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Circle 2 on information card
CONTENTS

33. Winners of the Journal’s Architectural Drawings Contest

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Cover: From our drawing competition winners, Tower #2, a hypothetical project, drawn by Mark Billy, Mission Hills, Calif.

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EVENTS


Oct. 4-6: Workshop on Supporting Design Development with Human Factors and User Need Requirements, University of Wisconsin, Madison.


Oct. 7-8: Workshop on Designing the Color, Light, and Visual Environment for Human Performance, University of Wisconsin, Madison.

Oct. 8: Roofing and Roof Maintenance Seminar, Birmingham, Ala., sponsored by the Birmingham Chapter/Construction Specifications Institute. Contact: Sam Hughey, Dover Elevator Co., P.O. Box 276, Birmingham, Ala. 35201.


Oct. 12-14: Annual symposium on the American Small Town, School of Architecture, Mississippi State University.


Oct. 18-21: Seminar on Rebuilding America: Challenge to the Construction Industry, Massachusetts Institute of Technology.


Oct. 24-26: Second Annual Zoning Institute, San Francisco. Contact: American Planning Association, 1313 E. 60th St., Chicago, Ill. 60637.

Oct. 24-27: The Association for Preservation Technology Annual Conference, Banff, Alberta, Canada. Contact: Walter Jamieson, c/o APT-82, Faculty of Environmental Design, University of Calgary, Alberta T2N 1N4 Canada.


Oct. 31-Nov. 3: Industrial Fabrics Association International 70th Convention, Las Vegas, Nev. Contact: IFAI, 350 Endicott Building, St. Paul, Minn. 55101.


LETTERS

Navy Arch: As an architect who was active in the recent controversy generated by the proposal to construct a monumental arch in the Doric mode for Washington, D.C., I wish to add a footnote to the JOURNAL's generous coverage. Not only did the National Capital Planning Commission receive a barrage of mail from the local design and planning community, but commission member T. Eugene Smith was outspoken in his appreciation for the intelligent content of written testimony. This positive response was in direct contrast to warnings by my colleagues that architects and planners “have precious little clout in this town.”

Also, William Conkin, FAIA, the New York City architect of the arch, remarked that he would have appreciated the opportunity to have presented his ideas to his peers in Washington. I concur, and the local AIA chapter, short of taking a pro or con stand in important design proposals, might seriously consider sponsoring forums for its membership and the general public in the future.

Martin Zimmerman, FAIA
Washington, D.C.

Diminishing Profits: Thank you for your article, “Growth in Architects' Income Lags Behind Other Professionals,” in the June News section (page 22). What I have been feeling has finally been put into words. The problem has been defined for the professional, for the businessman (for the artist there is no problem). Now can we discuss possible solutions to the problem? Or are we to go on, holding the line on inflation until we become nonprofit organizations? Patrick C. McGinty, AIA
Bay Village, Ohio

Unpaid Fees: An appropriate summation of the July News report about the New York City salary survey (see July, page 21) should be: “Professional fee standards are inconsistent, fragmented, and inequitable for the responsibility. Once, however, the fee is established, ensure that the client pays.”

We are already working harder and better than at any time in history. Why not a survey on free work and unpaid fees that result in losses, which in turn result in lower salaries? E. Abraben, AIA
Fr. Lauderdale, Fla.

Ed. note: The color renderings of buildings at Chicago's 1933 World’s Fair, “Century of Progress,” are by William Muschenheim, FAIA, currently professor emeritus at the University of Michigan (see June, page 56). At the time of the fair he worked with the fair's color consultant, Joseph Urban.
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Architecture Loses Three Very Different Leaders

They died within the space of four weeks: one a regionalist, almost a guru to generations of architects in the Southwest; the second, American architecture’s prime individualist, whose work is enjoying renewed attention in these eclectic times; the third, a statesman of the profession and co-founder of one of the nation’s largest firms.—Ed.

O’Neil Ford

Purely on the basis of the built accomplishments of his firm, Ford, Powell & Carson of San Antonio, O’Neil Ford, FAIA, who died July 20 at the age of 76, would have to be considered one of the leaders among 20th century Texas architects. The works included campuses for Trinity University and University of Texas in San Antonio, the Texas Instruments plant in Dallas, the Tower of the Americas for San Antonio’s 1968 Hemisfair.

But Ford’s leadership went well beyond the buildings, as attested by these comments by colleagues (and sometimes competitors), students, and architecture critics.

David Dillon, Dallas Morning News: “He turned architects’ attention to native Texas architecture, native materials, in the Southwest who deserved recognition and emulation, O’Neil Ford, his partner Arch Swank, who died July 24, his friend, Dave Williams, with whom Neil worked for about 15 years because of his opposition to the Breckenridge Park Freeway.

“For all his influence as a teacher, very few architects do work that is anything like his. Frank Welch is a good example. He’s a superb architect and learned a great deal from Neil, but you have to look at a long time at Welch’s work before you can see any real influence.”

Frank Welch, FAIA: “I was an early employee and since then a colleague and close friend. Neil’s work was very non-ego-centric, and therefore it wasn’t a high-style vocabulary that was easily discernible from one to another architect he influenced. That didn’t transfer. What was transferred was an intrinsic character or caring and sense of mission about an approach to things—approaching a job with honesty and candor and pragmatism and the sense of a building being correct in its place. He never did those stoppings buildings. He was for the self-effacing architectural statement, the crafted building of singular honesty. I think this nonego-centric quality is the thing that is really informing about his work and the reason he had so much appeal for younger people.

“He was being influenced by history long before postmodernism, but instead of it being classical Europe, this was native, indigenous. We’ve been doing things with history for a long, long time and enjoying it.”

William Caudill, FAIA: “Neil never got caught in the bottom of a cliché barrel. He’s been a regionalist from the very beginning, and to be a regionalist during the onslaughts of the International Style—you’re going upstream. And he did it all the way; never veered his course.

“As a competitor, he was absolutely wonderful. When our firm was getting started, his practice was already eight or 10 years old. We got a letter from a guy in Plainsville, way out in West Texas, asking if we were interested in designing his house. I wrote him about how great we were, and how interested in this thing, and I got the letter off into the mail special delivery. About ten days later, I got a letter from this man in Plainsville saying he had extended his invitation to three different firms, including O’Neil Ford’s, that he appreciated our letter and got it in three days, but the same day Mr. Ford got his invitation, Mr. Ford called him and said, “If you don’t want a goddamned colonial house, I’ll get my airplane and fly up this afternoon and see you.” He got the job. That was when I started flying. I’ve had nothing but respect for Neil. Before he died, we (the Texas Society of Architects) were putting him up for gold medalist.

“I recognized his great talent immediately when I moved to Texas (I’m from Ohio) in the ‘40s. I was teaching at Texas A&M, and from the start I felt there were only three architects in the whole Southwest who deserved recognition and emulation, O’Neil Ford, his partner Arch Swank, and Karl Kamrath.”

Arch B. Swank Jr., FAIA: “He was a many-faceted person, an absolutely amazing draftsman, and he had the greatest appreciation for the nature of materials and an amazing inherent feeling for the structure of building, even though he had no academic training. He was a pioneer in the lift slab concrete-type construction, and he was one of the early architects interested in prestressing, post-tensioning, hyperbolic paraboloids, thin-shell construction, and so forth.

“In one of my last notes to him, I asked him to write a foreword to a book that the Dallas chapter is helping publish on Neil’s mentor, Dave Williams, with whom Neil did studies of indigenous buildings, especially those done around 1840 by German and Alsatian settlers in the hill country in Texas. Neil wrote, “the sense of native things, the respect for climate, and the development of style just grew” from the research. He insisted on the necessity of understanding these values as well as...”

continued on page 13

AIA JOURNAL/SEPTEMBER 1982 11
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Circle 7 on information card
He said, 'All of architecture is a remembrance of one kind or another. You don’t just invent this thing.'

Karl Kamrath, FAIA: ‘We never worked together. We had a lot of fun talking about architecture though we never did see anywhere near close eye to eye on architecture. He did a fine job in producing the old Texas-style homes, which were always gracious and nice, while we were doing a more American architecture in the manner of Mr. Wright. Twenty-five years ago we were founding members of our Egg and Dart Club. We were friendly competitors, and there was only one man who could out-talk Neil. That’s Philip Johnson.’

Bill N. Lacy, FAIA: “I had the pleasure of making a four-hour video tape interview with him for WGBH of Boston last December. We had such a great time. I told him I enjoyed watching the tape so much because it was the only time I was able to turn him off when I wanted to. What was interesting was that throughout this long interview, he kept coming back over and over again to people. No matter what we talked about, he’d get back to San Antonio and the people. He was one of the most sensitive architects to the human qualities of design—and a talker, and a raconteur. I said to him once, ‘A lot of people know what the FAIA stands for behind your name, but a lot of others are curious about the ICS.’ He grinned and said, ‘International Correspondence School at Scranton, Pa.’ Then he always rushed in after that to let you know that he has proper academic credentials, that he lectured at Harvard and has honorary degrees and all that.

‘During the taping I asked if he considered his work derivative, and he snorted and told me it was absolutely derivative. He said, ‘All of architecture is a remembering of one kind or another. You don’t just invent this thing.’

‘He was one of the two or three mentors whose integrity and talent I most respected, and I loved him like a father. Besides that he was a marvelously entertaining, outrageous human being.’

Larry Paul Fuller, Editor, Texas Architect: ‘He used to half mutter and half growl, ‘When you hear someone say, ‘Oh, that’s a fun building! you know damn well it’s a bad building.”’ But that was a little misleading because while no one would say that his buildings are fun, there’s great pleasure to be found in their quiet elegance, their restraint, and the use of natural materials made delightful through the human touch.

‘The thing that came through to me was that he found architecture to be very serious business with definite limitations. Buildings have strict purposes, and he really felt that was the challenge facing architects—to live within those limits and still do something useful. He never swerved from his belief that architecture is the most serious of the arts.

‘Then there was his having gotten dirty. He really knew how to lay the brick; he was not only one to appreciate crafts, but also was a real craftsman.

‘O’Neil Ford was salty, saucy, irascible and irreverent, yet he exuded a unique kind of elegance.’

Paul Kennon, FAIA: “In his own creative way, he built on these regional forces and the antiquity of the Southwest, fused with the needs of the day. And he was a self-made architect who developed such a tremendous tactile sensitivity to materials. He was a tremendous force here in Texas.’

Jack McGinty, FAIA: “It became apparent to me as chairman of the Texas Society of Architects committee that has been gathering documentation for possible nomination for the gold medal that to him architecture was what it was all about, not architects, not personal statement, but an architecture of context, people, and quality. I perceived him as a leader and spokesman rather than a competitor. That’s very rare.”

Wolf von Eckardt, Hon. AIA, Time: “O’Neil was a real man.” His language was atrocious, and he took a certain pride in this. But he was so genuine in his concern for all the things one should be concerned with. He drove me crazy sometimes when I was on the Washington Post and he was fighting the good fight against the freeways, and he called up every two days and delivered some harangue. But in his case, it was not ambition; it was not to win. He was so sincerely involved that you forgave him his slight excesses.

‘He was quite selfless. He could have built a big firm; he certainly had all the talent to make a large, moneymaking office, but I think he liked to stay close to the soil. I will never forget the time I stayed overnight at his place in San Antonio. Here in the middle of his town was his farm, and all these incredible sack-like bulges dropping down from the trees in the dark. I thought the trees had some tropical disease. The disease then proceeded to cry like babies all night long.

continued on page 16
Briggs and Stratton Corporation planned to build a 744,000 square foot distribution center and manufacturing facility on a 64-acre sloping site along Highway 41-45 in Menomonee Falls, Wisconsin. They wanted their building to project a contemporary image for the company. Their requirements: 420,000 square feet for light manufacturing, 300,000 square feet for warehouse and parts distribution center, and a connected 24,000 square foot office building.

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Winner of an AISC Architectural Award of Excellence for 1981.
News from page 13
It was Neil’s collection of peacocks. He also had a marvelous collection of old cars. I had just read about such things in Scott Fitzgerald, this extremely modest, down-to-earth life of his. He was a very well known architect when I first met him 20 years ago, and lived in this little shack, almost.

“I think his contribution is that he was very ahead of his time in ignoring the abstract aspects of the International Style and fostering regionalism not just in terms of decoration but a regionalism that comes out of the soil, and out of the materials, and out of the traditions. All that stuff we’re talking about now he did 20 years ago. But you have this additional element of his recognizing craftsmanship as something that can do a lampshade or a door or a doorknob in better ways than the machine can, and he integrated it with his architecture in a fabulous way.

“I think the test of the pudding is always his work for Skidmore College in Saratoga, because here you have a large plant, you have a program with no money, and a very, very simple design. It’s just dormitories, but with craftsmanship, and he’s turned the whole thing into a simply delightful work of art. He was just a very great and wonderful architect.”

ANDREA OPPENHEIMER DEAN

Bruce Goff

During a career that spanned more than 60 years Bruce Goff designed nearly 500 buildings, and no two looked exactly alike. Many were startling in their originality, with extraordinary spatial effects, amplified by unexpected uses of materials and structure. All reflected a fundamental belief in the right to individual expression, a belief that Goff carried even further than his mentor and close friend, Frank Lloyd Wright. Goff’s unassuming, gentle manner disarmed critics seeking complicated (and sometimes unkind) explanations of his designs. He regarded his buildings as essentially rational responses to specific conditions, and never as flights of unguided fancy.

Born in Alton, Kan., on June 8, 1904, he always considered Oklahoma his native state, for it was there that he spent much of his youth and began working as an apprentice for the Tulsa firm of Rush, Endacott & Rush in 1916. Something of a prodigy, he produced designs for the firm that were beginning to be built by 1919, and in 1929 he was made a partner, having skipped college. When lack of work caused his Tulsa office to close in 1934, he moved to Chicago, where he worked briefly for Alfonso Iannelli, then taught at the Chicago Academy of Fine Arts and opened his own office in the Chicago suburb of Park Ridge. Following military service with the navy during World War II, he practiced in Berkeley, Calif., from Goff’s Shin’ enKan, an unbuilt museum of Japanese art for collector Joe Price.

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George F. Hellmuth, FAIA, built a reputation of successful large projects, maintaining the quality that the firm's design approach demanded. Among well-known projects done by HOK under Kassabaum's project management are the Dallas-Fort Worth Airport; the National Air and Space Museum, Washington, D.C.; the Galleria shopping complex, Houston; and Mobil Oil's division headquarters, Fairfax, Va. The firm has some 800 staff members in eight offices in the U.S. and one at Riyadh, Saudi Arabia, where it has in progress the largest single building project in the world—the $3 billion University of Riyadh.

Kassabaum was born Dec. 20, 1920, in Atchison, Kan. After graduation from the Washington University school of architecture in 1947 he served on that faculty for several years. In 1950 he joined the St. Louis office of Hellmuth, Yamashita & Leinweber, and in 1955 became a principal of HOK, the successor firm, with George F. Hellmuth, FAIA, in charge of business contracts and Gyo Obata, FAIA, of design. The triumvirate responsibilities were kept distinct, but are now under a broader management structure.

The president of AIA in 1968 and '69 and chancellor of the Institute college of fellows in 1977 and '78, Kassabaum also was an honorary fellow of the Royal Architectural Institute of Canada and La Sociedad de Arquitectos Mexicanos.

GEORGE McCUE

Mr. McCue watched HOK's growth as art and architecture critic for the St. Louis Post Dispatch

Government

Congress Investigates Generic Causes of Structural Failures

"Little if any information on recent structural failures has been made public," pointed out a congressional witness last month. For that very reason, a House subcommittee, as part of an ongoing investigation of generic, built-in causes for failures, heard the viewpoints of a dozen members of the building industry explain the system under which large buildings are constructed. A probable outcome is a federal repository of data where archi­tects, engineers, and others can learn from past mistakes.

The hearings brought out salient shortcomings, both general and specific. One witness, Vincent Bush of the International Conference of Building Officials, testified that structural design and detailing errors often are carried into construction because of inadequate plan review during the permit stage. Then, on-job construction review by qualified personnel is typically lacking, he said.

Speaking for AIA, Jerome Cooper, FAIA, said many owners and some architects and engineers tend to over-rely on review of project documents by code officials. Too, he said, the building regulatory system in the U.S. remains a "patchwork of ad hoc processes" that obstruct a "clear-cut design approach." The task of wading through the confusion and conflicts associated with the regulatory system is "often frustrating, costly, and time-consuming."

Representing the American Consulting Engineers Council, Harold Sandberg pointed out the lack of well-defined relationships among members of the design team, over which the architect no longer has control. "It has now become more a coalition of specialists, and each is in his own little area. Each is responsible, but what happens at the interface between one area and another is gray. You get more and more specialties and more gray areas, and it is hard for the structural engineer to see to it that what happens in those gray areas is not affecting the structure."

"Everyone is under pressure to speed up the process," testified R. Randall Vosbeck, FAIA. "This creates a lack of attention to details and sound construction practices. . . . More and more, the design professional's role during construction is being minimized rather than being increased."

And an engineer, John C. Archer, said the pressures to accelerate the work pace have led the design team to "short-circuit some traditional steps."

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And an engineer, John C. Archer, said the design of structures becomes subordinate to the principal business aspects of development while engineers are pressured to produce “marginally adequate structural designs in order to increase construction profit. In order not to be associated with such marginal designs, with their greater potential for structural failure, the design engineer is discouraged by legal advisers from reviewing the contractor’s design.”

continued on page 18
Government from page 17

Archer was not alone in relating concern over lawsuits: Litigation, both the fear of it and the reality of it, was a dominant theme running through the testimony. Referring to the "litigious nature of modern society which demands a source of recovery for every injury or damage, almost regardless of fault," Cooper, who served on AIA's long-span building panel, said that architects and engineers now see the risks involved in designing buildings "threatening to outweigh the value placed on their services by clients." Most architects, he said, who have received legal advice as a result of litigation or otherwise are advised that they perform an "observation" of construction activities as opposed to the "supervision" of 15 or 20 years ago. Referring to AIA contract documents that "very clearly" state that the architect does not take responsibility for the contractor's actions, Cooper said, "We find ourselves...not financially equipped to deal with the enormous claims."

Sandberg of ACEC testified: "As for liability for accidents, as opposed to errors or omissions in design, we have been advised that the strongest defense is 'Don't be there so you can't have a chance of seeing the possibility of an accident. If you go on a job, wear blinders.'" But a later witness representing A/E insurers, Roy Vince of Shand Morahan Co., said he would not give that kind of advice. "Whenever we have encountered that attitude, we have discouraged it as a method of dealing with that kind of problem."

Witnesses' recommendations were wide-ranging. Cooper saw the need for "simple information coming from a clearinghouse that would place most architects on notice that there are problems. We would take steps ourselves to correct our own practices." Asked if the problems of liability would not preclude free information exchanges, the Atlanta architect replied: "It would be better than what we have now, which is discovering the bear traps where they are and being caught in them."

Engineer Archer suggested more exhaustive checking of designs through the legal requirement of independent reviews by qualified engineering firms. Building permits would be issued only after such certification, and certificates of occupancy would be issued by a government entity "only upon notification by the engineer or inspection agency that construction was completed in conformance with design."

Attorney LePatner called upon professional organizations like AIA and the National Society of Professional Engineers to hold seminars and clinics. He also sees the need for trade and professional journals to "report in greater detail the technical information pertinent to significant failures," and suggested that architecture and engineering schools introduce courses to "analyze design and construction claims in the same way that business schools study corporate failures and successes."

Building official Bush: "In large and complex structures, design professionals should be required to submit written statements that buildings were constructed in general accordance with contract documents, including plans approved by the building department, a requirement now in force in very few jurisdictions."

The chief estimator for a large construction company in Washington, D.C., sees the funding and enforcement of a good quality control program as the answer. Said A. Key Kickman: "The saddest part of the present system is that for the lack of funds, quality control programs are one of the first requirements to be scrapped." He estimated the cost of a "strong" quality control program at less than 1 percent of the total construction cost on a $10 million project. "The total dollars are miniscule compared to the loss of lives, property, and services which structural failures cause," he said.

But legislativing quality control is not a primary role for the federal government, said Representative Albert Gore Jr., the Tennessee Democrat who chairs the subcommittee on investigations and oversight of the House Committee on Science and Technology. "We want to consider if there is a more effective way for the construction industry to improve quality control and engineering design," he said, and determine if a federal organization like the National Transportation Safety Board would be a cost-effective way to identify causes of failures and help promote safer technology and design.

A week before the congressional hearings, the Architecture and Engineering Performance Information Center was opened on the campus of the University of Maryland at College Park. Funded for two years by the National Science Foundation, the center will serve as a clearinghouse of information on both structural and architectural failures.

Air Quality Problems Plague California State Building

"If you are going to have problems with a new building, this is the best kind of building to have them in," says Barry Wasserman, AIA, California state architect, referring to the flagship of the energy conscious state office building program begun in the mid-‘70s by Wasserman's predecessor, Sim Van der Ryn. The innovative Gregory Bateson Building in Sacramento has had a raft of problems since its first occupants moved in a year and a half ago, but none of them is attributable to the basic design, according to Wasserman.

As a result of the problems, the contractors, subcontractors, and suppliers have been sued, and the state itself has several worker compensation suits pending and faces the potential of a class action suit. All are claiming that the air quality in the building was harmful to the health of its occupants.

Conceived in-house under Van der Ryn, with Peter Calthorpe, Bruce Corson, and Scott Matthews as principal designers, the Bateson was designed as an energy efficient building incorporating a ventilation system capable of being changed according to the seasonal variations and the needs of the occupants. Its principal elements are thermal mass radiant heat (including two rock storage beds believed to be the largest in the world), and a skylit central courtyard 150 feet square and extending the building's full four stories (see Jan. ’81, page 58).

According to state senior architect Glenn Hezmalhalch, AIA, of Waterman's office, a string of problems—a classic application of Murphy's law—began during construction when the prospective tenants were changed and interiors had to be redesigned, including the mechanical and electrical systems. The building went nine months behind schedule while political pressure mounted to get people in. Beginning in April 1981, construction and phased occupancy continued abreast until the contract was accepted in January of this year, Hezmalhalch says.

Because of leases terminating in other buildings, it just happened that the people who moved in first were placed in the most recently completed spaces, he says. Carpet had been laid and painting completed in the same week that people moved in, he says, and partitions for the open landscaped offices put in place the day before. "Odors bothered a lot of people for the first two months," he says. But it wasn't until last winter when the ventilation system was put into its cool weather mode that strategic components were found to be defective. These were boxes that control the flow of air to diffusers, and up to 80 percent of them were defective, Hezmalhalch says.

Another problem: The number of five-foot-high partitions, ordered by occupants, was much larger than anticipated in some areas, introducing a new source of formaldehyde while congesting these spaces.

Soon after the first occupants moved in, there were complaints of respiratory, gastro-intestinal, and skin and eye problems. An outspoken former state worker, Lila Molina, who was one of the first transferred to the new building, says she "suffered, and still does, from dizziness, loss of balance, occasional sore throat, continued on page 22
It's happened again. The project's complete. The client's happy. The last bill's ready to go out. Then you tally up the time sheets and find you're going to have to eat 50 hours of design time you hadn't budgeted for.

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Reacting to formaldehyde, cigarette smoke, phenois, the glicerins.” Molina, former director of the office of rural and migrant affairs, part of the health and welfare agency with offices on the fourth floor, says that while she took disability leave her position was abolished. She is appealing that decision and is a litigant in the cases against the contractors and the state.

At Wasserman’s request, the California Occupational Safety and Health Administration began a series of air quality tests in early May 1981. Among Cal/OSHA’s findings were “slightly elevated levels” of formaldehyde, carbon dioxide, and other pollutants attributed to “inadequate removal by the building ventilation system.” “Fungal type spores” were also present in air exhausted from the rockbeds. According to Hezmalhalch, the air circulation system is now functioning as designed, and the rockbeds are cleaned up.

Wasserman says the Bateson was better able to respond to the problems experienced than the typical sealed building: “We can open windows, run a lot of air through, increase outside air use to 100 percent. I have no qualms about the basic design of the building. But we know that health problems are exacerbated by very low ventilation rates, and in a building designed like this one was, you can’t afford to have failures.” As a result of the Bateson experience, Wasserman’s office has developed a procedure for occupying the eight other state buildings now under construction: They will be inspected, their equipment tested, and they will be given two to three months for drying out and “off-gassing.”

And Van der Ryn, who quit as state architect in 1978 during construction of the Bateson, sees one other need: communication with and education of the users of new buildings, “letting them know what is going on,” as he puts it.

Proposals Seen Creating ‘Billboard Protection Act’

Because currently proposed revisions to the Highway Beautification Act would turn it into a “billboard protection act,” and “no federal statute at all on billboard control would be preferable,” AIA seeks repeal of the 1965 legislation unless the revisions are defeated. Joining the Institute in the fight against the revisions are the Sierra Club, the American Society of Landscape Architects and other organizations.

In a letter to members of Congress, AIA President Robert M. Lawrence, FAIA, wrote that the proposals now before Congress would “change completely” the act’s purpose “from one of protecting scenic beauty to ‘preservation of communication through the outdoor medium.’” Lawrence was quoting the wording of the proposed amendment, which was in essence written by Vernon Clark, chief lobbyist for the Outdoor Advertising Association of America. Clark’s three-page amendment was inserted, with minor changes, into the current revision bill, H.R. 6211. Introduced by Representative James J. Howard (D.-N.J.), the amendment, Section 121, was approved in May by voice vote during hearings in the House Public Works and Transportation Committee.

The 1965 law banned new billboards within 660 feet of highways built with federal aid in noncommercial areas, and it authorized up to $160 million a year to compensate billboard owners for removal of existing signs near the roadways. A 1978 amendment, pushed through by the billboard association, extended payments to every sign taken down. AIA opposed the ’78 amendment’s “just compensation” provision, arguing that local jurisdictions had in practice taken the lead in billboard control by using amortization to compensate billboard owners. Under this procedure an offending billboard was allowed to remain in place for a specified time, in violation of law, until its economic value could be recovered. In 1980, one estimate continued on page 24
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Environment

Conservation Foundation Finds Progress an Endangered Prospect

In a 439-page analysis on the state of the environment, The Conservation Foundation reports an improvement in air quality in the U.S. and progress in improving water quality and in energy conservation. However, the report cites a number of growing and "largely unaddressed" environmental problems and concludes that "delays in pursuing environmental programs may have serious consequences."

The foundation (a Washington, D.C., nonprofit, nonpartisan environmental research and communications organization) concludes from its "objective analysis" of the environment that "we have made significant strides in addressing the challenges posed by pollution problems identified more than a decade ago. We have not finished the job, and we have not moved as far or as fast as we all would have liked."

Improvements have been greatest in air quality, the report suggests, "at least with respect to the most common pollutants."

As recorded by the Environmental Protection Agency, emissions of most major air pollutants have continued to decline. Data from 23 metropolitan areas show that particulate emissions dropped 56 percent between 1970 and 1980, partly because of a decrease in the burning of coal and solid waste. Coupled with a 24 percent decline in ambient sulfur dioxide levels from 1974 to 1980, most urban areas have now reached EPA's primary, health-based standards.

However, the available data show "no similarly significant progress toward water quality goals," says the report. The authors acknowledge that to "hold the status quo is an achievement in the face of significant economic and population growth since 1970." The report cites "episodic evidence" that some of the worst water contamination continued on page 26.
What's the point of equipping a toilet with a flush tank that (1) needs up to seven gallons of water to flush; (2) takes three minutes or more to refill; (3) wastes valuable bathroom space; (4) can leak and waste precious water; (5) contains far too many parts that need too much repair; and (6) is made of breakable porcelain?

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These points (and more) are discussed in detail in an objective report, "Selecting the Proper Flushing System for Your Building." It's yours, without obligation. Write us for a copy. The next time you have to decide what goes in your bathrooms, you may find yourself saying, "Thanks, but no tanks."

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Pollution problems may be easing—salmon have reappeared in New England rivers; eutrophication of Lakes Ontario and Erie has slowed; and the ecological productivity of some estuaries is returning.

Another improvement, according to the report, is that more land is available for outdoor recreation. Also, more state and local governments have passed laws protecting sensitive lands.

The growing areas of concern cited by the report include acid rain, indoor air pollution, the buildup of carbon dioxide and chloro-fluorocarbons in the atmosphere, groundwater depletion, contamination of drinking water by toxic chemicals, hazardous waste disposal, and the recurrence of farm practices that cause soil erosion.

The most “important, controversial and difficult” environmental problem of recent years, one which is still unsolved, is hazardous waste disposal, according to the report. “In the past five years, two major laws have been passed to deal with hazardous waste disposal. Implementation of both has been slow. Meanwhile, old hazardous waste sites continue to threaten many communities, and much of the waste now being generated is disposed of under environmentally unsafe conditions.”

Some of the findings in “problem” areas follow:
- Soil erosion has grown more acute. Most of the erosion is in the productive farmland, half of it in the corn belt and northern plains.
- Available data show losses in jobs, population, and capital investment in many of the nation’s central cities. Fiscal problems are chronic and severe. As a positive note on the urban environment the report states that “some of the most troubled central cities are experiencing significant revitalization in areas that a decade ago appeared hopelessly overwhelmed by poverty.”
- Although energy efficiency has improved, federal research on both energy conservation and renewable energy resources has “been all but eliminated.”
- “Nearly 35 million people live in areas that will be unable to meet the air quality standards for protection of human health from ozone by 1987, even if existing automobile emission standards are met. The Reagan Administration has advocated a relaxation of emission standards for gasoline and diesel automobiles and trucks, which would delay attainment of the ambient standards in major metropolitan areas.” The report also points out that there is now a “proliferation” of unregulated toxic air pollutants.
- “Pollution has also adversely affected the National Park System. Land development outside park boundaries, as well as overuse of sensitive areas within parks, is degrading natural and historic resources.”
- Other sensitive areas are feeling the pressure of development. “Along the Atlantic and Gulf coasts, the nearly 300 barrier islands that serve as the nation’s first defense against ocean storms are being urbanized at a pace far greater than mainland areas. Since 1950, barrier island development has proceeded at an estimated rate of 6,000 acres annually, much of it aided by federal funds.”
- “The nature and dimensions of toxic contamination in air, water, and land are still unfolding. The presence of toxic chemicals in groundwater in many locations has forced the abandonment of hundreds of wells supplying drinking water to millions of people.
- “Rapid development in the West has resulted in excessive water withdrawals from rivers and streams in such areas as the Rio Grande Basin, Lower Colorado Basin, and California... To overcome this lack of surface water, wells have been dug to tap groundwater supplies. But groundwater, too, is being used up. Groundwater

### The Institute

James P. Cramer Appointed President of Service Corp.

James P. Cramer, executive vice president of the Minnesota Society/AIA for the past four years, has been appointed president of the AIA Service Corporation. And the Institute has announced two staff changes at the administrative level.

The Service Corporation was established through a comprehensive management reorganization of AIA, which was implemented in January. In the reorganization the Institute and its subsidiary corporations—AIA Foundation, AIA Research Corporation, and Production Systems for Architects and Engineers—was consolidated into three entities—the AIA, AIA Foundation, and AIA Service Corporation. The Service Corporation consists of business management, data and word processing, PSAE, the AIA Journal, publications fulfillment, and marketing.

Besides serving as executive vice president of the Minnesota Society/AIA, Cramer has been publisher of AM 'architecture minnesota' since 1978. He was vice chairman of the Council of Architectural Component Executives in 1980-81, and chairman beginning in 1982 (he will resign from this position). As chairman of CACE, Cramer served as an ex officio member of the AIA board, and was a member of AIA’s long-range planning committee.

Educated in the administration of higher education, Cramer served as director of community services in St. Louis Park, Minn., and the district of the University of Minnesota, and has served as a management and long-range planning consultant for nonprofit and profit corporations in 11 states. He was named Minnesota’s “community educator of the year” in 1978.

As for the Institute’s administrative changes, Joseph S. Crane has been appointed administrator of the government affairs department and James A. Schuping has resigned as assistant secretary. Crane replaces Arnold J. Prima Jr., AIA, who had been administrator of the department since 1973 and who has joined the Washington, D.C., firm of Mariani & Associates.

Cramer joined AIA in June '81 as the government affairs staff members concentrating on federalism, block grants, and special projects. He previously was director of management of community development and planning at HUD, where he worked for 14 years. Crane has a bachelor’s degree in political science from Johns Hopkins University and a master’s degree in public administration from George Washington University.

Schuping, who became AIA’s assistant secretary in 1980, has been appointed executive director of the Construction Products Manufacturers Council in Alexandria, Va. He joined AIA in 1977 as administrator of component affairs.

### Awards Deadlines Announced

The deadlines for the 1982-83 AIA awards programs have been announced. They are:
- Honor award notification of entry must be postmarked Oct. 15, with submissions postmarked Nov. 18. (Eligible are projects completed since Jan. 1, 1975. Unlike previous years, one jury will recognize both new and extended projects of design excellence.)
- Nominations for honorary members must be postmarked Nov. 3.
- Submissions for Institute honors are to be postmarked Oct. 18.
- Entry notification for the library build-

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26 AIA JOURNAL/SEPTEMBER 1982
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In 1957 Norwegian artist Carl Nesjar first met Pablo Picasso and explained a new process of producing reinforced concrete sculpture. Reportedly, Picasso had for years been making small "experimental" sculptures, with the dream that one day they would be executed on a monumental scale. What grew out of this meeting was an extraordinary collaboration between the two artists that lasted 16 years, the result being numerous concrete sculptures and wall engravings.

Nesjar's technique is known as Beto-grave in which a thin mixture of concrete (containing aluminum to prevent shrinkage) is poured into wood forms packed with aggregate. After the concrete dries and the wood forms are removed, a high-pressure, fine-nozzled sandblasting hose cuts through the concrete to reveal the aggregate beneath and to reproduce the lines and areas of a given drawing.

Picasso would draw wall engravings and design maquettes in cutout metal or cardboard, which Nesjar would meticulously recreate on a larger scale. Nesjar considered himself an "interpreter," whose "role is comparable to that of a musician before the score of a genius." In fact, Picasso never saw any of the completed concrete sculptures, which are located in the U.S., Spain, France, Sweden, Israel, Norway, and Holland.

This little known facet of Picasso's work is documented in *Picasso's Concrete Sculpture* by Sally Fairweather, to be released in November by Hudson Hills Press, Inc. (Suite 4323, 30 Rockefeller Plaza, New York, N.Y. 10112). In the book, Nesjar says of his 16-year-old collaboration with Picasso: "He considered them Picassos—what more can you say."
Facing page: upper left, Football Player, metal maquette; lower left, Head of a Woman, photomontage for the City of Jerusalem; right, Head of a Woman concrete sculpture, Kristinehamn, Sweden. Upper photo, Le Dejeuner sur l'Herbe, four concrete sculptures, Moderna Museet, Stockholm; left, Sylvette, concrete sculpture, Bouwcentrum, Rotterdam; above, construction of The Bather, Gould Center, Rolling Meadow, Ill.
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The elevator innovators.
In the drawing above, by Anthony Ames of Atlanta, LeCorbusier and Mies van der Rohe, over the drone of a passing biplane, discuss the state of the art of architecture circa 1927 in an idealized modernist setting. It is one of 57 winners in the Journal's first architectural drawings contest, and one of eight singled out unanimously by the jury for special recognition in the form of an honor award. The rest of the winners are on the cover and on the following pages. They were chosen (by the Journal art director and editors with the help of Gerald Allen, AIA) from among an overwhelming 1,200 entries. We are grateful to all of the entrants and we believe that both the quantity and quality of the submissions attest to the resurgence of the art of drawing in architecture. D.C.
The collage above (1), "Imaginary Cities," was one of three winning drawings by New York architect Geraldine C. Pontius; no other entrant had three separate submissions chosen. In "Imaginary Cities," perspective grids have been extended from the vanishing points of xeroxed copies of renaissance scenes. Ms. Pontius, formerly with I. M. Pei & Partners, is now employed by Kohn, Pedersen, Fox and also teaches at Columbia University. She writes, too; because of her obvious drawing talent, we were interested in her thoughts about the current state of drawing and therefore asked her to review juror Gerald Allen's new book on the subject; you'll find the review on page 70. Honor Award

(2) In the category of drawing that might be called working sketches, used not to present designs or (as above) visions, but rather as actual design tools, is this sheet of remodeling possibilities for a small seaside bungalow in New England. The drawing is by Mark Simon of the Essex, Conn., firm of Moore Grover Harper.

(3) This study of a theater entrance in Denver's Kittredge Building is meant to serve as a model for the adaptive reuse of historic buildings along that city's new 16th Street Transit Mall; it is by Henry Beer of Communication Arts, Inc., Boulder, with collaborators Thomas Zimmerman, Paul Mack, and Kim Jonas. The jury liked the way a reverse print was made to capture the feeling of a night view, with a minimal addition of color used to great effect.
Two drawings from a series (1 and 2) are by Gerald Exline of Ketchum, Idaho, a former head of the department of architecture at the Cranbrook Academy of Art. Exline's general title for the series is "The Speculative Design of High Density Environments for Cities of the Future." He feels these cities will be "lightweight, plastic, clear, using the structure of curved geometries, transparent, fiber-like, a dimension of sun and light in situations that could be dark, gloomy, depressing. Not buildings, but multilevel networks of places and structures." The jury felt that, both in the case of the very abstract version below and in the more detailed version at right, Exline's technique "does just what a good drawing should do: tells what the artist wants to tell, without telling all sorts of other things he doesn't care about."

(3) The drawing by Ralph Johnson, principal designer for Perkins & Will, Chicago, is for an actual current Perkins & Will project, a hotel (400 rooms) and condominium (200 units) scheme for Miami Beach. The entry facade shown here will face Collins Avenue, and the recreation areas beyond will face the beach. "The form and colors," according to Johnson, "are a recall of the art deco buildings of the 1930s."
Mark Stankard of Boston has lavished imagination on a drawing type that is usually matter-of-fact: a plan section detail of a concrete-filled pipe column with fireproofing (the green material) and a spandrel connection (1). But Stankard points out that the drawing is "intentionally ambiguous" and can also be read, assuming a very different scale, as a waterfront urban complex.

(2) The plan of "Children in America," an educational environment designed by Chuck Clark and Mack Scogin of Heery & Heery, Atlanta, for the High Museum of Art, is composed of oddly shaped spaces. In this composite drawing by Chuck Clark, the plan is exploded so that each space can be shown in its own one-point perspective view.

(3) Kemp Mooney, also of Atlanta, has used a striking collage technique to describe his design for Moccasin Hollow, a cluster housing development still in the schematic design phase. Mooney points out that the site is on a slight rise above a flood plain, and that the houses will have views over the flat pastures where horses have traditionally been kept for both grazing and riding.
The Tuscan hilltown of Cortona is the subject of a brisk sketch by Larry D. Fox of Washington, D.C. (1). One juror remarked that it ably demonstrated "the ability of a good drawing to severely edit," and another said "it shows what you can do with virtually nothing."

(2) Colored pencil on plastic is the medium used for this abstract cityscape by Michael Insetta of Edison, N.J. Insetta is a freelance designer currently employed by the Construction Services Group of Rothe-Johnson Associates, Iselin, N.J.

(3) A collage by David K. Wagner of DW Design, Charlotte, N.C., contrasts a city of the present with one of the future. "Does the future hold self-contained hermetically sealed environments," Wagner wonders, "or are they only the musings of science-fiction writers? The earlier visions of Kurokawa and Isozaki loom on the horizon. Perhaps there is a frightening beauty in the hilltowns of the future," he says, "just as the past conjures up hilltowns as a simple, romantic ideal."
Prismacolor pencil on paper is the medium (1). "American Landscape ±1" is the title. Rod Whatley of Rod W. Whatley & Associates, Atlanta, is the entrant, and the result, according to one juror, is "totally lurid." In Whatley's own words, "The drawing comments on the problems of designing within the American strip environment" and points out "possible sources for a truly American architecture devoid of 'high art' European influences."

(2) Of all the working drawings submitted, the jury was most delighted by this one, involving intricate details and compound curves. It was drawn in ink on tracing paper by Ronnie B. Bonner of the Memphis firm of Roy P. Harvery & Associates, and it shows the bow of an 1870s Mississippi riverboat, constructed inside the Mississippi River Museum, part of the Harvery firm's Mud Island Park on an island in the river at Memphis.

(3) A second drawing chosen by the jury from the futuristic visions of David K. Wagner of DW Design, Atlanta.

(4) Into each competition, with any luck at all, some humor should fall, and the downpour at left is by Stanley Tigerman of Chicago. It is one of a series of visual fantasies springing from his design for an addition to the headquarters of the Anti-Cruelty Society, Chicago.
The second of the three drawings chosen from the work of Geraldine Pontius, New York, is a gentle pencil study for the facade of the Portland Museum of Art, Portland, Me. (1). It was drawn in 1979 as part of Pontius’ work in the office of I. M. Pei & Partners.

(2) The conventional but beautifully executed section through Hawksmoor’s 1713 Christ Church, Spitalfields, in the east end of London, was drawn by Jonathan Humble of the Milwaukee firm of Kahler, Slater & Scott, Inc. Humble developed a project for rehabilitation and reuse of the church in collaboration with Robert Chitham, architect with the London County Council.

(3) “Totally compelling” was one juror’s opinion of this spare drawing by Stephan Hoffpauir, Houston, of an ice cream parlor in Lafayette, La. With great economy, leaving most of the drawing surface blank, Hoffpauir has defined the facade with a few delicate patches of shadow. Honor Award

(4) The jury admired the contrast between realism and fantasy in this section through two town houses drawn by Donald Copper of the Chicago firm of Murphy/Jahn. Copper used pencil on Strathmore board, adding copies of figures from Muybridge’s classic study of The Human Figure in Motion.
The "Hypothetical Memorial to Elvis and to Rock and Roll Music" (1) is the work of Ron Boozer of Beaufort, S.C. Although the drawing is in a style currently fashionable and therefore perhaps overworked, the jury found this particular concept imaginative and light-hearted. The drawing is in pencil.

(2) "A lively, varied presentation of a repetitive building type" was the jury opinion of this watercolor of The Ironfronts, a row of cast iron buildings erected in Richmond during the post-Civil War reconstruction period. Camden Whitehead of the SWA Partnership, Richmond, used carved wooden forms and stamps to reproduce the repetitive elements of the watercolor, thus imitating the cast iron fabrication process. "The watercolor," Whitehead says, "presents the building as it was conceived and built."

(3) The second of two premiated drawings from the Chicago firm of Sisco-Lubotsky Associates, this one was drawn by Jim Y. Law. In colored pastels on tracing paper, it shows the detail of a column capital (designed by Law) for the Fox Valley commercial shopping strip in Aurora, Ill.; the capital provides night lighting as well as, in Law's words, characterizing "the spirit of this strip shopping center as an identifiable public gathering place." Honor Award.
Using ink and color film on vellum, Robert George Scheren, AIA, of Tallmadge, Ohio, produced this triad of drawings for a project called the Jefferson piano studio (1). Designed for a children’s piano teacher, the building, to be constructed of stucco on a steel frame, provides studio and office space as well as obvious symbolism. As Scheren says, “The memory image is that of a red toy piano.”

(2) “Something we have begun to realize in the last 10 years,” juror Gerald Allen remarked, “is the wealth of resources offered by traditional drawing techniques.” The jury felt that this ink on film drawing by Hudson Lockett of Dallas demonstrates near mastery of one such traditional technique. The subject is the McNay Art Institute in San Antonio, Tex.; to the original building have been added two new wings designed by the late O’Neil Ford.

(3) Loving care is evident in this colored pencil rendering by Milton Shinberg, AIA, ABS Architects Group, Washington, D.C. The subject is a composite wood column designed by ABS for a private residence in semi-rural Virginia.
From an extensive series of drawings for “A Project for Venice’s Cannaregio Sector” is the site plan (1) by Steven Forman of New York. Forman explains that “a painted mural of the southern elevation of the urban villa is located on the wall surface of existing housing. This image serves as the literal end of the journey.” Whatever the explanation of the design, the jury was impressed by the beauty of the drawing.

Of very different character, closer to the realities of practice yet still quite imaginative, is this rendered elevation by Andrew Metter, AIA, of Sisco-Lubotsky Associates, Chicago. The building is the Glenview Public Works Center.

A second premiated drawing by Henry Beer and his colleagues at Communications Arts in Boulder was another part of their studies for Denver’s 16th Street Transit Mall. This one is an elevation study (old construction above, new below) for the re-use of the Masonic Building, originally designed by Frank Edbrooke in 1890. Honor Award

The isometric drawing is enjoying great popularity these days, but this one’s unusual and complex subject makes it remarkable. “It shows what can be accomplished,” one juror said, “when you bite the bullet of a well-understood convention.” The subject is the Ten Meter Telescope facility being designed for the Mauna Kea observatory, Hawaii, and it was drawn by James Rodriguez of the Pasadena, Calif., firm of Richard W. Rose, architects of the facility.
The two India ink wash drawings (1 and 2) are the work of New York City architect Percival Goodman, FAIA. Both are from a series illustrating aspects of the "new romanticism." As Goodman explains, "The claim that a neoclassic revival is going on sounds a little fishy to me. If anything, it is mannerist or, even more accurately, an attempt to revive romanticism." These two were the jury's particular favorites, the upper one (titled "Monument to Persian Gulf Oil") because of its handling of light, the lower one for its brooding, apocalyptic quality.

(3) The jury chose two drawings by Samuel Mockbee, an architect with his own firm in Canton, Miss. This one shows an early design (not the design finally settled on) for the Dellhaven housing project, Jackson, Miss., the arcade in the foreground being "artistic license" for the purpose of framing the design. Mockbee used a combination of pen and ink, pastel color sticks, leaded colored pencil, spray paint, and collaged colored paper.
Pencil photomontage was the technique used by Mark C. Campbell of Glave Newman Anderson Architects, Richmond, Va., for this drawing of a bank expansion at an important downtown corner of Staunton, Va. (1). The drawing was used for a news conference and public display, and the jury thought that, for such purposes, it was "very convincing" and "eminently legible." Incidentally, the offices of Glave Newman Anderson are in The Ironfronts, a building that is the subject of a drawing shown on page 46.

(2) The jury chose two drawings by Hossein A. Peigahi of Eugene, Ore. This one seemed to impart a "friendly" character to a not-necessarily-friendly building complex.

(3) Frederic Schwartz did this drawing of his own design for a development at Columbus Circle, New York City, as an entry in a competition sponsored by the Institute for Architecture and Urban Studies. Schwartz is the director of the New York office of Venturi, Rauch & Scott Brown, and he used a presentation technique often used by that office: color film applied to a photograph of a pencil drawing on white tracing paper.
The drawing technique above (1), employing a rich combination of elevations, plans, and sections, is one currently being used with great skill by several Italian architects. As used by Lance Braht of St. Louis, currently a student at the Harvard Graduate School of Design, the technique has a different character: cheerful, lyrical, and ingenious. And although the technique may have been borrowed, the result in this case seemed to the jury to be thoroughly fresh and personal. 

Honor Award.

(2) The second drawing chosen from the work submitted by Hossein A. Peigahi of Eugene, Ore., is this sketch of a guest cabin addition for an existing house. The jury admired the repeated use of the grid motif in the latticed fence, windows, etc., and the drawing’s overall whimsicality.

(3) This rendered plan by Julia Miner of Essex, Conn., is for a four-unit housing group designed for a prototypical block in Savannah, Ga. Each quadrant of the plan shows a different level of the four-level scheme. The jury liked the quiet colors, the “almost three-dimensional quality,” and the manner in which Miner “perked up” the drawing with sparkling details such as the tile patterns in some rooms.
PENNZOIL PLACE - HOUSTON
PHILIP JOHNSON - JOHN BURGEE
Architectural intern Michael R. Ytterberg of Houston submitted a composite study of Johnson/Burgee's Pennzoil Place (1). It was drawn in ink and colored pencil on illustration board, with some photography added. Although the lettering seemed less skillful than the other elements, the sheet as a whole was thought by the jury to convey a rich impression of the building's character.

(2) "A beguiling aberration" was one juror's description of this collage using pen and ink and marker. It is the work of David M. Lane, an architectural intern with the Vail, Colo., office of Victor Mark Donaldson Architects, and it shows the living room of a single family house under construction in Berry Creek Ranch, Colo.

(3) The third of the drawings by Geraldine Pontius chosen for inclusion here was this plan study for a loft for two writers. Abstract as it looks, it is in many ways—such as the colors—a direct notation of design intent. Pontius likes to do such a study for each of her designs.

(4) Le Corbusier's Modulor man has been gesturing for more than three decades at imaginary proportional relationships. At last Anthony Ames of Atlanta, in one of his two premiated drawings, has put the figure to work, or at least to play. The basketball game takes place before an elevation of a studio/guest house designed by Ames with the aid of Modulor-based proportions.
Saint John's church, Jacksonville, Fla., is shown (1) in a handsomely rendered plan by John Embler of the Rambusch Co. The plan was prepared for architect Stanley Gordon and shows the proposed relocation of the altar to the crossing, new finishes, and new furnishings.

(2) Mack Scogin, AIA, president of Heery & Heery, Architects and Engineers, Atlanta, finds time for some drawings that (we assume) were never requested by Heery & Heery clients. Some of his submissions explored the relationship between architecture and foundation planting, another showed a building dedicated to inflated construction costs. The one chosen by the jury is Scogin's "Proposal for a Gateway Entry to a Pediment Farm."

(3) The jury thought that this drawing, titled "A Few Bell Towers," possessed great charm and wit. It groups together 20 old and new church bell towers observed in Germany and 24 in Switzerland by Maynard Lyndon, FAIA, who formerly practiced prominently in Michigan and Southern California and now works in Europe.
One of the jury's favorites was a splashy sketch of a fountain (1) by Norman Kondy of San Francisco. Juror Gerald Allen, who thought it was "just lovely," particularly admired the drawing's juxtaposition of two not-quite-coincident techniques, the patterns of the color application and the patterns of the ink drawing. 

**Honor Award.**

Plan renderings of large landscaped areas are notoriously difficult to make both realistic and graphically pleasing. An eminent success, the jury thought, was this Washington Mall Bicentennial Development Plan drawn by David M. Childs, AIA, and Richard Giegengack of the Washington, D.C., office of Skidmore, Owings & Merrill. From an original ink on mylar drawing, a double-weight brown-line ammonia print was made, and the print then colored with pencil.

(3) A second drawing chosen by the jury from the submitted works of Samuel Mockbee of Canton, Miss., was this poetic presentation of a fireplace design for his own house in Canton. The house, by the way, has just been chosen by the Mississippi Chapter/AIA for a design citation. 

**Honor Award.**
Two drawings were chosen from the work submitted by Mark Billy of Mission Hills, Calif., both showing buildings of iconic simplicity in a beguilingly lyrical manner (1). One of them has been used as the cover for this month's JOURNAL; the second, shown here, is a study for a building for the Museum of Contemporary Art in Los Angeles. Actually a collage, it incorporates, at lower left, a postcard view of the Acropolis in Athens.

(2) The second selected drawing by Kemp Mooney of Surber Barber Mooney Architects, Atlanta, and the final drawing of the competition winners, is, like Mooney's other winner, a view of Moccasin Hollow, a cluster housing development designed for Atlanta. Also like the other, this uses a collage technique to great effect. In this drawing, particularly, the jury felt, due to the contrast between fastidious drawing and surprising collaged elements, the result is elegant and stylish.
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A Two-Way Relationship
Of Drawings and Design

Paul Rudolph: Architectural Drawings.
Edited by Yukio Futagawa; text by Paul Rudolph. (Architectural Book Publishing Co., $55.)

As the earlier pages of this issue bear witness, architects are drawing pretty well these days. That hasn't always been the case. In the late '60s, young architects learned to *talk* architecture, not draw it, and, for a long time before that, drawing for most architects was an expedient tool, but laboring for a beautiful result smacked suspiciously of artiness, even of Beaux-Artiness. Throughout this whole period—and the present collection spans 30 years—Paul Rudolph has been consistently producing drawings of spectacular complexity and finesse. If the present generation of young architects draws well, Rudolph's example is certainly one of the reasons.

Futagawa's collection of more than 150 Rudolph drawings is beautiful, of course. Happily, it is more than that. It is not limited to the glamorous presentation drawings for which Rudolph is famous, but includes some felicitous—yet quite unpretentious—design sketches as well, and the book closes with a chronological catalog of all Rudolph's major built and unbuilt projects, thus serving as a comprehensive guide to the architect's work.

It also serves as a spur to thinking about the relationship between drawing and architecture, a relationship that may be more fundamental to Rudolph's work than to the work of most others. Reyner Banham, indeed, in once writing about Rudolph's Arts and Architecture building at Yale, said that "It is one of the very few buildings I know which, when photographed, was exactly like a drawing, with all the shading on the outside coming out as if it were ruled in with a very soft pencil. It is a building about draftsmanship as surely as many English 18th-century Palladian buildings are, with their carefully pic-toothed rustication with the actual pattern of the design taken directly from the engravings in the Quattro Libri. So that it is a building for draftsmanship and a building conceived in terms of draftsmanship."

This may be a bit of an overstatement, of course, but in a very frank and readable introduction to the book, "From
Conception to Sketch to Rendering to Building," Rudolph himself does ascribe a great degree of importance to the role of drawings. Early sketches "for an architect are the most direct line between his imagination and the tangible," and more finished presentation drawings serve to prevent, during the working drawing stage, "an evolution of the design which would not be true to itself. During this stage the rendering assumes a special authority as a reminder of the ideal and original intent."

Rudolph even speculates how drawing methods may influence design decisions: "Some construction materials are easier to depict through rendering than are others. This probably accounts for some of my interest in concrete and highly textured surfaces in general. The technique of rendering with line to create light and shadow suggests a certain linearity in the texture of walls which sometimes influences the choice of materials. . . . For instance, brick has always seemed to me to be an alien material in the 20th century, but perhaps part of this attitude lies in the fact that it is relatively difficult to draw."

Yet, for all the importance Rudolph understandably attaches to his drawings, he points out that an architectural concept is both prior and superior to its representation: "These renderings are merely a formulation to indicate the general scope of the project, but only the imagination, finally, determines the character of any building. One can only imagine unbuilt buildings. They can never truly be drawn, and no model or photograph can ever show their ultimate nature." Stanley Abercrombie, AIA

Books continued on page 70
‘The Beauty That Springs From Drawing Architecture’


For architects, drawings can be many things. As fantasy the highly rendered images evoke worlds of wonder as appealing as a Disney creation. As finely delineated representation they recall the best of still-life painting.

Perhaps brought on by the insecurity of the times, it is curious that suddenly architects feel the necessity to reaffirm their status as artists through drawing alone and not through building exclusively. Once virtually unknown to the public, many architects’ sketches have recently become monumental statements. Sketches, now seen as ideological works of art, hang in galleries and museums. What was once incidental is now an end in itself. Yet paradoxically, drawings, which can by their nature present evocative scenes, can never have the same sensory impact as buildings. Herein lies drawings’ greatest flaw.

Many architects and the general public associate architectural drawing with engineering problem-solving. One expects to find notated some essential ideas incorporated somehow into the final built product. Drawing in plan, section, and elevation is often assumed to be merely a vehicle of communication from architect to contractor, so it may seem unlikely that architects’ drawings can be art. Architectural Drawing: the Art and the Process is the most recent volume dedicated to affirming this fact.

Although the quality of architects’ drawings can be as high as anything done by painters and sculptors of comparable talent, many architects capable of virtuoso draftsmanship seem unaware of the beauty that springs from drawing architecture.

For the 30 architects selected by Gerald Allen and Richard Oliver for inclusion in their book, drawings are windows on a reality not yet real, a picture of possibilities, suggestions, and potentialities, the keys to revery, corrections on the now visible thoughts, hopes, and dreams.

The energy projected behind the images endows these drawings with impact; we can sense a process whereby issues are confronted and answers formulated in a new light. The architects claim to have used the drawings reproduced as tools to explore notions evident only in the particular drawing format selected, and it is surprising how often this explanation recurs. This suggests fragmentation of process, and that thought should be equivalent to its stylization in some sense. Drawing is a shorthand for an idea and primarily represents the beginning of a concept to be fleshed out later. In this the aims of many of the architects seem to parallel minimalist artists.

Perhaps the role drawing really plays for these architects is confessional, a personalized view of reality beyond the simply representational. They can show us an idealization brimming with emotion-building without the cool judgmental eye of the scientist-engineer. No longer are the drawings required to maintain the clarity of mechanical drawing, either in symbol or in technique, and no longer are the drawings considered to be blueprints for action directly. By reducing their sphere of influence, architects have suffused their drawings with dramatic narration.

Allen and Oliver gathered drawings for this book with the intention of wide general appeal. They chose a simple strategy to explain the subject and the drawings. The book starts with an essay on the whys and wherefores (some stated all too briefly) of art and architectural drawings. Very nicely covered, with many informative illustrations and lucid explanation, is a taxonomy of architectural drawing, and the book is valuable to drawing students because of devotion to this detail. Architects and their drawings are worthy of attention, we are reminded, because they are uniquely qualified through the practice of their art to critique culture. From their coign of vantage, architects propose change and offer commentary. The art of architecture, primarily associated with buildings, is evinced with equal eloquence in architectural drawings. The authors suggest at the conclusion of the introduction that the chaos of society will be mirrored in the work to follow.

The second part is devoted to 175 drawings continued on page 72
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Books from page 70

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The drawings are presented without editorial comment, and interpretation is continued on page 74

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Books from page 72
therefore rather hit or miss. Invited to invent an interpretive schema, we are tantalized by the expectation that one sequence of images leads inexorably on to the next.

In architectural drawing, nothing is as it might be perceived. These drawings display psychic and intuitive picture forms locked in an intermediate world between building and poetry. They come to us as pictographs, as allegorical messages, allusions, residual memory. We are invited to share with the drawings oneirocritical illumination. Geraldine Pontius

Building Renovation and Recycling.
Edgar Lion. (Wiley, $24.95.)

Many books extol the values of recycling old buildings; still others give examples of handsomely renovated structures. This one, written by a Canadian engineer, describes exactly how renovation is done. A small book of only 132 pages, it is nonetheless packed with information.

The book is divided into three major sections: analysis, design, and construction. The section on analysis is devoted to an assessment of the proposed project, covering such topics as site inspection and tests, construction failures, choice of materials, and energy considerations.

The second section on design discusses both fundamental design problems and such special considerations as access for the handicapped and the prevention of vandalism. It considers an array of design decisions—foundations, finishes, hardware, electrical installation, airconditioning, vertical transportation, mall enclosures. The final section on construction gives guidance on such topics as estimating costs, contracting, subcontracts, bonding, insurance, construction methods, and claims. In-depth coverage cannot be given to any of the subjects covered in a book of such few pages, but the author gives an amazing number of recommendations in nontechnical language.


More than just a catalog of the admirable Putnam sculpture collection at Princeton University, this handsomely illustrated book is also a study of 20th century sculpture and sculptors. The outdoor collection, made possible by an anonymous gift in memory of a Princeton student who lost his life in World War II, contains works by such notables as Picasso, Henry Moore, George Segal, and Louise Nevelson. There is an essay by Patrick J. Kelleher, former director of Princeton's Art Museum, about each of the 21 sculptures, drawn from hitherto unpublished information gathered from the artists, their families, scholars, and art dealers. Youngja Lee Kim, a specialist in the conservation of outdoor sculpture, also contributes an essay on the preservation of such works of art.


A revision of a work first published in 1978, this book is comprehensive in its discussions of construction project administration. Opening chapters consider the design/construction process; inspector responsibility and authority; and resident inspection office responsibilities. Discussions follow on records and reports; specifications; and construction laws and labor relations. There are chapters also on such matters as construction safety; negotiations; risk allocation and liability sharing; and preconstruction operations. The author also deals with construction scheduling and operations, value engineering, payment materials and quality control, claims and disputes, and project closeout. □
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Furnishings
The changing wonders of Wendell Castle.
By Stanley Abercrombie, AIA

Among American craftsmen, Wendell Castle has long been eminent. Born in Emporia, Kan., now living in Scottsville, N.Y., Castle has been celebrated in more than a dozen one-man gallery exhibitions (including ones at the Alexander Milliken Gallery, New York City, the generous source of the photographs we show here, and at the Fendrick Gallery, Washington, D.C.). Castle pieces are in the collections of the Philadelphia Museum of Art, the Boston Museum of Fine Arts, the Museum of Modern Art, and the Metropolitan.

But Castle's story is not a simple pursuit of success; there has been, in his work, a recent and marked change of style. His earlier pieces, exemplified here by the 1979 Zephyr rocker (2) of curly maple and the 1975 expandable maple table (3) were known for their way with laminating technique. (Castle is also co-author with David Edman of The Wendell Castle Book of Wood Lamination.) And others (see next page) amused and startled with trompe l'oeil effects. Castle's new work eschews the sculptural look of the work that made him famous; it is unambiguously furniture, but with a highly idiosyncratic character and an unabashed emphasis on the most dazzling workmanship. The 1982 gaming table (1), for example, is a wood-fitting wonder of natural maple, black lacquered maple, burly redwood, and gaboon ebony, poised on tiny ball feet of chrome plated brass. And the tall cabinet shown in three different views (4) is delicately, precisely sprayed with inlaid ebony.
The earliest (and simplest) of the Wendell Castle pieces we show here is the 1962 sling chair (1) with frame of natural oak and a T-shaped leather sling. Two pieces in the tradition of Castle's trompe l'oeil style are the 1979 mahogany table (2), complete with mahogany briefcase and mahogany hat, and the 1980 ebonized mahogany "Tail Coat on a French Chair," (3) seen recently at the Milliken Gallery.

Shown last November at the Pratt Institute Gallery, Brooklyn, was a whole suite of the new Castle furniture. His writing desk with a pair of chairs (4) is made of curly English sycamore, both solid and veneer, and the desk's drop front opens to reveal cabinetwork of purplish amaranth wood. The ebony accents include 8,500 inlaid dots.

The winged "Victory" desk (5), although built in 1980, is a walnut creation of the familiar Wendell Castle furniture-as-sculpture style, but the little "Demi-Lune Table" of 1982 (6) is clearly one of the new works. Brazilian rosewood, this time, with accents of ivory.
Join Us On A Voyage Of DISCOVERY

Please come forth if you or your firm has never had work published in a major American architectural magazine. We're saving space in the December issue of the AIA JOURNAL for presentation of buildings by "the unpublished" among U.S. architects.

Some ground rules: They must be completed buildings, remodelings, or additions, not projects. We need material on them by Oct. 10.

There is no set format for submissions: Anything that will help us understand and evaluate the design will do. But please label all submitted materials.

By "major magazines" we mean the JOURNAL, Architectural Record, Progressive Architecture, and the late Architectural Forum and Architecture Plus. Having had work published in any other media (local and regional publications, trade magazines, foreign magazines, etc.) doesn't affect eligibility to be included in the issue. Nor are individuals ineligible if buildings they designed previously for firms not bearing their names have been published.

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Environment from page 26

'overdraft' is occurring in 27 of 45 Southwest and Great Plains subregions."

The foundation is also concerned with what it calls the "deterioration of the already inadequate information base on which environmental policy depends." Says the report, "Our monitoring of environmental problems is even more deficient than our scientific knowledge. We have no monitoring data sufficient to describe accurately the extent of developing seriousness of any environmental problems." And, the foundation warns, "Because of budget cuts, the information base for environmental policy is likely to be even weaker in the future." And, as a result, future environmental policy decisions "will be based even more than in the past on ideology or the instincts or self-interest of decision-makers."

The report criticizes the Reagan Administration for breaking "the bipartisan consensus that supported federal protection of the environment for more than a decade" by giving priority to "deregulation, defederalization, and defunding domestic programs... A year and a half into the Administration's term, no hierarchy of environmental priorities or concepts of a positive federal role in maintaining and enhancing the nation's environment is yet discernible."

The report stresses that "the connection between federal programs to protect the environment and the physical quality of the environment has been amply documented." It warns that "delays in pursuing environmental programs may have serious consequences. At stake are human health, the condition of our farms and forests and rivers, and irreplaceable natural areas and animal species. Not only are the stakes high; many decisions are irreversible." As for the Administration's policy on relying on the private market place and state and local governments to assume some of the federal environmental programs, the report notes, "for many environmental programs, it was the failure of the private market place and failures or inaction of state and local government that led to federal intervention in the first place." The authors question whether "fiscally strapped" state and local governments can carry the cost of environmental programs and whether private industry will have incentives to do so.

As for the cost of environmental programs, the authors suggest that they have "some economic impact, but it is much smaller and less serious than is often claimed." (Their analysis is based on a comparison between projected economic performance without pollution control programs and the actual and projected performance with the programs in effect.) The Bureau of Economic Analysis estimates that the nation spent $55.7 billion (or about 2 percent of the GNP) for pollution control in 1980. The authors do suggest, however, that in the future there will be a need to balance environmental improvements against their economic cost.

The Institute from page 26

ings awards must be postmarked Oct. 1; submissions Dec. 1.

• For the R.S. Reynolds memorial award, the nominations postmark deadline is Nov. 24; submission postmark date is Dec. 31. Entries for the Reynolds aluminum prize for architectural students must be received by Feb. 10.

• AIA/ACSA award for educational nominations must be postmarked Oct. 8, with final documentation postmarked Jan. 14.

• Entries for the Louis Sullivan award for architecture must be postmarked Jan. 7, with submissions postmarked Feb. 18.

For more information, contact Maria Murray at Institute headquarters, (202) 626-7390.

Scholarships Awarded to 154

AIA and the AIA Foundation have awarded $168,500 in scholarships to 154 undergraduates and graduate students at 68 schools of architecture and to four intern architects. Last year $131,100 was awarded to 150 students.

The 1982 awards ranged from $500 to $2,000, based on evaluation by AIA's scholarship committee of each applicant's academic record, financial need, and recommendations by deans or department heads. Scholarships awarded to professionals for study beyond the first professional degree are based on the committee's evaluation of an applicant's proposed program for study or research.

The committee for 1982 awards was chaired by Robert Mooney, AIA. Other members were Cynthia Strawn Browne, AIA; Van B. Bruner, FAIA; Donald King, AIA; and Nora Klebow, vice president of the Association of Student Chapters/AIA.

The annual scholarship program is supported through endowments to the AIA fund and donations to the AIA Foundation. Several scholarships administered by the Institute and the foundation are funded by annual gifts from private corporations and associations in the building industry, including the Johns-Manville Fund, $2,000; Knoll International, Inc., $1,000; and Blumcraft of Pittsburgh, $500. □

BRIEFS

Water Sculpture Competition.

The first international water sculpture competition is being held in conjunction with the 1984 Louisiana World Exposition. An Oct. 31 deadline has been set for artists' submissions of slides or photographs of existing work. From these, 30 prefinalists will be selected, and up to 15 of these will be commissioned to design water sculptures for the fairgrounds. For information, contact: Lee Kimche & Associates, International Water Sculpture Competition, 3320 Quebec Place N.W., Washington, D.C. 20008.

Japanese Landscape Architecture Tour.

A study tour, scheduled for Nov. 3-18, will include stops in Tokyo, Hakone, Kyoto, Kurashiki, Inland Sea, Osaka, Hong Kong, and the Peoples Republic of China. The group will meet with Japanese landscape architects and tour the Expo Memorial Park and the Senri New Town in Osaka among other points of interest. For information, contact Gert Lederer, Japan Study Tour, 4852 Paseo de Vega, Irvine, Calif. 92715.

Public Housing Energy Survey.

The Council of Large Public Housing Authorities has gathered data on fuels used to heat some 100 of the nation's largest federal low-income housing projects. A 40-page report based on the data shows ranges of high and low energy consumption in comparisons between projects over a three-year period. The report (#82-3) is available for $5 from the council, 7 Marshall Street, Boston, Mass. 02108.

Peter Wilson Drawings Exhibit.

The Philippe Bonnafont Gallery, San Francisco, has on view through Oct. 9 an exhibition of project drawings and sketches by Australian architect Peter Wilson.

Passive Solar Information Series.

The Passive Solar Industries Council has developed a series of technical reports entitled "Passive Solar Trends," based on current government and industry research on a variety of passive solar subjects including regional market trends. For a limited time the reports are available free from PSIC, 125 South Royal, Alexandria, Va. 22314.

American Art Museums Exhibit.

The Whitney Museum of American Art has on view through Oct. 10 an exhibition of eight new museums and additions currently being planned or now under construction. The projects are the Dallas Museum of Fine Arts by Edward Larrabee Barnes Associates; the High Museum of...
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Access Desk. Desk is designed for use by students confined to wheelchairs. The table top measures 41x25 inches, and the height can be adjusted from 26 to 32 inches. (Hausmann Industries, Northvale, N.J. Circle 178 on information card.)

Teak Parquet Flooring. Prefinished 12-inch-square teak tiles feature either beveled edges or presanded square edges. (Kentucky Wood Floors, Louisville, Ky. Circle 180 on information card.)

Drafting Film. Polyester base film is designed for increased translucency for overlay drafting practices in pen, ink, or type. Direct multilayer compositing is also possible. (Keuffel & Esser Co., Morristown, N.J. Circle 181 on information card.)

Grab Bars. Stainless steel grab bar line features 20 configurations, including grab bars in a variety of lengths, and a swing away bar for toilet stall installations. A number of exterior diameters in smooth or safety grip finishes are available for residential or commercial installations. (American Dispenser Co., Carlstadt, N.J. Circle 179 on information card.)

PRODUCTS

Marble Table. Oval cocktail table designed by Paul Mayen features a one-inch-thick bullnose edge marble top. It is available in eight marbles, with a polished brass or chrome finished base. (Architectural Supplements, Inc. New York City. Circle 174 on information card.)

Drafting Chair. Nylon upholstered chair available in 19 colors features a five-prong base and a seven-inch adjustment from 20 to 27 inches. (Furinpa, Inc. Minot, N.D. Circle 173 on information card.)

Ceramic Tiles. Eight-inch-square, flat back tiles feature a slightly mottled and slip resistant finish. Almond colored tiles are single fired and recommended for residential use. (Marazzi USA, Inc., Dallas. Circle 172 on information card.)

Ribbed Wallcovering. Sound absorbent ribbed fabric wallcovering in 39 colors may be installed on movable steel doors and partitions. It is designed to meet strict fire codes and reduce vandalism. (Eurortex, Philadelphia. Circle 171 on information card.)
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