



Patented **TAB-LOCK** attachment...fast, easy, tool-free...offered only with Eastern's Acoustical/Fire-Safe Suspension Systems

Eastern's pioneering double web grid design was so superior, it was quickly duplicated by competitive systems. But our patented TAB-LOCK tee-to-beam attachment can't be copied! Insert tee. Bend tab. A positive lock is instantly assured! Eastern's grid members with TAB-LOCK are interchangeable in 3 standard weights plus fire-rated design.



nembers with TAB-LOCK are interchangeable in 3 standard weights plus fire-rated design. The result: maximum economy for all load and spanning conditions. See Sweets 11c/Ea, or write for complete specs.

ACOUSTICAL SUSPENSION SYSTEMS

Architectural Metal Products Division, 1601 Wicomico St., Baltimore, Md. 21230 By the makers of Eastern E.S.P. Demountable Wall Systems





Exterior veneer is Vermarco White "A" Rutland Marble. Interior main staircase and walls are Vermarco Best Light Cloud. Floor is Montclair Danby.

Architects: Naramore, Bain, Brady & Johnson; Minoru Yamasaki & Associates.

Vermont Marble the architect's choice for contemporary design

IBM BUILDING, SEATTLE. Distinctive, durable marble from the worldfamous Rutland and Danby quarries of the Vermont Marble Company add drama and elegance to the classic dignity of this new Seattle landmark. White Rutland Marble beautifies the graceful arches and the interior stairs and walls; rugged Montclair Danby covers the lobby floor. For further information on the use

of these beautiful marbles, call in your Vermont Marble representative — or write to Dept. 7 A.







Who makes these distinctive stainless steel drinking fountains?

ELKAY, of course. And we make more than just a drinking fountain. These handsome fountains are what architects consider to be important in design and engineering. Their clear, straight lines enhance any setting. The finest nickel-bearing stainless steel provides a non-porous surface that is easy to maintain. Stays sanitary. Lasts a lifetime. Standard models are readily available. If your requirements call for custom fabricating, Elkay can create any stainless steel product you design. Write for complete information.

Elkay is the world's oldest and largest producer of standard and custom stainless steel sinks.

Model E-33-840—Fully Exposed For indoor or outdoor use. Made of 18-gauge nickel-bearing stainless steel. Hand rubbed to a soft satin luster. Furnished complete as illustrated.



Model E-33-841—Semi-Recessed Tasteful design in 18-gauge nickelbearing stainless steel. For indoor or outdoor use. Hand-rubbed satin-luster finish. Furnished complete as illustrated.



Model E-33-842—Fully Recessed Tucks neatly into the wall. Made of 18-gauge nickel-bearing stainless steel, with handrubbed satin-luster finish. Furnished complete as illustrated. May also be furnished as cuspidor as model E-33-842C.





ELKAY MANUFACTURING COMPANY • 2700 S. 17TH AVENUE, BROADVIEW, ILLINOIS 60155



PUBLISHER Wm. Dudley Hunt Jr. AIA

EDITOR Robert E. Koehler

ourna

ASSISTANT EDITOR Neil E. Gallagher

ASSISTANT EDITOR Marilyn E. Ludwig

ART DIRECTOR Marilyn S. Housell

BUSINESS MANAGER Henry E. Kleiner

SALES MANAGER G. Paul Modrak

CIRCULATION MANAGER Jane B. Solt

PRODUCTION ASSISTANT Sandra M. Sturm

AIA JOURNAL, Official Magazine of The American Institute of Architects, published monthly at the Octagon, 1735 New York Ave. N.W., Washington, D.C., 20006 Telephone: 393-7050

Subscriptions For those who are, by title, architects, engineers, architectural employees (specification writers, designers, draftsmen, estimators), planners or landscape architects, and to those in architectural education (students, faculty and schools), and to libraries, building construction trade associations, and building product manufacturers and their employees: basic rate—\$5 one year, \$8 two years, in US, its possessions and Canada. For the same titles elsewhere: \$10 one year. For all others: \$10 one year in US, its possessions and Canada; \$18 one year elsewhere. Single copy: \$2. Payable in advance. Publisher reserves the right to refuse nonqualified subscriptions. For those who are, by title,

refuse nonqualified subscriptions.

Change of Address Give Circulation Department both old and new addresses; allow six weeks

Second class postage paid at Washington, D.C.

© 1966 by The American Institute of Architects



VOL. XLVI, NO. 1

Opinions expressed by contributors are not necessarily those of AIA®

The 1966 AIA Honor Awards

25 Report of the Jury

- Eero Saarinen & Associates-Columbia Broadcasting System, Inc., 26 Headquarters Building, New York, New York
- 30 Keyes, Lethbridge & Condon-Tiber Island, Washington, D.C.
- 34 Eero Saarinen & Associates-Dulles International Airport Terminal Building, Chantilly, Virginia
- Grant, Copeland, Chervenak & Associates-Hugo Winkenwerder 38 Forest Sciences Laboratory, Seattle, Washington
- 40 Frederick Kiesler and Armand Bartos-Shrine of the Book, Jerusalem, Israel
- 42 Victor A. Lundy, AIA-Church of the Resurrection, East Harlem Protestant Parish, New York, New York
- Kenneth W. Brooks, AIA-Intermountain Gas Co. Central Serv-44 ice Facility, Boise, Idaho
- Wurster, Bernardi & Emmons-Ghirardelli Square, San Francisco, 46 California
- 48 Hugh Stubbins & Associates, Inc.-Harvard's Countway Library of Medicine, Boston, Massachusetts
- 50 Keyes, Lethbridge & Condon-River Road Unitarian Church, Bethesda, Maryland
- 52 Katz, Waisman, Weber, Strauss-Joseph Blumenkrantz-World Wide Volkswagen, Inc., Orangeburg, New York
- 54 Vincent G. Kling & Associates-Sharples Dining Hall, Swarthmore College, Swarthmore, Pennsylvania

General Articles

- 57 The Decision-Making Totem Pole-A landscape architect suggests how design organization might respond if the client continues to demand an ever-better environment
- UD Workshop 11: Lessons from Copenhagen, Part 1-The finger 60 plan is one of the best examples of its kind
- Equity: Guidelines for Design-Architects can profit by reviewing 63 standards to which a theater must conform
- A Guide to Professional Collaboration-Principles of relationships 65 between architects, engineers and landscape architects are outlined in a joint document of seven professional groups

News Feature

70 Prejudice and the Computer-And architectural design

Departments

- **Comment & Opinion** 6
- 72 Books
- Calendar 80
- 81 Letters
- 22 **Unfinished Business**

Newslines

Necrology

8

17

Cover: Detail of the award-winning CBS Headquarters Building as photographed by Robert Damora AIA

LOOKING AHEAD TO AUGUST

An Oilman Talks Esthetics: When a top executive of a major oil company tells his colleagues they must get busy and clean up the appearance of their gas stations—billboards included —it is architectural news. Referring specifically to the Highway Beautification Act, the gentleman from Tulsa asks for "responsible leadership as an industry rather than the continuation of fighting a sure-to-be-lost, rear-guard action."

The Best of the New Libraries: Every other year the AIA, the American Library Association and the National Book Committee jointly sponsor the Library Buildings Award Program. Entries are evaluated individually on the basis of the architect's solution to the problem. The 1966 jury saw fit to give only one First Honor Award, and that in the Public category (the other two: College/University and School). The portfolio of 11 winners from coast to coast will feature both exterior and interior views, plans and jury comments.

The Lighting Consultant's Role: Why engage the specialist when his work has been done in the past by the architect and the electrical engineer? The answer to this question by a lighting consultant at the same time defines his position as a member of the architect's team. For, as the author points out, "The architect who regards light merely as a cosmetic is on a certain route toward an unsuccessful design solution. And the lighting consultant who understands his job is far more than a cosmetician or a decorator."

THE AMERICAN INSTITUTE OF ARCHITECTS

BOARD OF DIRECTORS

Officers

"he

President Morris Ketchum, Jr. FAIA* New York, N.Y.

First Vice President Charles M. Nes Jr. FAIA* Baltimore, Md.

Vice Presidents Rex Whitaker Allen FAIA* San Francisco, Calif.

Robert L. Durham FAIA* Seattle, Wash.

George E. Kassabaum AIA* St. Louis, Mo.

Secretary Oswald H. Thorson FAIA* Waterloo, Iowa

Treasurer Daniel Schwartzman FAIA* New York, N.Y.

Executive Director William H. Scheick FAIA

* Members of the Executive Committee of the Board

Directors

(Terms expire 1966)

California C. Day Woodford FAIA Los Angeles, Calif.

Central States Angus McCallum FAIA Kansas City, Mo.

Florida Robert H. Levison AIA Clearwater, Fla. Illinois Ambrose M. Richardson FAIA Champaign, Ill.

Pennsylvania Willard S. Hahn AIA Allentown, Pa.

Texas Llewellyn W. Pitts FAIA Beaumont, Tex.

(Terms expire 1967)

East Central Walter Scholer Jr AIA Lafayette, Ind.

New England Willis N. Mills FAIA Stamford, Conn.

New York Donald Q. Faragher FAIA Rochester, N.Y.

North Central Victor C. Gilbertson FAIA Minneapolis, Minn.

Ohio Charles J. Marr FAIA New Philadelphia, Pa.

Western Mountain James M. Hunter FAIA

(Terms expire 1968)

Boulder, Colo.

Gulf States Dan C. Cowling AIA Little Rock, Ark.

Middle Atlantic David N. Yerkes FAIA Washington, D.C.

Michigan Philip J. Meathe AIA Grosse Pointe, Mich. Northwest Robert B. Martin AIA Portland, Ore.

South Atlantic Bernard B. Rothschild FAIA Atlanta, Ga.

HEADQUARTERS 1735 New York Ave. N.W. Washington, D.C. 20006

Executive Director William H. Scheick FAIA

Secretary to the Executive Director Mabel Day

Department of Institute Services

Administrator J. Winfield Rankin HON. AIA

State, Chapter & Student Affairs Raymond L. Gaio

Convention John R. Carlson

Membership Maureen Marx

Awards Marie Gough

Department of Public Services

Administrator M. Elliott Carroll AIA

Publisher of the JOURNAL Wm. Dudley Hunt Jr. AIA Editor of the JOURNAL Robert E. Koehler

Governmental Affairs Philip Hutchinson Jr.

Information Services Richard S. Stitt

Librarian George E. Pettengill HON, AIA

Hospital, School & Theater Programs Marilyn E. Ludwig

Department of Professional Services

Administrator Robert J. Piper AIA

Research Benjamin H. Evans AIA

Education Richard R. Whitaker Jr.

Professional Practice Leonard Mayer AIA

Urban Design Paul Spreiregen AIA

Technical Programs Robert J. Cowling AIA

Department of Business Management Controller

W. G. Wolverton Chief Accountant

Ronald Panciera

Purchasing & Maintenance Harry D. Jones

The above is intended to facilitate communications between the membership and the AIA Headquarters and is not a complete staff listing.



Choose from the complete line OF STRAIGHT-THRU SAFETY OF DEPENDABLE OPERATION

REED[®]UNIVERSAL EXIT DEVICES

STRAIGHT-THRU SAFETY-For maximum safety, Reed exit devices are actuated in a straight through motion not the usual down swinging action of other devices. Operation is in the same direction as exit travel. Since there's no need to push down and then forward, only forward, the Reed exit device is safe, even for small children.

DEPENDABLE-SIMPLIFIED OPERATION-To further assure operation at all times, the Reed exit device features a simple, direct actuating mechanism. The crossbar operates the latch directly. Complicated cams and lever mechanisms are completely eliminated. This device requires less effort to open, yet withstands more use and abuse.



RIM DEVICES

Reed Rim Devices are equally adapt-able to all single doors or on double doors with permanent or removable mullions. The units are nonhanded and can be installed on either right- or left-handed doors.



CHOOSE THE DEVICE BEST SUITED TO YOUR JOB

VERTICAL ROD DEVICES

Reed Vertical Rod exit devices for the extra safety of latching the door at the top and bottom. Devices are nonhanded and can be installed equally well on right- or left-handed doors. On cylinder operated verti-cal rod devices, the key retracts top and bottom, latches easily, elimi-nates broken or bent keys.



COMBINATION DEVICES RIM AND VERTICAL ROD

Reed Exit Devices are available in rim and vertical rod combinations for pairs of doors without mullions. Since both the rim and vertical rod devices are nonhanded, they can be installed on either right- or left-handed doors. Rim and vertical rod devices actually latch together for maximum safety.

CHOOSE THE STYLE FOR YOUR ARCHITECTURAL DECOR



For use on any wood or metal door. Natural clean lines of this device lends itself for application on modern doors. Choice of 10 attractive finishes to match any decor including stainless steel US32D.

NARROW STYLE FLAT BAR DEVICES

For use on modern narrow style doors. Beauty of this device permits appli-cation where appearance is most im-portant. Choice of 10 attractive fin-ishes including stainless steel US32D.

ROUND BAR DEVICES

For use on either wooden or metal doors. The slim almost imperceptible appearance of this series allows in-stallation in any decorating scheme. Choice of 9 attractive finishes.

Reed Universal Exit Devices are sup-plied with all mounting accessories com-plete with installation templates. Wide range of outside trim and choice of strikes to satisfy all conditions.

FOR COMPLETE INFORMATION CONTACT YOUR **REED REPRESENTATIVE OR WRITE**



REED DOOR DEVICES

Box 58, Wood Dale, Illinois, 60191

JULY 1966

COMMENT & OPINION

Britons Have a Ball: This page last month focused on the new Architects Information Service, which made its debut in that issue. The AIA JOURNAL has occasion to serve as a clearinghouse in other areas too—with professional publications and societies from all over the world, for example.



Such was the case recently when the Architects Benevolent Society of London sent along details on a method by which the Britons raise money to assist their less fortunate colleagues; and its secretary wondered whether any similar activity takes place in our country.

What we received was the "magazine menu" presented to each of the 1,200 guests attending a ball. Each year a theme is adopted as a basis for the decorations and the content of the menu, for which the advertisers prepare special copy.

Last year's theme was POP (Pressed Out People), a tonguein-cheek industrial process con-



cocted by the editorial committee and thoroughly explained, with appropriate illustrations, in the first 16 pages (see typical facing panel).

American architects might well take a leaf from the British menu we could all stand a little humor.

Pass or Fail at Princeton: It is interesting to note that Princeton University is attempting an experiment by which each undergraduate is allowed to choose one course-outside the field in which he is majoring-for which the only grade would be pass or fail. Interesting, too, is the fact that courses in art and architecture have proved to be the most popular. Of the 2,351 students in the pass-fail option, 118 selected Modern European Painting, to set a record, while 51 chose Modern Architecture, to put it in the top 10.

Advice to Students: What would you as a practicing architect say to high school seniors who have indicated some interest in the profession? George W. Qualls AIA has such an opportunity to express his own views at a Construction Career Day sponsored by the General Building Contractors Association of Philadelphia a while back. He said in part:

"With the exception of a few isolated gems, most of our new buildings and groups of buildings must be seen as unsuccessful experiments or, what is more prominent, flat failures in meeting the needs of a way of life that has changed dramatically in the past 25 years. Things have moved too fast for us. The architectural profession has been asked to build too much too soon. There has been a tragic lag between the demands of society with its new pace of life and the skills and persuasiveness of the architect.

"If I seem to be painting much too black a picture, all you need to do is leave this building and walk observantly through your city. You will find, I think, that you are more comfortable and your eye more pleasantly soothed within the comparatively humane reaches of the older sections of the city than in the jarring variety of the new.

"There was a time, not so long ago, that the architect was considered a luxury. He was the plaything of the wealthy or he was called in only on projects of great civic or commercial importance.

"Most buildings were constructed not through the supervision of the architect but put together through the discipline of a traditional way of building that controlled materials, proportions and the details of door and window. Changes came slowly and were circumscribed by a building technology that was for all practical purposes limited to the things that would be accomplished with stone and wood.

"The architect is designing many kinds of buildings that did not exist until our time and he is working with building materials and mechanical systems that are new to him. He has come down from the lofty perch and is involved to some extent in all that we build. His habits of work are changing. He is beginning to look with a less frightened eye at the computer and he is beginning to work with industry.

"If he has so far been unsuccessful in reshaping our physical environment in a more human form, he is trying and he is learning.

"While his successes have been rare, they are proving influential."

School Buildings and Bonds: Speaking of the Quaker City, the Philadelphia Chapter AIA is to be congratulated for the letter it sent to the general public in May supporting "a bold new plan to raise the quality of education."

Board of Education members, the chapter president explained, "have spoken of the need for a city full of buildings—not just to replace the 67 schools that will be over halfa-century old in 1975 but to provide a setting that makes the most of modern instructional techniques. And they have said that these buildings should be of such excellence that they speak to every child of a brighter future and a better life." The Philadelphia voters agreed!

Postscript to May: Gratifying indeed has been the response to "Cities on the Move," the special



section on urban transportation in the May JOURNAL. As a kind of footnote, we present one final photograph that didn't quite make the portfolio highlighting visual aspects of transit systems.

> ROBERT E. KOEHLER Editor



What do fancy cars and space ships have in common with Simmons new line of dormitory furniture?

Bill Schmidt.

He's one of the country's top designers. A lot of automotive manufacturers and space engineers look to Bill when they need top-drawer designs.

It makes sense. He's proven his mettle on more than one test track, sweated out his share of countdowns.

When Simmons wanted a new furni-

ture design—one that really had functional as well as esthetic benefits—they went to Bill Schmidt, too. He had some revolutionary ideas and helped turn them into practical furniture for you.

Simmons new line combines a unique modular concept with styles suitable for any interior design. Don't buy another stick of dormitory furniture until you see Simmons new PACE line. There's a surprise for you in the drawer!



For more technical data, circle 215 on information card

NEWSLINES

Marcel Breuer Selected for FDR Memorial

Marcel Breuer FAIA has been selected to design the Franklin D. Roosevelt Memorial.

Rep. Eugene J. Keogh, (D-N. Y.), chairman of the FDR Memorial Commission, said Breuer was the commission's unanimous choice from a field of candidates that had been pared to five.

The five firms, interviewed briefly, were asked for their philosophy on Mr. Roosevelt and on monuments in general. The commission is made up of four members of the House, four Senators and four members appointed by the President.

The Roosevelt memorial stems back over a number of years, to an architectural competition won by the New York firm of Pedersen & Tilney with its familiar slab design. Controversy surrounding the design caused the House of Representatives to reject it and order the commission to come back with something new. Efforts to save the design failed. The commission built up a list of recommended architects numbering some 30 which was finally narrowed down to Breuer and these other finalists:

The Scranton, Pa., firm of Bellanti & Clauss; Andrew F. Euston Sr. AIA of New Haven, Conn., in association with Cooper & Auerbach of Washington; Philip C. Johnson FAIA, New York; and Paul Rudolph FAIA, also New York.

The 27-acre site in Washington has long been reserved and the first appropriation is in hand.

Rockrise Named Advisor to Secretary Weaver

George T. Rockrise FAIA will serve as advisor on design to HUD

Secretary Robert C. Weaver. His primary assignment, a department announcement said, will be the spearheading of design



Odell Firm Wins Army's First Design Award

A military center designed by a firm headed by a former Institute president has won first prize in the annual Army Chief of Engineers Architectural Awards Program.

The winning entry of A. G. Odell Jr. & Associates, Charlotte, N. C., is the Kennedy Special Warfare Center Headquarters and Academic Building, home of the Green Berets, Fort Bragg, N. C.

The center was selected as best among projects in the second annual competition because of its "orderly and direct plan," judges said, and "consistency of materials that have a strong affinity in color and texture."

Winner of an honorable mention was a noncommissioned officers mess at Ford Ord, Calif., designed by Robert Stanton AIA.

Judges for the program were O'Neil Ford FAIA, San Antonio, Tex.; Roy F. Larson FAIA, Philadelphia; and Philip Will Jr. FAIA, also an Institute past president, of Chicago.



MARRIED LIFE IN HELL STARTS WITH A BAG

Mel Reinhard, justice of the peace and president of the Chamber of Commerce in Hell, Mich., a town of 45 souls, gives each couple he marries three litterbags inscribed with the words: "Don't throw your trash all over Hell."

"We want to prepare them for their life ahead," says Reinhard. "They always accept the bags eagerly and leave Hell with a smile."

throughout all of HUD's programs. He will strengthen working relationships with The American Institute of Architects and other design groups, HUD said.

The San Francisco architect will also serve as the department's liaison with professional associations of builders, with universities, research and development firms and private groups.

He will provide professional advice on all programs and direct the HUD Design Award programs.

Among specific programs on which he will advise are urban renewal, neighborhood facilities, historic site preservation, urban mass transit and low-cost housing.

Weaver also announced that Mrs. Estelle Dodge, president of Estelle Dodge Associates, New York, was named to study the use of art in urban redevelopment.

Ketchum Faults Highway Program; Resigns Role

Morris Ketchum Jr. FAIA has resigned from the National Advisory Committee on Highway Beautification because his membership, he said, placed The American Institute of Architects in a position of "tolerating, or even approving, policies of which it disapproves."

The immediate past president of the Institute said federal policies on the design of highways within cities are producing "disastrous results."

They are, he added, in direct op-Continued on page 12 Newslines from page 12

Railway Uses Classifieds To Attract Commuters

The Chicago and North Western Railway uses classified advertising to tell prospective home buyers of the railroad's commuter services.

Started last year, the program is being continued with new copy, a series of 400-line ads laid out as a "commuting guide" and run in the Chicago *Tribune's* real estate pages.

Topped by a sketch of a suburban house, the copy carries a list of North Western stations under the words: "If your suburban home lies near one of these North Western stations, you'll enjoy the most modern, most efficient commuting in the country!"

Some ads list suburban stations and tell how schedules and fares can be obtained by telephone or mail. Others present maps showing the railroad's lines and stations and urging readers: "Before you buy or build, check this handy Commuting Guide!"

Report on Load Testing At Fair Due in '67

Destructive load testing of three New York World's Fair buildings is completed, but the results will not be made known until next spring.

The program is being carried out under the auspices of the Building Research Advisory Board which said a thorough program that includes all aspects was developed.

The Northbrook, Ill., firm of consulting engineers, Wiss, Janney, Elster & Associates, conducted the actual testing and are to report to BRAB the reduced and analyzed data toward the end of this year. A BRAB committee for the project will review and evaluate the data.

Buildings and tests:

Rathskeller—a single-story reinforced concrete waffle slab supported on a raft foundation. Three separate vertical loads tests were conducted to obtain data on column shear, in-plane slab forces and slab-to-exterior-wall connections.

Bourbon Street—a two-story open web steel joist and steel pipe column structural frame on a reinforced concrete slab on grade with a concrete spread footing foundation. A second floor comprises a reinforced concrete slab placed on corrugated sheetmetal forms. The *Continued on page 17*

Haws gives you a world of design possibilities...



HAWS Model 7R aluminum wall fountain

Consider the exceptional elliptical design of Haws Model 7R cast Tenzaloy aluminum wall fountain. It's a standout in any setting, yet projects only 13¹/₂" from the wall. Durable? The finish is permanent hard anodized to an abrasion-resistant, muted bronze color. And both fountain head and push-button valve assembly are vandal-proof. Write today for detailed information, available in the free Haws catalog. HAWS DRINKING FAUCET COMPANY, 1441 Fourth Street, Berkeley, California 94710.



For details and information on other Haws products—see your Haws catalogs on drinking fountains, emergency eye/face-wash fountains, drench showers and decontamination equipment; and dental fountain/cuspidor units.





LCN for modern door control



Detail at head for LCN overhead concealed closer installation shown in photograph

Main points of the LCN 2010 series closer:

1 Provides efficient, full rack-and-pinion, complete control of the door

2 Fully hydraulic, with highly stable fluid giving uniform operation over a wide range of high and low temperatures

3 Easily adjustable general speed, latch, speed, back-check and spring power (may be increased 50%)

4 Closer arm disappears over door in closed position

5 Available with regular or hold-open arm (choice of 85°, 90°, 100° or 110°)

Full description on request or see Sweet's 1966, Sec. 19e/Lc



LCN CLOSERS, PRINCETON, ILLINOIS A Division of Schlage Lock Company

Canada: LCN Closers of Canada, Ltd. P. O. Box 100, Port Credit, Ontario

PHOTO: IBM Office Building, Seattle, Washington. Architects: Naramore, Bain, Brady and Johanson, Seattle; Minoru Yamasaki and Associates, Birmingham, Michigan.

766

Newslines from page 15 roof system uses metal decking, rigid insulation and membrane roofing. Exterior walls are metal sandwich panels welded to the steel framework. Conducted were vertical and lateral load and vibration tests for data on diaphragm action of the floor, lateral distribution of load through the floor system, contribution of exterior wall system to resistance to loads, service load deflections, floor resonant frequency, damping and response of the entire structure under forced vibration. Chimes Tower-A simple steel frame tower 87 feet high comprising four columns that form a 10foot square with steel girders spanning between columns at each floor

level and cross bracing on all four sides between floors; it stands on a reinforced concrete raft foundation about 30 feet in diameter. The tower will be subjected to vibration tests only—excited in its several natural modes at various amplitude levels to obtain data on soil structure interaction and joint damping at high stress level.

Seven Professions Appeal For Rational Planning

The New York State Association of the Professions has warned of "unchecked abuse and irrational pollution of man's physical environment" in a letter to President Johnson.

The association, representing seven professions including architecture, urged government to give top priority to coordinated master planning, clean air, clean water and the preservation of natural and historic beauty.

NECROLOGY

DAUB, GEORGE Philadelphia, Pa.
DASSLER, CLARENCE A. North Miami Beach, Fla.
HESSER, HAROLD VAN B. Malvern, Pa.
IANNI, BASILIO F. Cleveland, Ohio
KING, JOHN LORD San Francisco, Calif.
LEWIS, ANGUS A. Glendale, Calif.
PALMER, ANDREW Garden Grove, Calif.



the most exciting ideas take shape in plywood





Whirlpool Employees Credit Union Building, St. Joseph, Mich./Edward R. Duffield, Architect/Holland Construction Co., Contractor/Plywood Components Corp., Fabricator

The jaunty cap on this glass-walled office building is a plywood radial folded plate. Its use here proves the versatility of the design idea, more often seen in the august context of churches and public buildings. This plywood roof cost less than any alternative and went up faster. Besides saving money, radial folded plates give large clear-span interiors because no center supports are needed. For more about this and other timesaving, high-strength plywood building systems, send for the new, free booklet "Plywood Construction Systems." We're at Tacoma, Wash. 98401 (USA only).







Savior of the World Seminary Chapel. Kansas City, Kansas. Architects: Shaughnessy, Bower and Grimaldi, Kansas City, Missouri. Cem-Seal was applied for protection during construction and installation of pews. (In progress above). After pews were installed, two thin coats of Super Hil-Brite carnauba wax provides the wearing surface.

CEM-SEAL[®] ENHANCES AND PROTECTS SLATE FLOORING...CURES AND SEALS GROUTING

Cem-Seal intensifies the beautiful, deep, natural colors of slate floors and guards against scratching, marring and dulling. Cem-Sealed slate may then be maintained against heavy traffic conditions with Hillyard Super Hil-Brite carnauba wax. Since Cem-Seal is formulated to produce maximum curing of concrete and protect masonry surfaces, it has an excellent function with slate and the grouting— Protecting both against damaging moisture and dirt.

PRODUCT DESCRIPTION: A modified clorinated rubber sealer. Recommended to properly cure concrete. It is commonly used to fill and seal porous masonry-type floors. Protects surface, improves appearance and provides base for final wax or finish coats.

SPECIFICATION AND HOW TO APPLY: On to a perfectly clean, stain-free floor, apply Cem-Seal in an even coat with lamb's wool applicator. Avoid puddling. After drying thoroughly, apply two thin coats of Super Hil-Brite carnauba wax with a new lamb's wool applicator, again being careful not to puddle. On large, open exterior areas, Cem-Seal may be sprayed.

DRYING TIME: Cem-Seal-two hours in normal weather conditions; Super Hil-Brite wax - 30 minutes.

COVERAGE: 500-700 square feet per gallon depending upon the porosity of the floor.

TECHNICAL DATA: N.V.M.-20%. Viscosity-Gardner A-2-A-5. Color-Gardner max. 6. A clear liquid with no sediment or suspended mat-



ter. The product shall comply with ASTM C156-55T, water retention efficiency of liquid membrane forming compounds for concrete curing.

GUARANTEE: When applied in accordance with manufacturer's directions, it is guaranteed to meet all claims made.

MAINTAIN WITH THESE HILLYARD PRODUCTS: Sweep daily with a Super Hil-Tone treated dust mop. Buff periodically. When floor is soiled, clean with Super Shine-All or with Clean-O-Lite (if a cleaner-sanitizer is desired). Traffic lanes may be patched in with Super Hil-Brite carnauba wax and buffed to blend with entire floor.

APPROVALS: All Hillyard products mentioned are listed by the Underwriters' Laboratories as slip resistant.

EXCEPTIONS: Do not use Cem-Seal on lightcolored masonry type flooring. Contact Hillyard for specification.

REFERENCES: Sweet's Architectural File, A.I.A. Building Products Register, Hillyard A.I.A. File No. 25G.

A certified Hillyard Architectural Consultant will gladly discuss with your specification writers the proper, approved procedures and materials for the original treatment of any type floor you specify. He'll also provide free follow-up "job captain" service to protect your specifications. Write, wire or call collect.

The most widely recommended and approved treatments for every surface

For more technical data, circle 222 on information card AIA JOURNAL For more technical data, circle 223 on information card ►



Ð

G

THE <u>ONLY</u> COMPLETE LINE OF FIRE EXIT HARDWARE

Von Duprin offers you the only complete line of Fire Exit Hardware for A, B, C, D and E labeled fire doors. Rim. Mortise Lock. Concealed vertical rod. Surfacé mounted vertical rod. All providing the Von Duprin high standard of quality and dependability. All listed by Underwriters' Laboratories. For complete details on the only complete line of Fire Exit Hardware, write for catalog bulletin 652.

VON DUPRIN DIVISION • VONNEGUT HARDWARE CO., INC. 402 WEST MARYLAND ST. • INDIANAPOLIS, INDIANA 46225 VON DUPRIN LTD. • 903 SIMARD ST. • CHAMBLY, QUEBEC





Von Duprin rim devices are listed for A, B, C, D and E labeled doors in single openings up to $3'6'' \times 7'2''$ and the 8854 mullion for double door openings up to $7'0'' \times 7'2''$.



Von Buprin EXCLUSIVE



Listed for A, B, C, D and E labeled doors in combination with mortise devices in double door openings up to 7'0" x 7'0". Also for B, C, D and E labeled doors up to $8'0" \times 7'0"$.







Von Duprin surface mounted vertical rod devices are listed for A, B, C, D and E labeled doors in combination with mortise devices in double door openings up to 7'4" x 7'2".



Architects, Advertising and Publicity



THESE PAST TWO YEARS have seen a big increase in correspondence about ethics, seeking interpretations of the Standards of Professional Practice

by the secretary and the executive director. Much of this represents a healthy interest in avoiding unethical conduct or warning minor offenders. By far the greatest number of inquiries pertain to Obligation 1.4 which reads:

"An architect shall not use paid advertising or indulge in self-laudatory, exaggerated, misleading or false publicity, nor shall he publicly endorse products or permit the use of his name to imply endorsement."

This wording was not intended to obliterate the architect from public view in a publicity-minded era when his competitors advertise with impunity in business magazines. It was written to make possible the punishment of individuals who compromise their professional responsibilities to their clients and the public by stooping to crass commercialism. The interpretations are based upon this philosophy.

Advertising by architects is hardly a problem except in its subtler nuances. The following are considered to be paid advertisements unpermissible under Obligation 1.4:

• Phone book listings in boldface type.

• Directory listings for which a fee is charged.

• "Complimentary ads" in publications related to the dedication of a new building, except when the architect's ad reads "Compliments of a friend."

Producers of these media press architects to buy listings or space.

An acceptable solution is to have the advertising in the name of and paid for by the local AIA chapter.

Publications by architectural firms are widely used in the conduct of practice. Brochures illustrate their work and set forth the experience and qualifications of principals and staff. Some firms publish newsletters or technical disseratations on some phase of design. These publications are almost always well designed, conceived in good taste and by no means "self laudatory, exaggerated or misleading."

They are subject, however, to one rigid rule: They may be distributed by the architect *only* to persons known to him or members of his firm.

Product advertising is not such a simple matter. Manufacturers want to be able to say that their products have merited selection and use by discriminating architects. They want to advertise this fact to architects and to prospective owners of buildings. Such advertising most effectively represents all architects as the important decision makers in the building industry.

Should we discourage this by a straitjacket application of Obligation 1.4? We think not. So we must draw a line through the gray areas of product advertising as follows: • Product advertising may illustrate a building project in which the product was used, with identification of the architect of the project. • The architect's personal portrait cannot be used.

• Reproductions of architects' letters cannot be used.

• The advertising text must not imply endorsement by the architect for use of the product on other projects ("blanket" approval) but must be limited to the reasons for its use in the project illustrated.

The text may use quotations or statements attributed to the architect which describe his objectives in design, function or economy which led to selection of the product for this specific project.

You will see advertisements in the JOURNAL and other magazines which follow these principles faithfully and successfully. They apply to any form of product advertising. An increasing number of advertisers submit preliminary copy to the Institute for advice and approval.

General publicity for architects as individuals seems to be increasing in various media. A national magazine, in advertising its importance to the people of major cities, pictures leading residents who occasionally include an architect. A financial institution prints local advertisements picturing prominent citizens who are members of its board of directors and among whom is an architect. A subdivision developer names his architects in advertising the quality of his houses. A newspaper, in a series of articles on its city's development, quotes an architect with his photograph as one of several civic leaders. Magazines for laymen publish articles by architects with their photographsas they do for other authors.

Do the prohibitions of Obligation 1.4 apply to such publicity? We think not. This is not commercialism but recognition by others of the importance of the talents, opinions and position of the architect in society. If photos are the order in this age of illustrated news, why eliminate architects from the picture? Let them be as real to the public as other leading citizens and we will all benefit thereby.

WILLIAM H. SCHEICK, AIA Executive Director

22



We have to call it pipe.



(It has a hole in it)

We call it A-36 pipe. You'll call it the best trick of the year. But the big news is: now, U.S. designers and engineers have a hot-formed tubular section to which standard structural specifications apply.

Here's what it's got. Strength: minimum yield, 36,000 psi; tensile strength range, 58,000 to 80,000

weight. Economy: one field report cites a tubular structure utilizing A-36 that weighs 30% less than a similar unit using ASTM A-120 pipe. Yet – pound-for-pound – the price is the same! Ease of fabrication and weldability often mean major speedups in production.

psi: .26 maximum carbon. A-36

lets you use lighter walls; save

And. as a round tubular section, it reduces wind resistance. What else? Why not try it? Then you can tell us.

J&L produces a wide line of quality building products for architects, engineers and builders. Some, like A-36 pipe, are offered by J&L alone.

Jones & Laughlin Steel Corporation 3 Gateway Center, Pittsburgh, Pennsy van a 15230





JULY 1966

For more technical data, circle 224 on information card

For more technical data, circle 225 on information card >

Today, ordinary showers are Out!

Go with the In group!

BRADLEY GROUP SHOWERS

Bradley Showers are In with progressive planners because they cut costs and provide complete layout flexibility.

U

Bradley Column Showers serve up to six users with one set of piping connections. They cut installation costs as much as 80%!

What's more, Columns enable you to use every inch of space. Combine them with our Wall-Saver[®] Showers and even limited areas

For complete details, see your Bradley representative. And write for latest literature. Bradley Washfountain Co., 9182 Fountain Drive, Menomonee Falls, Wis. 53055.

can be turned into high capacity shower rooms!

Choose from many types and sizes: 2 to 6-person Columns. Multi-Stall Showers that serve 2 to 6 students. Wall-Savers with 2 or 3 showerheads. Modesty Module[®] Showers with private dressing rooms for 2 or 4 users. And many more.

Next time you plan a shower room, go with the In group: Bradley Group Showers!









The 1966 Honor Awards

The following introductory paragraphs to the report of the 1966 Honor Awards Jury have been prepared by Paul Hayden Kirk FAIA, chairman of the AIA's Committee on Esthetics.

For the past several years the Committee on Esthetics, in conjunction with the Board of The American Institute of Architects, has been striving to develop a means by which the public at large could be informed of the architectural profession's opinion of its current work.

In addition, the public has indicated that it expects, and on occasion demands, an informed and knowledgeable critique of public works and planning programs that affect the urban environment.

The Committee on Esthetics is hopeful that in the near future it will have Board permission to authorize duly appointed committees, such as the National Honor Awards Jury, as a group to prepare, for public consumption, a critical analysis of projects that they have premiated, whether the comments be laudatory or derogatory.

This year's report clearly states the jury's opinion regarding the overall design concepts but fails to develop in depth a general critique of the individual structures involved. It is hoped that in the future a pattern of constructive critical analysis will become an inherent part of the Honor Awards Program.

REPORT OF THE JURY

The 1966 National Honor Awards Jury received 380 submissions. Approximately 200 of these were eliminated from further consideration on the first day, and the second day's judging reduced the contestants to 21. Three of these were selected for First Honor Awards on the third day, and nine others were given Awards of Merit.

At the suggestion of the Institute's Committee on Esthetics, the jury spent some time in discussing the characteristics of the entries as a whole, attempting to identify and define any significant directions or common denominators of strength or weakness. We offer the results for what they are worth as the impressions of five architects representing California, Massachusetts, Minnesota, Texas and the District of Columbia, based on a review of nearly 400 projects designed by architects from 31 states and the nation's capital.

Most of our comments are general because we feel that it is unfair to the architects to criticize individual buildings on the basis of photographs rather than actual inspection. Although we considered many buildings which had been seen by one or more of the jurors, there were few of them which all of us had actually visited.

The jury found that the winning entries could be classified in three general categories which might be described as follows:

1) Projects which showed great originality and creativity in their form of expression, making use of forms which were strong and unique as well as satisfying the program and site requirements.

2) Entries which fitted into familiar categories of form or style, but which showed consummate skill and sensitivity in design and in the solution of the problems presented by the program and the site.

3) Large-scale projects such as town and community planning and urban renewal complexes in which spaces and buildings, with more than usual skill and understanding, were designed to meet social needs. *Continued on page 56*



First Honor Eero Saarinen & Associates

Project

Columbia Broadcasting System, Inc. Headquarters Building New York, New York

Structural Engineer Paul Weidlinger

Mechanical and Electrical Engineers Cosentini Associates

General Contractor George A. Fuller Co.

Jury Comment

This superbly simple and disciplined building grows directly out of the ground and straight up to the top. The triangular columns emphasize the clean verticality of the form and reveal a constantly changing view of glass and granite as one passes the building. This variety, so rare in high-rise office buildings, does not weaken the perfect unity of the design. Like the exterior, the lobby is restrained and handsomely detailed; the office space, uninterrupted by columns, permits maximum flexibility. Strength and elegance are here splendidly combined.



Architects' Statement

From the beginning, this corporate headquarters was imagined as a dark building, for it would seem quieter and more dignified —more appropriate to the site.

It was also decided that this structure should be permanent in its appearance, that









it should be a masonry structure: concrete clad in granite. Sought was a building that would stand firmly on the ground and grow straight up.

We put a ring of concrete columns around the perimeter and a concrete core containing services and vertical transportation in the center. The arrangement permitted clear office space. We devised a plan to eliminate wasteful public corridors, and we made efficient use of the mechanical system by putting one mechanical floor at the bottom and another at the top with office floors between them.

It was after much study of other shapes that we arrived at the triangular piers. This shape was felt to emphasize verticality most strongly. It best combined mechanical and structural requirements and was a simple shape to be clad in granite. It kept the glass area to a reasonable minimum.

The triangular piers would also make for a changing relief as one moved around the building. One would see glass and granite, then solid granite with reflecting surfaces.

The exterior columns for this 38-story shear tower are on 10-foot centers. A joist floor system spans between columns and the central core.

Risers for low-induction airconditioning units located at each window are contained within the exterior columns, with the interior system supplied from the central core area. Exterior columns and plaza are covered with 2-inch-thick thermal-stippled, liquid-honed black granite. Spandrels consist of 2½ inches of similar granite with 4 inches of concrete cast onto the rear face. Glass is gray, heatabsorbing polished plate.





First Honor Keyes, Lethbridge & Condon

Project Tiber Island Washington, D.C.

Structural Engineer Carl C. Hansen

Mechanical Engineer Kluckhuhn & McDavid Co.

Landscape Architect Eric Paepcke

General Contractor Chas. H. Tompkins Co.

Jury Comment

Tiber Island represents a solution to a problem of increasing importance: the creation of a handsome and livable complex of varied urban dwelling units. The challenge has seldom been met with more understanding or greater success. The relationship of high and low buildings and of large and small open spaces is eminently satisfactory. From every angle the parts of the whole composition fall into place with unostentatious rightness. Without ever seeming to work at it, the architects have created freshness and variety. They have achieved both monumentality and warmth by honest structure and knowledgeable use of materials. Tiber Island must be considered an outstanding example of a successful urban renewal project, and one which should inspire other developers and their architects.

Architects' Statement

This project was designed in response to a specific redevelopment agency program for an area in which it was important to carefully relate the project to adjacent new buildings.

Given quantities were the number of living units (452), the ratio of high-rise to lowrise units, coverage, parking and easements,



- 1 plaza
- 2 townhouse quadrangles
- 3 rowhouse courts
- 4 private entrance courts 5 private garden courts
- 6 high rise apartments

8 condominium rowhouses

- 7 rental rowhouses
- 9 Law house
- 10 swimming pool
- 11 locker facilities
- 12 reflecting pool
- 13 Hornbeam grove
- 14 gazebo
- 15 driveway to
 - underground garage



typical floor plan





and only minor variations were permissible. The project was also subject to city zoning.

Basic design objectives were human scale and privacy as well as a unified, residential character. To this end, an effort was made to relate the high and low structures in form and scale; for privacy, buildings were arranged so that openings in one faced blank end walls of another. Further, the use of glass was restrained and windows were recessed behind solid balcony railings.

To assure a unified, residential character, materials were limited to exposed structural concrete, precast concrete trim and balconies, buff sand-finished brick and natural redwood. In addition, parking was carefully excluded from the site and placed in an underground garage below the central plaza.

The final result was a synthesis of these factors into a closely interrelated complex of townhouses, high-rise apartment buildings and underground parking, organized to form a system of enclosed spaces with a large public plaza, more intimately scaled residential courts and private, walled gardens.







First Honor Eero Saarinen & Associates

Project

Dulles International Airport Terminal Building Chantilly, Virginia

Structural Engineers Ammann & Whitney

Mechanical and Electrical Engineers Burns & McDonnell Engineering Co.

Landscape Architect Office of Dan Kiley

Airport Consultants Landrum & Brown

General Contractor (finishes) Humphreys & Harding

General Contractor (structural) Corbetta Construction Co.

Jury Comment

To a remarkable degree Dulles epitomizes the qualities of vigorous, free and graceful movement which we associate with flight,









main floor



while avoiding literal and obvious analogy. The two major building parts-the main concourse and the tower-are satisfying counterparts. The principal structural components-the pylons and roof-are clearly identified and have a sculptural quality which dramatizes their function. Subdued color and varied texture are beautifully related. Detailing is sophisticated. The concept of the mobile lounge appears to be an important practical contribution. The building functions smoothly now, and it should be possible to expand it gracefully and easily in the future. The entire project represents a new high in architectural achievement by the federal government.

Architects' Statement

We found that there were three critical areas in designing an airport: One was the time and inconvenience of getting passengers to and from planes; another was the heavy cost of taxiing jet planes; a third was the increasing need for greater flexibility in operations and servicing of aircraft.

We became convinced that some new method of passenger handling had to be found. The soundest system seemed to be one which brought the passenger to the plane rather than the plane to the passenger. We arrived at the concept of the mobile lounge —a departure lounge on stilts and wheels, a part of the terminal which detaches from the building and travels out to where the plane is parked or serviced.

A jet-age airport should be essentially nonstatic, expressing the movement and excitement of travel. There was the problem of the site: a beautiful flat plain. We came to the conclusion that a strong form which seems to rise and hover over the plain would look best. The horizontal element, or roof, should be tilted forward to enable the building to be seen. The terminal should also have a monumental scale in this landscape and in the vastness of the airfield.

The ground floor is mainly a concrete slab on grade. The main floor beams of reinforced concrete span between widely spaced columns. A solid slab spans the beams. The catenary roof is sheathed by a precast lightweight concrete deck spanning 10 feet between two pairs of 1-inch cables. At the intersection between the cables and the precast units is a protective concrete casement poured around both cables into which steel projecting from the panels is embedded.

Thus, the precast units and the cables are made integral with each other. The cables carry the dead weight; the concrete casements prevent flutter. The pairs of cables span the full width of the building between poured-in-place slabs which function as edge beams, transfer the cable reactions to the main piers and act as stiffeners. The concrete piers are sloped outward to counteract the pull of the cables.



Award of Merit Grant, Copeland, Chervenak & Associates

Project

Hugo Winkenwerder Forest Sciences Laboratory University of Washington Seattle, Washington

Structural Engineers Harvey R. Dodd & Associates

Landscape Architect University of Washington

Wood Sculptor Dudley C. Carter

General Contractor Baugh Construction Co.

Jury Comment

The choice of wood as the principal material is a logical outgrowth of this building's function. Through skillful articulation of the structural members, the building has a vigorous linear character which is made warm and human by the quality of the wood itself. The design of the raised entrance walk makes it an extension of the architecture. In the same spirit, the diagonal braces and other exterior framing members, although they perform a structural function, are also important features of the design. Throughout the building the architects have achieved an unusual unity and consistency.

Architects' Statement

The two major shaping forces that led to the glue-laminated structural system were the appropriate working environment created by the use of wood and the limited budget which precluded the materials relating the building to a collegiate-Gothic campus. The fortunate factor of a site in a grove of fir trees, with a cover so dense it is almost impossible to photograph the building, softens the relationship to its campus neighbors.

An important objective was for the occupants to see the material they were working with in its natural and finished state and possibly feel as though they were working within a tree.

Optimum flexibility had a marked effect on the building. With the exception of the corridor walls which service the laboratories, any wall may be moved. Manifestation of this is reflected in the exterior where bent struts maintain lateral strength for wind and earthquake forces and replace the normal shear walls.

The sunscreen was designed to maintain a controlled environment for minor instrumentation within the graduate students' room; major experimentation is done within the general laboratory spaces. The screen also protects the building from temperature extremes.









Award of Merit Frederick Kiesler and Armand Bartos

Project

Shrine of the Book D. S. & R. H. Gottesman Center for Rare Manuscripts Jerusalem, Israel

Structural Engineers Strobel & Rongved

Mechanical and Electrical Engineers Frank J. Sullivan & Associates

General Contractor Joseph & Hillel Fefferman & Co., Ltd.

Joseph & Hiller Fenerman & Co., Ltd.

Jury Comment

The concept of this structure is strong and dramatic although many forms, patterns and textures were employed. With greater simplicity and unity, notably in the interior, it would have avoided the slightly flamboyant quality which is one of its characteristics. Nevertheless, it is a vigorous and imaginative work which clearly states its unique and historic function.

Architects' Statement

The problem was to house rare biblical manuscripts including the Dead Sea Scrolls, most valuable and cherished documents in Israel. Since visitors could not read or decipher the scrolls, the architecture itself would have to have meaning and belief.

The scrolls were discovered about the time the United Nations voted the independence of Israel, and the coincidence of the two rebirths suggested a design expressing the continuity of light and life. The concern of the scrolls with the struggle of light against darkness, good against evil and knowledge against ignorance finds architectural expression through the play of contrasts between the white dome and the nonfunctional rectilinear black basalt wall.

The wall and dome further accent the continuity of life emerging from dormancy, the former calling to mind the heavy burden which lay on Israel for centuries.

The essentially subterranean design provides easier control of temperature and humidity, vital to the continued preservation of the scrolls and other documents. Inside the sanctuary the double parabolic dome with its concentric ribs forms a huge container with a top opening six feet in diameter. The dome emerges at the ground level in a pool of water.

The project also includes simulated caves in which artifacts relating to manuscripts are exhibited.

Jerusalem stone had to be used as the primary material in accordance with law, a welcomed condition since it was desirable to use materials expressive of the Israeli.










Award of Meril Victor A. Lundy, AIA

Project

Church of the Resurrection East Harlem Protestant Parish New York, New York

Structural Engineers Severud Associates

Mechanical Engineers Fred S. Dubin Associates

General Contractor Thompson-Brinkworth, Inc.

Jury Comment

This remarkable building was outstanding among all the entries because it accomplished so much with so little. Absolute economy of means was transformed into an asset. The entire character of the church, inside and out, seems completely consistent with its environment and purpose. Its austerity movingly expresses the strong structure of religious belief rather than the ornamental quality of ritual.

Architect's Statement

The site for this small mission church in East Harlem is in one of the worst slum streets in New York, an 80 by 100-foot lot hemmed in by dilapidated tenements to be replaced at some future time by high-rise public housing. Since these tall buildings would look down on the site, it was necessary to design the church as a total piece of sculpture to be viewed from above.

The one dimension that was free was upward, so the sanctuary was located on the second floor, making possible an expressive, sculptural shape where height could be gained. Because of the insistent and compelling environment outside, it was felt necessary to have a preparatory space and an experience that involved actual physical movement and commitment to a new experience.

The entrance from the street into a small lobby reveals glimpses of the sanctuary above. A long, easy ramp serves as a transition from the street and leads into a glowing, upward-reaching spaciousness of the sanctuary. At the head of the ramp one makes a turn, and then—because of the crease in the roof of the sanctuary—is drawn forward toward the prow to experience the total space. Here, the only beacon of light is provided by a small triangular skylight at the point.

The building cost \$200,000 including an expensive foundation system. Wood piles had to be used because this section of the city was once marshland. The project entails a disciplined system of details and building materials boiled down to their simplest essence.

The building is of concrete and steel frame with exterior masonry unit walls, bricklike in scale. All the materials have been left unfinished. To emphasize the direction and sweep of the sculptured ceiling over the lobby and sanctuary, fire-treated wood strips 15% inches square with an equal space between were nailed to the heavy timber roof beams.









Award of Merit Kenneth W. Brooks, AIA

Project

Intermountain Gas Co. Central Service Facility Boise, Idaho

Structural Engineers Kendall M. Wood & Associates

Landscape Architects Lawrence Halprin & Associates

Artist-Sculptor Harold Balazs

General Contractor Jordan-Wilcomb Co.

Jury Comment

Care, imagination and skill have made what might have been a prosaic utilitarian structure into a fine architectural achievement. Each component is a straightforward statement, but each is related to the others. The resulting well-organized complex has honest elegance, a quality which is characteristic of the building interiors as well as the entire group. Color is used with effective restraint.

Architect's Statement

The design problem was to shelter a natural gas turbine producing electrical energy and also heating and cooling the entire group of buildings: a "bullpen" type of office structure with executive offices, a hospitality house for company meetings, which includes a social "living room," and a service building to accommodate warehouse and repair functions.

The big sky and mountains of Idaho, dramatically viewable from this site, would prevail over the composition. That corporation personnel dealing with visitors should be more important than the shelter itself was another design concept. We put the architecture in the background—in both mass and color.

Enclosures are simple and cliché-free. Exterior color schemes are cool monochromatic; interior, warm monochromatic. The service building and hospitality house are muted shades of glazed-blue brick panels to merge with the blue summer sky and to take on the grayness of a winter day. The turbine house and office building columns are muted putty-gray brick to understate the color of these two more dominating structures. Teamwork of the architect and landscape architect is indicated in the central location of the turbine house (usually relegated to a basement utility area), reflecting the client's desires inasmuch as the equipment is of sales interest to this natural gas company.

The comprehensive architectural service was all inclusive—from programming to the creation of a documentary book at the completion of the project.











Award of Merit Wurster, Bernardi & Emmons

Project Ghirardelli Square San Francisco, California

Structural Engineers Gilbert-Forsberg-Diekmann-Schmidt

Landscape Architects Lawrence Halprin & Associates

Design Consultant John Matthias

Graphics Consultant Barbara Stauffacher

General Contractor Swinerton & Walberg Co.

Jury Comment

A highly successful urban development employing old buildings and open spaces for new uses. Its qualities of gaiety, liveliness and color make it a delightful addition to the San Francisco scene. The open areas are well related to each other and to an excellent tenant program. New and old features are happily blended. The view over the bay is preserved and enhanced; parking is inconspicuous and accessible. In terms of esthetics, economics, convenience and cheerful vitality, Ghirardelli Square shows what can be done by careful rehabilitation of significant older buildings in the center of the city.

Architects' Statement

The problem was to transform half a city block of old brick warehouses and factories of some historical significance into a complex of specialty shops and quality restaurants. The 19th century feeling of the buildings and the sloping site's spectacular views figured prominently in the design.

As many of the old buildings as possible were retained, and new ones were blended with them by the use of sympathetic materials and forms.

Because of the high cost of the site, code requirements and the commercial purpose of the project, a 300-car subterranean parking facility was provided.

A series of levels and spaces, the plaza draws visitors into its center through two main entrances and allows them to radiate outward via walkways, ramps, stairs, decks and balconies to mezzanines and upper building levels. The plaza has a fountain, trees, tubs of flowers, benches, table-umbrellas, etc.

The new buildings continue the spirit of the old with bay windows, domes, clerestories and lights all specially designed. Signing, regarded as a key to the character of the square—induced in part by the huge old sign that identified the factories for many years —was also custom designed and fabricated for particular functions. Lights like those of the retained factory sign outline the old buildings and a landmark tower.









.

H

Award of Merit Hugh Stubbins & Associates, Inc.

Project

Countway Library of Medicine Harvard University Medical School Boston, Massachusetts

Structural Engineers LeMessurier Associates, Inc.

General Contractor

George A. Fuller Co.

Jury Comment

A beautifully organized building, strong yet sensitive, whose component parts are integrated into a thoroughly unified whole. The clarity of its organization is a delight. The interior space is as satisfying as the forms of the exterior. In its relationship to other existing and future buildings, the library was conceived and executed with skill and imagination. As other buildings are constructed, it should become an increasingly satisfactory part of the medical school group.

Architects' Statement

The library serves Harvard University's Medical School, School of Public Health, School of Dental Medicine and the Greater Boston medical profession. It has a capacity of 750,-000 volumes.

The limited site required a vertical building plan, a restriction at first accepted reluctantly but later viewed as a blessing in disguise. Users and staff members travel quickly and easily by means of four high-speed elevators instead of walking long distances horizontally. Another beneficial result was a sharp dichotomy between books and periodicals appropriate in a medical library: Upon entering, readers go *down* for periodicals, *up* for books.

Unifying this vertical space is an open, seven-story central court that varies from floor to floor in horizontal dimensions. The court has three major functions: to provide a dramatic architectural space; to present an open vista to the entering reader and enable him to determine the location of various collections and services without consulting a directory; and to serve as a low-velocity return air duct, thus eliminating the need for space-consuming ductwork.

Reader traffic is concentrated in the central core area around the court. Readers move through a ring of open stacks to reading alcoves, studies and carrels on the periphery, where daylight is controlled by sliding louvers.

On the fifth floor are special accommodations for the study of the history of medicine, a high-security reading room for rare books and manuscripts, a 108-seat auditorium, a physicians' reading room, a clubroom for student groups using historical materials, and office and conference rooms.

This is a reinforced concrete structure finished with limestone inside and out. The structure is free of interior columns and is therefore flexible in stack spacing.











Award of Merit Keyes, Lethbridge & Condon

Project River Road Unitarian Church Bethesda, Maryland

Structural Engineer Robert A. Weiss

Mechanical Engineer Kluckhuhn & McDavid Co.

Landscape Architect Lester A. Collins

General Contractor Furman Builders

Jury Comment

A handsomely unpretentious building which expresses the Unitarian philosophy with clarity and vigor. In contrast with so many contemporary churches, this one does not strain for dramatic effect. Instead, it achieves crisp simplicity and effortless variety, and its rapport with its wooded site is thoroughly pleasing. Viewed from any position, the relationship of forms is delightful.

Architects' Statement

The design of a contemporary Unitarian church presented two principal challenges: the creation of an atmosphere of spiritual reverence without embodying any of the elements of traditional symbolism, and the combination of this quality with a forthright expression of intellectual honesty and humility.

We have tried to achieve the atmosphere of reverence by qualities of space and light, and forthrightness of expression by the use of natural materials and a consistent system of structure and detail.

Materials, both inside and out, are painted brick in a warm off-white, wood (principally oak and fir) and exposed steel finished in a burnt umber color. The hardware is oiled bronze, and some of the light fixtures were designed by the architect.

Every effort was made to preserve the quality of the site, a wooded knoll in a suburban Washington community. The required parking bays were dispersed among the existing contours of the land, and a landscape plan was developed to restore most of the disturbed portions of the grounds to a natural condition through the informal planting of native trees and shrubs.

Preliminary plans have also been prepared for the future expansion of the religious education wing and for construction of a small children's chapel on the grounds to the north of the main body of the church, a development of the plan that will create a partially enclosed, cloistered courtyard into which the church will open.







Award of Merit Katz, Waisman, Weber, Strauss– Joseph Blumenkranz

Partner in Charge Sidney L. Katz, FAIA

Project

World Wide Volkswagen, Inc. Orangeburg, New York

Structural Engineers DiStasio & Van Buren

Landscape Architect Paul Friedberg

Interior Design Consultant Designs for Business

General Contractor Milau Associates

Jury Comment

This building is especially notable because projects of its type seldom receive such careful attention. The skylights provide a consistent and repeated source of visual interest. Skillful organization in plan and handsome detailing combine to produce industrial architecture of a very high order.

Architects' Statement

This building houses as its primary function the control of retail sales agencies in a threestate area and the flow of cars and parts imported from Germany to these agencies. The site is in the heart of the beautiful Rockland County farmland, and the entire design philosophy stems from this inspiring environment.

The major elements—sales, administration, warehouse, central dining and training school—were individually articulated and clustered around the hub of the operation, the perpetual computerized inventory control. All functions are related to landscaped courts so that workers can enjoy the surroundings.

To emphasize a visual means of corporate identification, all congregate areas were designed to emphasize their importance and to introduce into the stream of experiential occurrences elements of delight. The resultant spatial definition was realized by projecting the roof planes upward to form pyramidal light traps. A mansard roof was developed to establish a continuity of design with the light traps and resolve the problems of humanizing and reducing the scale of the huge two-story warehouse and administrative areas.

The design totality achieves a strong sense of classic order and repose. The visual effect of the roofs and dominant light traps in counterpoint to the open courtyard spaces and pedestrian approaches implies a human involvement and scale. The building addresses itself to its farm neighbors and reflects the warmth and earthiness of the little car it shelters.













Award of Merit Vincent G. Kling & Associates

Project

Sharples Dining Hall Swarthmore College Swarthmore, Pennsylvania

Structural Engineers Severud Associates

Mechanical and Electrical Engineers Pennell & Wiltberger, Inc.

General Contractor

John S. McQuade

Jury Comment

A romantic contemporary building whose pitched roofs and stone walls create a satisfying harmony with its older neighbors. In particular, it forms a pleasing counterpoint to the nearby tower. The relationship of low and lofty spaces produces an exciting interior which must be a joy to those who use it. All aspects of the building are integrated with satisfying consistency.

Architects' Statement

As a co-educational liberal arts school dedicated to the principle of intellectual freedom, the college wanted its new dining hall to complement its educational program by encouraging student discussion and exchange of ideas in an atmosphere of warm hospitality.

The building's donor envisaged "an attractive and humane setting for the fine art of eating"—a conscious contrast to the "mess hall" atmosphere of the previous dining space.

The design carries out these objectives in plan, form and materials. The cruciform plan deliberately avoids the concept of a dining "hall" and provides instead six individual dining rooms of varying sizes, some seating as few as 16 students and the largest accommodating 300. These spaces are grouped around a clerestory-lighted, threestory central lounge, which also serves as circulation space to and from the upper level entrance. Two additional balcony lounges are at the entrance level, and the kitchen is set into the slope below the entrance plaza.

The circulation pattern requires movement through irregular spaces, enhancing the impression of variety in form, light, volume and space. Unity is achieved through consistent use of materials.

The primary structural walls are of native stone exposed inside as well as outside. Gray in color, the stone has a high ferrous content that produces a brownish weathering. The pitched roofs are clay tile supported by laminated fir beams on the interior. Doors, paneling, stair rails and other trim elements are natural finish oak. Floors are quarry tile in the large areas, with carpeting used in the small dining rooms and mezzanine lounges. Furnishings and chandeliers were, for the most part, designed by the architect.









The Report of the Jury

Continued from page 25

There was general agreement among the jurors on various recurrent trends.

We recognized the influence of some of our architectural leaders in a tendency toward formalism—a self-conscious approach to design which results in the creation of a monument to be worshipped rather than a working building to be participated in and used. The relationship, if any, between the architectural forms and the functions they perform is vague, and the product approaches stage design. Perhaps it should be called "Award Architecture"; certainly it is produced with at least a subconscious eye on design awards and magazine publication.

Such an approach raises an important question: How can awards programs like this one serve their proper purpose of encouraging better architecture rather than stimulating architectural showmanship? The answer seems obvious: by avoiding the superficial and showy and by recognizing those entries in which function, structure, materials and a sense of what is appropriate to time and place have produced buildings of lasting beauty. The jury was unanimous about this. The difficulty arises when buildings which cost \$15 a square foot are competing with those which cost \$50. Ideally this should make no difference, but in reality budget limitations are likely to result in compromise. We looked for the skillful products of a modest budget (the two award-winning churches, for example), as well as those with more liberal cost limitations.

The jury felt that little credit is due to the designer who creates a form and then "beats it to death" by endless and inappropriate repetition. When the supposed form-givers succumb to this temptation, it is not surprising that the followers fall into line. Perhaps this failing springs from the pressure to produce too much in too short a time. As one juror remarked, some of these architects make a major decision about an important building every day; no wonder the well runs dry. And that, of course, raises another question: How are we to use our best design talent most effectively in meeting the huge and growing demand for new buildings? Mies has pointed out one direction. Another course is suggested by the design leaders who associate themselves with firms less prominent than their own in order to delegate the production of working drawings and supervision. 56

It was most interesting and quite discouraging to note the second generation reproductions or adaptations of significant works of contemporary architecture already widely acknowledged. Discouraging in the sense that the reproductions in most cases were *flatly* "derivative" and showed little understanding of the motivation of the original creator.

We noted that few outstanding schools, commercial structures or industrial buildings were submitted. The answer may be found in the fact that a fine building requires an unusual client as well as a gifted architect. School boards and store owners are more often concerned with standardization, economy and maintenance than with esthetics. Our profession must prove that buildings of moderate cost which work well can also be good architecture. This demands sweat, and sometimes tears, from both architect and owner.

The jury regretted that few largescale projects were submitted in which the architecture was as significant as the overall planning and social concepts. This has been true of many redevelopment and new town projects—perhaps in part because design ability has seldom been the principal criterion for architect selection.

We feel that special tribute should be paid to the courage and vision of Robert Simon, the developer of Reston. In a venture which has few precedents and involves great risk, he has made an effort to achieve a high standard in community planning and building design.

We recognize the enormous difficulty of financing and organizing a large project which challenges many of our existing laws and habits, and we believe that developments like Reston hold great promise for the future. Simon's approach to selection of his planners and architects seems to have been exemplary as a procedure calculated to produce high quality, and the buildings by Whittlesey & Conklin, the only work at Reston which was submitted, were seriously considered by the jury. But a majority of the jurors felt them to be too nervous and overdetailed to justify an award, although they were clearly far above the average entry in imagination and quality of design.

There was some discussion among the jurors of the tendency to separate into distinct categories awards programs for individual buildings and those for communities. Shouldn't we demand of architects that they design the individual buildings in a large project with the same expertise they apply to small ones? The suggestion was made that too many of the people who are teaching planning are themselves incompetent to design a good building; thus, they are training students to design larger projects of bad buildings.

In rebutting this point of view, juror

Rockrise submitted the following statement of his own opinion:

"I believe the problem of town and community planning represents a mixture of challenges which are little understood by the design professionals in this country today. The lessons learned from the work of Clarence Stein at Radburn and Neutra at Baldwin Hills have been all but forgotten. To create the spirit and heart of a new town or community in today's terms requires more than an encyclopedic montage of medieval European prototype spaces. Today, the challenge facing the design professions requires a deep and integrated knowledge and application of such widely divergent specialties as group social behavior, land economics and financing, market research and traffic (both pedestrian and vehicular) allied effectively with the established disciplines of architectural and landscape design and site engineering.

"The architectural profession has yet to demonstrate that it can effectively head this complex team of contemporary disciplines, and there still remains unsolved the challenge of designing the multiclass, multiuse community or town as opposed to the developer's 'instant' bedroom.

"If the above be true, a special awards program with jurors of competence in these specialty areas should be established to evaluate town and community planning projects at the depth and breadth required."

To this statement the following comment might be added. The question as to whether leadership in planning is to be assumed by the architectural profession or by the other specialists who are involved will determine the basic emphasis in planning for years to come. Leadership by architects will tend to stress the three-dimensional approach planning considered as design. Leadership by economists and sociologists will inevitably minimize the design aspect of the planning process and give greater importance to other points of view.

While all of these disciplines are essential, the assumption of leadership by one profession will have fundamental implications for the future.

On the whole, the jury's impression was that the quality of a small portion of the entries was satisfyingly high, but that the standard of the vast majority was disappointing.

This was an entirely subjective and individual reaction based on the feeling that, given our country's varied materials, our advanced technology, our wealth and our heritage, we ought to be able to do better—especially since a few are doing so well.

David N. Yerkes FAIA, Chairman Robert G. Cerny FAIA O'Neil Ford FAIA George T. Rockrise FAIA Benjamin Thompson AIA

The Decision-Making Totem Pole

BY GARRETT ECKBO

In his somewhat utopian approach, the California landscape architect takes a look at the design professional and the decision-making process, and suggests how design organization might respond if the client continues to expand his understanding and demand an ever-better environment.

BELIEVING AS WE DO that ours is a rational, scientific, technological society, Americans tend to stress those arts which appear most rational reasonable, articulate, highly verbalized. Although many of our actions (nuclear armament, brush-fire wars, racial prejudice) are in truth entirely irrational, we cling to the myth of a rational society and are thereby obliged to surround all of our activities with elaborate rationalizing—verbalizing, justifying, correcting, reforming.

Such a society does not trust design unless it, too, is heavily verbalized and rationalized. We allow anyone to make design decisions (the myth of individual omnipotence); then, because we know empirically that most such decisions will be bad, we fence them in with an elaborate structure of building codes, zoning ordinances, subdivision codes, rules, regulations, standards and principles ad infinitum. These function as a substitute for, or evasion of, serious design processes; a screen for anticreative, antihuman decision-making, a figleaf for the ugly environment. If, as a society, we understood the potentials and problems of the design process, we would wipe out most such presumed controls, learn to be sympathetic and understanding clients for design, and insist on high qualifications and high performance from all who presume to make design decisions.

Consider the organization of design in the United States today. Bigger is better. The professional designer begins as one man who does everything—design, working drawings, supervision; contact, consultation, collection; management, bookkeeping, typing, telephone answering. As time goes on, the career grows and the volume of work expands. It becomes possible to hire help: first in the nonprofessional areas of reception and clerical help, accounting and management; then in the less complex or more routine professional areas, drafting and surveying; then perhaps the design of minor details, then minor jobs. As work continues to expand the staff likewise expands, more skilled and experienced people are hired, and an organized division of labor is established among draftsmen, specification writers, field men, detailers, designers. Whatever the detail of organization, expansion in scale brings the division of labor, either per technique or per job, and the allocation of various degrees of responsibility among various members.

But design is always personal, even when shared by more than one person. As long as the principal continues to do the primary design and field work, the organization may be considered an extension of him, with the primary qualitative control remaining in him. But even the quickest and most energetic designers have limits to the amount they can produce. And the most agile organizers begin to lose contact when their organization reaches a certain size.

Thereafter, the complexities of organization may expand endlessly, but one simple fact remains-the original principal, who is responsible for the growth and prestige of the organization, becomes gradually more divorced from the primary functions and more enmeshed in the secondary but absorbing functions of promotion, contact, organization, administration, economic management. He may proceed through a complete cycle from full design control through more and more fragmentary design, to becoming a critic of other people's design within the organization, to the final "success" of being a figurehead, completely divorced from actual design and supervision. (While any of these stages may be valid for a particular individual, the client should always know with certainty who will actually perform the primary professional functions for him. He should be sure that the glamorous name he is retaining will not be merely a front for anonymous design by others. And he should further be sure the glamorous individual is still active, not dead or retired while others function with his name as a shield!)

This is not so much a matter of ethics as of social values and the responsible use of human resources. For us, with rare exceptions, quantity is more important than quality; words are substitutes for deeds; verbalizing tends to supersede graphic performance; we choose the best salesman rather than the best product. Managers, organizers, expediters, administrators are more important than the activities or processes which they direct (perhaps because those who conduct them are too lazy or incompetent to direct them).

Design organization now tends to follow the typical quantitative patterns of American success. As work expands, organization expands to handle it. Such expansion is theoretically unlimited. The designer who wishes to design directly, or to remain in direct critical control of design, comes sooner or later to a point of decision. He must either turn away work to remain in control of what he has, or expand, and reduce his direct participation.

There is, of course, a relationship between size and technical complexity of the job and percentage of time devoted to design, as contrasted with working drawings and supervision. However, this too is subject to the pressures of quantitative success. Almost any job has design potential beyond what the client sees in it. Many jobs have potential beyond what most designers see in them. Design organization may be set up to search for this potential-by putting the best designers on the job and giving them adequate time and resources to explore its potential. Conversely, design organization may be set up to minimize the search for potential to a utilitarian level approximating the client's expressed desires, in order to expedite production and get on to the next job. The question is, who makes these decisions, and how are they made?

The size of design organizations today is limited by the size of opportunity and the principals' promotional expertise. The 1,000-man office is perhaps an occasional maximum. However, if projections of the future American environment come true, these limits will expand radically. If between 1950 and 1980 we double the total existing urban construction, and double it again between 1980 and 2000; if the now official search for beauty should cause the professional-design portion of total construction to increase beyond its current 20 percent—then all existing design organizations (not to mention construction organizations) will be completely inadequate for the job.

The question will be not how to inject more quality into normal quantities, but how to maintain qualitative control over rapidly expanding quantities. The present range of design organization—from limited custom design, through intermediate, reasonably-good general practice, to big-time mass production—will all tend to become irrelevant. Without precautionary organization, the big-time operation will tend to take over in the name of efficiency and economy, leaving most responsible designers on the fringes and in special spots.

Design organization today is determined by the general clientele. It is determined by governmental and corporate decisions as to whether to use private consulting firms or set up their own design offices. Public and corporate offices are organized by administrators for their own ends. Private offices constantly adjust to the reactions of a shifting and fickle clientele. Most of this clientele has only the most superficial notions about quality design. Its reactions are based largely on fixed ideas about function, convenience, economy and efficiency. Private design organizations are in part reconciled to these attitudes and in part arranged to get around them and produce quality in spite of them. From the normal American irresponsibility and lack of concern toward the quality of the environment springs the constant warfare between economyminded clientele and quality-minded designers.

It may be that the client is changing. Perhaps the tiny minority able to conceive and demand real qualitative standards for design is expanding. Certainly corporations more and more consistently search out the best offices and the best designers for their commissions. Certainly the "cultural boom," demonstrated by increased sales of classical records and paperbacks, mass art reproductions, discussion groups and lectures, has expanded the middle-class concept of design quality. The White House Conference on Natural Beauty, and many subsequent state, local, and industry conferences, have recognized growing concern over the accelerating destruction of the American landscape. So perhaps there is hope. Perhaps in the race between sensitivity and catastrophe, the former may win some major battles, or even the whole war.

If the client does change his attitudes, programs and policies enough to develop a significant change in the supply-to-demand ratio for quality design—or even if present ratios hold constant within rapidly expanding future mass construction—how might design organization respond?

The present clientele consists largely of administrative and executive types who see design far from the decision-making totem pole. Basic decisions are made and the designer is then called in to dress up the results of those decisions, regardless of how unpalatable they may be. The client tends to select designers who are administrators and executives like himself, or salesmen who project an image which conforms to his notion of the great—but practical—artist.

If this generalized client continues to expand

his understanding of the design process, and its potential for quality production, we may develop a favorable climate for organizations which express directly and accurately the fundamental service relations between consultation, programming, design, detailing and implementation. Perhaps we will be able to recognize the designer as central to his sequence; to set up something like an expanded atelier system, with design studios for individuals or self-constituted flexible teams. Such studios might be serviced by larger detailing and implementing organizations which they could supervise, or they might do their own. depending on the scale of the project. The promotional, public relations and administrative functions presently carried on by the principals of many firms (which demand more attention than they should) might be separated into an intermediary organization which could function as a guide or liaison between clients and designers. The designers would be established in their own names, on their own qualifications, rather than being hired by promoters and administrators.

Under the present system, the successful designer tends to become promoter-administrator, stops designing and hires other designers on their way up the same ladder. Thus, we lose the services of many of our best designers as they begin to mature and reach full productivity. Those who continue to design, usually for someone else or in a limited private practice, frequently don't "succeed" because of some personal or social limitations. And so our way of organizing the design process frustrates and wastes, by dissipation or sterilization, many of our best talents. Clearer understanding and organization of the relations between promotion, administration and design could eliminate much of this waste of a valuable human resource.

It may well be said that these proposals describe approximately the pattern which now exists. But this pattern seldom clarifies the relation between design and administration. The designer who is not also an administrator is at the mercy of the latter and may well be exploited in various ways. The administration-minded clientele now tends to go along with this. A design-minded clientele could shift to a more constructive relationship.

Use of the words "atelier" and "studio" may suggest going back to an older, smaller, and less efficient kind of organization. But this could be a new version, capable of expansion to almost any scale, and much more flexible than present individual-dominated organizations. Efficiency is a word which has no meaning until we ask "for what?" The studio-atelier idea would have no relevance for current utilitarian procedures oriented toward quantitative concepts of function and economy. For these it would definitely be "inefficient." But for a society oriented toward the search for *high-quality* environment, utilitarian design organizations are "inefficient" because they are so concerned with quantity as to be unable to discern quality. The studio-atelier, centered on known and proven design talents, and demanding maximum production from them, could be much more "efficient" in the pursuit of quality in the environment.

One might envision a skyscraper in which floors alternated between design, detailing and implementation, with a central vertical service core devoted to administrative offices and conference rooms. The design floors could combine, with maximum flexibility, top personnel from planning, architecture, engineering, landscape architecture and the other allied arts. The building could be called the Design and Planning Center, and the names in the directory would be those of the actual planners and designers. Here the—hopefully—discerning clientele could find the level of design service it needs and should have.

The problem of selection and distribution of designers might be resolved on an area basis, rather than by general competition, as now. The experience of the environment is continuous both in space and time. Currently its design is fragmented by political boundaries, ownership patterns, professional jurisdictions and competitive struggles. A general community clientele which recognized that the continuity of environmental experience requires continuity of design process for adequate solution might organize the community or region areally, with design organizations for each area, and perhaps overseeing regional organizations. Then our hypothetical skyscraper might be centered in the region, with vertical segments of design detailing implementation devoted to each area. Or this skyscraper could be sliced vertically, and each segment set in the center of its own area. Then the designers could live continuously with their problems. Personnel could be allocated to areas by a central office-competitive practices would center there. Within each area, organization personnel would be adequate and competition would be minimal. In the country as a whole, we obviously could not begin to staff such a system of areal officesthe real problem exceeds our resources, although the apparent problem does not.

Granted, the foregoing may seem a flight into utopian fantasy. However, it is hoped that it may open some windows on future possibilities.

The author is chairman of the Department of Landscape Architecture, University of California, Berkeley.



PREPARED BY PAUL D. SPREIREGEN, AIA, FOR THE COMMITTEE ON URBAN DESIGN

Lessons from Copenhagen: Part 1

AT A RECENT CONFERENCE in Washington, D.C., a noted British planner brought his American colleagues up to date on the progress of Britain's new towns. Britain's program aims at siphoning industrial and commercial activity away from its large urban centers and into new towns—the receptacles for overspill population and industry. This program traces back 50 years, with major impetus since the late '40s.

Among the Americans at the conference were many who have been following the progress of Reston and Columbia, at present our most important new town efforts. Reston and Columbia are strictly private endeavors, however, independent of government policy, national or local. Nevertheless, there is growing realization that a new towns program is vital for the United States—at least as part of a more effective program to shape metropolitan growth. In order to arrive at such a program, remarked one of the conferees, the US public must embark on a broad open discussion, not only on new towns but on the entire question of urbanization.

There is in fact some doubt as to whether new towns as presently conceived could be functionally independent of large metropolitan centers in the US, or whether they should be satellites, welllinked by transport lines. It may be, all things considered, that metropolitan corridors with urban centers would be more workable for us. Some theorists further posit a matrix of linear urban corridors forming a supergrid city, stretching across a region. Particulars aside, there is one example of the discussion of these matters that stands as a model for everyone. For our purposes it is, as well, a model of the many areas of consideration in which urban design plays a major and unself-conscious role. The example is the planning of greater Copenhagen, dating back to 1947. A description of this plan, its evolution, some of its details and its methodology is an invaluable guide to all urban design efforts in which architects should be engaged in every US city.

Copenhagen's Growth

The cities of Denmark, like those of all agricultural areas, were centers of local trade and distribution prior to industrialization. After the Industrial Revolution they became centers of production and commerce. This was far from uniform. The cities with the best long distance routes—for material and trade—were obviously destined for growth.

By the end of World War II, the effects of this phenomenon were clearly seen in Copenhagen, as well as certain other urban centers of Denmark and its northern European region. But the most marked effect for Denmark would be on Copenhagen, the city with the prime connections to long distance routes (Figs. 1 & 2).

The growth of Copenhagen, particularly around its fringe, was clearly evident. So were the problems of overcrowding, of traffic congestion, of obsolete buildings, of bad housing and of all the other ills of rapidly growing cities. These problems required an immediate program of action. Copenhagen's population then numbered 1.1 million.

The "Finger Plan" of 1947

The Danish Town Planning Institute went to work on this problem and published a first report on a regional plan in 1947—the so-called "finger plan" (Figs. 3 & 4). In 1949 legislation regulating built-up areas was adopted to ensure Copenhagen's development along the lines of the plan.

The finger plan was based on two stages of growth: first to a metropolitan population of 1.3 million and then to a maximum of 1.5 million. These numbers were based on recognized need and realizable programs of public action on all fronts—housing, land-use controls, policies and programs to readjust densities, transport, industry, remodeling the center and open space. It was less important that target dates be set for the two stages than that growth could be constantly measured against progress in achieving programs.

The Question of Form

All of these questions boiled down to a decision as to the *form* of urban growth. In the late '40s the idea of the independent new towns was a predominant concept in the minds of theorists. Yet, the towns near Copenhagen—possible centers for overspill growth—were not growing as rapidly as the main urban centers. Obviously, people were moving to where the jobs were, not to towns an hour or more away from the jobs by train. The question of Copenhagen's—and Denmark's—economic progress was tied to unsnarling the inefficiencies already developed and preventing those that might occur through rapid and shapeless growth.

The answer to the question of form seems to lie in developing efficient radial corridors as a supplement to the rings of urban growth concentric to the central city (Figs. 5 & 6). However, the continuation of ring growth had to be stopped. Characteristically its density decreases with distance—as we in the US know only too well—and it produces a low-density pattern of dispersion which is impossible to serve by public transit. In Copenhagen these rings from center to outskirts were those of a city of three or four times the population. Trolley lines were clearly overtaxed, terminals being 45 minutes distant from the center, the maximum tolerable distance.

Radial corridors, however, could extend well beyond the fringe of ring growth and its overtaxed trolleys. Corridors have the advantage of serviceability by rail rapid transit, of proximity to open space, of opportunity to create viable new communities, of choice in housing, of choice in recreation and of easy treks to work or the *central* city.

Concurrent Inner City Action

Concurrent with the creation of the corridors would be programs to reduce residential density in overcrowded areas. Four density zones were established around the city, ranging from 80 to 400 persons per acre. For new quarters in the radials, housing societies would build in ranges of from 18 to 45 persons per acre. Other standards for height and floor area ratio were also set up.

Through new building, central Copenhagen's 37 million square feet of commercial space would be increased by 11 million square feet.







-Radiocentric growth 4-Fi

4—Finger-growth pattern





5-Main auto routes

6-Main rail routes

To effect a reduction in residential density, and an increase in central commercial floor space, more than standards were needed. Standards and policies might serve as statements of tolerable limits or objectives, but only actual design studies for each situation could determine the form of individual areas. Thus, there was an ample stock of urban design work. Innovations in housing design and commercial architecture resulted, including imaginative air rights developments over railroad tracks for commercial buildings.

Finger Plan Features

The main elements of the physical plan—the finger plan—were the location of industries at the near end of the new corridors and the creation of workable residential, commercial and industrial areas (Fig. 7). Thus, industry would have a prime location along transport lines as well as between central Copenhagen and outlying workers' residential areas. The extension of the radial transportation lines would, in fact, be the new corridors.

In the corridors themselves would be more industries as well as business, commercial and shopping centers. The corridors would be composed of districts of from 10,000 to 20,000 people each, in row houses, apartments and individual houses. Twenty-five percent of the houses were detached—far from the demand for this type over apartments—but apartment dwellers frequently maintained a small weekend cottage in the country. Neighborhood groupings would consist of 1,000 to 2,000 people; small enough to be personal, yet large enough to avoid dullness. Indeed, housewife drudgery was also taken into account. The corridors were laid out to maximize variety, choice to the large-scale finger program. Similarly, it was decided to stop growth on the island of Amager to the southeast, since Amager might be a future link to Sweden as well as a major transport and industrial area. More thought on its future was needed. Meanwhile, it was kept in reserve.

A further reason for not building to the northwest was scenic beauty. It seemed wiser to preserve that area in its natural form for recreational use. High standards of environmental amenity could certainly be achieved in the new corridors. There was no need to damage one asset in creating another.

An important feature of the finger plan was its intelligent use of all modes of transport to serve a workable metropolitan form—not to let transport create an unworkable and unlivable form (Figs. 5 & 6). Obviously, that was easier in Denmark than in American cities, for the Danes had far fewer cars, and transportation was not a competitive number of businesses but, rather, a series of public utilities organized for the whole public welfare.

This did not mean that cars would be banned from the city. On the contrary, the finger plan's backbone included an improved highway system in the form of a radiocentric net. This would supplement the rail, trolley and bus system. The capacity of the center was determined as an opti-



7-Finger plan schematically (left) and finger layout (right)

and accessibility of activity. Industries and businesses in the corridors could also employ women. Corridors through semi-built-up areas would be carefully designed to fit existing community structure. The fingers could thus enrich a partly built-up area as well as create urban structure where none previously existed—again, more work for urban design.

The main direction for the "fingers" was to the west in a 120-degree sector. Development of a corridor to the north was undesirable, since that was already built up and there would be obstacles mum balance of maximum urban activity, supported by maximum access and inner movement. The center would be readjusted to serve a larger area more fully and more efficiently. By displacing some housing and some industry, and by improving the metropolitan transportation net, the center could become more of a center.

(Part 2 of this worksheet next month will discuss the reassessment of the finger plan leading to a concept of urban sectors, present some more recent considerations and conclude with an analysis of the role of urban design.)

EQUITY

Guidelines for Design

BY ARTHUR C. RISSER, AIA

THE STROLLING PLAYERS of Shakespeare's day performed in innyards and castle halls; they frequently found themselves changing costumes in the stable, and jostling a disgruntled horse for elbowroom. They were a sturdy and adaptable breed of men.

Fortunately, actors have retained these qualities into the 20th century. A modern actor may not actually have to share his dressing room with a horse (except, perhaps, in a few "straw-hat" summer theaters). But too often, a theater is thought of by the businessman who builds and operates it, as a space for the paying customers into which should be designed all the amenity the budget will allow—and a platform for the actors.

Insufficient thought may be given to the actor's need for dressing and rehearsal spaces, easy access to and from the stage, a place to relax and prepare for his work, and adequate circulation around the acting area when it is enclosed by scenery. (Occasionally, the acting area is so shallow—or the director's desire for playing space so grandiose —that scenery must be shoved all the way to the back wall. This can mean that an actor, needing to cross unobserved to the other side of the stage, must slither like a snake through a passageway too low to negotiate even in a crouch—and then make his entrance, insouciant, unwrinkled and unsmudged.)

Because of the difficulties encountered by its members, who struggled to perform in theaters where space and facilities were neither safe nor sanitary, Actors' Equity Foundation ("trade union" of the performing arts) formulated a set of minimum standards to which a theater must conform. Equity members are not permitted to play in theaters which fail to meet these criteria.

A review of these suggestions and requirements will be helpful to the architect involved in the design of a new theater, or the remodeling of an old one. Equity requirements should be taken into consideration whether the project is intended to be a professional theater, or a building to house amateur groups, student or otherwise. The current trend is toward a tremendous reawakening of interest in legitimate theater throughout the nation. As this trend continues, it will bring professional actors into theaters across the country; thus conformity with Equity standards is essential. It is to be hoped, of course, that most new theaters will provide facilities which will exceed the Equity minimum requirements.

The Equity recommendations may be divided into two categories: those which concern the playing area and adjacent offstage areas used by the actors during the performance; and those backstage areas used by the actors for rehearsals, relaxation or preparation. Requirements and recommendations dealing with the playing area (the stage itself and adjacent offstage areas) will be discussed first.

"Too frequently," the Equity recommendations state, "theaters of proscenium or thrust-stage design are provided with too little wing space (offstage side areas) on one or both sides." They therefore suggest that "adequate" wing space be provided on both sides "so that scenery, actors and other facilities can be easily accommodated." Admittedly, the word "adequate" leaves much to the imagination; as a rule of thumb, it is suggested that the offstage area on each side be equal to half of the width of the acting area. However, site conditions and the general plan of the building may make it necessary to have more wing space on one side of the stage than on the other.

There is a clear prohibition in the Equity rules against dancing on marble or concrete floors, either in performance or rehearsal. Therefore, stage flooring for live theatrical presentations should be of wood, and must not be laid directly on concrete or marble. The requirements further state that there should be no less than 3 inches of air space between the wood floor and the supporting floor.

In addition to the offstage areas at the sides, there should be a safe and unobstructed crossover space which is, in the words of the Equity docu-

A member of the AIA Committee on Auditorium and Theater Architecture, the author is on the faculty of the School of Engineering at Wichita State University and coordinator of the AIA-AETA Theater Architecture Exhibits.

ment, "convenient and adequately lighted to make it possible for the actor to move from one side of the stage to the other without exposure to the audience." Whenever possible, crossover space should be provided at stage level. When this is impossible, an entrance should be provided "from stage to basement on both sides of the stage, for crossovers and as entrances from basement dressing rooms."

The next item really belongs in the "backstage" category, but is considered with the stage requirements because of its importance. A quick-change room must be provided on each side of the stage to accommodate the actor when he does not have time to return to his dressing room. The quickchange room need not be as completely furnished as a regular dressing room, but must have hanging space for costumes, dressing table and lighted mirror, and must be large enough for an actor and a costumer who may assist him.

At least one drinking fountain and men's and women's toilet rooms are required at the stage level and in the immediate vicinity of the stage. The drinking fountain may be adjacent to the door leading to dressing rooms.

Doors from passageways, quick-change rooms and storerooms which open directly into the stage area should be equipped with light baffles.

Quoting again from the Equity recommendations, "There should be two separate intercommunications systems. One should provide communication from the stage manager to dressing rooms; the second should provide a playback of the performance to the dressing rooms. Sending and receiving equipment should be distinctly separated." These are in addition to other systems such as communication between stage manager and house manager, projection booth, fly gallery and follow-spot locations. It is also recommended that telephones located in the performance area be equipped with light signals, in addition to bells, so that the light system can be utilized during performances.

Equity requires that the theater contain adequate equipment for rehearsal lighting as part of the permanent house lighting and independent of any lighting that may be brought in for a given production.

Stairways and passageways should be at least 5 feet wide "to allow for convenient passage of traffic going both directions in wide period costumes." Stairs should be equipped with safety treads.

Performers and technical staff enter the theater through a stage entrance which is separate from that used by the audience. Equity stipulates that the following criteria apply to stage entrances:

The doorway shall be well lighted (a logical re-

quirement, particularly since the stage entrance is frequently located in an alley or side street).

In order to keep unauthorized persons from the backstage area, a stage-door attendant is stationed at this entrance. Properly furnished space must be provided for him.

A bulletin board (call board) should be located at the backstage entrance; individual mailboxes for the actors are also desirable.

Equity recommends that the theater include two "star" dressing rooms (single rooms); several rooms which will accommodate from two to four persons each; additional dressing rooms to accommodate varying numbers in multiples of four; and two "chorus" dressing rooms—men's and women's —large enough to accommodate 20 persons each. A basin, toilet and shower should be located in each star dressing room. In addition to this equipment, one wash basin with hot and cold water should be provided for every four performers; one men's and one women's toilet per 12 performers on each floor (unless contained in each dressing room); and one shower for every 8-12 performers is recommended.

The following items should be provided in all dressing rooms:

• dressing table, 30 inches in height which will provide $2\frac{1}{2}$ -3 feet of space for each performer, and covered with laminated plastic

mirrors at least 3 feet high, measuring from dressing table top, 3 feet wide for each performer
good general illumination, plus perimeter lighting around the dressing table mirror, which should use incandescent lamps

• a lockable drawer for each performer

• at least 3 feet of hanging space for each performer (separate hanging space for street clothes is recommended)

· shelves for storage of footwear and headwear.

Equity stipulates that all dressing rooms must be well ventilated. Heating equipment (and airconditioning equipment, if any) should have individual controls in each room.

Windows, if any, should be provided with adequate safeguards to prevent unlawful entry.

Actors' Equity recommendations make little attempt to tell the architect how to arrange the necessary spaces. In theaters which will not be used as Equity houses—such as many high schools —it may not be necessary to provide all the facilities suggested. However, as stated earlier, it is possible that many high school, college and university theaters may soon become the center for a resident professional company, or be used extensively by amateur groups which would require the same facilities needed by professionals. Therefore, the importance of a well-thought-out program for each new theater cannot be overemphasized.

Professional Collaboration in ENVIRONMENTAL DESIGN

This Guide has been approved and adopted by

THE AMERICAN INSTITUTE OF ARCHITECTS THE AMERICAN INSTITUTE OF CONSULTING ENGINEERS THE AMERICAN INSTITUTE OF PLANNERS THE AMERICAN SOCIETY OF CIVIL ENGINEERS THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS THE CONSULTING ENGINEERS COUNCIL OF THE UNITED STATES THE NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Preface

In the interest of promoting the public health, safety and general welfare, national organizations representing members of the design professions who deal with research, planning, design and construction of man's living environment have jointly prepared this guide to professional collaboration in environmental design.

There is a continuing need for a better understanding of the services offered by those professions concerned with the conception, analysis and design of planning and construction projects. Uncertainty often exists in the minds of both the public and the design professions as to the functions performed and the areas of service provided by these professions. All of them entail exhausive study and research, demonstrated talent in planning and design, and devotion and integrity in guarding the public welfare and the client's interest. To delineate the various design functions and areas of practice precisely is impractical, as they may overlap to a degree.

However, with the complexity and magnitude of present-day buildings and man's living environment, the merging of design services through collaboration among all environmental design professionals is required to meet advancing environmental standards, to solve the complicated design problems of contemporary projects, and to produce unified and harmonious results. Such collaboration and teamwork throughout the planning and design cycle are supported wholeheartedly by environmental design professionals in the interest of their clients and the public.

It should be noted that, since registration is not presently required of all design professionals in all states, the references to professional licensing, registration, registration laws or legal qualifications made in this statement are applicable to professionals whose registration is required in state laws.

Tenets of the Collaborating Design Professions

The environmental design professions include Architects, Engineers, Landscape Architects and Planners. Members of these professions adhere to the following tenets:

1) They uphold the dignity and advance the progress of other design professions by exchanging information and experience.

2) They familiarize themselves with the registration laws of the other design professions and adhere to the spirit as well as the letter of those laws.

3) They recognize, whenever a project involves skills practiced by several professions, that close collaboration is desirable between them and should begin at the very earliest stage of research, analysis and design, and at that time the responsibilities of the collaborating professions should be clarified and established.

4) They perform their services in accordance with the standards of conduct and code of ethics of their individual professions, and each respects the standards and codes of the other professions.

5) They respect the professional reputation, prospects or business of all their colleagues in the design professions.

6) They do not supplant another design professional after definite steps have been taken toward his employment whether as principal or as collaborator.

7) They do not engage in competitive bidding with another design professional on the basis of professional charges.

8) They do not accept a commission on a contingency basis as a device for obtaining work.

9) They will not accept a commission on which another design professional has been engaged, unless his connection with the work has been terminated.

10) They do not offer the services of another professional as a collaborator without his consent.

11) They do not review the work of another design professional except with his knowledge.

12) They do not alter or copy reports, drawings or specifications prepared and identified by another design professional, whether or not bearing his seal, without his knowledge and consent.

13) They give due public recognition to the work performed by collaborating design professionals.

Collaborative Service Contracts

The combined talents of collaborating design professionals and their coordination are required on many projects.

Ordinarily the client's interests are best served in the research, analysis and design of a project when

the client has a single contract with a prime professional who is responsible for direction of the work and for providing through collaboration the specialized services that may be needed. This makes available to the client all the advantages of specialization and at the same time centralizes responsibility. It is then up to the prime professional to see that collaboration is initiated at the earliest possible stage and carried on throughout the life of the project.

It is recognized that some long-range planning projects requiring continuity and some projects with a prolonged construction period may be better handled by separate contracts between the client and individual professionals under the general guidance of a coordinating professional.

Selection of Prime Professional

It is the responsibility of the client to select and designate the prime professional and to approve the selection of the collaborating professionals for his project. When the major portion of a project is in the recognized category of a particular design profession, a member of that profession should be the prime professional. The prime professional's design ability, professional reputation, demonstrated competence, practical efficiency, business capacity and integrity, good judgment and ability to obtain the cooperation of those involved in a project will be the primary considerations in his appointment.

Coordination of the Work

The prime professional is responsible for the design of the project. He will be the project coordinator and will have the responsibility for selecting the collaborators with the consent of the client.

The education, experience and registration (as prescribed by state law) of each of the collaborators qualify him for design services of particular type and scope. Each design professional is cognizant of the training and experience required for competency in the design professions, and does not render his services in those areas in which his qualifications are not established.

Contractual Responsibilities

The allocation of professional responsibilities is determined in joint conference between the prime professional and the collaborating professionals prior to the design work to insure proper consideration of all elements.

When the collaborative design services are performed under a single contract, the areas of responsibility and the division of the fee between the collaborators are determined by negotiation between the prime professional and the various collaborators, and are agreed upon prior to the start of design work.

When separate contracts between the client and the various collaborators are executed, all such contracts should include a clear statement of areas of responsibility and work, should state which of the parties is to be the project coordinator and define his authority.

Professional Firms

Many firms will include in their organizations more than one of the usual specializations of the environmental design professions. Such firms may perform more than one function, or may perform all design for an entire project, to the extent they are legally qualified. Two or more professionals or professional firms may form a "joint venture" for the purpose of rendering the client a complete design service.

Selection and Compensation of Environmental Design Professionals

Selection Basis

Environmental design professionals furnish the creative talent necessary to bring into realization the client's projects. The environmental design professions are learned professions requiring of their members sound technical training, broad experience, personal ability, honesty and integrity. The selection of design professionals by an evaluation of these qualities is the basis for comparison of their services.

Many projects require the teamwork of several collaborators. The design team provides management, research, planning, design, drafting, technical and nonprofessional personnel and the facilities needed. It is essential that the client understand that design professionals have expenses considerably greater than direct salaries. Adequate compensation is necessary for them to provide the scope and quality of services that the client desires and has a right to expect.

Members of the design professions will not solicit or submit proposals for professional services, including supporting services, on the basis of competitive bidding. Such competition by design professionals for employment on the basis of professional fees or charges is defined as: the formal or informal submission, or receipt, of verbal or written estimates of cost or proposals in terms of dollars, man-days of work required, percentage of construction cost, or any other measures of compensation whereby the prospective client may compare services on a price basis prior to the time that one individual, firm or organization has been selected for negotiation.

Selection Policies

The responsible member of the professional firm being considered by the client for a particular project, having established competency to perform the necessary services, must be legally qualified to practice as prescribed in the state in which the services are required, and must have adequate recent experience in responsible charge of the professional disciplines involved. The client is referred to the appropriate professional society for a definition of "responsible charge" if he is not familiar with the requirements.

Every firm being considered should be requested to provide complete information on its qualifications. This information should include the personal qualifications of principals and key personnel, current work load and a record of recent projects. Similar information should be supplied for the collaborators.

Selection Procedures

In selecting the prime professional, the client should proceed as follows:

1) Prepare a description of the proposed project, the purpose to be served and any other pertinent factors for transmittal to design professionals.

2) Request data on the qualifications of a reasonable number of professionals (and their proposed major collaborators) who appear capable of meeting the requirements of the project, and review their qualifications and experience.

3) Arrange personal interviews, preferably in the office of each professional, to assure mutual understanding of the contemplated project and the capabilities of the firm.

4) Investigate each professional's work, if desired, by requesting a visit to one or more of his projects, or an interview with the owners and possibly others associated with the projects. Where appropriate, this procedure may be extended to some or all of the major collaborators.

5) Select the preferred prime professional and reach an agreement on mutually satisfactory contract

terms, including compensation based on the value of the services to be performed.

6) If a satisfactory agreement cannot be concluded with the preferred prime professional, the client terminates the negotiation and repeats the process of review and negotiation with the next party of his choice.

Compensation

Compensation for professional services may be established by a variety of methods. Professional societies have issued manuals describing these methods, and the client may wish to refer to these manuals for guidance. Among the more common methods, or combinations thereof, are the following:

- 1) Percentage of construction cost
- 2) Lump sum
- 3) Cost plus a fixed amount or percentage
- 4) Salary cost times a factor
- 5) Per diem
- 6) Retainer fee

The type and size of the project, the scope of the professional services required, the area in which the design professional is located, and the area in which the work is to be performed, all have a bearing on the cost of professional services. Quality is the only true measure of the services offered by the professional.

Functions of the Coordinator

Where professional services are performed under a single contract between client and prime professional, the prime professional acts as coordinator. In addition to his usual services as a design professional, it is his duty and responsibility to:

1) Negotiate the scope of professional services, compensation and terms of payment with each independent collaborator. 2) Prepare a time schedule based upon the client's program for the project in agreement with the client and collaborators.

3) Obtain from the client, and furnish as needed to the collaborators, all surveys, subsurface and soil mechanics investigations and reports, and other necessary data.

4) Arrange for all project conferences between the client and design collaborators, and maintain liaison continuity with them on all project matters.

5) Coordinate and transmit all recommendations received from and made to the client.

6) Assume final responsibility for all decisions required by the agreement with the client for the services to be rendered.

7) Establish and coordinate design standards with concurrence of the collaborators and, where pertinent, coordinate statements of probable construction costs prepared by them.

8) Where construction is involved, it is also the duty and responsibility of the coordinator to:

- a) Coordinate the preparation and arrange for the printing, publication and distribution of the construction contract documents.
- b) Advise the client of the construction contract procedure, and with the advice of appropriate collaborators, assist in compiling a list of bidders or aid in negotiations with selected contractors.
- c) Coordinate the analysis of bids and submit to the client recommendations as to award.
- d) Coordinate the general administration of the construction contracts among the collaborators.
- e) Prepare a completion report with the assistance of the collaborators and recommend as to acceptance of the work.

This document is subject to periodic review by the participating professional societies for the purpose of keeping it current with respect to professional practice. Suggested amendments will be considered collaboratively in connection with future revised editions of this guide.

Amarlite Curtain Walls

Design . . . Strength . . . Function . . . all packaged with on-the-job service!

It's architect designed . . . engineered to more precise specifications . . . for one to one-hundred stories . . . finished with anodized hard-coat . . . in a wide range of standard systems (or custom walls) with greater strength and more dramatic exterior styles! Most important, we provide nation wide on-the-job supervision by our own engineering professionals to assure smooth-going and fast installation. • Select from Sweet's, or write Amarlite, Main Office, P. O. Box 1719, Atlanta, Georgia . . . for product information

or the name of our

for ALL THAT'S NEW!







Amarlite

ENGINEERED FOR DISTINGUISHED ARCHITECTURE . . .

Atlanta • Chicago • Cleveland • Dallas • Paramus, N.J. • Los Angeles • Export throughout the Free World

For more technical data, circle 226 on information card

Prejudice and the Computer

As ARCHITECTURE adjusts to the space age, an unlikely romance buds between art and automation. To some architects the love affair seems to have been made in a technological heaven; others, dedicated to the notion of intuitive design, are as skittish as the groom at a shotgun wedding.

Most practitioners, however, are willing to reserve judgment while they study the tools of the new technology and acquaint themselves with the capabilities and limitations of these tools—including the computer.

To ensure that tomorrow's architects escape a technological lag, educators are starting them young. The employee newspaper of one California corporation which specializes in programming recently published a photograph of architectural students from nearby University of Southern California being initiated into the mysteries of computer operation and capability.

The accompanying text said the students had been briefed on the impact of such equipment, both on the buildings which will house it and on its potential role in the design process itself.

Students are not alone in their inquiry. Many of today's architects are also interested: Some 600 braved a New England snowstorm to attend a 1964 conference on architecture and the computer at the Boston Architectural Center. They got an intensive short course in the range of applications possible now and projected for the future.

Since the Boston conference 18 months ago, architects have become less hesitant about investigating the use of computers in various aspects of practice, both as an aid to efficient business operation and in the design process itself.

Investigators who collected data for the AIA-sponsored research project, "Emerging Techniques of Architectural Practice," found several firms which have acquired computers for their offices; others use service bureaus which provide equipment and programming for routine operations; still others were considering "time-sharing," a procedure which takes advantage of the computer's high-speed calculating ability and the fact that it can be programmed to interrupt one operation in favor of another. Operators

at remote consoles manipulate input/output equipment connected by teletype to a central computer, which can handle many computations virtually simultaneously with each user paying for only the machine-time actually spent on his project.

Business applications are as familiar to the architect as his punch-card phone bill. For figuring his payroll, producing construction documents on a high-speed line printer, computing cost estimates and even automatic drafting by means of computer-driven data plotters, electronic data processing equipment would probably be welcomed by the most conservative practitioners, provided the price is right. It is when the talk begins to edge into areas of actual design that a controlled nervous tension sets in and the imaginative architect visualizes a Kafka-like 1984 landscape, designed, constructed and populated by Artzybasheff robots.

In an effort to calm such queasiness, the pioneers already experimenting with computer-aided design and urban planning techniques tend to overstress the magic-show aspects of the equipment. Great emphasis is placed on demonstrations of computer graphics, and rightly so; architecture is after all primarily oriented to graphic rather than verbal communication. Inevitably, sightseers in a computer facility are fascinated by the demonstration in which the operator uses a light-pen to sketch a design on the face of a cathode-ray tube. If so programmed, the computer can then "true up" the freehand sketch and display it in perfect vertical and horizontal alignment, thus assuring the architect that he, like God, can draw straight with crooked lines.

Perspectives can be made to appear to rotate around a point; one element can be changed in its relationship to another; drawings can be stored, obliterated from the face of the tube and then called back from the computer's capacious memory for further modification. It takes awhile for the beholder to realize that what he has just seen probably represents, next to an original Thurber dog, the world's most expensive doodle.

It is all too easy to get the im-

pression that the machine itself is performing all these wonders without benefit of human agency. We forget that programming a computer and training a mule have at least one thing in common—you have to be smarter than the mule or the machine.

Many truly advanced thinkers in the architectural and planning professions envision a day when data processing equipment can be fed a few basic design criteria, then programmed to evaluate the esthetic qualities of a design, a sort of transistorized and incorruptible critic.

The prospect of a computer which really *can* think—which is capable of approximating the human reasoning processes and maybe surpassing them—is troubling. Erwin H. Warshawsky, a physicist and engineer, wrote recently in *Industrial Research*:

"The tendency throughout industry to automate processes . . . once thought to be the exclusive territory of the creative man, is accelerating. The position of man in the scheme of things is not nearly as clear today as it was perhaps 50 years ago. It becomes more and more likely that the time will come when very few jobs will be done by man because they cannot be automated . . . even these will be primarily in the subjective fields such as politics, religion and the arts."

To the extent that architecture is a business or a collection of routine skills, it can conceivably be delegated to the computer—but only if humans are available to tell the machine what it needs to know. To the extent that architecture is an art, it will remain in the human province.

Christopher Alexander summed it up in Boston: "In my opinion, the question, 'How can the computer be applied to architectural design?' is misguided, dangerous and foolish. . . . We do not wander about our houses, hammer and saw in hand, wondering where we can apply them. In short, adults use tools to solve problems that they cannot solve without help. Only a child, to whom the world of tools is more exciting than the world in which those tools can be applied, wanders about wondering how to make use of them.'

MARILYN LUDWIG

70

What are the ugliest products in the world?

Not too long ago most architects would probably have voted that dubious honor to fire extinguishers. For example less than 20 years ago the little beauty below was not only the most effective extinguisher available, but just about the most attractive. Today, everything has changed. At Ansul, the name of the game is design ! Design for better performance and better appearance. The Ansul dry chemical unit at the right not only looks good but is, by actual UL test, 9 times as effective as the best comparable extinguisher of 20 years ago. Another Ansul unit, our new ENSIGN pressurized fiber glass water extinguisher, is available in 48 different decorator colors to meet the esthetic requirements of today's architects. Ansul, the world's leading manufacturer of fire protection equipment, has created a broad line of extinguishers intended to visually enhance your building. We offer a complete consulting service to architects...so when fire protection problems come up, call on Ansul.





BOOKS

The New Museum: Architecture and Display. Michael Brawne. New York, Washington: Praeger, 1965. 208 pp. \$20

Our affluent society, happily places an emphasis upon art, and in recent years art museums have been erected in all parts of the world. Brawne states that the museum is a medium of mass communication, like television or the movies. It communicates, however, to one individual at a time. Unlike the television or movie screen, it does not transmit reproduction of an object; rather the museum exhibits the object itself. The author contends that museum architecture and display, therefore, must "exploit this unique sense of immediacy, this direct encounter between viewer and viewed.'

The introductory essay is highly interesting, and any architect involved in planning a museum would do well to read it before he decides whether his museum will constitute a dramatic work of art within itself or should "withdraw" and be as neutral as possible in

order not to distract attention from the art it is designed to house.

Both kinds of museums are shown in the following survey of some of the recent museum architecture in Italy, the Netherlands, Belgium, Scandinavia, France, Germany, Austria, Switzerland, Great Britain, the United States, South America and Asia. Fifty stunning examples are commented upon and documented with photographs, plans and drawings.

The author also considers several factors peculiarly important to museum architecture including such topics as lighting, climate control, security, storage, workshops, labels and open-air display. Finally he supplies us with a list of useful references and an index of architects. The text is in German and English. Brawne, to whom we owe thanks for this helpful book, is an associate of the Royal Institute of British Architects and a contributor to Architectural Review.

MARY E. OSMAN

The Concrete Architecture of Riccardo Morandi. Giorgio Boaga and Benito Boni. New York, Washington: Praeger, 1966. 234 pp. \$20

In his introduction to this book

Morandi says that his life has not been easy because he has always been in the midst of controversy either with conservative engineers unconcerned with formal values or with those architects who pursue an empty esthetics. He believes this pulling between two opposing groups has caused a "certain asperity" both in himself and in his work.

If so, then tension is indeed a valuable influence in an architect's life, it would seem, for Morandi's clean, chaste structures are spectacular. Twice daily for two months this reviewer passed his Amerigo Vespucci Bridge over Florence's Arno and could never resist the desire to stop and look at it no matter what the circumstances. Its simple beauty and strength always pleased.

Two Italian architects, Boaga and Boni, here present their fellow countryman's work with justifiable pride. Their comments on some of his bridges, power stations, hangars and other industrial structures as concise and to the point. They note the difficulties involved and tell us briefly the manner in which Morandi overcame the structural problems. Morandi's archives contain *Continued on page 74*



Student Union Building, University of Buffalo, Buffalo, N. Y. Architects: Duane Lyman & Associates, Buffalo.

ALUMINUM SCHOOL DOORS

Plenty of rugged strength combined with a graceful modern appearance makes these Michaels Heavy Duty Aluminum Doors right for the Student Union Building at the University of Buffalo. Standardized design makes them economical. The stiles and rails are heavy-gauge extruded tubing for extra rigidity. For special resistance to twisting, a strong reinforcing bar runs inside the top rail, fastening to both stiles. The custom aluminum column covers and glass framing work seen here also are by Michaels, who supplied aluminum doors, windows, and curtain wall for the entire building. Few archi-

tectural metal companies can compare with Michaels for versatility and skill in aluminum, stainless steel, and bronze. Write for details.



THE MICHAELS ART BRONZE CO.



Mailing Address: P. O. Box 668, Covington, Ky. • Plant & Office: Kenton Lands Road, Erlanger, Ky



New PITTCO[®] T-WALL[™] thermal framing system will control condensation, reduce heat loss in new Xerox Square building.



The new PITTCO T-WALL has a proven 0.6* U-value. There is absolutely no metal connection from inside to outside. (See Section.)

That means no condensation on the metal at room temperatures up to 70° with relative humidity of 35%—even when it's minus 20° outside. Metal framing is not chilly. Sound transmission is reduced.

Appearance is slim, elegant, unobtrusive. Face of the mullion is only $1\frac{1}{2}$ inches wide; gasket projects only $\frac{3}{6}$ of an inch from surface of the glass.

PITTCO T-WALL is available in several glazing thickness combinations, including double glazing for maximum insulation. Standard components will meet varying strength requirements.

For more information on this new PITTCO framing system, see Sweet's Architectural File, section 3a/Pi, or write for our 4-page descriptive folder. Pittsburgh Plate Glass Company, Pittco Architectural Metals Department, Ohio Street, Kokomo, Indiana 46901.

*Performance test data published March 1, 1965, by Pennsylvania State University.

PITTCO ARCHITECTURAL METALS

> Xerox Square, Rochester, N.Y. Architect: Welton Becket, N.Y. General Contractor: Turner Construction Co., N.Y.

JULY 1966



Delineator

This is Delineator, by Hauserman. Dramatic design and ultimate economy are combined in these walls. Delineator expresses the clean look of contemporary offices, provides maximum environmental control and assures lifetime value. As space needs change – Delineator can be relocated easily, quickly and economically. Precise engineering and design gives Delineator the look for today and the versatility for tomorrow.

Hauserman engineered wall systems offer styles and finishes to meet any need. Hauserman means flexible, economical interiors. Write today for our Movable Wall Systems brochure.

The E. F. Hauserman Co., 5741 Grant Ave., Cleveland, Ohio 44105 In Canada: Hauserman Ltd., Mallard Rd., Don Mills, Ontario

 $\begin{array}{c} H \ A \ U \ S \ E \ R \ M \ A \ N \\ \hline \\ \mbox{For more technical data, circle 235 on information card} \end{array}$

Books from page 72

more than 30,000 designs and projects, most of which have been executed. The selection given here seems to be a good one, including his most mature designs and revealing his mastery of concrete.

George Washington Smith, 1876-1930; The Spanish Colonial Revival in California. Art Gallery, University of California at Santa Barbara, 1964. Unpaged. No price given

Mediterranean Revival, or Spanish Colonial Revival, architecture was introduced in California by Goodhue and Winslow through their buildings at the Pan Pacific Exposition in 1915. It was not until the twenties that the movement reached its peak, however, and George Washington Smith is outstanding among the several gifted architects responsible for achieving an almost "unanimity of architectural form" for a brief time in southern California.

This excellent catalog was prepared in connection with an exhibition held in November and December of 1964 at the University in Santa Barbara, the city in which Smith's primary work was accomplished. In addition to photographs of the exhibition, there is an incisive introduction to Smith's achievements by David Gebhard, a bibliography, a list of sources illustrative of his work and a selected list of Smith's major projects and buildings.

Environment and Design in Housing. Lois Davidson Gottlieb. New York: Macmillan, 1965. 258 pp. \$6.95

According to the author, this is a "how to think about it" book, rather than a "how to do it" one. She writes that she wants to give the reader information on how to get the most out of whatever one has to live in-"be it a fifty-dollara-month apartment, or a tent." This reader found really little advice applicable to either of these two dwellings, although there is much of interest to those who are fortunate enough to afford more costly surroundings. The emphasis is on the individual's home as a part of his total environment, and information is given on how to make it a place of comfort and beauty. It is both a "how to do it" and a "how to think about it" book.

AIA JOURNAL

For more technical data, circle 231 on information card >

74



Architects Perkins and Will achieve an awe-inspiring architectural effect with the use of BUCKINGHAM® SLATE PANELS from Virginia on the magnificent United States Gypsum Building. The natural character of the multi-million year old slate panels reflect the beauties and wonders of this earth while the structure, a marvel of modern building technology, soars into space above Chicago. Like brush strokes across an artist's canvas, the natural cleft texture of the BUCKINGHAM® SLATE adds dimension and humanistic feeling to the whole city area and the building becomes a timeless work of art. Catalogs on BUCKINGHAM® SLATE panels, flooring and roofing in Sweet's and Stone Catalogs. Listed in AIA Building Products Register.

BUCKINGHAM-VIRGINIA SLATE CORPORATION, 1103 EAST MAIN STREET, RICHMOND, VA.

Profit Engineering for the Construction Industry!



Slab perimeter heating, cooling?

DECIDE on ECONOMY!

Achieve it with ...



The choice is in your hands! With SONOCO SONOAIR-DUCT FIBRE DUCT, you can depend upon quality performance . . . you can deliberately reach for ECONOMY . . . you can be sure that your recommendations will be calling for the duct that has been proved in thousands of residential, institutional and industrial installations.

For encasement in concrete ... SONOAIRDUCT FIBRE DUCT meets F.H.A. requirements ... and contractors find it lightweight, easy to saw, to handle and install ... saving time and money!

Exclusive aluminum foil lining plus wall thickness results in lower heat loss from plenum to register ... naturally owners are pleased! Sizes 6" to 36" in standard 18' shipping lengths . . . or as ordered. Specify this quality product of Sonoco research ...

Specify this *quality* product of SONOCO research . . . for IMMEDIATE DELIVERY. **Reg. U. S. Pat. Off.*

Call or write for COMPLETE data!





construction products

SONOCO PRODUCTS COMPANY, HARTSVILLE, S. C. • Akron, Ind. • Atlanta, Ga. • City of Industry, Calif. • Hayward, Calif. • Holyoke, Mass. • Longview, Texas Louisiana, Mo. • Lowell, Mass. • Munroe Falls, Ohio • Mystic, Conn. • Philadelphia, Pa. • Phillipsburg, N. J. • Richmond, Va. • Tacoma, Wash. • MEXICO: Mexico, D. F. ALSO IN CANADA


Montgomery provides Stapleton International Airport with every type of in-building transportation. More than 10,000 travelers use these facilities daily. Architect: PAUL R. REDDY / General Contractors: Olson Construction Co., Gerald Phipps, Inc., Hensel Phelps Construction Co.

montgomery[®] moves people at STAPLETON INTERNATIONAL DENVER with...



TEN Montgomery 48" ESCALATORS with exclusive feature of two-steps-level at entry and at exit move passengers rapidly and comfortably.

FOUR Montgomery POWER RAMPS at Stapleton have 40" tread width. Two Power Ramps have HORIZONTAL TRANSITION (horizontal entry — incline travel — horizontal exit.)

EIGHT Montgomery ELEVATORS and DUMBWAITERS include: 3 electric passenger elevators (tower and terminal); 2 oil-hydraulic passenger elevators (concourses); 1 electric freight elevator (restaurant); 2 electric dumbwaiters (restaurant).



main office/moline, illinois

ି ଲେ ତା ସ ତ ତ ଲ ସ ର ସ୍ଥାନ ଦ୍ୟୁର୍ବରେ କ୍ରେମ୍ବର କ୍ରେମ୍ବରେ କ

offices in 120 cities/see yellow pages

Reading the ads first?



Wiley makes it a rewarding practice . . .

The Column Research Council

GUIDE TO DESIGN CRITERIA FOR METAL COMPRESSION MEMBERS Second Edition

Edited by BRUCE C. JOHNSTON, The University of Michigan. Presents the application of research to the design of centrally loaded columns, laterally unsupported beams, compression components of plate girders, beam columns, laterally restrained compression chords of trusses, and local elements that transmit compression in any structural member. 1966. 217 pages. \$10.00.

DESIGN OF THIN CONCRETE SHELLS

Volume II: Negative Curvature Index

By A. M. HAAS, Technological University, Delft. The Netherlands. 1966. Approx. 240 pages. Prob. \$14.50.

MODERN SURFACE COATINGS A Textbook of the Chemistry and Technology

of Paints, Varnishes, and Lacquers By PAUL NYLÉN, Royal Institute of Technology, Stockholm; and EDWARD SUNDERLAND, Research Chemist, Stockholm. An Interscience Book. 1966, 750 pages. \$22.50.

NUMERICAL AND MATRIX METHODS IN STRUCTURAL MECHANICS With Applications to Computers

By PING-CHUN WANG, Polytechnic Institute of Brooklyn. 1966. 428 pages. \$14.50.

HEAT PUMPS AND ELECTRIC HEATING Residential, Commercial, Industrial Year-Round Air Conditioning

By E. R. AMBROSE, Head, Heating and Air Conditioning Division, American Electric Power Service Corp. 1966. 205 pages. \$10.75.

TIMBER CONSTRUCTION MANUAL A Manual for Architects, Engineers, Contractors,

Laminators and Fabricators Concerned with

Engineered Timber Buildings and Other Structures *Prepared by the* AMERICAN INSTITUTE OF TIMBER CONSTRUCTION, *Washington*, D. C.

1966, 716 pages \$12.50.

PLANNING

Aspects and Applications

By MELVILLE C. BRANCH, President, Los Angeles City Planning Commission. 1966. 333 pages. \$10.95.

JOHN WILEY & SONS, INC. 605 Third Avenue, New York, N.Y. 10016

55 Third Avenue, reew Tork, re. r. 100

Circle 234 on information card

CALENDAR

National

- Aug. 14-18: American Institute of Planners National Conference, Hilton Hotel, Portland, Ore.
- Sept. 25-30: Prestressed Concrete Institute, 12th Annual Convention, Rice Hotel, Houston
- Sept. 27-30: Producers' Council 45th Annual Meeting, Waldorf-Astoria, New York City

AIA Regional and State Conventions

- July 21-23: North Carolina Chapter, Grove Park Inn, Asheville
- Sept. 8-10: New Jersey Society of Architects, Essex and Sussex Hotel, Spring Lake
- Sept. 14-16: North Central States Region, Radisson Hotel, Minneapolis
- Sept. 29-Oct. 1: Illinois Council, Ramada Inn, Champaign
- Oct. 5-8: Florida Association of Architects, Deauville Hotel, Miami Beach
- **Oct. 6-9:** California Council, Monterey County Fair Grounds, Monterey; East-Central Region, Brown Hotel, Louisville, Ky.; New York State Association of Architects, Whiteface Inn, Lake Placid
- Oct. 7-9: New England Region, Sturbridge Village, Mass.
- Oct. 12-15: Western Mountain Region, La Fonda Hotel, Sante Fe, N. M.
- Oct. 13-15: Architects Society of Ohio, Carrousel Inn, Cincinnati; Louisiana Architects Association, Jack Tar Capitol House Hotel, Baton Rouge
- Oct. 20-22: Pennsylvania Society of Architects, Hotel Hershey, Hershey
- Oct. 24-26: Northwest Region, Benjamin Franklin Hotel, Seattle
- Oct. 27-29: South Atlantic Region, Queen Charlotte Hotel, Charlotte, N. C.
- Nov. 3-5: Central States Region, Lassen Hotel, Wichita, Kan.

AIA Committee and Related Meetings

- (At the Octagon unless otherwise noted)
- July 20-22: SCPI Education Conference, New York Aug. 13: Building Construction Coordinating, Green-
- brier, W. Va.
- Aug. 18-20: Documents Review

International

- July 11-18: International Union of Architects Second Colloquium on the Industrialization of Buildings, Belgrade, Yugoslavia
- Sept. 21-23: International Conference on Space Structures, London, England

Awards Program

Eligible for the Design Awards Program of the US Office of Education's Bureau of Higher Education, conducted in collaboration with the AIA and the Educational Facilities Laboratories Inc., are projects for which applications for grants or loans have been approved under the Higher Education Facilities Act of 1963. Deadline for entries is July 29. Additional information: Design Awards Committee, Bureau of Higher Education, Room 4931 GSA-ROB, US Office of Education, 400 Maryland Ave. S.W., Washington, D. C. 20202.

LETTERS

A Place in History

EDITOR:

Congratulations to authors Eggert and Sprague for writing a fascinating account of John Edelmann [Feb.]. It is a significant contribution to the history of architecture. STEPHEN T. OUSLEY

Chicago, Ill.

Identification, **Please**

EDITOR:

We have a photograph on our hands that almost certainly is not what we are told it is.



Scene: Chicago; date: Aug. 1, 1894. A building appearing to be 15 stories or so has most of its steelwork in place. The name Carson, Pirie, Scott & Co. is in evidence, but we feel this is inadmissible.

This can't possibly be the Carson, Pirie, Scott masterpiece of Louis Sullivan—wrong number of floors, different shape, etc. Can anyone tell us what building this really is? RALPH VINES

Dayton, Ohio

ED. NOTE: Can any readers help us out?

Mr. Whitton's "Proper Mix" EDITOR:

The article by Federal Highway Administrator Rex M. Whitton entitled "Preparing the Proper Mix" [May] indicates clearly that the cauldron of urban highway design is boiling over like inedible

soup from one end of the nation to the other. It is not a new discovery in cities where the seemingly wanton destruction by greedy merchants and cooperative politicians and state highway engineers has been made indelibly apparent, and where

JULY 1966

many civic values have been wiped away by this particular brand of "progress."

If Mr. Whitton's theory that a new and "proper mix" for a more palatable dish is to be expected soon, certain recent actions indicate that many more peptic ulcers can be expected by millions of urbanites before the proper pill is available across the counter.

A flagrant example of words opposing reality is the scandalous and recently approved Elysian Fields-Riverfront Expressway in New Orleans which, in spite of prolonged opposition by architects and preservationists and forward-looking concern for civic values in many citizen action groups, was approved by Mr. Whitton just three days before his advisory board on routes and designs convened for its first formative meeting.

This project will cut a hideous swath through the world-famous Vieux Carré (French Quarter) along its historic riverfront from one end to the other, arrogantly thrusting its six-lane, elevated intrusion upon the delicate scale of a National Historical Landmark District, and ending the possibility of the projected Mississippi River Development as a showplace for the people of New Orleans and the world.

While an outraged citizenry pleads for a real study of relocation and design by competent urban designers, the wheels of progress keep moving in the direction of "catch as catch can" federal subsidy millions.

Perhaps Mr. Whitton really feels the hot breath of public concern for its future, and perhaps the persisting rumors that national authority higher than he dictated the New Orleans expressway approval to him is more than hearsay.

If so, we must all help to put local and national political pressure into the recipe for the "proper mix" or too many untrained cooks will certainly continue to spoil the broth. MARK P. LOWREY, AIA

President, Vieux Carré Property Owners and Associates New Orleans, La.

PHOTO CREDITS: William Lansing Plumb-p. 6 (lower right); Gordon H. Schenck Jr.-p. 8; CBS-pp. 26, 29 (top); Robert Damora AIA -pp. 27, 29 (bottom), 52; J. Alexanderpp. 30-33, 50-51; Baltazar Korab-pp. 34-37; Hugh N. Stratford-pp. 38-39; © Ezra Stoller Associates-40-41; George Cerna-pp. 42-43; Jack Williams-pp. 44-45; Ernest Braunpp. 46 (top), 47 (top); Stone & Staccati-p. 46 (bottom); Roger Sturtevant-p. 47 (top); Louis Reems-pp. 48-49; Robert Galbraithp. 53; Lawrence S. Williams, Inc.-pp. 54-55.

MATOT LIFT-AID

NEW RESIDENTIAL AND LIGHT COMMERCIAL DUMBWAITER



saves homeowners:

- carrying heavy loads
- walking upstairs
- risking injury
- wear-tear on stair carpeting
- permits convenient service

New automatic Lift-Aid has been developed by a 77-year manufacturer of dumbwaiters for home and light commercial use. Easy to install in a new or existing dwelling. A complete package, 90% pre-wired with low voltage control circuit. Motor is 1/2 hp, power supply is 115/230 volt, single phase, 60 cycle. To keep the price down, no doors are furnished, hinged door interlocks are provided.

Plywood car for standard kitchen cabinet, $17 \times 17 \times 30$; general purpose car $24 \times 24 \times 30$. The rate of travel is 25 fpm loaded, serves 2 or more levels — maximum travel 30 feet. Capacity is 200 lbs. Car is suspended from steel cables and runs on steel guide rails. Key operated for safety. Write or call for prices and more information!

D. A. MATOT, INC. 1533 W. Altgeld, Chicago, Illinois 60614 312 - LI 9-2177 See our catalog in Sweet's $\frac{23a}{Mat}$ S

Circle 230 on information card

Armstrong offers the widest variety of resilient floors. The best is the one that suits your design.

Haydon Burns Library, Jacksonville, Florida. Architect: Hardwick & Lee, Jacksonville. General Contractor: The Auchter Company, Jacksonville. Flooring Contractor: Phillips Floor Service, Jacksonville Beach. Interiors: Hardwick & Lee.



The architects for the new \$2.5 million Haydon Burns Library in Jacksonville chose Armstrong Tessera Vinyl Corlon for the main floor, third floor, and mezzanine areas. One reason: Tessera Corlon has a clear, classic design, like the contemporary interiors of the building itself.

Second reason: Tessera Corlon requires little maintenance. Its subtly textured vinyl surface helps hide scuffs, scratches, heel and traffic marks. And because it is a sheet vinyl floor and almost seamless, it's easier to clean, stays better looking longer.

Third reason: By combining Armstrong Vinyl Corlon Decorator Strips with the Tessera floor, the architects added a distinctive, modern look—complementing the library's bold design.

Here, the best is Tessera Vinyl Corlon.

Because Armstrong offers the widest variety of resilient floors, your Armstrong Architect-Builder-Contractor Representative can make an objective recommendation on the floors best suited to your design. For more information on any Armstrong floor, call your Armstrong representative, or write Armstrong, 305 Sage Street, Lancaster, Pennsylvania.

SPECDATA, TESSERA VINYL CORLON. **Design:** colored vinyl chips inlaid in translucent vinyl all the way to the backing. **Available:** in 11 colors. Sheet material 6 feet wide up to 90 feet long; .090" thick. **Performance:** excellent durability, ease of maintenance, resistance to heel damage; superior grease, stain, and chemical resistance. Has moisture-resistant Hydrocord backing. **Installation:** above, on, or below grade. Suitable for installation with Armstrong Perimiflor Installation System. **Load limit:** 100 lb. per sq. in. bearing surface.

Hydrocord®, Perimiflor, Tessera®, and Corlon® are trademarks of Armstrong Cork Company.









Johnson Control Centers automate everything

Air conditioning Heating Ventilating Communications Fire and smoke detection **Building security** Illumination Programming Emergency power system Preventive maintenance program Equipment surveillance Data logging Process monitoring Motors Fans Pumps Totalizing Metering



... but the building engineer!

Our new solid state electronic control centers monitor, indicate, control, record and warn the building engineer instantly if off-normal conditions occur. They scan, compare, display, start, stop, log . . . literally automate everything. And they accept, economically, all three types of signals — pneumatic, electric and electronic.

There is no limit to the degree of automation possible with Johnson control centers. They make it economical to centralize any or all building functions. When integrated with any standard computer system, they can do everything from adjusting the heat to analyzing their own efficiency.

A Johnson control center provides the unequalled efficiency of "Management by Exception" building operation — the ultimate in systems automation. You can rely on it!



JOHNSON SERVICE COMPANY MILWAUKEE, WISCONSIN 53201 • 110 DIRECT BRANCH OFFICES AUTOMATIC CONTROL SYSTEMS • BUILDING AUTOMATION • CONTRACT MAINTENANCE • INDUSTRIAL INSTRUMENTATION CONTRACTING