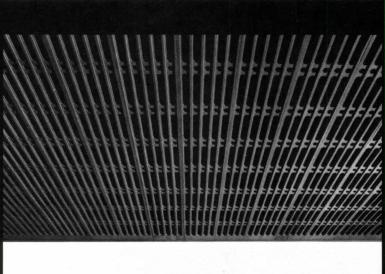




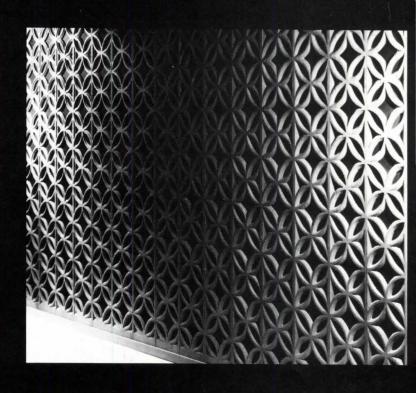
#### **Acoustical Wall and Ceiling Systems**

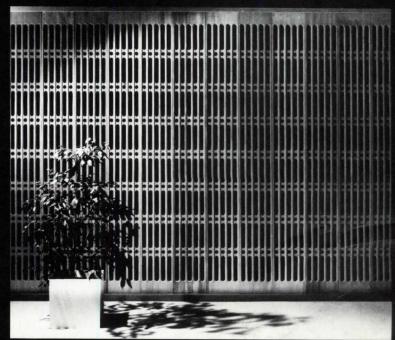
The newest addition to our Acoustical
Wall and Ceiling Systems in Wood and Metal
is a group of carved wood grilles.
These are handsomely styled and engineered
for architectural applications requiring sound control
and durability. Easily installed modular panels
are ideal for auditoriums, libraries, churches, offices,
lobbies, broadcasting studios and other locations
where sound control or enhanced appearance are desired.
Available in oak or redwood.
Forms & Surfaces Box 5215
Santa Barbara, CA 93108 (805) 969-4767











FORMS+SURFACES

#### EVENTS

Mar. 1-3: Material Handling Systems & Controls Conference, Royal Sonesta Hotel, New Orleans. Contact: Material Handling Institute, 1326 Freeport Road, Pittsburgh, Pa. 15238.

Mar. 2-3: Development Feasibility Symposium, sponsored by AIA, AIP, ASPO and AIREA, National Housing Center, Washington, D.C. Contact: Peter Wood, AIA Headquarters.

Mar. 4: Solar Energy Seminar, University of California at Davis.

Mar. 6-7: Construction Cost Estimating Bidding & Optimization Course, Hartford Graduate Center.

Mar. 6-8: Practical Planning and Design for Efficient Office Space Seminar, New York City, sponsored by New York University (repeat seminar May 22-24, Chicago). Contact: New York Management Center, 360 Lexington Ave., New York, N.Y. 10017.

Mar. 6-10: National Association of Corrosion Engineers annual conference, Albert Thomas Convention Center, Houston. Contact: NACE, P.O. Box 986, Katy, Tex. 77450.

Mar. 8: Home Building Industry Workshop, Iowa State University, Ames.

Mar. 8-9: Construction Cost Control Course, Hartford Graduate Center.

Mar. 10-12: National Conference on Solar Energy, Shoreham Americana Hotel, Washington, D.C. Contact: Charles B. Slack, Inc., 6900 Grove Road, Thorofare, N.Y. 08086.

Mar. 13-15: Seminar on Computer-Communication Network Design and Analysis, New York City, sponsored by Columbia University (repeat seminar May 15-17, Chicago). Contact: New York Management Center, 360 Lexington Ave., New York, N.Y. 10017.

Mar. 13-15: Construction Documentation Conference, National Bureau of Standards, Gaithersburg, Md. Contact: Roger Rensburger, A151 Technology Building, NBS, Washington, D.C. 20234.

Mar. 14-15: Conference on Production Welding for Construction, Mining and Agricultural Equipment, Continental Regency Hotel, Peoria, Ill. Contact: American Welding Society, 2501 N.W.

7th St., Miami, Fla. 33125.

Mar. 14-16: National symposium on the technical, environmental, socioeconomic and regulatory aspects of coastal zone planning and management, Jack Tar Hotel, San Francisco. Contact: American Society of Civil Engineers, 345 E. 47th., New York, N.Y. 10017.

Mar. 15-16: Advanced Construction Scheduling & Planning Techniques Course, Hartford Graduate Center. Mar. 16-17: Professional Services Business Management Association national conference, San Francisco. Contact: Marjanne Pearson, Robinson & Mills, 1005 Sansome St., San Francisco, Calif. 94111.

Mar. 16-18: Passive Solar Conference, University of Pennsylvania, Philadelphia. Contact: Mid-Atlantic Solar Energy Association, Department of Architecture, University of Pennsylvania, Philadelphia, Pa. 19104.

Mar. 16-18: Course on the Technical Design of Solar Thermal Systems for Buildings, University of Colorado, Boulder. Mar. 20-21: Institute on Deterioration and Restoration of Concrete, University of Wisconsin, Madison.

Mar. 20-22: Mid-West Health Exposition and Conference, Kansas City, Mo. Contact: Raymond L. Hueholt, AIA, Smith-Voorhees-Jensen, 1040 Fifth Ave., Des Moines, Iowa 50314.

Mar. 22-23: Air Pollution Control Association annual government affairs seminar, Hyatt Regency Hotel, Washington, D.C. Contact: APCA, P.O. Box 2861, Pittsburgh, Pa. 15230.

Mar. 30-31: Conference on the Marketplace for A/E Services: New Directions, sponsored by COFPAES, Roosevelt Hotel, New York City. Contact: Steven Biegel, AIA Headquarters. Mar. 31: Call for papers, on in-situ strength evaluation of concrete, for American Concrete Institute conference in Houston, Oct. 29-Nov. 3. Contact: V. M. Malhotra, ACI Committee 214, c/o CANMET/EMR, 405 Rochester St., Ottawa, Ont. K1A OG1, Canada. Apr. 1: Applications deadline, Cintas fellowships in architecture, painting, sculpture, music and creative writing to young persons of Cuban citizenship or lineage who currently reside outside Cuba. Contact: Institute of International Education, 809 United Nations Plaza, New York, N.Y. 10017.

Apr. 10-May 5: Architecture and Gardens Tour of Japan and Taipei/Hong Kong. Contact: Kenneth M. Nishimoto, AIA, 147 S. Robles Ave., Pasadena, Calif. 91101.

May 21-24: AIA annual convention, Dallas.

#### LETTERS

Coldspring, Md.: It was a pleasant surprise to see such up-to-the-minute photographs of Coldspring in the article on Baltimore in the November '77 issue (p. 38), and to read the quotes by M. Jay Brodie, AIA, the new commissioner of the department of housing and community development (DHCD). By contrast, the reference to "landscaping" by Lawrence Halprin concerns work done

for the master plan which was completed in Sept. 1972.

The Delta Group of Philadelphia, as consultant to the DHCD and working in close coordination with Moshe Safdie, is fully responsible for providing landscape architectural and engineering services for all phase 1 public improvements, including the pedestrian deck prominent in one of the photographs. We have been involved in the project in that capacity since April 1974.

The project has been extremely challenging and demanding and is certainly representative of a city and an agency willing to be flexible and sensitive, as well as bold. David M. DuTot,

Vice President The Delta Group Philadelphia

No 'One-Building' Architect: I found Roxanne Williamson's article on architectural family trees in the January issue to be interesting, but I must take issue with her designation of John Russell Pope as an architect with a "one-building" reputation, this being the National Gallery of Art in Washington, D.C. Certainly he is as well known as the designer of the Jefferson Memorial and the National Archives building, not to mention the Scottish Rite Temple, Constitution Hall, American Pharmaceutical Association headquarters and the National City Christian Church—all major buildings in the nation's capital.

In his native New York City, Pope carried on a successful and varied practice from 1900 until his death in 1937; he also designed buildings at Yale University and in Baltimore and Richmond, Va., among many other American cities. In London, he was architect for the Duveen wing of the British Museum and an addition to the Tate Gallery, as well as an office building for the U.S. government. It should also be noted that if anyone had a mentor, it was Pope: His was Charles Follen McKim.

In regard to the line stemming from James Renwick: I have never heard that William Holabird worked in his office (although Edgar A. Renwick joined the firm of Holabird & Roche), but it is generally agreed that another Chicagoan, John Wellborn Root, got his first drafting experience in Renwick's office, where he worked for a year without pay. Holabird and Root were connected later, of course, when their sons formed the firm of Hola-Sue Kohler bird & Root.

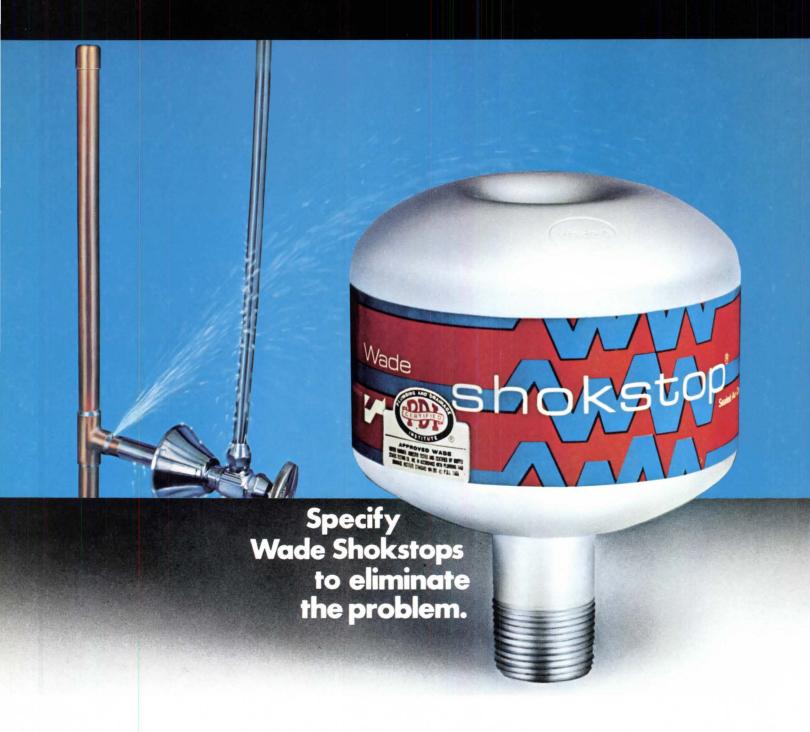
Architectural Historian U.S. Commission of Fine Arts Washington, D.C.

We welcome comments on any aspects of the profession or on the contents of this magazine.

\*\*Hockeytown U.S.A." Fine hockey teams aren't the only thing we're known for. Marvin was the first window builder to emphasize triple glazing, and in 20 years Warroad has produced untold thousands of them. Write for literature. Marvin Windows, Warroad, MN 56763. Phone: 218-386-1430. You've never been so insulated in all your life.

You've never been so insulated in all your life. chitect: Donald Pertinen Builder: Tom Cooper Circle 3 on information card

# When the air chamber fills up... expensive water hammer problems start.



Wade's stainless steel water hammer arresters protect batteries of commercial plumbing fixtures or a single quick-closing valve.

Design out water hammer problems — specify Wade Shokstops.

Wade Shokstops have been tested and certified in accordance with Plumbing and Drainage Institute Standard WH201.

Upon request, Wade Representatives will size and locate Shokstops for any piping

system or special equipment application.

For complete information on how Wade Shokstops handle water hammer problems write Box 2027, Tyler, Texas 75701.

#### **Tyler Pipe**



Subsidiary of Tyler Corporation

Member Plumbing and Drainage Institute © 1976 Tyler Pipe

#### **Board of Directors**

#### Officers

Elmer E. Botsai, FAIA, President Ehrman B. Mitchell Jr., FAIA, First Vice President

Herbert Epstein, FAIA, Vice President
Sarah P. Harkness, AIA, Vice President
Charles E. Schwing, FAIA, Vice President
Robert M. Lawrence, FAIA, Secretary
Joseph F. Thomas, FAIA, Treasurer
James A. Scheeler, FAIA, Executive Vice
President

Directors (Year indicates expiration of term)

Donald L. Hardison, FAIA ('80), California Harry W. Harmon, FAIA ('80), California Robert B. Marquis, FAIA ('78), California Henry N. Silvestri, AIA ('79), California Robert C. Broshar, FAIA ('78), Central States Thomas H. Teasdale, AIA ('79), Central States Lynn H. Molzan, AIA ('79), East Central States

Frank R. Mudano, AIA ('78), Florida/ Carribbean

Ray K. Parker, AIA ('80), Gulf States David L. Perkins, FAIA ('78), Gulf States Eugene C. Swager, FAIA ('78), Illinois Paul D. Bowers Jr., AIA ('80), Michigan David A. Holtz, AIA ('80), Middle Atlantic R. Randall Vosbeck, AIA ('78), Middle Atlantic

Gridley Barrows, AIA ('79), New England George M. Notter Jr., AIA ('80), New England Harold D. Glucksman, AIA ('80), New Jersey Anna M. Halpin, FAIA, ('79), New York Kenneth Klindtworth, AIA ('78), New York Saul C. Smiley, FAIA ('79), North Central States

James M. Harris, AIA ('78), Northwest William H. Trogdon, AIA ('80), Northwest Roger N. Ryan, AIA ('79), Ohio Derek Martin, AIA ('78), Pennsylvania Michael D. Newman, AIA ('80), South Atlantic Harold H. Tarleton Jr., AIA ('79), South Atlantic

Jay W. Barnes, FAIA ('79), Texas J. Harold Box, FAIA ('78), Texas Gerald L. Clark, AIA ('79), Western Mountain Harold C. Fleming, Hon. AIA, ex officio, Public Director

Charles Guerin, ex officio, President, ASC/AIA Des Taylor, AIA, ex officio, Chairman, Council of Architectural Component Executives

#### Headquarters

James A. Scheeler, FAIA, Executive Vice President

Richard H. Freeman, Group Executive, Component/Information

Nancy W. Truscott, Assistant Secretary/ Legal Counsel

William G. Wolverton, Hon. AIA, Assistant Treasurer/Controller

John P. Eberhard, FAIA, President, AIA Research Corporation

Marshall Purnell, Administrator, Community Services

J. R. Kirkland, Administrator, Component Affairs

James E. Ellison, AIA, Administrator, Education and Professional Development Arnold J. Prima Jr., AIA, Administrator, Government Affairs

Michael B. Barker, AIP, Administrator, Practice and Design

Muriel Campaglia, Administrator, Public Relations

John H. Schruben, FAIA, President, Production Systems for Architects and Engineers, Inc.

#### AIA JOURNAL

Evaluation: Rockefeller Center's Two (Bernard P. Spring, FAIA  Its recent extension is far more open		i i	20
Evaluation: A Troubled Theater That Allen Freeman and Andrea O. Dean The Mechanic is a successful sculptu as a playhouse			32
Evaluation: A Mental Health Facility, Lawrence R. Good, AIA, and William Special attention was paid to relatio community	E.	Hurtig	38
Evaluation: Letting a House Speak for Ellen Perry Berkeley  A writer experiments with a persona her own		If Through a Variety of Voices— proach to describing an environment—	42
The Art of Architectural Illusion—A.O Richard Haas paints buildings on bu		ngs, with whimsy and a sense of mission	44
Education for Design: A Group of Prac AIA's design committee finds that the		ners Looks at 18 Schools udio system is 'alive,' if not entirely well	48 1
Savannah's Victorian District: Trying R Mary E. Osman A nonprofit corporation's landmark e		ration Without Wholesale Dislocation— t to maintain racial and economic diver	
Lessons from Three Cities' Efforts at Co Nora Richter A report on revitalization programs in			56
Cover: Photo courtesy of the Boston Courtesy		e of Richard Haas' mural on the	
Departments Events Letters Going On	2 2 8	Books Acknowledgments Advertisers	64 88 88
Donald Canty, Editor; Suzy Thomas, A. Mary E. Osman, Senior Editor, Departm	nent	s; Andrea O. Dean, Senior Editor, Artic	eles

Allen Freeman, Managing Editor; Nora Richter, Editorial Assistant; Michael J.
Hanley, Publisher; Michael M. Wood, National Sales Director; George L. Dant, Production and Business Manager; Gladys McIntosh, Circulation Manager; Pam A.
Honeyman, Administrative Assistant; Richard H. Freeman, General Manager.

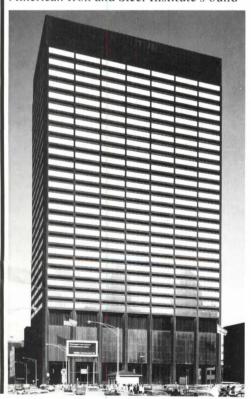
AIA JOURNAL, official magazine of The American Institute of Architects, published 14 times yearly at 1735 New York Ave. N.W., Washington, D.C. 20006. Telephone: (202) 785-7300

AIA JOURNAL, official magazine of The American Institute of Architects, published 14 times yearly at 1735 New York Ave. N.W., Washington, D.C. 20006. Telephone: (202) 785-7300. Subscriptions: for those who are, by title, architects, architectural employees, and to those in architectural education (faculty and schools), and to libraries, building construction trade associations and building product manufacturers: basic rate \$12 a year; \$20 two years; \$8 to architectural students in the U.S., its possessions and Canada. For all others: \$18 a year in the U.S., its possessions and Canada; other countries to those who are by title, architects: \$18 a year. All others outside the U.S., its possessions and Canada: \$30 a year. Single copy: \$2, payable in advance. Publisher reserves the right to refuse unqualified subscriptions. For subscriptions: write Circulation Department; for change of address: send Circulation Department both old and new addresses; allow six weeks. Second class postage paid at Washington, D.C. Quotations on reprints of articles available. Microfilm copies available from University Microfilm, 300 N. Zeeb Road, Ann Arbor, Mich. 48106. Referenced in The Architectural Index, Architectural Periodicals Index, Art Index, Avery Index to Architectural Periodicals. © 1978 by The American Institute of Architects. Opinions expressed by contributors are not necessarily of the AIA.® VOL. 67, NO. 2.

#### Harry Weese & Associates Will Receive AIA's 1978 Architectural Firm Award

AIA's 1978 architectural firm award will be presented to Harry Weese & Associates at the Institute's convention. The 30-year-old firm has offices in Chicago and Washington, D.C. The award is made annually to a firm "in which the continuing collaboration among individuals of the firm has been the principal force in consistently producing distinguished architecture for a period of at least 10 years." It is the highest honor the Institute confers upon a firm.

In 1973, the firm won an AIA honor award for the design of the Time-Life building in Chicago (photo below). Other award-winning Weese projects include: Washington's Arena Stage Theatre, the Milwaukee Performing Arts Center, the Crown Center Hotel in Kansas City, Kenwood Gardens apartments in Chicago, the American Iron and Steel Institute's build-



ing in Endicott, N.Y., and the First National Bank of Dayton, Ohio. The firm also designed the U.S. Embassy and staff apartments in Ghana and the Riyadh airport community in Saudi Arabia.

The firm has been involved in several transportation projects, including the design of Washington's Metropolitan Area Transit Authority rail system, with its 50 regional stations and 29 basic stations. It also worked on the Northeast corridor for the Federal Railway Administration and on Dade County, Fla.'s transportation system.

The firm, which was established in 1947 by Harry Weese, FAIA, now has 83 members, including 39 registered architects.

### Artists Honored This Year: Haas, Macaulay, Solovioff

Trompe l'oeil painter Richard Haas is one of three artists to win 1978 AIA medals, given to artists and craftsmen whose work is related to architecture. Haas, a witty deceiver (see p. 44), has been revitalizing thrown away walls of buildings from New York's Soho neighborhood to Boston's Architectural Center. His technical wizardry can turn blank cement into a lawyer's office or a loft home into a Pompeian villa.

Haas, on leave from Bennington College in Vermont, has had one-man exhibitions across the country. His work is in the collection of the Boston Museum of Fine Arts, the Whitney Museum of American Art and the San Francisco Museum of Contemporary Art, among others.

The second recipient is David A. Macaulay, a prize-winning writer and illustrator of children's books on architecture and city planning. Macaulay's children's books include *Cathedral* (1973); *City* (1974), about the imaginary Roman city of Verbonia; *Pyramid* (1975); *Underground* (1976), a visual journey through a city's infrastructure, and *Castle* (1977), —stories of planning and construction for older children.

A new book, this one for adults, will be published next month. Facetiously entitled *Great Moments in Architecture*, it is a humorous collection of drawings first gathered for an exhibition in New York City. (All the books, published by Houghton Mifflin, are available to AIA members at discount rates from AIA's department of publications marketing.)

Macaulay is head of the department of illustration at Rhode Island School of Design.

Another illustrator, Nicholas M. Solovioff, has won the third medal. Solovioff illustrated the growth and development of the World Trade Center in New York City between 1967 and 1973 when he was artist-in-residence for the Port of New York Authority.

He also captured the grace of some of the city's now demolished structures, such as the old U.S. Customs House, the Ansonia Hotel and the New York Chamber of Commerce building, which were published in *Fortune* magazine. Also for *Fortune*, he illustrated Chicago's landmark buildings.

Solovioff has illustrated Time-Life books on Egypt and Rome. Collections of his work may be found in the National Archives, the Smithsonian Air and Space Museum, the Robert Woods Bliss collection at Dumbarton Oaks, all in Washington, D.C., and at Harvard's Fogg Museum.

#### Robert Venturi Recognized For Influential 1966 Book

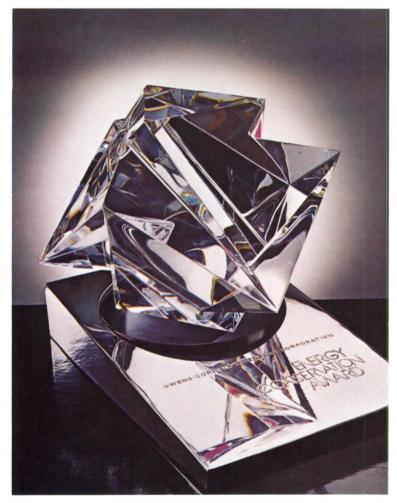
Robert Venturi, AIA, has been selected to receive the Institute's medal given annually to an individual or organization responsible for a significant project related to architecture. The honor comes to Venturi for his book *Complexity and Contradiction in Architecture*, first published in 1966 by the Museum of Modern Art in New York City and republished in 1977 in an enlarged edition.

The book has been controversial since its first publication. Art historian and critic Vincent Scully called the first edition "probably the most important writing on the making of architecture since Le Corbusier's *Vers une architecture* of 1923."

continued on page 12

While last winter's energy shortage was literally turning workers and students out into the cold, many people were working hard to do something about it.

We honor some of these architects and engineers with the 1977 Owens-Corning Energy Conservation Award.



At one time it was merely prudent to conserve energy. Now, it is a matter of survival.

For years now, experts have been predicting energy shortages. Last winter their predictions came terrifyingly true.

Lack of sufficient energy resources closed thousands of businesses and schools. Suddenly, America was in a crisis. A crisis that wouldn't pass over by itself.

In recognition of this urgent need, architects and engineers have been searching for new and better ways to make their projects more energy efficient.

The sixth annual Owens-Corning Energy Conservation Awards program honors some of those people who, through creative efforts, have designed buildings and mechanical systems that make significant contributions towards this goal.

This year, the Awards Jury made a special point to underscore the philosophy used in establishing the winners.

The panel—comprised of architects and design engineers—all felt that "energy conservation could not be separated into just architectural envelope or just engineering systems. That every entry had to be examined for its total contribution to conserving energy. And only in a case where a project had a particularly outstanding solution could it merit an award for just architecture or just engineering."

For 1977, there are four winners and three honorable mentions. The winners are illustrated on the next four pages. The honorable mentions are as follows. We hope you'll appreciate them all as much as we do.

#### Honorable Mention, Institutional Category

Rowe Holmes Associates, Tampa, Florida, for the College of Business Administration Building, University of South Florida, Tampa, Florida.

#### Honorable Mention, Commercial Category

Ellerbe Associates, Bloomington, Minnesota, for the Western Life Insurance Company, Corporate Offices, Woodbury, Minnesota.

#### Honorable Mention, Governmental Category

Moore, May and Harrington Architects Inc., Gainesville, Florida, for the Air Terminal at Gainesville Municipal Airport, Gainesville, Florida.

#### The 1977 Energy Conservation Awards Jury

- Jack E. Tumilty, President, Jack E. Tumilty, P.E. & Associates, Consulting Engineers, Tulsa, Okla.
- Walter R. Ratai, President, Walter R. Ratai, Inc., Consulting Engineers, Glendale, Wisconsin.
- David A. Pugh, General Partner, Portland office of Skidmore, Owings & Merrill, Portland, Oregon.
- Jack D. Train, President & Director of Metz Train Olson Youngren, Inc., Architects, Engineers and Planners, Chicago, Illinois.
- Robert C. Metcalf, Dean of The College of Architecture & Urban Planning, University of Michigan, Ann Arbor.
- Charles C. Law Jr., Acting Assistant Commissioner of The Office of Construction Management, Public Building Service, General Services Administration, Washington, D.C.

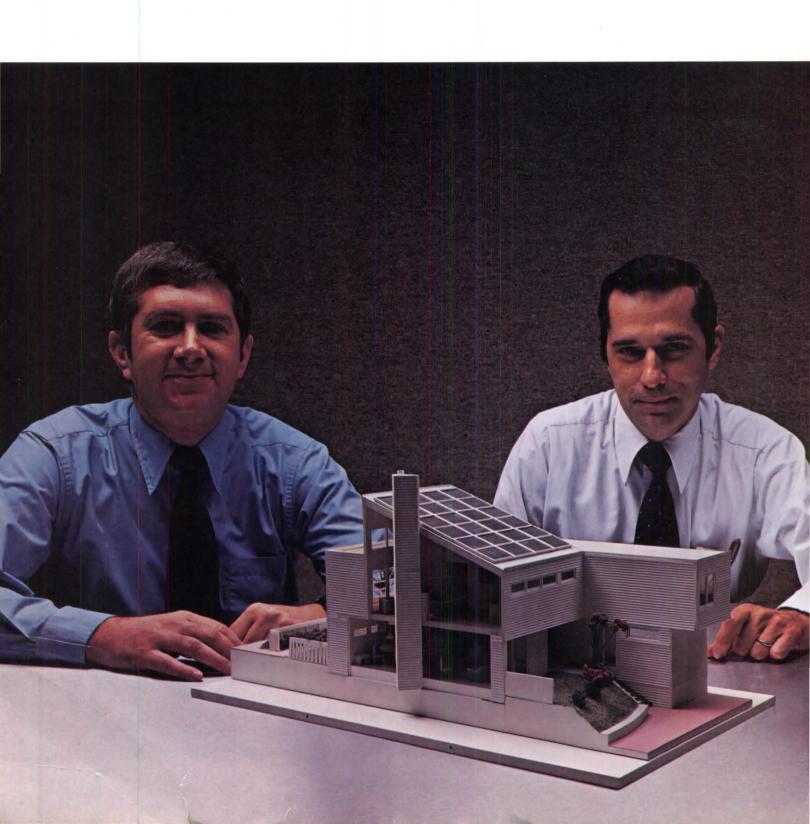
For more information about the winners, write to A.B. Meeks, Owens-Corning Fiberglas

Corporation, Building Products Operating Division, Fiberglas Tower, Toledo, Ohio 43659.



Winner: Special Category (Residential) Lee Harris Pomeroy, Jack Lebduska, Pomeroy, Lebduska Associates, Architects, New York City.

Project: Bedford Mews, Bedford, New York A 160-unit townhouse condominium development with many energy efficient features. In addition to overall conservation planning and design, twenty-eight units will have factory-made solar systems including collectors, packaged energy recovery devices, water-to-water heat pumps and hot water storage. These systems will provide heat and hot water at a low \$331 a year, saving approximately \$436. In addition, the development's outdoor swimming pool and 3,000 sq. ft. clubhouse will be solar-heated for an estimated \$2,300 annually. A \$1,900 savings.



Winner: Governmental Category Stewart Daniel Hoban, Stewart Daniel Hoban Associates, Architects, Washington, D.C.

Arthur Cotton Moore, Arthur Cotton Moore/Associates,

Architects, Washington, D.C.
William I. Pulgram, Associated Space Design, Interior

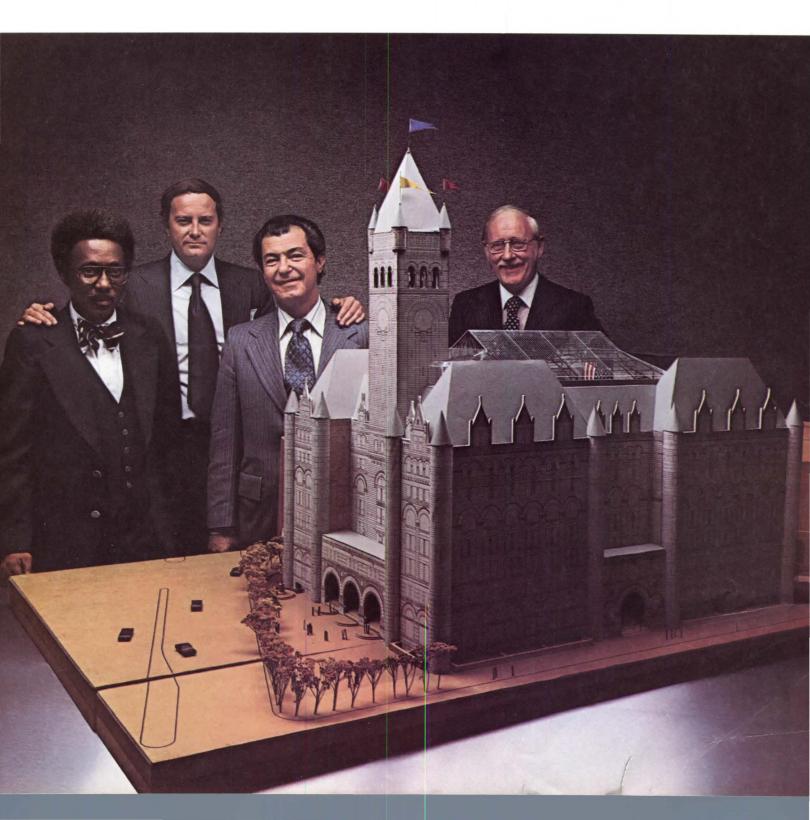
William L. Pulgram, Associated Space Design, Interior Planning and Design, Atlanta, Ga.

William Marshall, McGaughy, Marshall & McMillan, Project Management and Contract Documents, Norfolk, Va. Gershon Meckler Associates, P.C., Mechanical Design Engineers, Washington, D.C. (not pictured).

**Project: Old Post Office Building, Washington, D.C.** The inside of this 1899 Romanesque Revival building is being converted into a modern, imaginative and

energy-efficient office building with a museum, art galleries, restaurants and stores.

The giant cortile skylight—covered over for years—will be reglazed. An unusual system of "thermal louvers" installed beneath the skylight will work as solar collectors. A unique air-conditioning system using chemically dehumidified air, plus window awnings and thermal insulated glass, will further minimize energy needs. Estimated annual fuel savings: up to 25%.



Winner: Special Category Warren L. Custer, H.F. Lenz Company, Consulting Engineers, Johnstown, Pennsylvania.

Project: Carnegie-Mellon University's Science Hall, Pittsburgh, Pennsylvania This huge 335,588 sq. ft. building had a traditional, oversized, air-handling system using 100 percent outside air. This required costly preheating and reheating.

Key to the redesign was a smaller air-side system that separates contaminated air from the science lab, and recovers heated air from the rest of the building.

This highly efficient system uses the adjacent

buildings in the campus complex as a heat sink—heating the entire 557,059 sq. ft. with recovered energy.

Cost: approximately \$925,000. Annual fuel savings: about \$300,000.

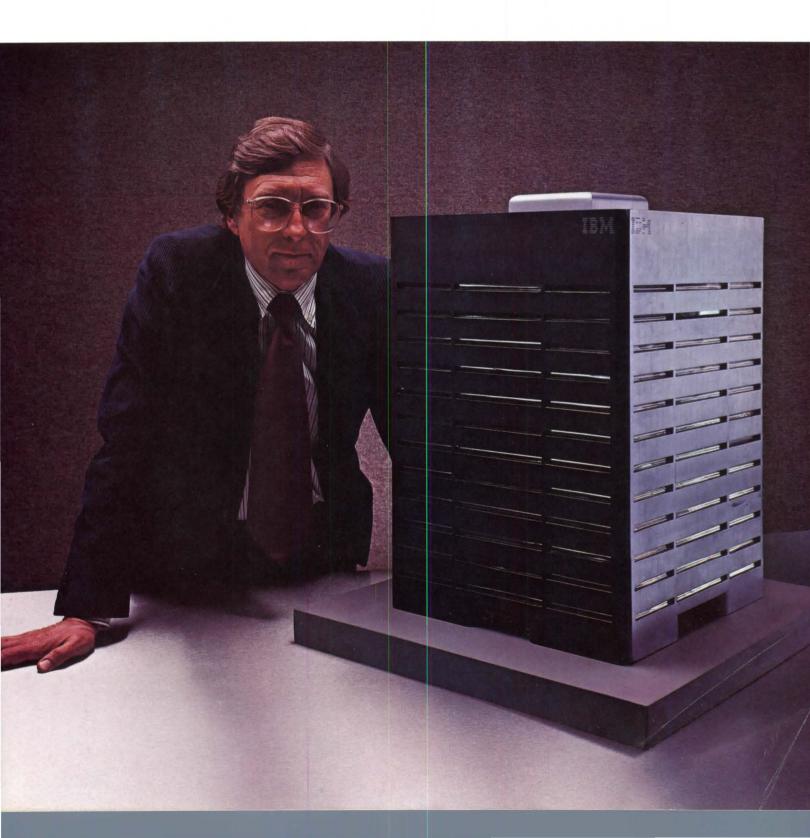


**Winner: Commercial Category** Gunnar Birkerts, Gunnar Birkerts and Associates, Architects, Birmingham, Michigan.

Project: IBM Office Building, Southfield, Michigan A building that's uniquely energy efficient. Its two-color exterior curtain wall keeps its interior cooler in summer—warmer in winter.

Its "sill reflector" system—a reflector below the outside window line which bounces sunlight off a reflector above the inside window line—reduces the lighting load by one half.

Combined with an air recovery system, estimated annual fuel savings: \$111,000.



Going On from page 6

Another critic said that it told "how to coexist with, and learn to love, the mess."

One of the book's precepts, simply put, is that human life with all of its complexities and contradictions can only flourish in a complex and contradictory environment. Venturi wrote in a note to the second edition that he has "sometimes felt more comfortable with my critics than with those who have agreed with me. The latter often misapplied or exaggerated the ideas and methods of this book to the point of parody. . . . Most of the thought here was meant to be suggestive rather than dogmatic."

Venturi, who heads the Philadelphia firm of Venturi & Rauch, is the coauthor (with Denise Scott Brown and Steven Izenour) of another controversial but influential book, *Learning from Las Vegas*. His firm has been the recipient of many awards, including a 1977 AIA honor award for Franklin Court in Philadelphia (see May '77 p. 35).

#### National Trust, Portman And Gutheim to Be Cited

John Portman, FAIA, Frederick Gutheim, Hon. AIA, and the National Trust for Historic Preservation are AIA medalists for their accomplishments toward the integration of disciplines related to architecture.

Portman combines the roles of architect and developer. He is most famous for his atrium hotel designs: Atlanta's Hyatt-Regency and Peachtree Plaza, San Francisco's Hyatt-Regency, Chicago's Hyatt-Regency O'Hare, the Los Angeles Bonaventure, Detroit Plaza. (See Oct. '77, p.37.)

Portman has said that "human beings have a natural affinity to beautiful landscapes, flowers and foliage, to running water, fountains and waterfalls." All are a part of his hotel interiors. He published his first book, *The Architect as Developer*, in 1976, which was written in collaboration with Jonathan Barnett, AIA

Frederick Gutheim, architectural writer, critic, historian and consultant on urban affairs, has made an impression on architecture for the past 45 years.

His writing career began in 1931 when he became contributing editor for the American Magazine of Art. In 1948, he became the first architectural writer for the New York Herald Tribune. Later, he was architectural critic for the Washington Post and advisory editor for the Washingtonian magazine. His articles have also appeared in numerous national magazines, such as Nation, Harper's and Saturday Review.

Among his books are In the Cause of Architecture: Frank Lloyd Wright; Frank

Lloyd Wright on Architecture: Selected Writings; Alvar Aalto; Plans and Realities, and Worthy of the Nation.

Gutheim's long-time involvement in land use, conservation and regional and local planning includes the writing of the planning sections of the Tennessee Valley Authority Act in 1933. He received a decoration from the president of Finland in 1974 for bringing that country's new town of Tapiola to the attention of the American public.

He is now adjunct professor of American civilization and urban and regional planning at the George Washington University and director of its master's program in historic preservation.

The National Trust for Historic Preservation, headquartered in Washington, D.C., was cited as our "conscience for preservation" and praised for its encouragement of public participation.

Chartered as a private, nonprofit organization by Congress under the provisions of the National Historic Preservation Act of 1966, the National Trust has pointed the way to those who would protect the nation's cultural heritage through its publications and counseling on preservation, its administration of historic properties, its workshops and conferences and its grants to groups and individuals.

#### For 'Inspiration': Royston Komendant and Nowicki

Three individuals who "have inspired or influenced the architectural profession" have been chosen by AIA to receive medals.

Stanislawa Nowicki, professor of architecture for 40 years, is among the three. Born in Poland, Nowicki studied in Paris under Le Corbusier and in Warsaw. She came to the U.S. with her husband, Mathiew Nowicki, the Polish representative to the design team for the United Nation's buildings. (See July '74, p. 54.)

She has taught at the Polytechnic Institute in Warsaw, North Carolina State University and University of Pennsylvania (1951-77). Retired, she now lives in New York City.

August Komendant, a structural engineer, author and teacher, will also be honored. He has worked with the late Louis Kahn (Richards Laboratory for Research in Medicine at the University of Pennsylvania and Salk Institute at La Jolla, Calif.); Geddes, Brecher, Qualls & Cunningham (police administration building in Philadelphia); Eero Saarinen (Stiles and Morse dormitories at Yale), and Moshe Safdie (Habitat, 1967 World's Fair in Montreal).

Komendant was born in Estonia and came to the U.S. after World War II. He is the author of several books, including

Prestressed Concrete Structures (1952), Contemporary Concrete Structures (1972) and 18 Years with Architect Louis Kahn (1975). In 1975 and '76, he was the visiting distinguished professor at Pratt Institute. He lives in Upper Montclair, N.J.

The third award goes to landscape architect Robert N. Royston of Mill Valley, Calif. His firm, Royston, Hanamoto, Beck & Abey, has won more than 30 design awards. Among the projects are the Quarry Theater at the University of California in Santa Cruiz; Sunriver, a new town in Oregon; Civic Center Park in Santa Clara, Calif., and the campuses of the College of the Virgin Islands at St. Croix and St. Thomas.

The firm also planned the new town of North Bonneville, Wash.

#### William Slayton Confirmed For State Department Post

Secretary of State Cyrus Vance has confirmed the appointment of William L. Slayton, Hon. AIA, as assistant secretary of state in charge of foreign buildings operations. Slayton, who has already assumed his new duties, has manifold responsibilities—his office could be described as an overseas GSA.

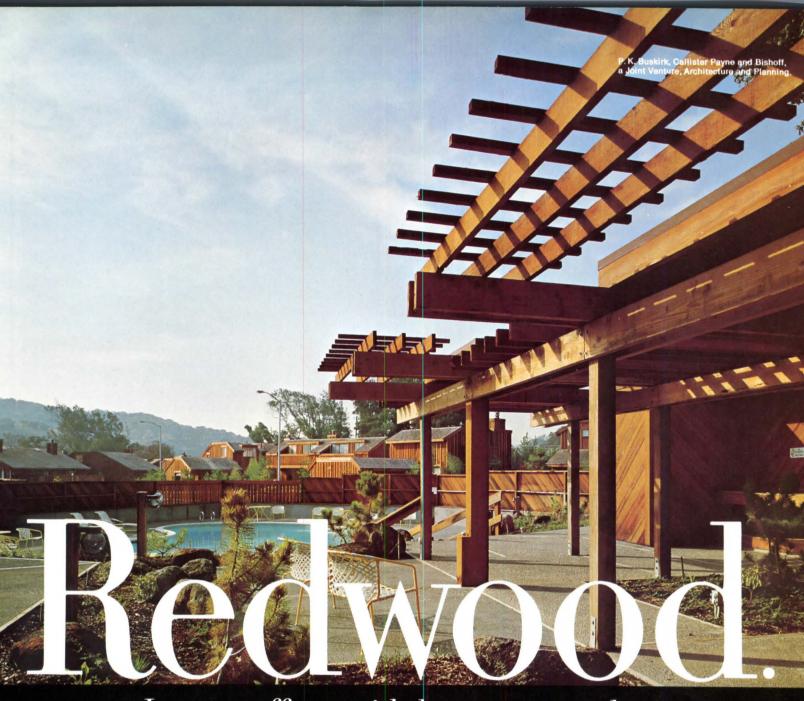
Except for Department of Defense activities, he will direct the maintenance of all existing U.S. foreign facilities, as well as the construction of new facilities. He also is responsible for all U.S. real estate overseas, again with the exception of DOD holdings.

The current construction program which Slayton will oversee is estimated at \$100 million. At the present time, for example, projects include the design and construction of new embassies in Moscow (Skidmore, Owings & Merrill and Gruzen Partners) and in Cairo (Hellmuth, Obata & Kassabaum and CRS/CM).

Slayton served as executive vice president of the Institute for seven and a half years, relinquishing his responsibilities to James A. Scheeler, FAIA, at the beginning of the year. On April 1, David O. Meeker, FAIA (*see* Jan., p. 22), will become executive vice president.

Bruce Schafer, director of the Institute's federal agency liaison program, says that Slayton is a most appropriate choice for the Department of State position. "He brings to the office of foreign buildings a great wealth of in-depth experience, being thoroughly familiar with the design and building process in foreign countries due to his years of Institute work, and he also has an excellent knowledge of the A/E selection process in this country which will be most helpful in his responsibilities for new construction."

Going On continued on page 14



## Luxury effects with lower-cost grades.

The economy grades of California's luxury lumber are a practical means of enhancing the appeal and value of outdoor areas of large-scale building projects.

Construction Heart, Construction Common and Merchantable redwood, popularly called garden grades, are priced far lower than kiln-dried grades. The natural knots and sapwood streaks in garden grades are particularly suited to those amenities that make outdoor space more useful and attractive, more pleasant and more saleable.

For decks, trellises, fences, screens, sunshades, benches—even storage sheds and cabanas—the lower cost grades of redwood add the rustic beauty and weatherability of this prized natural building material, at a price your budgets can accommodate.

So whatever your forthcoming projects—commercial, civic, or residential—be sure to include redwood in your plans.

For data on specifying redwood, see the Redwood Landscape Guide in Sweet's, or write us at Dept. S.

CALIFORNIA REDWOOD

 $Redwood-a\ renewable\ resource.$ 

ASSOCIATION 617 Montgomery St., San Francisco, CA 94111.

Circle 7 on information card

Poolside area (above) at Miller Creek Homes in San Rafael, California, is made more inviting and livable with fencing, cabana and trellises of naturally textured redwood.

IBM office building facade is warmed and softened by use of rustic redwood window grilles and bridge.



#### Alaska Selects Two Firms For Capital City Project

Architects Bull Field Volkmann Stockwell and planning consultants Sedway-Cooke, both San Francisco firms, were selected in December as master planners and designers of Alaska's projected new capital city on a wilderness site near Willow, 70 miles north of Anchorage.

The choice was made by the state's capital site planning commission after an unusual two-month process of elimination. In October the commission invited 11 firms to make brief presentations, then five were chosen to participate in a monthlong charrette to develop "concept studies" for the new city of 30,000. Each of the five received \$16,000.

Presentations all were made in one day and the San Francisco firms were selected by a five to three vote after a week's deliberation by the commission, its staff and consultants. Runner-up was the team of Benjamin Thompson & Associates of Boston and Paul Freidberg & Partners of New York City.

The commission was to present an initial financing plan to the state legislature Feb. 1 and the design-planning team is to make more detailed second-stage presentations to the commission next month. Meanwhile, an initiative petition was being circulated in Juneau, the present capital, seeking to require approval of the state's voters for construction of the new one.

The winning concept would place the city center along a ridge dotted with lakes in a linear megastructural complex intermixing government facilities with offices and commercial buildings, all grouped around a glazed central "commons."

Both sides of the single main street would have covered arcades, and buildings would be connected above street level to create an indoor pedestrian circulation system, minimizing automobile use even in winter. Two intersecting transit loops would extend out to residential neighborhoods of approximately 1,000 families, centered around elementary schools and convenience general stores.

#### Plans for Dulles Include Elongated Catanary Roof

Representatives of the Federal Aviation Administration and the architectural and engineering firms involved with the expansion of Dulles International Airport held a briefing last month, one day before bids were opened for construction. Explained were details of the first expansion phase (see Dec. '77, p. 8), as well as



Dulles model showing proposed 1995 linear additions to Saarinen's structure.

further expansions in 1985 and 1995.

Three alternatives were considered for the Eero Saarinen-designed airport, according to William E. Valentine, AIA, of Hellmuth, Obata & Kassabaum, which has designed the first addition and developed the master plan. The alternatives were (1) an additional terminal building, (2) a new gate arrival system attached to the terminal and (3) expansion of the present terminal. The last was chosen, Valentine says, to preserve Saarinen's concept of "a single, compact unit" served by mobile lounges.

Linear additions to the catanary roof structure are planned in two increments. The 1985 phase would add five bays to each end, with 100-foot low-rise extensions toward the field, and the 1995 phase would place four additional bays at each end, with a widening and continuation of the lowrise "fattening" structure to 100 feet for the full length of the building.

Valentine says Saarinen's plans indicated linear expansions up to eight bays on each end, one less than currently projected, but that the architect anticipated possible further additions, as indicated by dotted extensions on the original plans. Saarinen considered the free-standing control tower correctly proportioned to the planned extensions, according to Valentine, and the tower contains adequate space to meet foreseeable needs.

The current expansion is a lowrise extension 50 feet toward the field and the full length of the present catanary structure. It will be of precast concrete matching the 1962 facade, with narrow skylights extending the 50-foot width placed so that Saarinen's outward leaning columns will be visible from within. All security functions will begin at the lip of this expansion, with the remainder of the space utilized as hold areas from which passengers will board the mobile lounges. This should alleviate congestion at peak hours and free up circulation in the terminal, where

at present rest rooms and concessions are separated from entrances and ticket counters by security gates.

Among those attending the briefing at Dulles were representatives of the Advisory Council on Historic Preservation, the National Capital Planning Commission, the National Trust for Historic Preservation, the Virginia Historic Landmarks Commission and AIA. Changes in the FAA-operated airport currently must be approved by the Department of Transportation and the National Capital Planning Commission, and their funding approved by Congress. Placement of Dulles on the National Register of Historic Places is being advocated, but this currently is opposed by the FAA.

#### California Defers Date For New Energy Standards

After two months of negotiation by a team representing the California council/ AIA with the state's energy commission, the date of enforcement of energy conservation standards for nonresidential buildings has been deferred from Jan. 1 to July 1. CCAIA was supported in final testimony before the commission by representatives of the California Building Officials and the California Builders Council. (See "California Tries Prescriptive and Performance Standards in Tandem" by John Balzar, Dec. '77, p. 57, for a discussion of California's new energy standards and regulations, written before the commission's action on date deferral on Dec. 14, '77.)

"The pushing of enforcement into mid-1978," says Howard R. Lane, AIA, president of CCAIA, "eases much of the pressure for exemptions for design work now in the pipeline. We are now working with the commission on a simplified method of applying for exemptions in cases where they are still essential."

Going On continued on page 19

# THE PINK STUFF. The two important things to know about roof insulation today. THE GREEN STUFF.

# The Pink Stuff is Thermax® Roof Insulation. From Celotex. It's the most efficient on the market with a Factory Mutual Class 1 fire rating.

We don't have to tell you the critical importance of insulating efficiency today and in years to come. The government is making it quite clear.

So start now with a simple fact ... the most efficient roofing insulation is foam, and one of the most efficient, stable, practical foamed insulation boards comes from Celotex.

Over new or existing roofs, Celotex will help you get the maximum insulation value at costs equal to or below the less efficient insulating systems you may use now.

#### High R factors.

One look at the chart comparing insulating value per thickness of Thermax, Tempchek, fibrous glass, composite (foam plus perlite), and fiberboard roof insulations shows how The Pink Stuff and The Green Stuff provide up to 2.5 times as much insulation value per inch.

#### Strong. Stable. Lightweight.

Both Thermax and Tempchek Roof Insulations are reinforced with glass fibers for extra dimensional stability. And both are 3 to 6 times lighter than less efficient insulation.

### Thermax Roof Insulation...the only FM-rated foam insulation (non-composite) for Class 1 over steel.

Thermax Roof Insulation is the first non-composite foam insulation in

the U.S. to qualify for Factory Mutual Class1 fire rating installed directly over unsprinklered steel decks.

Why pink? To dramatize the exclusive isocyanurate foam core, sandwiched between two asphalt-saturated inorganic facers. It gives you the high insulation value of urethane, plus fire rating, without the need for a second material like perlite between it and the steel deck.

The best way to fasten Thermax to the deck is with Insulfast\* nails, providing maximum protection against wind uplift and lateral movement. Mechanical attachment with Insulfast nails is FM approved.

With less deadload factor, you not only have easier installation, you can reduce the size and gauge of roof supports, have greater flexibility in choosing heating and air-conditioning equipment, and can reduce the size of metal or wood facia around roof perimeters.

Thermax Roof Insulation costs no more for comparable insulation values than other fire-rated materials, is easy to cut and handle, gives more footage per truckload, and uses less warehouse space. All of which means a better application per dollar for everyone.

\*Product of Berryfast, Inc.



# The Green Stuff is Tempchek® Roof Insulation. From Celotex. It's the most efficient on the market for every other application.

When you don't need fire-rated insulation, you still need Celotex for high R factor. In Tempohek Roof Insulation.

#### Same high R factor. With some differences.

Tempchek is a lightweight urethane foam, reinforced with glass fibers o make it just as strong and dimensionally stable as Thermax. Check he chart again and you'll see that it has the same top-rated insulating efficiency per thickness as Thermax.

With the same lightweight, easy cutting, easy handling, easy application characteristics as Thermax Roof Insulation. And the same compatibility with hot asphalt.

The differences? Tempchek has organic instead of inorganic acers, a different chemical composition, and a different color, all simply because it doesn't have to be fire-rated like Thermax.

And one more thing.

#### Lower costs.

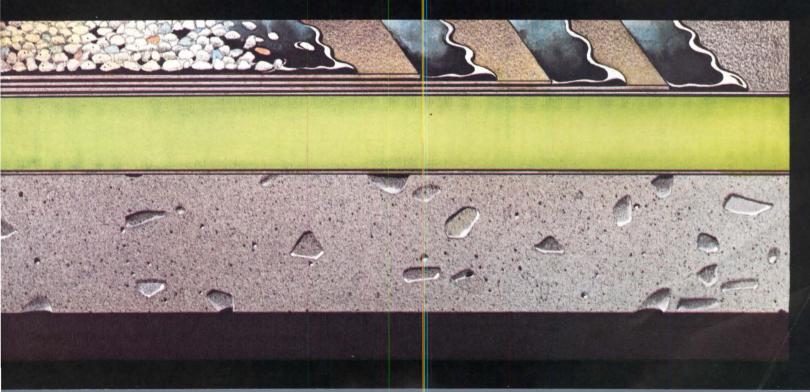
t costs less per application than conventional, lower-efficiency mateials. And not just because of the lighter weight. Tempchek boards measure 3' x 4', so more roof area can be covered in less time than with normal 2' x 4' cuts.

"R"	Thermax Roof Insulation†	Tempchek Roof Insulation†	Perlite & Urethane Composite Board	Fibrous Glass	Perlite & Fiberboard
8.3	1.2"	1.2"		ANTON.	3″*
10.0	1.4"	1.4"	1.9"	2-1/4"	4"*
1.1	1.6"	1.6"	THE PARTY OF	2-7/16"	WANT.
12.5	1.8"		2.2"	100	The same
14.3	2.0"	2.0"	2.5"	N. S. C.	W. R.
16.7	2.3"	2.3"	2.8"	STATE OF THE STATE OF	
20.0	TO SERVICE	2.8"	3.2"	CENTRAL STORY	1000
25.0	E PER STA	3.0"	No. of the last of the		March Bar

\*In two layers

†NOTE: Under normal use, Thermax and Tempchek Roof Insulations will retain an average of 80% of their thermal resistance (R factor) values.

Another surprise on the next page. The most effective way to use the most efficient roofing insulation on the market. From Celotex.



# This is the Upside-Down Roof. From Celotex. It's the most effective way to use the most efficient roofing insulation on the market.

The most effective place to put roofing insulation is on top of the roof assembly. It protects the membrane on new or existing roofs like no right-side-up roof ever could.

But it requires an insulation product that is able to withstand moisture, hot asphalt applications, the weight of conventional roofing equipment, and traffic. Tempchek Roof Insulation does all those things.

#### What makes the most protective roof practical?

- A conventional application of 300 lbs. of slag or 400 lbs. of gravel per 100 sq. ft. protects roof installations from flaming brands, harmful rays of the sun, and impact damage caused by hail and roof traffic. Approved by U.L. as Class A Roof Covering.
- 2. Top pouring of hot asphalt keeps gravel in place and provides first line of protection against moisture.
- 3. New Tempchek Roof Insulation is what makes the Celotex Inverted Roof Assembly work so well. It provides thermal protection, dimensional stability and resistance to moisture.
- 4. Flood coat of hot asphalt keeps Tempchek Roof Insulation in place and provides more protection against moisture. The asphalt is

beneath the insulation and will not alligator.

- 5. Built-up roofing membrane provides the third line of protection against moisture. Serves as a vapor barrier as well. Roof membrane is protected from thermal shock, punctures and blistering be the Tempchek insulation above.
- The Celotex Inverted Roof Assembly systems are readily applied t most conventional nailable and non-nailable decks. Shown is concrete deck, with asphalt primer.

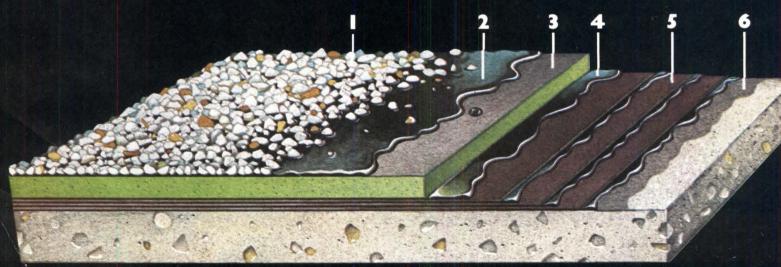
Celotex provides a 10-year Inverted Roof Assembly guarantee. For specimen, and complete details about Thermax and Tempchek Roo Insulations, and the Inverted Roof Assembly, contact your Celote representative or write:

John Hasselbach The Celotex Corporation 1500 N. Dale Mabry Highway Tampa, Florida 33607.



BUILDING PRODUCTS
The Celotex Corporation, Tampa, Florida

a Jim Walter company



Circle 8 on information ca

Going On from page 14

#### Nory Miller Joins Staff As Journal Assistant Editor

Nory Miller is now assistant editor of the JOURNAL. She comes to Washington, D.C., from Chicago where she was the managing editor of *Inland Architect*, a publication of the Inland Architect Corporation affiliated with the Illinois council and Chicago chapter/AIA, and architecture critic of the *Chicago Daily News*. She has been a contributor to this magazine in the past, as well as to *Architectural Forum*, *Architectural Record*, *Architectural Review* (London), *Progressive Architecture* and *Urban Design*.

In 1977, she received the Chicago Art Association's award for the best critical writing in the visual arts, and the same year held a fellowship from the Graham Foundation for Advanced Studies in the Fine Arts.

This year she will be a Loeb fellow at Harvard University, traveling to the campus two days a week while continuing her editorial responsibilities.

#### **Data on Minority Firms**

The deadline for submission of information for inclusion in the second edition of the *Directory of Minority Architectural and Engineering Firms* has been extended to Mar. 1. The second edition, published jointly by AIA and the American Consulting Engineers Council, contains an alphabetical listing of firms by state, giving each firm's address, phone number, approximate size of staff, available professional services and firm capabilities. It is scheduled for publication in April.

Minority architects and engineers should send submissions to ACEC, 1155 15th St. N.W., Washington, D.C. 20005. Firms should enclose the U.S. government standard form 254 and a notarized certification that they meet the U.S. code of federal regulations' definitions of "minority business enterprise" and "architect/engineer services."

#### Space Habitats by 2000?

The first Congressional initiative to suggest as a national goal the development of human settlements in space was introduced on the last day of the 1977 Congressional session by Rep. Olin Teague (D-Tex.). Chairman of the House science and technology committee, Rep. Teague introduced a House concurrent resolution which calls for a Congressional study of the "first manned structures in space for the conversion of solar energy and other extraterrestrial resources to the peaceable and practical use of human beings everywhere," by the year 2000.

The resolution calls for the Office of Technology Assessment to conduct a study which would look at the "technical feasibility, economic and social impact of a goal that would see several thousands of people living and working in space construction solar power satellites made from lunar materials and solar energy."

Subsequently, Reps. Barbara Mikulski (D-Md.), Lindy Boggs (D-La.) and David Stockman (R-Mich.) introduced companion resolutions. They indicated that other members of Congress would be interested in cosponsoring the concurrent resolution in this session of Congress.

#### ASCE Members Offered Ethics Advisory Service

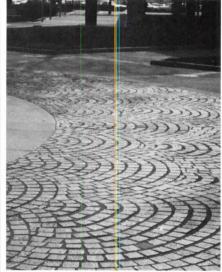
The American Society of Civil Engineers has established a "confidential ethics advisory service" which is designed to advise ASCE members on questions involving professional ethics.

Although ASCE's committee on professional conduct in 1976-77 considered approximately 35 cases involving allegations that members had violated ASCE's code of ethics, the new service

continued on page 22

## **Granite.**

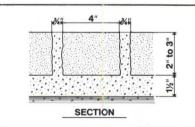
## Beautiful for heavy traffic areas.

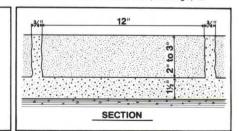


Architects: Lawrence Halprin & Associates



Architect: Joe Karr & Associates, Chicago, IL





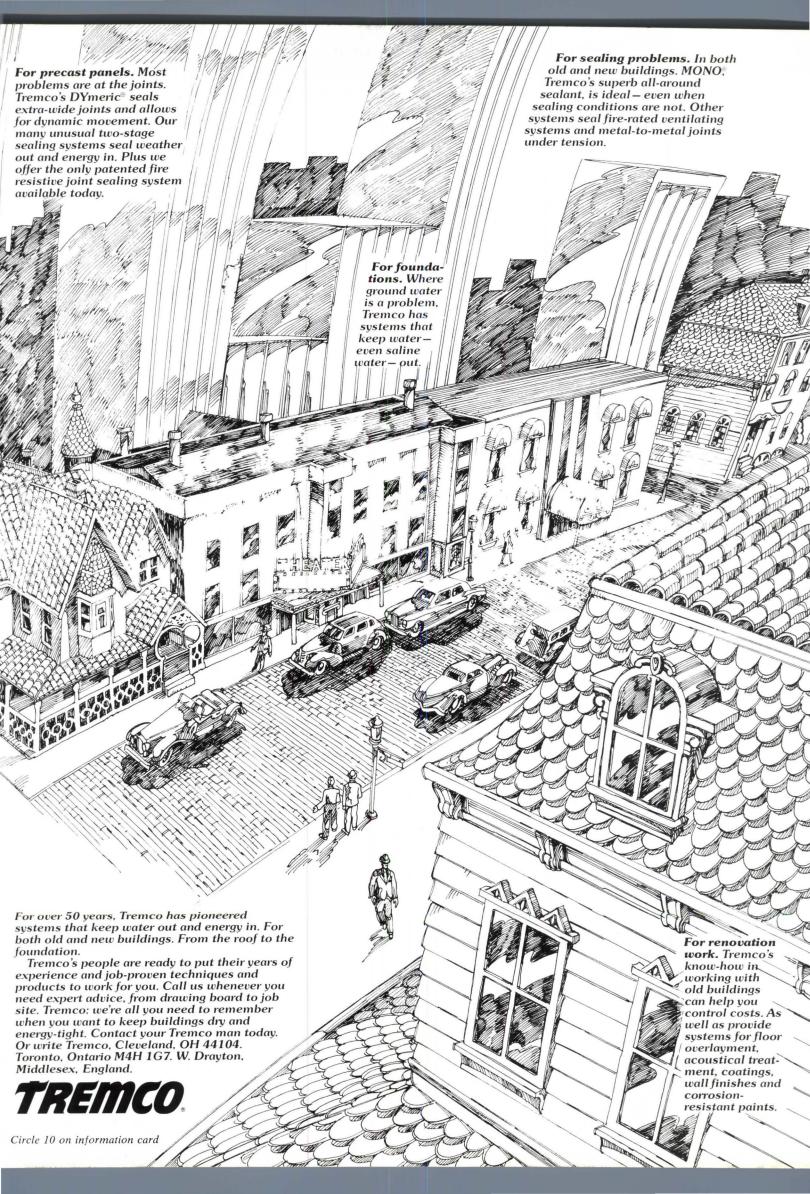
Cold Spring granite is a natural for landscape applications. Its warm colors and natural textures blend beautifully with the environment. And at the same time, granite provides the designer with the flexibility he needs to create areas of unusual and lasting beauty.

At Cold Spring we now have a wide variety of Module Pavers and Durax Blocks available. For more information, plus a packet of full color literature illustrating our products in use, call toll free **800-328-7038**. In Minnesota, call (612) 685-3621. Or write to the address below.



Cold Spring Granite Company, Dept. AIA-2 202 South 3rd Avenue, Cold Spring, MN 56320





Going On from page 19 is aimed at more informal treatment of such problems as a defamation of character, falsifying qualifications, unfair employment practices and the supplanting of one engineer by another.

ASCE members who seek the service will be helped by appropriate staff members and also by a special advisory board of "distinguished engineers chosen for their years of experience and reputations for high ethical . . . standards."

#### Barrier-Free Elements Of Housing Evaluated

"Study and Evaluation of Integrating the Handicapped in HUD Housing" is the title of a recently prepared report conducted by Battelle's Columbus, Ohio, laboratories. Based on data gathered for HUD, the 259-page report will be used in HUD's internal efforts to study nationwide housing policy. Thomas Martineau of Battelle says the study was designed "to evaluate ways of removing housing-related barriers which have traditionally kept disabled individuals from effectively functioning and participating in the world of the able-bodied."

Martineau says the publication "can be used as a source of information throughout the development and operational

phases associated with the creation of new, or the renovation of old, multifamily housing complexes."

The study identified eight essential design elements that should be added or which require modification of standard design practices:

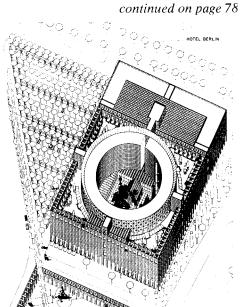
- A communication system to permit tenants with a variety of physical impairments to signal a central location in the event of an emergency.
- Completely barrier-free circulation, including proper corridor and door dimensions, ramps and door hardware and locks.
- Easily operable windows.
- Adaptable kitchen cabinetry to permit raising and lowering of counter tops.
- Bathrooms easily accessible by wheelchair and adaptable to different heights and disabilities.
- Accessible electrical outlets and controls.
- Barrier-free exteriors.
- Adapted controls and signals for persons with sensory disabilities.

Additional construction costs to accommodate various percentages of disabled people, according to the report, vary from 0.25 to 4.7 percent.

Although supplies are limited, copies of the report are available, at no cost, from: Thomas R. Martineau, Battelle's Columbus Laboratories, 505 King Ave., Columbus, Ohio 43201.

#### Cornell Team Selected For West Berlin Hotel

An international design competition for a \$100 million hotel complex to be built in West Berlin, Germany, has been won by a team of Cornell University architects and hotel management experts. The design team was headed by O. M. Ungers, AIA, who is on the faculty of Cornell's school of architecture. Other members of the team included Hans Kollhoff, an instruc-



Whose high-volume, automated laundry system uses the least space?

MILNOR's.

Most high-volume, automated laundry systems are three-step systems which require separate washers, extractors and conditioning tumblers, each linked by a materials handling system. MILNOR's Hands-Off Washing System is different. It's composed of washer-extractors that wash, extract and condition all in **one** machine. A materials handling system moves the goods to the machines and then to the finishing section. MILNOR's one-step Hands-Off system can be a big help when you're trying to put a lot of laundry system in a little space.

So, if an upcoming project includes a laundry, check with MILNOR's Laundry Planning Department. And for a free file on large laundry systems, check the reader service card or write us today.

PELLERIN MILNOR CORPORATION

P.O. Box 400, Kenner, La. 70063 (a suburb of New Orleans) 504-729-7381 Sold and serviced by leading independent dealers the world over

©PELLERIN MILNOR CORPORATION



Circle 11 on information card



The World's Most Respected Name in Locks.

\*Courtesy of the Schlage Antique Lock Collection.

This breakthrough in fluorescent efficiency is a break for you in savings.

GENERAL WELECTRIC U.S.A.

Watt-Miser™II Slimline, rated at 100 lumens-per-watt, can save 20% on energy costs while giving almost as much light and solve 20% on energy almost as lamp that will give you fluorescent lighting efficiency you never had before. Made possible by use of a new, exclusive Lite White Phosphor, watt-Miser II Slimlines, you use you to essenergy with only slight loss of light. For every 100 new Watt-Miser II Slimlines, you can save \$1103.00 in energy costs over the life of the lamps (Based on 18,000 hours average life and 3.5¢/KWH in typical commercial installations.) So right now you can have the good lighting you need. Keep your business a brightly lighted, pleasant and inviting place for both customers and employees. And still keep the cost of lighting down. Replace your standard Slimline fluorescents with new Watt-Miser II Slimlines all at the same time on a group relamping plan—and you'll see even greater money savings. And the sooner you switch, the sooner you begin to save on energy costs. General Electric Company, Dept. C-801, Nela Park, Cleveland, Ohio 44112. Phone: 800-321-7170 (in Ohio, 800-362-2750).

100 Years of Progress for People

GENERAL & ELECTRIC

### Mitchell: A Focus on Architecture

Having presented last month the views of AIA's new president and incoming vice president, it seems appropriate to do the same with those of the third member of the new leadership triumvirate, First Vice President Ehrman B. Mitchell Jr., FAIA. Hence the following excerpts from his presentation to the recent AIA grassroots meetings in Washington, Memphis and Seattle.—Ed.

Where do we go from here? The answer must be sought in the central focus of our profession, the basic reason for its existence. That is, of course, architecture, the design of the built environment. This is what we're all about, this is why we're here, this is what we do.

Our greatest failing is that we don't talk enough about architecture, either among ourselves or to the public. It seems to me that the first thing we need to do now is to broaden the public's awareness of architecture and the built environment. We must build a greater understanding of how the built environment comes to be, a discernment of its quality, a recognition

of the architect's role—and the public's own—in shaping it. . . .

As we anticipate the public's broader awareness of architecture, our responsibility clearly is to prepare ourselves for the greater public scrutiny that will come. We must build a consciousness within our ranks of the importance of design excellence and the importance of accountability. We must continue to sharpen our skills and technical knowledge, and to broaden our capacities to perform our role in producing the built environment. We must find a way to demonstrate to ourselves the pressing need to achieve design excellence.

All of us have a great responsibility to the public to create a better life through our design. We must be ever conscious of how we affect the people, the land, the cities through our design efforts. An AIA architect should be recognized as that professional who truly stands for excellence, not only in design but in performance as well. This comes from doing—not talking.

The architecture of the future will reflect the pressures, demands and innovations we see mounting now and those that are yet to come. It will also respond to shifts in public attitudes, life styles and changing needs. It will embrace and give impetus to new technology and industrial capability, and show an awareness of the constraints imposed by dwindling natural resources.



## **Evaluation: Rockefeller Center's Two Contrasting Generations of Space**

Its recent westward extension is far more open—and far less lively—than the 1930s original. By Bernard P. Spring, FAIA

Not even many New York City buffs are aware that Rockefeller Center has just about doubled in size since 1960, a period in which six new buildings have been added to the original complex. (One of them, the Sperry-Rand building, was recently sold.) Of the 17 million square feet of rentable space in the development, 7.6 million have come on line since the opening of the Time-Life building in December 1959.

That the newer buildings do not seem to be an integral part of the much admired urban design concept of the 1930s is a problem that the management appreciates and has been trying to find ways to solve. For example, a few months back brightly colored banners with a bold abstract design on translucent cloth were hung from lampposts on the streets within the now jagged boundaries of the center. The banners add sparkle to the familiar jumble of midtown street signs. And, if viewed from the proper perspective (particularly when they are backlighted by the sun), they create a most electrifying cohesive pattern. Nevertheless, one is hard put to imagine that the average pedestrian will get the visual message that "this is all part of Rockefeller Center" unless he has read about the new heraldry in the Times.

There is a striking contrast in the design and the use of the public spaces in the original section of Rockefeller Center, which was built between 1931 and 1940, and the major addition constructed between 1960 and 1973 on the west side of the Avenue of the Americas. The original plaza areas, built under the old zoning ordinance which had no explicit concern for urban design, remain the most popular and delightful open spaces in the city. They are crowded in all but the most severe weather, not only with visiting sightseers but with New Yorkers of every age and social group. I. M. Pei, FAIA, has called this sequence of spaces—the channel gardens, the sunken plaza and the private midblock cross street-"per-

**Mr. Spring**, dean of the school of architecture at City College of the City University of New York, is a former editor at *Architectural Forum*.



The famed, tightly defined Rockefeller Plaza contrasts with the flat, befountained forecourt of the Exxon building, even though both are roughly the same size.

haps the most successful open space in the U.S., perhaps in the world, for that matter."

Yet these open areas occupy only 16 percent of the original 12-acre parcel of land. In the more recently built, westerly section of the center, which was built under a set of laws self-consciously devoted to the improvement of urban design, the public open space adds up to 39 percent of the buildable land. But these spaces attract few tourists, are not memorable to anyone except those who have business in the adjacent buildings and are virtually barren of people unless the city is experiencing one of those dozen or so sparkling days each year which New Yorkers are obliged to remember to help them face the usual run of weather.

The difference between the old and new plazas cannot be attributed to a change in architectural direction. For, in the person of Wallace K. Harrison, FAIA, Rockefeller Center has had a mentor for design continuity without parallel in modern times for a project of such scope. Harrison was a leading member of the center's initial design team: Reinhard & Hofmeister, Corbett, Harrison & MacMurray and Hood & Fouilhoux. Subsequently, he was the senior partner of the firm of Harrison & Abramovitz (later Harrison, Abramovitz & Harris) that was responsible for all four buildings of the latest addition.





The original Rockefeller Center sent low projections out to meet and maintain the street line (left). The western extension breaks the edge of the Avenue of the Americas (from right, above, Time-Life, Exxon, McGraw-Hill and Celanese).

Some fragments of the history of John D. Rockefeller Jr.'s conversion of a potential financial disaster into a highly successful investment in the depths of the 1930s Depression help to explain the enduring attraction of the original plaza spaces. In 1928, Rockefeller was spearheading a civic drive to provide a new building for the Metropolitan Opera. After the stock market crash in 1929, he found himself holding a \$3.8 million a year lease on 12 acres of midtown land owned by Columbia University. There were no prospective tenants solvent enough to even consider a new building. Nevertheless, he was determined to build.

At the time, the western boundary of the site (then called Sixth Avenue) was a strip of tenements and marginal shops in the shadow of a rumbling elevated transit structure. But the Fifth Avenue side was still prestigious, a spine of the mansions, offices and stores of those who were able to maintain their wealth through the depression. The channel gardens was designed as a promenade to draw the cachet of Fifth Avenue and its strollers deep into the site. The idea was to bring the real estate value of the Fifth Avenue location and the attendant high rents over to the Sixth Avenue side of the project. This passageway is lined with small shops. The shopping mall was continued into the street and basement levels of the RCA building, which extended all the way through to Sixth Avenue. The sunken plaza, now occupied by the skating rink, was originally designed to encourage pedestrian flow through to the lower level of the RCA shopping mall. But pedestrians, then as now, are reluctant to walk down to a sunken courtyard.

After some hit and miss experimentation with special events such as concerts in the below grade area, someone tried an ice skating rink. The rink has become New York's premier spot for standing and watching, an activity considered somewhat suspect in almost any other location in the city. The gentle downward terracing, which the architects provided to ease the anticipated pedestrian flow, instead creates a viewing platform that

seems to have just the right amount of separation from the traffic on the surrounding streets. If the design had been calculated to provide enough space for the peak crowds that now flock to the plaza in the Christmas season, it would have been twice the size, at least. And it would have lost thereby the intimacy of scale that makes people feel at home there amid the surrounding office towers. Similarly, the channel gardens, designed as a passageway and scarcely 60 feet wide, must be the most popular seating area in the city. The central fountain's raised stone edges make excellent benches from which to look at the passing foot traffic, the shop windows and the floral displays kept fresh and varied throughout the year by the center's management.

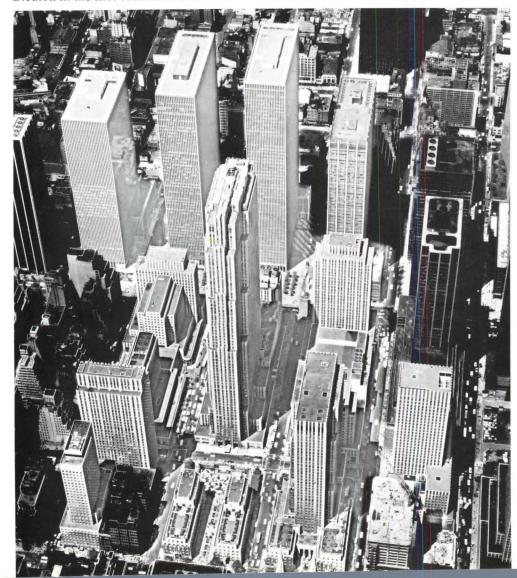
It took some time for the spaces and the people who used them to adapt to each other. Even modernist Lewis Mumford, writing in the *New Yorker* in 1933, was apparently puzzled by the absence of strong, formal architectural themes in a project of such importance and size. He wrote: "Architecturally, in short, Rockefeller Center is much ado about nothing. It lacks distinction, the strength, the confidence of good architecture just because it lacks any solidness of purpose and sincerity of intention." He never did like big cities much, in any case.

Less than 10 years later, Sigfried Giedion in the first edition of what was to

become one of the modern movement's holy books, *Space*, *Time and Architecture*, devoted several pages to a paean to the center. Nothing built at the time, he felt, better expressed the dynamic, spacetime continuity of the experience of truly modern architecture, made of fragments of visual experience blended into a harmonious montage in the mind of the peripatetic observer. "Such a great building complex," he noted, "presupposes not the single point of view of the Renaissance but the many sided approach of our own age."

Thus the pre-1940 Rockefeller Center became a model for the more sophisticated urban designers of the 1950s. Its public spaces must have been in the minds of the people who drafted the complete revision of the New York City zoning ordinance which became law in 1961. The incentive which permitted 10 additional square feet of floor area for each square foot of plaza (but limited to a 20 percent total increment in floor area) was financially attractive to developers. And it gave the planners visions of the congestion of the center city relieved by delightful public oases like those of Rockefeller Center. The 1961 ordinance controlled the design of the western section of the center. Why does this environ-

The new buildings are lined up like boxy sentinels behind the variegated original.



## The center's pre-'40 public spaces must have influenced the city's '61 zoning law.

ment look and feel so different from the model to the people who use it?

A closer look at one aspect of the politics of zoning in New York City, an aspect rarely acknowledged by any of the active participants, helps to explain why the Time-Life building, which was completed a year before the revised ordinance went into effect, was designed to comply (in large part) with the new law. The city planning department staff recognizes that most major projects need a few variances from the complex provisions of the ordinance in order to create the most felicitous design and investment package. Therefore, they will often negotiate the commission's support for the variances in return for the developer's willingness to follow the provisions of a proposed revision. This strategy provides the planners with a real life demonstration of their staff work and helps to "sell" the passage of their proposals to the political bodies which must ultimately approve them.

The Time-Life building covers only 80 percent of its two-acre lot. The public spaces created on the remaining land are the most heavily used of any in the post-1960 section of Rockefeller Center. A 25-foot-wide setback, 300 feet long on the southern edge of the site, has some of the characteristics of the channel gardens. Raised planting beds provide seating on their perimeter which allows people to watch an active stream of foot traffic on busy 50th Street and the activity of a string of small retail shops that connect through to the building's lobby. The raised edge of the large fountain in the 60x150-foot plaza on the southeast corner is a favorite spot for office workers and strollers to stop to catch a bit of sun. The terazzo paving, set down in a Copacabana-like wave pattern, is done in white and light gray. Many have complained that the bright reflections from this surface, in its more somber surroundings, create an unpleasant glare on sunny days. And it is slippery when wet.

In return for these amenities, Rocke-feller Center, Inc., was allowed to build 18 times as much floor area than the size of the building lot, a floor area ratio of 18 instead of the 15 allowed by the code. This added about one-quarter million square feet to the rentable area of the building.

As the Time-Life building was being completed, three very large office towers (each about 2 million square feet) were simultaneously in the planning stages for









The Exxon building meets the Avenue of the Americas with an immense, placid fountain (top and page 27). Fronting on it is a bank with its entry around the corner. New regulations require that at least half such frontage be occupied by retail stores and restaurants. Compressed, active character of Manhattan streets is lost in wide setbacks on the north and south sides of the building (second). A midblock plaza between the Avenue of the Americas and Seventh Avenue (above) has an oversized waterfall fountain but is not connected directly with the building.

Rockefeller Center in the offices of Harrison, Abramovitz & Harris for the three blocks to the south. The grand urban design concept for the four blocks on the western side of the Avenue of Americas, as it later emerged, seemed to respond more to the qualms of Mumford than to the kudos of Giedion for the initial phase of the center. The southernmost building, now named for its principal tenant, Celanese, was to be a virtual mirror image of the Time-Life building at the northern end. Its corner plaza would thus be shaded rather than sunny.

The two center buildings in the composition were to be set back 110 feet from the front property line. The ensemble created a vast open courtyard some 800 feet long. In plan, the ends of this monumental space seem to be closed by 85foot-high wings on the Celanese and Time-Life buildings. In fact, these wings are barely visible to anyone on the street who tries to take in the visual sweep of this open space design. Only a touring architect would be likely to try to visualize the entire space. Experienced New York pedestrians know that to divert their attention from the bustling street traffic long enough to take it all in would be to risk anything from a rude bump from another pedestrian to being hit by a passing bus.

The most dramatic departure of the "western addition" from the urban design principles of the old Rockefeller Center and, for that matter of all of central Manhattan and most high density central cities in the world, was the break away from building to the street property line. The two central buildings in the post-1960 scheme, headquarters for Exxon and McGraw-Hill, were not only set back 110 feet from the principal wide street they faced but were held 40 feet away from their side street boundaries. Thus, they appear as tower shafts set in an open space. This dramatic change in the idea of a configuration for the city has often been analyzed as a well-intentioned but feeble attempt to recapture Le Corbusier's concept for the Ville Radieuse. Feeble because nothing short of Le Corbusier's vision of the ground plane of the city as a continuous park could make it work; New York is not likely to be the place where this can happen in the foreseeable future.

At the time that the plans for the additions to Rockefeller Center were being brought to the city building department for approval (with the usual requirements for a number of helpful variances), a far less abstract approach to urban design was being built into the city's policymaking machinery by Mayor John Lindsay. In 1967, the mayor created an urban design group within the city planning department, a pioneering effort to marry urban design with politics. Jaquelin T.

Robertson, AIA, was its first director. Robertson and his team—two members of which, Jonathan Barnett, AIA, and Alexander Cooper, AIA, succeeded him as directors—made a bold counterproposal. They sketched a design concept which incorporated all of the most successful, actively used elements of the original Rockefeller Plaza scheme. It was relentlessly oriented toward the delight and convenience of the pedestrian user rather than to theories of urban form.

The excessively long side streets were to be relieved by a midblock passage as they were by the privately owned Rockefeller Plaza. But while the original midblock street is open to vehicular traffic (open to the sky and clogged by the waiting chauffeured limousines of top-level executives), the proposed midblock plaza was to be for pedestrians only, lined with shops and restaurants and arched over by a skylighted extension of the adjoining building for protection against rain and snow. The buildings were to be pushed forward and outward to re-establish the consistency of the city's street facade. The entire lobby and street wall of the struc-

The sunken plaza in front of the McGraw-Hill building (below) originally was to contain a planetarium dome. It is little used even though it leads to a subway entrance and the popular McGraw-Hill bookstore. (Actually, both are more accessible from the lobby.) McGraw-Hill's 40-foot-wide rear plaza (bottom) is the most used of the spaces midway between the avenues. Directly accessible from the building lobby, its movable chairs and tables provide an intimate setting for a few dozen of the building's 10,000 inhabitants.







ture was to be occupied by lively retail tenancies. All four blocks were to be interconnected at the lower shopping mall level by passages beneath the city's streets that also joined with the entry level of one of New York's busiest subway stations.

As Robertson tells the story, all but Wallace K. Harrison were skeptical of the practicality of the alternative proposal. The mayor called together the principal executives involved in the development and urged them to have faith in a bold scheme that would be sure to add another major attraction to the midtown area. But some contracts had already been let for the new construction and the major tenants felt they could not tolerate further delay in occupying the urgently needed larger quarters. Some important gains were made, however. The midblock plazas were added, even though in some instances the purchase of additional property was required to make this possible. Most important of all, the foundations were laid for a major revision of the plaza bonus provisions of the zoning ordinance.

These revisions, worked out by the Urban Design Group, now under the direction of Raquel Ramati, were ultimately approved as part of the zoning

law in 1975. The new incentives are framed in a marvelously intricate way that should prevent a developer from getting a floor area bonus unless a genuinely lively, user-oriented plaza area is constructed (and maintained). The city has yet to see the completion of an office building design prepared under this 1975 revision to the zoning ordinance. But when the results of the current resurgence of office development are realized, we are not likely to see the vast, unused open spaces that make a wasteland of most of the plaza areas around the Celenese, McGraw-Hill and Exxon buildings.

Many of the proven delights of the first Rockefeller Center design will reappear. No doubt there will even be significant improvements over the original. The initial, curiously accidental public amenities are bound to turn out even better now that architects and urban designers are obliged by the current version of the much amended zoning law to attend to the real desires and habits of the pedestrian in the city.

And it may even come to pass that the management of Rockefeller Center, Inc., which for 45 years has made it a matter of principle to keep its properties com-







The most attractive feature of the Celanese building's large front plaza (top and left) is a small raised seating platform bearing trees and a three-dimensional corporate symbol in stainless steel, but casual visitors are discouraged and the handicapped barred by the steps leading up to it. On the south side (center) is a 40-foot setback with no apparent use or amenity, and midway between the avenues is an arcade (above) with rental space that has been empty since completion in 1973.

petitive with the newest and finest in the city, will find it in its interest to recycle some of the more recent barren plaza areas so that the public and tenants can share some of the delightful and engaging experiences that we have seen can be made available to the denizens of midtown Manhattan.

This kind of socially oriented physical change in the quality of the life of the center city remains one of the key elements in the array of objectives and strategies that will bring business and new job opportunities for the unemployed and underemployed to New York and other distressed older cities.  $\square$ 

### **Evaluation: A Troubled Theater Anchors Baltimore's Downtown**

The Mechanic is a successful sculptural centerpiece but has had problems as a playhouse. By Allen Freeman and Andrea O. Dean

The centerpiece of Baltimore's Charles Center is a lowrise, multiuse structure whose peaks, towers and multiple planes boldly express its function. Its woodformed, warm-hued concrete facade offers visual relief from neighboring curtain walls, while its shops and restaurants draw people day and night to a street-scape dominated by standard office buildings.

As part of the urban fabric, the Mechanic Theatre is strikingly successful. As a functioning playhouse, it has had serious problems.

The Mechanic opened 11 years ago. Its developer was Morris A. Mechanic, who had leased the Charles Center block from the city for 75 years at \$30,000 a year. He selected John Johansen, FAIA, as architect and worked through several programs for the site with him.

Mechanic had owned and managed the ancient Ford's Theater, which was demolished in 1964, leaving Baltimore without a house for Broadway tryouts and road shows. Johansen says his client (who died six months before the new theater opened) wanted to do something for the city in which he had made his fortune in real estate, but stipulated that nontheater portions of the building should support the theater financially.

During initial stages, recalls Johansen, "the design moved strangely from one animal to another and became many, many things. At one time we had office spaces to rent alongside the theater, and another time he wanted a highrise or middle-rise office building on top."

The process ended with two levels of basement parking for 200 cars, virtually a complete floor (50,000 square feet) of shop and restaurant space, and, atop this, a theater with 1,800 seats. The cost was a reported \$2.5 million, not including land, fees or financing, with the theater accounting for \$1.5 million, including all furnishings and equipment—a small budget for a project of this size.

The program for the theater was, by necessity, a multipurpose design, Johansen says. The feeling was that "Baltimore could not support two or three different theater types," he recalls. "Mechanic

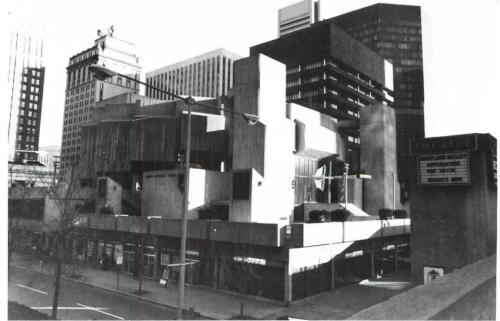
wanted to be very certain that this theater could be flexible enough to assure income from various sources. He was a shrewd man." It was intended to accommodate musicals and dramas, Broadway tryouts and road shows, movies, nightclub-type entertainment, musical performances (including chamber music), fashion shows.

New York theater designer Jean Rosenthal worked with Johansen as consultant. "She was selected because of her knowledge of Broadway theaters, and she worked with us throughout the design on lighting, rigging, staging and seating."

Johansen wanted a thrust stage. At the time, it looked like the wave of the future. The Tyrone Guthrie theater in Minneapolis had gotten excellent press, as had the Stratford, Ont., Shakespeare festival theater. There was talk of Broadway houses converting to thrust stages, and the Saarinen/Skidmore Owings & Merrill Beaumont at Lincoln Center was to open in 1965 with one.

The architect's solution for the Mechanic was an "experimental" stage, which included an oversized proscenium arch and a traditional stage house with full trappings for proscenium productions, as well as a thrust section. The thrust was in the form of a half-circle,







actually an elevator platform that could function as an extension of the stage or be lowered and filled in with seats for standard proscenium productions or lowered farther to become a small orchestra pit.

The downstairs seating was arranged in a semicircle radiating from a center point where the curtain met the stage. There was a cross aisle half-way down. The single balcony was another semicircle of sharply raked seats.

The Nederlander organization, which operates theaters in New York and other cities, signed on during the final construction phase to manage the Mechanic. Their theater consultant, Mason Arvold, says that he and the Nederlander brothers were quite satisfied with the theater from the beginning and throughout their tenure there. The only shortcoming, the absence of a place to sell tickets, was remedied by Arvold, who converted a store space at the theater entrance into a box office.

The Mechanic opened in 1967 with a strong yearly subscription base of 14,000, but that figure diminished, as did overall attendance, during the first years. Explanations for this are varied. Some blame a lackluster promotion effort. Some see it as a reflection of a nationwide decline in live theater attendance during the turbulent late '60s and early '70s. Some cite the opening of Washington's Kennedy Center and the concurrent improvement of roads between Baltimore and the District of Columbia (now an hour's easy drive). But others lay part of the blame on the theater itself, saying some New York producers were unhappy with the auditorium design. Here are their general criticisms:

The orchestra seating was a compromise. Primarily a thrust configuration, it was unsatisfactory for proscenium-designed shows. As it turned out, the Mechanic was used as a proscenium house almost exclusively. The wide shape simply

put seats too near the proscenium on the sides, and people in these seats couldn't see performers on their side of the stage. This meant that approximately 400 seats could not be sold for normal Broadway productions, which come with dimensions preordained by New York standards.

Lighting positions in the auditorium were unsatisfactory. There were provisions along the balcony rail, but for high position lighting, men had to work around the suspended acoustical panels. Also, there were no light slots on the side walls. For road shows, the deficiencies didn't particularly matter; lighting men just compromised, working with what was there, often to the detriment of the production in Baltimore. But Broadway tryouts needed to have lighting problems solved before going to New York.

The acoustics were bad from certain seats, a problem common to wide thrust houses where side walls are too far away

to adequately reflect sound from the stage.

The Nederlanders pulled out after several seasons. Next, several local businessmen took over management on a three-year sublease, during which attendance continued to decline. For the 1974-75 season, subscriptions were down to 2,300.

In May 1975, the Mechanic went dark. It stayed dark for seven months before the city stepped in.

Robert Embry, now assistant secretary for community planning and development at HUD (see Nov. '77, p. 38), was Baltimore's commissioner of housing and community development. Embry recalls that the local operators were losing a substantial amount of money, and they were going to try to turn their losses around by opening it as "one of these exploitation downtown movie theaters that you see all over the country."

Embry reasoned with the mayor, William Donald Schaefer, that there was an adequate local theatergoing "constituency" to be "cultivated" and that initial operating losses could be brought down after a year or two. The mayor agreed, and the city signed a 20-year lease at a fixed rent for the theater and restaurant, which also stood dark.

For the theater, New York producer Alexander Cohen was engaged to arrange bookings and rebuild the subscription clientele. Cohen, who had previous experience with the Mechanic, insisted that the auditorium be renovated to improve sightlines and acoustics. The city hired Roger Morgan, a New York City-based theater designer who had worked on Baltimore's Center Stage, an old school building which was converted into a repertory company playhouse (see June '76, p. 32).

For a reported \$550,000, the city got a narrowed proscenuim opening (from 60

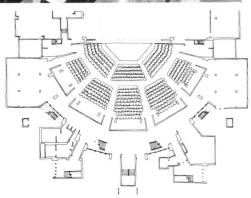




feet to 45); new walls on the sides to eliminate poor sightline areas; a new arrangement of orchestra seating with overall capacity reduced from 1,800 (400 of which had been unsalable) to 1,600; refurbished and recovered balcony seats; new lighting slots in the side walls and lighting catwalks hung below the ceiling and brighter house lighting; a new sound system and changes to improve natural acoustics, including new reflective panels suspended below the high ceiling, reflective surfaces on the side walls and absorptive material on the rear walls ( Jaffe Acoustics was consultant); an orchestra pit of twice the original size; a new house curtain; fresh paint in brighter colors; new carpeting, and—the only exterior change—a back-lighted sign mounted on a free-standing air shaft structure in front of the theater.

Renovation took five months. The New Mechanic, as it is now called in promotional materials, opened Nov. 1, 1976. According to Robert Embry, the theater lost between \$600,000 and \$700,000 the first year; "we'll have it down to about \$300,000 the second, and hope it will be less the third." The first season had 16,200 subscribers, and the current season is up an additional thousand, which is about half the seats available for each three-week run.

The restaurant has been subleased at the rate the city is paying Mr. Mechanic's heirs, and the restaurateur has divided the space into three establishments—a French restaurant which he operates, and a singles bar/restaurant and health food eatery, both operated by others. A study conducted by Johns Hopkins University showed that the first season after the Mechanic was remodeled, it brought \$1.4 million worth of business to neighboring

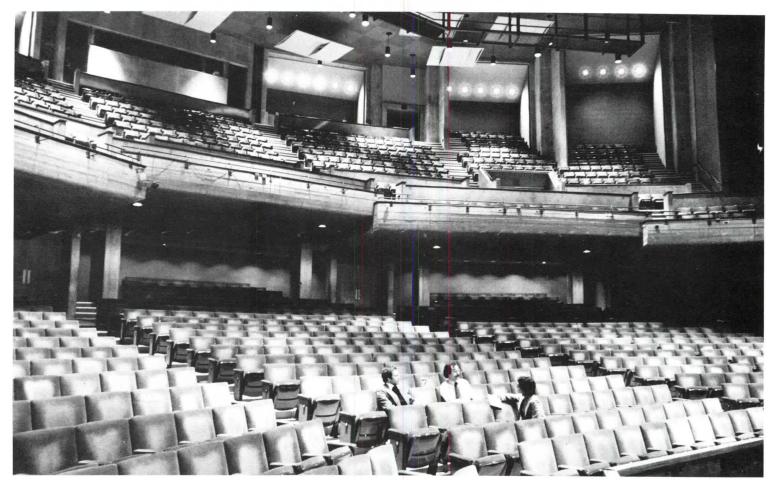


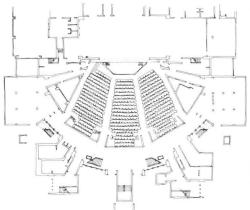
The orchestra seating as originally designed (above) contained eight seating sections with a cross aisle halfway down to the thrust stage. Lobby (below left) as currently outfitted with exhibit walls.

restaurants, hotels, shops and parking facilities.

To gather some reactions to the theater's exterior, we talked with people on the street. Although the Mechanic has an inside-out quality, its exterior expressing directly the spaces within, it doesn't look like a conventional theater. The reactions of most people to its external form, therefore, tend to be tempered by their attitudes toward old-fashioned theaters and new-fangled architecture. Some typical comments: "I guess I'm old-fashioned, but I don't like that type of theater." "It gives no indication of what its purpose is; the same is true of all modern architecture." "I wouldn't want it to look more like a theater, because theater to me says 'little old dingy neighborhood theaters that are closing their doors."

Audiences come and go. Their impressions are fleeting, perhaps because they are concentrating on the performance. Actors, management and other backstage people live with theaters and most of

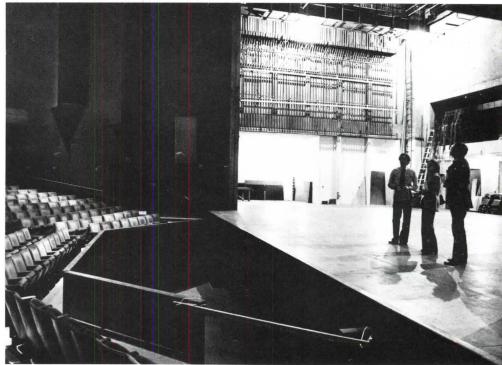




Orchestra seats as redesigned are in a funnel pattern, with seating eliminated to the far sides in proximity to the stage. An enlarged orchestra pit (right) occupies the former thrust stage area.

them form strong opinions about their places of work. Richard Hamilton is a member of the cast of Eugene O'Neill's "A Touch of the Poet," which tried out at the Mechanic last fall prior to opening on Broadway. Says Hamilton: "The concrete feeling both outside and inside puts you off a bit at first. The outside feels like a crazy German constructivist exercise, but it doesn't feel that way inside. It's a nicer theater than I thought."

Without exception, cast members and theater employees interviewed appreciate the fact that shops and restaurants are in the building, and the theater is within walking distance to hotels. As actress



Betty Miller puts it, "In some cities, we're just stuck. Ours is a crazy life and it helps to have things that can soften it and make it easier."

Comment about the inside of the theater is now generally positive. The exceptions include complaints about inadequate rest room facilities for the audience—there are only two, one for each sex, and the lines are usually long, especially at matinees when the audience is mostly

women—and a surfeit of exterior doors, 34 of them. Theater manager Paul Holland explains: "It takes 15 minutes just to get the security off them." An undistinguished mural of garish colors, a gift of the city arts program, runs up the stairway from the plaza to the theater.

But the lobby itself is a pleasant space, with patios and a lounge where drinks are served and after-theater parties are held. Roger Morgan had black curtains hung in

front of the doors into the auditorium as a sound/light buffer, recarpeted the lobby and covered one wall with panels to hang artworks for exhibitions.

The actors generally like the auditorium, although, as Kathryn Walker of the "A Touch of the Poet" cast commented, "I felt the balcony was far away and just ascended into heaven. For people in the top of the balcony, watching a show must be like seeing a flea circus." Holland says the balcony is no higher than most, but because it is on one level, there is no second balcony to enclose the high space as viewed from the stage. And the theater's resident director of promotion, Hope Quackenbush, says, "There is resistance to sitting in the balcony; it is too far back,



and there are almost as many seats in the balcony as in the orchestra. You need a blockbuster show to fill the balcony."

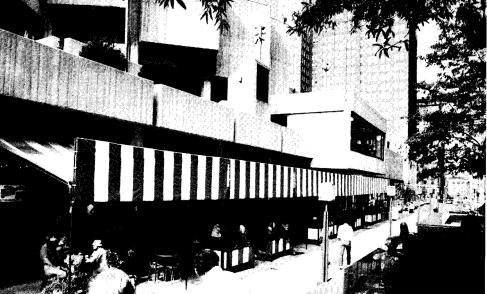
At least for the cast of O'Neill's intimate drama, the Mechanic allowed an easy and close enough relationship between actors and audience. Says Jason Robards, "You have a feeling that you can draw everybody in, even though there are 1,600 people and some are way up there."

Concerning acoustics, Robards says, "None of us likes to use mikes. It suddenly makes it a movie or a television show—not theater. It immediately puts something like a piece of glass up in front, separating actor from audience. I sat in the last row of the balcony during rehearsal and could hear every word." Theater manager Holland is less sanguine, saying that before the remodeling, less than 50 percent of the audience could hear well: "Today, 20 percent doesn't hear adequately."

Backstage areas are considered more than adequate by most. There are three star dressing rooms, ample space for storing props and the like, at least for most

Betty Miller (left), Geraldine Fitzgerald (below) and Jason Robards of "A Touch of the Poet," which tried out at the Mechanic prior to Broadway. Tier of cafes (bottom) draws a brisk lunchtime trade.





nonmusical productions. But neither the 36-foot-deep stage nor the backstage storage area is large enough to comfortably accommodate large-scale musicals, says Holland.

A serious problem is posed by the loading dock, which is one level below the stage and positioned so that movers must negotiate trucks down a ramp, through a 90-degree turn, offload and swing the contents another 90 degrees before reaching the elevator. "The engineering rooms now face the back of the trucks, and there's no reason why the elevator couldn't have been put there instead," says Holland. "As it is, we need four men to offload trucks. It was badly planned."

Another common complaint among actors is that both backstage and on stage it is either too hot or too cold. The temperature system in the theater is inadequately zoned, with the result that in order to keep the auditorium warm enough, the dressing rooms and stage are usually overheated. When Katharine Hepburn played the Mechanic, she insisted that the stage be no warmer than 55 degrees, to the discomfort of the audience. Similarly, the lighting system in the auditorium and lobby is not zoned; there is no way to light the balcony, for example, without lighting the whole lobby and the whole orchestra, says Holland.

Jason Robards expresses a seemingly universal complaint of theater actors: "All the new theaters are like the CIA or a factory complex. There are no windows; it's like being caught in a machine, a labyrinth everywhere. You don't know where you are—backstage or in a tomb."

Actress Geraldine Fitzgerald says: "I don't suffer from claustrophobia, but if I did, I certainly now would have hysterics."

We doubled back to Johansen to get his reactions to some of our findings. He is unhappy that he was not consulted for the conversion to the strictly proscenium design, which he considers a "terrible mutilation," adding that he nonetheless accepts its financial rationale.

"Generally, I think the building is, if not a triumph, still a success for the program that it meant to answer to. And it was one hell of a bargain."

Even the severest critics of the Mechanic probably would agree. But Johansen is sure to find opposition to his prediction for the future:

"I think Broadway is in deep trouble. They are operating in theaters nearly 100 years old, and the structures limit the performers and even the playwrights. In a short time, maybe 30 years, all those buildings will come down and then we will have a whole new scene. And I predict that the Morris Mechanic will have to be renovated back again."



## **Evaluation: A Mental Health Facility, Its Users and Context**

Special attention was paid to relationships between it and the community. By Lawrence R. Good, AIA, and William E. Hurtig

Psychiatric hospitals and mental health centers have changed significantly and for the better in their architectural programs and design during the last decade or two.

Until about 15 years ago, buildings for mental health care usually followed narrowly defined institutional models. Then around 1960, a handful of hospital administrators, architects and behavioral scientists began to seriously question the traditional design of psychiatric hospitals.

The new influences and thinking are demonstrated in the collaborative planning, design and evaluation of the Norwood Mental Health Center in Marshfield, Wis. It was built to replace Wood County Hospital, a two-story, 1911 structure which by 1960 had become overcrowded with patients and with physical barriers to their recovery. By 1964, the building was condemned because of building code and safety violations.

The hospital's location as well as its drab, hostile appearance contributed to its negative reception in the community. Although the facility was within the Marshfield city limits, it was located in the center of an industrial park (originally the asylum farm), isolated by several miles from stores, movie theaters and medical facilities. Hospital-community interchange was minimal, and the internal arrangement of spaces isolated patients from the meager number of outsiders who came to the facility.

In 1965, the hospital administration became aware of studies being conducted by the Environmental Research Foundation at Topeka (Kan.) State Hospital. Three years later, the county governing board made a small grant for a study by an architect-psychologist team from the foundation to determine the feasibility of turning Wood County into a satisfactory facility for active treatment of patients from the hospital's two-county, 105,000-person catchment area.

The team recommended building a new structure in a location that would foster better relationships between the com-

Mr. Good is president of Lawrence R. Good & Associates, Lawrence, Kan.; Mr. Hurtig was in charge of the evaluation.

munity and the facility and designed to encourage the best possible relationships among users—patients, staff and visitors—as well as among programs.

In late 1969, Hougen-Good-Pfaller & Associates was selected as architect to work with the hospital staff and building committee. One of the architects had been a member of the earlier study team, which increased the continuity of research and planning.

In October 1971, the firm submitted a preliminary design and recommended a site on Central Avenue, the major north-south route through the city. The proposed site was in a newly developing shopping and service area that promised to be an active part of the city for years to come. The building committee and the hospital staff and patients received the plans enthusiastically.

However, some reactions of the county board and public were startling: There was a tremendous outcry against the proposed new location. Members of a small but vocal group who called themselves the Wood County Taxpayer's Alliance spearheaded a campaign to force the county board to continue to use the existing hospital. Failing that, their goal was to force the board to use the original site for a new facility.

The publicly stated reasons for opposing the new site were the cost of the land and the welfare of the patients. But after several months of highly emotional public meetings and intense publicity, it became clear that many Marshfield residents felt threatened by the hospital's being moved closer to the mainstream of the community. The opponents included a majority of the area's professionals, such as physicians and attorneys. Proponents in the community launched an equally intense campaign, and brought about the approval of a compromise site about two blocks from the first location and only slightly removed from the recommended frontage on Central Avenue.

The compromise site was similar enough to the first location so that the design could be reoriented without drastic change. Construction was begun in August 1972, and the center was ready for oc-



cupancy in April 1974. A year later, a team from the architects' group conducted the first of a series of evaluations of the center in operation. It was based on eight informal interviews, each lasting about an hour, with representatives of the county building committee and the center's staff.

Two of the goals determined early in the planning were to eliminate the hospital's image as an isolated, hostile-appearing place. Related goals were that the new center be compatible with the existing streetscape and yet display cues about its purpose. It had to be easily accessible and inviting to vehicles and pedestrians. And so that patients and their treatment would be better accepted, community groups had to feel free to use the center's recreational facilities and meeting rooms.

The solutions involved developing a structure that blends with the scale of neighborhood buildings, which include homes, stores and a bowling alley. The center itself is an irregularly shaped splitlevel brick building with about 80,000 square feet of floor space; the levels are planned so that the building's profile is compatible with the neighborhood. Its main entrance is from a street about half a block from Central Avenue, but it is oriented toward the avenue, from which much of the center is visible. An ovalshaped drive and a system of walks encourage easy movement to the main entrance and to parking areas. The day treatment services have their own entrance and separate parking area.

The relatively high cost of the land and



the intensifying neighborhood development dictated efficient use of the site. The site is divided into distinct areas, including those for public entry, for interaction between the public and the center (primarily the day hospital, as its facilities are used both by patients who come and go and by the community) and for privacy (the inpatients units and the large landscaped area behind them).

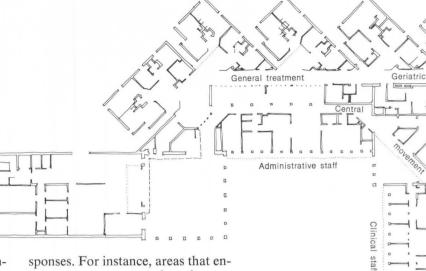
In open-ended questions posed by the architects to elicit opinions and attitudes about Norwood's external image and site, 25 were positive, three neutral and six negative.

Positive comments included: "Old Wood County reflected the image of a different age; new Norwood reflects an active suburban society and current treatment methods." "Fear of old Wood County is being replaced by a more general interest." "The immediate residential neighbors are mellowing-merchants in the area have been helpful from the first." "Community groups are using the auditorium for meetings and local community activities." "Patients who have privileges walk to neighborhood facilities." One negative comment was that it would be preferable to be close to the general hospital and to professional consultants rather than close to the community.

Certainly, the fear stated by opponents that Norwood would depress the neighborhood has not proven true. Development may well have been stimulated by Norwood. In addition to commercial development along Central Avenue and Upham Street, a large new multifamily

A view of the Norwood Mental Health Center (above) from Upham Street, in Marshfield, a growing commercial area. The building forms were planned to convey visual cues to function—dining, entry and multipurpose gymnasium.





residential project is currently under construction contiguous to Norwood on the west.

Goals for the interior included encouraging dynamic relationships among people—patients, staff and the publicand among inpatient, day patient and outpatient treatment programs. The staff considered it desirable to reduce the psychological and physical distances between different treatment areas and individuals.

The design also was to encompass a wide range of treatment activities and to encourage frequent use by staff and patients of lounges, treatment rooms, occupational therapy areas, the rehabilitation workshop, auditorium and classrooms. Patients were to have as much privacy as they might need but also were to be kept in touch with the local community.

These goals are achieved primarily by the arrangement of the interior spaces and by the circulation patterns. Separation between floors, treatment services and people is minimized by the use of split levels: Upper and lower levels are for inpatients, an intermediate level is for offices of clinical and administrative staff and for the day hospital and the fourth and lowest levels are for services and mechanical equipment.

On the upper and intermediate levels, a central "street" serves office, lobby areas and related activities. To further increase circulation, a major activity center is located at each end of this street. The main entrance, snack bar and gift shop are at one end, and the dining room is at the

Further, because of the openness of the design and the use of partial glass walls in places such as eating areas and lounges that overlook activities on a lower level, there is selective visual contact between the street and the territories of various users. There is also some visual contact between each inpatient unit and one or more activity areas. Thus patients cannot avoid seeing the center's busiest areas or the surrounding Marshfield community.

All levels have "watching places" so patients have choices for socialization ranging from solitude to interaction with a large group. Materials are used in consistent ways to help cut appropriate responses. For instance, areas that encourage movement, such as the street, are surfaced with floor tiles, while spaces such as lounges, where people are expected to stop and interact, are carpeted.

The design for inpatient units also included providing a staff patient lounge and activity area surrounding each nursing station to further encourage close communication between staff and patients, and to help patients identify with certain territories and interact within them.

The two inpatient levels each were subdivided into three program units, the upper level into a 18 general treatment unit, geriatric unit, and reactivation unit. The lower level has a token economy unit—where appropriate behavior is rewarded with tokens for purchasing goods and privileges—an admissions unit and inpatient alcoholic unit, which was converted for the elderly. Each unit includes a program director's office, an activity lounge and bedroom "pods" for six patients each.

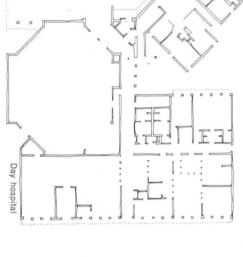
Each pod is further divided into single and double bedrooms located around a small living room, plus two toilets and baths. The bedrooms have views of quiet areas of the site. Each patient has his own window, lounge chair, lavatory and builtin clothing storage.

Each of the two inpatient levels has a centrally located nursing station for the 55 or so patients, in an area that is accessible and visible. The essentially barrier-free design encourages patients to walk around either side of the desk to the staff-patient lounge behind it. The lounge also leads to a stairway and elevator to the intermediate level, which further encourages circulation through the nursing center.

Clinical records and medications are in separate rooms adjoining the nursing center. Also nearby are interview rooms and a music and TV room.

In response to open-ended questions about the interior spaces and their arrangement, asked one year after completion of Norwood, 32 were positive, eight neutral and three negative.

Among the positive comments were that the center was "not hard to get acquainted with." One respondent said,



The plan above shows inpatient units and service facilities. A view from the 'street' into the lounge is seen below, next to it a view from the general treatment unit into the dining room, and, finally, a nurses' station.



40 AIA JOURNAL/FEBRUARY 1978

"I sat down and looked at the plans. It makes a good deal of sense—now it's easy." Negative comments included "kind of spread out" and "My first reaction was, oh my gosh, what a maze!"

Commenting on the visually open concept of the center, one respondent said, "You step out into the hall and you can see just about all over the place; it has a spacious feeling." Another said, "People tend to feel they are in a nonthreatening atmosphere because they can see other people; even in locked areas, they can see other areas and into other levels." Another respondent felt it was "virtually impossible for staff to hide out—they are encouraged to be with patients." Negative comments included, "It is strange to be looked down on" (referring to people looking down from the upper inpatient level to the intermediate level) and "Whichever way you turn, there's somebody looking at you."

Comments about physical accessibility included: "There is a closeness to everything," "Supervision is easy," "Staff are more accessible" and "You can make rounds by going one circle." However, one respondent found halls and ramps a little narrow. (The ramps were primarily for older, physically disabled patients.)

Today, after three and a half years of operation, we feel that it is fair to suggest that basic changes in attitudes on the part of staff and public about mental health care in Wood County have taken place. It is not easy, however, for all users to accept the architectural design of the facility. The interiors of Norwood, when compared with more traditional planning. seem to exert more demands on staff as they experience almost continuous contacts with patients throughout the day. The building may also actually require

more staff than other building plans. Although interview responses are predominantly positive about the "open"

nature of the building, we were especially looking for evidence of actions taken to physically modify the building. One example is a folding partition that has been installed at the entry to the snack bar from the main lobby along with a posted schedule limiting use of the snack bar to several hours per day. Another example is the application of painted graphics to interior windows between the so-called street and inpatient lounge/corridor of the "token economy unit" half a floor level below. This unit houses patients of adolescent age. All street traffic moving to dining passes by and may look into this unit. At the opposite end of the street, traffic moving to the main lobby looks down into the

### Basic changes in attitudes about mental health on the part of the staff and the public.

geriatric unit. Here no complaints about privacy were voiced, nor are there modifications to windows. The stated reason for the need of privacy on the token economy unit, was that more traffic moves to dining than to the main lobby. But our hunch is that visual privacy requirements of adolescents may be greater than those of older people. There is the flexibility at Norwood for assigning inpatient units on the basis of "interaction privacy" level desired. We are pleased, however, to find that relatively few actions have been taken to revert to more traditional approaches.

Most comments related to privacy were favorable. For instance, "There are some nice visiting areas outside of the patient units where there is complete privacy" and "There is always a place where you can sit down away from others." But a negative reaction was that "staff have need for privacy; it is difficult to obtain."

The residential units excluding the bedroom pods received the largest proportion of negative responses; most of them reflected a change from the original clinical concept of open access between all units to the current policy of locking doors between some units. One respondent said that for better management of certain patients, and because the units have different rules and approaches (it was necessary to lock some doors), the center had improvised additional nursing stations at the ends of the inpatient levels.

The design was adaptable to the change, partly because it included smokecontrol doors between units. The lounge areas at the ends of the inpatient levels are flexible enough to include desks for nurse contact centers, and the program director's offices there provide space for clinical records. (We believe architects and planners should anticipate that programs and attitudes about the degree of openness of a facility will change, and that a building must be able to make such changes without major alteration.)

Other negative comments about the residential units were that storage for patient belongings was not adequate, and that the carpeting and upholstery materials on the geriatric unit were not suitable.

Relatively few comments were made about the bedroom pods, but they included two remarks that the living rooms within the pods were favorable for interaction.

Most of the negative comments about the outpatient hospital related to its limited size: The hospital was already handling more than 35 patients planned for, and there was a demand for services for 100 to 150.

Comments about the general building environment were almost totally favorable: "The looks of the building add to helping people feel better." "An interesting place, nice angles and lines." □



### Evaluation: 'Seeing' a House Through the Reactions of Others

A writer experiments with a highly personal approach to describing an environment—her own. By Ellen Perry Berkeley

With more than a decade of serious architectural journalism behind me, I consider this brief piece on an unassuming house in Vermont to be among my most important works. But because this is not a conventional work of "architectural journalism," I should explain how it came into being and why I believe it has significance.

For several years, I have taught a workshop in architectural criticism at Columbia University in the graduate school of architecture and planning. This past spring, I did the course at the University of California (Berkeley) in the college of environmental design. It was there—farthest from the house in Vermont—that I could see the house most clearly. But the content of the piece is not what is more important. Let me continue.

These workshops, as I structure them, demand a great deal of writing-of different kinds and for different audiences. Toward the end of the course, when students are relaxed with each other and with themselves, I give this assignment, which is rather more personal than the rest: "Write about any environment you know well-home, school, work, playand describe what it does for you and to you, and how you feel about it. Make the reader feel this, too." I describe this assignment as an exploration of the following: "writing as a way of communicating with others and with oneself; writing as risk-taking, exposure, sharing of self; writing as a way of analyzing a problem and discovering what one thinks and feels

I attempted the assignment myself in Berkeley, along with the students, partly as a gift to my students, partly as an exercise for myself. I soon realized that I was involved in more risk-taking, exposure, sharing of self, than I have experienced in my public writing. I also realized, with excitement, that I was involved in a personal discovery based on an entirely dif-

Ms. Berkeley, a critic and teacher who studied architecture at Harvard, has held editorial positions at *Progressive Architecture*, *Architectural Forum* and *Architecture Plus*.

ferent question: *the subjectivity of* "*truth*." (Perhaps you know this saying: "You tell me *your* truth and I'll tell you *mine*.")

In the intervening months, I've thought more about this concept, especially as it relates to the body of work that calls itself architectural journalism.

Without attempting a full critique of the current state of criticism, let me say that I find most works of architectural journalism-in the professional press and the daily media—almost stupefying in their pomposity and banality. I am not referring to articles that give real information or describe interesting trends. I am referring to articles on specific buildings, usually written before the landscaping and the occupants have quite settled into place, and usually written by an unseen reporter who earnestly and "objectively" seeks to tell us what the building is all about. (More often than not, the only source of information is the architect.) We get "fact" after "fact"—as though the mere statement of such fact can become the substantiation of fact. But these "facts" are nothing of the sort: They are a sludge composed in large part of jargon, public relations and hogwash. These works of architectural journalism are ever-trendy, ever-optimistic and-to my mind—ever-tedious. Reality is so much more complicated, and so much more

Some years ago, I began to sense that objectivity in any reporting was a pretense—certainly impossible, and probably undesirable. Accuracy is possible. (That is another matter.) But a living reporter is out there, asking the questions, making the observations, sifting the material, drawing the conclusions. Why pretend otherwise? A first person approach to journalism ("I-was-there-and-this-iswhat-I-learned") is surely a valid way of telling a story, and I first used this approach in an article revisiting the Boston City Hall. But the first person approach is still "directional": still the single vantage point, still the single reporter (now visible) through whom all reality is filtered. While the third person approach of "objective" writing ("this-is-the-way-itis," or even "this-is-the-way-someone-says-it-is") may leave many readers skeptical and bored, the first person approach may not be a real improvement; it remains only one voice, and sometimes intrusively so. Again, reality is more complicated. If we recognize the subjectivity of truth, we must recognize the many subjectivities of many truths.

Here, then, is where "A House in Vermont" comes in. What the exercise suggests, I believe, is that a building can speak *for itself*, more directly and more vividly, through many voices. The reader sees this house in terms of what many people believe it is. The house is described by means of many subjective reactions to it. (I hasten to add that not much of the above was intentional, or even conscious, during the writing.)

I sent the piece to Don Canty, hoping to convince him that I'd been too busy to write something else I had promised him. I mentioned a little of what I'd been thinking, but on the first page I wrote "Not for publication, not for circulation." It was Don's suggestion that this be published in the AIA Journal, with some words of explanation from me. After a careful debate with myself, I agreed. I was then tempted to tamper with the piece, but that seemed unsportsmanlike; it was written as an experiment, and as a private communication, and I ask only that it be read as such. (I have changed three words, but only to avoid a severe unkindness.) I hope I have not imposed on Don Canty's generosity—and the reader's stamina—in the length of this prologue.

I don't usually describe the house. I don't even carry pictures. If you've seen the house, or stayed in it, you know it; if not, you don't. Still, though, I sometimes try to give a sense of it. This is the first time I've written of it.

"You bought an old house and redid it?" asked a friend, passing through. A nice compliment, I thought.

Another nice compliment: "That's some view," said the dishwasher repairman from Sears, not seeing the house at all. Actually, the view isn't apparent until you're inside the house, since you've come up the driveway with the view behind you. Then, fully inside, you look out through the wall of oversized windows, down into the valley and off into the mountains. The farthest hills are 50 miles away in Massachusetts.

We first saw this site on a gray December morning, eight years ago. Until then, we'd seen land with houses, land without houses, houses with land, houses without land—until we didn't know what we wanted anymore. We had all but exhausted the local realtors, and they had all but exhausted us. Then we trudged up

this sheltered hillside on that gray morning, and we stopped occasionally to catch our breath and to catch the view. The real estate man had stayed below, at the dirt road. We were turning frequently now, looking back to this diminishing person and to the growing view behind him. Suddenly one of us said to the other—we can't remember which of us it was—"If we don't buy this, we're crazy." We signed the papers within the week.

Then came the planning of the house. "You're not really thinking of the resale value," argued my Dad, hurt that we hadn't appreciated his back-of-thenapkin sketch: a suburban house with all the proper entrances, foyers, doorways, passageways and closed-off rooms. Instead we built a box, roughly 30x40 feet. We enter it from the back, through the carport and mud room, coming out suddenly into the living room and the view. Or we enter it from the side, through the kitchen, again confronting the view through the bay window in the kitchen. Some people may never get used to this unceremonial pair of entrances (and there are two other ways into the house, in addition); in fact, the entrances have their own ceremonial meanings, but I guess you either feel it or you don't.

My father has never gotten used to the place we call the "snuggery." It's basically a mattress (someday a built-in bed) in a low-ceilinged alcove off the twostory living room. The snuggery is where guests stay, or where we pile up. The stereo is here, and the place has a special intimacy. It's a special corner, although it's connected to the rest of the house and has its own grasp of the view. My father has never called it anything but the Snug Room, and has never understood why this room doesn't have a door. (When my parents come to visit, we give them our bedroom, one of the few places that has a door on it.)

"You're quite certain you don't want a separate dining room?" my mother asked,

### A pair of unceremonial entrances which nevertheless have their own ceremonial meanings.

disapproving of the dining table in the kitchen. They gave us the beautiful Saarinen table (our choice), and she seems less disapproving now than she was then. I am more certain now than I was then; how absurd to think that it's improper to look upon dirty dishes in the sink, while it's proper to shut someone off in the scullery. I am no longer the only cook, as I often am in the narrow galley in New York; Roy is a full cooking partner here, and guests are encouraged to make themselves equally at home. The

open shelves are a help—no one has to ask where to find a pitcher, a measuring cup, a glass. Guests are still shy about poking into hidden places, though; I wonder how open drawers would work. Maybe for the next house. . . . The kitchen counters are a smiling color—pumpkin, as I recall, or was it apricot—something good to eat, at any rate. The table is nicely contained in the bay window, with most chairs facing the view. We spend a lot of time in this room, far more than necessary simply to prepare and consume meals.

"That's the biggest bed I've ever seen," said my niece, with awe. It's only kingsize, I explained, wondering what else she wanted to say. The bed was built by my cousin one sweltering weekend, and includes mattress-height cabinets at the head of the bed and along one side. We could sit on these cabinets, if we didn't load them up with magazines, TV, telephone and the endless paraphernalia that accumulates in this combination bedroomstudy-living room. But the bed is the only furniture in the room. Plus a single straight-backed chair. No wonder my niece is perplexed. I don't know many bedrooms like this either.

My official workplace is in the loft, near the bedroom. The loft is above the snuggery; the bedroom is above the kitchen. From the loft, I look up the hill-side, and am startled to see a deer occasionally moving into the otherwise still landscape that suits my daydreaming.

Roy's workplace is in the basement—he shares the space only with the water softener and the furnace, two talkative but undemanding friends. Otherwise in the basement it's wall-to-wall bookshelves and record bins, and a long messy desk that I try not to look at when I go to the freezer. Roy's daydreaming is sometimes interrupted by a critter that wanders by, close to the house, peering into the low windows that overlook his desk.

Another friend commented: "I understand you so much better, seeing this house; your apartment in New York isn't anything like you." Indeed the house is like us, feeding the combination in each of us of the elegant and the rough, the sophisticated and the plain. The Andersen windows, for example, with double-thick glass and frames permanently coated: the ultimate in quality, as the ads might say. And on the outside of the house, Texture 1-11 plywood from sill to eave, permanently stained dark brown; its sellingpoint, the ultimate in economy. Inside, a spectacular sheathing of white pine throughout—roughsawn boards rubbed with a thin white coating that reveals all the colors and imperfections: the knotholes, and the streaks of tan, brown, blue, slate gray. This wood is unique and interesting. I enjoy an intriguing ceiling, and

this wood is the ceiling material for bedroom and living room, as well as the wall material for most of the house. Does it look expensive or inexpensive? I can't decide.

Everyone sees the house differently. "Cozy," said one of my students, a thinblooded young man, upwardly mobile at a prestigious office in New York, and clearly confused by the ordinariness of the house. It isn't even ordinary in the special Venturi sense; it isn't self-consciously ordinary.

"Generous," said my friend who does interiors; "everything's just a little larger than it needs to be." She's right, of course. Roy is a large man, six feet, vigorous,

### Perspectives and insights: A student found it 'cozy,' a friend said 'generous.'

vibrant, a bit forgetful in his movements. He *needs* the space. And I, I just *wanted* the space. As long as we're building in the first place, I kept saying, why not make everything big enough.

What do I now think of the house? It would never make the magazines, I realize, slightly chagrined, secretly proud. And then I know that my real self is in this house. And the self that I will shed, when the season is ripe, is the self that was a Senior Editor on the magazines, the self that is a Famous Person on juries for *Sunset* magazine.

Ours is not a special house; it is just our house, our Good Brown House. It doesn't even look important enough to get ransacked by local kids looking for a stereo set or some booze.

But if the local folk bypass us, the animals don't. This too is a compliment. Tiny mice sometimes live in the rafters; feral cats sometimes check out the carport and its woodpile for a quick lunch. During a snowstorm we can see the footprints of various critters that hang out under the deck outside the kitchen. We are glad to have provided this sanctuary. In fact, though, critters are thriving all over the lawn (or what we choose to call a lawn), every year a new mixture of weeds and wildflowers, as the hardier ones crowd out the smaller ones. The smaller ones are still there, underneath, and underneath that are the tunnels and "hidevholes" that the small critters have made in the brush. It's a tangle, but it's alive, and I wouldn't tamper with it by mowing it or planting it.

One of Roy's comments is still, perhaps, one of my favorites about the house. "I love this house," he said once; "I'm happier here than I've ever been anywhere." But he wasn't talking about the architecture.

### The Art of Architectural Illusion

AIA arts medalist Richard Haas paints buildings on buildings, combining whimsy with a definite sense of mission 'to enrich and embellish.' A.O.D.

Serving as backdrop for a portrait of the artist at his dining table is a wall-size mural that gives you the illusion of looking onto a nonexistent balcony with two Corinthian columns, and out to the surrounding Soho area and the New York skyline beyond. Across from where he sits in his loft studio/apartment, Richard Haas has covered the wall with another painting that makes you think, at first glance, that you're looking at two additional rooms and through a window to the city outside.

Another of his murals, a neo-Gothic pastiche facade (across page), contrasts as might a witty anomaly with its surrounding, the cool, modern interior of the Hyatt Regency Hotel in Cambridge, Mass., designed by Graham Gund, FAIA. Not far away in Boston, Haas has turned a blank five-story wall—the back of the Boston Architectural Center—into what has been called "a kind of madman's fantasy of an 1800-vintage French neo-colonial palace" (see cover).

No wonder, perhaps, that Richard Haas' work is seen by many as a whimsical deception.

It's a great deal more than that. In fact, his intention is not to deceive but to enrich and embellish in the centuries-long (and lost) tradition of architectural illusion.

"It began, I suppose, with this accidental background," explains Haas, who was born 41 years ago in Spring Green, Wis., and "we all know who lived there. Right? Wright," he quips. As an adolescent, Haas worked at Taliesin for his uncle who was Wright's chief stone mason. And, he was allowed, as he puts it, "to snoop around a lot in the drafting rooms and library. I methodically went through all of Mr. Wright's drawings from 1880 onwards, and still remember almost all with photographic clarity."

For a time, Haas teetered on the edge of choosing architecture as a career, with the seesaw finally coming down more heavily on the side of painting. He went to art school at the University of Milwaukee and then to the University of Minnesota, where he taught (an "art for architects" course) and received a master of fine arts degree in 1964.

44 AIA JOURNAL/FEBRUARY 1978

Then, though it didn't last long, he went the route of most 1960s painters, which was abstraction. "I was trying to find myself," he says, "and living in the Midwest, you see. And there is this strange thing that happens out there to artists and architects too, I've found. They feel isolated, believing that New York is *the* art center. So I was trying very hard to be New York contemporary."

All this while, however, he remained what he calls a closet realist, making small boxed interior scenes with false perspective in the tradition of American artist Joseph Cornell, the bulk of whose work was done in the 1930s, and Dutch illusionists of the 16th century. Strangely perhaps, there was a good deal of interest in Haas' realistic work even in the antirealistic '60s, and it came mainly from the most died-in-the-wool avant-garde artists and their patrons. As Haas explains it, "They have closet lives too. If vanguard artists weren't sensitive to a beautiful past and didn't surround themselves with it, why would they live in Soho's Victorian lofts? I can't imagine artists getting off on building their studios in 1950s nondescript warehouses."

By the time Haas moved to Soho in 1967, he had put away his abstract work and become increasingly interested in urban subject matter. His butcher, the corner bar, the streets themselves began to show up in his boxed paintings, at the same time that he was doing drypoints and etchings of city scenes. He also became fascinated with the juxtaposition of old and new buildings and of different architectural styles. This led him to a study of architectural history, which, in turn, took him to Europe several times (he discovered Italy in 1971), to North Africa, Mexico and the American Southwest.

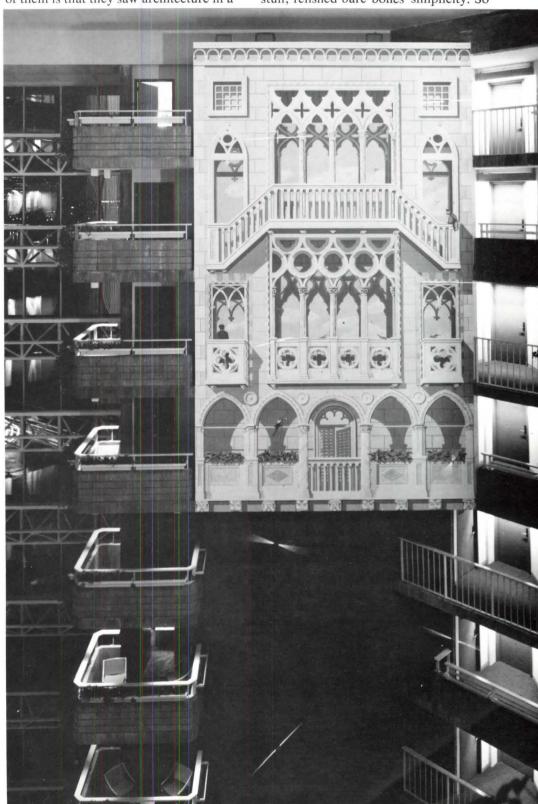
In 1974, Haas did his first of three wall paintings in New York, commissioned by City Walls, Inc. "What I'm trying to do is to show what might have been or might be, what is plausible," he says. "I'm seldom interested in bringing anything back."

He did, however, bring back from his travels, and especially Italy, an historically based concern with, and understanding of, integrating art and architecture. "Veronese or Tiepolo, everyone in the tradition of Italian Renaissance or post-Renaissance decorative arts was trying to deal with the total involvement and ambience of scale and architectural space. And that I call architectural illusion," he says. "All of those Italians, when I went and saw their paintings, I was always struck by the importance of the architecture in the painting itself and around it. You take the picture out of its altarpiece and it loses, I think, a terrific amount. The National Gallery has a beautiful collection, but really we can't understand Italian art when we see those objects separated from the original surroundings. I guess we can't transport all their churches."

"In most modern mural art," he continues, "the biggest problem—and this is my pet peeve—is the failure to understand the architectural context. You look at the successful cities of Italy, and you see that everything that was put there belonged there, and we wonder why, and how it happened that they were able to intuitively do this. I think it's because they understood a few basic things. One of them is that they saw architecture in a

broader context than we've allowed for it more recently, and therefore it could be very exciting even though it stayed within its boundaries. You could get surprises at every turn, but it still all seemed to belong to the realm that we consider as architectural."

From his travels and studies, Haas also came to the conclusion that "the Americans, the early ones, really understood the necessity of detail and texture, because they were aware of how bland their environment was. The European, who was surrounded by sometimes overly ornate stuff, relished bare bones simplicity. So



AIA JOURNAL/FEBRUARY 1978 45



Mies could get Barcelona out of Wright, but Wright could rightfully criticize Mies' simplifying of his plan. I think this simplification has now become very seriously destructive. It's a long way from Louis Sullivan to downtown Houston."

He became increasingly interested in "the dialogue that goes on between the architecture and the city space, how things coexist by accident and fail to coexist by design, and how the 1960s turned our cities around. So much was built in the '60s" he says, "that it had the opposite effect of what was intended. It dramatized the architecture of the '20s. All those curtain walls provided a backdrop and made people realize, 'My God, in the '20s people still had a little fun. They still put funny tops on their buildings. They did all kinds of things that were neat. Why not make a corncob column?"

To explain his feelings about much recent architecture, Haas tells of a recent new-wave German film about a



In New York City, Haas proposes to paint a shadow of the Madison Square Garden Tower (left); in Galveston, infill buildings simulate their neighbors.



drive all around America. The film maker shows, says Haas, "that as soon as you leave New York, you're on a track and everything just becomes a repeat of itself as you move. You completely forget where you are; you don't remember what motel you were in what night, nor what strip you were riding on outside what city, because everything just melts and folds on itself and becomes a repetition. It's what we keep referring to as the homogeny of our society, and I think it's very connected to the visuals. And I think it's pretty frightening.

"One result of this is," he continues, "that people orient themselves to a past—whatever is available. I go to L.A. and talk to artists and they get really ecstatic about the '30s and now the '50s. In Houston, they build quaint French restaurants in '20s bungalows. Now, that's a curious one. Everyone's interested in vernacular architecture; that's what we live with. But I think we ought to look at

our environment here as a part of the whole historic and European connection that occurs in American architecture and is part of it.

"And so, that's the area I'm getting more interested in than the pure, bare bones kind of thing that we get when we glorify the grain elevator. They're blowing up anyway."

Such thoughts, in combination with a personal bent, also explain his interest in whimsy. "I think whimsy is an intrinsic byproduct of my work," says Haas. "But I think that if you see the work only as that it's a problem.

"The history of the sort of thing I do," he continues, "was marked by whimsy throughout. There was a whole history of this sort of thing in the Alps and Italy. Sometimes it was carried too far, and yet there was a charm to it, a beauty to it,

The blank side wall of a Soho building is now a replica of its Victorian facade.

the way they went about taking a little mountain village and turning it into something incredible. It was a gutsy, devilmay-care kind of attitude toward what would otherwise have been considered a very bland environment."

He adds, "I hope that people don't miss the irony of my work either. To embellish the back of the Boston building tells something about my attitude toward the front, or maybe even toward its interiors. I think at this point it's almost redundant to talk about the changes of attitude toward the International Style. But it's not redundant to talk about the possible forms changes should take. I think that's something that I'm very conscious of in what I'm doing. And I'm also beating this drum saying, 'Okay, you guys excluded the artist; now how are you going to include him back in?' The artists' involvement in architecture was very badly mutilated by the International Style." □



## Education for Design: A Group of Practitioners Looks at 18 Schools

The AIA design committee's informal visitations lead it to conclude that the studio system is 'alive,' if not entirely well.

The AIA committee on design has visited a cross section of architectural schools in the U.S. to observe how design is taught and to generally assess the quality of the educational process as well as the product. The committee is composed of architects whose primary concern is design and whose concern reaches out beyond their own practice. As designers are well aware of the limitations as well as the broad potential for better design in our society, it was thought that this contact with the schools could have two immediate benefits. On the one hand, the professional designer would have an opportunity through observation to evaluate the quality of the formation of future designers, their attitudes, skills and learning processes. And on the other hand, the schools could benefit from the contact through a dialogue with the visiting designers, their knowledge of the practice of design as it exists today.

Under no circumstances were these visitations anything more than cursory contacts. One day was spent at each school by groups ranging from two to eight committee members. The faculties were asked to organize the visits as little as possible, but there were some inevitably well designed tours. Others were virtually surprises to the schools who wondered who these snooping architects were and what they were doing. Some visits were made on days when there was little activity and others when schools were teeming with deadlines to be met. With only one exception, the schools were delighted that architects were interested enough to visit, observe and talk. Since the committee on design did not represent any official accrediting organization, in many instances the administration, faculties and students were genuine in revealing their own successes and failures, concerns and objectives.

The 18 schools visited were chosen as much for their regional location around a central place where the committee could convene to discuss its findings as they were for their differences in size, program and known products. They were the following: the West: University of California at Berkeley, California Polytechnic

State University at San Luis Obispo, University of California at Los Angeles, Southern California Institute of Architecture, California Polytechnic State University at Pomona and University of Southern California; the Midwest: Cranbrook Academy, Illinois Institute of Technology, University of Illinois (Chicago Circle), Lawrence Institute of Technology, University of Minnesota and Washington University; the East: Boston Architectural Center, Cooper Union, Howard University, Massachusetts Institute of Technology, North Carolina State University and Princeton University.

After all the visitations, members of the committee outlined observations and recommendations which can be regarded as issues that apply to the education of design as a whole as it exists today. The committee then reviewed a draft of the report, and from that critique and letters received throughout the summer, the final document was developed. Thomas S. Marvel, AIA, authored this summary.

The studio system of teaching design is alive. The studio "culture," where there is a great deal of criticism, ideas and sharing of the workload among the students, is very apparent in most of the studios visited. In some cases, the students are inviting critics and professionals from outside the faculty to attend project reviews.

There are exceptions to this observation, however. The "commuter schools," where the students are not in residence within or near the institution, have little or no studio activity. In these, design work is generally done at home by the individual and the studio is only a place to bring designs for criticism and presentation.

Almost without exception, the case study method to teaching design is found in every school. A program is given in outline form, it is expanded by sensitizing the student to the environs and users, schematic designs are developed and reviewed by a "critic" or "instructor" as it progresses. And finally the presentation is made in models and/or drawings to a review panel or jury of faculty and occa-

sional visitors. In contrast to the studios of the 1960s, there is almost no innovation in this format nor real alternatives to the case study method. The total return to this learning method appears to be partially a reaction to the radicalization of design of a few years ago and thus a return to the proven process of an education by studio exercises in different building types. It was surprising to find such consistency in the schools that were visited.

The design problems have tended to become longer and longer as front-end investigations in the programming stage have become popular. On the one hand, the student is more sensitized to the users, environment and context of the problem, and therefore it is assumed that the design is "better." But on the other hand, over the span of years spent in the school, the student experiences the actual design process less often.

And in many studios, the design problems are often used as vehicles to explore issues rather than teaching the function and technicalities of a particular building

Almost without exception, the design curriculum of the architectural schools is structured to offer a basic design course of one or two years followed by what are commonly called "studio options." This option system is defended on the grounds that it gives the students a choice of different critics and design themes, and therefore helps them to develop their particular interests. Another justification for the options is that architecture, in the real world, has diversified its role in society and students should be offered a broad spectrum of alternatives at the school level. Thus a student can follow different "tracks" with a concentration of design and related courses that should work together toward a design specialization.

It appears that in theory, these studio options are valid. But in practice, most of them seem to be personality contests of who is the most popular studio critic—certainly not the objective of the design program.

And when there are real options between design and, for example, building technology, research or energy design, the design studios are invariably regarded as the test of the true architect.

All other options are secondary in importance and are generally treated as such by students, faculty and administration alike

It was surprising to find almost no regional differentiation of design in the studio process or products. The vocabulary, visitors, faculty and design policy are strikingly similar in the regions that were visited across the country. In this present era when the inadequacy of mod-

ern architecture is being questioned, the resultant examples of "postmodern" form derivation are completely alien to a regional sense of place or response to place. Also, through a growing awareness of energy as a major issue in design, one expects to find a probing search for more appropriate architecture related to climatic variations and availability of materials. There was only a token recognition of this in the schools.

Design education seems to slowly absorb issues after they become paramount in the American society. The schools have not been taking a strong role of leadership, but rather have responded reluctantly to pressures made upon them by outside forces. Perhaps this is basic to the traditional practice of architecture which generally designs what is requested by a "client." To illustrate this point, it has been seen that the schools have emphasized social design recently as a result of the social issues of the 1960s. These have been incorporated into almost all of the programs we observed.

Today, the energy issues are being slowly recognized. Almost every school has an "energy man" who is teaching at least in the environmental-mechanical departments. There is usually one studio or studio option dedicated to designing for energy-consciousness, in most cases as a token acceptance that it is an issue at all. No doubt, this will become more integrated into the studio probably, but only when energy-conscious design becomes an environmental requirement. Today, also, there is a growing tendency to conserve and recycle buildings. A few years ago, almost no design studios were offered in the "remodeling" of structures.

In this regard of responding to change, it seems that in recent years, the architectural design profession has reacted and taken action faster to these issues than the schools. Certainly, advocacy design in the 1960s was practiced in the field far before the schools accepted it as a valid studio option. Even the conservative AIA

## History and design remain separate subjects 'whose relationship is left entirely to chance.'

research staff has done far more than the schools in developing an energy policy in recent years. And in the issue of recycling buildings, the schools have waited until the vocabularly was revised and the national design media made it *au courant*. The point is that where it is expected that schools would investigate new fields and solutions in design, they, in fact, only reluctantly offer innovative studios in response to issues that must pass the "magazine" test first.

The design studios appear to be torn between two poles of emphasis, the process of design versus the product of design. The process approach argues that sociocultural inquiries, users' needs and sensitivity to the microenvironment are the predominant issues in the formation of a design. It espouses the concept that architecture can be an instrument of change in our society. The resultant design is an attempt to create an architecture through a series of socially determinant decisions. More often than not, the final product of a building design is left unresolved in its coordination of social with constructive and technical details.

The product approach, on the other hand, emphasizes what the design looks like through the manipulation of form, space, circulation, materials and, recently, the neighboring esthetic. The design program, users, climatic and social environment all play subservient roles to the final integrity of the design product. It appears that over the past years these two approches have played counterpoint to each other in the schools but have come very close to converging in importance.

In the programs that emphasize the process approach, there appears to be a general lack of discipline in the methods of making design decisions. The traditional case study studio problem, which was successful as an exercise in designing a building, does not seem to be conducive to social design. There is a clear progression of design decisions from sketches to final presentation structured within the traditional method, but when used to probe extra design issues, the visual communication of the project becomes sloppy and unresolved. The schools in general are found to be avoiding a clearer distinction between these two approaches.

There appears to be a small but growing recognition of historicism in design with the studios. Some studios are offering problems which draw upon historic analogies of the immediate past. Others are offering options to adopt old buildings to new uses and outright renovation problems. These are subjects which would have been shocking and irrelevant in architectural schools just a few years ago. The visits did not reveal any sensitivity, however, in how instruction in history is related to design or to the studios. They appear to remain as two separate subjects whose relationship is left entirely to chance. One reason for this may be that the design faculty that teaches today was educated within a total historical void.

"Systems" design is almost nonexistent in the schools. It is almost as if it were a reaction to the great faith placed in this as a major design tool more than a decade ago. When architecture could not satisfy the apparent need to design and build in the quantity demanded by society, "systems" theories were developed to build better and faster. Now that the building boom has abated, there seems to be more interest in designing for quality rather than for quantity. In every studio, emphasis is again being placed on the individual solution to a design problem. Design is reverting to a craft effort, custom-made, rather than toward mass production, with the users in mind.

In this same thought, it was also observed that the scale of the studio projects has diminished. Gone are the large impersonal urban redevelopment problems. In their place are either small scaled architectural and urban rehabilitation schemes or simple buildings which depend upon a personalized knowledge and sensitivity of the student designer to his/her immediate solution.

Most architectural schools that were visited do not espouse any particular design ideology. This appears to be a deliberate decision on their part. In the 1940s and '50s, when modern architecture was firmly established, almost every school

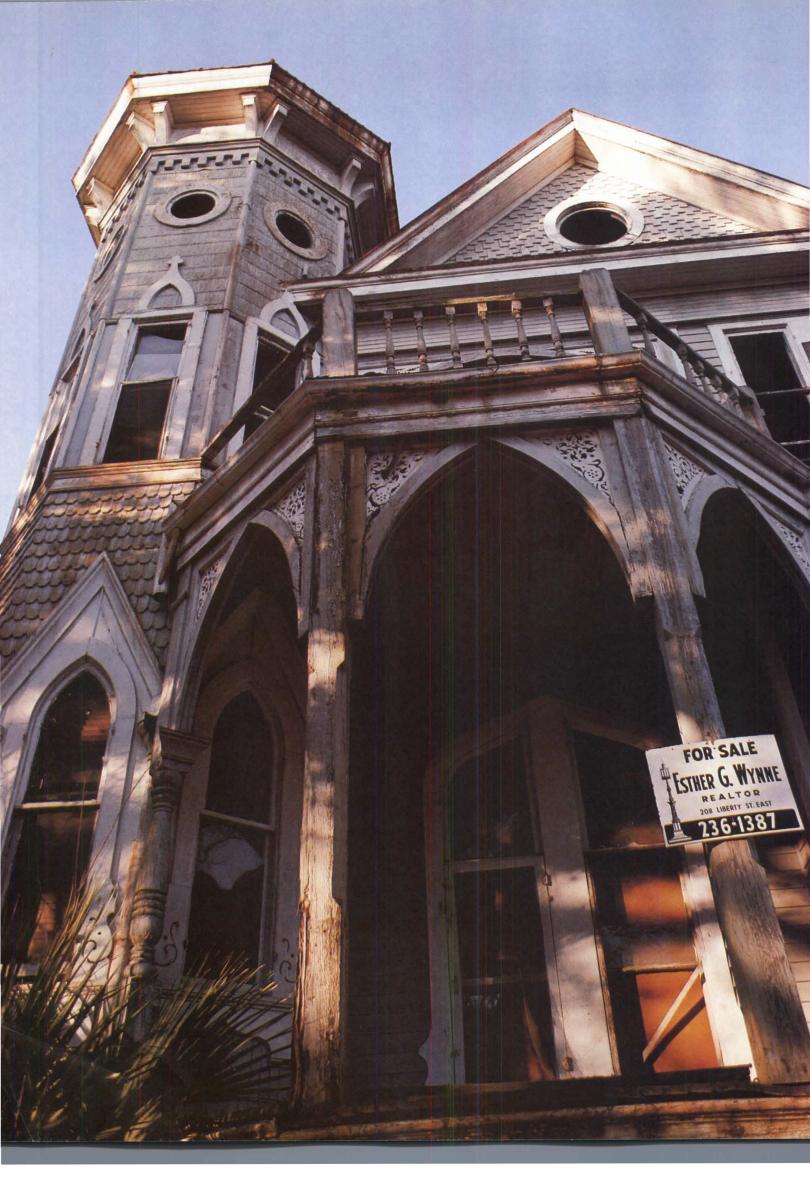
### With the abatement of the building boom, design is concentrating again on custom-made solutions.

either had a strong design-oriented dean or chairman or a "master" to whom the entire school was oriented as a model toward which every student aspired to be. In the '60s and early '70s, the schools chose the opposite direction away from the "hero" and more toward a design options program which does not emphasize one point of view over any other. This trend is clearly parallel to the state of the profession in terms of design. There is a dissatisfaction with the design of the immediate past as being generally unresponsive to society's real needs and already bland and unexpressive.

Yet it is interesting to observe that where there exists a strong design task-master who is forceful about his or her ideas, the students respond enthusiastically. The success of this person appears to be greatest when he or she is a designer whose work has been proven in practice or who is involved in developing a design vocabularly outside of the school studio.

The communication of design ideas seems to be traditional and healthy. Compared to the great emphasis on verbal and conceptual collage-type presentations of a few years ago, there appears to be a gradual return to models and drawings as the principal means of presenting designs in the studios. On the whole, it was observed that the general quality of these

continued on page 60



### Savannah's Victorian District: Attempting Restoration Without Wholesale Dislocation

A nonprofit corporation engages in a landmark effort to maintain the area's racial and economic diversity. By Mary E. Osman

The magnificent plan which General James E. Oglethorpe prepared in 1733 to guide the growth of the new town of Savannah has served well. Savannah is one of America's most beautiful cities, where its 20 squares are gardens of live oak, magnolia and azaleas and its riverfront creates a colorful backdrop for the downtown.

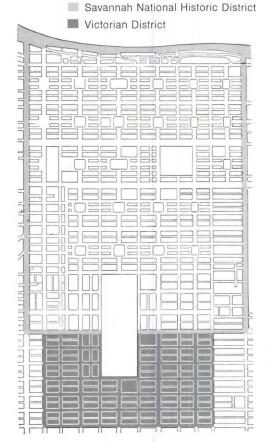
Just south of Oglethorpe's original city (see map) Savannah suddenly changes. The soft and sedate buildings of the core give way to Victorian gingerbread, brick to wood, restoration to decay, and stateliness to an atmosphere of poverty.

This is Savannah's Victorian district, a 45-block, 162-acre area that was built in the late 19th century as the city's first suburb. Today, the Victorian district is the scene of this history-minded city's boldest restoration effort to date, one that may become a national model for the melding of social and architectural concerns.

There is a long way to go. For as other suburbs grew up around Savannah the more affluent moved on from the Victorian district and their place was taken by the poor. Houses gradually came under absentee ownership and the area drastically declined.

Today, the residents are mainly lowincome black families and the elderly and only 20 percent own their dwellings. Yet Savannah is moving southward and in the process the Victorian district is being "discovered" by middle-income people who like city living.

Savannah is well versed in the events that follow such discovery. Its restoration in the late '50s and '60s of more than 800 structures in the two-and-a-half-mile downtown historic area has attracted worldwide attention and praise. But some of the city's leaders know that all too often this means massive displacement of the people who can least afford it. They are now bent on providing the nation with a lesson in restoration that does not entail major relocation of people. The ambitious plans to rehabilitate the Victorian district aim at proving that neighborhoods can be revitalized, providing a human-scale en-





A Gaston Street house just north of the area (across page) typifies restoration's southward move. District houses (above) were built in the late 1800s.

vironment for all classes of people and ensuring social and economic diversity.

The leading force in this movement is the Savannah Landmark Rehabilitation Project, Inc. (SLRP), a nonprofit housing corporation which is dedicated to the proposition that rehabilitation strategies can be devised that will alleviate the substandard rental units for low-income residents of the Victorian district. Early on, the SLRP received a grant for administrative costs from the National Endowment for the Arts and a loan for working capital on rehabilitation from the local, minority-owned Carver State Bank.

The president and driving force of the SLRP is Lee Adler II, an investment banker who served as president of the Historic Savannah Foundation in the '60s when the group spearheaded the downtown's restoration. He is determined that the southward movement of restoration will not destroy the diversity of the Victorian district and that its long-time, low-income residents will not be uprooted by the advent of the more affluent.

Adler says that he saw two destinies for the district: either continued deterioration and eventual demolition or a complete takeover by the more economically fortunate. He had a dream about a third destiny, however, believing that "sensible rehabilitation" would create social stability to the benefit of both the area and the rest of the city, and that eventual owner-occupancy would be fostered. He did not want this to be accomplished at the expense of human suffering, and concluded that the time to do something was before restoration hit with full force.

Savannah has always prided itself on the diversity of its neighborhoods, Adler says, and he was able to form the SLRP whose 23 board members, white and black leaders, share his aspirations. Moreover, the group has finally received the blessings of the city's officials.

After the formation of the SLRP, its members announced what urban affairs columnist Neal Peirce calls "a breathtaking goal: to drive out slumlords, to purchase and restore 600 of the 1,200 structures in the Victorian district and then—with the help of federal subsidy





Added to the Register of Historic Places in 1974, the area's houses are 'carpenter Gothic,' trimmed with details bought from a building supply catalog.

programs—to rent the homes back to the poor tenants at rents they could afford." When Mrs. Beth Reiter, the full-time director of the SLRP, was asked what social values the proposal aimed toward, she put it simply: "The right of every person to have a decent home."

The organization used loans cosigned by individual backers to buy its first property on Price St., a three-unit row house. On a recent winter day, construction workers were busily working to make the units habitable and at code standards of both HUD and the city, and the first tenants will move in in a few weeks. Costs have been cut by the use of a grant under the Comprehensive Employee Training Act, and many of the workers are district dwellers.

For the pilot project a \$52,200 urban renewal grant was obtained. Beth Reiter estimates that rehabilitation costs for 1,200 square feet of dwelling will be under \$16,000. Overall costs of acquisition, rehabilitation and administration, she estimates, will be about \$21 per square foot. Most of the tenants in the area now pay rents that average \$50 per month, she says. To help keep the rents low, the SLRP will use HUD Section 8 funds, and

HUD guidelines will be used in the tenant selection process. Already, Mrs. Reiter says, there is a waiting list of more than 60 people for the first renovated units. It is hoped that other renovations will follow quickly and that 20 units will be ready soon.

The SLRP, "staying a step ahead of the speculators," as Adler says, has managed to buy to date 40 structures, and it has an option on several others. Its goal is to rehabilitate 60 units per year for 10 years. A combination of conventional and government financing will be used, according to plans, with loans at a low 3 percent interest, paid off after renovation is completed. The SLRP was gratified when HUD recently announced a grant of \$160,000 to the city's community development department to be funneled to the SLRP. The Victorian district, once included in the model cities program, has hope that this time around it will be able to avoid the wasteland of traditional

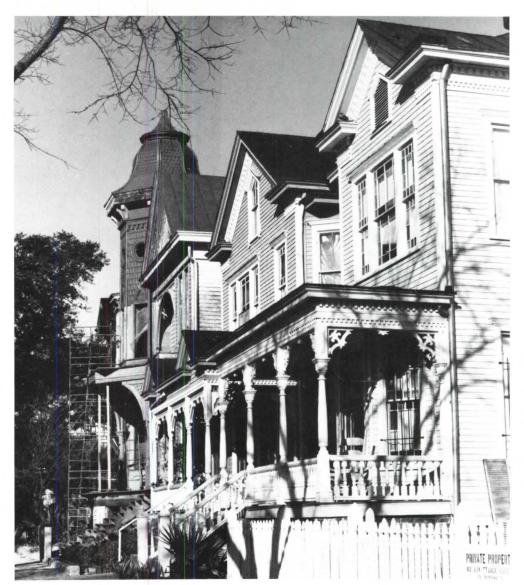
urban renewal.

The Lominack Partnership, a Savannah architectural and planning firm, has been employed by the SLRP as architect for the rehabilitation project. Already, the firm has made measured drawings of 64 units or 30 wood-frame houses. David Browne, a student from University College, Dublin, Ireland, who is working in the firm's office as an architectural trainee between his fourth and fifth year of school, was primarily responsible for the measured drawings and design drawings. For the first time, the firm has used some aspects of photogrammetry, the science of measuring by means of photographs, for the construction drawings. This technique of recording historic architecture is particularly valuable for use by unskilled contractors and workmen, says T. Jerry Lominack, AIA, a partner in the firm. "They can see a photograph," he says, "even if they can't read a blueprint."

Lominack makes no claims that the rehabilitation of the Victorian district is "luxurious restoration." He calls the undertaking "social restoration rather than architectural restoration." He says that the project is a "new and different one" for his firm. "There are so many buildings, and the scale is so different."

Lominack believes that the project "would be tremendously important socially even if the buildings were not so historic or of such architectural quality. The package could be used anywhere, in any situation."

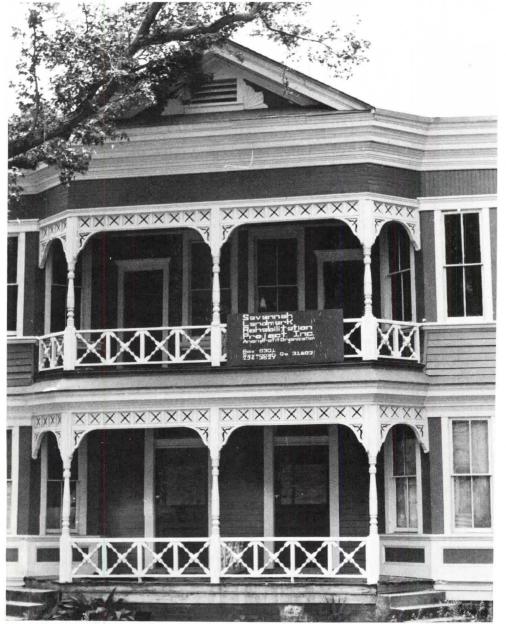
He emphasizes that "preservation of architectural landmarks is now a reality; it has become a recognized necessity for the continuance of our cultural heritage, and it's also less expensive than building from scratch. We also have to remember that the rehabilitation of less significant structures is important, both culturally





The area in early days was beyond city fire regulation zones and wood was used extensively; a row house on Price Street (bottom) is the first to be restored.





Among the best of a dilapidated lot, a little paint helps this old house; before restoration, tenant-occupied homes are repaired as sensibly as possible.

and economically, and is just as vital to the whole."

Lominack also praises the SLRP's plan of purchasing one or two structures in each of the district's 45 blocks. Such dispersal, he says, has two major advantages. First, the diversity of class levels in the neighborhood will be assured and, second, the upgrading of one unit will likely inspire private developers and homeowners to do likewise for homes in the same block.

When Beth Reiter was asked if the life cycle of the housing units, which now appear so dilapidated, would endure for more than one generation, she answered: "Well, these houses have lasted a hundred years; why not a hundred more?" She was also asked if there had been local opposition to the project. She said that while some people cannot imagine a low-income person as a next door neighbor in a restored area, there has been no opposition from local developers. Also, endorsements have come from Mayor John P. Rousakis and such groups as the Junior League and the National Association for the Advancement of Colored People. Every such effort, she says, must have "drive from the local level, even with federal government backing," and that an articulate spokesman is a necessary ingredient for success. Savannah has this, she says, in Lee Adler.

Mrs. Reiter says that "ideally the SLRP will pay off its loan in 10 years, after which the project will be re-evaluated and the SLRP will get out of the rental business, moving toward some form of tenant ownership." To Adler, the more immediate problem is acquiring the necessary units as quickly as possible to fullfill the SLRP's aims. Tenants of the units, Mrs. Reiter says, will be required to attend sessions that will explain the rehabilitation purposes, give information on proper maintenance of the units and help generally in knowing how to be good neighbors.

In November, the SLRP called a conference to seek "alternatives to the tough problems of deterioration and displacement that are occurring in architecturally stable inner city neighborhoods across the U.S." The conference was made possible by a grant from the National Endowment for the Arts and supported by a variety of groups including the National Trust for Historic Preservation and the National Park Service, and cosponsored by the Pittsburgh History and Landmarks Foundation and the Mount Auburn (Cincinnati) Good Housing Foundation. The Victorian district was used as an informal "laboratory."

Neal Peirce, a participant, reports that the conference showed "realism" in being aware that "income-generating activities" in rehabilitated inner city neighborhoods are dependent upon "allies in business



Across from the project on Price Street are privately rehabilitated homes; the hope is that others will follow.

and banking circles" and upon "skillful manipulation" of federal grants. "There was indignation," he said, "at the idea that poor people, forced into impoverished center city neighborhoods deserted by the middle class in its rush to the suburbs, might now be displaced by that same middle class returning."

Carl Westmoreland, president of the Mount Auburn Good Housing Foundation, said that the black poor would always be victimized until they owned their own homes and neighborhoods. "Don't wait for pity from the Northern industrial cities who might be on a liberal binge today," he said, that may end tomorrow. "Find beauty where you are. . . . As long as we wait, we will dance for our supper."

Robert McNulty of the National Endowment for the Arts promised the conferees that the endowment would help spread the message. Groups such as the one meeting in Savannah, he said, "can contribute flesh and blood, not bricks and mortar" to the revitalization of neighborhoods.

A HUD-supported study of the revitalization of old neighborhoods, made for the Urban Institute by economist Franklin J. James, indicates that the fears of Lee Adler and others in Savannah are justified. All too often "renovation and economic uplift in some neighborhoods are being accompanied at the expense of blight and human distress in others." The poor of the improved areas are displaced to less desirable neighborhoods.

The research shows that the rehabilitation of existing housing is becoming increasingly popular. One of the surveys made "showed that renovation on a substantial scale is occurring in more than 60 separate neighborhoods of 20 major cities." And an Urban Land Institute comprehensive survey of every central city in the country found that "substantial recycling was occurring in half of the cities and in three-quarters of those with a population over 500,000. This activity involved some 50,000 housing units between 1967 and 1975, and the pace has been speeded up in the years since then."

Contrary to the opinion of many people, James says, he sees no back-to-the-city movement. In the private renewal efforts, few new homeowners come from outside the city. "Seventy percent of those who purchased homes in the cities studied relocated from within those same central cities in 1973 and 1974. Only 11

percent had moved from the suburbs. The rest came from other cities," he says. Low-income blacks and the elderly suffer most, as the people in Savannah realize. As homes in the inner city are taken over at bargain prices by the more affluent, "families are being pushed into apartments where they are often unwelcome and uncomfortable. Elderly persons, especially renters, are vulnerable to revitalization because they sometimes cannot deal effectively with relocation, either economically or psychologically."

Local governments, says James, "are more likely to consider the fiscal benefits rather than the social harm from changes that are occurring."

Lee Adler and the other leaders in Savannah make no pretense of having solved all the problems, but Adler does believe that the method devised by the SLRP can be applied to cities everywhere, even those without historic districts. However dreaded the middle-income pressure is for the vulnerable in the revitalization of inner city neighborhoods, it does seem that Savannah gives a "glimpse of a new vision," as a conference speaker expressed it, for diverse and viable urban neighborhoods.

### Lessons in Three Cities' Efforts At Neighborhood Conservation

A new Conservation Foundation report on revitalization programs in Cincinnati, Seattle and Annapolis. By Nora Richter

"Urban death"—blight, fiscal crisis and poverty—threaten many American cities. In the '60s, urban renewal strategies involved razing older buildings and reconstructing urban centers. However, the trend is changing as more and more communities turn to urban conservation and rehabilitation. So states a report recently published by the Conservation Foundation, "Neighborhood Conservation: Lessons from Three Cities."

"A surge of interest in older buildings and a greater regard for existing urban assets have accompanied a growing sense of how to use these assets as focal points for community regeneration," say authors Phyllis Myers and Gordon Binder.

The report describes revitalization efforts in six communities: Over-the-Rhine, Mount Adams and Mount Auburn in Cincinnati; Pioneer Square and Pike

A renovated cast iron pergola adorns a park in Seattle's Pioneer Square.



Place Market in Seattle, and Historic Annapolis, Md. Examined are how the neighborhoods were developed and defined, the process of their decline and the role of community residents, private sector, local and federal government in revitalization efforts.

Myers and Binder recognize two "waves" of neighborhood conservation. Annapolis and Mount Adams illustrate the first wave, in which conservation efforts are mainly initiated and funded by the private sector. When the private sector has no interest in revitalization or is only interested in "razing and rebuilding," the second wave occurs. As exemplified by Mount Auburn, Pioneer Square and Pike Place Market, such conservation efforts are initiated by a mixture of public and private planning and investment. In these cases, conservation efforts were "designated to offer protection to existing residents and activities in addition to buildings and the overall physical character," the authors says.

Following are community profiles summarized and excerpted from the report. The full text can be obtained for \$4.40 from the Conservation Foundation, 1717 Massachusetts Ave., N.W., Washington, D.C. 20036.

Cincinnati has been described as "44 neighborhoods, one great city." This legacy has survived through suburbanization, neighborhoods split by expressways and old buildings razed for urban renewal projects. Although the old neighborhoods remain, they have changed drastically, some declining and others being revitalized.

The authors examine Over-the-Rhine, Mount Adams and Mount Auburn because the city's most intensive revitalization activities have occurred there. "In all three neighborhoods, specialness-of-place and architectural character have been used as levers for neighborhood upgrading," they say.

Over-the-Rhine (see Aug. '75, p. 26), a community adjacent to the central business district, was first settled in the 1850s as a German working-class neighborhood. Findlay Market, built in 1902, is the city's only remaining public open air market,

and the community's most distinctive buildings are located nearby. (The market was placed on the National Register of Historic Places in 1972.) Over-the-Rhine has been "torn apart socially and physically" in recent decades. The old-line families and newer Italian residents moved to the suburbs, while there was an influx of unskilled Appalachian whites and displaced blacks. The market deteriorated; stores closed; crime, welfare, transiency and vacancy soared.

A main trigger of renewal activity in Over-the-Rhine was the health department's insistence in 1969 on razing the deteriorated, vermin-ridden Findlay Market. Instead, the director of the city department of urban development chose to work with architects to restore the market as a "focal point for community renewal." In addition, a "town center" was to be constructed from old and new buildings. Funds from the federal neighborhood development program covered one-third of the \$1 million cost of restoring the market; city funds provided the remainder.

The authors observe that rehabilitation of Over-the-Rhine has not been as successful as Mount Adams and Mount Auburn. Although 600 houses and 3,000 units were renovated, broken windows deface the neighborhood, abandonment is increasing, stores are empty, the two remaining supermarkets threaten to close, and the city is razing one or two houses a week.

Some blame the failure on lack of community organization and interest. Residents tended to be distrustful of the city's revitalization plans. Some believe that "mismanagement, corruption and badly conceived federal housing administration regulations that went along with the federal money actually contributed to further decline in Over-the-Rhine."

Mount Adams consists primarily of multifamily frame houses built in the early 1900s. Until the '60s, it was a stable working class community. However, as these residents migrated to the suburbs, black residents were relocated from adjacent urban renewal projects, and rural whites from Appalachia moved into the community. This led to increasing vacancy rates, declining rents, physical decay and social disintegration.

Rehabilitation of Mount Adams was initiated by a local attorney, who with other early developers decided that the neighborhood could attract young, childless professionals because of cultural and recreational assets. At first, lending institutions were skeptical, so houses had to be purchased and rehabilitated for cash. In time, these efforts helped attract more private investment. "Now that profitability has been proven, the banks are quite willing to finance renovation, and more indi-



viduals are buying and renovating for their own occupancy," the authors report. Unrenovated houses that sold for a few thousand dollars in the mid-'60s cost \$30,000 to \$40,000 by 1975.

The developers chose to rehabilitate rather than restore the houses "in the belief that eclectic upgrading sells better in Cincinnati than faithful restoration."

With rehabilitation, the make-up of the community has changed from lowincome residents to middle-income newcomers, predominantly singles and childless couples.

Mount Auburn was "one of the most influential and affluent 'suburban' enclaves in the city until WWII." Over a 60-year period in the 19th century, Cincinnati's business, social and political leaders built landmark structures. Mount Auburn's decline "was not physically isolated, but physical and social blight in nearby communities created a self-fulfilling fear among its residents of change." Predominantly white and middle class until 1967, Mount Auburn had become mainly black and poor by 1970. Vacancy and abandonment increased and home ownership decreased.

Mount Auburn's rehabilitation efforts involved both a nonprofit community development corporation and community action. The authors cite the Mount Auburn Community Council as the driving force behind revitalization. "The council's

Over-the-Rhine community center: a new structure in Cincinnati's old neighborhood.

active role in setting priorities among competing needs undoubtedly helped Mount Auburn receive the second largest block grant allocation in 1976 of any neighborhood in the city for concentrated improvement services."

The council began in 1967 to "deal with the demoralizing array of physical, economic and social problems," and created the Good Housing Corporation to purchase "the most obtrusive eyesores" and renovate them, hoping to spur private activity. In addition, Mount Adams has received financial aid from office of economic opportunity, model cities, neighborhood improvement program and project rehab.

As in Mount Adams, lenders at first balked, but they came around as property values increased.

The neighborhood is now attracting a broader professional group, including single women, older couples and blacks.

As Cincinnati communities became involved in upgrading their neighborhoods, two trends became clear: (1) an increasing emphasis on preservation and (2) residents broadened their scope to include how public and private policies affect their daily lives.

The report makes clear that Cincinnati's neighborhood conservation efforts

exhibit a lending pattern that is consistent with documented national trends. "For many years, most of the private financial resources available for housing have been directed to new development and the suburbs."

Thus, nationwide, there are limited funds for either the purchase or the renovation of a city's existing housing stock. "This pattern of disinvestment by the lending community has been endemic in the decline of urban neighborhoods."

Seattle's urban renewal efforts in the '60s and '70s have combined new construction and rehabilitation. During this time, almost 3 million square feet of new office space has been built, as have new expressways, parking lots for suburban commuters and luxury housing on the city's waterfront. Equally important and impressive are Seattle's efforts to rehabilitate and restore old structures.

Most of the changes examined in the report began in 1970. "The World's Fair [1962] gave the city a new image of pride and confidence, but this was shattered by high unemployment from the faltering aerospace industry and migration to the suburbs. The downtown area experienced increased blight and abandonment. The solution most often advanced was massive urban renewal."

The authors suggest that although Seattle lacked a single landmark building, the city's first public efforts in preservation "evolved into sophisticated, neighborhoodwide revitalization efforts jointly marshaling public and private resources." Efforts concentrated on Pioneer Square and Pike Place Market.

Pioneer Square is the site of Seattle's first settlement in 1852. After a fire in 1889 leveled 65 square blocks, the area was rebuilt. Architect Elmer H. Fisher created 60 buildings which "helped stamp the area with a physical integrity and harmony." Pioneer Square enjoyed many years of prosperity until the city center moved northward. Eventually, the square became a skid row which housed transients in the lower-income bracket.

By the late 1960s, 80 percent of the area was vacant, prepetuating the skid row image. Crime and violence increased.

While a construction effort began, a few private citizens started to buy and restore old buildings in the square for offices and commercial rental space. Wes Uhlman, elected mayor in 1970, was committed to reviving Seattle and chose first to restore Pioneer Square, which was placed on the National Register of Historic Places the same year.

Using revitalized Ghirardelli Square in San Francisco as an example, the council decided to use city finances to attract private investment. However, "the supporters insisted that they did not want to create the same image of affluent, chic commercialism nor a particular historical era, but aimed for reuse and adaptation for a diverse urban community—offices, shops, restaurants, housing for a middle-income community as well as for the skid rowers. small parks and an accessible waterfront." The historic preservation board reviews all alterations, reconstructions and demolitions as relative to broad guidelines of "historical and architectural style, general design, arrangement, texture, material and color of the existing streetscape."

Federal and local money—\$2 million financed a landscaped cobblestone mall, pedestrian shelters, street improvements and median planting strips.

By 1974, more than \$8 million had been privately invested in Pioneer Square, and by 1976 more than 100 restaurants, art galleries, craft shops and bookstores were operating in the area. Office space rents increased from about 50 cents a square foot prior to renovation to from \$6 to \$8 a square foot.

Overall, rehabilitation in Pioneer Square has been a success. However, the commitment not to displace the skid row residents has been less successful. Some early advocates of revitalization are un-

Before and after in Annapolis: Carvel Hall Hotel (left), razed during rehabilitation of adjoining William Paca House and gardens.





happy about the doubled rents and taxes. "At this point, you start to worry. It wouldn't take too much to coast into the Ghirardelli thing," said former city councilman Bruce Chapman.

Pike Place Market (see Aug. '77, p. 46), the second revitalization target in Seattle, is eight blocks north of Pioneer Square. "Tensions in the Pike Place Market have been more complex and controversial than those in Pioneer Square. A different set of aims called for a different blend of public and private cooperation."

Pike Place, built as a marketplace for local farmers, deteriorated after World War II. In the early '60s, the business community won the approval of the city council to "raze and rebuild." However, by 1969 disillusion was setting in nation-

## Achieved in Annapolis: an ordinance to protect structures in a defined historic district.

wide about the benefits of massive redevelopment as an urban strategy.

A major personality in the Pioneer Square revitalization, architect Victor Steinbrueck, led the fight against this urban renewal plan. "Steinbrueck claimed that the market could not be preserved unless the *uses* in the streets around the market were preserved—the taverns, bingo parlors, second-hand clothes stores, thrift shops, cheap hotels. All these, he insisted, comprised an interlocking web of relationships, an 'ecology' that had to be conserved."

Steinbrueck's efforts led to the Pike Place Market's listing on the National Register of Historic Places in Mar. 1970. The 22-acre site was, however, reduced to 1.7 acres. But a "sophisticated campaign" brought the adoption of a local ordinance protecting a seven-acre historic district and the establishment of a 12-member historical commission. The project has received \$12.7 million in federal funds, while private financial interest, sluggish at first, has picked up.

Seattle officials have argued that the urban conservation ethic, above all, makes excellent economic sense. "The new wave of urban renewal has led Seattle citizens into traditional landmark preservation (a direction previously thought irrelevant to a city founded in 1852) and into conservation of older neighborhoods, newly appreciated by residents for their solid construction and fine views."

Historic Annapolis contains one of the largest concentrations of 18th century architecture in America. In the '30s, the city began to decline as steamboats and ferries abandoned its port. In 1952, when Historic Annapolis, Inc., (HA) the city's first preservation group, was formed, the

area was declining. By 1970, the historic core and surrounding blocks had lost over one third of their population. Stores and homes were vacant and property values had dropped.

The tide changed when better roads made Annapolis within commuting distance of both Washington, D.C., and Baltimore. At the same time, the State of Maryland moved more administrative offices to Annapolis. The town became a "mecca for tourists, yachting enthusiasts,

architectural historians and others lured by the city's various amenities."

Encouraged by HA, the city council passed a local historic district ordinance in the late '50s establishing building regulations and a review board. Although the ordinance was "weak," HA "relied on the power of persuasion and protests to fend off what its members saw as undesirable additions to the Annapolis skyline."

In 1965, after an eight-story hotel was approved for the city dock, community reaction resulted in a stronger historic district ordinance. However, in 1967 a disgruntled applicant had the ordinance declared invalid because its appeal procedures were not in accord with existing laws.

HA began working for a new law, and finally in 1969 an ordinance was passed identifying a historic district and creating a five-member commission with the power to approve or deny applications for construction, demolition or alteration of any structure.

Most people agree, say Myers and Binder, "that the historic district commission has had a beneficial impact on the area, particularly in retaining scale and harmony among the structures. This in turn has given home buyers and mortgage lenders confidence that their investments will be protected."

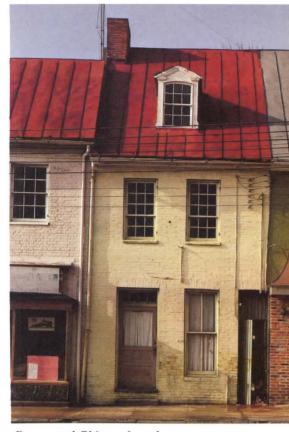
Today, most of Historic Annapolis's structures have been renovated. During the past decade, property values have gone from \$20,000 for a modest shell, with an additional \$15,000 to \$20,000 for rehabilitation, to as much as \$70,000 for a home today; few shells remain.

A result of the "transformation" has

A result of the "transformation" has been a change in the area's population. In the '50s and '60s, the neighborhood was a mixture of old and young, working class and professionals, black and white, renters and homeowners. Now, few lowand moderate-income residents live there.

The experience in Historic Annapolis demonstrates a successful joining of "a community organization and public support to take advantage of opportunities brought about by private investment," says the report.

Its concluding chapter examines how such neighborhood conservation efforts will affect national urban policy. It may be too early, say Myers and Binder, "for



Renovated Chinese laundry among row houses on Main Street, Annapolis.

a grand national policy design" on neighborhood conservation, but it is "by no means too early to take appropriate initiatives to nurture the kinds of efforts" examined in the report.

The best thing the federal government can do, say some people, "is keep away." The case studies in the report, however, "do not support the calls for a hands-off policy." Not only is it demonstrated that even the modest grants can make a difference, but the studies suggest "that federal actions to encourage conservation need to be formulated with an awareness of the diversity of conservation efforts, their dependence upon local initiative and resident involvement and the limitations of previous federal policies in turning cities around. At this time, conservation should be thought of less as a panacea for the renewal of cities and more as a hopeful approach that calls for flexible, supportive-and judicious-response by the federal government."

Myers and Binder contend that the decline of many cities has not been due just to federal policy decisions, but rather to "fundamental demographic economic and cultural forces abetted by a range of public policies and resources." They suggest that "by looking at our cities today, we can sense another set of trends that seem to be working in favor of their renewal. People in the cities, and state and federal policy makers, must learn from these trends how to help American cities help themselves."

### 'High standards' of design presentation were found at several of the schools visited.

Design from page 49

was average at best and in many schools less than what is thought to be a minimum quality. The use of photography, especially in documenting field and social conditions, is more widely used than before as well.

Surprisingly, in spite of all the promise that computer graphics and other media were supposed to have in applications to design, it is not used in any of the schools visited outside of a laboratory environment. Could this be because design is still taught as a "craft," a traditionally individual creative effort which cannot afford nor allow the intervention of a depersonalized system as an aid? Or could it be that the technological systems developed so far are too expensive, sophisticated or advanced for design education?

Several schools are so outstanding in their emphasis on excellent design presentation that they are worth mentioning. They are not put forward as models to be emulated by others but simply as examples of schools that strongly and thoughtfully believe that the art of communicating design ideas is as important as the design ideas themselves. Cooper Union, Cranbrook and IIT encourage the most precise, disciplined, exquisite models and drawings of all. The University of Minnesota has maintained a high standard of sketch presentation throughout recent years. To these schools, presentation is a firm requisite of each studio project in time and quality, but they remain the exceptions. Such proficiency in those examples may be construed as a legacy of a deep seated tradition. No other schools of those that were visited achieved such excellence in design communication.

In general it was found that the design studios are still isolated from the other courses offered in the schools. The history, theory, structures, mechanical, environmental and social subjects are scheduled during separate hours and are taught usually by a group of faculty separate from those of the studios. For all the discussion of integration of these courses together that has gone on in the past, it appears that no program has achieved it. What few interactions there are seem to be casual and are not part of a set program of how design should be taught.

There is a small but growing number of architectural programs which are reaching out to other fields. Several have established joint degrees and interdisciplinary majors. The architectural students are the sole beneficiaries, however, as there appears to be no reverse flow of students from other disciplines entering the architectural program. The business management, engineering, planning, urban design and building technology fields seem to be the most receptive to this collaboration.

Research in architectural design programs is very underdeveloped. There appears to be little patience or interest on the part of the design faculties for research in the schools. There were comments that it is basically antipathetic to the design process, leading to a study of minutiae rather than the synthesis of design concepts into a built form. It has been applied to developing information for design in the behavioral and technical fields, but never integrated into a design project within the studio. Where any research options were offered in schools, they depended upon a particular interest and therefore individual initiative of a student or faculty member.

There is a basic question as to whether it is a relevant effort or not in a school of design. Certainly, research has proved that it can sharpen the validity of some design decisions, especially in those problems where the emphasis of an architectural project is related to the needs of the users of the building. In this sense, it could result in making a good design better, but it will not necessarily make a bad design better from the point of view of design. The universal attitude about research is that it is preliminary to the design process and that with as little precious time as there is in a studio project, the information thus gathered is not necessary or very relevant.

Research in design therefore remains in another world apart from the studios. It is even more curious to note that no one, at least in the schools visited, seems to be distressed by this situation.

Architectural schools have expanded their enrollments far beyond the capacity of society to absorb the graduate architects as "designers." The programs of the schools, however, are still structured to teach design and an individual is regarded as a second-class student if he/she cannot achieve in the design studios. In recent years, much has been said about the expanding role of the architect and the diversification of the field in order to compensate for the lack of traditional architectural work. The visits revealed few program alternatives leading to an architectural degree for a student to pursue a course other than design.

Based on conversations with people in the schools that were visited, it appears that those that had an active participation of design practitioners in the studios experienced the least turmoil in their design programs over the past 15 years. These schools tended to be located in cities where they could draw faculty from a pool of practitioners in small offices who have the time and dedication to teach as well as maintain their own offices. Could it be concluded that the practicing designer-teacher had a stabilizing effect in maintaining student interest in design through those years of soul-searching of the future of architecture in society?

It was observed that the faculties of schools are tending to be composed more and more of full-time teachers who, by the consequence of their isolation from practice, are not wholly dedicated to design as an objective of the studio activity. For whatever reasons this is occurring, be it the recent economic recession which has limited the opportunity for teachers to practice, or a general change in teaching design to that of a profession in itself, there is the inevitable question as to what effect it is having on design education.

If, as has been observed, teaching is tending to become a full-time profession in itself, and if less and less of the faculty is practicing design, and if there is virtually no research being undertaken in the schools, then what do faculty members do in their nonstudio hours that is related to design? Apart from an additional teaching load, or administrative burdens which some inevitably have, there appear to be no incentives or even intraschool programs which would serve to stimulate the continual involvement of faculty with design outside the studio.

It was found that there is very little formal contact among the schools other than the administrative communications at association conventions. Visiting speakers and itinerate critics do pass through to show slides and bring outside design theory, but they comprise a relatively small group who present their own ideas which may or may not have any relevance to the school or the students. They are, in fact, treated as entertainment with little desire on their part, or the schools' either, to really involve their ideas with those of the family of the school. A more organized communication system, exchange of ideas, faculty, publications and exhibits among schools, seems lacking.

In general, the schools appear to be quite isolated in their communities. Except for occasional joint programs with other faculties within the same university, the design programs are purposefully self-sufficient and introspective.

There are some obvious problems in architectural education which are so vast in scope that no one school can effectively deal with them. Although it was not the original intent of the committee on design to confront the whole education picture, the issues deserve some exposure.

• Due to the total changes in architectural programs from the five year b. arch. degree to the six year m. arch. degree, the

continued on page 82

# Better professional protection for architects and engineers.

As Shand, Morahan's share of ENR top 500 design and construction firms continues to increase, we are pleased to report that our medium and small architect and engineer client list grows right along with them.

That's because, large or small, all Shand, Morahan accounts enjoy the same high standard of attention, service and expertise. And they all share the same distinct advantage that only our claims-made

liability protection provides.

Claims-made increasingly is becoming the pre-

ferred form of liability coverage for professionals across the board—including insurance professionals. Shand, Morahan is America's second largest underwriting manager of claims-made E&O for architects and engineers. And our continuity with these policy-holders is among the best in the industry.

After all, when you're providing professionals with the best service and protection they can expect anywhere, there's really no reason to look elsewhere.

Have your agent or broker contact us today.



American Dental Association Headquarters, Chicago

## Steel permits redesign to meet seismic code change

Boston State College was bursting at the seams after enrollment leaped from 800 students in the 1950s to nearly 10,000 in the 1970s. The college found itself on the verge of losing its accreditation because its library threatened to fall below American Library Association standards.

Though Boston State was locked into a high-density urban area, the trustees decided to stay put. They asked the architects to develop a structure which would meet existing A.L.A. standards for space and number of volumes. They also wanted additional classrooms, a theater/auditorium complex, and other facilities in a building that would present a new image for the college. Quite a challenge: all this plus an oddly shaped site.

The architect's solution was to provide each separate function with its own level, resulting in a building of unusual configuration. It was originally designed in

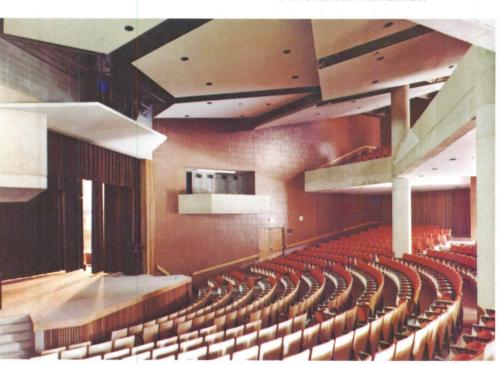
Late design change

When the design was about one-third complete, the site was declared applicable to Zone Two seismic code requirements. The structure had to be virtually redesigned to meet possible earthquake conditions.

Because of its irregular shape, a concrete frame and flat slab approach wouldn't work as a total moment-resisting structure. The architects decided on individual steel frames for each of the five main units of the building. They had to have the ductility that they knew steel would provide for earthquake design.

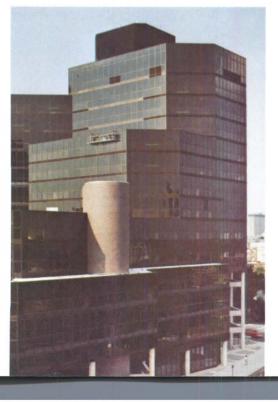
They got what they wanted with steel, without having to compromise on site, design, or functions.

We offer a broad range of technical advisory services for school and college structures, as well as many other building types. Our preliminary frame analysis program, for example, is designed to help you develop the most efficient frame for your building. It will be most beneficial to you and



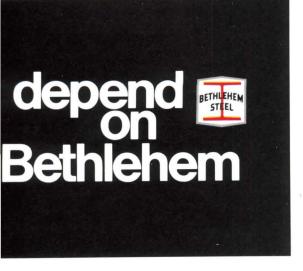
The theater/auditorium complex.

Building detail shows steel's versatility in framing unusual shapes for both striking architectural effect and a difficult site solution.



Circle 15 on information card





your client if it is conducted early in the design phase before architectural parameters have been finalized. This allows our Buildings Group and your structural engineer freedom to develop an optimum frame design.

Our large library of practical design and engineering aids, product catalogs, building case history studies, and slide presentations are also available upon request. Just get in touch with your Bethlehem Sales Engineer through the nearest Bethlehem sales office. Bethlehem Steel Corporation, Bethlehem, PA 18016.

### SALES OFFICES

phone

Atlanta (404) 522-4918 Baltimore (301) 685-5700 Boston (617) 267-2111 Buffalo (716) 856-2400 Chicago (312) 664-5422 Cincinnati (513) 381-6440 Cleveland (216) 696-1881 Detroit (313) 336-5500 Houston (713) 659-8060 Los Angeles (213) 726-0611 Milwaukee (414) 272-0835 New York (212) 688-5522 Philadelphia (215) 561-1100 Pittsburgh (412) 281-5900 St. Louis (314) 726-4500 San Francisco (415) 393-4800 Seattle (206) 285-2200 Ask for Sales Engineer

**Theater Design.** George C. Izenour. New York: McGraw-Hill, 1977. 631 pp. \$60, available to AIA members for \$54 from the department of publications marketing.

This is a big, impressive book. Written by one of the leading theater technicians of our day, it covers, in brilliant illustrations and surprisingly graceful prose, the history of Western theater architecture and features a detailed account of recent accomplishments in multiuse buildings for the performing arts. Since it was written by a proponent of adaptable space theaters, it traces with great authority the major developments of that field.

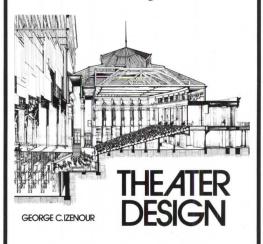
In spite of its technical orientation (in addition to the Izenour text, the book contains essays on the acoustics of multiuse spaces by Vern Knudsen and Robert Newman), it deals humanistically with the fundamentals of seeing, hearing and seating and relates these elements to the physical and psychological aspects of performance. It emphasizes convincingly that, after all, theater design is an art as well as a science.

Izenour points out, and rightly so, that the problem of theater architecture is among the most difficult an architect may be called upon to deal with. He also comments on the fact that, because of the enormity of technical and production demands, the form yields proportionately little creative satisfaction for the effort entailed. Esthetics, in the conventional architectural sense, pale before the base concern of orienting a mass audience to the rigorous demands of a particular performance event.

The illustrations alone are well worth the price of the book. There are over 900 halftones and drawings. Executed by many anonymous hands, yet rendered in one consistent style, they convey an impressive feeling of involvement in the atmosphere of the individual theaters shown. Drawings in linear one-point perspective-section combined with plans, transverse sections and isometric seating and acoustical diagrams put the reader into the picture as no photographic or literary description possibly could. Also, consistency of scale permits a composite of various plans and sections toward the end of the book that

provides an informative coda to the preceding exposition.

Among a wealth of documentation, there are particularly good and thorough accounts of two landmark innovative theaters of the 19th century. The first is the Festspielhaus in Bayreuth, Germany, conceived by Richard Wagner and designed by Brandt & Brückwald based on experiments by Gottfried Semper. The second is the Auditorium Theater in Chicago, designed by Dankmar Adler and Louis Sullivan. Both represent the triumph of rational auditorium design over the Italian



baroque tradition. Each opened up the possibilities for experimentation in sight-lines, acoustics and variable volume which have marked the most sophisticated 20th century work.

Since we have just emerged from a period of intensive experimentation in novel ways of relating audience to performers, it is interesting to read Izenour's evaluation of the basics of human communication. He points out that face-to-face confrontation seems to work best since the backs of human beings transmit "but little of mood, even less of acoustical energy (vocal and/or musical instrumentation), and nothing of facial expression." He concludes that despite the enticements of central, thrust and multifocus presentation, the frontal, on-axis approach would seem to be optimal for performance purposes.

He also notes that when the houselights begin to dim in a thrust stage configuration, the holders of the cheaper seats to the left and right tend, if possible, to move into the more expensive front-and-center seats. The pleasures of an audience surrounding the event are often solely within the mind of the director who ordinarily works exclusively from a seventh row center location. No matter how novel the form, the ability of an audience to see and to hear is indispensable to satisfactory actor-audience relationship.

As an experienced consultant in a highly complex and ego-bruising collaborative effort called theater architecture, Izenour often expresses an impatience with the "wrong" sort of architect. He rails against those who would place monumentality and visual effectiveness above utility. A structure such as a theater meant to house a highly demanding type of function, in his view, must first and foremost permit the intended functions to occur without serious limitation. He feels that the theatrical event demands a great deal of its environment and that this environment must fulfill its potentials in good enough measure to qualify as architecture in the most comprehensive sense.

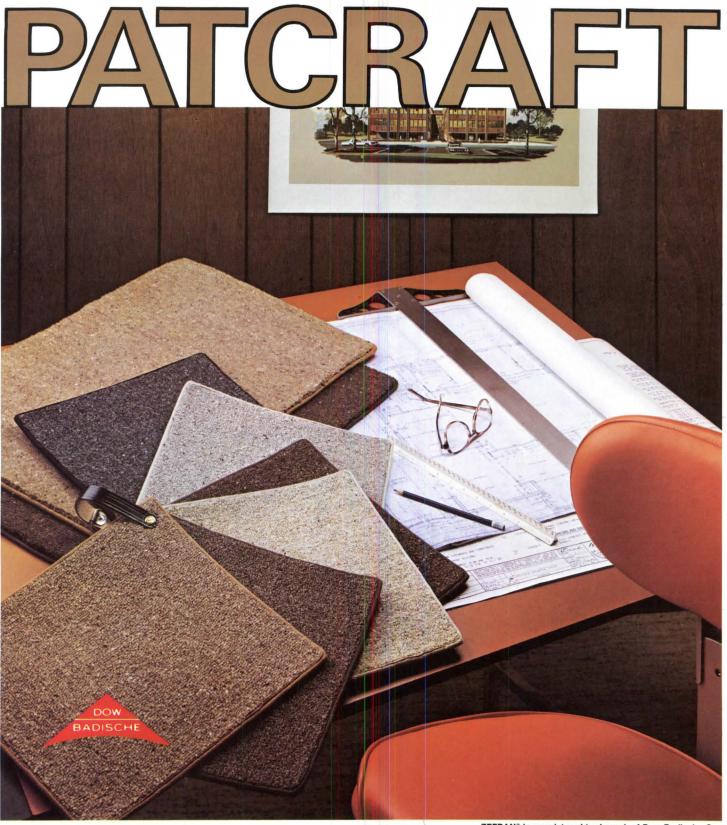
Izenour's book emphasizes the need for the design to proceed from practical theatrical considerations. We can only applaud his intention and hope that all theater architects will, in practice, heed his advice—and, incidentally, read and savor his remarkable book. *Martin Bloom, AIA* 

Creative Communications for a Successful Design Practice. Stephen A. Kliment, AIA. New York: Whitney Library of Design, 1977. 190 pp. \$22.50.

If you've ever said, "Nobody understands what architects do" or "We can't get our work published in the local press" or "We have an office brochure, but we're not very proud of it," read Steve Kliment's book

In 190 pages of text and illustrations, Kliment has managed to cover virtually every type of oral and written communication that design professionals have to deal with, right down to the appropriate "thanks-for-the-interview" note when you missed getting the job.

The book touches on every conceivable continued on page 71



ZEFRAN® is a registered trademark of Dow Badische Co.

### ARCHIVES ...

### PATCRAFT'S "CLASS A" textured loop of

100% ZEFRAN® acrylic berber by Dow Badische. (Pictured above with COURT HOUSE, a match-mate heavy duty cut pile plush.) Both in the same 6 earthtones and available with



ARCHIVES and COURT HOUSE are the stand up and take it carpets from . . .



### Outside Salt Lake City, Vulcraft and the Army Corps of Engineers

544,400 square feet, to be precise. For a new warehouse facility at Hill Air Force Base. The completed 1361' by 400' building could accommodate thirteen football fields.

The Corps of Engineers and the Air Force first considered making the facility an all concrete structure like its twenty year

old counterpart next door.

Then, Weyher Construction Company value engineered the structural system to see if they could reduce the contract price without altering the function or characteristics of the completed building. And to obtain the greatest possible savings

they recruited Vulcraft to computer design steel joists and joist girders specifically for the job.

The resulting Value Engineering Change Proposal showed that an estimated \$300,000 could be saved by using Vulcraft steel joists and joist girders instead of reinforced concrete.

When the Army Corps of Engineers and the Air Force saw that Vulcraft joists and joist girders were the least expensive structural system for the job, they gave Weyher Construction the go ahead. Weyher then issued Vulcraft's orders: deliver the joists and joist girders fast. In time to meet the original deadline.



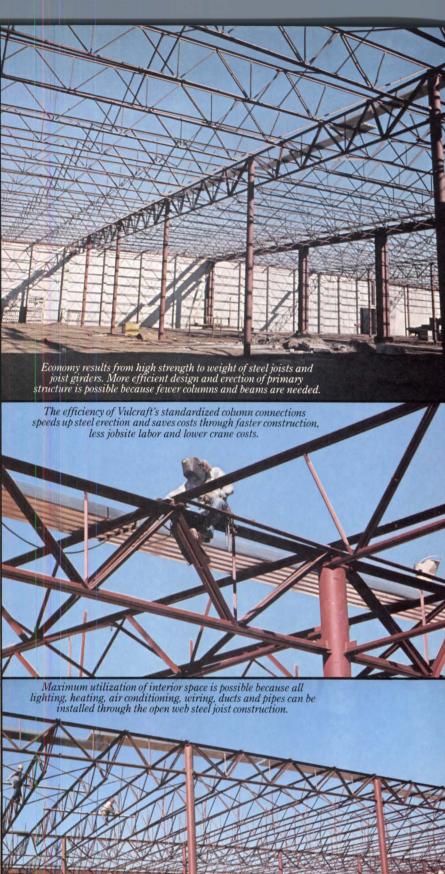
### covered a lot of ground together.

Vulcraft came through with flying colors. Weyher Construction came through with an on-schedule building. And the U.S. Government came through with an estimated \$300,000 savings.

The Vulcraft system might be able to save you money on your next job. So contact your local Vulcraft representative for details. Or write Vulcraft, P.O. Box 17656, Charlotte, North Carolina 28211 for your Joist and Joist Girder Specification Guide (See Sweet's 5.2/Vu.). Or call 704/366-7000.

What you'll get is action above and beyond the call of duty. No matter how much ground you want to cover.





A Division of Nucor Corporation

A Division of Nucor Corporation

P.O. Box 3009, Florence, S.C. 29501 803/662-0381
P.O. Box 169, Fort Payne, Ala. 35967 205/845-2460
P.O. Box 186, Grapeland, Tx. 75844 713/687-4665
P.O. Box 59, Norfolk, Neb. 68701 402/371-0020
P.O. Box 1000, St. Joe, Ind. 46785 219/337-5411

General Contractor: Weyher Construction Company, Salt Lake City, Utah. Steel Fabricator: Utah American Steel, Salt Lake City, Utah. Steel Fractor: Masco, Inc., Centerville, Utah. Architect and Engineer: Reid & Tarics
Association, San Francisco, California

Circle 17 on information card

### Proven Performer<sup>#</sup>814:

LOCATION: BROWARD COUNTY SCHOOL SYSTEM,

FLORIDA.

PROBLEM: SOUND CONTROL. BECAUSE OF OPEN CLASSROOMS.



RESULTS:
LOTS OF
HAPPY 4TO9
YEAR-OLDS.
LOTS OF
HAPPY
TEACHERS
AND STAFF.
PLUS REDUCTION
OF MAINTENANCE
COSTS.

SOLUTION:



SPECIFY
GROGRAINIT,
A LEVEL
LOOP WOVEN
VELVET
ACRYLIC

CARPET. A PROVEN
PRODUCT WITH GOOD
SOUND ABSORPTION,
CLEANABILITY AND
WEAR RESISTANCE.

_		
	Bigelow-Sanford, Inc. Dept. N. P.O. Box 3098, Greenville, S.C. 29602 I'd like to know more about your Proven Performers. Please send me your contract catalog.	
	Name	
	Title	
	Address	
	City	
	StateZip	

PROVEN PERFORMERS

TODAY, CARPET IS NO
LONGER AN EXPERIMENT
IN BROWARD
COUNTY SCHOOLS,
THE SYSTEMS 155
SCHOOLS ARE

FULLY CARPETED, WITH MORE
THAN 300,000 SQUARE YARDS
INSTALLED. AND WHEN THEY
WANTED TO TALK CARPETS,
THEY CAME TO BIGELOW.
FOR STRAIGHT TALK. PRACTICAL
SUGGESTIONS. AND PROVEN
PERFORMERS LIKE THIS
ONE. CARPET THAT REALLY
STANDS UP TO ABUSE IN
HEAVY TRAFFIC AREAS
AND ABSORBS SOUNDS.

After 150 years in the business, Bigelow has a wide selection of Proven Performers.

And we use our experience and advanced technology to develop a product to meet your needs.

Either way, when you come to Bigelow you get the benefit of years of experience.

Bigelow: 150 years of Proven Performance.

Goldilocks sat in the great big chair. It was too hard. She sat in the middle size chair. It was too soft. She sat in the baby chair. It was just right—but it broke when she sat on it. That is a capsule history of chair design in the western world. Does it matter? It appears to matter very much. If the world is a stage, then all designers are set designers and the chair is the basic prop. It is certainly our basic artifact, despite—

Chair is a collection of illustrated discussions exploring the what and why of chairs, and how they got that way. It is based on seminars conducted by the Smithsonian's new National Museum of Design, the Cooper Hewitt Museum in New York City.

Bound to last with a double thick cover, the book is 9" by 12" with 128 pages and over 1100 illustrations.

"A chair is not an artifact of service, but an artifact of culture." Chair examines chairs as peculiarly compelling symbols of civilization.

Character with the state of the

Chair interprets man's most common product, as perceived by some of the world's notable chair designers. They discuss their art and craft from a fascinating variety of personal perspectives.

Chair juxtaposes the work and thoughts of Ward Bennett, Nicos Zographos, Charles Stendig, Donald Gratz, Mary Blade, Joseph D'Urso and Neils Diffrient, together with the historical and contemporary perspective of Ralph Caplan.

A special section presents an extraordinary 1977 chair competition sponsored and coordinated by the American Institute of Architects.

Over 800 submissions show an international suggestion of what chairs will become.

or because of—the fact that it has nothing to do with basic survival needs: food, shelter, clothing....There has to my knowledge never been a world chair shortage. Yet despite the fact that the need for still another chair has not yet been established by the Surgeon General, an astonishingly

large number of designers go on designing chairs. When a chair is created that is original in design concept it is enough to make a man's reputation for a decade. If it is possible to sit in it with anything less than acute pain, it is a bonus.

Manager, Publications Marketing American Institute of Architects 1735 New York Avenue, N.W. Washington, D.C. 20006

Yes, I would like to own this \$15.00 book at the special AIA member's discount of \$13.50 per copy.

Enclosed is my check for \$ \_\_\_\_ for \_\_\_ copy(ies)

Firm

Attention

Address

Zip

Signature

(From the Introduction to Chair by Ralph Caplan)

## When you specify good floors, you should specify good care.



Those nice floors you're specifying will continue to mirror your good judgement while they look like new. But without proper care, they can soon take on the appearance of a pair of scruffy expensive shoes. That's why you should talk to the Hillyard Maintaineer<sup>®</sup> in your area. By recommending the proper treatment for the floors you specify, he can help keep you and your project looking good.

He'll bring you spec data sheets and folders which contain short form specifications plus detailed instructions for your contractor. He'll help you keep your files up-to-date with periodic mailings. And he'll even supervise application procedures at the job site.

So you'll know who he is, we've listed the Maintaineers at the right. You're sure to find one close. And after you find him, call him the next time you're specifying floors. He'll be glad to share what he learned in finishing school with you.

Hillyard Floor Treatments, 302 North Fourth Street St. Joseph, Missouri 64502 (816) 233-1321.

### 70 Years of Quality in Professional Floor Care Products.

### LET HILLYARD HELP

ALABAMA		
Montgomery	. Carlos Noblett J. Victor Akin	(205) 933-2625
ALASKA	. O. VICTOI ARIII	(203) 200-0700
Anchorage	. Jim Harper	(907) 276-5146
ARIZONA Phoeniy Hills	yard of Arizona, Wer	adall Harner Con
Mgr	valu of Affizona, vvei	. (602) 267-1341
ARKANSAS	Farrant F. Marra	(504) 000 000
Magnolia	. Forrest E. Moss	(501) 234-2035
Springdale	. G. Van Horton	(501) 751-1224
CALIFORNIA Anaheim	Lenzi M Allred	(714) 637 0106
Chico	Lenzi M. Allred Ken Carlsen Donald J. Ervin	(916) 343-9045
Los Altos	Fldon P Hart	(714) 234-9927
Oakland	Robert Klieman	(408) 295-6000
San Gabriel	Warren Sperling	(714) 485-0432 (213) 287-1223
San Jose Hil	Eldon P. Hart Robert Klieman Charles Morrison Warren Sperling	Coast Sales Office.
GIEIIII Gasto. I	regional Mor.	(408) 295-6000
	Jack G. Hoover Jerry Klieman	. (415) 939-4009
COLORADO Contact Hillyard	-Western General	Sales Office St
	· · · · · · · · · · · · · · · · · · ·	
CONNECTICU		(202) 622 5424
DELAWARE	. John Zimms	. (203) 633-5131
	. Joe Keenan	. (215) 586-8320
FLORIDA	William H. Burk	(205) 702 4274
Orlando	. William H. Burk . . Dan K. Minnick	(305) 293-3121
GEORGIA		
Atlanta	. Thomas L. Campbe	ell (404) 237-9003
	. G. Duane Browning	(208) 522-8250
ILLINOIS	Debest F. Hermath	(240) 700 0054
Mackinaw	Robert F. Horwath John G. Allred Alan Allred Jesse Daughtry	. (312) 782-0854
Paxton	. Alan Allred	. (217) 379-4284
Shelbyville	. Jay Allred	(217) 774-4723
INDIANA	. William Rollinson	(217) 202 2772
IOWA	. William nullinsun	(317) 293-3772
Des Moines	. Loren Baxter	. (515) 276-2458
Des Moines Des Moines	. R. C. Bechtel Daryl Cummings .	. (515) 2/7-3938 (515) 266-5669
Sioux Center	. Floyd Achterhof	(712) 722-4691
KANSAS	. Fred Burnett	(013) 272 0105
KENTUCKY		
Lexington	. Walter Ferguson	(606) 252-7511
Louisville	. Walter Ferguson Don Hancock Dave Ederheimer	(502) 587-8818
LOUISIANA		
Lafayette	. Arthur J. Grey	(240) 000 0554
	. Dell Dawsoll	. (318) 828-0551 . (318) 984-3176
Linville	Dan Bryan	(318) 828-0551 (318) 984-3176 (318) 292-4201
Linville Metairie Natchitoches	Dan Bryan Jack B. Jones Walter Ledet	(318) 828-0551 (318) 984-3176 (318) 292-4201 (504) 887-0682 (318) 357-6171
MAINE		(318) 828-0551 (318) 984-3176 (318) 292-4201 (504) 887-0682 (318) 357-6171
MAINE Lincoln	. R. Garv Rivard	. (207) 794-8870
Lincoln Rumford	. R. Gary Rivard Roland Rivard	. (207) 794-8870 . (207) 364-2584
Lincoln Rumford	. R. Gary Rivard Roland Rivard	. (207) 794-8870 . (207) 364-2584
Lincoln	. R. Gary Rivard Roland Rivard	. (207) 794-8870 . (207) 364-2584
Lincoln	. R. Gary Rivard Roland Rivard	(207) 794-8870 (207) 364-2584 y (301) 730-7979 r. (301) 585-3957 . (301) 585-3957
Lincoln	. R. Gary Rivard Roland Rivard	(207) 794-8870 (207) 364-2584 y (301) 730-7979 r. (301) 585-3957 . (301) 585-3957
MAINE Lincoln Rumford  MARYLAND Columbia Silver Spring Silver Spring MASSACHUSE Newton Highland W. Springfield MICHIGAN	. R. Gary Rivard . Roland Rivard	(207) 794-8870 (207) 364-2584 y (301) 730-7979 r. (301) 585-3957 (301) 585-3957 (617) 969-4517 (413) 781-5539
MAINE Lincoln Rumford  MARYLAND Columbia Silver Spring Silver Spring MASSACHUSE Newton Highland W. Springfield MICHIGAN Cadillac	R. Gary Rivard Roland Rivard  Edward W. Ganocz Lawrence Weyer, J. Hugo DiGiulian  ITTS S Walter Elcock Thomas Allen  Ed Bohm	(207) 794-8870 (207) 364-2584 y (301) 730-7979 r. (301) 585-3957 (301) 585-3957 (617) 969-4517 (413) 781-5539
MAINE Lincoln Rumford  MARYLAND Columbia Silver Spring Silver Spring MASSACHUSE Newton Highland W. Springfield MICHIGAN Cadillac Detroit	R. Gary Rivard Roland Rivard  Edward W. Ganocz Lawrence Weyer, J. Hugo DiGiulian  ITTS s Walter Elcock Thomas Allen  Ed Bohm Dick Sheldon	(207) 794-8870 (207) 364-2584 y (301) 730-7979 r. (301) 585-3957 (301) 585-3957 (617) 969-4517 (413) 781-5539 (616) 775-3569 (313) 571-4476
MAINE Lincoln Rumford  MARYLAND Columbia Silver Spring Silver Spring MASSACHUSE Newton Highland W. Springfield MICHIGAN Cadillac Detroit	R. Gary Rivard Roland Rivard  Edward W. Ganocz Lawrence Weyer, J. Hugo DiGiulian  ITTS s Walter Elcock Thomas Allen  Ed Bohm Dick Sheldon	(207) 794-8870 (207) 364-2584 y (301) 730-7979 r. (301) 585-3957 (301) 585-3957 (617) 969-4517 (413) 781-5539 (616) 775-3569 (313) 571-4476
MAINE Lincoln Rumford  MARYLAND Columbia Silver Spring Silver Spring MASSACHUSE Newton Highland W. Springfield MICHIGAN Cadillac Detroit	R. Gary Rivard Roland Rivard  Edward W. Ganocz Lawrence Weyer, J. Hugo DiGiulian  ITTS s Walter Elcock Thomas Allen  Ed Bohm Dick Sheldon	(207) 794-8870 (207) 364-2584 y (301) 730-7979 r. (301) 585-3957 (301) 585-3957 (617) 969-4517 (413) 781-5539 (616) 775-3569 (313) 571-4476
MAINE Lincoln Rumford  MARYLAND Columbia Silver Spring Silver Spring MASSACHUSE Newton Highland W. Springfield MICHIGAN Cadillac Detroit	R. Gary Rivard Roland Rivard  Edward W. Ganocz Lawrence Weyer, J. Hugo DiGiulian  ITTS s Walter Elcock Thomas Allen  Ed Bohm Dick Sheldon	(207) 794-8870 (207) 364-2584 y (301) 730-7979 r. (301) 585-3957 (301) 585-3957 (617) 969-4517 (413) 781-5539 (616) 775-3569 (313) 571-4476
MAINE Lincoln Rumford MARYLAND Columbia Silver Spring Silver Spring MASSACHUSE Newton Highland W. Springfield MICHIGAN Cadillac Detroit Escanaba Grand Rapids Jackson Kalamazoo Northville Stevensville MINNESOTA	R. Gary Rivard Roland Rivard  Edward W. Ganocz Lawrence Weyer, J Hugo DiGiulian  ITTS s Walter Elcock Thomas Allen  Ed Bohm Dick Sheldon Harold Schermer Robert H. Hill Bud O'Brien Thomas M. Hill Charles J. Bowser Larry Clement	(207) 794-8870 (207) 364-2584 y (301) 730-7979 r. (301) 585-3957 (301) 585-3957 (413) 781-5539 (616) 775-3569 (313) 571-4476 (906) 786-5881 (616) 455-9400 (517) 784-7891 (616) 345-2215 (313) 864-3416 (616) 429-6754
MAINE Lincoln Rumford MARYLAND Columbia Silver Spring Silver Spring Silver Spring MASSACHUSE Newton Highland W. Springfield MICHIGAN Cadillac Detroit Escanaba Grand Rapids Jackson Kalamazoo Northville Stevensville MINNESOTA Brainerd Minneanolis	R. Gary Rivard Roland Rivard Edward W. Ganocz Lawrence Weyer, J Hugo DiGiulian ITTS s Walter Elcock Thomas Allen Dick Sheldon Harold Schermer Robert H. Hill Bud O'Brien Thomas M. Hill Charles J. Bowser Larry Clement Jim Demgen	(207) 794-8870 (207) 364-2584 y (301) 730-7979 r. (301) 585-3957 (301) 585-3957 (617) 969-4517 (413) 781-5539 (616) 775-3569 (313) 571-4476 (906) 786-5881 (616) 455-9400 (517) 784-7891 (616) 345-2215 (313) 864-3416 (616) 429-6754 (218) 829-734
MAINE Lincoln Rumford MARYLAND Columbia Silver Spring Silver Spring Silver Spring MASSACHUSE Newton Highland W. Springfield MICHIGAN Cadillac Detroit Escanaba Grand Rapids Jackson Kalamazoo Northville Stevensville MINNESOTA Brainerd Minneanolis	R. Gary Rivard Roland Rivard Edward W. Ganocz Lawrence Weyer, J Hugo DiGiulian ITTS s Walter Elcock Thomas Allen Dick Sheldon Harold Schermer Robert H. Hill Bud O'Brien Thomas M. Hill Charles J. Bowser Larry Clement Jim Demgen	(207) 794-8870 (207) 364-2584 y (301) 730-7979 r. (301) 585-3957 (301) 585-3957 (617) 969-4517 (413) 781-5539 (616) 775-3569 (313) 571-4476 (906) 786-5881 (616) 455-9400 (517) 784-7891 (616) 345-2215 (313) 864-3416 (616) 429-6754 (218) 829-734
MAINE Lincoln Rumford MARYLAND Columbia Silver Spring Silver Spring MASSACHUSE Newton Highland W. Springfield MICHIGAN Cadillac Detroit Escanaba Grand Rapids Jackson Kalamazoo Northville Stevensville MINNESOTA Brainerd Minneapolis Minneapolis Red Wing Red Wing	R. Gary Rivard Roland Rivard Edward W. Ganocz Lawrence Weyer, J Hugo DiGiulian ITTS s Walter Elcock Thomas Allen Dick Sheldon Harold Schermer Robert H. Hill Bud O'Brien Thomas M. Hill Charles J. Bowser Larry Clement Jim Demgen Idilyard-Western Nor rd, Regional Mgr. Jim Buis Cal Eastlund	(207) 794-8870 (207) 364-2584 y (301) 730-7979 r. (301) 585-3957 (301) 585-3957 (413) 781-5539 (616) 775-3569 (313) 571-4476 (906) 786-5881 (616) 455-9400 (517) 784-7891 (616) 345-2215 (313) 864-3416 (616) 429-6754 (218) 829-743 kth Central Sales (612) 533-7660 (612) 533-7660 (612) 538-2950
MAINE Lincoln Rumford MARYLAND Columbia Silver Spring Silver Spring MASSACHUSE Newton Highland W. Springfield MICHIGAN Cadillac Detroit Escanaba Grand Rapids Jackson Kalamazoo Northville Stevensville MINNESOTA Brainerd Minneapolis Red Wing Spring Grove	R. Gary Rivard Roland Rivard  Edward W. Ganocz Lawrence Weyer, J Hugo DiGiulian  ITTS S Waiter Elcock Thomas Allen  Ed Bohm Dick Sheldon Harold Schermer Robert H. Hill Bud O'Brien Thomas M. Hill Charles J. Bowser Larry Clement  Jim Demgen Hillyard-Western Nor Jim Buis Cal Eastlund Bob Bunge	(207) 794-8870 (207) 364-2584 y (301) 730-7979 f. (301) 585-3957 (301) 585-3957 (413) 781-5539 (616) 775-3669 (313) 571-4476 (906) 786-5881 (616) 455-9400 (517) 784-7891 (616) 452-9215 (313) 864-3416 (616) 429-6754 (218) 829-7438 th Central Sales (612) 533-7660 (612) 533-7660 (612) 533-7660 (612) 388-2951 (507) 498-3384
MAINE Lincoln Rumford MARYLAND Columbia Silver Spring Silver Spring Silver Spring MASSACHUSE Newton Highland W. Springfield MICHIGAN Cadillac Detroit Escanaba Grand Rapids Jackson Kalamazoo Northville Stevensville MINNESOTA Brainerd Minneapolis Office, Jerry Bi Minneapolis Red Wing Spring Grove Storden Winnebago	R. Gary Rivard Roland Rivard Edward W. Ganocz Lawrence Weyer, J Hugo DiGiulian ITTS s Walter Elcock Thomas Allen Dick Sheldon Harold Schermer Robert H. Hill Bud O'Brien Thomas M. Hill Charles J. Bowser Larry Clement Jim Demgen Idilyard-Western Nor rd, Regional Mgr. Jim Buis Cal Eastlund	(207) 794-8870 (207) 364-2584 y (301) 730-7979 f. (301) 585-3957 (301) 585-3957 (413) 781-5539 (616) 775-3669 (313) 571-4476 (906) 786-5881 (616) 455-9400 (517) 784-7891 (616) 452-9215 (313) 864-3416 (616) 429-6754 (218) 829-7438 th Central Sales (612) 533-7660 (612) 533-7660 (612) 533-7660 (612) 388-2951 (507) 498-3384
MAINE Lincoln Rumford  MARYLAND Columbia Silver Spring Silver Spring MASSACHUSE Newton Highland W. Springfield MICHIGAN Cadillac Detroit Escanaba Grand Rapids Jackson Kalamazoo Northville Stevensville MINNESOTA Brainerd Minneapolis Minneapolis Red Wing Spring Grove Storden Winnebago MISSISSIPPI	R. Gary Rivard Roland Rivard . Edward W. Ganocz Lawrence Weyer, J Hugo DiGiulian . ITTS s Walter Elcock . Thomas Allen . Dick Sheldon . Harold Schermer . Robert H. Hill . Bud O'Brien . Thomas M. Hill . Charles J. Bowser . Larry Clement . Jim Demgen . Jim Demgen . Jim Demgen . Jim Demgen . Jim Buis . Cal Eastlund . Bob Bunge . Harvey Iverson . Bob Hynes	(207) 794-8870 (207) 364-2584 y (301) 730-7979 f. (301) 585-3957 (301) 585-3957 (413) 781-5539 (616) 775-3669 (313) 571-4476 (906) 786-5881 (616) 455-9400 (517) 784-7891 (616) 345-2215 (313) 864-3416 (616) 429-6754 (218) 829-7438 th Central Sales (612) 533-7660 (612) 533-7660 (612) 388-2950 (507) 498-3384 (507) 445-3954 (507) 893-4126
MAINE Lincoln Rumford  MARYLAND Columbia Silver Spring Silver Spring MASSACHUSE Newton Highland W. Springfield MICHIGAN Cadillac Detroit Escanaba Grand Rapids Jackson Kalamazoo Northville Stevensville MINNESOTA Brainerd Minneapolis Minneapolis Red Wing Spring Grove Storden Winnebago MISSISSIPPI	R. Gary Rivard Roland Rivard  Edward W. Ganocz Lawrence Weyer, J Hugo DiGiulian  ITTS S Waiter Elcock Thomas Allen  Ed Bohm Dick Sheldon Harold Schermer Robert H. Hill Bud O'Brien Thomas M. Hill Charles J. Bowser Larry Clement  Jim Demgen Hillyard-Western Nor Jim Buis Cal Eastlund Bob Bunge	(207) 794-8870 (207) 364-2584 y (301) 730-7979 f. (301) 585-3957 (301) 585-3957 (413) 781-5539 (616) 775-3669 (313) 571-4476 (906) 786-5881 (616) 455-9400 (517) 784-7891 (616) 345-2215 (313) 864-3416 (616) 429-6754 (218) 829-7438 th Central Sales (612) 533-7660 (612) 533-7660 (612) 388-2950 (507) 498-3384 (507) 445-3954 (507) 893-4126
MAINE Lincoln Rumford MARYLAND Columbia Silver Spring Silver Spring MASSACHUSE Newton Highland W. Springfield MICHIGAN Cadillac Detroit Escanaba Grand Rapids Jackson Kalamazoo Northville Stevensville MINNESOTA Brainerd Minneapolis Red Wing Spring Grove Storden Winnebago MISSISSIPPI Moselle MISSOURI Mandand Heights Mandand Heights	R. Gary Rivard Roland Rivard . Edward W. Ganocz Lawrence Weyer, J Hugo DiGiulian . ITTS S Waiter Elcock . Thomas Allen . Dick Sheldon . Harold Schermer . Robert H. Hill . Bud O'Brien . Thomas M. Hill . Charles J. Bowser . Larry Clement . Jim Demgen . Hillyard-Western Nor . Jim Buis . Cal Eastlund . Bob Bunge . Harvey Iverson . Bob Hynes . A. Grice . Art Werkmeister	(207) 794-8870 (207) 364-2584 (207) 364-2584 (301) 730-7979 (301) 585-3957 (301) 585-3957 (413) 781-5539 (616) 775-3669 (313) 571-4476 (906) 786-5881 (616) 455-9400 (517) 784-7891 (616) 345-2215 (313) 864-3416 (616) 429-6754 (218) 829-7438 (612) 533-7660 (612) 533-7660 (612) 533-7660 (612) 533-7660 (612) 388-2954 (507) 445-3954 (507) 445-3954 (507) 893-4126
MAINE Lincoln Rumford MARYLAND Columbia Silver Spring Silver Spring MASSACHUSE Newton Highland W. Springfield MICHIGAN Cadillac Detroit Escanaba Grand Rapids Jackson Kalamazoo Northville Stevensville MINNESOTA Minneapolis Red Wing Spring Grove Storden Winnebago MISSISSIPPI Moselle MISSOURI Maryland Heights Mexico St. Joseph	R. Gary Rivard Roland Rivard Edward W. Ganocz Lawrence Weyer, J Hugo DiGiulian TTTS s Walter Elcock Thomas Allen Ed Bohm Dick Sheldon Harold Schermer Robert H. Hill Bud O'Brien Thomas M. Hill Charles J. Bowser Larry Clement Jim Demgen Lillyard-Western Nor rd, Regional Mgr. Jim Buis Cal Eastlund Bob Bunge Harvey Iverson Bob Hynes A. Grice Art Werkmeister Jim Inlow Hillvard-Western	(207) 794-8870 (207) 364-2584 y (301) 730-7979 r. (301) 585-3957 (301) 585-3957 (413) 781-5539 (616) 775-3569 (313) 571-4476 (906) 786-5881 (616) 455-9400 (517) 784-7891 (616) 345-2215 (313) 864-3416 (616) 429-6754 (218) 829-743 (612) 533-7660 (612) 533-7660 (612) 538-2950 (507) 498-3384 (507) 498-3384 (507) 893-4126 (601) 752-5725 (314) 432-4600 (314) 581-1314
MAINE Lincoln Rumford MARYLAND Columbia Silver Spring Silver Spring MASSACHUSE Newton Highland W. Springfield MICHIGAN Cadillac Detroit Escanaba Grand Rapids Jackson Kalamazoo Northville Stevensville MINNESOTA Minneapolis Red Wing Spring Grove Storden Winnebago MISSISSIPPI Moselle MISSOURI Maryland Heights Mexico St. Joseph	R. Gary Rivard Roland Rivard Edward W. Ganocz Lawrence Weyer, J Hugo DiGiulian ITTS s Walter Elcock Thomas Allen Dick Sheldon Harold Schermer Robert H. Hill Bud O'Brien Thomas M. Hill Charles J. Bowser Larry Clement Jim Demgen Hillyard-Western Nor rd, Regional Mgr. Jim Buis Cal Eastlund Bob Bunge Harvey Iverson Bob Hynes A. Grice	(207) 794-8870 (207) 364-2584 y (301) 730-7979 r. (301) 585-3957 (301) 585-3957 (413) 781-5539 (616) 775-3569 (313) 571-4476 (906) 786-5881 (616) 455-9400 (517) 784-7891 (616) 345-2215 (313) 864-3416 (616) 429-6754 (218) 829-743 (612) 533-7660 (612) 533-7660 (612) 538-2950 (507) 498-3384 (507) 498-3384 (507) 893-4126 (601) 752-5725 (314) 432-4600 (314) 581-1314

St. Joseph	0 11		
St. Joseph	Guy Humphreys	(816)	233-1321
	Court Rush	(816)	233-1321
Springfield	Joseph Newton	(417)	862-4235
MONTANA			
	C. Ben Martin	(406)	252-5366
	C. Dell Wartin	(400)	232 3300
NEBRASKA	R. H. Beckman	//00	400 0015
		(402)	423-9015
<b>NEW HAMPSH</b>	IRE		
Stratham	. Thomas G. Binette .	(603)	772-4012
<b>NEW JERSEY</b>			
NEW JERSET	Joseph E. Smith	(600)	922 2450
Dhillipoburg	Joseph E. Silliti	(201)	154 1950
Phillipsburg	John W. Benol	(201)	404-1009
Trenton	Robert Myers, Jr Robert Myers, Sr	(609)	882-8862
	. Hobert Myers, Sr	(609)	002-0002
<b>NEW YORK</b>			
Black Creek	John Musson R. Golankie Clinton Atwood George Zammit Ted Platt Doak Dochak	(716)	968-3809
Brewster	. R. Golankie	(914)	279-6060
Delmar	. Clinton Atwood	(518)	439-0456
Eggertsville	. George Zammit	(/16)	835-0184
Elbridge	. Ted Platt	(315)	689-3796
Guilderland	. Doak Dochak	(518)	482-6597
Huntington	Charles Rose	(516)	692-6240
Morristown	Charles Rose James Smithers William Zimms William Schutte Murray Weeks Daniel McNulty Allan R. Ely	(315)	375-8246
Oceanside	William Zimms	(516)	766-7705
Owego	William Schutte	(607)	687-2891
Rochester	Murray Weeks	(716)	426-0828
Saranac Lake	Daniel McNulty	(518)	891-1752
Smithtown	Allan R Fly	(516)	265-2228
Syracuse	Lawrence Brennan .	(315)	463-6182
Sylacuse	Lawrence Diciman .	(0.0)	
NORTH CARO	LINA	(040)	707 4050
Raleigh	. Carl Jarvis	(919)	787-4050
Charlotte	. Ralph L. Jones	(704)	536-7856
NORTH DAKO	ΓΑ		
Fargo	. Jim Heller	(701)	235-8970
OHIO			
Bores	Robert Gillespie James Jackson Bill Yost Harris Gillespie	(216)	331-2500
Douton	lames lackson	(512)	277 7605
Mawork	Dill Vest	(614)	2//-/095
Deeler Diver	. DIII 10St	(014)	344-1103
Hocky Hiver	Harris Gillespie	(210)	331-3500
OKLAHOMA			
Oklahoma City .	. Walt Powers	(405)	751-8932
OREGON			
	. Thomas G. Good	(503)	646-2888
PENNSYLVANI	A	(04.4)	000 0044
Conneaut Lake .	. William Snyder	(814)	382-8211
Folcroft	. James A. Smith	(215)	586-8320
Munhall	. Lawrence Cullen	(412)	462-3165
Nazareth	. John F. Magdith	(215)	759-1041
Peach Bottom	. Bernard Richards	(717)	548-2061
Pittsburgh	. Roger K. Jorgensen	(412)	563-6812
	W Grenory Snyder	(412)	366-0841
Pittsburgh			000 0011
Pittsburgh Reading	Fred Harnar	(215)	678-4110
Reading Reading	Fred Harnar	(215) (215)	678-4110 777-0857
Pittsburgh Reading Reading Wyoming	Fred Harnar	(215) (215) (717)	678-4110 777-0857 655-6089
Pittsburgh Reading Reading Wyoming York	Fred Harnar	(215) (215) (717) (717)	678-4110 777-0857 655-6089 854-0030
Pittsburgh Reading Reading Wyoming York	Fred Harnar	(215) (215) (717) (717)	678-4110 777-0857 655-6089 854-0030
Warwick	. Craig Swanson		
Warwick	. Craig Swanson	(401)	739-4500
Warwick	. Craig Swanson	(401)	739-4500
Warwick SOUTH CAROL Duncan TENNESSEE	Craig Swanson INA Ben Blackwell	(803)	739-4500 439-3694
Warwick SOUTH CAROL Duncan TENNESSEE	Craig Swanson INA Ben Blackwell	(803)	739-4500 439-3694
Warwick SOUTH CAROL Duncan TENNESSEE	Craig Swanson INA Ben Blackwell	(803)	739-4500 439-3694
Warwick SOUTH CAROL Duncan TENNESSEE Chattanooga Jackson	Craig Swanson  INA Ben Blackwell Harry Prater Billy Schrivner	(803) (615) (901)	739-4500 439-3694 624-0066 422-2902
Warwick SOUTH CAROL Duncan TENNESSEE Chattanooga Jackson	Craig Swanson  INA Ben Blackwell Harry Prater Billy Schrivner	(803) (615) (901)	739-4500 439-3694 624-0066 422-2902
Warwick SOUTH CAROL Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo	Craig Swanson  INA Ben Blackwell Harry Prater Billy Schrivner	(401) (803) (615) (901) (806)	739-4500 439-3694 624-0066 422-2902 353-4551
Warwick  SOUTH CAROL Duncan  TENNESSE Chattanooga Jackson  TEXAS Amarillo Brownwood	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett	(401) (803) (615) (901) (806) (915)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619
Warwick  SOUTH CAROL Duncan  TENNESSE Chattanooga Jackson  TEXAS Amarillo Brownwood	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett	(401) (803) (615) (901) (806) (915)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western	(401) (803) (615) (901) (806) (915) (512)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western	(401) (803) (615) (901) (806) (915) (512)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western	(401) (803) (615) (901) (806) (915) (512)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western	(401) (803) (615) (901) (806) (915) (512)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western	(401) (803) (615) (901) (806) (915) (512)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western	(401) (803) (615) (901) (806) (915) (512)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336
Warwick SOUTH CAROI Duncan TENNESSE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales	(401) (803) (615) (901) (806) (915) (512) (214) (214) (915) (713) (214)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 565-5829 526-1409 759-2796
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz	Craig Swanson  INA Ben Blackwell  Harry Prater Billy Schrivner  C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber	(401) (803) (615) (901) (806) (915) (512) (214) (214) (915) (713) (214) (512)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 565-5829 526-1409 759-2796 658-1122
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales	(401) (803) (615) (901) (806) (915) (512) (214) (214) (915) (713) (214) (512)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 565-5829 526-1409 759-2796 658-1122
Warwick SOUTH CAROL Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH	Craig Swanson  LNA Ben Blackwell  Harry Prater Billy Schrivner  C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk	(401) (803) (615) (901) (806) (915) (512) (214) (214) (915) (713) (214) (512) (817)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 565-5829 526-1409 759-2796 658-1122 799-1483
Warwick SOUTH CAROL Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH	Craig Swanson  INA Ben Blackwell  Harry Prater Billy Schrivner  C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber	(401) (803) (615) (901) (806) (915) (512) (214) (214) (915) (713) (214) (512) (817)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 565-5829 526-1409 759-2796 658-1122 799-1483
Warwick SOUTH CAROI Duncan TENNESSE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk	(401) (803) (615) (901) (806) (915) (512) (214) (214) (915) (713) (214) (512) (817)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 565-5829 526-1409 759-2796 658-1122 799-1483
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke	(401) (803) (615) (901) (806) (915) (512) (214) (915) (713) (214) (512) (817) (801)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 565-5829 526-1409 759-2796 658-1122 799-1483
Warwick SOUTH CAROL Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk	(401) (803) (615) (901) (806) (915) (512) (214) (915) (713) (214) (512) (817) (801)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 565-5829 526-1409 759-2796 658-1122 799-1483
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher	(401) (803) (615) (901) (806) (915) (512) (214) (915) (713) (214) (512) (817) (801)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 565-5829 526-1409 759-2796 658-1122
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher	(401) (803) (615) (901) (806) (915) (512) (214) (915) (713) (214) (512) (817) (801)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 565-5829 526-1409 759-2796 658-1122
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher	(401) (803) (615) (901) (806) (915) (512) (214) (915) (713) (214) (512) (817) (801)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 565-5829 526-1409 759-2796 658-1122
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Atton Harrisonburg Virginia Beach	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton	(401) (803) (615) (901) (806) (915) (512) (214) (915) (713) (214) (512) (817) (801)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 565-5829 526-1409 759-2796 658-1122
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Atton Harrisonburg Virginia Beach WASHINGTON	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton	(401) (803) (615) (901) (806) (915) (512) (214) (915) (214) (512) (817) (801) (802) (804) (703) (804)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 565-5829 526-1409 759-2796 658-1122 799-1483 943-2981 655-1120 361-2144 434-4483 481-4731
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Atton Harrisonburg Virginia Beach WASHINGTON	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton	(401) (803) (615) (901) (806) (915) (512) (214) (915) (214) (512) (817) (801) (802) (804) (703) (804)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 565-5829 526-1409 759-2796 658-1122 799-1483 943-2981 655-1120 361-2144 434-4483 481-4731
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Atton Harrisonburg Virginia Beach WASHINGTON Kent Spokane	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton Earl Kanz Lyle Guiles	(401) (803) (615) (901) (806) (915) (512) (214) (915) (214) (512) (817) (801) (802) (804) (703) (804)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 565-5829 526-1409 759-2796 658-1122 799-1483 943-2981 655-1120 361-2144 434-4483 481-4731
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Atton Harrisonburg Virginia Beach WASHINGTON Kent Spokane	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton Earl Kanz Lyle Guiles A	(401) (803) (615) (901) (806) (915) (512) (214) (915) (713) (214) (512) (801) (802) (804) (703) (804) (703) (804) (206) (509)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 565-5829 526-1409 759-1483 943-2981 655-1120 361-2144 434-4483 481-4731 631-4391 624-4516
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Atton Harrisonburg Virginia Beach WASHINGTON Kent Spokane	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton Earl Kanz Lyle Guiles A	(401) (803) (615) (901) (806) (915) (512) (214) (915) (713) (214) (512) (801) (802) (804) (703) (804) (703) (804) (206) (509)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 565-5829 526-1409 759-1483 943-2981 655-1120 361-2144 434-4483 481-4731 631-4391 624-4516
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Atton Harrisonburg Virginia Beach WASHINGTON Kent Spokane	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton Earl Kanz Lyle Guiles A	(401) (803) (615) (901) (806) (915) (512) (214) (915) (713) (214) (512) (801) (802) (804) (703) (804) (703) (804) (206) (509)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 565-5829 526-1409 759-1483 943-2981 655-1120 361-2144 434-4483 481-4731 631-4391 624-4516
Warwick SOUTH CAROI Duncan TENNESSE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Atton Harrisonburg Virginia Beach WASHINGTON Kent Spokane WEST VIRGINI Huntington South Charleston	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western less Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton Earl Kanz Lyle Guiles Robert L. Dodson William Grimes	(401) (803) (615) (901) (806) (915) (512) (214) (915) (713) (214) (512) (817) (802) (804) (703) (804) (206) (509) (304) (304)	739-4500 439-3694 624-0066 422-2902 353-34551 646-0619 855-0336 241-3174 241-3174 565-5829 579-2796 658-1122 799-1483 943-2981 655-1120 361-2144 434-4483 481-4731 631-4391 624-4516 522-7962 744-5719
Warwick SOUTH CAROI Duncan TENNESSE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Atton Harrisonburg Virginia Beach WASHINGTON Kent Spokane WEST VIRGINI Huntington South Charleston	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western less Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton Earl Kanz Lyle Guiles Robert L. Dodson William Grimes	(401) (803) (615) (901) (806) (915) (512) (214) (915) (713) (214) (512) (817) (802) (804) (703) (804) (206) (509) (304) (304)	739-4500 439-3694 624-0066 422-2902 353-34551 646-0619 855-0336 241-3174 241-3174 565-5829 579-2796 658-1122 799-1483 943-2981 655-1120 361-2144 434-4483 481-4731 631-4391 624-4516 522-7962 744-5719
Warwick SOUTH CAROI Duncan TENNESSE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Atton Harrisonburg Virginia Beach WASHINGTON Kent Spokane WEST VIRGINI Huntington South Charleston	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western less Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton Earl Kanz Lyle Guiles Robert L. Dodson William Grimes	(401) (803) (615) (901) (806) (915) (512) (214) (915) (713) (214) (512) (817) (802) (804) (703) (804) (206) (509) (304) (304)	739-4500 439-3694 624-0066 422-2902 353-34551 646-0619 855-0336 241-3174 241-3174 565-5829 579-2796 658-1122 799-1483 943-2981 655-1120 361-2144 434-4483 481-4731 631-4391 624-4516 522-7962 744-5719
Warwick SOUTH CAROI Duncan TENNESSE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Atton Harrisonburg Virginia Beach WASHINGTON Kent Spokane WEST VIRGINI Huntington South Charleston	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western less Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton Earl Kanz Lyle Guiles Robert L. Dodson William Grimes	(401) (803) (615) (901) (806) (915) (512) (214) (915) (713) (214) (512) (817) (802) (804) (703) (804) (206) (509) (304) (304)	739-4500 439-3694 624-0066 422-2902 353-34551 646-0619 855-0336 241-3174 241-3174 565-5829 579-2796 658-1122 799-1483 943-2981 655-1120 361-2144 434-4483 481-4731 631-4391 624-4516 522-7962 744-5719
Warwick SOUTH CAROI Duncan TENNESSE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Atton Harrisonburg Virginia Beach WASHINGTON Kent Spokane WEST VIRGINI Huntington South Charleston	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western less Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton Earl Kanz Lyle Guiles Robert L. Dodson William Grimes	(401) (803) (615) (901) (806) (915) (512) (214) (915) (713) (214) (512) (817) (802) (804) (703) (804) (206) (509) (304) (304)	739-4500 439-3694 624-0066 422-2902 353-34551 646-0619 855-0336 241-3174 241-3174 565-5829 579-2796 658-1122 799-1483 943-2981 655-1120 361-2144 434-4483 481-4731 631-4391 624-4516 522-7962 744-5719
Warwick SOUTH CAROI Duncan TENNESSE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Atton Harrisonburg Virginia Beach WASHINGTON Kent Spokane WEST VIRGINI Huntington South Charleston WISCONSIN FOND du lac Manitowoc Sheboygan Superior	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton Earl Kanz Lyle Guiles A	(401) (803) (615) (901) (806) (915) (512) (214) (915) (713) (214) (512) (817) (802) (804) (703) (804) (206) (509) (304) (304)	739-4500 439-3694 624-0066 422-2902 353-34551 646-0619 855-0336 241-3174 241-3174 565-5829 579-2796 658-1122 799-1483 943-2981 655-1120 361-2144 434-4483 481-4731 631-4391 624-4516 522-7962 744-5719
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Afton Harrisonburg Virginia Beach WASHINGTON Kent Spokane WEST VIRGINI Huntington South Charleston WISCONSIN Fond du lac Manitowoc Sheboygan Superior WYOMING	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western less Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton Earl Kanz Lyle Guiles Robert L. Dodson William Grimes Ken Schaller Robert Raatz Gordon Hunter	(401) (803) (615) (901) (806) (512) (214) (214) (214) (817) (801) (802) (804) (703) (804) (703) (804) (509) (304) (304) (414) (414) (414) (715)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 2565-5829 526-1409 759-2796 658-1122 799-1483 943-2981 655-1120 361-2144 434-4483 448-4731 631-4391 622-7962 744-5719 921-1067 682-0138 457-4481 394-5255
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Afton Harrisonburg Virginia Beach WASHINGTON Kent Spokane WEST VIRGINI Huntington South Charleston WISCONSIN Fond du lac Manitowoc Sheboygan Superior WYOMING	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western less Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton Earl Kanz Lyle Guiles Robert L. Dodson William Grimes	(401) (803) (615) (901) (806) (512) (214) (214) (214) (817) (801) (802) (804) (703) (804) (703) (804) (509) (304) (304) (414) (414) (414) (715)	739-4500 439-3694 624-0066 422-2902 353-4551 646-0619 855-0336 241-3174 241-3174 2565-5829 526-1409 759-2796 658-1122 799-1483 943-2981 655-1120 361-2144 434-4483 448-4731 631-4391 622-7962 744-5719 921-1067 682-0138 457-4481 394-5255
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Atton Harrisonburg Virginia Beach WASHINGTON Kent Spokane WEST VIRGINI Huntington South Charleston WISCONSIN Fond du lac Manitowoc Sheboygan Superior WYOMING CRANDA	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton Earl Kanz Lyle Guiles A Robert L. Dodson William Grimes Earl Johnson Ken Schaller Robert Raatz Gordon Hunter Emil Eggert	(401) (803) (615) (901) (806) (915) (512) (214) (512) (817) (801) (802) (804) (703) (804) (206) (509) (304) (314) (414) (414) (414) (414) (417) (307)	739-4500 439-3694 624-0066 422-2902 353-3551 646-0619 855-0336 241-3174 241-3174 255-5829 526-1409 759-2796 658-1120 361-22799-1483 943-2981 655-1120 361-4481 434-4483 481-4731 631-4391 624-4516 522-7962 744-5719 921-1067 682-0138 457-4481 394-5255 632-8252
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Atton Harrisonburg Virginia Beach WASHINGTON Kent Spokane WEST VIRGINI Huntington South Charleston WISCONSIN Fond du lac Manitowoc Sheboygan Superior WYOMING CRANDA	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton Earl Kanz Lyle Guiles A Robert L. Dodson William Grimes Earl Johnson Ken Schaller Robert Raatz Gordon Hunter Emil Eggert	(401) (803) (615) (901) (806) (915) (512) (214) (512) (817) (801) (802) (804) (703) (804) (206) (509) (304) (314) (414) (414) (414) (414) (417) (307)	739-4500 439-3694 624-0066 422-2902 353-3551 646-0619 855-0336 241-3174 241-3174 255-5829 526-1409 759-2796 658-1120 361-22799-1483 943-2981 655-1120 361-4481 434-4483 481-4731 631-4391 624-4516 522-7962 744-5719 921-1067 682-0138 457-4481 394-5255 632-8252
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Atton Harrisonburg Virginia Beach WASHINGTON Kent Spokane WEST VIRGINI Huntington South Charleston WISCONSIN Fond du lac Manitowoc Sheboygan Superior WYOMING CRANDA	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western les Office, nal Mgr Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton Earl Kanz Lyle Guiles A Robert L. Dodson William Grimes Earl Johnson Ken Schaller Robert Raatz Gordon Hunter Emil Eggert	(401) (803) (615) (901) (806) (915) (512) (214) (512) (817) (801) (802) (804) (703) (804) (206) (509) (304) (314) (414) (414) (414) (414) (417) (307)	739-4500 439-3694 624-0066 422-2902 353-3551 646-0619 855-0336 241-3174 241-3174 255-5829 526-1409 759-2796 658-1120 361-22799-1483 943-2981 655-1120 361-4481 434-4483 481-4731 631-4391 624-4516 522-7962 744-5719 921-1067 682-0138 457-4481 394-5255 632-8252
Warwick SOUTH CAROI Duncan TENNESSEE Chattanooga Jackson TEXAS Amarillo Brownwood Corpus Christi Dallas Southwestern Sa Ted Trask, Regio Dallas El Paso Houston Longview Schertz Waco UTAH Salt Lake City VERMONT Burlington VIRGINIA Atton Harrisonburg Virginia Beach WASHINGTON Kent Spokane WEST VIRGINI Huntington South Charleston WISCONSIN Fond du lac Manitowoc Sheboygan Superior WYOMING CRANDA	Craig Swanson INA Ben Blackwell Harry Prater Billy Schrivner C. W. Hefley Lew Bennett William Cleland Hillyard-Western less Office, nal Mgr. Carl Montgomery Gene J. Dennehy Neal MacAllister Baxter Sales Martin Gerber Ken Mauk Dale Y. Duke Edward Danaher Louis DePiro Elvin Miller Conway Britton Earl Kanz Lyle Guiles Robert L. Dodson William Grimes Ken Schaller Robert Raatz Gordon Hunter	(401) (803) (615) (901) (806) (915) (512) (214) (512) (817) (801) (802) (804) (703) (804) (206) (509) (304) (314) (414) (414) (414) (414) (417) (307)	739-4500 439-3694 624-0066 422-2902 353-3551 646-0619 855-0336 241-3174 241-3174 255-5829 526-1409 759-2796 658-1120 361-22799-1483 943-2981 655-1120 361-4481 434-4483 481-4731 631-4391 624-4516 522-7962 744-5719 921-1067 682-0138 457-4481 394-5255 632-8252

Books from page 64

technical detail of producing a publication, with examples. It demonstrates how to set up a press release. It gets down to the basics of type faces, photo reproduction, alternative binding methods. It shows in detail how to put together a professional-looking slide show (as opposed to tossing a batch of slides into the Carousel and hoping they all land right side up). It talks about logos, and photography, and proposals, and the use of color in brochures, and the press conference (when) and the TV interview (how).

Where there is a right way and a wrong way to go about a communications effort, the author says so, and tells why. Where options exist, he enumerates them—with comments and suggestions as to which approach may be appropriate for a particular audience. In fact, one of the book's greatest strengths lies in its repeated reminders that every communication should be directed toward a specific audience—a seemingly obvious point, but one often forgotten in the heat of creation.

Keeping the communication audiencecentered will, almost automatically, eliminate one of the major blocks to understanding: the use of jargon, which Kliment rightly and repeatedly deplores.

While combing the jargon out of your prose, he suggests, edit out *all* unnecessary verbiage. Instead of "as to availability, we can begin to implement our agreement at any date that suits your schedule," he offers a quote from former CRS colleague Bill Caudill: "Availability? Say 'frog.' We'll jump."

Chapter 10, "Organizing Your Communications Effort," is one of the book's most important and useful sections. There Kliment presents a framework for developing a cost-effective communications program for a particular firm—depending on size, type of practice, ambitions, etc.—and offers a few budget guidelines. If the latter make you turn pale, you haven't been thinking realistically.

A final brief chapter deals with changes in communication methods and media that may result from coming technological developments and attitudinal shifts: improvements in word processing equipment, transmittal of information by satellite, more insistence by clients on price competition, the possible withdrawal of restrictions on paid advertising.

Now, for the "but-the-roof-leaks-a-little." Kliment's publishers have not always done him proud. Some of the graphics have suffered in reproduction. The proofreading isn't always impeccable. And the jacket design—to one reader, anyhow—is a not-very-attractive example of graphic noncommunication. None of which matters much in a book as comprehensive, lucid and readable as this one. Get it. Read it. Keep it handy on your

reference shelf and pull it off the shelf whenever you need to communicate with elients or prospective clients or the public at large. Marilyn E. Ludwig, formerly AIA's director of public relations publications and now a free-lancer on the West Coast

Shopping Center Development Handbook. Washington, D.C.: Urban Land Institute, 1977. 290 pp. \$18 for ULI members, \$24 for nonmembers.

Automobiles, suburbs and shopping centers are all part of a single phenomenon, says the Urban Land Institute in this manual. Shopping centers, which grew by leaps and bounds in the late '60s and early '70s, have now had to adjust to a variety of regulations. Inflation and public reaction to environmental and land abuses are among the factors causing new restrictions. But in the long run, the energy crisis may have a greater effect.

Today's developer faces the problems of transportation regulations, land use legislation, pollution control and other factors. "Nevertheless, good planning produces good environment. Guidelines and standards designed to assist shopping centers in meeting principles and practices of good land use planning and operation will be even more important in the future than they have in the past," says ULI. The aim of this book is to present the principles of good planning.

It considers development preliminaries such as market analysis and site selection. It also covers planning, architectural and engineering design and operation management. Also, there are nine case studies given as representative examples of various kinds of shopping centers—from neighborhood to super regional centers. A final section is on future trends in shopping centers. The book is a must for anyone involved in the planning and design of shopping centers.

The Presidents. Robert G. Ferris, series editor. Washington, D.C.: National Park Service, 1976. 598 pp. \$8. (Order by no. 024-005-00663-0 from the U.S. Government Printing Office, Washington, D.C. 20402, sending check or money order in full.)

This book, vol. 20 in the National Park Service's national survey of historic sites and buildings, discusses the 37 men who have served as President. The section on historic sites and buildings associated with the chief executives will interest the architect. Arranged alphabetically by state, the sites and buildings described range from Nixon's birthplace in Orange County, Calif., to Wilson's in Staunton, Va. In between are such landmarks as the Octagon in Washington, D.C., Saarinen's arch in St. Louis and, of course, the White House.

# Gulistan is right on the job. Any job.

At Gulistan, we think there's more to contract carpeting than just meeting the specification.

You see, the way we look at it, lots of carpets look good on paper. The trick is looking good on the floor. And that means writing the right specification. It's why we offer a variety of carpets—and carpet ideas. So you'll get just the right carpet in just the right place at just the right cost.

Carpets for corporate headquarters, to just what the doctor ordered for hospitals. Or carpets for hotels, restau-

rants, schools or airports.

In many cases, you'll want to specify (or we may suggest) a carpet system that provides for different carpets in different areas of usage—with coordinating patterns and colors that create and establish islands of identification. A systemic approach to interior landscaping.

Want to know more? Just contact Gulistan.

We'll show you how our carpets and carpet ideas can work for you.

Let Gulistan be right on your job.









Because it makes things a whole lot easier. Including their job. Meeting ever-changing space requirements. Achieving an attractive, yet functional, working environment. Reducing energy consumption. Meeting rising construction costs head-on. But at the same time, meeting and exceeding today's standards for durability and ease of maintenance.

Because Marlite brand products are designed to be used in combination with each other. In coordinated product packages. For open office areas. Private offices. Executive offices. Lunch rooms. Work rooms. Even restrooms. Interior decor packages that reflect the design leadership of Marlite Division. That are always available when and where you need them. Delivered to your door. On time.

Because the products are unusual. Often unique. Economical Marlite® brand demountable Partitions and Open Plan Screens are completely relocatable and reusable. Available in the widest selection of rich woodgrained designs and vivid accent colors on the market today, these systems are the practical solution to constant space requirement changes. And Marlite brand Plank. All of the natural graining and textured beauty of real wood, plus the durability demanded on commercial applications. Then there's Door/Frame systems. Toilet Compartments and Vanity Tops. And a dozen other products. Each with something special to offer.



Management is turning to Marlite brand products because they're concerned about service. The Marlite Division specializes in service. Before, during and after the sale. We're firmly committed to serving the office market

Marlite Division of Masonite Corporation. It's a name you know. And trust. Write for details. Better yet, phone (216) 364-8854. Ask for Dept. P.



Books from page 71

The Arts and Architecture of German Settlements in Missouri: A Survey of a Vanishing Culture. Charles Van Ravenswaay. Columbia, Mo.: University of Missouri Press, 1977. 536 pp. \$45.

This impressive and timely publication stresses the urgency of studying American folk and vernacular architecture; it deserves more attention than the usual historical picture book designed for the Christmas trade. The author is a native of Boonville, Mo., with a life-long passion for his state's pioneers. He is well known as a museum executive: 16 years as director of the Missouri Historical Society (1946-62), four as president of Old Sturbridge Village (Mass., 1962-66), and since 1966, as director of the Henry Francis du Pont Winterthur Museum (Del.) where he enjoys emeritus status.

Van Ravenswaay's monumental survey presents his intermittent 40-year gleanings that "call attention to a regional culture ... previously overlooked and whose contributions to the history of American design merit recognition." He disavows the "intention to explore in depth either in architecture or the objects produced in the area. That encyclopedic effort," he warns, perhaps with tongue in cheek, "must be left to various specialists following extensive fieldwork." Considering the rate at which old buildings in rural areas are disappearing, soon there may be few examples remaining for the next generation of scholars to study. Van Ravenswaay's publication itself may become a "primary source." For this reason, his work should receive critical attention and emendation while some tangible evidence exists. As he suggests, "Much more study, both in Missouri and in Germany, will be required to assess and interpret these Missouri-German products. . . ."

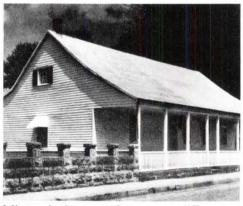
His preliminary survey combines three book-length parts: I, The Great Migration; II, Buildings (log, frame, stone, brick, barns and designer-builders); III, The Crafts, Objects for Domestic Use (furniture, musical instruments, wood carving, baskets, firearms, tins and copperware, stone cutting and carving, textiles, pottery, graphics and miscellaneous crafts).

As one works through 23 separate chapters (370 footnotes and 640 illustrations, 22 in color), it becomes clear that Van Ravenswaay's disclaimer of intent to study in depth was far too modest, especially considering the limited geographic area covered—not the whole state as the book's title implies—but only five contiguous counties west of St. Louis, bordering the Missouri River before it meets the Mississippi. The "Missouri Rhineland" contained the heaviest concentration of German emigrants, but several other counties (e.g., Buchanan, Shelby and

Perry) also attracted their settlements as did those in nearby Illinois (St. Clair) where the terrain was far less rugged.

Since geography is so important to the study of folk art, it seems strange that the author has not provided a usable map of his study area. For graphic aid in following text descriptions, the reader must turn to the end papers which reproduce a typical 19th century railroad map covering the whole region from St. Louis to Boonville. It locates the principal Germanic towns: St. Charles (only 20 miles from St. Louis, founded ca. 1770 by French settlers as Les Petite Cotes); Washington, in Franklin County, and Hermann, in Gasconade County (conceived ca. 1836 as a colony of Philadelphia). This early railroad map is decorative and appropriate for end papers, but is hardly adequate to find the various smaller villages mentioned in the text.

The author's many years' experience in research for the Missouri Historical Society and as editor of the 1941 WPA Guide to the "Show Me" State has equipped him admirably with demographic and genealogical details to write about the successive waves of German emigrants to



Missouri who came from many different states in the fatherland. Their reasons for leaving varied: economic pressures and the promise of greater social, political and religious freedom. However, they were guided to the Missouri River Valley by glowing descriptions of the landscape and attractive living conditions written by enthusiastic travelers such as the scholarly lawyer Gottfried Duden.

German emigrants came from all classes of society and religious faiths. Van Ravenswaay gives a vivid account of the well-educated aristocratic "Latin Farmers," and the idealistic intellectuals (Berlin Society, et al.), who found the going too rough and, tragically, soon became far less well-off than the peasants and artisans trained in Germany to work with their hands, and hence to adjust to frontier conditions. Apparently, it was the latter types who affected the material culture in Missouri, and justifies describing their work as "folk art," at least until the Civil War; but from the beginning—it seems to this reviewer—with few exceptions, Missouri-German architecture merges into the American Midwestern vernacular, with differences only in accent.

The time frame for Van Ravenswaav's survey covers the mid-19th century from the 1830s to the 1880s, setting it well apart from earlier German settlements in the Eastern U.S. Thus in Missouri, the Germans were not truly "pioneers in the wilderness," for they expanded from routes and bases that had been already established for generations by the French with their Louisiana, integral-galleried house type. This climate-conditioned form appealed first to the Anglo-American settlers coming after Daniel Boone (ca. 1790) from Virginia, Kentucky and Tennessee. Each of these earlier ethnic groups brought their own building traditions.

In his understandable zeal to find the German element in anything identified with a Teutonic name, the author-especially in part 2 on buildings—continually refers to Germanic design qualities without explanation or citing specific examples to reinforce his assertion and establish reader confidence. There are no illustrations of Bauernhaus prototypes from the fatherland; the author's principal reference for timber construction in Germany is Hans J. Hansen's general (world) history of wood building. For his description of German half-timber (Fackwerk) construction, Van Ravenswaay leans heavily on quotes from FAIA Richard W. E. Perrin's writing about Germans in Wisconsin. In dealing with the stone masons in Missouri from Hanover, Hesse-Cassel and Prussia, the author relies for technical background on Early American Masonry Materials, by the late Harley J. McKee, FAIA. Excellent use has been made of a few Historic American Buildings Survey drawings made in 1975, but the architect-reader may wish to see more than five floor plans to explain the several hundred buildings.

In summary, Van Ravenswaay appears more authoritative in his part 3, fully illustrated, on organizing and discussing furniture and objects for domestic use. Part 2, on buildings, presents a running commentary of various random examples with little evidence of structural inspection or typological analysis. His categories (chapters) are based on wall construction except for barns (chapter 10), where the functional plan types have been fairly well defined by others. This chapter and chapter 9 (brick buildings) and 11 (builders) seem to be better ordered than the others and are recommended for test sampling. This survey, it is hoped, will arouse the 'Show Me" state to preserve the best of its Germanic heritage in material culture to show future generations. Buford L. Pickens, FAIA, Professor Emeritus, School of Architecture, Washington University Books continued on page 78

# WE STILL MAKE THEM THE WAY WE USED TO. BY HAND.

Today's architects still call on the same masonry craft skills that architects and master builders of 200–and 2,000—years ago relied on. For masonry is still the best way to build. Still the least expensive.

The mechanics of creating walls with mortar and brick, or block, or stone, have changed little. But technology in the production of masonry materials as well as on-site automation of materials handling have changed enough to maintain masonry's reputation: it's stingy with the tightest budget. In fact, masonry structures are usually lowest in initial cost. Consistently low in operating

Masonry materials have taken on new dimensions, new colors, new textures. And innovative design has demanded parallel innovations to execute them. Masonry panels afford the architect design flexibility not known before while still assuring unparalleled craftsmanship. Loadbearing masonry systems permit fast, economical construction and afford the designer a broader palette.

The reasons for masonry's ageless popularity are many. Permanence. Beauty. Flexibility. And economy. There is simply no more energy-efficient, durable, easily maintained building material known to man.

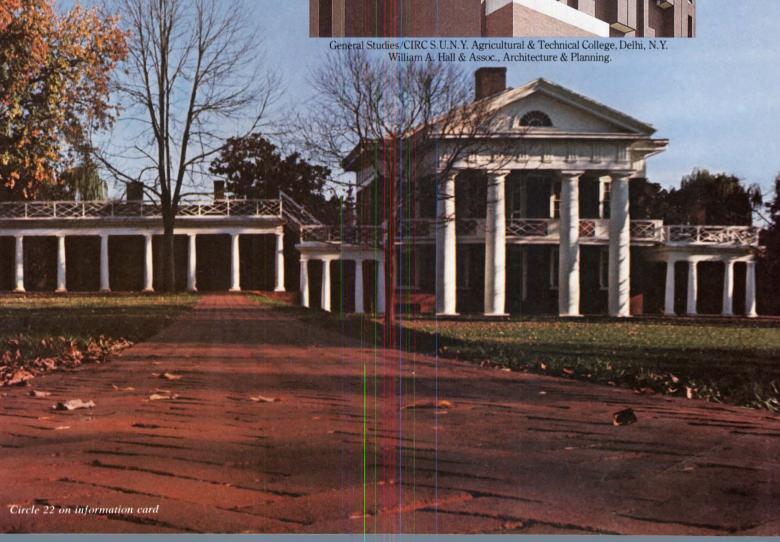
So it's no wonder we're still making them the way we used to. The trowel is still one of the building designer's handiest tools.

#### INTERNATIONAL MASONRY INSTITUTE

Suite 1001, 823 15th St., N.W., Washington, D.C. 20005, (202) 783-3908

(The Mason Contractors Association and The Bricklayers' Union of the U.S. and Canada.)







# Sealant: 20-Year Butyl-Flex Caulking Compound.

For tough caulking service between similar and dissimilar contruction materials, specify Butyl-Flex. Its high butyl content assures up to 5 times the service life of conventional oil-base caulks in 9 out of 10 general caulking applications. Specify **Flexiseal Polysulfide Polymer Sealants** for sealing expansion joints, curtain wall and tilt-up panel construction, channel glazing and insulated glass installations. Both Flexiseal one-part and two-part systems withstand severe expansion and contraction cycles over an extended period and both carry the Thiokol\* Seal of Security. To get your DAP Architectural Sealants Catalog, write to DAP Inc., General Offices: Dayton, Ohio 45401. Subsidiary of Plough, Inc.

\*Trademark of the Thiokol Corporation

DESIGN CONCEPT: Civic waterfront project with convention center in background. Cable-structured, tent-shaped restaurant is adjacent to docks and other recreational facilities.

INNOVATIONS IN DESIGN: One of a series created for DAP Architectural Sealants. Design and rendering by Richard P. Howard Associates, Architectural Illustrators, Sylvania, Ohio. Harold R. Roe, A.I.A.



ANUNITED TUNAL SEALANTS

DAP, Butyl-Flex and Flexiseal are registered trademarks of DAP Inc.



Steel joists can save on your labor costs because they speed up construction.

Steel joists let you install duct work, wiring and pipes simultaneously. And they eliminate the time and expense of erecting temporary flooring and working platforms.

And joists are versatile. The designer can achieve almost any form of building he wishes through standard steel joist construction. They won't slow down your planning because they'll fit whatever

you have in mind.

Finally, joists are made with modern, highstrength steels, allowing you to use less steel to meet structural strength requirements.

If you'd like to keep your costs from hitting the ceiling, faster construction just might be the answer. Write for our latest edition of Specifications and Load Tables. It gives the facts on Open-Web, Longspan, and Deep Longspan joists. Cost-free, too. Just mail the coupon.

Mail to:

# STEEL JOIST INSTITUTE

Room 204B 1703 Parham Road Richmond, VA 23229 O III

Please send me your latest copy of Specifications and Load Tables

NAME	
TITLE	
FIRM	
ADDRESS	

STATE \_\_\_\_ZIP \_\_

CITY \_

# CANVAS

### IS FOR THE ARCHITECT WITH A LOT OF **GOOD IDEAS**







Identification



Townhouse Shades



Store Fronts

Balconies







Pedestrian Covers

Stair Rails









Sun Decks

Shopping Malls

Your nearby canvas artisan has the know-how, fabrics and facilities to help you bring these good ideas to life. He's listed in the yellow pages under "Awnings, Canopies or Canvas Products.

Write us on your company letterhead for a full-color brochure on architectural uses of canvas. Facts on weight, strength, hardware, coatings, energy conservation.



Going On from page 22

tor in architecture; Arthur Ovaska, a former graduate student and now a practicing architect, and two members of the faculty of the school of hotel administration, Richard A. Compton and Richard H. Penner.

The winning team competed with four other design teams: two from Switzerland and two from West Germany.

The seven-story, 1,600-bedroom hotel will be the largest in West Germany. The complex, which Ungers calls a "minicity within a city," will have an interior public plaza with restaurants and shops. During the construction of the hotel over the next two years, Ungers, Kollhoff and Ovaska will serve as architectural consultants to Swiss hotel developer Jaques Rosenstein, president of Hotel Berlin Inc., which sponsored the competition in cooperation with the city of Berlin.

# Federal A/E Marketplace Will Be Conference Topic

The sixth national conference on federal programs involving architectural and consulting engineering services contracting will be held on Mar. 30-31, at the Roosevelt Hotel, New York City. The conference, sponsored by the Committee on Federal Procurement of A/E Services (COFPAES) is open to all interested parties.

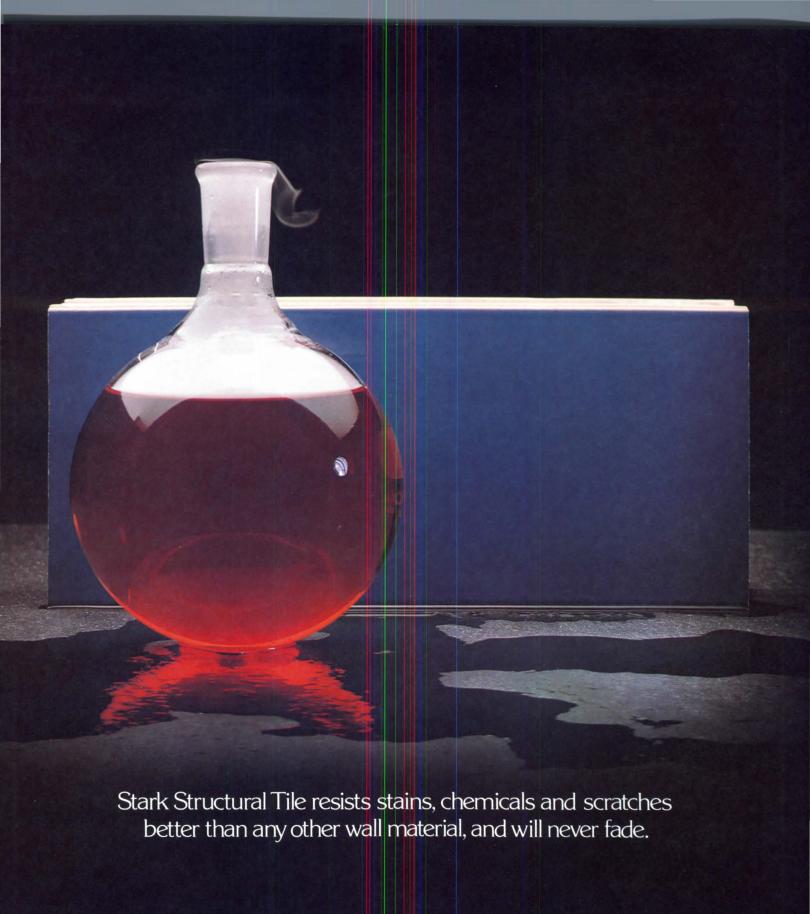
The conference will concentrate on the federal marketplace of A/E services in 1978. Five general sessions will feature reports from more than 30 federal agencies stressing new policies, procedures and directions. Eight workships will concentrate on grant and loan programs, minority firm policies, small business standards and programs, allowable costs and audits, profit guidelines, research and development opportunities, among others.

For further information, contact: Steven Biegel, Assistant Director, Federal Agency Liaison Program, AIA, 1735 New York Ave. NW, Washington, D.C. 20006.

### **Endowment Names Three**

Livingston L. Biddle Jr., recently named chairman of the National Endowment for the Arts, has announced that he has created three positions in place of the previous single deputy post. The new deputy chairmen are P. David Searles, currently NEA's assistant chairman; L. James Edgy Jr., executive director of the Ohio Arts Council, and Mary Ann Tighe, special arts adviser to Vice President and Mrs. Mondale.

Searles will be deputy chairman for continued on page 80





Fire protection Zero flame spread Zero fuel contribution Zero smoke density



Insulation
"U" factor: 0.072
(10" insulated cavity brick and tile wall)



Sound control STC rating: 46 NRC rating: .55 to .60

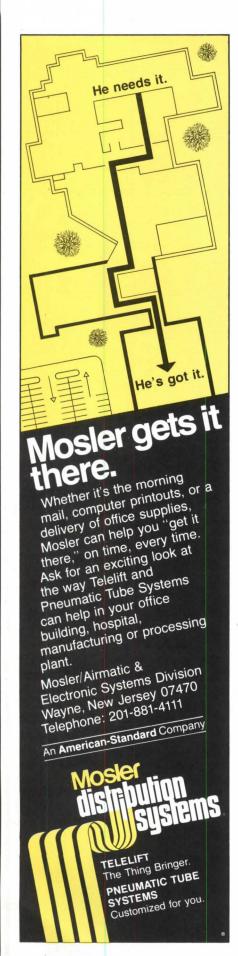


Stark Ceramics, Inc. P.O. Box 8880 Canton, OH 44711

Call toll free 1-800-321-0662 (In Ohio, call collect 216-488-1211)

#### Stark Structural Tile is:

Glazed Facing Tile
Acoustical Tile
Textured Tile
Textured Acoustical Tile
. . . also utility and lustre
finish utility brick and
High Brick.
Circle 6 on information card



Going On from page 78 policy and planning, serving as acting chairman when required. Edgy will become deputy chairman for intergovernmental activities, and Ms. Tighe will become deputy chairman for programs.

### Feasibility Study Made For Sullivan Restoration

Robert L. Bailey, chairman of the Greater Buffalo Development Foundation's task force on the Prudential Building, has announced the completion of a feasibility study for the renovation of the historic landmark, designed by Louis Sullivan. Considered one of the important buildings in American architectural history and the city's most acclaimed piece of architecture, the Prudential faced an uncertain future last spring when it was placed in receivership after a fire and the owner began procedures for a demolition permit (see June '77, p. 8).

Concerned citizens rallied, however, and the Buffalo Preservation Board declared the Prudential a landmark, which allowed a waiting period before demolition. A volunteer task force of business and community leaders was established to find ways to make the structure commercially viable.

The 132-page feasibility study outlines concepts and strategies for long-term economic viability of the Prudential. The task force estimates that construction costs would total \$4.96 million or about \$35 per gross square foot. Funds required for restoration are estimated at \$1.38 million, including all related project costs.

To make the Prudential commercially viable, and in conformance with all life safety code requirements, a condition which the bulding has not met for some time, the task force recommends that the structure's light court be filled in to convert the U-shaped plan to a square one. The advantages to such a plan would include increased rental area per floor, more flexible rental space and a better ratio of income to construction cost.

The study envisions complete replacement of the mechanical systems; standards and considerations for the handicapped; the cleaning of the terra cotta cladding, and restoration of the exterior skin. The damaged column capitals would be restored, exterior signs removed from the terra cotta faces and windows replaced with insulating glass and frames.

In order to restore full ceiling heights and the marble mosaic ceilings and friezes in the lobby areas, mechanical system service for the first floor would be achieved through the floor rather than the ceiling. The stained glass ceilings would be restored, and where natural light is still available, new skylight construction would be provided.

Interestingly, the feasibility study says that "the most spectacular support for this local preservation effort has come from the federal government." Senator Daniel Patrick Moynihan, it is reported, has personally chosen the site of his future district office in the Prudential. The senator says, "Buffalo has a treasure—of scale, of form and notably of ornamentation. Sullivan's building is the soul of that great city of ours, and we are going to save it."

At a recent press conference, Francis Faust, president of the Greater Buffalo Development Foundation, said that "the next step in the process of restoring the building will be to identify the members of the partnership team who will implement the process for rehabilitation proposed in the report." He said that members of the task force would continue in a "catalytic role" during this implementation.

The architectural and engineering assessments in the feasibility study were made by Paul Battaglia and Peter Hourihan of Cannon Design Inc., Grand Island, N.Y. The report also pays tribute to John D. Randall, AIA, who became the building's manager last spring.

# Plans Told in Washington To Patch Kennedy Center

"Washington folklore may say otherwise, but the truth is the roof of the Kennedy Center doesn't leak," said reporter Betty James recently in the *Washington Star*. The roof is watertight, having been repaired in late '76 and early '77 to the tune of \$125,000. But any visitor to the national capital's cultural palace will testify that something leaks. Wooden canopies line the grand foyer, and water often stands in puddles on the lower terrace at theater level, a happening that has caused the deterioration of some of the fireproofing and the rusting of reinforced steel in concrete slabs.

What leaks, with abundance, are the building's horizontal surfaces, mainly the two terraces around the building. Another leaking problem of a horizontal nature is in the floor of the kitchen which serves the center's three rooftop restaurants. Water has oozed to the ceiling of the concert hall below. As a result, all the restaurants are now closed for a three-month period while repairs are made, Congress having appropriated \$4.5 million to make them. The expectation is that work will be finished by mid-1979.

After the kitchen floor is mended, the concert hall will be closed for about a sixweek period next summer.

Fortunately, a temporary membrane, sprayed over the west roof terrace last summer, has prevented new leaks in the grand foyer, but the wooden canopies will

remain there until the roof terrace is reconstructed and the foyer's ceiling is repaired.

Manus J. Fish, director of the national capital region of the National Park Service, says that even the flagpoles leak. Water gets through the flagpole deck plates on the entrance drive, leaking through the concrete base. He says planter boxes and fountains leak, too. The grade of the drive will be altered and additional drains introduced.

NPS architect Judson Ball is supervising the reconstruction. He says everything below the paving on the terraces will be removed, and more slope will be provided.

# Optimism for Downtown Is Expressed in Survey

As a rule, when the greatest problems facing downtowns are cited, crime and racial problems head the list. But these are not the biggest problems, say a group of elected officials, planners, property owners and businessmen concerned with downtown. They were respondents to a questionnaire sent out by the Downtown Research and Development Center, an independent organization based in New York City which since 1954 has researched and reported on downtown problems. The respondents were also optimistic about the future of downtowns.

Laurence A. Alexander, director of DRDC, calls this "an exciting turnaround in attitudes. . . . After 20 years of almost unending negativism about downtown, it is impressive that these downtown leaders now have solid, affirmative views of their future."

According to DRDC's tabulation and analysis of replies to the questionnaire sent to readers of its *Downtown Idea Exchange*, two-thirds of the respondents see banking/finance in downtowns as growing industries; but only 28 percent see retail growth and one in twenty sees growth in the industrial and wholesaling sectors. An impressive 83 percent of the respondents believe their downtowns will be "bigger and stronger in 10 years." Respondents in the private sector are more optimistic than those in the public sector.

The questionnaire asked for a list of what the respondents considered downtowns' most serious problems. Heading the list are "poor image" and "poor cooperation" (47 percent each). Parking shortage was named by 45 percent. Some of the other problems listed: need for more housing (43 percent); poor planning (18 percent); poor transit (12 percent), and at the bottom, as mentioned, safety/crime (11 percent) and dirtiness and racial problems (10 percent each).

\*\*Continued on page 84\*\*

STAINLESS STEI Model 1410 In this age of mediocre materials and short-cut craftsmanship, architects, contractors and building owners are ever more frequently specifying HAWS stainless steel drinking fountains. The reasons are self-evident. From the practical simplicity of a multiple-bubbler unit for schools and public buildings to the elegance of a polished piece of sculpture, there's a HAWS stainless steel model for your particular need. Contact Haws Drinking Faucet Company, 1441 Fourth St., Berkeley, CA 94710. aws DRINKING FOUNTAINS

Circle 32 on information card

# Raising social consciousness 'at the expense of' the frequency of student design experiences.

Design from page 60

distinction between undergraduate, graduate and postgraduate programs has become terribly muddled. The first professional degree is not the m. arch. instead of the b. arch. The second professional degree is still a m. arch. and its value depends upon "where you go," the prestige of the name of another institution, and not necessarily a specialization or design program of any better quality than that of the first degree.

• The demand for architectural education is still incredibly high in spite of the limited ability of the profession or society to absorb all the graduates. And the opportunities for a graduate to use his "design"

ability are even less.

• The nondesigner architect is not accounted for in the programs at all.

• The cost of education over a minimum of six years is enormous, especially for the graduate who cannot enter the architectural field or for the student who realizes he does not want to be an architect but too late to change in midstream. Since the cost is so high, it is no wonder that the state institutions in general are so large. And generally because of so many students, the quality of design education suffers as a result.

It would seem that a fresh approach to architectural education might be needed to resolve some of these critical issues. These should be a more clear distinction between undergraduate and graduate programs. Perhaps the undergraduate years, the first four of a six-year program, could have a "liberal arts" emphasis. Its objectives could be to develop an environmental design awareness, to introduce the students to the components of design, related fields, theory, history, even the technical courses on basic level. The communication of design ideas through basic design courses in drawing, photography and other media could be developed. Design studios would be limited to an equal weight with the other liberal arts credits. The number of students that could be accommodated in this type of program could be relatively large and the program would be, at best, an introduction to architecture. In this way, many students could explore the field of design before making a commitment to enter architectural school.

The two graduate years in architectural studies leading to the m. arch. degree could thus be free of the ambiguous position that they find themselves in today. Students would have to apply to architec-

tural school at this level, much as they apply to law or medical schools. The design courses could luxuriously consume all of the student's efforts if the studios were truly interdisciplinary, integrating design with the technical-theoretical aspects of architecture. The "design" graduate program could be more rigorous in its objectives, more structured in communicating techniques of process of design and more qualitative in the design products. The studios could concentrate on the intimate critic-student relationship that has been paramount in developing the designer. The graduate program for the "nondesigner" could be as clearly structured but toward a different goal, perhaps with more distinct options than those found today in schools.

The "postgraduate" studies, those beyond the m. arch. degree, could sharpen particular interests, be they urban design, research in a specialized area, theory or relationship with another field or discipline.

Departing from this approach, perhaps some schools should pull back from professional studies and concentrate on a good undergraduate liberal arts introduction to an architectural and environmental study program. Others, conversely, could specialize in graduate and postgraduate studies in architecture and develop true excellence in design and other architecturally related disciplines.

As design issues have become as important as the design product, the problems given in the studios have become longer and more insoluble. This results in raising the student's consciousness of problems of society at the expense of going through the design process less often. It seems that the students lose in both instances. In one prominent school that was visited, a studio critic remarked that he felt obligated to give a "nuts and bolts" studio where students design buildings with real structural and mechanical considerations because no one else did.

It is time that the design curriculum should be reconsidered in its entirety. Design education has recently experienced the change from emphasizing product to a process-oriented program. All of the schools have headed toward the studio option system, with freewheeling faculty and problems alike, that has virtually no relationship to a logical development of design process, integration of social, economic, or technical issues or merely excellence in design. The studio option system is the result of a lack of design convictions or a reluctance to take a stand on rigorous design instruction. Why not ask some basic questions again? How could structures, energy, social, economic issues best be integrated into the instruction of design? How could the limited studio time best be spent and toward what goals?

How to get studios to interrelate so that design information is passed on from one year to the other in an evolutionary development from simple to complex problems? Where is theory best introduced? What real options are needed in design education to best prepare the students for choices in their future careers?

When these issues are freshly addressed, the resultant curriculum, studio organization and design education could be quite different from what is seen today in the schools.

The schools are pure funnels. The students enter on one end from various sources mostly without any basic notion as to what architecture is, pass through the program in a constricted stream and leave the other end to be dispersed to the outer world to fend for themselves. It is ideal but impractical for the architectural schools to prepare the entering students for the ensuing design education, although it is a concept which might be tested. And, at the other end, it is irresponsible on the part of all the schools that they do not maintain close communications with their graduates.

One possible result of such communication would be a feedback into the design curriculum from what these graduates are doing. It might be revealing in the consideration of real options, interdisciplinary studies and studio problems. Instead of sending the alumni a newsletter of what is happening at the school, which is really not top priority information for the graduate, it would be more important for the school to know what is happening with its graduates, especially those who do not achieve fame or fortune.

What is the answer to the inevitable question of whether a faculty should be primarily composed of full-time teachers or part-time teacher-practitioners? Probably a balance between these is ideal but this is contrary to the trend toward a faculty of full-time personnel. While there are exceptions, it is difficult to conceive that the average design critic working exclusively within a design studio can be credible without the experience of practicing architecture.

There are several possible solutions to reaching an ideal balance. One is to reach out and draw upon a possible source of practicing architects in small offices who are interested in dedicating some time to teaching. These might be adjunct faculty members who are willing to give problems, lectures and lend reality to the studios on whatever time basis they can afford.

A few schools have tried sending students to architectural offices to work with specific assignments under supervision for studio credit. This is a possible area of interesting collaboration between aca-

continued on page 84

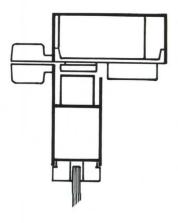




# LCN SERIES 2030-OPJ Pacer<sub>®</sub> Overhead Concealed Closer

THE DOORS LEADING TO THIS STRIKING ATRIVM LOBBY ARE CONTROLLED BY LCN 2030 SERIES CLOSERS CONCEALED IN THE HEADFRAME. LCN OFFSET PIVOTS COMPLEMENT THE INSTALLATION, WHEN THE DOORS ARE CLOSED THE CLOSERS DISAPPEAR LEAVING ONLY THE CLEAN LINES OF THE ENTRANCE. 2030 SERIES HAS THE SUPERIOR ACTION OF FULL RACK AND PINION DESIGN YET FITS IN A 1¾×4" TRANSOM BAR. SINGLE LEVER ARM RETAINS EFFICIENCY WITH QUIET, LOW FRICTION TRACK AND ROLLER.

SEE SWEETS, SEC. 8, OR WRITE FOR OVERHEAD CONCEALED CATALOG





LCN CLOSERS, Princeton, Illinois 61356 LCN CLOSERS OF CANADA, LTD., Mississauga, Ontario L5G4L5

### A 'hands off' attitude between the architectural schools and the profession at large.

Design from page 82

demic and professional design education which deserves more attention. The practitioners who participate in such a program could be "field faculty," who ideally would be able to commit contact time with the student participants on more than an architect, quasiemployee basis.

In recent years, "hands off" appears to be the attitude in both the schools and the architectural profession about meddling in each others' realm. Perhaps there have been some unfortunate experiences, especially in the area of the profession attempting to dominate the schools' internal affairs and objectives. But in spite of this fear, obvious benefits to both the schools and the "design" profession could be gained by both parties. Why cannot every school have a continual dialogue with a visiting committee of designers composed of dedicated architects, not necessarily of great names? Why are there not more exhibits of students' work at professional meetings and more professional work at schools? Why are there not more jointly sponsored design educational programs directed toward the surrounding community? Why are there no design courses offered to the public as a continual adult education program? In general, design, to be effective and responsive, should be a public concern as well as a private concern. Students are a powerful and enthusiastic resource for such collaboration. Through their participation as "teachers," they would also learn in the process.

Architects have been continually criticized for their self interests. Within the profession as well as the schools, there is a constant debate as to whether architecture is of benefit to society. If schools remain within their cloisters and the architects within the bounds of their professional societies, then they will both remain peripheral to the real design issues which are of great public concern. This is reason enough for more cooperation and communication.

In conclusion, this summary of observations and recommendations is at best an overview from the perspective of practicing designers peering through the windows of the schools. It is intended to be a catalyst to bring into focus some concerns voiced by many designers over the past several years. Some organization should begin where this report ends to make a comprehensive study of design education, its methodology, goals and future, as well as its necessary association with the design profession and public.

Going On from page 81

DRDC reports that small downtowns view problems differently from large downtowns. For example, parking shortage is more troublesome to small ones than to big ones. Small downtowns are also more troubled by growing competition; large downtowns express a greater need for more downtown housing than smaller ones. The smallest downtowns believe they need more malls. Concern about crime is more pronounced in the largest downtowns.

Survey results and detailed tabulations may be obtained from DRDC, 270 Madison Ave., New York, N.Y. 10016.

## Portland Ready To Open Its Ambitious Bus Mall

The nation's most ambitious bus mall project will soon be in operation in Portland, Ore., providing transportation throughout the central business district and cutting down on single vehicle driving. The Portland Mall forms the spine of the high density commercial and retail





Northeast: Raindrop (Purple)

Southwest: Rose (Yellow)



22-block area, from Burnside to Market Sts., between Fourth Ave. and Broadway. The mall will serve as the major transfer point and the origin or destination of two-thirds of the area's transit trips by 1990.

For the first time in this country, a closed circuit television system in the bus shelters will tell riders about the times of bus arrivals and departures. Riders will be helped further by maps and colored symbols that identify routes and areas. The "total rider information system" was developed by Ilium & Associates, Seattle

transit system consultants. Color-coded pictographs (below left) have been devised to indicate the seven geographic service areas of the Portland metropolitan region. The pictographs are keyed to maps with routes in each service area. There will also be a separate "tripplanning" kiosk (bottom left) in eight locations on the mall, and they will include a TV screen and keyboard so that riders can punch a particular route number and see locations and times of bus stops. Each kiosk will have a ticket vending machine and a free telephone linked to an information line.

In addition to underscoring the city's commitment to public transit, the mall is expected to reduce pollutants in the downtown by 60 percent. It will also provide an inviting environment with its combination of textures and colors and its comfortable street furniture. Sixteen artists have been chosen to create artworks to decorate the mall, and \$250,000 has been budgeted for this effort to make a "people place."

The mall, developed by Tri-Met, the public transportation agency in the Portland metropolitan area, will cost \$15,-865,915 and is jointly financed by the Urban Mass Transportation Administration and Tri-Met.

As buses approach the downtown area, they will reach a staging block outside the mall. Once on the mall, the buses will stop at every corner. While one bus is stopped, others can use the center lane for by-



passing. This leap-frogging will keep traffic moving. In the auto access lanes, cars will travel beside the bus lanes to get in and out of parking lots and to gain access to businesses on the mall. Displaced auto traffic is viewed as a limited problem, for during construction when some of the streets were closed to auto traffic, ad-

continued on page 86

# THE COMPUTER PROGRAM THAT NOW DOES MORE TO SAVE ENERGY AND MON

The new, improved E CUBE 75 produces an accurate, three-part Life Cycle Energy Analysis at low cost. With many new features it computes the hour-by-hour energy requirements of your building or planned building for an entire year-taking into account all weather, design, operation, and occupancy factors.

#### Air Side Systems Simulations.

E CUBE 75 can now handle Variable Air Volume (VAV) systems directly. It also offers expanded treatment of Multizone, Dual-Duct, and Reheat air distribution systems. The energy consumption of various air side systems can be predicted - you can compare their performances and costs, and pick the one that's best. Other improvements make E CUBE 75 more complete and easier to use.

#### Energy Systems Simulations.

E CUBE 75 can simulate many different energy systems - from central stations to rooftops. It projects all costs, so you can choose the system or combination of systems that will work most efficiently and most economically for you.

E CUBE 75 is Inexpensive. For example, a life cycle energy analysis of a large building with 8 zones, 2 air side simulations, 4 system simulations and 4 economic comparisons costs less than \$160

ECUBE 75 is Accurate. That's what it says in HUD Report "Study of Computer Utility Analysis." E CUBE is the most advanced program in this field with thousands of runs made by people in private practice, industry, American Gas Association member companies, and the U.S. government.

E CUBE 75 is Private. You give your information directly to the computer. Your project data and the results are never seen by any third party. Of course, we stand ready to provide assistance at your request.

E CUBE has been a big help to thousands. And the New Improved E CUBE 75 can help you even more to make the right decision. Right financially, and right for conserving America's energy.

For more information, or details of Seminars for new and advanced E CUBE 75 users. mail in the coupon or call Stephen A. Lewis (703) 524-2000.

Stephen A. Lewis, Manager Energy Systems Analysis American Gas Association 1515 Wilson Boulevard Arlington, Va. 22209.



☐ Send more information on E CUBE ☐ Send information on Seminars.

Name Address\_

**ENERGY CONSERVATION** UTILIZING BETTER ENGINEERING

A American Gas Association



Going On from page 84 jacent streets did not seem to develop major congestion problems. Tri-Met says that some of the dissipation of auto traffic may be responsible for the increase in bus ridership.

The overall concept of the mall was performed by a design team in the Portland offices of Skidmore, Owings & Merrill and CHNMB & Associates (formerly Lawrence Halprin & Associates). SOM had responsibility for overall coordination of architectural and engineering design, and CHNMB & Associates took the lead on the design of street furnishings and fountains.

### **Deaths**

Lewis G. Adams, New York City Franco Albini, Hon. FAIA, Milan, Italy Robert M. Ayres, San Antonio, Tex. Robert M. Berry, Eighty Four, Pa. Tore E. Bjornstad, Waterloo, Ont. Canada Roger W. Blaine, Oakland, Calif. Edward N. Bliss, Amarillo, Tex. Frank W. Bodrick, Santa Monica, Calif. Frederick N. Brown Jr., Warwick, R.I. Cochrane Browne, Kensington, Calif. Joseph L. DeMarco, Farmingdale, N.Y. Albert J. Evers, FAIA, San Francisco Walter C. Finne, Elizabeth, N.J. Jan T. Gaastra, Grand Rapids, Mich. Charles B. Gannaway III, Tulsa, Okla. Ray R. Gauger, St. Paul, Minn. George T. Gillette, Palm Beach, Fla. Donald H. Goldsmith, Traverse City, Mich.

Charles F. Goodale, Osterville, Mass. Robert E. Grady, Bedford, Mass. John Hans Graham, Arlington, Va. John M. Gray, FAIA, Boston Kossuth D. Hamilton, Jackson, Miss. John C. Hill, Palo Alto, Calif. Charles E. Jones, Northridge, Calif. Paul O. Klingensmith, St. Louis F. Earl Leggett, Tampa, Fla. Roland L. Linder, FAIA, Denver R. M. Lindsey, La Canada, Calif. Meyer Louis, Boston S. Arthur Love Jr., Norwood, Pa. E. William Martin, FAIA, Newark, Del. Senator John L. McClellan, Hon. AIA, Washington, D.C.

Laurence S. Miller, Jekyll Island, Ga. Benjamin Parker, Fallbrook, Calif. John M. Payne, Amherst, Mass. Thurman J. Peabody, Norwalk, Ohio Clarence C. Robinson, Wichita, Kan. Noah N. Sherman, Brooklyn, N.Y. Joseph T. Sibley Jr., Scarsdale, N.Y. Landon E. Smith, Roanoke, Va. Samuel Smulian, Atlanta Charles B. Spencer, Highland, Ill. Roman A. Thoenig, Caldwell, N.J. John L. Turner, Jackson, Miss. Edwin H. Wetherell, Sarasota, Fla. Harold Whiting, Farmington, Mich. David J. Witmer, FAIA, Los Angeles

### **Newslines**

One of the few architects to be selected for Rear Admiral in the Civil Engineer Corps, James E. Mantel, AIA, has been named commander of the First Reserve Naval Construction Brigade. The brigade, comprised of more than 10,000 officers and men, is headquartered in Kansas City.

Murvan M. Maxwell, FAIA, of the New Orleans firm of Maxwell & LeBreton, was chosen "man of the year" by the Construction Industry Association in New Orleans.

A \$10,000 prize for practical advances in energy production and conservation will be given in 1979 by the fellows of the American Consulting Engineers Council. The award will go to an engineer or team in recognition of "outstanding engineering accomplishment in applied research, design, development of materials, processes or procedures." Nominations will be accepted until Dec. 8, 1978. Address: ACEC, 1155 15th St. N.W., Washington, D.C. 20005.

"The Frank Lloyd Wright Newsletter" is a new periodical devoted solely to information about the architect and his works. It will be published six times yearly by the newly formed Frank Lloyd Wright Association based in Oak Park, Ill. It is edited by Thomas Heinz, an architect who is an expert on Wright's Prairie period. Membership in the association (\$15 annually) includes copies of the bimonthly newsletter. Free samples of the first issue are available. For membership or information, write: The Frank Lloyd Wright Association, P.O. Box 2100, Oak Park, Ill. 60303.

An "energy information" package which presents ideas on how to save energy in the home is available without charge from HUD. The aim is to "begin seeing your dollars in the bank, not up the chimney." Write: HUD, Energy, Washington, D.C. 20410.

A team of Egyptian architects has visited Israel to survey restoration work required on the Al Aksa mosque in Jerusalem, which after Mecca and Medina is considered the holiest shrine in the Moselm world. During his visit to Israel in November, President Anwar el-Sadat obtained permission for Egyptian architects and builders to repair the mosque and the Church of the Holy Sepulchre.

"Public Relations Guide for Consulting Engineers" is the title of a 60-page manual for design professionals in private practice. Published by the American Consulting Engineers Council, it "provides a comprehensive blueprint for the

promotional activities of design firms." Copies are available at \$6 for ACEC members, or \$12 for nonmembers. Order prepaid from: ACEC, 1155 15th St. N.W., Washington, D.C. 20005.

The Association of Women in Architecture's president for 1977/78 is Robin Jaffe of Sherman Oaks, Calif. The association is headquartered at 541 S. Spring St., Los Angeles, Calif. 90013.

"Orientation and Mobility Maps for the Visually and Physically Handicapped" is a booklet which describes the preparation of tactual maps to serve the needs of blind students and graphic maps for the use of students in wheelchairs at the Oklahoma State University. The manual, prepared by F. Cuthbert Salmon, AIA, can be useful in similar building groupings, such as industrial complexes. A copy may be obtained for \$3.50 from: School of Architecture, Oklahoma State University, Stillwater, Okla. 74074.

The American Hospital Association has established two new units to function as information clearinghouses in their specialty areas: the center for rural and small hospitals and the center for multihospital systems and shared services. Two additional centers will soon be established: the center for ambulatory care and home services and the center for health education. For information, write: AHA, 840 N. Lake Shore Drive, Chicago, Ill. 60611.

O'Neal Ford, FAIA, of San Antonio, Tex., is the recipient of Louisiana State University's first distinguished lecturer award. Ford was cited for "achievements in architecture that relate to people and the natural order of our world—past, present and future."

Temple Hoyne Buell, AIA, president of the Denver firm of Buell & Co., is the first recipient of the dean's medal awarded by the graduate school of architecture and planning, Columbia University. The award was presented on the occasion of the university's celebration of the opening of its newly expanded Avery architectural and fine arts library, a \$5.5 million underground structure, designed by Alexander Kouzmanoff, AIA, of New York City. The dean's medal, given for "significant contributions" to the architectural profession, goes to leaders of the architectural and planning professions.

"Urban Research in France: Trends and Results (1971-1975)" is a report directed to English-speaking persons. A free copy may be obtained from: Centre de Documentation sur l'Urbanisme, 64 rue de la Fédération, 75015 Paris, France. □



Ah! The sweet smell of fresh air. But the ammonia-free PD80° isn't today's most popular convenience copier just because it's ventless and odorless. With instant on-off, it operates on a convenient 115 volts to deliver dry prints of your engineering drawings in seconds.

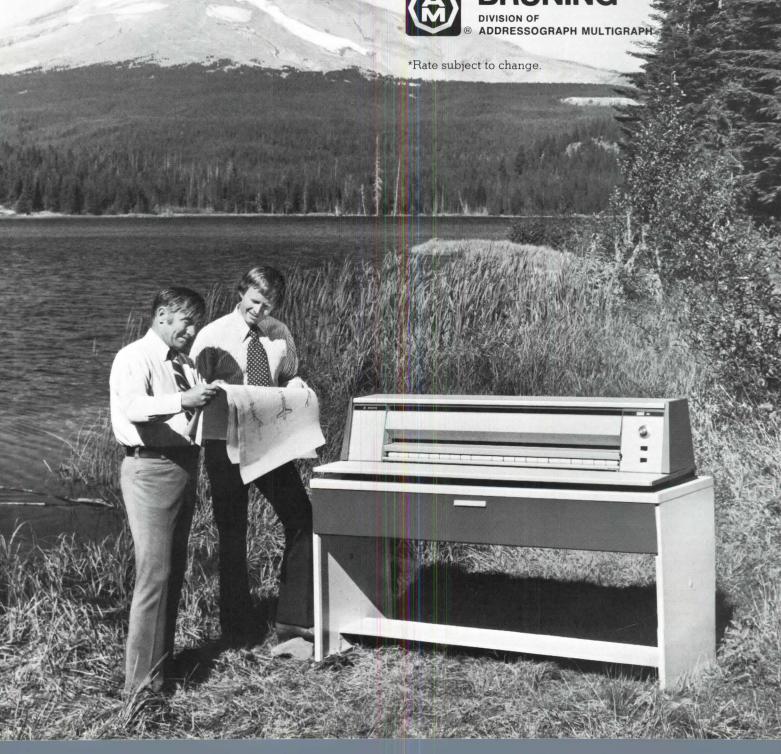
And here's another breath of fresh air. Our rental plan with an option to buy means no

capital investment, no long-term commitment. At only \$40 a month, we're sure you'll like it. All rent applies toward purchase for the first three months.

And the PD80 is backed by the respected Bruning tradition of service and support to the engineering profession.

Breathe easier. Call your local Bruning Sales Office. Or write Bruning, 1834 Walden Office Square, Schaumburg, Illinois 60196.





# ADVERTISERS

Michael J. Hanley	,
Publisher	
Michael M. Wood	
National Sales Dir	rector
George L. Dant	
Manager, Product	ion and Business
1735 New York A	
Washington, D.C.	20006
(202) 785-7300	
ADVERTISING	SALES OFFICES
Washington, D.C.	
Michael M. Wood	
1735 New York A	
Washington, D.C.	20006
New York (201) 7	
Thomas R. Crow	
79 Hilltop Trail	
Sparta, N.J. 0787	1
Chicago (312) 236	5-4545
John D. Stewart	
20 North Wacker	Drive
Room 1425	
Chicago, Illinois 6	60606
<b>St. Louis</b> (314) 56	
Richard D. Grater	
1466 Summerhave	
St. Louis, Missour	
San Francisco (41	5) 362-8547

Jules E. Thompson 1111 Hearst Building

Bert Charlton 2560 Via Tejon

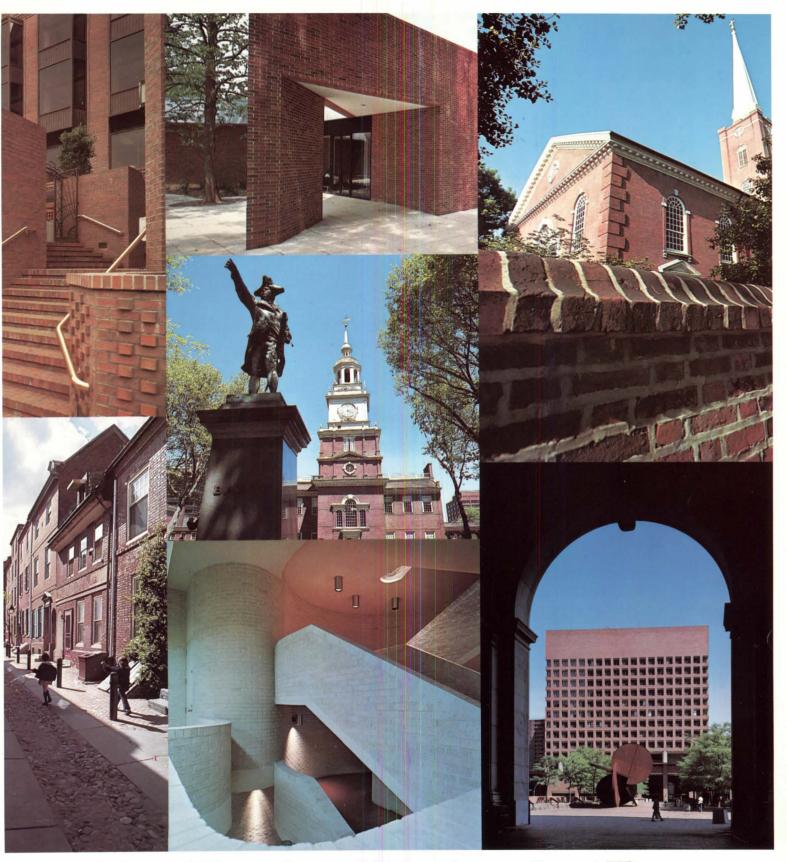
San Francisco, California 94103 Los Angeles (213) 378-8361

Acknowledgments: 6, Balthazar Korab; 26-28, Bo Parker; 29, Thomas Airviews; 31 left, Bo Parker; 32-33, Allen Freeman; 34 left, Eric Feinblatt, top George Cserna; 34-35 drawings, Robin Roberts; 35-37 photos, Allen Freeman; 39-40 drawings, Robin Roberts; 44, Ira Berger; 47, Stan Ries; 50, Al Stephenson; 51-52, courtesy The Lominack Partnership; 53 top, courtesy The Lominack Partnership, bottom, Donna Naismith; 54 top, courtesy Savannah Landmark Rehabilitation Project, bottom, Donna Naismith; 55, Beth Reiter; 56, Carleton Knight III; 57, Balthazar Korab; 58-59, M. E. Warren.

Palos Verdes Estates, California 90274

American Canvas Institute 78  The W. N. Gates Co.
American Gas Association 85  J. Walter Thompson
Bethlehem Steel Corp 62-63  Van Brunt & Co.
Bigelow-Sanford, Inc 68  D'Arcy-MacManus & Masius
Brick Institute of America cov. 3  Henry J. Kaufman & Assoc.
Bruning Div. of Addressograph Multigraph Corp 87
Campbell-Mithun, Inc. California Redwood Assoc 13
Foote, Cone & Belding/Honig Celotex Corp., The 15-16-17-18
Mike Sloan, Inc. Cold Spring Granite Co 19
Kerker & Associates DAP, Inc
Kircher, Helton & Collett DuPont/Patcraft 65
BBD&O Forms & Surfaces 1
Sherrill Broudy Associates General Electric Company 24
Meldrum & Fewsmith, Inc. Gulistan Carpets (J. P. Stevens) 72
Matthew-Lawrence, Inc. Haws Drinking Faucet Co 81
Pacific Advertising Staff Hillyard Chemical Co 70-71
Harmon Smith, Inc. International Masonry Institute 75
Henry J. Kaufman & Assoc. LCN Closers 83
Alex T. Franz, Inc. Marlite Commercial Sales 73
Whitemyer Advertising Marvin Windows
Discovery Designs  Modernfold Folding Doors cov. 2  Fahlgren & Ferris, Inc.

Mosler Airmatic & Electronic Systems
Div
Keyes, Martin & Company
Nucor Corp. (Vulcraft) 66-67
Cargill, Wilson & Acree, Inc.
Olympic Stain cov. 4
Craft Smith
Owens-Corning Fiberglas Corp 7-8-9
Ogilvy & Mather, Inc. 10-11
Pellerin Milnor Corporation 22
Peter A. Mayer Adv., Inc.
Peter Bradford Publishers 69
Peter Bradford
Schlage Lock Company 23
Martin Advertising, Inc.
Shand, Morahan & Co 61
Hakanson & Associates
Stark Ceramics 79
Ira Thomas Associates
Steel Joist Institute 77
Batz, Hodgson, Neuwoehner, Inc.
Tremco Company 20-21
Carr, Liggett Adv., Inc.
Tyler Pipe, Wade Div 4
Crume & Associates Inc.



# Ideas.Timeless.Priceless.And Free.

Brick in Architecture is a magazine of ideas, free to registered architects. If you're not receiving your copy, write us on your letterhead.

# Brick Institute of America 1750 Old Meadow Road/McLean, Virginia 22101

# Some houses were never meant to be painted.



Architect. Architectular Workshop Proscow, Idaho. John Amon Derg

Nothing you can use preserves and protects the natural beauty of wood better than Olympic Stain. All Olympic Stains are factory formulated with the best possible pigment balance for perfect uniformity.

When homes deserve beautiful, natural protection against the effects of sun, rain and harsh climates, they deserve Olympic Stain. For more information about oil or acrylic latex stains, consult the 1978 Sweet's Catalog. For samples on wood, write: Olympic, Dept. S, 2233 112th Avenue N.E., Bellevue, WA 98004.

Circle 31 on information car