

AIA JOURNAL

SEPTEMBER 1972

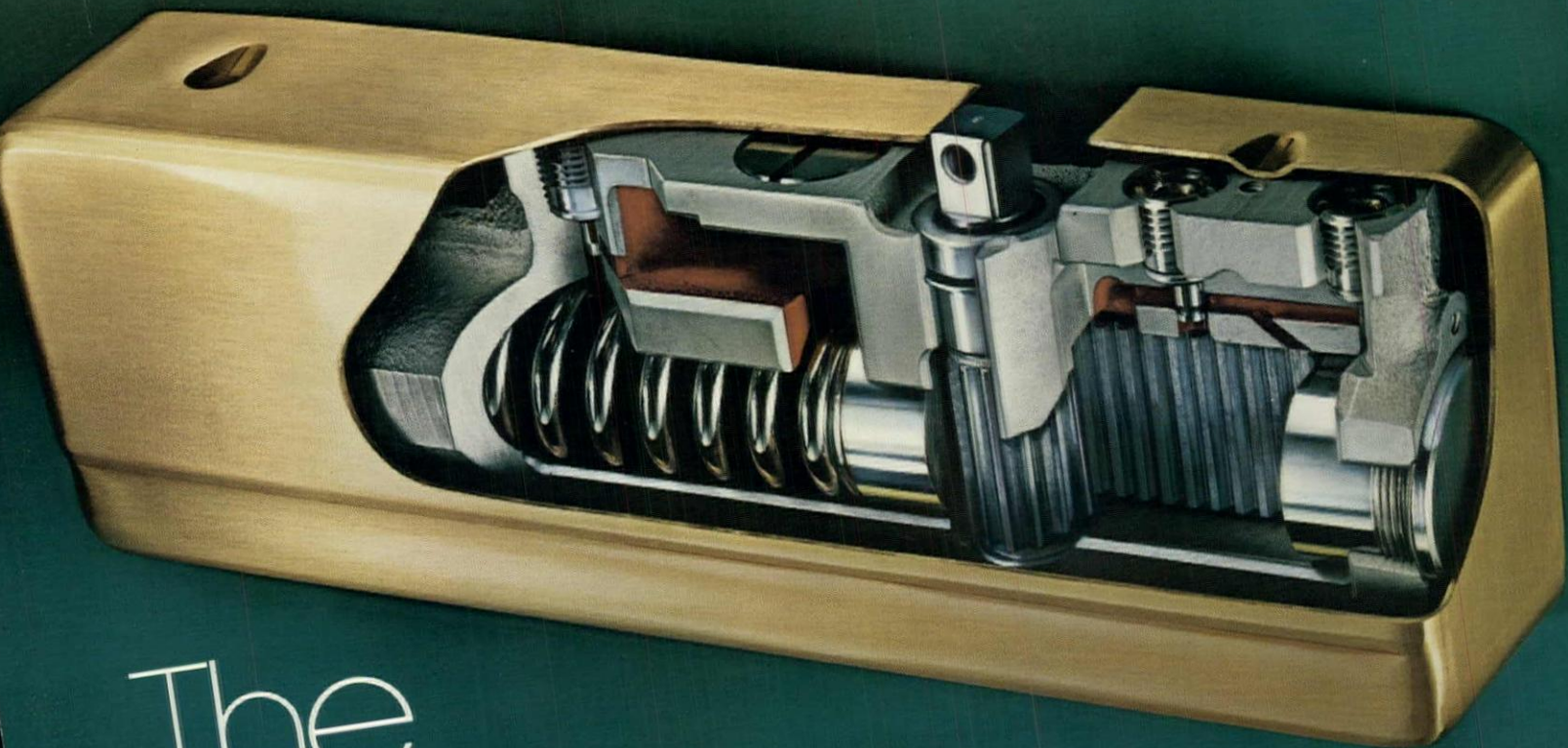
1972

SEPTEMBER

1972

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
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3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

THE AMERICAN ENDLESS WEEKEND



The
strength

The
style

The
range

Door closers.
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where strength and power
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Red Cedar Shingle & Handsplit Shake Bureau

One of a series presented by members of the American Wood Council.

AIA JOURNAL

SEPTEMBER 1972

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COVER: Getting ready for the weekend that never ends (see p. 17).

Editor and Acting Publisher: ROBERT E. KOEHLER, Hon. AIA; *Associate Editor:* BESS BALCHEN; *Assistant Editor:* MARY E. OSMAN; *Consulting Editor:* JAMES E. ELLISON, Institute Department of Education & Research; *Art Director:* SUZY THOMAS; *Sales Manager:* RICHARD J. SATOLA; *Production Manager:* GEORGE L. DANT; *Circulation Manager:* MICHAEL A. BENOIT

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Owner: State of New Jersey
Architects: Mahony & Zvosec, Princeton, N. J.
Kenneth De May of Sasaki, Dawson, De May & Assocs. Inc., Watertown, Mass.
Gen. Contractor: Glenwall Construction Co., Hawthorne, N. J.
Curtain Wall by Cupples Products, St. Louis, Mo.; glazing by American Paterson
Glass Co., Paterson, N. J.

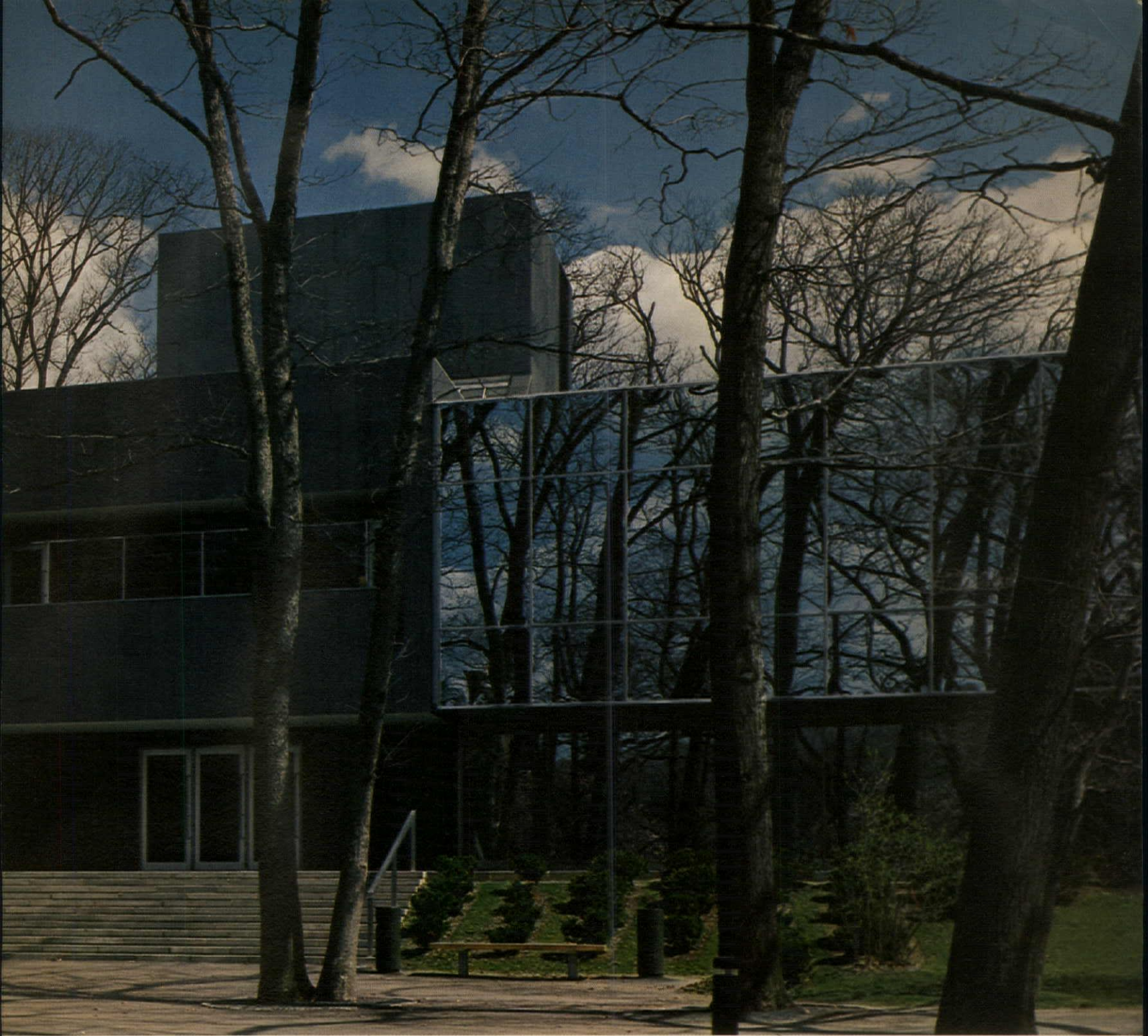
LOF helps Ramapo College change

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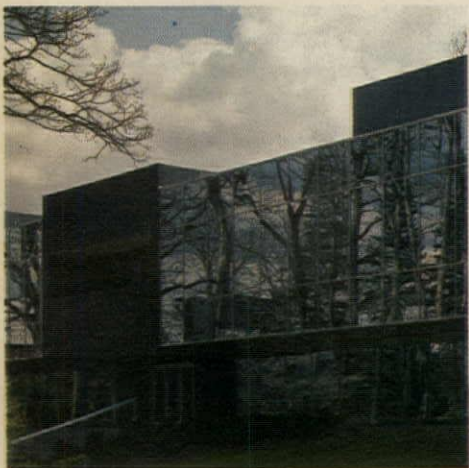
Ramapo College is located on a spacious, wooded tract in Mahwah, New Jersey, and it was the intention of the school officials and their architects to

preserve and even complement this environment as much as possible. To accomplish this end, Vari-Tran was selected.

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comment and opinion

HIGHWAYS CAN BE HAPPY — AND BEAUTIFUL — WAYS: The Highway Beautification Act of 1965 initiated a national program to control blight caused by billboards and junkyards and to promote scenic enhancement and landscaping across the land. It was intended largely as a remedial measure to compensate for environmental damage already generated by the Federal-Aid Highway Program. The American Institute of Architects has supported the goals of the act which has as its purpose the preservation of natural beauty and the improvement of the safety and recreational values of our highway system. Unfortunately, the objectives of the legislation have not been achieved; indeed, some aspects of the act are being used to thwart its very purpose.

For example, Congress has not appropriated the amount of money necessary for the aggressive billboard removal program authorized in the 1965 act which would pay the industry "just compensation" to remove such blight. As a consequence, that provision has, if anything, resulted in an increase in the number of uncontrolled roadside graphics. Observers have noted a rise in the construction of billboards in anticipation of handsome federal payoffs to take them down.

For many years the Institute has been assisting local governments by making available to them a model sign ordinance for the control of on-premise outdoor advertising which uses an amortization provision to achieve this objective. The "just compensation" clause of the 1965 act calls into question the legality of local governmental units using such a condition — and one which is essential.

The AIA has been strongly recommending that Congress amend the measure to include language to the effect that any state involved in a federally assisted transportation project be required to enact enabling legislation which would permit the amortization of on-premise and off-premise nonconforming signs and billboards. This should apply to all road systems.

The Institute is also concerned about the provision in the 1965 Beautification Act which established a 660-foot corridor along interstate highways in which no billboards may be erected. The outdoor advertising industry has been industriously installing thousands of mammoth ones just outside that corridor. When the legislation was under consideration by Congress, the AIA proposed that the language read "no billboards would be visible" from the roadway. This would create a visual rather than a specific-distance corridor.

In testimony before the Commission on Highway Beautification in June, Paul Spreiregen, AIA, chairman of the Institute's Regional Development and Natural Resources Committee, said that the graphics should be selectively used to provide the traveler with vital information in a well-designed fashion.

Michael B. Barker, administrator of Environment and Design at AIA headquarters, puts it this way: "Unless the amendments proposed by the Institute are incorporated in the recommendations of the Commission on Highway Beautification which is studying the problem, and eventually in the federal act itself, the 1965 legislation must go down in the failure column." Readers can write the commission at 1121 Vermont Ave. N.W., Washington, D.C. 20005.

ROBERT E. KOEHLER

ACKNOWLEDGEMENTS

12 — left, Balthazar Korab
18 — above, Rex Gary Schmidt, US Department of the Interior
18 — center, Cecil W. Stoughton, US Department of the Interior
18 — below, US Department of the Interior
19 — center, W. H. Spradley, US Department of the Interior
19 — below, courtesy Everson Museum of Art, Syracuse, New York
20 — center, courtesy Steel Products News Bureau
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22 — above, David Hirsch
22 — below, courtesy American Institute of Steel Construction
23 — Arthur C. Holden, FAIA
23, 24 — Edwin Bateman Morris, FAIA
27 through 33 — photos by Anthony Hathaway
36 through 38 — John Desmond, FAIA
40-41 — delineation by Ernest Burden, AIA, reproduced from *Architectural Delineation, A Photographic Approach to Presentation*, by Ernest Burden. McGraw-Hill Book Co.
56 — Julius Shulman
58 — Colonial Williamsburg
62 — Davis Dunlop

NEXT MONTH

"New or expanded court facilities will be required by a majority of judicial districts in the United States during the next 10 years. Most architects commissioned to design these projects will have little or no prior experience with the judicial function. On the other hand, most judges, lawyers and court administrators responsible for satisfying the critical need for more space will have had little or no prior experience in dealing with architects."

So writes Walter H. Sobel, FAIA, co-chairman of a joint committee of the Institute and the American Bar Association, in announcing the forthcoming *The American Courthouse: Planning and Design for the Judicial Process*, from which he has excerpted a chapter for our October issue. Sobel calls the book, published by the Institute for Continuing Legal Education, "the first comprehensive, interdisciplinary guide to the design of courthouses, courtrooms and related facilities."

Also coming up: a candid discussion among five youthful professionals at a seminar sponsored by the Boston Society of Architects under the heading "Tips for Young Architects Starting in Practice"; a look at the UAW Family Education Center near Onaway, Michigan, a project on which the client — Walter Reuther — and the architect — Oskar Stonorov, FAIA — had collaborated for so long and which neither saw in use; an analysis of what's good and bad about the rapid acceptance of housing allowances.

ASIDES

The 19th meeting of the Appalachian Trail Conference, which drew 614 registrants to Plymouth, New Hampshire, in June had a special meaning for us editors. As a good many of our readers will recall, the 50th anniversary of the publishing of Benton MacKaye's proposal in the AIA JOURNAL was appropriately noted in last October's issue in a section entitled "Regional Development: The Architect's Role." Furthermore, the program for this year's conference carried a quotation from an interview with MacKaye appearing in that same issue: "The ultimate purpose of the Appalachian Trail is to walk, to see and to see what you see."

Hugh B. Johnson, AIA, who wrote the article "The Appalachian Trail and Beyond," sent us these comments: "My own participation in this conference was to make a plea for regional planning for the Appalachian Mountains and for extension of the Appalachian Trail to fulfill the goal as stated by Benton MacKaye 50 years ago. This would include a trail from Alabama to Maine with branches extending through Tennessee, West Virginia and Kentucky, uniting the whole mountain chain in a great trail system and offering a place to walk on the mountaintops to more people, hopefully with less pressure on the vital areas. The technique of regional planning could cover all of the reaches of the Appalachian Mountains—the whole 130,000 square miles of them—controlling development, preserving selected wilderness areas and preventing destructive mining and lumbering practices." □

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National Electrical Contractors Association, Inc.
Washington, D.C. 20036



The Lord Baltimore Hotel, Baltimore, Maryland

AIA National Policy Panel Faces Urban Experts, Financiers and Developers

"We feel as though we have been in temple," said a young man from the audience which had just heard Archibald C. Rogers, FAIA, vice president of the Institute and chairman of the AIA Task Force on National Policy, give an after-dinner speech on July 28 in the new town of Columbia, Md. The group had listened with rapt attention as Rogers called for architecture not to be just a thing of "individual jewels" but a "mosaic" in equilibrium with nature and sympathetic with society.

Declaring that the US is the first country caught up in a postindustrial revolution which will run its course in 30 years, Rogers predicted that we have the resources to emerge into our "first golden age." "We are a missionary society," he said, "but we have run out of missions." He called upon America, which is witnessing the collapse of a Renaissance view of history, to have as its new mission the creation of a new environment appropriate to the postindustrial era.

The speech was the climax of an occasion which marked the second birthday celebration of the Urban Life Center of the Ameri-

mittee; William L. Slayton, Hon. AIA, executive vice president of the Institute; and Paul N. Ylvisaker, dean of the Graduate School of Education, Harvard University.

The session was moderated by Leo Molinaro, president of the American City Corporation, who said that three times in its history the nation has been on the verge of creating a national growth policy, only to have its beginning efforts defeated by national crises and war. He indicated that there is a pressing need for a national policy and commended the AIA for responding.

Rogers, first speaker for the task force, reviewed the salient points of the Institute's report. He said that a second report of the task force, to be funded by the Ford Foundation, will identify restraints and propose mechanisms for rebuilding the environment.

Each of the panel members was called upon to explicate the major portions of the AIA statement, after which Rogers outlined some of the more controversial aspects and then called on the panel members to respond to queries from the audience. The questions covered a wide range of subjects. Representa-



National policy symposium panelists are Molinaro, Ylvisaker, Rogers, Slayton and Bruner.

can City Corporation, a division of the Rouse Company. Headquartered in the new town near Baltimore and Washington, D.C., the center's membership includes such organizations as a systems engineering company, a computer graphic firm and a management training consultant group.

Earlier in the afternoon, four representatives of the AIA National Policy Task Force had met with a group of about 125 Canadian and US professional developers, planners, financiers, architects, engineers, government officials and representatives of the press to explicate and to field questions about the first report of the task force. Participants at the invitational symposium and dinner, which was the first meeting of the total membership of the Urban Life Center, came from as far away as Hawaii and British Columbia.

Panel members conducting the symposium were Rogers; Van B. Bruner Jr., AIA, chairman of the AIA Community Services Com-

mittee; William L. Slayton, Hon. AIA, executive vice president of the Institute; and Paul N. Ylvisaker, dean of the Graduate School of Education, Harvard University. The session was moderated by Leo Molinaro, president of the American City Corporation, who said that three times in its history the nation has been on the verge of creating a national growth policy, only to have its beginning efforts defeated by national crises and war. He indicated that there is a pressing need for a national policy and commended the AIA for responding. Rogers, first speaker for the task force, reviewed the salient points of the Institute's report. He said that a second report of the task force, to be funded by the Ford Foundation, will identify restraints and propose mechanisms for rebuilding the environment. Each of the panel members was called upon to explicate the major portions of the AIA statement, after which Rogers outlined some of the more controversial aspects and then called on the panel members to respond to queries from the audience. The questions covered a wide range of subjects. Representative ones, greatly condensed here, were: Why is it necessary for the policy to commit the AIA to a neighborhood growth unit? How will we be able to ascertain the appropriate unit of growth? How can a regulatory policy body be really responsive to the desires of people at a neighborhood level? Will such bodies be elective or appointive? Does the AIA policy position tend to nationalize the management of the growth process in the US? Is the policy proposed in the statement strong enough to restrain or contain the socio-economic forces flowing in the nation today? Does the policy statement suggest a professional bias toward land use? What kind of urbanization pattern would the policy produce by the year 2000?

Apparently the audience considered its questions to have been answered in a satisfactory and straightforward manner. Perhaps the success of the occasion is evidenced in a question raised following Rogers' dinner

speech at the evening's conclusion: How can the Institute bring in other professions and broaden the constituency of adherents of a national policy?

The Urban Life Center, sponsors of the event, is directed by Claude E. McKinney. It is an association of individuals representing industries, institutions and firms which are concerned about urban life and community development. It conducts seminars, workshops and conferences which address themselves to such topics as land planning, urban growth, health, transportation, etc. It began with a concept of resident membership of organizations physically located in Columbia's American City Building. At a press conference prior to the panel's discussion, McKinney announced that a group of 50 organizations located elsewhere had become associates of the center as "partners in the community development process."

Energy Saving Ideas to Be Presented, Seminars Planned in 50 US Cities

The Producers' Council, Inc., is sponsoring a series of Energy Conservation Seminars to be presented this fall in over 50 major cities across the nation.

Developed in response to numerous statements about the energy crisis, the seminars will emphasize the manner in which the most efficient use of energy can be effected through initial design and through the utilization and application of building products and equipment. There will be presentations at the time by technical staff of key manufacturers whose products have a direct relationship to the energy problem.

It is expected that architects, engineers, building managers, contractors, owner/investors, government officials and others will attend the half-day sessions.

Among the cities in which the seminars will be held are New York City, Milwaukee, Denver, Chicago, San Francisco and Honolulu. A complete listing with dates will be provided by the AIA JOURNAL to any reader upon request.

Sponsors of the seminars are: American Public Power Association; American Gas Association; Amspec, Inc.; Apache Foam Products; Armstrong Cork Co.; Barber-Colman Co.; C-E Glass, Inc.; Electric Energy Association; W. R. Grace & Co.; Grefco, Inc.; Johns-Manville Corp.; Libbey-Owens-Ford Co.; Owens Corning Fiberglass Corp.; PPG Industries, Inc.; Silbrico Corp.; Westinghouse Electric Corp.

Newly Issued Construction Index Offers A Coordinated Communications System

The Joint Industry Conference has issued the *Uniform Construction Index* to facilitate the exchange of construction information. The index replaces the 1966 edition of the United States *Uniform System for Construction Specifications, Data Filing and Cost Accounting* and the Canadian *Building Construction Index*. JIC is composed of eight organizations, one of which is the AIA. Sweet's Division, McGraw-Hill Information Systems Co., also contributed to the development of

continued on page 10



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the index, which is supported as well by several Canadian organizations, including the Royal Architectural Institute of Canada.

The new index provides for uniformity in the recording and use of information by all segments of the construction industry. It uses an expanded system for filing and retrieving technical literature and other data and relates directly to the elements of specification writing and cost estimating. Manufacturers are being encouraged to assist in the filing and retrieval function of the new system by print-



A New System of Coordinated Construction Communications Produced for the Construction Industry in the United States and Canada

The Uniform Construction Index represents the first step in a new system of coordinated construction communications. (See Index and Cost Accounting)

The 1972 Uniform Construction Index has four distinct parts:

- Specification Format
- Cost Filing Format
- Cost Accounting Format
- Project Filing Format

The Index covers the entire construction industry, including residential, commercial, industrial, and public works. It is a useful tool for architects, engineers, and contractors. It is coordinated with the new books in a comprehensive series of publications of construction information.

The Uniform Construction Index is a system for:

- Cost Estimating
- Cost Filing
- Cost Accounting
- Project Filing

The Uniform Construction Index was prepared and is supported by the following organizations:

- American Institute of Architects
- American Council on Education, Inc.
- Association of General Contractors of America
- Association of Professional Engineers, Architects, and Surveyors
- Building Industry Association
- Construction Industry Institute
- Construction Industry Institute of Canada
- Construction Industry Institute of Mexico
- Construction Industry Institute of the Philippines
- Construction Industry Institute of the United Kingdom
- Construction Industry Institute of the United States
- Construction Industry Institute of the USSR
- Construction Industry Institute of the USSR (Moscow)
- Construction Industry Institute of the USSR (Leningrad)
- Construction Industry Institute of the USSR (Sverdlovsk)
- Construction Industry Institute of the USSR (Novosibirsk)
- Construction Industry Institute of the USSR (Khabarovsk)
- Construction Industry Institute of the USSR (Yekaterinburg)
- Construction Industry Institute of the USSR (Chelyabinsk)
- Construction Industry Institute of the USSR (Omsk)
- Construction Industry Institute of the USSR (Novosibirsk)
- Construction Industry Institute of the USSR (Khabarovsk)
- Construction Industry Institute of the USSR (Yekaterinburg)
- Construction Industry Institute of the USSR (Chelyabinsk)
- Construction Industry Institute of the USSR (Omsk)

ing index classifications on their technical literature. The inter-related formats are further tied together by a comprehensive index of key words of construction terms.

Changes embodied in the index are based on six years of experience with a comprehensive data filing format. An addition to the system is the Project Filing Format developed from Canada's *Building Construction Index*. Of particular interest to architects, the format provides filing standards for correspondence, agreements, modifications, etc., for individual projects.

The manual sells for \$6.50 to members of the participating organizations and for \$8 to nonmembers. Orders may be placed with the Publications Department, AIA, 1785 Massachusetts Ave. N.W., Washington, D.C. 20036.

Alignment with National Commissions Reflected in AIA Department Changes

A new Department of Environment and Design, headed by Michael B. Barker, has been created by the AIA (see p. 14). At the same time, the Department of Government Affairs has been restructured. In addition to the legislative and federal agency liaison, the department will be responsible for the state government affairs program and a new public campaign to be financed by special assessment of the membership.

James C. Donald, who will head the department, will spend half his time as director of the Special Assessment Program. The aim of the program is to convince both private and government clients to adopt the Institute's preferred methods for procurement of architectural services, i.e., to select an archi-

tect primarily on the basis of competence and qualifications to do the work and not on the fee to be charged.

New administrator of the Department of Community Services is E. Donald Van Purnell, who for the past two years was acting department chairman and assistant professor, Department of Architecture, Southern University, Baton Rouge. A graduate in architecture from Howard University in Washington, D.C., he also holds master's degrees in architecture and in environmental design from Yale University. He has had considerable experience in a number of architectural and planning firms.

San Francisco Tries to Save Heritage, Offers Victorian Houses for Sale

San Francisco's Carpenter Gothic or Victorian houses, some built before the earthquake and fire of 1906, are a distinctive feature of that city (see Aug. '71). Forty-one of the best remaining houses in the Western Addition A-2, a 73-block area that is the site of a \$220 million project, were put on sale recently by the San Francisco Redevelopment Agency. The minimum acceptable bid was put at \$500 each.

To be preserved, the houses will have to be moved or restored on site by successful bidders. Thirteen of them are designated by the San Francisco Landmarks Preservation Advisory Board as having "notable visual merit" and must be moved to pre-designated lots set aside for them in the redevelopment area. Nineteen are of "exceptional or notable visual merit" and must be moved outside the renewal area to any site available to the bidder at his expense. The nine others, of "exceptional or notable visual merit," are to be rehabilitated in place.

The sale offering is a result of protests after the destruction of 200 Victorian structures a decade ago. Both the landmarks board and the redevelopment agency agree that a great public effort should be made to preserve and restore these buildings which are so much a part of the heritage of San Francisco.



A Classic Revival building on Sutter Street (left) has heavily detailed cornice and pediment. The Italianate structure on Ellis Street (right) has had most of its elegant trim removed.

FAA Supports Study of Elevated STOLport For Evaluation of Construction Costs

The New York City architectural and engineering firm of Parsons, Brinckerhoff, Quade & Douglas, Inc., has been awarded a \$119,249 contract by the Federal Aviation Administration for the design and cost estimates of constructing elevated STOLports (short take-off and landing).

The firm will develop architectural and engineering plans for a 2,000x300 foot-STOLport on an elevated surface. The exterior design of the structure supporting the STOLport will be planned to provide an approaching pilot with realistic cues resembling those included in an actual landing facility located on top of a multilevel building. Conditions such as crosswind control, turbulence, lighting, etc., which would affect the operation of an elevated STOLport, will be considered.

A technical report, to be finished in 10 months, will compare construction costs for a test STOLport with one that could be put into operational use following completion of a test program.

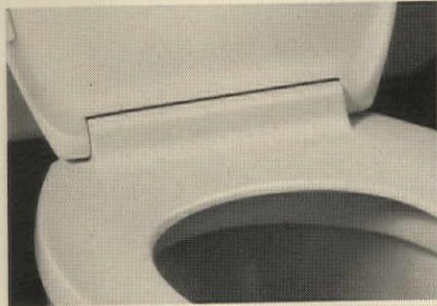
'Office of the Year' Awards Are Made, Show Flexibility, Workstation Modules

The magazine *Administrative Management* has given its "Office of the Year" first award for 1971 to the new home office of McDonald's Corporation, an eight-story building located on a landscaped site in Oak Brook, Ill. Built at a cost of \$10 million, the structure was designed by Balsamo Associates with interior planning by Associated Space Design, whose president is William L. Pulgram, AIA.

The interiors are the result of team effort conducted by the staff of ASD and McDonald executives. There is an open plan, considerably different from so-called "office landscaping," which creates flexible spaces and encourages communicative interaction. ASD designed modular furniture, and the

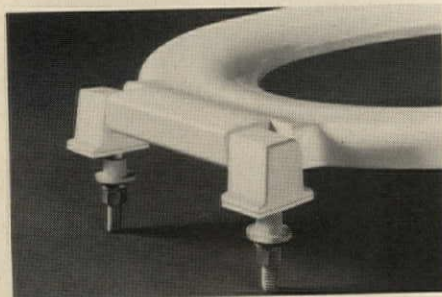
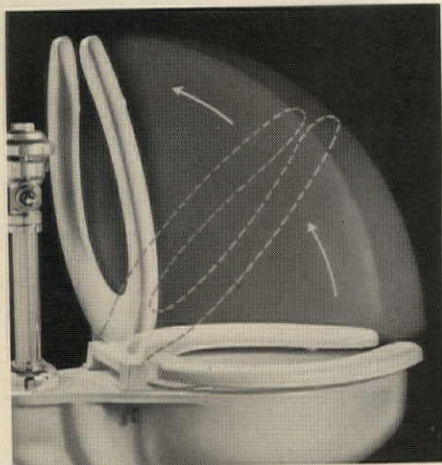
continued on page 12





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Unique hinge design raises solid plastic seat away from bowl by a full 1½"1 Enables easier, more thorough cleaning. With cover up, back of seat and cover blend to conceal hinge and protect from moisture. Open and closed front models; regular and elongated.



NEW SELF-RAISING BENEKE SEAT

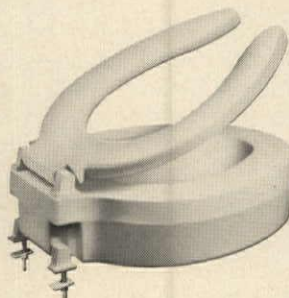
The Beneke NSR solid plastic seat has a preset, soft-spring mechanism; never needs adjustment. It is completely enclosed; aids housekeeping and sanitation. When not in use, seat slowly raises itself to upright position. A "check" stop prevents damage to tank or flush valve. Regular and heavy-duty open front models; regular and elongated.

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SHELTERING ARMS®

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For additional information, please contact

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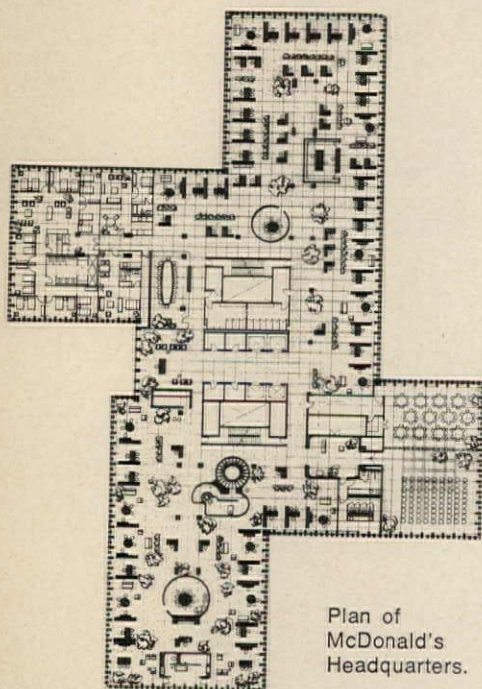
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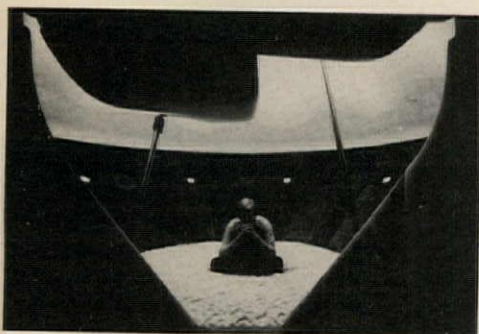
units installed appear as built-in equipment, yet are easily movable with interchangeable components.

An unusual feature is a "think tank," a capsule for "escape," which provides a facility conducive to contemplation. When used by groups, it stimulates "nonprogrammed, creative dialogue."

Awards of merit went to the Manufacturers National Bank in Detroit (architects: L. G. Redstone Associates) and to the Weyer-



Plan of McDonald's Headquarters.



The think tank features a furry water bed.

haeuser Co., Tacoma, Wash. (architects/interior designers: Skidmore, Owings & Merrill; interior space planning: Rodgers Associates).

Honorable mentions were presented to six other offices: Union Mutual Life Insurance Co., Portland, Me. (architects: Hugh Stubbins & Associates; space planning: Bernard Soep Associates); Blue Cross/Blue Shield of Tennessee, Chattanooga (architect: John Portman, FAIA); Westinghouse Electric Corp., Nuclear Energy Center, Monroeville, Pa. (architects: Deeter Ritchey Sippel Associates; interior consultant: ISD Inc.); Advance Mortgage Corp., Southfield, Mich. (architects/interior designers: Leonard Siegel Associates); Chubb/Pacific Indemnity Group, Los Angeles (interior space planning architects: M. Arthur Gensler Jr. & Associates); and Gulf + Western Industries, New York (architect: Thomas E. Stanley, AIA).

Design Institute Will Further Fuller's Work; Major Exhibit Set for Chicago

AIA Gold Medalist R. Buckminster Fuller is turning over his life work of "reforming the environment of man" to a new nonprofit corporation called the Design Science Institute. To be located in Washington, D.C., the institute plans to perpetuate and promote the ideas and designs for which Fuller is so celebrated.

The president of the new organization is Glenn A. Olds, president of Kent State University. A "world advisory council" will be comprised of science writer Arthur C. Clarke; urban planner Constantinos A. Doxiadis; anthropologist Margaret Mead; medical scientist Jonas E. Salk; former Secretary of the United Nations U Thant; and President of the Massachusetts Institute of Technology Jerome B. Wiesner.

Recently the National Endowment for the Arts awarded a \$50,000 matching grant to Chicago's Museum of Science and Industry for a major exhibition of Fuller's work. Called "The Design Science of R. Buckminster Fuller," the exhibition will be held at the museum from May 1 through August 31, 1973.

New Hampshire Community Cited Twice, Environmental Quality a Keynote

Controlled Environment Corporation is an unusual organization which was created and is owned by four New Hampshire institutions: Dartmouth College, the Manchester Bank, the Society for the Protection of New Hampshire Forests and the United Life and Accident Insurance Company.

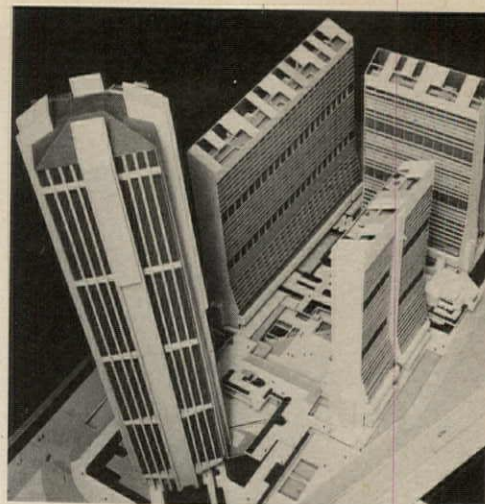
CEC selected the firm of Emil Hanslin Associates to plan, design and market the new community of Eastman in the heartland of New Hampshire. Sited in a wooded area of 3,500 acres, Eastman has an open space plan to protect ecologically fragile areas. The open space framework protects a resident's privacy but encourages him to relate to his neighbors through a common property interest.

Recently the developers of Eastman were recognized by the editors of *The Environment Monthly* for two categories of environmental excellence. One citation honored the corporation for the outstanding "initiative and innovation" of the Eastman program. A second citation went to Emil Hanslin Associates for the master plan "which goes beyond most communities in creating a dynamic open space framework to protect miles of waterfront and encourages values environmental and social."

New Life Planned for Downtown Caracas As Venezuelans Erect Housing Complex

The Centro Simón Bolívar, a Venezuelan state enterprise, is building a city within the city of Caracas and transforming the south part of downtown Caracas into a lively and agreeable place.

A housing complex called Parque Central, which is expected to be completed by 1975, will contain 13 buildings with a total of 6,000 apartments to accommodate about 24,000 persons. The aim is to create middle income



The 13 buildings in Parque Central are to be the first true skyscrapers in Caracas.

homeowners by providing the apartments for a 15 percent down payment and the balance over a 15-year period.

Nine of the buildings will be 42 stories in height, the remaining will be 50 stories. Built by a mix of private and state backers, Parque Central is as completely earthquake-proof as humanly possible. The scope of the project has demanded the coordinated effort of several Venezuelan and foreign architectural and engineering firms.

The 13 units will contain stores, offices and parking facilities. Each building will have its own kindergarten and primary school for owners' children. There will be landscaped green open spaces with plazas, parks and recreational areas.

Garbage from the 13 buildings will be taken out through tubes which, by means of suction, will whisk the refuse out of the area and into a garbage center building. It will then be compacted and eliminated of noxious odors.

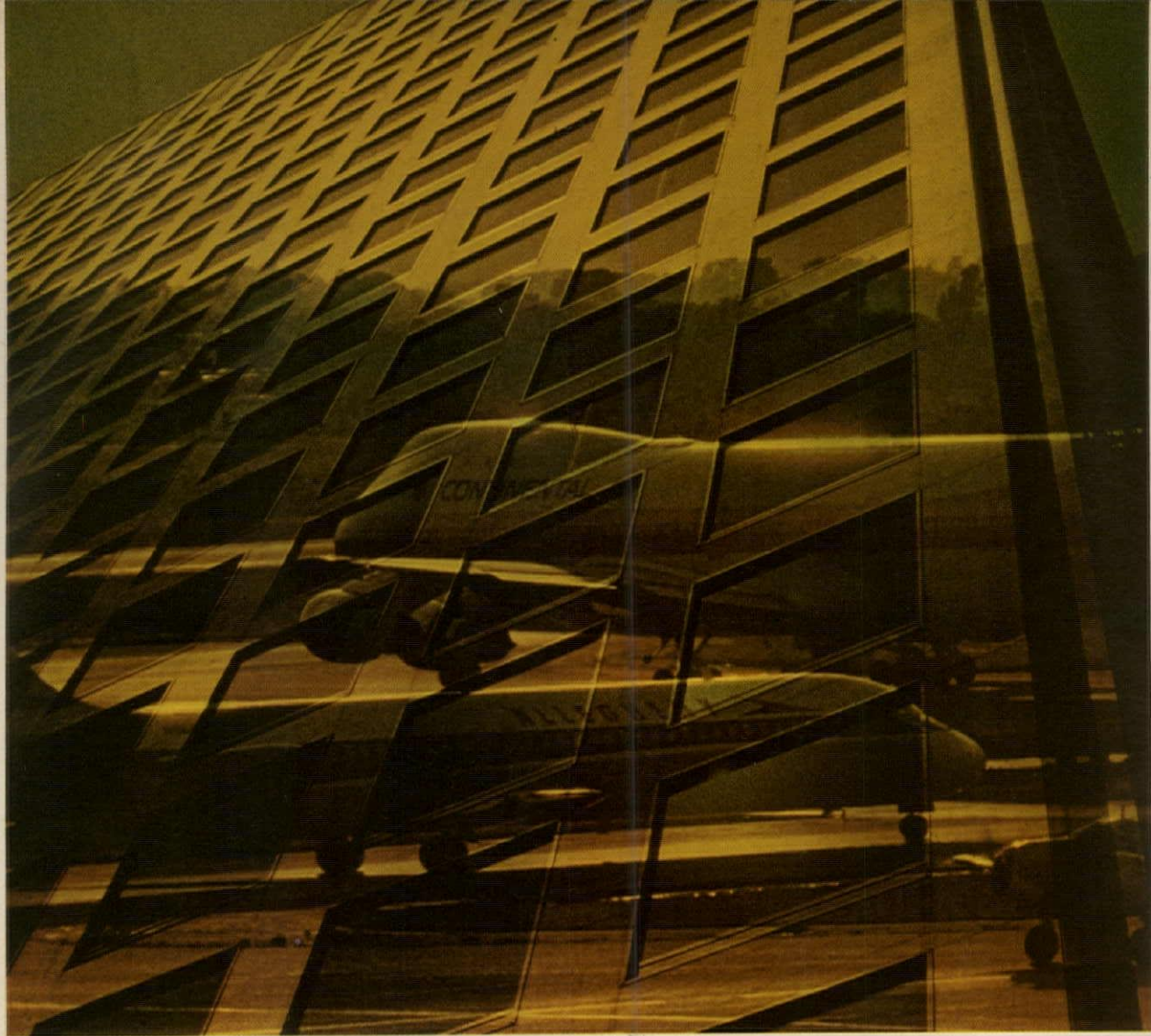
As part of the integral plan, the Avenida Bolívar will be broadened and converted into a combination of tree-lined pedestrian malls and an eight-lane roadway. Constructional changes are expected to be completed this year.

A further project in the revitalization of downtown Caracas is a concert hall to be started next year directly opposite the Caracas Hilton Hotel. It will seat 3,000 spectators and should be finished by 1973.

American Architects to Tour Russia

President-elect S. Scott Ferebee Jr., FAIA, of Charlotte, N.C., will be joined by Frank L. Hope Jr., FAIA, of San Diego; John M. McGinty, AIA, of Houston; and Mildred F. Schmertz, AIA, of New York City on a tour of the Soviet Union in October. The journey to Russia by the architects is sponsored by the US Department of State under a cultural exchange program.

A group of four Soviet architects visited the United States last fall (see Jan., p. 13). At the suggestion of the USSR Union of Architects, reciprocal visits by delegations of four architects were realized through diplomatic channels and worked out in conjunction with the Institute. *continued on page 54*



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Emphasis: Environment and Design

by MICHAEL B. BARKER
Administrator

Department of Environment and Design

The establishment of the Department of Environment and Design at AIA headquarters seems anything but newsworthy for a professional society whose primary function is to achieve quality environment through design. But before William L. Slayton, Hon. AIA, executive vice president of the Institute, and the AIA Executive Committee created such a department, the Commission on the Environment and its staff function were located in the Public Affairs Department; the Commission on Building Design was situated in the Professional Practice Department. The strong support within the Institute of the National Policy Task Force report and the close relationship of the task force to both the Commission on the Environment and the Commission on Building Design led to combining the two commissions and forming a Department of Environment and Design.

The new department will be responsible for three major programs: 1) national policy; 2) urban programs and housing; 3) design and international relations.

The department will provide staff support and the locus of operations within the AIA for the work of the National Policy Task Force. It will vigorously seek outside funding to augment the Institute's own commitment in this area. Recently a grant of \$30,000 was made by the Ford Foundation to study the constraints to implementing the task force recommendations. Presently we are seeking funds from the National Science Foundation for basic urban design and environmental research.

Already working in conjunction with the Department of Government Affairs, the new department has prepared and assisted in the presentation of Congressional testimony on five occasions covering President Nixon's national growth report, a national community development fund and national land use planning. The strong legislative program of the department will concentrate on the implementation of the National Policy Task Force recommendations.

The Urban Programs and Housing Division which is administered by M. Carter McFarland will serve three major AIA committees: Urban Planning and Design; Regional Development and National Resources; and Housing. It will focus on policy and positions regarding community development,

environmental issues and critical housing concerns. For example, a national housing policy, which the AIA can recommend to the nation, is now in preparation. Also a conference on HUD-assisted housing is scheduled for October 5-6. High priority will be placed on working closely with federal agencies and Congressional committees in the urban program and housing area.

The Division on Design and International Relations, headed by Maurice Payne, AIA, is aimed at improving the capability of architects in meeting the needs of clients in specific building design areas, as well as increasing the awareness of client associations and government agencies regarding the scope of architectural services available for particular building types. The division will direct programs and committees in the following areas: International Relations; Architecture for the Arts and Recreation; Architecture for Commerce and Industry; Architecture for Health; Architecture for Education; Historic Resources; Correctional Architecture; Capitol Architecture; Design and Building Design Working Groups Task Force.

The division will also staff the Institute's international activities. These include performing liaison work with foreign architectural societies and government agencies; providing information for foreign professionals wishing to visit, study or practice in this country; and coordinating official visits by foreign architects and by US architects to other countries.

Both McFarland and Payne are outstanding professionals and bring a great deal of knowledge and experience to their assignments.

I strongly believe that the new departmental organization will improve the quality of service which the staff can provide the Commission on Environment and Design, its various committees and the members of the Institute.

AIA members who are interested and willing to work with us in any of the areas covered by the Department of Environment and Design's activities are most welcome. We would like as many members as possible to help us in making this department representative of the nation's architects and effective in improving the quality of the environment through design. □

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The International Union of Architects' 11th World Congress is being held this month in Varna, Bulgaria. Its theme is "Architecture and Leisure." The United States has been asked to present a paper on weekend recreation in America; the United Kingdom will give one on a similar subject. The Soviet Union and France will report on annual recreation; Japan and the Scandinavian countries will deal with daily recreation while Morocco, Peru and Turkey will cover recreation in developing countries. Naturally, as far as the US is concerned, the charge fell within the bailiwick of the AIA Committee on Architecture for the Arts and Recreation, and a comprehensive committee report was developed under the leadership of C. Ray Smith, AIA. This will be published in Varna in English, Russian, French and Spanish. Hopefully, copies will be made available for sale through the Institute. In addition, an AIA film on this subject will be premiered in Varna. The following presentation by no means represents the substance of the movie's report to the world congress but rather summarizes the conclusion of the committee's manuscript, "The American Endless Weekend."

THE AMERICAN ENDLESS WEEKEND

1972		SEPTEMBER			1972	
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
3				7	8	9
10	11				15	16
17	18	19				23
	25	26	27	28		



The American Endless Weekend

by WILLIAM L. ENSIGN, FAIA



When is a weekend? All week long in America, where it has been shaped that way by working conditions. But even so, peak traffic occurs on Saturday and Sunday, when would-be recreationers rub elbows on riverbanks, in national parks and any other inviting spot.

For the past 34 years, since the 40-hour work week became the law of the land, Americans have had the opportunity to engage in weekend recreation 52 times a year. What do they make of the opportunity? How many hours do they spend on recreation? What kinds of recreation? Where? At what cost?

The United States has no statistics which provide conclusive data on weekend recreation—at least none that are known to the Committee on Architecture for the Arts and Recreation. To be sure, huge quantities of information have been amassed. But almost without exception the data is in annual or monthly figures. From a long-range planning point of view the situation is incredible because the weekend is the peak time for recreation, and our officials have not been concerned with such peaking.

Federal and state agencies apart, how can business and private recreation organizations function effectively without in some way planning to accommodate weekend crowds? It would seem that instinct is not enough any more.

What is the American weekend? The biblical injunction “Six days shalt Thou labor” notwithstanding, a five-day, 40-hour work week has been the norm for the great majority of Americans since 1938. At that time, the two-day weekend became the officially sanctioned institution to be enjoyed by most of us, not just by the privileged few. Less than a generation later, pressure began building for a still shorter work week—and a longer weekend. Today the three-day weekend is an accomplished fact several times a year. The federal government, followed by states and businesses, has instituted five national holidays on Mondays. In addition, several state holidays have been moved to Monday. Thus over 10 percent of our weekends are three days long.

Even more significant is the fact that for a growing number of Americans *all* work weeks now last only four days (*see p. 45*). In mid-1970, there were only about 40 firms known to be working four-day schedules. By September 1971 there were 670 such firms. It is reported that every day, five US firms are joining the four-day ranks. Unions, manufacturers and government officials all predict that we are on our way to a four-day, possibly even shorter, work week. Management consultant Riva Poor, whose book *Four Days—Forty Hours* has stirred the business community, says, “[The four-day, 40-hour week] is undoubtedly a benchmark along the route to fewer and fewer working hours—to a four-day, 32-hour week, to a three-day week, and so on.”



But on which days do weekends occur? While millions are engaged in recreation on Saturdays and Sundays, other millions are at work providing them with services. These millions in turn earn their rest during the week.

The traditional refrain "Thank God it's Friday" will soon apply only to a mere fraction of our populace. For others almost any other day will be substituted. In truth, the American Endless Weekend will be upon us.

Taken as a whole, our country offers an almost infinite variety of recreational opportunities ranging from the familiar to the less well known. (The official sport of the State of Maryland, for instance, is jousting.) We are a nomadic people, addicted to travel. For those who can afford it, distances mean little in the search for escape. Others suffer endless traffic jams to and from popular resorts and return to work more frustrated and tired than when they left for their weekend leisure.

Recreation is big business in America. A conservative estimate puts the current market at upward of \$150 billion per year—15 percent of our Gross National Product—and it's growing. In 1970 we spent \$516 million in spectator sports. Horse racing attracted 71 million enthusiasts; automobile racing, 41 million; greyhound racing, 12 million. Football games drew 38 million fans; baseball, 37 million; basketball, 27 million. Seventy million swimmers used our waters or the grounds nearby. Forty-two million bowlers rolled their balls down 215,000 lanes; 30 million fishermen cast their lures; 18 million hunters stalked their game—and each other; 12 million golfers swung their clubs on 9,000 courses and 75 million pairs of legs pedaled bicycles.

Bicycling, in fact, has experienced such a rapid surge in popularity that bike manufacturers and importers are unable to keep up with the demand even at a production rate of 700,000 per month. Denver is said to have more bicycles than automobiles—and yet not one bike trail. Washington, D.C., on the other hand, has built special bike trails for commuters, and the State of Oregon has decreed that 1 percent of all highway user revenues—about \$1.3 million annually—must be spent on construction and maintenance of bicycle trails in that state.

In 1970 almost 9 million pleasure boats were afloat, and \$3.44 billion was spent on boating. In that year 172 million visits were made to our National Park Service areas. Campsites in some grounds have become virtually urban in densities.

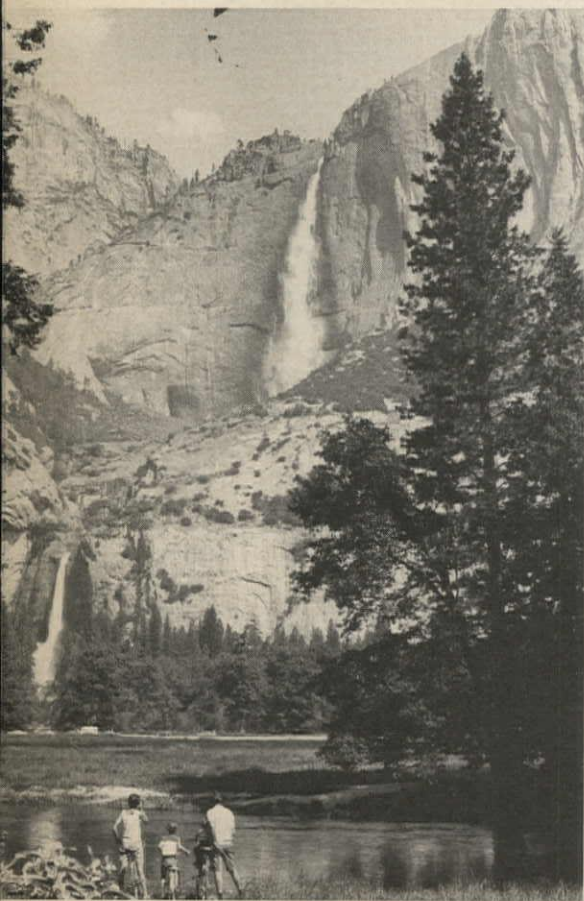
Up to this point I have placed much of the emphasis on outdoor recreation, and for a good reason: This is where the government places most of its emphasis also, a fact that might be excused in the Department of Agriculture's National Forest

Mr. Ensign is a partner in the Washington, D.C. firm of McLeod, Ferrara & Ensign. The present article is based on a slide presentation he made at the AIA Houston convention and summarizes the extensive study prepared by the AIA Committee on Architecture for the Arts and Recreation, of which he is a member.



Recreation is also an indoor activity. One form of it is offered through the fine and performing arts. At last the first national park for the performing arts has opened: Wolf Trap Farm near Washington, D. C. (center: MacFadyen & Knowles). But museums benefit little from government funds. Pasadena Art Museum (above: Ladd & Kelsey). Everson Museum of Art, Syracuse (below: I. M. Pei & Partners; associate architects, Pederson, Hueber, Hares & Glavin).





Recreation is — or should be — for all of us. For those who cannot get far away it could be a spot near home, such as the Estée and Joseph Lauder Foundation Playground in Central Park, New York City (above: Richard Dattner & Associates). For others it could be an evening at a ball game. Oakland-Alameda County Coliseum, Oakland, California (center: Skidmore, Owings & Merrill). And for others again it could be a bicycling trip in Yosemite Park.

Service, but it is less easily overlooked in the Department of Interior (no pun intended). Interior's Bureau of Outdoor Recreation has spent seven years writing the most comprehensive plan for outdoor recreation ever devised for the US. Although not published yet, "The Nationwide Outdoor Recreation Plan" is described as being precisely and only that.*

Yet, the Interior Department's National Park Service oversees the National Historic Sites and Monuments, many of which are houses and shrines—predominantly indoor sightseeing locations. This fragmented approach at the national level results in serious deficiencies and funding restrictions in spite of a pattern and sense of cooperation which exists within the Interior Department. What of the fine and performing arts, which in the main are traditionally indoors? In spite of their half billion visitors yearly, museums have no claim on the more than \$500 million which the federal government spends annually on outdoor recreation.

In 1970 the public paid \$735 million to see plays and ballets and to hear concerts and opera, but the budget for the Federal Council on the Arts and the Humanities was only \$16.3 million. Until recently the government agencies never connected recreation and the arts in such a way as to permit cooperative development of the two. Now, however, we have witnessed the opening of the first national park for the performing arts: Wolf Trap Farm Park near Washington, D.C.

Several factors must be considered as exerting influence on recreation: mobility, affluence, increasing leisure time, population growth, urban crowding and dwindling resources of open land.

As far as mobility is concerned, we have 90 million automobiles which we drive almost a trillion miles a year over nearly 4 million miles of roads. We fly over 4 billion miles a year. Toffler calls us the "new nomads."

Half the families in this country now have an income of more than \$10,000 per year. Still, although the percentage of our population that is poor keeps decreasing, the lot of those who remain poor is increasingly miserable. Here's where we have one of the major failures of our recreation efforts: Since the poor are not mobile, recreational opportunities within their reach, physically and financially, are minimal at best. The average American spends almost half of his leisure hours parked in front of the fantasy image of the TV set, and I suspect the percentage is higher in low income families. Overall plans must be implemented to bring a healthier life to the poor as well as the affluent.

We have entered the Age of Leisure, and for the first time since the golden days of Greece and Rome, man is beginning to have the freedom to enjoy his pursuits at his own pace. For the most part we are straying from the Puritan ethic: We no longer

* Recent reports indicate that the plan which Interior spent six years and more than \$6 million to produce has been scrapped. It is now being redone and is scheduled for publication in 1973. The author, on July 12, presented an Institute statement at a public forum held by the Bureau of Outdoor Recreation.

hold work to be the central interest in life. We are rediscovering the concept of *Homo ludens*—man the play animal.

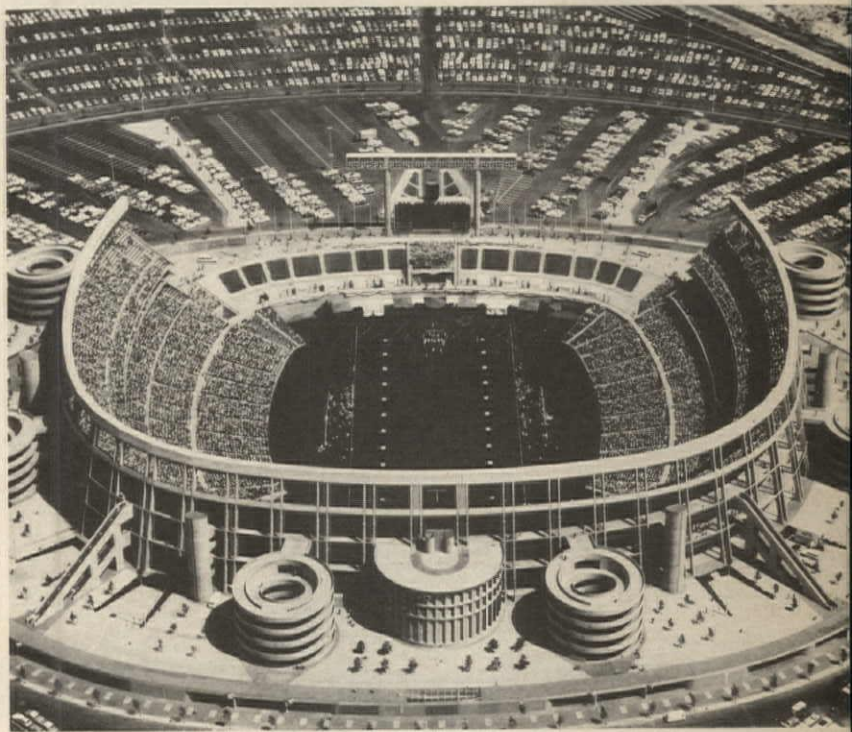
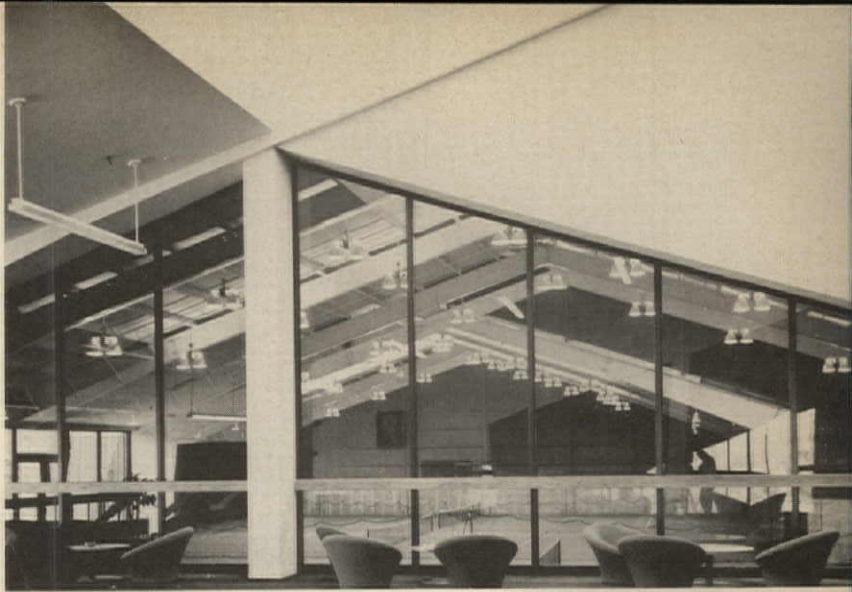
A widely accepted view of recreation in America today is that a population with increased leisure time will swallow up all our limited existing recreational land areas, that we will have too much crowding and too little land. Reports of severe overcrowding during the last several summers in our national parks provide disturbing supportive evidence.

While recognizing the need for conserving and husbanding our recreational resources wisely, the AIA committee report questioned some of the precepts accepted as gospel and was less pessimistic in its findings. First, it noted that Bureau of Census figures reveal a definite downward, not upward trend of our population growth rate. At the stage of zero growth, which could begin within a generation, the median age of our population would rise from today's 28 to 37, and there would be an equal number of people over 60 and under 15. The youth market may slow down. If careful planning is not followed we may leave our future generations with a surfeit of recreational facilities for the younger half of the population and a critical shortage of facilities for the older half.

The amount of land in this country available to the public for recreation activities, far from being inadequate in total, is staggering. Almost a fourth of the country's land surface, 491 million acres, is available to any and all Americans for recreational activities on weekends and throughout the year. The character of these lands varies endlessly. There are wilderness areas of spectacular untouched beauty with silver-etched rivers in sheer-walled canyons, painted deserts, snow-topped crags, erupting geysers, waterfalls, serene and silent forests. There are wetlands: sand dunes, quicksilver lakes, spongy bogs, whispering salt marshes, sensuous swamps. There are developed areas: parks, zoos, climatrons, reservoirs, campgrounds, picnic grounds and ski trails; the still more developed areas where architects have created gigantic stadiums, concert halls, hotels and lodges; and the overdeveloped places: the chainlinked, fenced-in asphalt jungle-gym of the inner city playground.

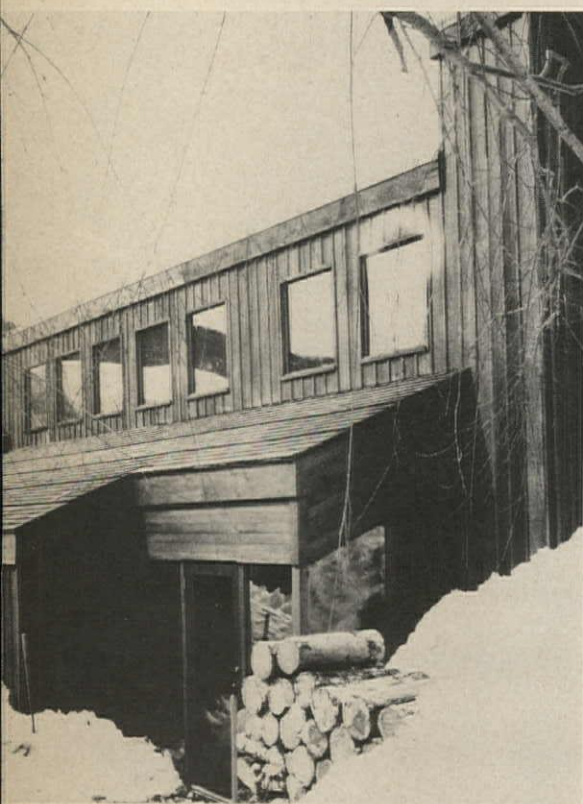
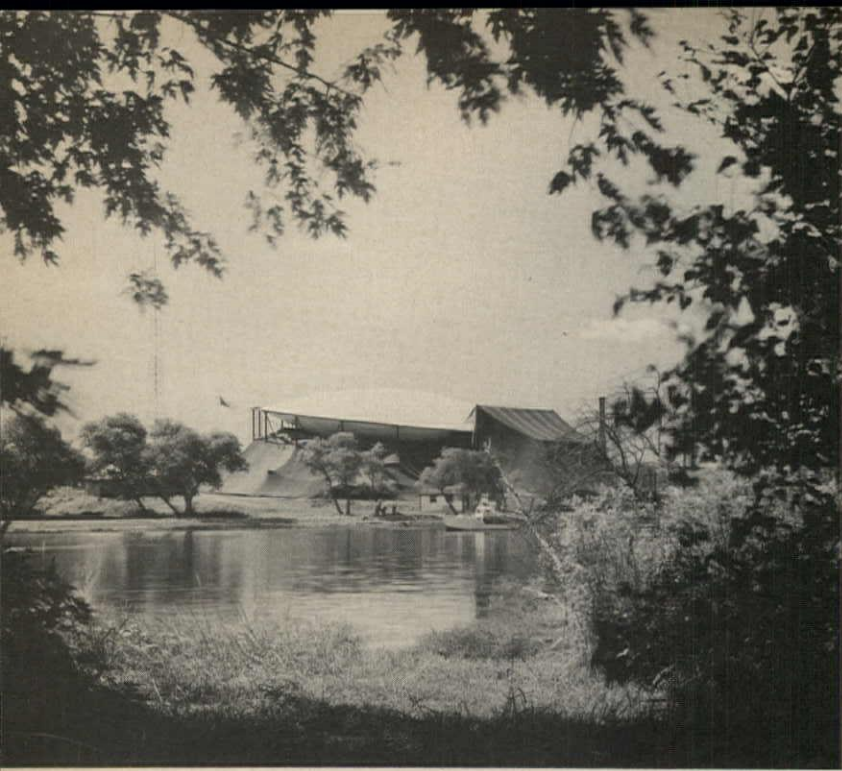
Even though we have an abundance of leisure land, we lack accessibility to it. The vast majority of our public lands lie west of the 100th meridian where only 18 percent of the population lives. Yet, almost one-half of us, 91 million people, live in the northeast quadrant, cramped into megalopolises removed from most open space. In urban America, where 75 percent of our population is concentrated, only 25 percent of the recreation facilities and only 3 percent of public recreation lands are reasonably easy to reach.

Public officials from the President on down have recognized this problem and there are signs that we may witness the birth of a new era of recreational planning with emphasis on the urban scene. As for the Department of Interior, it should first



Recreation is active sport or spectator sport — or sometimes a loafer sport, all according to your wishes. Hazel Hotchkiss Wightman Tennis Center, Weston, Massachusetts (above: Sasaki, Dawson & DeMay Associates, Inc.). San Diego Stadium, California (center: Frank L. Hope & Associates). Via Verde Country Club, California (below: Robert E. Lee, AIA).





Recreation is quite often what architects provide for it, whether it be a theater, a tavern or a sports hall. Boston Arts Theater (above: Carl Koch & Associates Inc.). Blaine County Restaurant and Bar, Ketchum, Idaho (center: Robert York). Roscoe Maples Athletic Pavilion, Stanford University, California (below: John Carl Warnecke & Associates).



of all include the whole spectrum of recreational activities within its purview. The public wants many forms of recreation whose totality is inclusive, not exclusive: It's both indoors and outdoors, active and passive, for the young and the old. It embraces the arts and crafts as well as sports and exercise, all being enjoyed in uncountable environments ranging from urban to country to sylvan. Recreation is a rich treasure chest of activities and interests, pastimes and productive creations that make up the fabric of our culture.

What roles do architects play in it all? Up to now we have had a distressingly minor role; first, because the exclusive emphasis has been on outdoor activities; second, because, paradoxically, our fee schedule pays us for what we build but nothing for what we advise not be built. Ironically, some of our most creative work has been in just this latter area.

Still, a wide variety of recreational structures are built. Stadiums, race tracks, swimming pools, camps, resorts, amusement parks, second homes, band shells, bath houses, skating rinks, theaters, restaurants, bars and pool halls, concert halls, parks, outdoor theaters and fairs. But because of the preoccupation with land acquisition and conservation of nature, the larger recreation activity is less in the province of architects and more the prerequisite of landscape architects, planners, foresters, engineers, agricultural economists and conservation scientists.

Symbolic of this situation is a 1968 publication of the Bureau of Outdoor Recreation which contains a list of organizations interested in various aspects of recreation. The AIA is not mentioned, although the League of Women Voters and the Daughters of the American Revolution are, along with the Brotherhood of the Jungle Cock and the Ruffed Grouse Society of America. An expanded definition of recreation by the government and the funding of programs to cover indoor as well as outdoor public facilities would greatly enhance our position in this field. Furthermore, if we are to practice our concept of expanded services, we must reach beyond the design of individual structures and become more involved in broad comprehensive regional planning for recreation.

Clearly, the lesson for architects is that we must become more deeply and scientifically involved in the social and psychological aspects of the recreational fields before we can be more deeply involved in recreational architecture.

Increasingly, as the year approaches one long weekend, man must develop a new concept of leisure consciousness. With proper education, leisure life opens the possibility of an expanded consciousness, a deepening awareness of the web of relationships that form the fabric of life and our human role in the environment. This frees man to explore the meaning of wisdom, the relevance of human values and the preciousness of ideas. We have a role in this future. □

The Way of an Architect with a Client

by WALTER H. KILHAM JR., FAIA



Raymond M. Hood played a vital role in the development of the skyscraper as a peculiarly American architectural expression. He was born in 1881 and died in 1934 at the age of 53. A Fellow of the AIA, he had the ability to transfer his enthusiasms to clients, as well as to young draftsmen in his office.

At the end of 1927, I had completed my school work and had picked a subject for my final thesis for a master's degree in architecture. The design curriculum of the school followed the tradition of the Beaux-Arts. But change was in the air. Skyscrapers were American, a new form of building, but they were clothed in traditional styles. I felt that with the setback requirements of New York City there could be a break with the past and a style of American architecture could evolve. I proposed to do my thesis in this area and my work in Manhattan where "the action was." My hope was to get into the office of Raymond M. Hood.

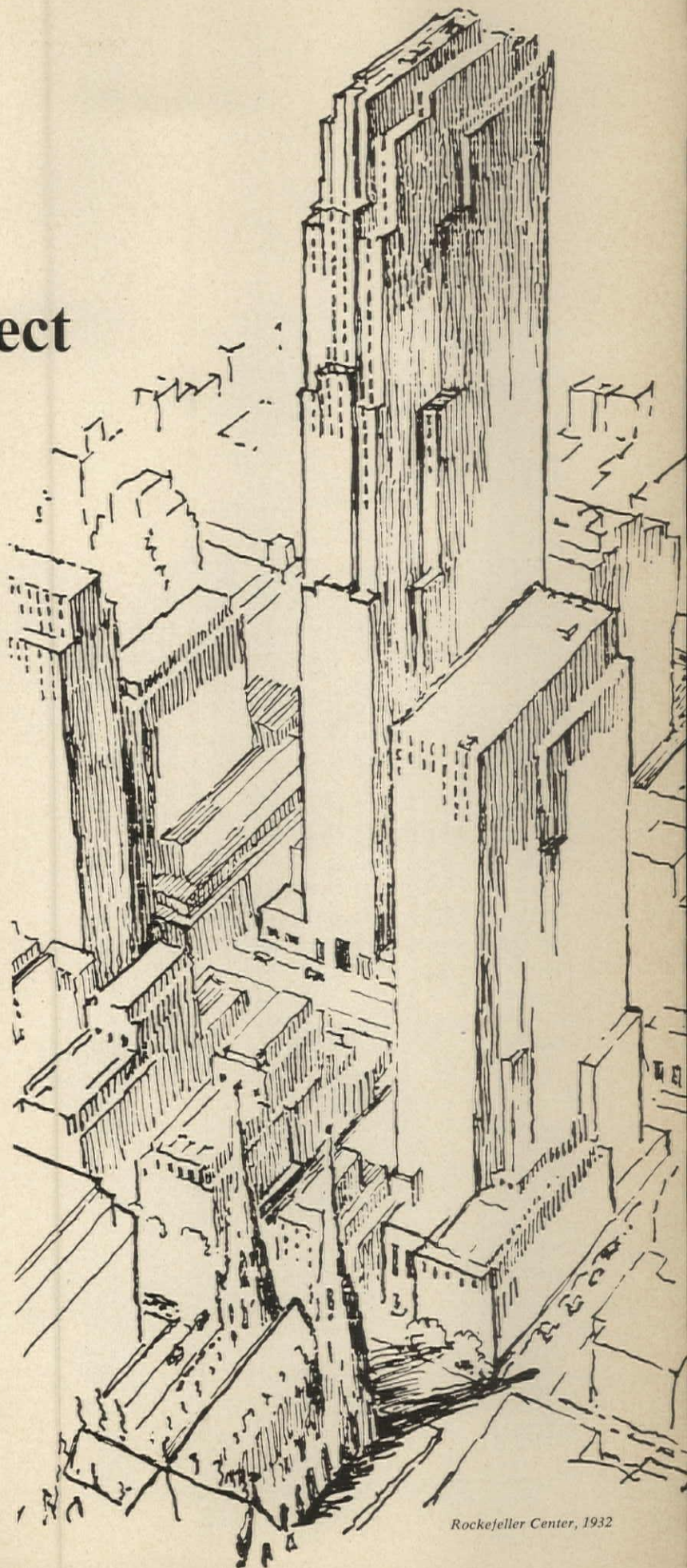
Early in 1928, I went to New York. As soon as the doors opened, I was in Hood's outer office. The architect was busy—I sat there all day—but finally, just before train time, he had a moment. His first question was what I expected to earn.

I replied that money was not my object, but only to work for him. All I would expect was enough to "keep body and soul together."

"Well, now," was his comment, "that is something that interests me very much. I once asked Ralph Cram that question, and he said it wasn't worth anything. When I asked Bertram Grosvenor Goodhue, he said \$3. What's keeping 'body and soul together' worth to you?"

I had never earned more than \$25 a week in my life, but I had been told that they would have small use for you in New York City if you mentioned such a sum. So I doubled it and answered, "\$50 a week."

Hood said that he would have to think it over, and changed the subject. He then asked if I had read *Vers une architecture* by Le Corbusier. By chance, I had two of Le Corbusier's books in my bag. Hood had only read one of them; so he borrowed the



Rockefeller Center, 1932



Tribune Tower, 1922

other, *Urbanisme*, to read. My foot was in the door. He did say to come back in the morning.

The next day I was put to work on a small job at a somewhat smaller salary. Once I was settled down, I began to come back to the office in the evenings to work on my thesis. One night, when I was alone in the drafting room, Hood came in and asked me what I was doing. I told him about my thesis on skyscrapers and the zoning law.

He said that there was only one way to learn about skyscrapers and that was to work on them. "I am starting one on 42nd Street next week and you can begin it." This proved to be the building for the *New York Daily News*. To combine work on my thesis with the actual experience in the same field was beyond anything I had dreamed possible.

I was put to work on the initial sketch plan for the building. More than that, I attended the meetings, a rare privilege for a beginner. My job then, to be sure, was one of fetch and carry, but it gave me a chance to see how things were done at higher levels.

To Captain Joseph M. Patterson, the owner of the *Daily News*, Raymond Hood was the man to give him the best possible building to house his enterprise; to Hood, Patterson was the man to give him a chance to work out his effervescing ideas of what a new structure in a modern metropolis should be. Not that Hood ever told Patterson so.

Patterson wanted a printing plant maybe six stories high with some space attached. He said, "When you experts have decided what I should do, I'll come around and see if I'll do it."

Finally, the great day for the showdown came. Everything was made ready to impress Patterson with what he "should do." Hood said to us, "Remember, Patterson is a businessman, and the stage must be set in a businesslike way. The final scheme must be determined by the figures," (the most efficient plan being the one that will net the biggest return on the investment). Nothing was said, of course, about a handsome tower that got taller and taller from one scheme to the next.

Six or eight schemes were arranged on the conference table with their calculations, zoning diagrams and estimates of cost and return. Instead of perspective renderings, the schemes were illustrated only by the series of block models. Starting with the basic six stories of the plant through to a height of 50 in a tower, the

Mr. Kilham is a partner in the New York City architectural firm of Kilham Beder & Chu. A fuller account of his assessment of Raymond Hood, prepared with the assistance of an award by the Arnold Brunner Scholarship Committee, New York Chapter AIA, will be published in the near future.

figures indicated that the best return on the investment would be for a building 35 or 40 stories high.

Captain Patterson came over. The businesslike presentation didn't fool him a bit. First, he looked at the magnificent drawing on the wall that had won the *Chicago Tribune* competition, then he looked at the figures and diagrams. "Well," he said, "I suppose this is one way of doing it," and after a pause, "but what's all this about a tower? I know I run a 'dirty rotten yellow sheet,' but if I can be on a cross-town street to Times Square, I'll get my tabloids on the sidewalks in the morning ahead of my competitors. All I want is a printing press with a bit of office space attached, and you've got this thing piling up in the air. What's that for?"

Hood was all excited. "Captain Patterson," he said, "do you realize that with this new zoning law 25 percent of your space can go to the sky? Supposing it cost you \$200,000 a year to run your newspaper. If you build additional space in this tower for rent-making, a profit of \$100,000 a year, it would cut the cost of running your newspaper in half."

"Now wait a minute, wait a minute," exclaimed Patterson. "You want me to do what? Spend \$5 million extra in order to save \$100,000 a year? Not a chance, Ray, not a chance."

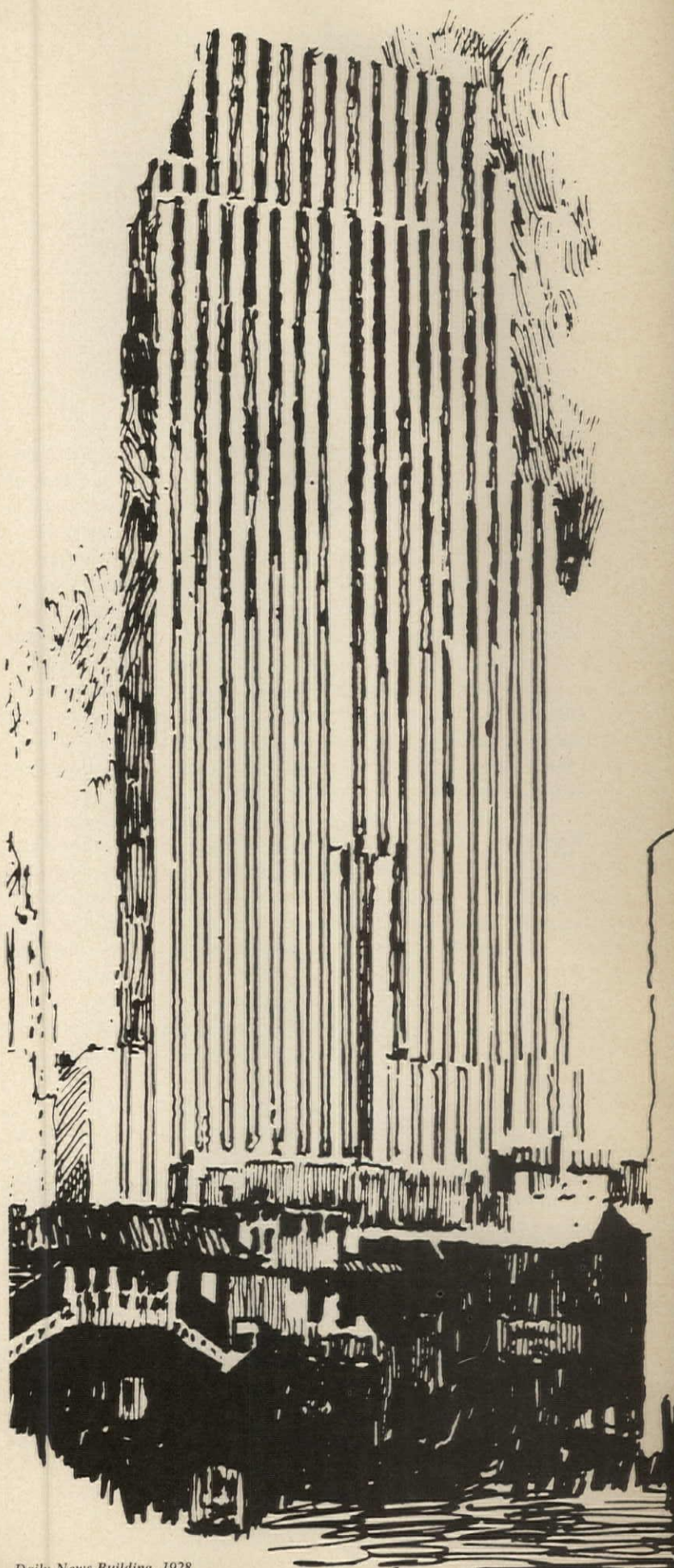
I will never forget the look that came over poor Hood's face as the effort of months fell into a heap of ashes. Patterson, however, was never one to let a good man down. After waiting until the effects of his blow were complete, he went over and put his arm around Hood and said, "Listen, Ray, if you want to build your G--D--- tower, go ahead and do it."

And that's how a six-story printing press on 41st Street came out to be a 37-story tower building on 42nd.

It is gratifying today, therefore, to go over to the *Daily News* and find this citation, a plaque on the building:

*"Landmarks of New York
New York Daily News Building
Completed in 1930 from design of
John Mead Howells and Raymond Hood
this structure was cited in 1957 by the
Municipal Art Society and the
Society of Architectural Historians
'For originality in design and
influence on later work.'
Plaque erected 1957 by
New York Community Trust"*

Much more has been told about Rockefeller Center, but with little impression of the part that Hood played in the design



Daily News Building, 1928

or the way in which he was able to do so as one of eight collaborating architectural partners in three combined firms, two or three steps down in the hierarchy, responsible for the design to the owners.

When first displayed to the public as a plaster model in 1931, the project was subject to every criticism and verbal abuse the press could muster, assisted by the ablest critics of the day. As Royal Cortissoz stated editorially in the *New York Herald Tribune*, "The crux of the business is that Radio City is ugly."

It was obvious that something had to be done to impress the management of hard-headed businessmen, whose ears were open only to square feet and dollars, that maybe architectural considerations were of importance, too. The following anecdote may illustrate how Hood picked up the challenge.

In the plans, there was a small plaza at the foot of the great central skyscraper. An esplanade leading into it from Fifth Avenue ran between two low buildings. Here there was an opportunity to create a restful feature, and Hood wanted a fountain.

At the next meeting, he presented the idea. He said that they were piling up great masses of prosaic office space, dwarfing the streets and concentrating great hordes of people to spill out of them at hours of change. Having stacked up these storied walls, baking in the sun and stifling the streets below, perhaps they should give back a little something to the man in the streets. Just take a good hot summer day on the crowded sidewalks, what would it take, he asked, just to have the sound of a little cool running water, perhaps even a fountain, splashing in the plaza at the foot of the tower. What a world of difference it would make.

"A fountain!" Dedicated, practical, hard-headed men ran this business enterprise. True to form, they came down on Hood like a ton of bricks. Almost spluttering, "Doctor" Todd, the brother of the manager, John R. Todd, asked Hood if he had any idea what it would mean to have a fountain, with running water at that. "Why," he asked, "do you realize this would mean recirculating 30,000 gallons of water a day?"

"And how much," inquired Hood in a tired voice, "how much would it cost to recirculate 30,000 gallons of water a day?" Todd scratched his head and figured away for a moment or two and finally came up with the answer. "To recirculate 30,000 gallons of water," he said, "would cost \$8.30 a day." Even to a hard-headed businessman in a \$125 million enterprise, \$8.30 a day didn't seem such an appalling extravagance after all. The fountain went in. It was to become the famous Prometheus Fountain of the sculptor Paul Manship.

As the project neared completion, it was turning out a lot better than people had been led to believe by the newspapers. In fact, as time went on, more and more individuals began to identify themselves as responsible for the success of the project. Pictures of more and more people began to appear as the man of the hour in Radio City.

One day we were passing the Fifth Avenue window of one of the noted portrait photographers, and Hood noted that there was another new portrait in the gallery. He said that he thought he'd had a lot to do with Radio City, too, but nobody ever put his picture in the window.

"Don't worry," I said. "The windows may be full of pictures of people who designed Radio City, and the Sunday magazines full of stories. However, if somebody who really cares takes a look at the Daily News Building and the RCA Building, from comparable angles, they will *know* who designed Radio City."

In June 1969 Rockefeller Center received the first 25-Year Award of The American Institute of Architects "to recognize a distinguished design after a period of time has elapsed in which the function, esthetic statement and execution can be reassessed." Some 40 years have gone by since Rockefeller Center outlived the dire prediction of its early critics, surviving the Depression as well, to become the great commercial and architectural success of its time. It has won a place in the hearts of the people of New York City as a spot to go on the Sunday walk, and it has become the great tourist attraction of the city. It is not only a monument to the courage and perseverance of its promoters but to their foresight as well.

For Hood, the first phase of the construction of Rockefeller Center was the end of the road. All his career Hood had to deal with hardboiled clients like Colonel Robert McCormick of the *Chicago Tribune*, Captain Patterson of the *Daily News* and John R. Todd of Rockefeller Center—all people who got things done, if seeming a little rough at times on the man with ideas. A master of avoiding a dead-end decision, Hood was always ready with an apt story or parable that, likely as not, charmed his client, as T.E. Tallmadge so well said, into "doing things which in his right mind he never would have done otherwise." I like Tallmadge's summary of the work of Hood: "His practice was a joy-ride in which everybody got a thrill, including the client," and I may add, the man in the drafting room, too, like me.

Architecture for its own sake was Raymond Hood's life. A contagious enthusiasm and spirit such as his is the ever-renewing vitality that keeps architecture the great profession of all time. □

PRACTICE

Bryant & Bryant, a 40-man firm in the nation's capital, is establishing ever deeper roots in its city through a healthy growth and infiltration in urban renewal areas.

PROFILE



Park Road Community Church, snug between town- and apartment houses, is built over an existing basement sanctuary.

With the City Foremost in Mind

It's a young firm but already Bryant & Bryant is making important tracks in its hometown, Washington, D.C., and especially where it counts: in the inner city. "We expect to become more and more involved in the restoration and renewal of the capital. I mean not just involved but *meaningfully* involved," says Charles I. Bryant, AIA, the firm's founder and now a partner with his brother, Robert E. Bryant, AIA.

A check of the firm's finished projects as well as those on the drawing boards shows that the brothers are already well on the way toward their goal. Among their works are the D.C. Frontiers Turnkey Housing in the much-ravaged Shaw School urban renewal area; the Uptown Office Building, to be located where some of the worst disorders took place during the 1968 riots; the Immaculate Conception Apartments for low and mod-

erate income families, also in a "riot corridor"; the Dunbar High School, in the Shaw area and on a principal avenue leading to the Capitol; and the Park Road Community Church, built over an existing basement sanctuary on a site where two run-down town houses once stood. The firm is also taking part in the building of a station for the capital's long-awaited subway system.

"This last job isn't exactly a designer's dream," admits Charles Bryant. "The stations are, for reasons of order and economy, prototypes designed by Harry Weese & Associates, so you take it from there. But it is still highly desirable to be party to the planning and construction process which will have such significant impact on the city we live and work in."

Originally from Palmetto, Georgia, the brothers Bryant, now both in their early 40s, came to the D.C. area in 1939 with

their family and settled first across the Potomac in Arlington, Virginia, but they both attended junior high, senior high and college (Howard University) in Washington, which today is home for both.

Nobody had ever heard of architects back in Palmetto during the boyhood days of the two brothers, but for Charles, with an appetite whetted by a natural affinity for beauty, people, places and structures, becoming one was simply following the path of least resistance although nobody ever encouraged him in this direction. The sight of a drafting class, with the masses of lines and dimensions, almost turned him away when he visited his future high school to make his preference for the 10th grade. He found to his delight, however, that the difficulties he had imagined were indeed just imagined.

The years at Howard helped him gain confidence and determination. After graduation and with an ROTC commission, he was fortunate enough to be sent to England for two years on an assignment with the United States Air Force. There he got an opportunity to study classic and modern European architecture. He believes this is one of many exposures which has enriched his architectural vocabulary and empathies. When he returned to the US he rejoined a large private architectural firm for two years prior to becoming a hospital planner for the Veterans Administration, a position he retained for four years. Finally he was a staff architect at the Government Services Administration's Office of Space Management. After 16 months of this discipline he was

Carrillo, Charles Bryant, Adamopoulos (president of the next-door Alphatec engineering firm), Jerome, and Robert Bryant in discussion during a review session. Bryant & Bryant's reception room has carpet and furniture in vibrant colors against muted walls.



GROSS BILLING PERCENTAGES

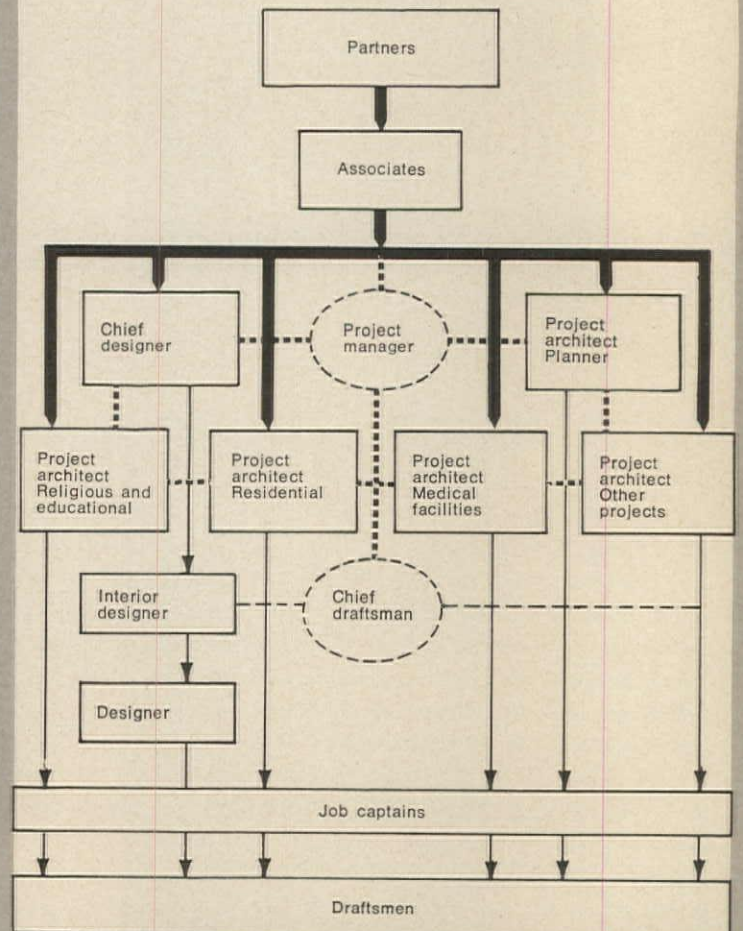
(1971-72 fiscal year)

Educational	28
Post office projects	18
Hospitals	17
Federal projects	10
Multifamily residential	8
Apartment buildings	7
Churches	5
Single family residential	2
Office buildings	1
Other	4
	<hr/> 100

STAFF BREAKDOWN

Partners	2
Associates	3
Project architects	3
Administrators	6
Project planner	1
Designers	3
Interior designer	1
Draftsmen	19
Technical specialists	2
	<hr/> 40

ORGANIZATION CHART



ready to try it alone, and so he did with three commissions—and hope.

Bob Bryant, during his high school years, had matriculated in the preparatory engineering curriculum with a view toward majoring in civil engineering. But, he says, "I must admit that I became fascinated with architecture after watching Charles prepare for design projects. After switching to architecture, I began to feel that there would be a great deal of satisfaction and a sense of accomplishment in preparing plans for structures and watching them become realities on the face of the landscape."

After graduation in 1954 and two years of service in the US Air Force, where he served as an installation's engineering officer, Bob worked for various architectural firms in the District of Columbia until 1969, when he joined his brother, and Bryant & Bryant was founded.

Today the firm has projects as far away as Maine (a private hospital in Lincoln) and all over the Washington metropolitan area. One of these, now on the drawing boards, especially pleases the Bryants: the new headquarters building for the Fairfax County YWCA in Vienna, Virginia. For this structure, Bryant & Bryant was selected with six other firms from a field of 39 which had requested consideration, and then was chosen from among the six.

But work in Washington's renewal areas is closest to the hearts of the two partners. To rebuild the cities appears to Charles to be "the most staggering job in the world, and growing; a bigger job than anyone can define, a job that we must get on with." He looks at it as a double-pronged affair: to replace the obsolete and to meet the expanding need. The architect, he feels, in order really

to make a contribution, must consider the effect of his buildings on the whole environment: on sewers, on traffic, on energy, on water; only then can he help create a beautiful and pleasant community.

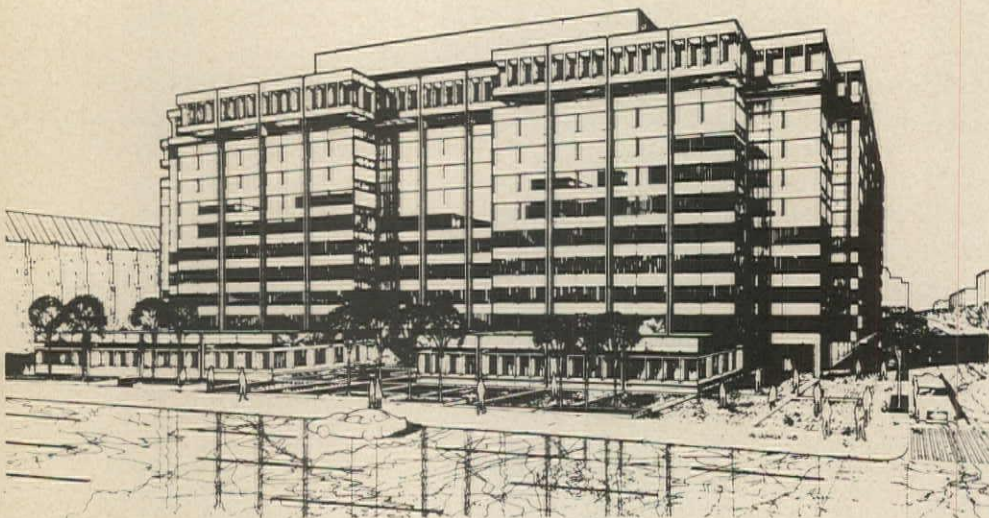
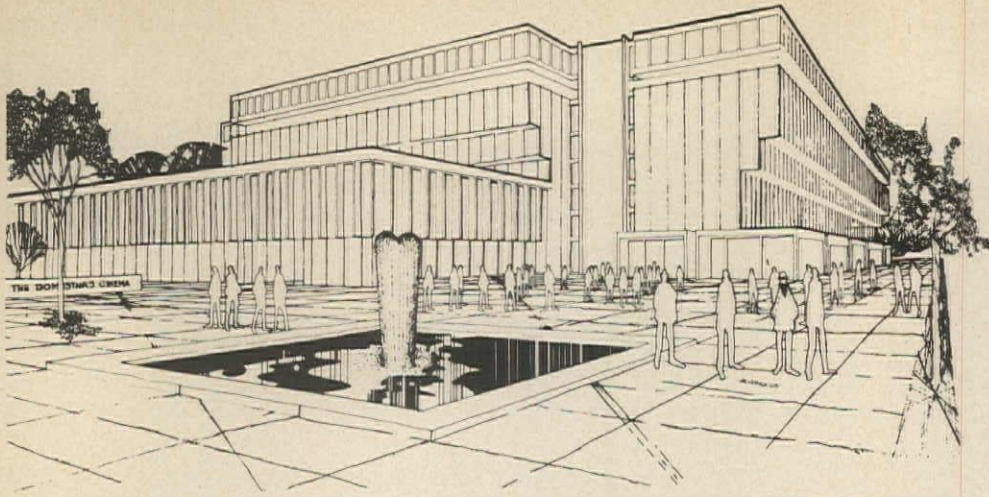
The making of such a community doesn't stop there, Charles is convinced. "Take Washington's in-town residential districts which once were handsome and uncluttered. Building maintenance was severely curtailed when we mobilized for World War II. The English and Europeans in comparison have buildings much older; what you see there is an ongoing process of maintenance, it just never stops. In our country we aren't attitudinally geared in this direction. During the last 30 years practically nothing has been done by way of a program to maintain Washington's or any other major city's nonofficial structures. We aren't trained to repair but to replace, and this attitude we've got to reassess."

To be involved like Bryant & Bryant takes quite a special commitment, not to say devotion. For instance, when the federal government is behind the funding, which is usually the case in renewal areas, the firm may well end up with only a marginal profit—if any at all. Much consideration must be given to staying within an almost impossibly tight budget, and often savings from these revisions are wiped out by the cost escalation that takes place simultaneously. It breaks down to a vicious circle, trying to be a step ahead.

But, Bob philosophizes, if you can turn a condition of difficult feasibility into a glimmering successfully structure for the city, that in itself is a great compensation. Not that the firm

The drafting room bears witness of the integrated staff, "men and women, black, white, brown and yellow," people that cities are made of.





Two proposals for an office building in an area of the nation's capital where riots raged in 1968. The final scheme (above) was approved by the community after majority concurrence.

makes a practice of working for free. In fact, the two agree, "During all our waking hours we continually seek new commissions to keep the necessary funds coming in to keep our staff busy."

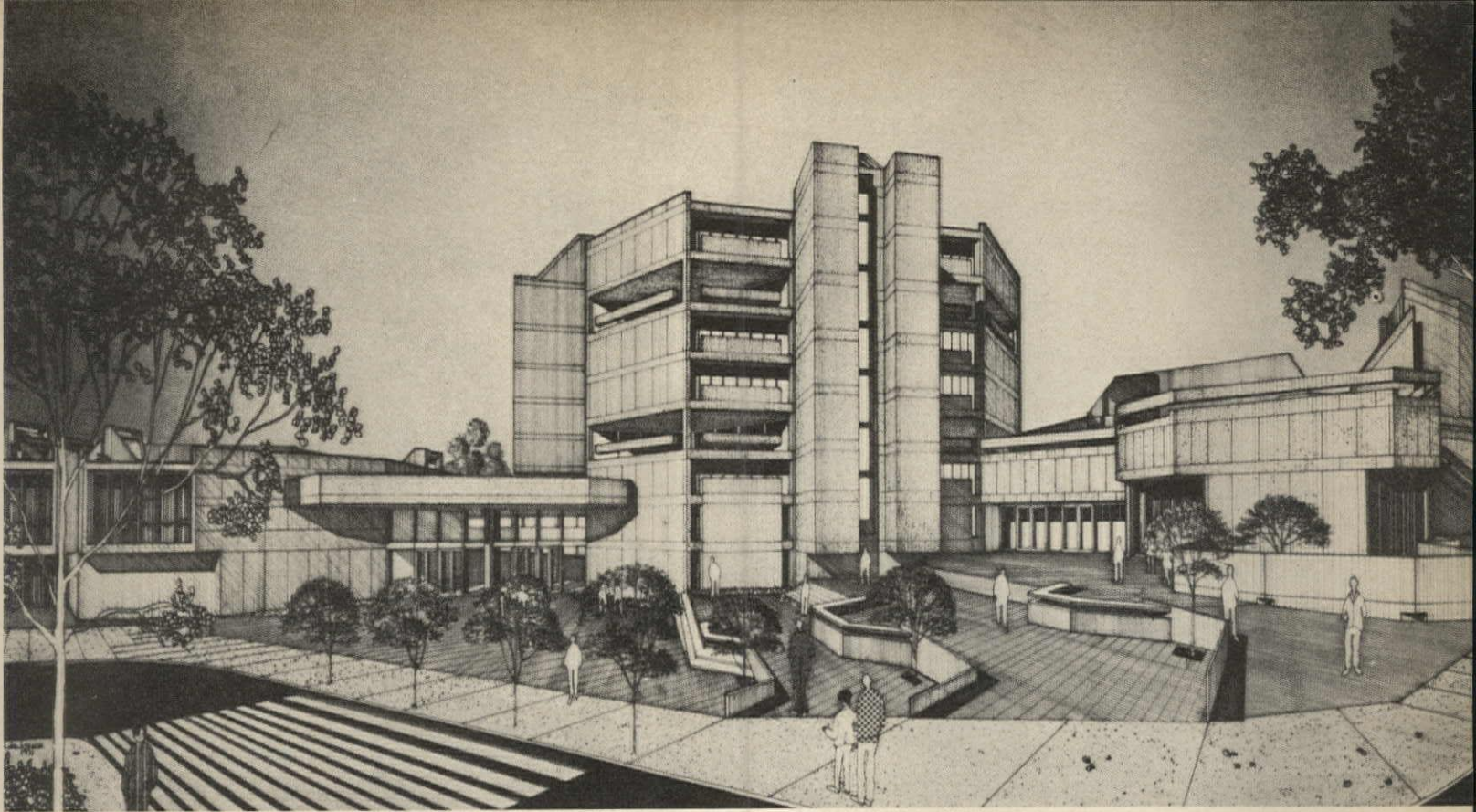
This they see as responsibility No. 1. While the idea of offering gratis services to a community development center has been discussed, the firm has not been involved in a structured program. In the first place, the two partners both are active in civic associations and do volunteer work. In addition, the firm's projects in urban renewal areas already involve a number of extra services and provide the architects the opportunity to have direct contact with citizen groups. The Frontier Housing project, for instance, literally had to be redesigned three times by Bryant & Bryant in order to meet the various constraints established by the Department of Housing and Urban Development and the local housing authority, planning commission, Redevelopment Land Agency and city council as inflation spiraled 10 to 15 percent a year. "The biggest problem was to get decisions rapidly so we would benefit from the time aspect of construction. We have less structure today for \$25,000 than we indicated we were going to give in 1970 for \$23,000. This was by no means a profitable operation," says Charles.

All of which sums up to reinforce the brothers' belief that the problems of our cities must be attacked at the highest level, that rebuilding them must be made one of our first national priorities. "The task is of such immense proportions and so many-faceted that it can only be accomplished through an all-out effort by the entire nation," the brothers agree, "and the goal must be pursued with unyielding tenacity if we are to survive as a nation. The fiber of future populations, the citizenry, is directly affected."

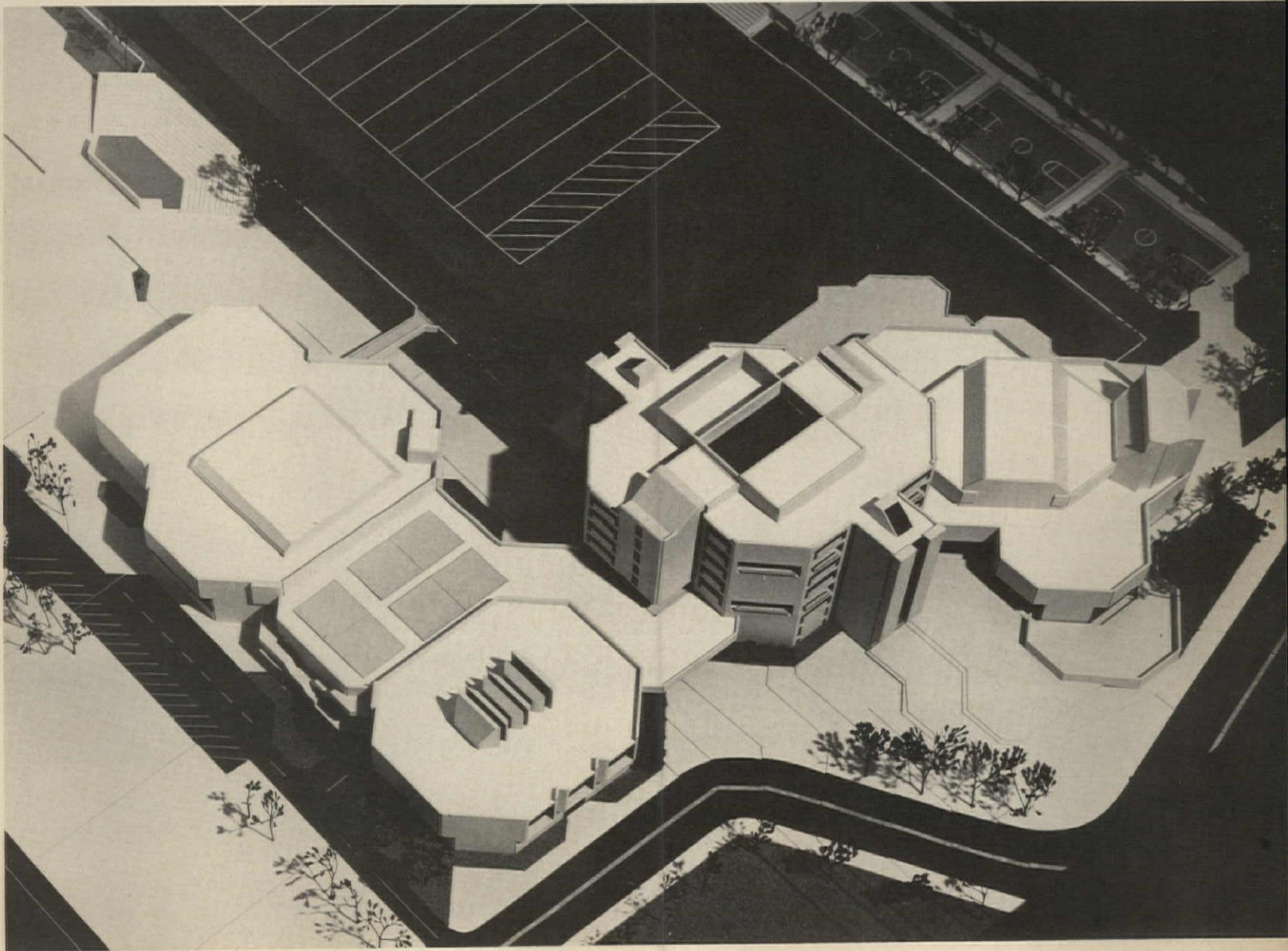
The survival of our cities, they hold, will depend on facilities which will provide a solid tax base and a population composition which is more balanced from an economic income standpoint. But how difficult it can be to place a business building in a community they found out when they were commissioned to design the Uptown Office Building. In its vicinity, not only the structures but the pulsebeat of the city needed—and still need—restoration. To pump life back into the ailing patient, the developer proposed a commercial highrise which would draw activity back into the core district. But citizens protested. Probably, Charles feels, this was because the original developer didn't quite know how to apply the mechanics of citizen participation in a fashion that would have cranked in all forces concerned.

The Bryants see as one of the main concerns in urban renewal that citizens be advised and be given an opportunity to indicate what are their needs and preferences. People participation is usually difficult and time-consuming but is nevertheless an absolutely necessary part of the renewal process. In dealing with neighborhood groups, the Bryants have played the roles of designers, mediators and politicians, and add to those psychologists, for the whole spectrum of personalities usually show up in the meetings, from the quiet guy in the corner to the articulate cynic who moves to center and never gives up disagreeing. Then there are those who think they can demand everything under the sun. That's when it becomes the architect's job to explain why there cannot be an underground garage or other amenities which would shoot the budget completely. This is a continuing situation, Charles explains.

Through it all, the brothers have found, the architect must demonstrate clearly that he is the professional, that his is the in-



The Dunbar High School replacement is the largest D.C. school board project to date. On a main avenue leading to the Capitol and in an urban renewal area, it will play a double role: as a place for learning and as a neighborhood center with pool, gymnasium, etc., open to the public.





Webb Elementary School Addition (above), which has a stilted second floor to conserve scarce play place, is one of the District's first public schools with open planning. Nalle Elementary School Addition (below) is planned to integrate with the original school both functionally and in appearance. The Georgetown Day School (across page) is a private school whose playtower, also designed by the Bryant & Bryant firm, is of differing levels and shapes of openings leading to balconies. The upper level can only be reached by a rope. Kids love it.

formed decision. While a professional, for sure, can be guided and directed to a degree, would a pilot let people tell him how to fly or a surgeon let them tell him how to operate? So, too, the architect must keep his professional position, advocacy planning notwithstanding.

Experience of the Bryants is that given an opportunity to hear and to be heard, people will understand what's going on, why things are planned the way they are and why their suggestions and wishes aren't always followed. This is what the thumbs down on the first proposal for the Uptown Office Building hinged on, as Charles suggests. It was most likely due to lack of communication. Eventually, after what must have appeared as an obstacle course for the architects, the citizen council accepted a plan to proceed with minimum variations to the planning effects of the original scheme.

But such headaches don't turn the two Bryants away, they're in there to get the job done, and done to everybody's satisfaction. Their proposal for the Dunbar High School, for example, would accomplish just this. It would draw into its life not only 1,600 students, who would pursue their studies in a 10-story high tower, but also the community, which would be free to use the auditorium, gymnasium, pool, etc., on the ground floor.

Dunbar isn't the firm's only contribution in the educational field; there have been others both in the District and in Virginia. Presently on the boards is design for the Washington Technical Institute on Connecticut Avenue and just across the street from Bryant & Bryant's offices in Van Ness Center. The Washington Tech project is in association with Ellerbe Architects/Engineers/Planners of St. Paul. The master plan is by the same team.

"To be in a joint venture is a good experience for us," says



Bob. "We use the opportunity to observe how others are working. We still have a lot to investigate in various phases of practice. I guess this holds true for most firms, for that matter. For instance, take architecture from a business standpoint. The schools simply do not train the students in this area; the graduate is completely unprepared to head up his own firm; in fact, he is often frustrated when he has just been employed and finds that he is to operate as a production trainee. It's a rare graduate who is able to move into a firm and concentrate on design and planning, the way he did in school."

The brothers find it difficult—as do no doubt many other practitioners—to project costs with accuracy and to monitor activities so that the necessary services can actually be provided while still making a reasonable profit. "It used to be that we would know the absolute cost of a project only after it was finished," says Charles. "We have taken steps to improve monitoring, including beef-up of our cost accounting staff."

Another difficult aspect of their operation, they find, is to keep the relationship between staff and workload in a proper balance. "As a young firm we have been growing steadily, and therefore it is imperative that we concentrate on securing new commissions to maintain the staff at its present size. If at all possible we won't reduce it; we don't want a reputation as a firm that will hire for a particular project and then let people go when that project is finished."

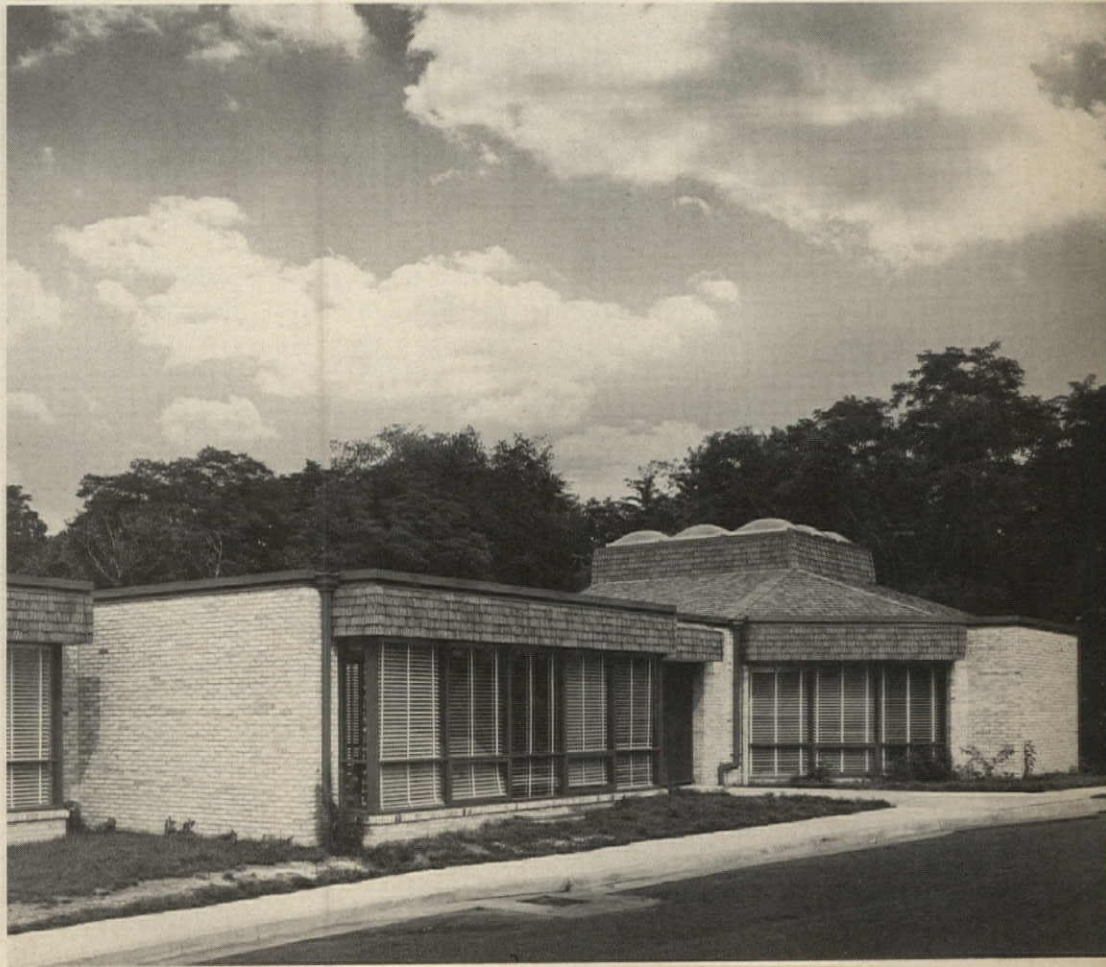
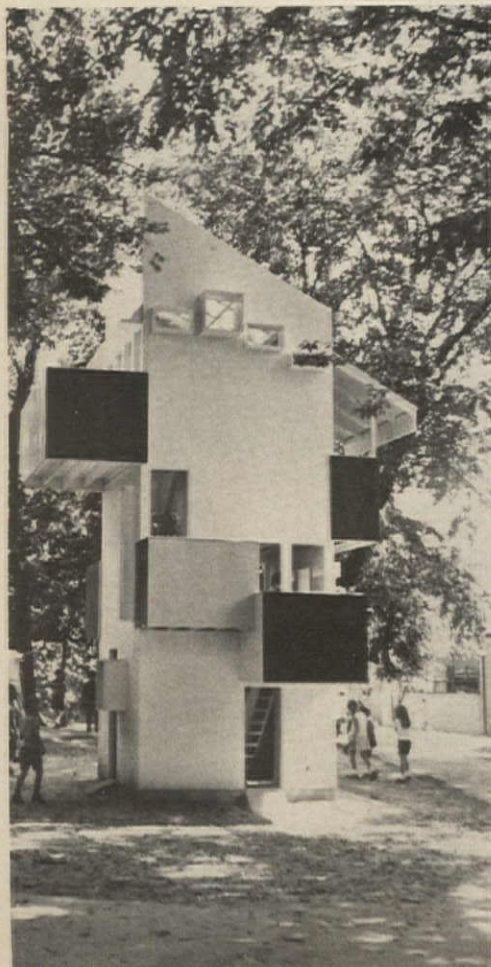
With an important part of their work for the federal government, cash flow can become a problem when payments are slow to come in. "If it hadn't been for our relationship with the National Bank of Washington, we wouldn't have been able to function," Charles admits.

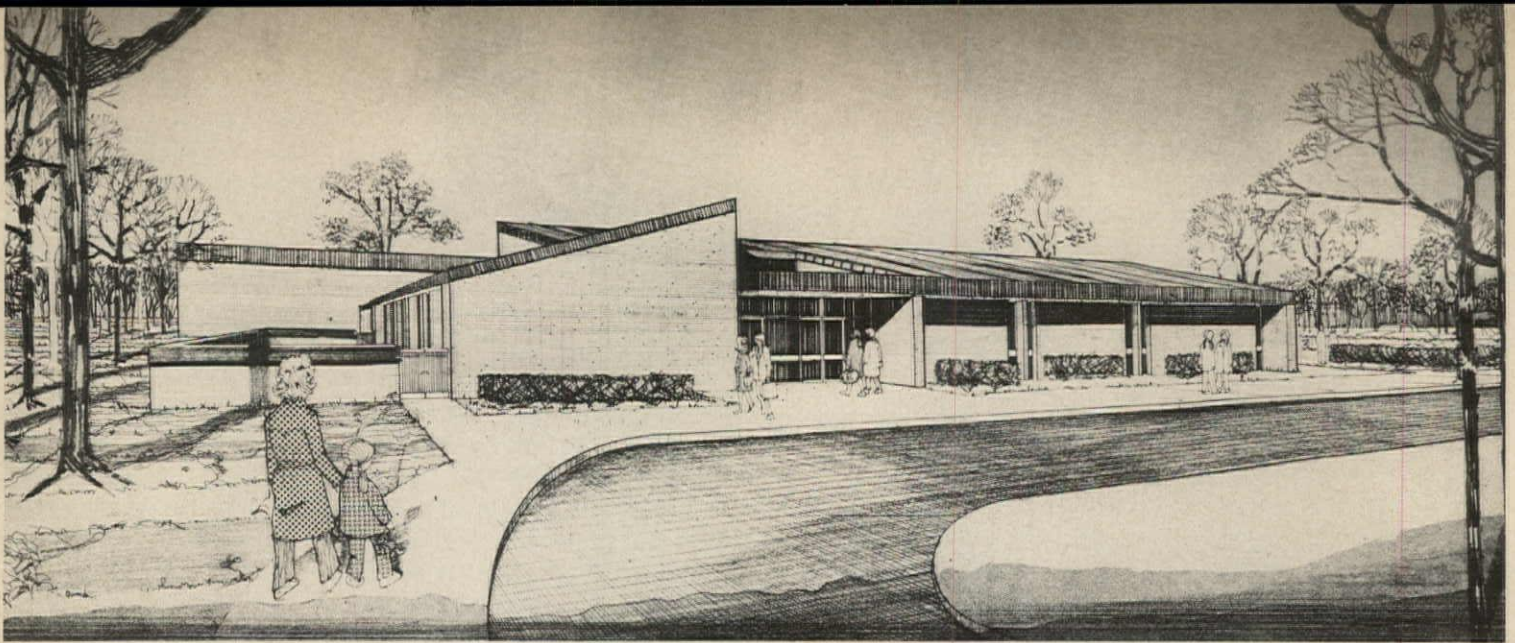
The first project on the boards of Charles Bryant & Associates (which was the name of the firm before Bob became a partner) was a \$150,000 education wing for Lomax Church in Arlington, Virginia. "My earliest commissions were secured as a direct result of having been a long-time resident of the area," explains Charles. "The clients, when they needed an architect, remembered and gave us the opportunity. Our next confidence-generator after the Lomax education wing was a \$100,000 residence for Dr. and Mrs. Oscar Ellison, also in Arlington. We provided full services for each. But the business didn't start to grow immediately; the tight money crunch of '65 and '66 nearly put us out of it. In '68 we evidenced a reversal and began a slow growth."

The Bryant brothers don't sit back waiting for the clients to knock on their door. "They just don't walk in off the street looking for an architect! You've got to let people know that you're interested in securing commissions, let them know you're there. Project yourself. Most firms get a certain amount of publicity through signs on construction sites, though this isn't possible on work for the federal government or on most school buildings. We find that our firm brochure is of great importance to us in our promotion work."

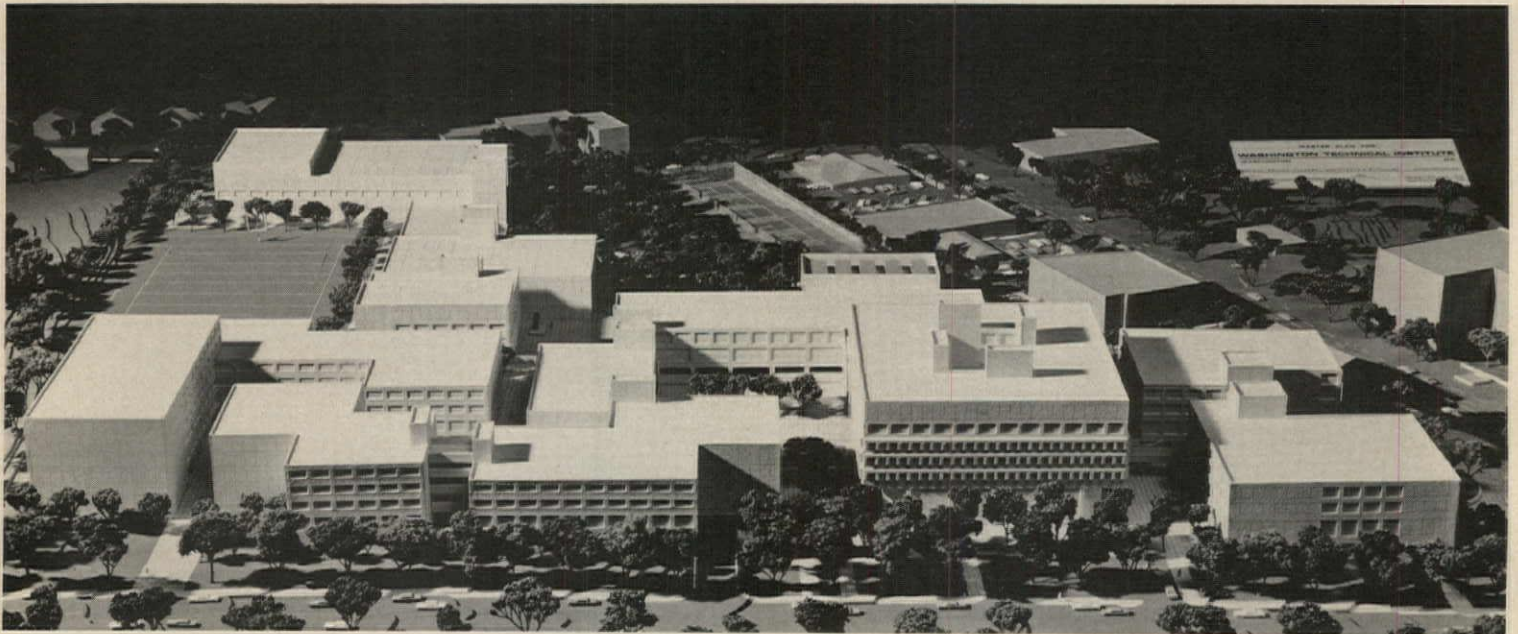
Candidly, Charles suggests that being a black firm in Washington, D.C. in the 1970s hasn't hurt when it comes to getting commissions. "But, we win some and we lose some." On several occasions they have been asked to take part in joint ventures. If they enter into one, it is on terms entirely acceptable to them. "We are not against joint ventures but we will not under any circumstances act as a 'front' office."

During the last two years the Bryant & Bryant staff has grown from eight to an office of 40, with an average of 34. "We are to-





Master planning for the Washington Technical Institute in the District of Columbia (below) is undertaken by Bryant & Bryant in a joint venture with Ellerbe Architects/Engineers/Planners, St. Paul. Fairfax County YWCA (above), by Bryant & Bryant, is underway near Tysons Corner, Virginia.



tally integrated. We are men and women, black, white, brown and yellow, and we come from all parts of the world. We think we're stronger for it. We have project architects with special capabilities in a variety of fields."

Besides the two brothers there are six other registered architects on the staff and one professional planner. Hector E. Carrillo, whose specialty is in the educational field, comes from Cuba; Robert Jayson, strong in the housing area, was born in Baltimore; Mary Hanes Holbeck, mainly involved with medical design, is from Massachusetts; Axel Jerome, whose responsibilities for the most part consist of urban planning, was raised and educated in Haiti and Canada and also studied at the Massachusetts Institute of Technology; Robert C. deJongh, the chief designer and recipient of several excellence in design awards during his Howard University days and the 1971 Nathan Wyeth Award from The American Institute of Architects, is a native of the Virgin Islands; Fred Schick, who has extensive experience in institutional and office buildings, was born in New York City, and Richard H. Fitzhugh, who is concentrating his efforts on the development needs of Guyana and the Caribbean Islands, is a Washingtonian.

Charles' primary responsibility areas are administration,

programming, planning and design, client development and estimating, while Bob oversees production and phasing, personnel management, engineering coordination and also, with his brother, planning and design and client development. Their experiences complement each other, with Charles heavy on the institutional, Bob on commercial and multifamily residential.

The firm has no engineer on its staff, but the partners consider themselves fortunate in that the next-door neighbor is Alphatec Engineering Company whose president, Nicholas C. Adamopoulos, also a Howard graduate, has many objectives in common with them. The two firms are not presently interrelated organizationally, although they have direct access to one another's physical offices. The Bryants have found the close proximity relationship to be very fruitful.

An interior design department is now being added so the firm can provide even more complete services. Looking further into the future, Charles and Bob are sure the day will come when they will be making use of computers to speed up various processes. Expecting to incorporate their firm this year, the brothers' long-range plan is to create a strong, top-rate organization in order to get the best possible vehicle with which to participate in the rebuilding of our cities.

BESS BALCHEN

The first article in this series of three concerned the manner in which illumination and color in an artificial man-made environment can be used to keep a human being in good shape biologically, psychologically and psychically. The architect or interior designer also needs to know just how light and color affect bodily functions. Results of recent research with plants, insects, animals and man himself may be surprising.

An esthetic approach has dominated the use of color by architects and interior designers more or less since the beginning of time. How do things look? Are they in good taste? Any judgments of color on an artistic basis must be purely personal and arbitrary. Perhaps some people have a better sense of color than others, but who is to know?

It really doesn't make much difference what colors are used and how much originality and creative talent are shown if the particular space or environment is one in which the emotional factors of beauty can be allowed to prevail, as in a home, hotel, theater or shop. But to let individual notions of beauty serve as criteria in other facilities, such as offices, schools or hospitals, where people are supposed to busy themselves at useful tasks or to have their welfare regarded, is to take a supercilious if not callous attitude toward humanity.

One glaring example of such indifference is found in the current rage for white walls in offices. At high levels of illumination and with white walls all too often further washed with light, irreparable damage is being done to countless eyes. Perhaps white walls are attractive on casual inspection and allow for the dramatic use of accents on equipment and furnishings, but at what sacrifice! A few decades ago, two highly regarded authorities on vision, C. E. Ferree and Gertrude Rand, wrote: "The presence of high brilliancies in the field of view produces a strong incentive for the eyes to fixate and accommodate for them, which incentive must be controlled by voluntary effort. The result of this opposition of voluntary control against strong reflex incentive is to tire the eye quickly and to make it lose the power to sustain the precision of adjustment needed for clear seeing of the work."

Ophthalmologists are in agreement here. White glare, as a form of artificial snow blindness, can cause congestions in the eye, inflammation and scotoma. It can aggravate muscular imbalance, refractive difficulties, nearsightedness and astigmatism—perhaps not in a day or week but over a prolonged period. It is doubtful if many architects or interior designers know this fact; and because many of them are egoists to the core, it is equally doubtful if some will care.

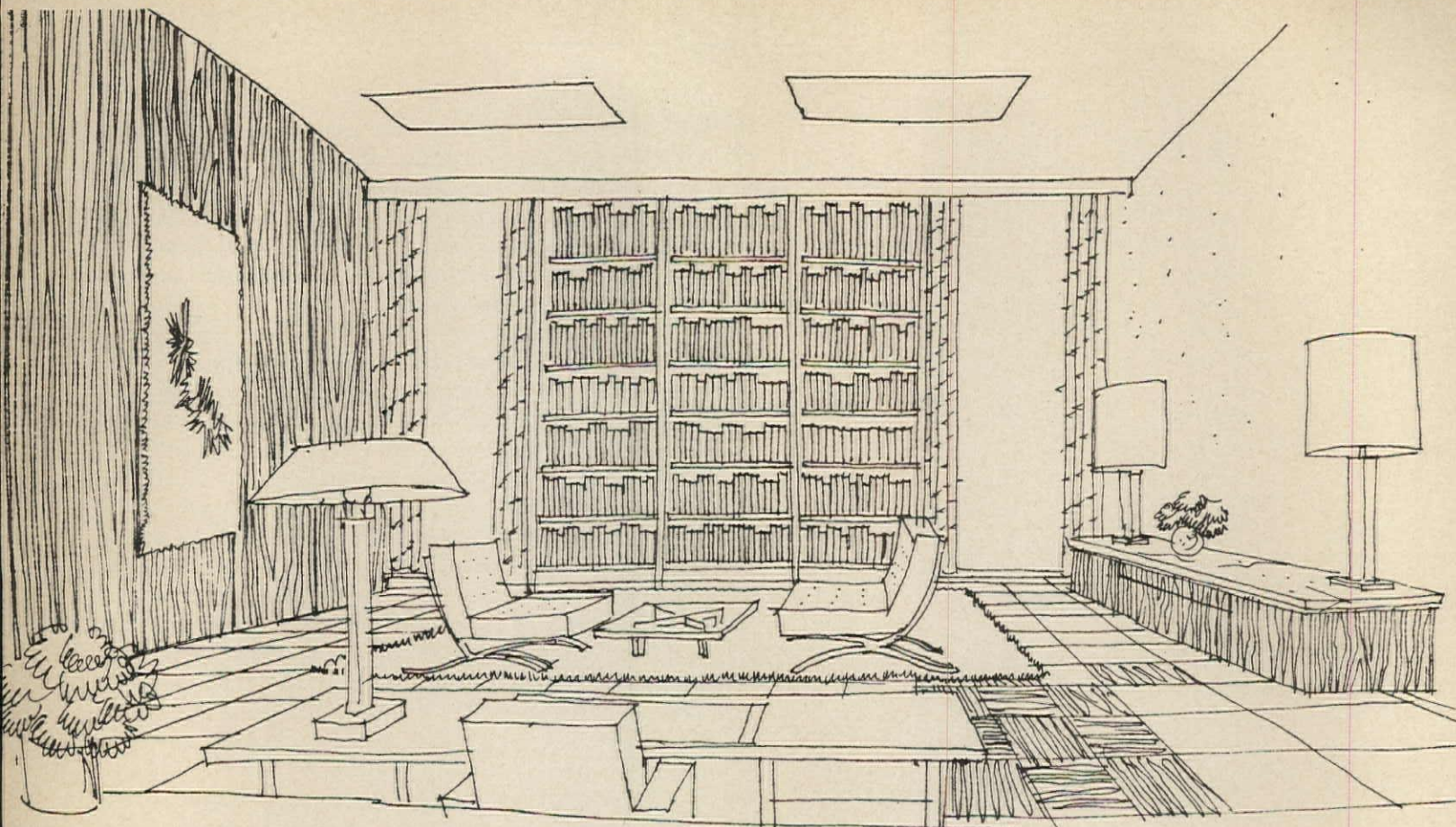
Creative persons by nature resist advice and counsel. To question their "feeling" for color is like criticizing their religious views. What is often amusing, however, is that the architect and interior designer are likely to raise eyebrows at each other's decorative work. So if there is not much agreement among them esthetically, they leave wide open spaces for researchers in the field of color to step in and teach them a lesson or two.

Not that the researcher would don the smock of the artist, but his findings are of tremendous value and can readily be given esthetic interpretation to suit the individual whims of even the most gifted souls, provided a few elementary principles are not violated.

While some skeptics will deny all or most affective values in

2. Reactions of Body and Eye

by FABER BIRREN



"Both uniformity . . .

Desmond '72

color (warmth and coolness, excitement, tranquility, etc.), these are psychological in quality. There are also physiological and visual effects; and whether the doubter likes them or not, he must submit to them and not argue.

Considerable research has been conducted with plants on the effects of color on lower forms of life. Among the prominent investigators in the field are H. A. Borthwick of the Department of Agriculture, Stuart Dunn of the University of New Hampshire and R. van der Veen and G. Meijer of the Philips Research Laboratories in Holland. It was Borthwick who noted an antagonism between visible red light and invisible infrared. Red would cause lettuce seed to sprout, for example, while infrared would put the sprouts back to sleep. Similarly, red would inhibit the flowering of the short-day plants and promote that of long-day ones. Van der Veen and Meijer reported that there was maximum absorption of red light and, hence, maximum plant action. Blue also has its effects, but yellow and green are neutral or reduce activity, and short ultraviolet will destroy the plant.

What is unusual is that plants seem most receptive to red and blue and are inactive to yellow and yellow-green. The human eye, however, finds maximum sensitivity (visibility) to yellow and yellow-green. In a greenhouse under artificial light, weak green illumination is "safe" light for plants, for there is little if any plant response to it. This light is to the plant physiologist "what the ruby light was for the photographer."

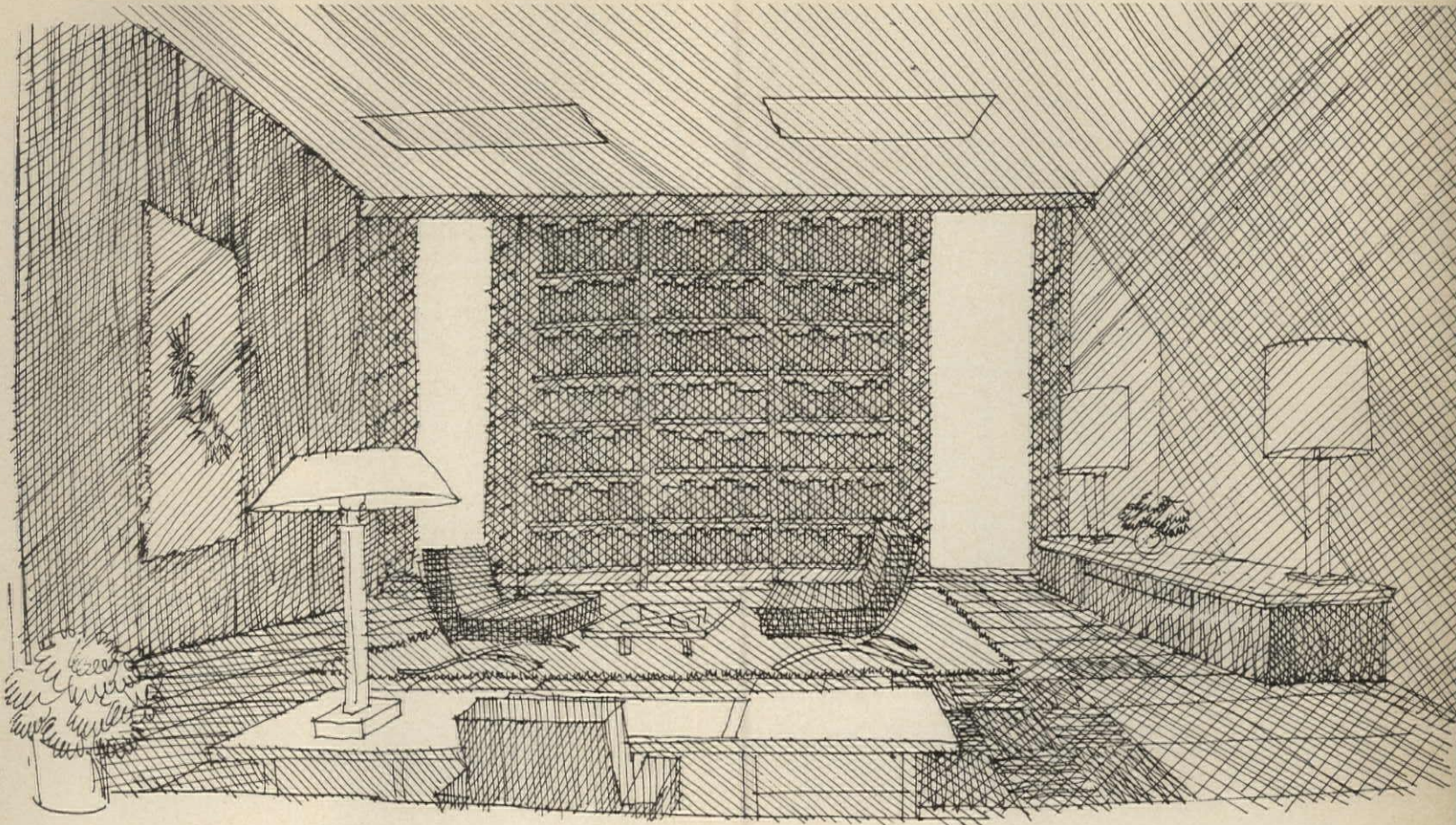
Stuart Dunn's findings in the growth of tomato seedlings are particularly interesting. "The yield by the warm white lamps was highest of all the commercially available fluorescent lamps. Next to it stood that of the blue and pink lamps. Green and red were low. The experimental 'high intensity' of red lamps produced the highest yield of all. Stem growth (elongation) is promoted espe-

cially by the yellow part of the spectrum." However, "Succulence is increased by the long wavelengths (red) and decreased by blue light." In France, the irradiation of potato plants with red light has stimulated germination, and satisfactory crop yields have been achieved. Growing flowering plants completely under artificial light is fast becoming a national hobby in the United States, making the mystery and magic of color more impressive to the layman.

For the most part, insects have a fair sense of color, being insensitive to red but sensitive to yellow, green, blue, violet and into ultraviolet, which is invisible to man. A group of researchers, H. B. Weiss, F. A. Soroci and E. E. McCoy Jr., tested about 4,500 insects, mostly beetles, and found that 72 percent reacted positively to some wavelength, 33 percent to yellow-green, 14 percent to violet-blue, 11 percent to blue and 11 percent to ultraviolet. Few showed any attraction to warm colors. "It thus appears that in general the shorter wavelengths of light are more stimulating and attractive, whereas the longer wavelengths are considerably less stimulative and perhaps repellent in nature to coleopterous [beetles] forms of life."

John Ott of the Environmental Health and Light Research Institute in Florida has studied higher forms of life. He has observed the effects of different wavelengths and light intensities on tropical fish. The young produced under pinkish fluorescent light resulted in 80 percent female and 20 percent male; no young were produced under bluish fluorescent light. Even feeble amounts of light will affect the normal development of fish. Ott

Mr. Birren is a specialist on human reaction to color, his publications being well-known and respected in all parts of the world. He has been a consultant on color for hospitals, schools, offices, factories; he also has set basic color standards for buildings and facilities of the Army and Navy.



and excessive contrast are bad.”

tells about the death rate among brook trout eggs at the New York State Hatchery suddenly shooting up to the 90 percent bracket from under 10 percent. “Dr. Alfred Perlmutter of New York University traced the cause to installation of new 40-watt fluorescent lights in the ceiling. Another investigator, working with rainbow trout, found that the violet and blue components of white or visible light are more deadly than green, yellow and orange bands.”

Much experimental work has been done with rats and mice. Rats exposed to red light from birth grow larger than those exposed to blue light. Ott kept over 1,000 mice in separate colonies under three conditions: bluish fluorescent light, pinkish fluorescent light and natural daylight. The colony under natural daylight produced 50 percent females. The one under bluish fluorescent light produced 70 percent females and the one under pinkish fluorescent light about 30 percent females. Despite tradition, it would seem that blue is for girls.

In a study performed for the US Atomic Energy Commission in 1968, three researchers investigated the influence of visible colors on voluntary activity in albino RF-strain mice. The rodents were placed in cubicles for periods of 18 hours, rested and then were placed for 18 hours in other cubicles until all environments were tested. The measure of activity was determined by the revolutions of activity wheels, similar to those seen in squirrel cages. Mice are nocturnal animals and hence are most active in darkness, as results of the test showed. Next greatest activity was with red. The RF-strain mouse experiences red as darkness. “Activity in yellow light was significantly greater than in daylight, green, blue and significantly less than in dark and red.” Incidentally, blind mice showed little difference in activity, regardless of color, bearing out that the effects discovered were “due to visual

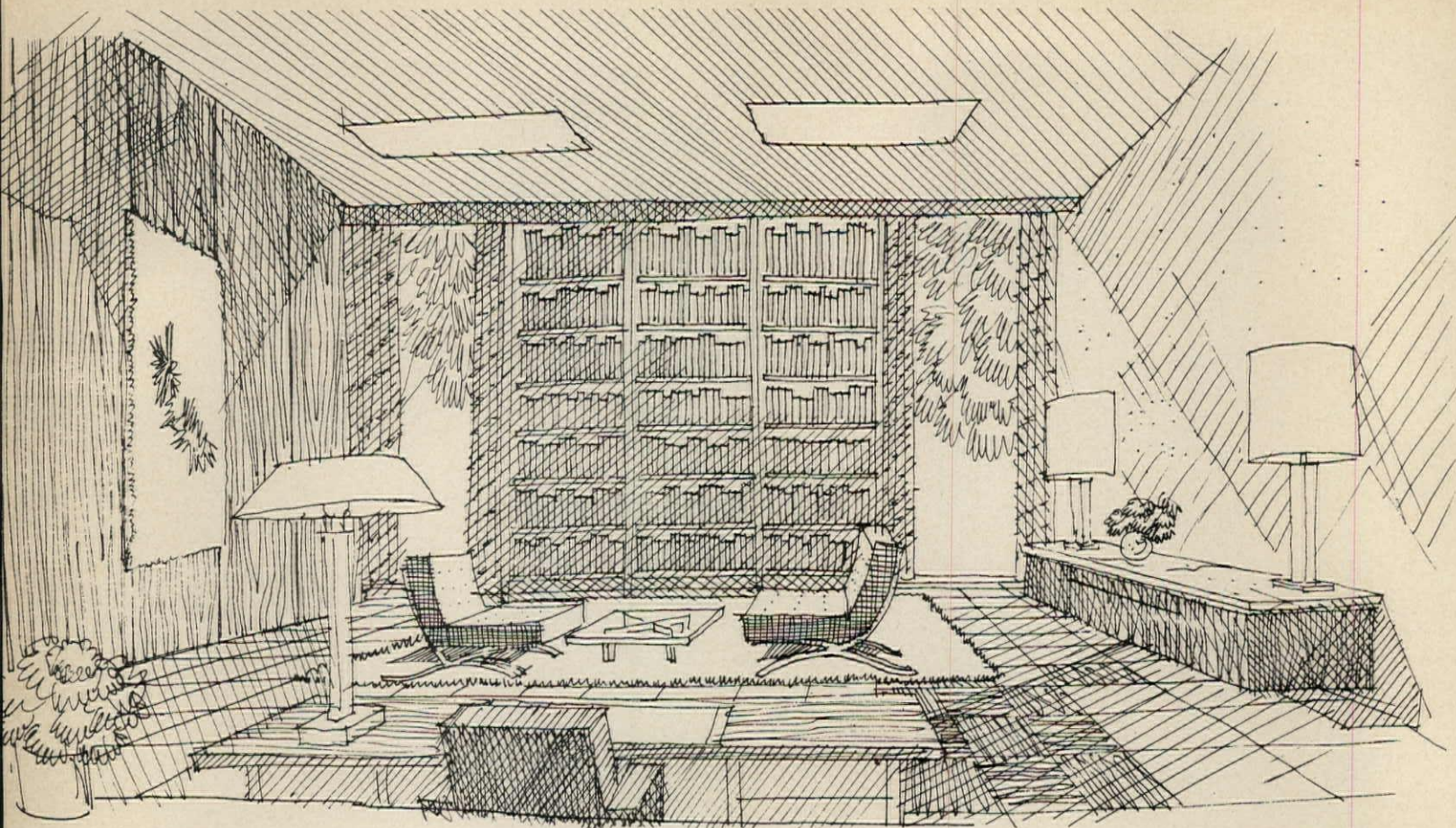
receptors.” While mice and men are not to be confused, the story bore out the fact that different colors have different effects.

According to Ott, breeders of chinchillas will have a relatively high percentage of males if the animals are kept under ordinary (warm) incandescent light and a correspondingly higher ratio of females if they are under daylight (bluish) incandescent light. The use of blue daylight bulbs has now become commercial practice. Who knows, perhaps the eternal problem of sex preference in human babies may one day be solved through the medium of colored light.

Ott describes a case study in which mink were reared behind different colored plastic windows. Ordinarily, mink are quite vicious, particularly during the mating period. Those kept behind pink plastic became increasingly aggressive, while those behind blue plastic became more docile and could be handled like house pets. All females became pregnant after mating. To draw an empirical conclusion, man as well as mink seems to be excited by red radiation and pacified by blue.

Two unusual phenomena can be mentioned regarding visible blue light. While ultraviolet radiation may at times cause a rash in persons who have eaten strawberries or buckwheat cakes or in those whose skin has been made light sensitive by the application of some cosmetics, these effects are said to be produced by *invisible* radiation. Yet in a rare and minor affliction known as *urticaria solare*, visible blue and violet light will cause discoloration and swelling with no exposure to ultraviolet. Similar reactions become an occupational hazard to some persons exposed to the fumes of certain chemicals and then to sunlight.

Recently, *visible* blue and blue-violet light has been found to counteract jaundice in newborn infants caused by an excess of bilirubin in the blood. Complete blood exchange may be pre-



"The place to meet is in between."

scribed, but phototherapy is also effective. Researchers Luke Thorington, L. Cunningham and J. Parascondola have commented in an article: "It is evident that all radiation near 555nm in yellow-green is most effective for producing 'light,' while that near 410-460nm in the violet and blue is most effective for 'bleaching and degrading' serum bilirubin, which results in the basic difference in 'light' requirements of the engineer and phototherapist." There is true color therapy in this particular instance.

It seems apparent that all living things, including human beings, have a radiation sense. What is significant is that such sense may be independent of conscious vision itself. Awareness of the existence of light is noted in completely blind individuals, even where heat and ultraviolet energy are excluded. Some authorities are of the opinion that the visible light of the sun acts directly on the superficial layers of the skin and has definite metabolic effects.

Reactions to color through the eye itself are many, varied and intriguing. In the main, color effects tend to be in two directions—toward red and toward blue—with the yellow and yellow-green regions of the spectrum more or less neutral. Further, these two major colors induce different levels of activation both in the autonomic nervous system and in the brain.

Red seems to have an exciting influence. Kurt Goldstein, who has worked extensively with color, writes, "It is probably not a false statement if we say that a specific color stimulation is accompanied by a specific response pattern on the entire organism." Referring to red, he mentions the case of a woman with a cerebellar disease who had a tendency to fall unexpectedly. When she wore a red dress, such symptoms were more pronounced. Goldstein points out that tremor, toricollis and some conditions of Parkinsonism "can at times be diminished if the

individuals are protected against red or yellow, if they wear, for instance, spectacles with green lenses."

There is general light tonus in the muscular reactions of the human body; conditions of muscular tension and relaxation are noticeable and measurable. Such changes are more active with warm colors than with cool ones. Through optic excitation, A. Metzger, who devoted research to the physiological reactions to light and color, observed that when light was directed on one eye of many animals and human beings, a tonus condition could be produced in the corresponding half of the body. Accompanying these tonus changes were alterations in "the superficial and deep-seated sensations, both showing a regular dependence upon optical stimuli." He concluded that the influence of light not only acted on the muscles but was effective in producing changes over the entire organism. Outstretched arms tended to move toward red and away from green and blue.

Goldstein concludes, "The stronger deviation of the arms in red stimulation corresponds to the experience of being disrupted, thrown out, abnormally attracted to the outer world. It is only another expression of the patient's feeling of obtrusion, aggression, excitation, by red. The diminution of the deviation to green illumination corresponds to the withdrawal from the outer world and retreat to his own quietness, his center. The inner experiences represent the psychological aspect of the reactions to the organism. We are faced in the observable phenomena with the physical aspect."

Light and color undoubtedly affect body functions, just as they exert an influence over so-called mind and emotion. In what is known as the unity of the senses, individual experiences are seldom confined to one organ. As Sir Charles Scott Sherrington, the great English pioneer in neurophysiology, summarizes, "All

parts of the nervous system are connected together and no part of it is probably ever capable of reaction without affecting and being affected by the other parts, and it is a system certainly never absolutely at rest."

All experiences, color included, have definite interrelationships. Referring specifically to color, Felix Deutsch, a German psychiatrist who later practiced in Boston, says, "Every action of light has in its influence physical as well as psychic components." All persons are aware of "sensations and psychic excitations, which through the vegetative nervous system, boost all life functions: increase the appetite, stimulate circulation, etc., and through these manifestations the physical influence of light upon the disease process is in turn enhanced."

It thus may be generalized that color affects muscular tension, cortical activation (brain waves), heart rate, respiration and other functions of the autonomic nervous system, and certainly it arouses definite emotional and esthetic reactions, likes and dislikes, pleasant and unpleasant associations. Now architects and interior designers may well pay attention to a few observations on the visual aspects of color in human environments.

It has been traditional to assume that, for purposes of seeing, light is light no matter what its spectral composition. Green light sources have often been the most efficient with relation to current consumption and light output. Certain light sources, of course, emit strange illumination, such as sodium vapor which is yellowish and some mercury vapor which is greenish and bluish. They may be disliked esthetically and may be rejected for emotional and psychological reasons. Visual acuity is said to be high under yellow light and low under blue. Some persons will prefer warm light at low levels for recreation and relaxation, and cool light at high levels for working.

Two British investigators, Sheila M. Aston and H. E. Bellchamber, have recently found that for "visual clarity" light level alone is not all-important. A well-balanced fluorescent light source emitting a fairly complete spectrum from red through yellow, green and blue to violet will provide conditions of *clear vision*, comparable to the light of "standard" fluorescent at much higher levels, such "standard" light being deficient in some color energy, particularly red. In effect, 70 footcandles of balanced light will be just as good for visual clarity as 100 footcandles of ordinary (cool white) fluorescent light.

The human eye is quick in adjusting itself to brightness, and slow to dimness. If the task is dark, as it might be, and if the surrounding is bright, the whole arrangement from the standpoint of visual efficiency and comfort may be in reverse. Some compensation, incidentally, may be achieved through color. In any case, uniformity of stimulus is undesirable. The human organism is not adapted to unvarying stimuli. Many lighting codes and recommendations run contrary to very plain and obvious facts. Uniform illumination and brightness in the field of vision may be ideal from an academic standpoint, but they are inconsistent with the natural reactions and capacities of human beings.

People require varying, cycling stimuli to remain sensitive and alert to their environments. Comfort and agreeableness are normally identified with moderate, if not radical, change, and this change concerns brightness as well as all other elements in the environment. If overstimulation may cause distress, so may severe monotony. In simple terms, where work is performed, moderation with light or color is better than excess. If an all-white room appears sterile in the psychological sense, a black-and-white one would be objectionable in the physiological one.

Both uniformity and excessive contrast are bad. An attempt by the eye to make trying adjustments may well throw it out

of kilter. Monotony may lead to visual efficiency, but it also may cause emotional rejection. Contrast, on the other hand, may lead to emotional acceptance but impair good visual performance. The place to meet is in between.

It may be said on good evidence that brightness and color have two major effects. Where the task requires chief attention to the environment, high levels of general illumination and brightness in the surroundings will condition the human organism accordingly. The attention and interest of the room will be *outward*. This is a good principle to apply to manual tasks. On the other hand, where the task requires concentrated visual and mental attention at fixed points (desks and work tables), softer general illumination and more subdued brightness may accomplish the best results. If critical seeing tasks are performed, supplementary localized illumination may be added. In such a setting, the attention and interest of the room occupant will be away from the environment and to the job at hand. His body and his eyes will be physiologically and optically well adjusted. Let it be added that in purely casual or recreational areas, the sky is the limit and almost anything can be done.

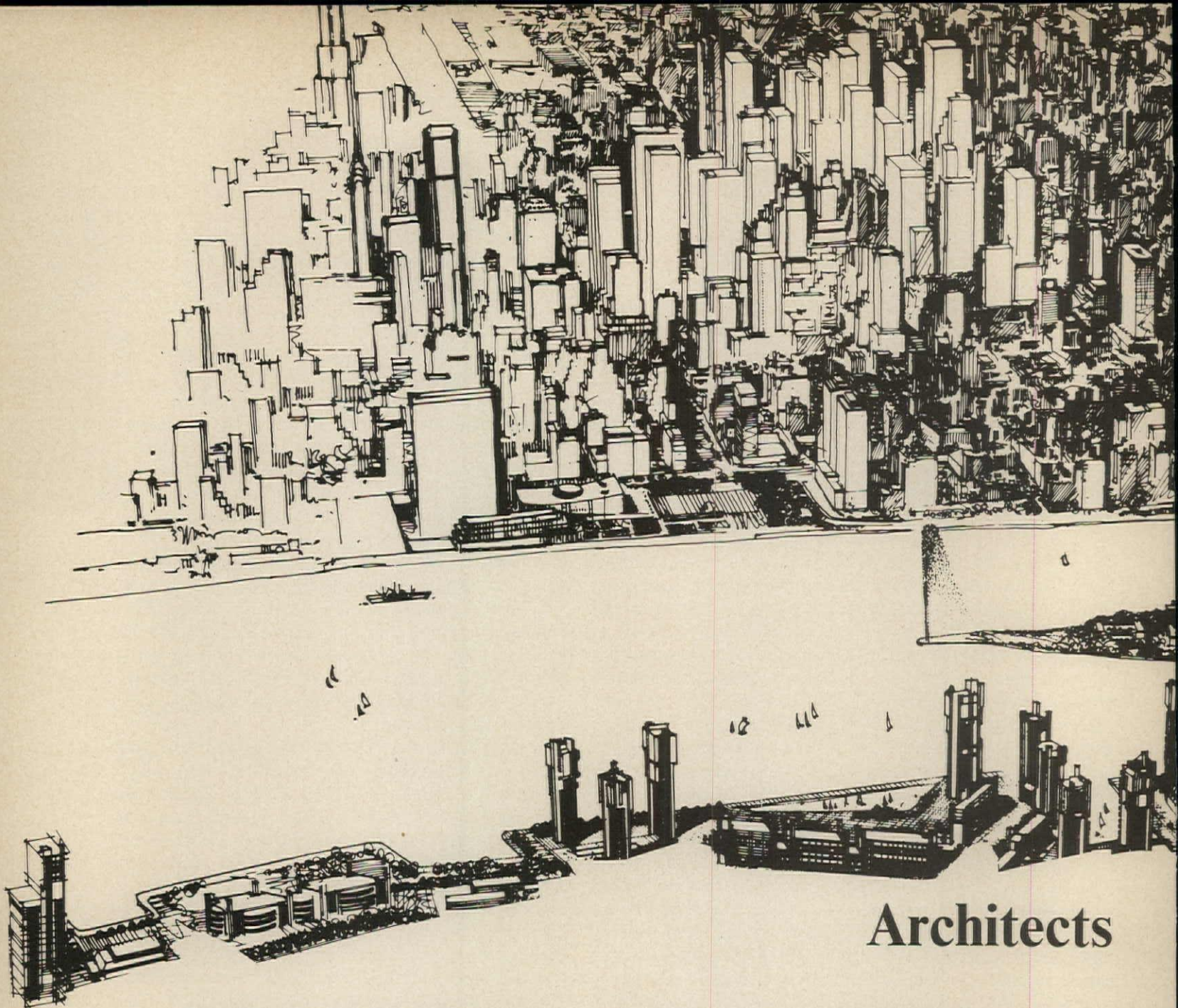
There is a surprisingly simple fact about vision, color and light. The majority of architects, interior designers and others who specify color for buildings seem to be unaware of certain definite occurrences that take place in the apparent brightness or value of colors as illumination levels are varied from dim to bright. This is a phenomenon noted by many students of vision which was given special attention by the great German psychologist David Katz.

Despite the wonders of color constancy (the persistence of vision in seeing genuine color qualities under widely different conditions of light), the values of color undergo shifts when exposed to different degrees of light intensity. By the term *value*, reference is made to apparent brightness or reflectance.

Consider the following points. As long as the eye is able to see, a white surface will always appear white—from under a fraction of a footcandle to high in the hundreds of footcandles. In complete dark-adaptation, the eye loses *all* sense of color. This is because the cone endings of the retina, sensitive to color, grow dormant and seeing is taken over by the color insensitive rods. However, because near darkness is seldom encountered in a decorative problem, the phenomenon of complete dark-adaptation may be set aside.

Here is the phenomenon in operation. Looking at a scale of gray values from white to black, the relationships of the steps will remain normal, one to the other, for *all* illumination levels of about 25 or 30 footcandles. Below this, however, there will be a pronounced contraction. This is because, as illumination grows dim, all deep colors tend to "melt" together in value or brightness, if not in hue. In brief, as light goes dim, the gray scale gets shorter and shorter, but *from the bottom up*. All the dark tones below mid-step will tend to blend together and appear alike in value. White alone will hold its constancy.

The lesson is clear. It is wholly incongruous, for example, to pick colors in bright light and expect them to appear the same under dim light. Again, if the environment is designed for soft light, as in a living room, a cocktail lounge, an exclusive restaurant, a theater or an enclosed sitting or rest area, there is little sense in using very dark colors. They, in fact, may "fall apart" and grow muddy. If the eye of an occupant in a dimly lit room is to sense and appreciate the colors of the decor in walls, floors or furnishings, no color with a reflectance of *less than 10 or 15 percent* should be used. Anything deeper may be meaningless, if not ugly, due to the inability of the eye to perceive it clearly. □



Architects

New York City's Urban Design Council, after a 20-month study, has issued a report to the mayor which concludes that the city gets poor design at great cost and with long delays because of building processes which are chaotic. The following summarization of the report's findings offers recommendations for an analysis and a complete overhaul. Some of the suggestions are applicable for other large city and governmental bodies.

Mayor John Lindsay has finally recognized that unholy practices are being perpetrated upon architecture in New York City. In February 1970 he asked the City Council "to review the ways in which public works projects are initiated, architects selected and design review carried out, with an end toward recommending major changes in this process to insure a higher quality of design in schools, libraries, firehouses and other civic buildings."

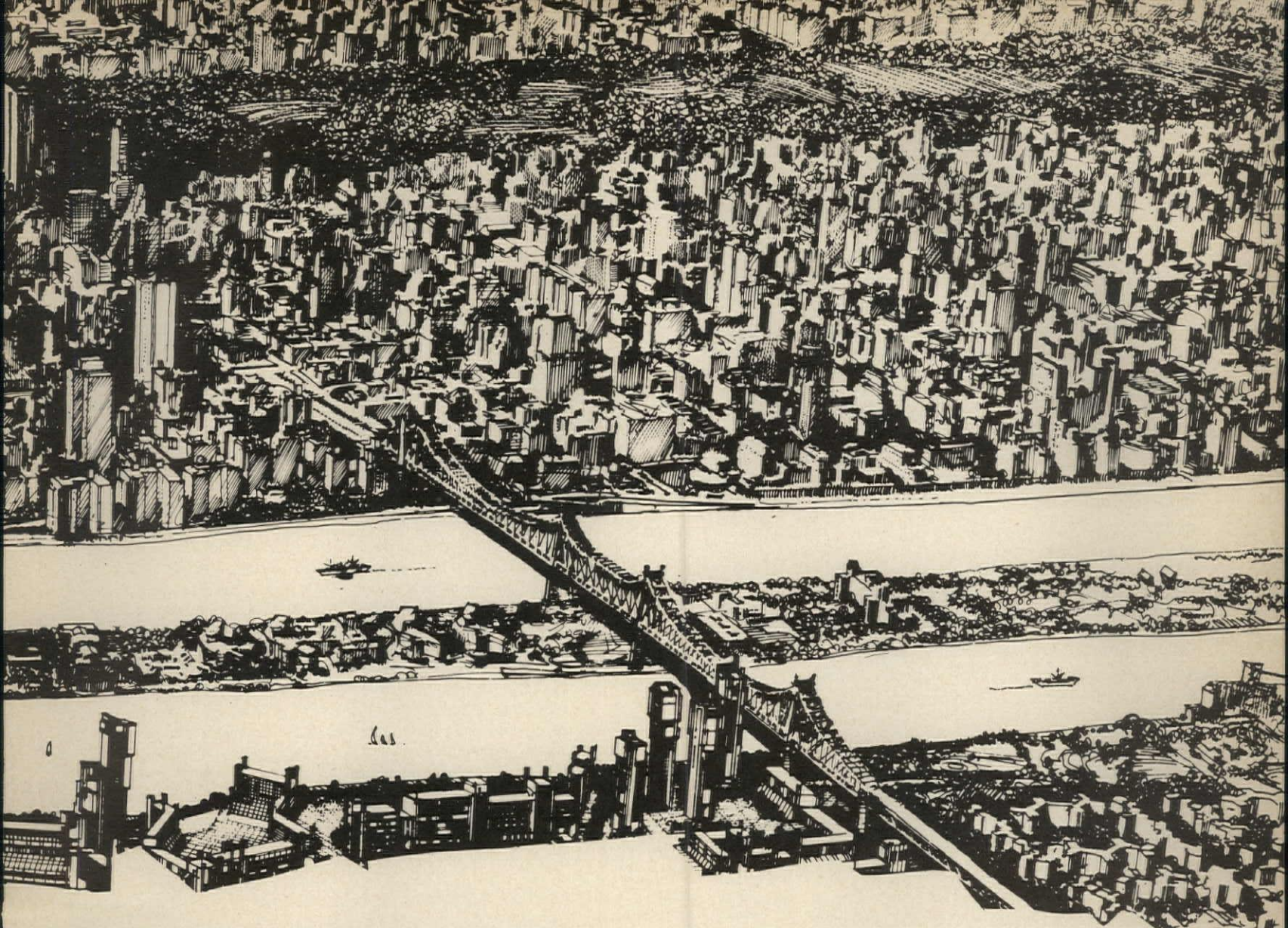
The study was undertaken by members of the Urban Design Council of the City of New York, a task force of leading citizens and professionals set up by executive order in 1967 to act as an advisory group concerning matters of planning and design for New York City. William S. Paley is chairman of the group and Charles Reiss is executive director. Included are such distinguished Fellows of The American Institute of Architects as I.M. Pei and Philip Johnson.

In *A Report on the Working Relationships of Architects and the City of New York* issued last November, the council has affirmed the belief that "good design is of vital importance to the city and can be achieved only if working conditions—both contractual and procedural—attract good architects and permit them to work creatively and with the knowledge that their client understands and is responsive to their professional problems and responsibilities."

Most of the conclusions and recommendations in the report apply with equal force to other cities as well as county, state and federal governments. Much can be gained for architecture and the profession by the implementation of the recommendations of the report, with only a few exceptions.

In order to improve the city's architectural design standards, the council has come to the conclusion that the working relationships between the City of New York and architects often discourage the best firms from accepting city assignments and discourage those which do accept from doing their best work.

This situation results, states the council, both from procedures that are time-consuming, duplicatory and inconclusive and from compensation that is insufficient in amount and unrealistically scheduled in payment. In effect, architects are penalized by working for the city in terms of meeting the highest professional



and New York City

by STEVEN H. ROSENFELD

standards and of earning a just profit on the sale of their services. The causes of this situation are multiple. Chief among them are:

- formula programs which do not attach priority to good design nor fulfill the opportunities individually presented by specific buildings and sites
- routine attitude in choice of firms
- inaccurate budget estimates, dated or based on factors which do not apply to the specific building
- an unbalanced Basic Services Contract governing architects' compensation
- low fees, compounded by low or improperly adjusted estimates of construction costs
- lack of compensation for architects' time spent at meetings of community groups
- excessive changes in building programs in later stages
- unnecessary and negative review procedures
- slow processing of payment vouchers
- lack of provision for adequate on-site supervision and inadequate provision for construction coordination
- unfair post-auditing policies by comptroller.

To eliminate or alleviate these conditions, the council makes several recommendations:

1. That there be created the Office of City Architect which

would report directly to the Administrator of the Municipal Services Administration.

2. That the Office of City Architect represent the client—the user agencies—in all of the MSA's relationships with outside architects and be given responsibility for hiring private architects to do MSA work.

3. That the mayor instruct the city architect to revise thoroughly the procedures now used to draw up the panel of architects required by the New York City Charter in order to carry out fully its requirements that "all contracts . . . shall be made with qualified architects."

4. That the architect selected for a commission be given the opportunity to review and, when necessary, to suggest revisions to programs and budgets before beginning work.

5. That such other city agencies be encouraged to adopt the procedures and standards set by the city architect and to utilize his services once they have proved themselves in practice.

6. That a thorough review of the city's Basic Services Contract be undertaken to study such points as:

- methods to assure prompt review of the architect's work and speedy payment upon completion of each review
- raising the basic fee schedule
- more frequent adjustments of the architect's fee to take into

account inflation and increased estimates of the building's cost

- an optional system of monthly payments
- additional compensation for extra work and more equitable payments to principals in architectural firms.

7. That the mayor ask the Office of the City Architect and the Board of Construction to study professional fees and lump-sum contracts as alternatives to the Basic Services Contract, to be used in exceptional cases.

8. That the city architect devise plans to simplify and speed up the existing system whereby numerous agencies have power to review and, therefore, frequently to delay the production of the architect's designs.

9. That the mayor continue efforts to persuade the state legislature to repeal the New York State Multiple Contracts Law. In the meantime, the use of construction managers or supervisors should be extended and the city should make every effort to see that only those contractors who are able to meet reasonable standards of competence and financial responsibility are hired for city work.

10. That the mayor make every effort, perhaps through the Board of Construction, to arrange with the comptroller for more equitable procedures for the post-audit of architect's contracts.

The Urban Design Council, in considering the need for increased compensation for outside architects, has been aware of the strained economic plight of the city. It is confident, however, that more efficient procedures can effect savings that would balance any increases in professional fees.

In order to attract more of the best representatives of the architectural profession to its service and to rule out firms whose standards or practices may be deficient, the city must significantly improve its attitudes and procedures.

Also of importance is the status and quality of architects who work in-house as employees of the City of New York. By performing important programming and review functions, these architects play a key role in the success of municipal projects, including those designed by architects engaged by the city for specific buildings.

One major step in the right direction has already been taken by Mayor Lindsay through Executive Order No. 28 (Nov. 19, 1970), which established a Board of Construction charged with expediting the capital construction program of the city by recommending standards with respect to the planning, design, processing, implementation and execution of all construction projects.

In general, however, the virtually uniform procedures under which city facilities are constructed—with the exception of housing, hospitals and some schools—are inefficient, unproductive, expensive and environmentally deficient. Frequently, they result in the architect's loss of both money and desire for further city work. These procedures are discussed in order of occurrence:

1. Capital Budgeting and Site Acquisition: The capital budgeting process is so complicated and has so many exceptions both in law and in fact to every rule involved that what follows can be taken only as a rough approximation of what might occur in a given instance.

The process begins with a "user agency" preparing an "ini-

Response from New York Chapter

The New York Chapter AIA has viewed this report with mixed emotions. Former President Frederick G. Frost Jr., FAIA, in a letter to New York City's Mayor John Lindsay summarizes the chapter's viewpoint which generally endorsed the report's findings with the exception of the proposed Office of City Architect.

"Our conclusion," writes Frost, "is that the establishment of an Office of Architect would not in itself cure the problems. The cure seems to lie with the quality of the administration and the control of bureaucracies in the city agencies."

Frost also notes that a consensus of city officials expressed the opinion that "the basic difficulty in the relations between architect/consultants and the city agencies derives from the unfriendly attitude of civil service staffs toward privately practicing architects." No solution to this problem is offered.

The chapter official also mentioned the fact that administrators of various departments lack the authority and powers necessary to make their agencies function properly.

One of the prime concerns of the chapter is the lack of recourse by architects to arbitration in order to resolve disputes with city agencies. It recommends the incorporation of an arbitration clause in the city's professional services contracts.

tial project program" and a budget estimate which must be submitted by the City Planning Commission at least 10 months before the capital budget is certified by the mayor. The initial program has traditionally listed only the estimated square footage required for the building. The budget estimate is based upon prices in force at the time. For a variety of reasons, initial programs take no account of design potentialities and community needs, and budget estimates usually are unrealistically low.

A process of standardization is underway for building cost estimates. These standards will be periodically updated and will be subject to appeals, as a type, through the New York Chapter AIA. This new procedure holds great promise as a means of correcting the chronically unrealistic initial building cost estimates which go into the city's capital budget.

After public hearings, the City Planning Commission includes the building in its draft capital budget. Using this, the Bureau of the Budget prepares the executive capital budget for the mayor which is then subject to comment by the comptroller and the planning commission and to public hearings by the Board of Estimates and the City Council. Each of the latter two may alter or omit individual projects from the executive budget. Such changes may be vetoed by the mayor, but his veto can be overridden by two-thirds vote each of the board and council. Once the budget is approved and authority is received to initiate a building project, the user agency must suggest a site to the Site Selection Board which reviews it, studies alternatives and holds a public hearing.

In practice, few projects get through the capital budgeting

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and site acquisition process in a minimum of 15 months. Most must wait two to three years from conception to initiation—some several years longer. To survive the process, user agencies have, perhaps understandably, felt it necessary to prepare vague and inaccurate initial programs and budget estimates. These inaccuracies were frozen into the capital budget, thereby restricting the freedom to amend the program. The problems, however, will remain and, seemingly, will have to be lived with. The first and most serious is that initial programming and budgeting must frequently be done before anyone knows exactly where the building in question is to be erected. The second is the lengthy time lag between conception and initiation, which the city's system of reviews and checks and balances inevitably makes protracted.

2. Final Programming: When a building is fixed in the capital budget and the site is selected and acquired, the user agency, acting with the MSA, if appropriate, prepares the final program.

In many other cities and in New York State agencies, the final program is written in consultation with the architect who is to build the structure, or at least a description of the building is given in enough detail to give a clear picture of what is desired and a true reading of the probable cost. In New York City, however, the final program, as a general rule, does not differ greatly from the initial project program prepared before budgeting and site acquisition. The building description is based upon the past experience of the user agency and does not consider the functional and site differences which are bound to exist. Without clear-cut authority for judgments, the consequence is confusion, conventionality and costly delay.

Another difficulty is the failure to take into account the views of the community groups who will be affected directly by the building. Current practice usually permits such groups to be heard when the building is first budgeted and when the site is selected, but not at the point where the decisions about the nature of the structure are being made. The community often does not get another chance to be heard concerning the design until the architect has begun work. He then must listen to the views of the community on his own time and at his own expense, and his freedom to make changes in the design is severely limited.

3. Selection of the Architect: Existing city practice calls for selection of the architect after a site has been chosen, the budget estimate approved, a final program written and the money allocated.

The firms selected are usually conventional but with a distinct ability to adjust themselves to city procedures. In effect, firms of national reputation as well as new talented ones are discouraged from seeking city work because of difficulties in making such adjustments.

There are distinguished exceptions, but many established firms of national reputation refuse city work as a matter of policy, most often because they know from personal experience or the experience of others that they are bound to lose money or at best to break even, and to work under nerve-wracking conditions.

4. The Basic Services Contract and Fee Schedule: Once an architect is selected, he is given the city's Basic Services Contract, its Standard Fee Schedule and the building's program and cost estimate. His total payment is determined in the contract as a per-

centage of the estimated cost of the building. Because of current inflationary pressures, cost estimates generally rise in the design period, and there are provisions in the contract for making limited adjustments to the architect's total payment.

A contract compensating the architect on the basis of a percentage of the construction cost is used in 85 percent of the work done by architects across the nation, but the New York City contract is one of the few which makes a large portion of the total payment dependent upon a building cost estimate made before the architect begins work. Final budgeting costs for city work have averaged 45 percent over the initial budget estimate. The effect of all this is to reduce the architect's total payment significantly below what would be received if he were designing the building under an AIA contract or under those used by many other public organizations.

The lower payment resulting from the city's system for determining the building cost estimates is further reduced by the percentage schedules that the city uses to determine the architect's total payment. These percentages are lower than those of almost every major governmental organization when compared to the percentages recommended by the local chapters of the AIA.

There is a "take-it-or-leave-it" attitude which ignores the professional responsibilities of the architect and, in regard to programming and budgeting, does not permit him to give the city the full benefit of his knowledge and expertise.

5. Design: During the three design phases—schematic drawings, preliminary drawings and construction documents—the architect must often deal with excessive demands, such as redrawing plans because of changed detail or scale requirements, which force him into extra work and do not necessarily improve the quality of the building.

These problems have been compounded in the past by the city's excessive, repetitive and cumbersome review process. Depending upon the type and location of the building, the architect who is required to complete his work within a specified time usually has to seek additional approvals from one or more of the six other agencies.

Once the review procedure is complete, the slow processing of vouchers can be an added difficulty for the architect. Under inflationary pressures, delayed payments represent an unfair reduction in the architect's payment since they may compel him to borrow money from commercial sources at interest rates higher than his profit rates.

6. Construction: Any contractor able to furnish a bid-bond may submit a bid. The numerous and expensive change orders which occur during construction, whether due to the contractors, the supervisors or the architect, create serious administrative difficulties for the architect since the change orders come from each of four separate contractors and are not coordinated by a general contractor or supervisor. Such inefficiencies increase significantly the direct time that the architect must devote to the project and can result in serious erosion of his profit.

In the opinion of the Urban Design Council, there is a wide range of possible remedies for the problems discussed.

1. Programming and Budgeting: Lines of authority should be re-

drawn within the MSA to create the Office of the City Architect directly responsible to the MSA. In his dealings with private architects, the city architect and his staff would function for the user agencies which would, however, remain the clients of the building and would be responsible, in consultation with the city architect, for all decisions customarily made by clients retaining architects for private work. The city architect, by representing the clients, would provide a one-stop service for the architect and so would simplify the difficult procedures under which architects now work.

Programs prepared by the city architect's office should embrace environmental considerations. The city architect's office should participate with the user agency and the relevant community groups to make sure that a program contains not only proper square footage allotments, but also takes into account critical environmental and functional factors. In addition, the architect should be chosen sufficiently early to participate in some way in the drafting of the program.

The city architect should be responsible for monitoring the budget. He should be responsible for determining accurate budget estimates within guidelines and limits set by the Bureau of the Budget. He should work with the user agency to assure that an accurate budget is prepared and that the sum listed in the capital budget accurately reflects the type and quality of building which the user agency requires. In addition, he should see to it that this building cost estimate is revised and updated, not only during the design process but before an architect is selected so that when the latter is finally chosen, the figures will be realistic and current.

The city architect should be represented on the Site Selection Board.

2. Selection of Architects: A carefully considered program, budget and site are a good beginning. The next step is to put that work in the hands of a competent architect for both review and production. In the case of private architects, reasonable fees and a more equitable contract are essential in order to enlarge the pool of available architects. Equally important is the adoption of policies and programs to improve the caliber and capacity of in-house architects.

The quality and morale of the staff should be improved by giving design work to in-house architects. To be successful, the city architect's office should be staffed by talented and qualified architects. For a specific building, the city architect should have the option of assigning the project to his own staff or to an outside architect. Without this authority, the city architect will not be able to retain talented people who require professional challenges.

While improving the in-house staff, however, the city should avoid creating a monopoly among in-house architects on city building projects. The staff should be kept within reasonable dimensions and the value of outside architects should not be overlooked or underestimated.

The procedures used in drawing up the mayor's panel should be revised, and small and newly established firms should be encouraged.

3. Negotiations: Once selected, the architect should be able to negotiate openly with the city architect. The city architect should be able to offer a contract suited to the type of building to be designed and to the architect selected.

Prospective architects should be given the opportunity to review budget estimates and program requirements before beginning work. The city should deal forthrightly and fairly with the architect and give him the opportunity to decide whether the budget and the program are accurate and reasonable.

The Basic Services Contract should be improved in order to attract better architects and to produce better and more economical buildings. The most important changes which should be made in the Basic Services Contract are: a) commit the city to carry out prompt reviews and to make speedy payments upon completion of each review; b) provide option of receiving monthly payments based on direct technical costs; c) raise the Basic Fee Schedule in order to make it more compatible with the standard fee schedule recommended by the New York Chapter AIA to provide for a greater differentiation in fees based on the complexity of the building and to raise fees, particularly for buildings costing below \$2.5 million; d) adjust payments to architects as updated estimates of the building cost are refined; e) give the architect additional compensation for community meetings; f) increase compensation for extra work; g) revise the weighted system of payments to emphasize design.

Alternate contracts should be used at the discretion of the city architect. Alternatives to the percentage of construction cost basis are professional fee contracts and lump-sum contracts.

4. Design: The numerous reviews which the city now permits during the design phases have tended to delay work unnecessarily, add to costs, dilute authority, lower the quality of the product and reduce interest in accepting work by talented, small or nationally recognized firms.

Review procedures should emphasize building quality; formal reviews by user agencies should be eliminated for MSA projects.

The role of the Art Commission of the City of New York should be reconsidered.

5. Construction Phase: The Multiple Contracts Law, a state rule, aggravates the building process by mandating separate bidding and equal status to each of the four construction trades and by not providing for coordination among the trades. It also prevents the city from prequalifying bidders, i.e., from setting minimum standards of competence and financial responsibility which contractors would have to meet before being eligible to bid.

Two possible approaches are to 1) repeal the law; 2) make greater use of construction managers or architectural supervision contracts, assuming the continuation of the Multiple Contracts Law.

6. Post-Audit: Post-audit procedures for percentage of construction cost contracts should emphasize contract commitments only.

In conclusion, the Urban Design Council once more points out that the successful adoption of its recommendations requires the most earnest cooperation of all municipal agencies that have a voice in the present procedures and authority over them. □

Making the Four-Day Work Week Work

by ROBERT S. LUNDBERG, AIA

Through trial and error an architectural/engineering firm found a practical, flexible and enjoyable way of producing a large volume of complicated and original work. It has improved the working conditions and leisure opportunities for the staff, reduced built-in inefficiencies, decreased indirect cost and last, but not least, it keeps the clients happy through better service.

Way back in 1969 when our office was being inundated with new commissions and when additional qualified (or even semiquali-fied) architects and engineers were nowhere to be found, a strange suggestion was proposed at a partners' meeting: "Let's try a four-day week."

I reacted rapidly in such a manner as to clearly indicate that in my opinion, at least one of my partners was showing signs of strain due to our overloaded condition. However, after listening to the several benefits that were supposed to develop from such an experiment and not having any alternative to offer I agreed, somewhat ungracefully as I remember, to give it a try for the summer during June, July and August.

Haines Lundberg & Waehler is an architectural/engineering firm that was established some indeterminate number of years prior to 1885 by Cyrus W. Eidlitz. The partnership has practiced continuously since that era under a succession of 11 partners. Since World War II the payroll has averaged 400 people.

We were slightly larger than this number when we launched our noble experiment in the summer of 1969 due to our long-standing custom of accepting a couple of dozen summer students and at least as many summer employees. It was hoped that this innovative program would accomplish three things:

1. Increase recruitment opportunities during this very tight high hiring period.
2. Increase the number of employees who would find the three-day weekend attractive enough to defer their vacations, at least until the pressure of work letup.
3. Increase the number of overtime hours available by using both Friday and Saturday for premium time work. Obviously, we hoped many would be attracted by the possibility of considerably larger weekly paychecks and give up their weekend and vacation plans for a while.

At that time we were working 37½ hours per week, which was about average for similar firms in New York City. The work was rescheduled so that three days were of 9½-hours duration and the fourth was held to nine. In order to keep any inconvenience to our clients to a minimum we kept the office open Monday through Friday by various staggering devices such as having project managers and their secretarial help work Fridays and take Mondays off.

From its inception, this program was doomed. As has been well publicized, transportation to and from Manhattan is a chancy thing at best, and although New Yorkers have proved to be quite skillful in overcoming the ever-changing obstacles that crop up, the 9½-hour day certainly tested their ingenuity and stamina. Car pools were disrupted by the new schedule because these cooperative ventures are usually constructed on the basis of neighborhoods and convenient routes to the city, and rarely



did a pool consist entirely of our personnel. We heard that the adjustment to the earlier opening time (from 8:45 to 8:00 a.m.) was not too difficult, but our 6:15 p.m. closing left our former car pool riders stranded. Train, bus and even subway users quickly found that the substantially less frequent scheduling of these forms of transportation after 6 o'clock sharply increased the length of time away from home each day.

Our staff is rather evenly distributed on Long Island, in New Jersey and in Westchester County, with a few slightly farther away in Connecticut. Normal door-to-door travel time from home to office probably averages between an hour and an hour-and-a-half for a large portion of the people. This, of course, if all goes smoothly. For many, the longer workday now forced them to be away from home more than 12 hours each day, and family life Monday through Thursday was almost nonexistent.

The disruption this caused to the traditional evening meal, when all of the family is together, can easily be imagined. One wife who had two infants and two high school children found that she was making one meal for the babies and a later meal for herself and the school children, and then could look forward to feeding her husband at an even later hour. In a short time she advised her middle-aged husband architect either to get back on a regular working day or eat before he came home. This attitude became more and more common as the summer progressed.

Our other ambitions regarding the four-day cycle also came to naught. Recruitment did not improve. Whether this was merely a continuation of the dearth of available manpower or the word

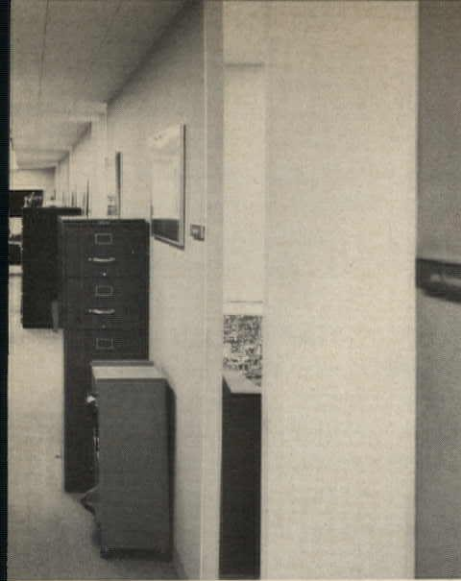
was getting around that our program was not flying quite as we hoped, we never did find out.

Nobody offered to postpone his vacation because of the possibilities of the new three-day weekend. If anything, that probably whetted appetites for more time at the beach and on the golf course during the fine summer months. And of course, as is well recognized, families with school children want their vacations when schools are closed.

Likewise, the offer of additional overtime work, although not entirely ignored, did not attract as many of the staff to give up swimming and boating days as we had expected.

However, the most important factor in our deciding not to extend our trial of the four-day week beyond Labor Day was the number and vociferousness of the complaints received from some of the clients. The program had been established without sufficient orientation, and no client could keep in mind who was off Mondays and who on Fridays. Even in-house this was chaotic because it was impossible, without special arrangement, to get a full group together on a project from Thursday afternoon until Tuesday morning. Realizing that a contented client is the name of the game, in August we switched to a schedule where everyone except a telephone answering group was off on Friday. This worked much better for all, but by that time it was too late to erase the feeling of confusion. With obvious disillusionment the experiment was abandoned.

Mr. Lundberg is partner in the firm of Haines Lundberg & Wachler in New York City.



*Four days
you see them . . .*



*three days
you don't.*

After the trial was over, we polled our staff and found that about 85 percent liked the four-day week concept, but the long day had few friends. However, a recapitulation of the work actually done over the three months showed significantly more work accomplished than in previous summers in spite of the generally chaotic atmosphere. So, although I, myself, was glad that that part of my career was history, it seemed that the four-day week idea had merit from a business and production standpoint and certainly would be favored by most everyone if the longer day could be eliminated.

Through the summer of 1970 and into January 1971 we maintained our regular five-day, 37½-hour work schedule with no further consideration of the shorter or rearranged work week. About that time the Chrysler Corporation and the United Auto Workers agreed to study the possibility, and occasional other references to firms experimenting with the idea reached the news media. This was also the year that brought several national holidays to a permanent Monday arrangement, chiefly for the purpose of creating additional three-day weekends. It was apparent that the trend toward more leisure time was active and probably inevitable. It was then, also, I first read Riva Poor's *4 Days, 40 Hours* and was surprised to find our previous experience quite accurately documented, including the fact that we had reverted to our former schedule. The benefits and predicted advantages of the four-day program we had already experienced, but the long day still was the big hurdle. To shorten the work week in hours in order to make a palatable day seemed too expensive to

consider if the salaries were not reduced proportionately. To keep the same hourly rates and reduce total hours worked per week, thereby cutting the take-home pay, would have been foolhardy in a manpower market that was still quite healthy as far as we were concerned.

It suddenly occurred to me that for nearly 25 percent of a work year (after deducting vacation weeks) we were already working a four-day week due to our policy of an average of 11 paid holidays. Although this was not new, it stood out clearly on our yearly holiday schedule because of the additional and now fixed three-day weekends. Was it possible that everyone was speeding up his production in these shorter weeks to keep on long-range schedules, or were we, in a variation of Parkinson's law, taking five days in the other weeks to get a similar amount of work done that could actually be done in four without apparent strain? Remembering the sometimes amazing results that can be accomplished "on charrette," and believing that creative people generally seem to work better under pressure, I decided to come up with a plan, if possible, that would satisfy the clients' requirements for full service, improve the working conditions in our office by introducing the highly desired additional leisure without decreasing the take-home pay, and not be too expensive to the firm. All this has been accomplished.

By shortening the work week to 34 hours with no change in weekly salary, a schedule of four 8½-hour days was established. This is not much longer than the generally accepted 8-hour day and I felt it would be a great improvement over the disliked 9½-hour day of our aborted program. In order to keep as close to good commuting hours as possible, the work day was established as 8:00 a.m. to 5:00 p.m. with a half hour for lunch. Experience had shown that the earlier starting time had caused no personnel problems and in fact, many had indicated it was preferable. We also knew that a significant part of the staff already ate lunch in the office, either bringing it from home, having it sent in, or purchasing it from food cart service that the firm made available. For these people a half-hour lunch was quite adequate. Those of the staff having business lunches with clients, contractors or suppliers would, of course, continue to suit the time involved to the occasion. The 5 o'clock closing is normal in New York City and provides the greater opportunities for selection of transportation even though all forms are most crowded at that hour.

It can be seen that by keeping the weekly salary unchanged and reducing total hours worked, approximately a 10 percent increase in hourly rates was effected, which was roughly equal to our expected overall salary increase for the coming year. Therefore a moratorium was established for that year on any additional pay adjustment, principally to assure clients that they were not picking up the tab for our new venture. (I assumed correctly that the extra day off per week would compensate for a while, and President Nixon's August 15 freeze came well before the euphoria wore off.)

The office now works four days each week of the year whether a holiday occurs in any given week or not. In effect, holidays are no longer paid for but are considered to be the day off in that week. For the major part of the year we are open Monday through Thursday and closed Friday through Sunday. If the traditionally observed holiday occurs on Monday, we work Tuesday through Friday. If it comes on a Wednesday, we are at the boards Monday, Tuesday, Thursday and Friday. This year there are generally six or seven four-day weekends. In addition, our office has 39 three-day weekends and only five or six of the old-fashioned two-day variety.

Vacations have been kept on the same weekly basis. That is,

Week Beginning	Holiday	Work Week	Days in Weekend
January 3	—	M T W TH	3
10	—	M T W TH	3
17	—	M T W TH	3
24	—	M T W TH	3
31	—	M T W TH	3
February 7	—	M T W TH	3
14	—	M T W TH	4
21	Washington's Birthday (M)	T W TH F	2
28	—	M T W TH	3
March 6	—	M T W TH	3
13	—	M T W TH	3
20	—	M T W TH	3
27	—	M T W TH	3
April 3	—	M T W TH	3
10	—	M T W TH	3
17	—	M T W TH	3
24	—	M T W TH	3
May 1	—	M T W TH	3
8	—	M T W TH	3
15	—	M T W TH	3
22	—	M T W TH	4
29	Memorial Day (M)	T W TH F	2
June 5	—	M T W TH	3
12	—	M T W TH	3
19	—	M T W TH	3
26	—	M T W TH	3
July 3	July 4 (T)	M W TH F	2
10	—	M T W TH	3
17	—	M T W TH	3
24	—	M T W TH	3
31	—	M T W TH	3
August 7	—	M T W TH	3
14	—	M T W TH	3
21	—	M T W TH	3
28	—	M T W TH	4
September 4	Labor Day (M)	T W TH F	2
11	—	M T W TH	3
18	—	M T W TH	3
25	—	M T W TH	3
October 2	—	M T W TH	4
9	Columbus Day (M)	T W TH F	2
16	—	M T W TH	4
23	Veterans Day (M)	T W TH F	2
30	—	M T W TH	3
November 7	General Election Day (T)	M W TH F	2
13	—	M T W TH	3
23	Thanksgiving Day (TH)	M T W F	2
27	—	M T W TH	3
December 4	—	M T W TH	3
11	—	M T W TH	3
18	—	M T W TH	4
25	Christmas Day (M)	T W TH F	3

Midweek holidays are considered to be the day off in that week. If it occurs on a Monday, the office is open through Friday; if on a Tuesday, working days are Monday, Wednesday, Thursday and Friday.

an employee entitled to three weeks' vacation still has the calendar three weeks, but for accounting purposes where that term used to encompass 15 working days, it now includes 12. Fractional accumulated weeks are translated to days earned on a formula related to weekly salary.

Under the new arrangement, we still pay for certain absences but only on the basis of reasonableness. Personal absence by choice is frowned on. It was clearly requested that Friday be the day for appointments with dentist, doctor, beautician, etc. Ignoring this concept is apt to result in reduced paychecks. The cooperation on this point has been fine and we find our overall absenteeism 35 percent less than on the former schedule.

Our overhead costs are about 6 percent lower than previously. This is because of the elimination of paid holidays as such,

reduced expense for nonproductive absenteeism and the fact that we no longer pay premium time until 40 hours have been worked in a week. This allows six hours on Friday at straight time for necessary extra work, all of which is billable. Prior to this program we felt it necessary to absorb all premium pay costs as we could not develop a satisfactory method of fairly allocating the overcharge to the clients.

The matter of recruitment is one on which we can still only conjecture. Due to the national economic slowdown which made itself so strongly felt in our profession in '71, the firm has not been actively seeking additional help but we have seen clear evidence that this will also be an advantage when more commissions require us to restaff some divisions. Several inquiries have been received from desirable professionals who are holding good positions in other fine firms, as well as from excellent people who are presently employed.

Looking at the other side of the coin, the stability of the staff is excellent. Even though we have never experienced a high rate of turnover among our technical people, it is now almost zero. In simple terms, accepting another position means back to the five-day week for the same salary that the four days produced. Apparently it will take considerable inducement to make such a change attractive.

Certainly, one of the most pleasurable factors to the partners is the evident employee satisfaction. Staff members have continually responded to inquiring reporters and radio commentators with enthusiastic approval of the arrangement. As hoped, they are really producing more work per week, which is so essential to any such plan. Even a year later, and in spite of a lesser workload overall, tardiness no longer is the annoying factor it used to be.

Our clients seem to be equally satisfied with the results and as their requirements for work increase again, they are already aware of the potential for "crash program" work on Friday and even Saturday if needed. It is also possible to work an occasional evening but this is far less efficient production and, we believe, has a tendency to slow down creative effort in successive work periods. We are finding that the shorter day in a concentrated work week keeps our employees in a better frame of mind to tackle accurately and skillfully the various projects that come to the office. It is inevitable that a significant proportion of our output is repetitive and somewhat routine. In our new climate this work is getting accomplished quicker and, I feel, better.

Aside from the basic substitution of 52 days off for the former paid holidays, our other fringe benefits have not had to be revised. Our profit-sharing program, which is integrated with social security, continues in proportion to the profits earned. We pay one-half of the hospitalization insurance costs, one-half of tuition costs for accredited courses related to professional improvement, all costs for group life and travel insurance plus several employees' activities costs. We have never established a definite sick leave allowance, preferring to pay for all reasonable time off due to illness as related to an employee's record of absences and length of service. This is handled as an administrative matter within the various divisions, except that excessive or long continuous absence needs partner review and approval.

So far it has not been possible to include our field staff in the short week program. These men must be on the site whenever the construction situation requires their presence and therefore they maintain the old five-day schedule. Hopefully this condition will not continue for much longer as there seem to be expressions of interest in a shorter week coming from some contractors and construction unions. □

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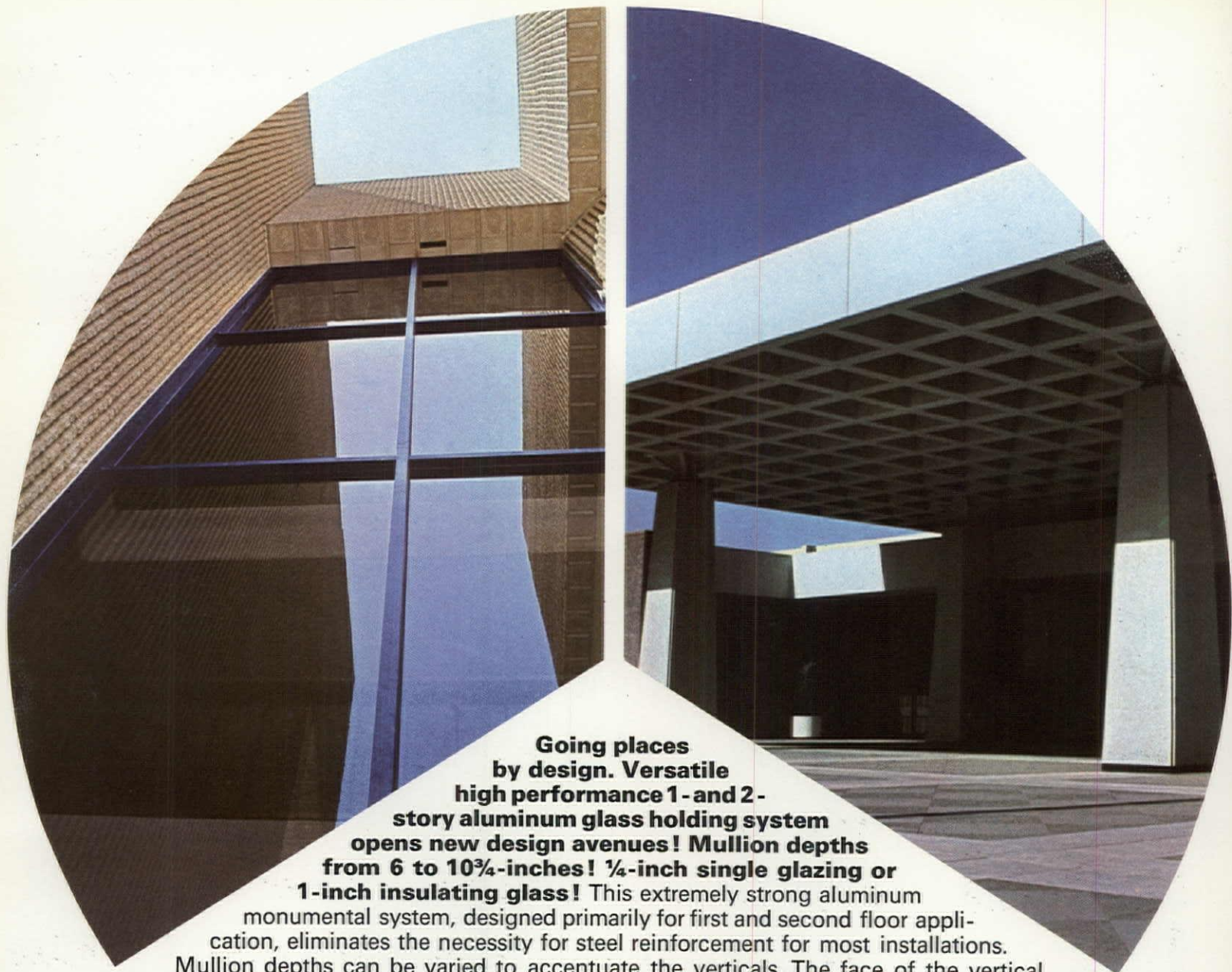
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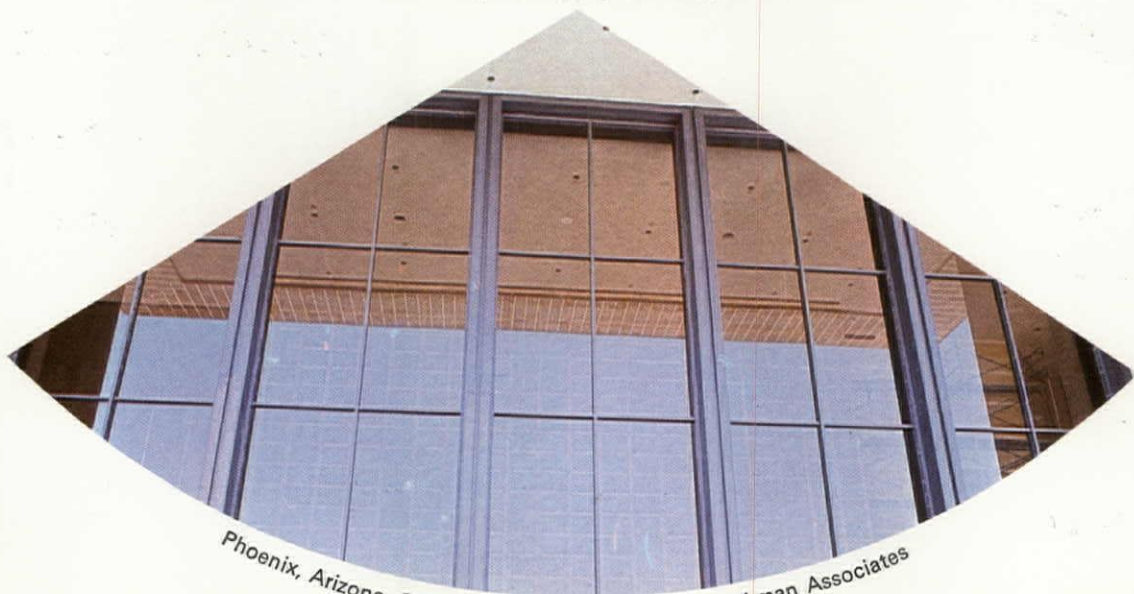
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Phoenix, Arizona, Civic Plaza, Architect: Charles Luckman Associates

The Two-Wheeled Solution

It may be a long wait until technology and politics come up with any real answers to the present transportation crisis. Meanwhile, there's one way to alleviate the problem, says C. M. Deasy, FAIA, partner in the Los Angeles firm of Deasy & Bolling. His account of experiences on a Honda is a condensation of an article in *The Los Angeles Magazine*, Beverly Hills, California.

"One man, one vote" may be a potent political slogan, but "one man, one car" is our way of life. A less rational method of moving masses of people would be hard to conceive. When these mechanical mounts get where they are going, they will idle away their day on some of the most expensive pasture ever created until it's time to head home. Going and coming, they will make a burnt offering of gasoline, the incense of urban life.

The true cost in human terms as well as public treasure is probably impossible to compute. This means of transportation preempts an inordinate amount of urban land and, from a planner's standpoint, produces an aching quandry: How can you plan a city for people when the cars keep getting in the way? A last glaring drawback is that the automobile is the paramount source of the poison in the air we breathe. Perhaps we could live with the other burdens, but smog is not one we can long endure.

With all its drawbacks, the private automobile has one thing going for it that the widely touted alternative, a public transit system, can't match: unequaled any time, anywhere, personal mobility. A substitute system that hopes to lure the commuter out of his car will have to match this, or offer a reasonable facsimile.

There is one readily available option that will minimize all the drawbacks of the automobile as a commuting device without any sacrifice of personal mobility: the much maligned motorcycle. It uses a fraction of the parking space, quadruples the capacity of a freeway lane and, most encouraging of all, burns a quarter of the gasoline. Anyone who isn't impressed with the last fact is either burning free gas or has learned to get along without breathing.

Walking to work or riding a bicycle would be even better, of course, but with the commuting distances in many cities these aren't often practical alternatives. A 14-mile bicycle ride through traffic is not only slow work, it's sweaty. It's great for the health, but not apt to win you friends at the office.

It's not easy for most motorists to view the

motorcycle with any deep sense of gratitude. At the very least, it's noisy. At worst it's saddled with the mangiest public image ever manufactured by the film industry: jack-booted, kidney-belted gangs on wild looking choppers terrorizing the decent and the wholesome. The sight of someone moving easily between lanes of cars while you're stalled on the freeway isn't easy to take, and the dark suspicion that it's really Count Dracula's cousin on his way to a gang fight doesn't help.

But in fact, every motorcycle rider is making life just a little easier for every automobile driver and doing his bit for cleaner air and a less crowded city to boot. If enough people could be coaxed out of their cars and onto two wheels, it would solve some serious problems.

The motorcycle is a thoroughly practical way to commute. This isn't hypothesis, but a demonstrated fact. Mindful that many brilliant theories of architects and planners lose some of their gloss in practice, I put this one to the test. Can a middle aged architect find happiness on a 350 Honda? The answer is, yes, if he can find some way to keep his knees warm.

Since some early misadventures, the Honda has become for me a reliable, thoroughly enjoyable beast. It's easily tucked into those odd corners of the parking lot and delivers a steady 60 miles per gallon in city driving. Taxes, insurance and even engine tune-ups are similarly scaled down. Compared to operating an automobile, the bite is almost painless.

There is one drawback that any professional man will recognize. Walking into a conference with a scuffed toe on your well-turned oxfords — that's what you shift with — is no big thing, but it's hard not to feel a little conspicuous with a helmet swinging from your arm like an oversized May basket. It doesn't blend with the decor of the average executive suite. Stuffing it under your jacket won't work. The anatomical abnormalities that result are even more conspicuous than the helmet. The only thing to do is



to treat it as a perfectly normal accessory, and hope that everyone will forget it.

During the last 10 years, automobile registrations in Los Angeles County have increased by 30 percent, but motorcycle registrations have leaped by 450 percent. It is doubtful that all these new riders can be credited with a deep concern for the environment or a selfless contribution to better traffic flow. No matter, the result is the same.

The two-wheeled solution offers enough solid benefits to the community that it seems reasonable to propose that some action be taken to encourage it. Free parking for two-wheelers would be a painless way to start. In Los Angeles, for example, there are now some 13,000 curb parking meters in operation, 1,100 of them in the downtown area. Inviting cyclists to use these free of charge could have an electrifying effect on commuting habits. The 1,100 downtown parking spaces alone translate into 5,500 motorcycle spaces. There's no question that eliminating this number of automobiles from the daily tidal movement of traffic in and out of the central city would be a real blessing.

There are a lot of common sense reasons why the daily commuter would be doing everyone a favor, including himself, if he left his car at home and rode to work on a cycle. In the end, however, the single factor that will put more motorcycles on the road is that it is more fun than driving a car. Granted, you may not be any Steve McQueen; you won't be drifting the corners or doing wheelies when the signals change. You'll stay in the right lane, slow down for the turns and keep a cautious eye on the traffic. But you won't be bored.

Even if you don't try it yourself, keep a warm spot in your heart for the man on the bike. He's making life easier for you. Give him a reasonable amount of running room and don't crowd him on the curves. And if you overtake a rider on a blue Honda wearing a white helmet and a look of concentration, please pass quietly. Riding is still a full-time job for me. One loud noise and I may take off for the nearest hedge. □

Design Translation of Political Decisions

A planetwide conference on the human environment was held in Stockholm in June under the aegis of the UN. Attended by 1,200 representatives from 112 countries, the conference was attended also by representatives of 258 nongovernmental organizations. The design professions were not effectively represented, says Patrick Horsbrugh, AIA, director of the graduate Environics Program at the University of Notre Dame. He gives his general impressions of the Stockholm meeting, but more to the point, he calls upon the AIA and other design professional organizations to influence and have a say in any post-Stockholm meetings.

The United Nations Conference on the Human Environment acknowledges, beyond all doubt, the existence of a realm of natural factors and forces above and beyond politics. By means of this meeting mankind now knows that upon the condition of the environment all else depends and recognizes that no international dealings are possible without environic consequences.

The strategic significance of environic conditions may be accepted as a logical extension of Alexander de Seversky's 1940 treatise *Victory through Air Power* which was so brilliantly revealed by the Walt Disney Studios in a cartoon film with the same name. The thesis is that domination is achieved by those who control the largest element: the land, the oceans or the air. The validity of this obvious military concept was demonstrated in the early days of World War II where the range of armies was contained by naval power but was curtailed by aerial strength. Space technology has now revealed the delicacy and the finiteness of the biosphere, presenting humanity with political temptations hitherto confined to dreams.

Henceforward, the environment is known as the ultimate realm of human conflict. The arguments presented at Stockholm at each level of expression — in the stilted formality of the plenary session, in the fluid appeals of the nongovernmental organizations, in the abrasive flourishes from the Environmental Forum and in the spontaneous fulminations of the many action groups — all confirm this tacit fact.

The momentum of the conference lay not in the official UN proceedings, but in the deliberations of the nongovernmental organizations and their interchange with the action groups whose focus was the Environmental

Forum. The success of the conference may be assessed by the most scale-setting and concise paragraph contained within the statement submitted by the nongovernmental organizations to the plenary session, which was prepared by a committee under the chairmanship of economist Barbara Ward and read by anthropologist Margaret Mead.

The perception of the biosphere in finite terms represents "a revolution in thought fully comparable to the Copernican revolution by which, four centuries ago, men were compelled to revise their whole sense of the earth's place in the cosmos. Today we are challenged to recognize as great a change in our concept of man's place in the biosphere. Our survival in a world that continues to be worth inhabiting depends upon translating this new perception into relevant principles and concrete action."

Amid the welter of exchange, the simple truth emerged that the scale of environic disorder and degradation is now so great that remedial decisions cannot be effective other than through the prevailing political systems and that no translation of "new perception into relevant principles and concrete action" can be achieved other than by means of *professional planning and design*.

As obvious as this may be, the transcendent importance of planning technology was seldom implied and never, it seems, directly conveyed in official statements or by individual utterance. This omission of professional emphasis touches all who are involved in the process of environic appreciation, from education to design practice. It is surprising that no concentrated effort was made by the



design professions to seek representation among the nongovernmental organizations. The absence is the more unexpected when it is considered in the context of the long sustained leadership in environic criticism and obligation developed by The American Institute of Architects more than a decade ago with its stress upon the totality of the man-made environment and upon collaboration among all the design professions.

Moreover, this leadership in environmental alarm, assessment and concept stands to the credit of American design professions in general, nudged perhaps by such paraprofessional influences as the National Trust for Historic Preservation, whose range of historic comprehension and esthetic experience is so significant when assessing environic change.

Precise dates can seldom be applied to burgeoning concepts, but in the United States the recognition of environic obligations oc-

curred in May 1965 with the White House Conference on Natural Beauty. The condition of the environment was established as a national imperative, and the AIA was in the forefront of this vital social endeavor. With the Stockholm conference, the expansion of that national event to the global scale as an international urgency was witnessed.

The UN conference may now be recognized as the first international assembly to be held in anticipation of social catastrophe in the hope of human security and in the partial realization that human inadvertence has already produced degradation that is, indeed, irrevocable. Such an extraordinary conference must be assessed within the context of the history of both the League of Nations and of the UN, for it seems strange in retrospect that no recognition has been given to the simple fact that man-to-man moralities depend ultimately upon man-to-land relationships and consequent environic ethics. The Declaration of Human Rights reads now as a very frail concept without reference to material conditions presently recognized in the newly formed Declaration of Environmental Rights. It was an ingeniousness of thought prevalent only 25 years ago which could have accepted the possibility of social stability detached from material conditions.

The environic crisis, even though dimly perceived, represents what is potentially the most unifying issue ever to confront mankind. Yet the prospect of diminishing resources, both material and spatial, serve only to intensify instinctive hostilities and to increase traditional competitiveness in an evermore intense struggle for the control of what remains. As the vision of new administrative opportunities emerge in the form of the proposed permanent UN environmental organization, the personal bickerings and national animosities and the unseemly scramble for manipulative positions, are already in progress for the control of an international instrument for formidable intellectual prestige, economic prowess and political power.

The enforced revision of concept respecting the earth's position in the cosmos brought about by the Copernican revolution had fierce political ramifications, and similar effects must now be expected from the sudden realization that the environment represents a new dimension of political operation based upon material and spatial scarcity, upon limitations of energy conversion and upon quality of conditions — that essential factor of human survival. It is upon this issue of the *translation* of political decision into practical design that the good intentions at Stockholm were revealed at their most deficient.

The design professions were not effectively represented among the nongovernmental organizations for a variety of reasons, ranging from direct political discouragement and a natural professional disinclination toward international involvement to organizational and economic restraints. Of the 258 nongovernmental organizations listed, only seven are actively concerned with the vital matters of physical planning and design.

There exists, therefore, an obvious vacuum in the pattern of organizations rallied to in-

continued on page 54

Newslines

■ **The measurement of noise** at proposed housing sites is being researched by the National Bureau of Standards under the sponsorship of HUD. The intent is to develop an inexpensive, self-operating, portable device for accurate measurement. HUD has established specific requirements for noise abatement and control, and federal aid is withheld from new housing that would be affected by excessive noise pollution. Its *Noise Assessment Guidelines* may be obtained for 70 cents from the US Government Printing Office, Washington, D.C. 20402.

■ **P. Richard Rittelmann**, senior associate with the architectural firm of Burt, Hill & Associates, has been appointed by the National Aeronautics and Space Administration to the Solar Energy Panel. The panel was given the responsibility by President Nixon to "study promising solar energy systems for terrestrial applications, establish priorities and recommend research and development programs and plans."

■ **The New York Society of Architects** has published its 59th annual edition of the Building Code of the City of New York. In two volumes, the publication includes virtually all building laws and codes needed by the New York City practitioner. It may be obtained for \$20, plus \$1.40 for sales tax and \$1.75 for handling and mailing from the society, 101 Park Ave., New York, N.Y. 10017. The price to members of the society is \$5 plus handling and mailing charges.

■ **Sanford M. Goldman, AIA**, of St. Petersburg, Fla., has been named by action of the City Council to St. Petersburg's new Environmental Planning and Development Commission. The council has abolished its former Zoning Board.

■ **The Paolo Soleri Collection** has been established at Arizona State University to contain publications by and about the architect, drawings, correspondence, etc. Inquiries may be addressed to L. Schneberger, Paolo Soleri Collection, Hayden Library, Arizona State University, Tempe, Ariz. 85281.

■ **Arland A. Dirlam, AIA**, of Marblehead, Mass., now holds an honorary Doctor of Laws degree from Union College, Barboursville, Ky.

■ **John P. Conron, AIA**, of Santa Fe, N.M., has been appointed an adviser to the American Revolution Bicentennial Commission. He will serve on the Historic Conservation Advisory Panel of the Heritage '76 Committee.

■ **Roger M. Blough**, chairman of the Construction User's Anti-Inflation Roundtable, is the 1972 recipient of the F. Stuart Fitzpatrick Memorial Award given to the individual in the building industry who, in the opinion of the judges, has done the most to encourage unification within the industry. The AIA is one of the organizations sponsoring the award.

■ **Mobile homes** were bought by half of all new single family home purchasers in 1971, *Business Week* reported recently. Of all families with incomes under \$15,000, 95 percent who purchased homes chose mobiles. The median cost was \$7,130 in comparison with \$25,000 for a so-called conventional house.

■ **Roy Gussow** was declared winner of an invitational competition for a free-standing sculpture to be placed at the entrance of the new Family Court Building in New York City. Now under construction, the structure is the design of Haines, Lundberg & Waehler. Among the members of the jury for the competition were Lewis Davis, FAIA, and Charles Haines, AIA. The competition was managed by the Fine Arts Federation, whose president is Giorgio Cavaglieri, FAIA.

■ **Building systems** are given special attention in the reports and studies of the Building Systems Information Clearinghouse/Educational Facilities Laboratories, Inc. BSIC also publishes every 10th week the *BSIC/EFL Newsletter*. Communications and requests for publications should be addressed to BSIC/EFL, 3000 Sand Hill Road, Menlo Park, Calif. 94025. □

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Schindler. David Gebhard. Preface by Henry-Russell Hitchcock. New York: Viking Press, 1972. 216 pp. \$7.95 hardbound, \$3.95 paperbound.

If you are not familiar with the name Rudolph Schindler, you are not alone. Yet this late architect's work rates an apology for neglect from Henry-Russell Hitchcock, one of our most eminent historians, in the preface to this interesting volume. Also Gebhard has called Schindler one of the major modern figures of American architecture in another of his publications. How Schindler's obscurity is possible is treated in a provocative manner in this book, in which I see implications for the future of building and of critical thought as well.

Gebhard gives due credit to Esther McCoy for establishing an awareness of Schindler in her book *Five California Architects*. She has re-created in writing the excitement generated by Schindler's buildings in reality. Gebhard's book serves to document thoroughly the work of Schindler, but it does much more also. It makes me hunger for a next book on this architect, which should have sufficient photographs of his few unaltered works to establish the feeling and the depth of thought behind the stylistics so well cataloged by Gebhard. This would necessitate many color plates as Schindler did not design with the chiaroscuro medium of the black and white photograph in mind. Many of his buildings were essentially one color inside and out. My interest in his work is in the purely architectural ideas which cannot be translated fully into words or pictures. This perception only became possible for me after experiencing his buildings because the photographic impressions were too unfamiliar, even peculiar.

While Schindler's reputation is emerging, Gebhard is taking a direction as a critic which should prove useful to the practitioner. He seems to be a man who is not afraid to grow. In the past, he wrote of a lower opinion, shared with others, of Schindler's last eight years of work. Since then, he is courageous enough to look again without the preconceptions based on what big name architects are designing. In this book, Gebhard says of the same eight post-World War II years: "By the time he died in April 1953, Schindler had succeeded, but not in a self-conscious way, in bringing about a remarkable union of low and high art."

Would it really matter, though, if one architect's reputation were lost? It would not if history continues to be written along the lines of what Richard Neutra called "the Renaissance myth of genius." The mainstream of the great men concept allows only a few names at one time or in one place, but there are really so many.

For example, in the book's preface Hitchcock makes reference to Leopold Eidlitz,



Dating from 1935 (top) and 1945, these California houses seem to have been built today.

another name unfamiliar to most architects. Was Eidlitz, then, a minor unimportant figure of the 19th century? Hardly. In a speech before the Royal Institute of British Architects, he was called the first man to affirm that esthetic invention was still possible in architecture. H. H. Richardson called him "the ablest man I ever knew." Since first becoming aware of Eidlitz, I see that he is gaining more frequent notice but only for his writings. His architecture is downgraded. I am sure this is done to justify his lost and neglected reputation. His work was highly considered in his own time; he was called a great architect by Montgomery Schuyler.

Another example would be the fact that Schindler was not alone in being underestimated in Los Angeles. Gebhard points out some of the others. I could add Vincent Palmer with his ingenious, and *commercially successful*, steel production houses and buildings from the '30s until World War II.

Gebhard reveals Schindler and himself as champions of diversity and hence of the practitioner on the firing line. To be most effective, the active practitioner needs the courage to mold the possibilities at hand, rather than to fit into current conceptions of correctness. Schindler appears to have spent his life doing this, but in addition he invented his own problems to solve. For example, some of his

unusual uses of glass areas result in delightful light effects.

Gebhard speaks boldly of styles as packaging, and even more boldly of publicity and critical writing as salesmanship. He says, "However, the creation of the historical tale of the International Style, and its presentation as the only logical style for the 20th century, now stands revealed as one of the most impressive sales campaigns of recent history."

This suggests other thoughts. Would Gebhard go so far as to say that greatness has been equated with publicity value and that publicity value has been secured by salesmanship? I think that he might. If so, we can welcome a new breed of critic who seeks out and encourages fine building. The practitioner could then turn his attention back to his product and pursue a truly pragmatic approach. While critical acclaim does feed back encouragement and results in better buildings, so few have been allowed to play. Gebhard has shown that while these few may have been good, they were not the only ones.

Aside from the significance that I find in this book, it is a gold mine for serendipity seekers. Gebhard now becomes one of my favorite writers on architecture, along with Wayne Andrews, Esther McCoy and Don Gifford.

JOHN BLANTON, AIA

Legacy from the Past: A Portfolio of Eighty-eight Original Williamsburg Buildings. Carlisle Humelsine. Williamsburg, Va.: Colonial Williamsburg Foundation (distributed by Holt, Rinehart & Winston), 1971. 78 pp. \$5.10 hardbound, \$2.10 paperbound.

This exquisite portfolio of 88 original colonial buildings in the restored town of Williamsburg, Virginia, is, I surmise, the diplomatic answer to a gentleman and a scholar to some misunderstandings about the presence of original 18th and early 19th century buildings in the historic area. The author, Carlisle H. Humelsine who is president of the Colonial Williamsburg Foundation, describes in a cool, deft manner the foundation's philosophy of preservation and its dedication to unveiling our nation's history to today's society.

A good idea defends itself. This book, revealing for the first time under one cover these 88 *original* buildings, is vindicating; and the replicas which have been criticized are a necessary part of this open air museum to accomplish its educational mission.

There are both social and architectural lessons to be learned here by young architects and their colleagues in the social disciplines. Humelsine's brief narrative and N. Jane Isley's photography will whet the curiosity of a sensitive architect. The book's full color plates show these original buildings in summer and winter, in high noon sun and low dawn or dusk sun. One of the best is of the Market Square Tavern where Thomas Jefferson lived for a time. It was photographed on a snowy, cold, gray day.

The color plates are presented with minimum comments which describe the town plan, the gardens, the handicrafts program, the authentic furnishings, the comprehensive program of preservation, the research and

continued on page 58

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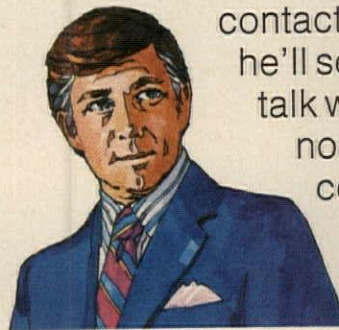
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If the student of architecture will combine this book with two others, *The Public Buildings of Williamsburg* and *The Eighteenth Century Houses of Williamsburg* which describe how the colonists designed and detailed their weatherboards, their chimneys and their shingles for function and durability, his trip with these field reference manuals will be exciting and informative.

As Humelsine states, "In all, 88 of these original buildings from the 18th and early 19th centuries have withstood the toll exacted by fire, destruction and decay. Without them, there would have been no restoration of Williamsburg. It was the prospect of the preservation of these buildings and their dramatic historical significance that captured the imagination and held the interest of the Reverend W.A.R. Goodwin, former rector of Bruton Parish Church, and John D. Rockefeller Jr., whose combined vision saved the major portion of the 18th century town.

"These originals include thirty-eight residences, eight public buildings, thirty-six out-buildings, two taverns and four shops. (The restoration program began in 1928 with the Wren Building, the focal point of William and Mary campus which houses classrooms plus the 'terrific' chapel in natural wood and white.)

"From the first, Mr. Rockefeller perceived that of all the colonial capitals, Williamsburg offered the best opportunity to transform an entire small town into a 'living museum'."

To create this open air museum, those important colonial buildings which had only their foundations remaining, were rebuilt. The 88 original buildings were revived faithfully and meticulously to the credit of these preservationists. To this has been added authentic colonial crafts at work; a comprehensive continuing calendar of cultural events in music, drama and environmental activities; and other aspects of a broad interpretative program. I have found, via my family's opinion, that Williamsburg does instill an appreciation of our country as no spotty preservation can.

Williamsburg is an accomplishment somewhat like Stockholm's renowned Skansen open air museum. The distinction is that buildings were not moved into the Williamsburg historic area; they are original, or reconstructed following the most intensive research based on the "Frenchman's map" drawn by an unknown French soldier in 1782, extensive archeology and other research. Skansen, on the other hand, is a col-

lection of Lapland buildings which were moved to the site. Both Williamsburg and Skansen have flourishing craft programs.

Another comparison of preservationism philosophy: The wood structures composing the revered impeccable Japanese Shrine of Ise traditionally are rebuilt with new wood and thatch every 20 years, thus all structures are replicas many times over. This sensitive program has been documented by Kenzo Tange in the book *ISE: Prototype of Japanese Architecture*. Hence, historical architec-



ture and its entourage need the privilege to correlate the methods of preservation, restoration, relocation and rebuilding as replicas.

The conviction of the Colonial Williamsburg Foundation preservationists that Colonial Williamsburg is in fact the unique and opportune place for a lesson in history, where the greats of the American Revolution hammered out the principles of our democracy, deserves accolades.

I admit that I still wipe a tear away on seeing the information center's film "Williamsburg: The Story of a Patriot," even after four sojourns to Williamsburg with my family. Like the Philadelphia lawyer who said that he didn't have to prove that he was the best lawyer in Philadelphia, he admitted it. So does *Legacy from the Past* present a convincing case of admitting that Colonial Williamsburg is a national treasure.

KENNETH W. BROOKS, FAIA

Sunlight and Shadows. The Bri-Marians. Randolph, Mass.: Bri-Mar Nursing Home, 1972. 100 pp. \$2.50.

This may well be the most important architectural publication of 1972. Its cover is made of green construction paper; the binding is done with staples and yellow plastic tape. The text is printed without gross editing and includes spelling and grammatical errors just as they occurred in the manuscript.

The book has 21 authors who wrote, designed, illustrated, printed and bound a limited edition of 500 copies. I have copy No. 98 and consider it the best book in the entire AIA research library. The authors live in the Bri-Mar Nursing Home in Randolph, Massachusetts. As a group, they represent just over 1,500 years of living.

This is a "must" book for architects for a number of reasons. To begin with, it is a treasure house of user need statements and activity patterns that apply to any housing environment designed for elderly persons. For example, this statement is made on page 15: "I notice that it's harder for me to remember some of the things that I used to know. I'm slower moving but I still love looking after my plants." Margaret McLaughlin, who said this, is 82.

Dorothy Welch, on page 27, gives us enough information to keep a designer at the drawing board for a month. "I smoke my cigarette. I take care of my table and I take care of my trays and I do my dishes. I went to the mast ball. I wore my beautiful costume. I dance. I had a very nice time. I went for a ride. I do lots of different things. It's nice to have your picture took. I play croquet. I'm not so old. I don't have time to be so old because I have so much to do."

Pages 47 and 48 give us these activities: "Pat likes to sweep the walk"; "Mike dumps the waste baskets"; "After dinner Bob vacuum cleans the rug"; "Jim likes to do errands and goes to the store"; "David mops in the upstairs hall"; "Mary A. and Mary K. often help Dorothy with the trays." The book contains hundreds of insights into user activities and behavior patterns.

But the book is much, much more than a source of user needs information. In a series of statements about what Bri-Mar means to them the authors present the impact and importance of their environment on their lives and their sense of well-being. For example, there is this one: "On special occasions we fly our house flag from the porch so that passers-by will know that we are entertaining and all are welcome. We designed the flag ourselves."

Mildred Everson, who is 78, tells us, "Bri-Mar has given me a most delightful place to live. We have many good times. . . . At first it was hard for some of us to accustom ourselves to being addressed as residents rather than patients and some were a bit slow in joining in. Now we are more certain. It keeps everybody happy and lively."

In the foreword, the authors tell us, "For us, Bri-Mar is a real home rather than 'a place to be put into.' We cherish our house and are proud of our years." Doris Stewart probably sums it up for all Bri-Mar residents when she writes, "I doubt that these people . . . have ever spent so much as one week

out of their lives living in a nursing home. How can they be so certain that they are right? First, they need to know the word *home*." Just the thought of producing an unresponsive, hostile, badly designed setting for people who are that sensitive to their environment should be enough to make any designer break out in a cold sweat. That's the kind of thought that can bring you out of a deep sleep with the screaming meemies.

There is still another reason why this book is a must for architects, and this is why everyone should read this little book. It's pure food for your soul. It's a mandate for life itself. Beyond its architectural usefulness, the book cries out that life is good and precious and well worth the effort it takes to live it. A few examples: "Age is a privilege, not a penance — so we've written this book to prove that we're still young in spirit because life's beautiful. And so are we." "I really don't mind saying that I am over 90. . . . My philosophy is to 'keep dancing'."

The last page of the book puts it all together: "Has anyone a last thought which should be written, or do any of you have anything to add? (A hand is raised.) 'Yes, Liz, shall we play secretary for you?' 'That's right, Darlin'; you write it down for me. My hand's not good. Say: That life is beautiful. Tell the world I'm glad to be alive! Now! Every day . . . ! I look for you to come. Last night I dreamt of smiles. Life is love and love is living. God bless, Darlin' — Will you be here tomorrow?'"

DON CONWAY, AIA

Director
AIA Research Programs

ED. NOTE: A few copies of *Sunlight and Shadows* may still be available from the Bri-Mar Nursing Home, 490 N. Main St., Randolph, Mass. 02368.

Toward Understanding Modern Churches. Filmstrip package. Lutheran Church in America, Commission on Church Architecture (distributed by Lutheran Film Associates, 315 Park Ave. S., New York, N.Y. 10010), 1972. \$12.

This new 15-minute color filmstrip and 33 1/3 rpm record are not for architects. They can, however, serve as a tool to make the architect commissioned to a church client more effective.

This audiovisual tool is beamed in particular toward the Lutheran Church and toward the average Protestant group in general. It attempts to dramatize the historic trends in the Christian church: early Christian cathedral, Gothic Revival, modern. Its basic emphasis, however, is to sell the idea that church architecture itself is only a means of accomplishing the purposes of the church.

Obviously, this point of view will not fit all denominations. It does, however, fall in line with the strong trend of today to emphasize the church as an assembly of concerned Christians around the sacramental table. The record responds to the writings of Dr. Edward Frey, author of *Before You Build* and *This Before Architecture*.

As any architect who has designed a church knows, very few congregations really understand the basic philosophy of their denomination. It is a rare building committee that can produce an effective building

program. This packet, therefore, could be a platform on which to launch an enlightened committee to a new level of understanding in order to achieve an effective program and a climate for more appropriate architecture.

The record is cut on both sides, one for manually operated projectors with a tone indication and the other for use in automatic projectors with an inaudible advancing signal.

This reviewer would not want to suggest that all the contemporary churches illustrated are good. Far from it. But it appears that, if properly used, the filmstrip and accompanying record can be a real contribution that, hopefully, will lead toward more useful and appropriate architecture for the average Protestant church of the '70s.

ROBERT L. DURHAM, FAIA

Environmental Design: New Relevance for Special Education. Alan Abeson, Project Coordinator; Julie Blacklow, Editor. Arlington, Va.: Council for Exceptional Children, 1971. 120 pp. \$6.75.

The tone of this book is amply stated in the first page of the introduction with two paragraphs.

"Urban sociologists and others who have studied the patterns associated with the 'settling in' of newly arrived groups into the city speak of the 'principle of succession.' This principle states that the newest group to arrive — regardless of ethnic origin, religious beliefs or racial heritage — occupies the least valued and usually the least desirable environment. It is this same principle which has operated for some time in regard to educational facilities for the handicapped.

"It is common knowledge that the education of handicapped children often occurs in abandoned schools, churches, barely modified basements and renovated offices or custodial spaces. Gradually as more and more handicapped children participate in education programs, improved facilities are being made available to them. However, in many cases no adaptation of the facilities in which they are housed is made to meet their special needs."

The field of special education has been, to a large degree, a mystery to and an unknown factor to architects because of the absence of any really helpful research material. Architects have been prone to design for "school districts" rather than children in schools for the normal. They have had even less exposure to understanding of and experience with the mentally and physically handicapped.

This book is perhaps the first real substantive document relative to designing for sub-normal children. The authors have been engaged with other persons in a research project over the past several years under the sponsorship of the Council for Exceptional Children, studying the problems of special education and physical environment. The results of their research, which includes returns from nearly 1,500 questionnaires, are summarized in this book.

The findings cover a broad range of topics including such things as whether to integrate the handicapped with the normal child, how much to involve the community and the parents in the program, what the learning space

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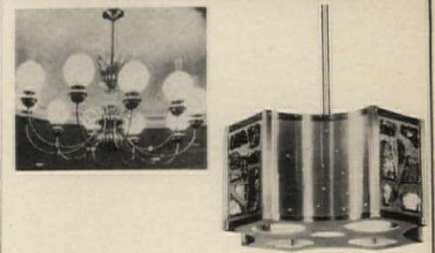
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should be like, what the educational program should encompass, what should be done about physical education, music, art, dramatic training and social adjustment. Attention is given as well to how transportation should be handled, what the observation systems should expect to accomplish, etc.

As stated on page 6: "The existence of a gap between planned and actual use of the environment was verified by almost half of the sampled teachers. Additionally, slightly over one-fifth (20.4 percent) reported that some activities which occurred in their classrooms should not be permitted to occur there. In order of frequency, those mentioned include small group physical education, instructional activities, arts and crafts and music. It becomes clear from this data that the special education classroom is a multiuse space and yet, despite the changing nature of the children, program requirements and teacher, the environment remains virtually the same."

The book goes on to cover the basic philosophies of planning, beginning with comments on such things as the importance of involving people in the planning process and the kinds of people to involve. It deals with broad philosophies in the educational process, particularly as they relate to educational programs for handicapped children and the subsequent environment which either enhances the program or makes it difficult to manage. It stresses the importance of the program narrative; it emphasizes the importance of the person being designed for with such statements as, "The purpose of schools is the education of youth for life." This applies to the handicapped as well as the normal child.

In addition to the summary of the questionnaires, the book includes comments by leading educators, especially directors of special education programs, by architects who have worked prominently in this field and by other specialists in programs for the handicapped. The book endeavors to relate a collection of ideas into a document which, rather than telling one how to design for the handicapped, provides planners and architects with the kinds of stimulation necessary to produce these special environmental considerations so important in planning for the handicapped.

There is a section on graphic solutions which, while having merit, are but a small part of the environmental design. This part of the book is useful but limited. The volume also contains a few findings in the area of research, notably on the psychological effects of the environment. The architect will find these helpful.

This book should be required reading for all planners and architects prior to commencement of the planning process.

ARNOLD G. GANGNES, AIA

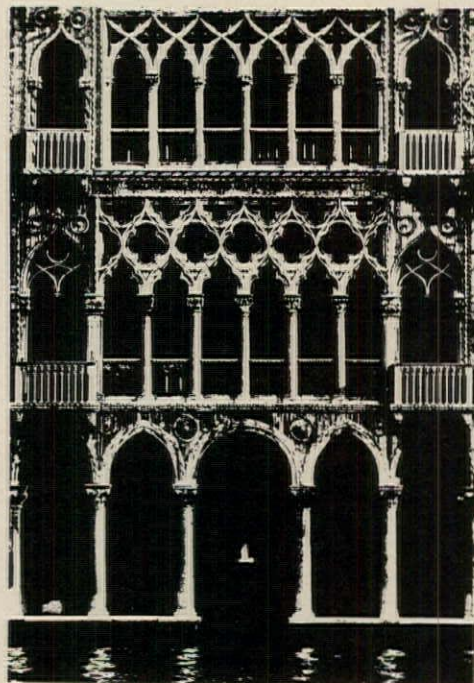
Gothic Architecture in Venice. Edoardo Arslan. Translated by Anne Engel. New York: Phaidon, 1972. 409 pp. \$35.

There is really no city in the world to compare with Venice. The inspiration of countless artists and writers, it has a character all its own that can only be appreciated by spending long periods of time wandering

through its winding streets and alleys and leisurely traversing its canals.

The fact that this city is in truth a work of art makes it difficult to view it objectively. The author of this scholarly book admits the difficulty, stating that he hesitated to undertake the task of this book. "Venice . . . forms a very complex environment with innumerable aspects — not only representational — which acts strongly on the visitor's soul; an entirely new, indeed unique environment, which tends to imprint itself on his reactions, to alter his usual standards of judgment, inducing his mind to fall under a kind of spell."

Fortunately for the literature of architectural history, Arslan did complete his task



with distinction. He knows his subject well. For 25 years he was a professor at the University of Pavia, concentrating his writings on northern Italian art and architecture. This book alone is the fruit of five years of research. He is appreciative of and subject to the amazing spell that Venice casts, but he has a scholar's ability to view even this city with the necessary dispassion.

In this copiously illustrated and graphically handsome book, Arslan is concerned only with Gothic secular architecture in Venice. This architecture "with its specific characteristic — the inflected arch — stands quite apart and develops coherently" from the 13th century to the beginning of the 16th.

Arslan traces the architectural forms that preceded the Gothic and the sources of influence from England, France and Germany, providing the reader with a background that makes him more appreciative of the chapters on floriated Gothic and the discussion of Venetian Gothic on the mainland.

Structures never before documented are analyzed with detailed drawings and many splendid photographs to complement the text. Each chapter is followed by copious notes and bibliographical references. To all this is added a general bibliography and an index of artists and of buildings. It's really a splendid volume.

MARY E. OSMAN

Graphic Shielding Analysis. A. A. van Ammers, AIA. Washington, D.C.: US Government Printing Office, 1971. 37 pp., plus charts. Free.

A graphic method of determining the radiation-shielding potential of a building by use of a master layout chart, similar to perspective layout charts, has been devised and developed by the author, a Los Angeles architect. The publication, a report of the method's development, describes it in detail and contains five examples on folded sheets to use in following the text. A special scale is also included.

The drawing, developed on tracing paper overlaying the master chart, is a "curvalinear" perspective with somewhat the appearance of having been photographed with a wide-angle lens. Radiation intensities penetrating the building to the room or area being analyzed can be sealed off "because the directional intensity of radiation at each point of the wall and roof areas is known." By multiplying with barrier reduction factors for walls, roofs and partitions — functions of the mass of the building materials — reduction factors for each building element are established. These are tabulated on schedules and added together to determine degree of protection.

The report assumes a knowledge of basic radiation protection analysis methodology and "replaces the very elusive omega parameter (of the engineering method) by a pictorial model of the shielding geometry which can be visually interpreted and in which quantities can be seen and measured."

The fundamental concepts of the graphic system and its relationship to the older analysis methodology or "engineering method" are explained. The five examples progress from an elementary one of a simple rectangular building to a more complex structure.

This is not a simplified system of shielding analysis but rather one which uses the more familiar tools of the architect as a means of determining protection factors instead of the "freight train" formulas and slide-rule techniques of the engineer. It is not recommended for the architect who has not taken the Office of Civil Defense's Fallout Shelter Analysis course.

Copies may be obtained from the reviewer who is chief architect of the Defense Civil Preparedness Agency, Washington, D.C. 20301.

ROBERT BERNE, AIA

Designing for the Handicapped. Edited by Kenneth Bayes and Sandra Francklin. London: George Godwin (distributed by the Society for Emotionally Disturbed Children, Montreal, Canada), 1971. 79 pp. \$4.

The material in this book on solutions to the problems of providing accommodations for the handicapped was originally published in the British journal *Official Architecture and Planning*. It has been revised and updated by an architect who specializes in the study of the therapeutic environment and by a medical research worker. Experts on the handicapped child supply significant papers. Also included is a summary of recent and current research, along with a bibliography. The volume helps answer a need that is hitherto unmet.

Found Spaces and Equipment for Children's Centers. Richard Passantino, AIA. New York: Educational Facilities Laboratories, 1972. 71 pp. \$2.20.

Here are resourceful ways to transform the discarded, overlooked and inexpensive spaces and objects into useful places and things for learning. The report shows how warehouses, supermarkets and residences can become "found spaces." It demonstrates how such things as old piano crates can become outdoor playgrounds, how cardboard cartons may be made into display screens, how storage cans may become chairs, etc. The book also reviews indoor and outdoor spaces for children and furniture and equipment. It provides a bibliography of publications, licensing requirements and codes and sources of help. Once more citizens, school administrators and designers are in EFL's debt.

Vacationscape: Designing Tourist Regions. Clare A. Gunn. Austin, Tex.: University of Texas, Bureau of Business Research, 1972. 238 pp. \$8.

One of Texas' newest industries is tourism. It is declared also to be "one of the most promising in growth potential." The aim of this book, published under the auspices of the University of Texas' Bureau of Business Research, is to help in the wise development of recreational areas for the expected hordes of tourists.

Perhaps the last four sections of the book will be of more interest to architects. Here the author, who is a licensed landscape archi-

tect and currently professor of tourism/recreation development at Texas A&M University, gives his attention to design principles and process. His hypothesis is that land resources, owner rewards and user satisfactions all gain if planning of the vacationscape is done in an overall regional context, a thesis, he says, which "is yet subject to proof."

Great Houses of American History. Andrew H. Hepburn. New York: Clarkson N. Potter, Inc., 1972. 244 pp. \$25.

The history and development of the United States is portrayed here in terms of some of its historical homes. The dwellings vary, going from the cliff dwellings of the Mesa Verde in Colorado to the birthplace of former President Franklin D. Roosevelt in Hyde Park, N.Y. Included are such well known homes as Monticello in Charlottesville, Va., Mount Vernon, home of George Washington; and William Randolph Hearst's home in San Simeon, Calif. Less celebrated houses are included as well, such as Booker T. Washington's birthplace in Virginia; Kit Carson's home in Taos, N.M.; and Sutter's Fort in Sacramento, Calif. The book is beautifully illustrated.

Great Religions of the World. Washington, D.C.: National Geographic Society, 1971. 419 pp. \$11.95.

This handsome and beautifully illustrated book will enlighten anyone who wants to know more about Hinduism, Buddhism, Judaism, Islam or Christianity. Through a bet-

ter understanding of the great religions of mankind, one becomes more appreciative of the architecture that celebrates them.

Baroque Art: The Jesuit Contribution. Edited by Rudolf Wittkowitz and Irma B. Jaffe. Bronx, N.Y.: Fordham University Press, 1972. 139 pp. \$20.

An accepted commonplace has been that the Jesuits influenced and patronized Baroque art and architecture, but there has not heretofore been extensive research to support the assertion. This book, one of the results of a symposium of scholars who turned their attention to the subject, contains essays by seven competent critics who analyze not only art and architecture but also the theater and music.

A statement by one of the editors, Irma B. Jaffe, summarizes: "There was surely no single, concerted and programmatic concept of the architecture and decoration of all Jesuit buildings. There were basic Jesuit principles . . . which led Jesuit superiors to evaluate the relation of means to ends, and to see all the arts as 'creatures' which could lead man to God." These principles were realized in the forms of art.

Seattle Urban Design Report: Determinants of City Form. Seattle: City of Seattle, Department of Community Development, 1971. 128 pp. No price given.

This provocative report on urban design and environmental quality for Seattle is a worthwhile acquisition for those concerned

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Yellow Pages of Learning Resources

edited by Richard Saul Wurman

The book resembles the phone company's Yellow Pages, but the intent is not to "let your fingers do the walking"—the book is meant to lead you out into the environment, to put you into contact with a lot of different kinds of people, to teach you the what, where, why, and how-to of all sorts of things that go on in the real world. The intent, finally, is to let your head do the thinking, your eyes do the seeing, and—it's good exercise—your feet do the walking.

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with the determinants of city and metropolitan form.

The report does an excellent job graphically of summarizing Seattle's morphology. Attention is called to the effort's greatest weakness in the following words: "The most severe limitation of the study is that the new developing physical form of the city must be conceived on a regional scale which is not possible within the scope of the study." The unmet need for comprehensive regional planning and implementation is, of course, a national environmental disaster which is less peculiar to Seattle than to the nation.

Despite this qualification, the report is a useful graphic model which should be on the bookshelf of all urban design offices.

The Letters of Lewis Mumford and Frederic J. Osborn: A Transatlantic Dialogue 1938-70. Edited by Michael Hughes. New York: Praeger, 1972. 493 pp. \$15.

These letters exchanged by two authorities on town planning will intrigue their admirers. What started as a rather formal correspondence in 1938 with a common interest in Ebenezer Howard's Garden City concept becomes a more intimate discussion about many topics.

Not only do we learn the thoughts of these thinkers about urban renewal and planning, but we come to know Osborn's views of T. S. Eliot's poetry, what his garden is like in winter, how he reacted to a serious eye operation. In Mumford's letters to his English friend, there are insights into his own country's grief over President Kennedy's death, the things he reads and what he thinks of great European cities he has visited.

As Mumford remarks in the last letter to Osborne dated December 16, 1970, the correspondence "will mean something to many people . . . who have no special interest in town planning or new town development. For a future generation, they will convey something that does not easily find its way into history books or even into formal biographies—the sense of the impact of immediate events and experiences upon two knowledgeable and well-balanced minds."

Can We Legislate Beauty? David B. Singer. Riverside, Calif.: J. F. Davidson Associates, 1972. 9 pp. \$2.

Can we legislate beauty? Is such legislation constitutional? Would it violate individual rights? These questions are raised and answered in this provocative report by a firm of civil engineers, planners and surveyors who have issued it as a part of a public service program. The author is a member of the firm's staff. He finds that legislation of beauty does in fact exist and is "receiving growing judicial endorsement."

Anyone interested in architectural control or design review boards will find much here of interest. In addition to specific recommendations, there is an excellent bibliography to direct the reader to other sources.

The Dollars and Cents of Shopping Centers, 1972: A Study of Receipts and Expenses. Washington, D.C.: Urban Land Institute, 1972. 228 pp. \$30.

This is a newly revised edition of a study

of the actual receipts and expenses of 421 shopping centers with 15,000 tenants. Computer print-outs give data on tenant characteristics in regional, community and neighborhood shopping centers. Supplementary information is provided in a special chapter, and here are covered such matters as shopping center financing, operating income, composition of rent, enclosed malls and sale of utilities to tenants. Anyone wanting information on shopping center economics will find the book of help.

Focus on Furniture: An Important Element in Housing. Washington, D.C.: Department of Housing and Urban Development, 1971. 41 pp. 45 cents.

In 1970 the Washington Center for Metropolitan Studies in the nation's capital was awarded an Operation Breakthrough grant by HUD to develop innovative approaches to furniture design for low and moderate income housing. This report is a result of the research undertaken and includes a state of the art survey; illustrations from an exhibit



of 67 winning designs in a competition where emphasis was placed on durability, flexibility and good construction as well as low cost; and a report of a conference attended by low income consumers.

The study concluded that "the desire for appropriate furniture is real; that the development of appropriate furniture is feasible." The utilization of this well-designed furniture "will allow each low and moderate income family to have a sense of dignity and a quality of life unattainable in past residential environments."

Anatomy of the Visual Environment: A Visual Approach to Planning. Thomas J. Kachel. Carbondale, Ill.: A New Man Publication, 1971. 104 pp. \$5.

The central business district of Carbondale, Illinois, is used as an example to indicate how citizens can come to understand and influence their visual environments.

A Practical Guide to Low- and Moderate-Income Housing. Charles L. Edson and Bruce S. Lane. Washington, D.C.: Bureau of National Affairs, Inc., 1972. Various pages, \$45.

This loose-leaf manual explains the mechanisms of federal and state programs for low and moderate income housing programs. Written by experts on housing law, it contains comprehensive data for builders, devel-

opers, government officials and "all who have entered the vast public/private effort to provide a decent home for every American."

The six major parts of the book are devoted to the Department of Housing and Urban Development, subsidized private housing programs, public housing programs, site policy and zoning, taxes and finance and related programs and problems.

Thermal Comfort Requirement Adjacent to Cold Walls: Application to Glazed Opening. J. Anquez and M. Croiset. Washington, D.C.: National Bureau of Standards, 1972. 54 pp. 55 cents.

The coldest portions of walls in winter are usually windows and other glazed openings. They can be a source of discomfort. Results of research to determine the thermal comfort requirements near a cold wall are presented here. This leads to formulation of the "air-radiation requirement" for a plane surface element parallel to the wall, the requirement being 16 or 17 centigrades at about 1 meter from the wall. The remainder of the study concerns the problem of satisfying the requirement near glazed openings in winter, taking into account such factors as climatic zone, average temperature in the room, dimensions of the openings, position of heat sources, type of glazing (single or double) and presence or absence of curtains or screens.

Construction Management Practice. S. Peter Volpe. New York: Wiley-Interscience, 1972. 181 pp. \$9.95.

Another of a number of publications issued recently on construction management. This one, by a man who has had 35 years experience in the construction industry, gives practical information on such matters as assessment of financial capabilities, selective bidding, types of contracts, owner/architect/engineer relations, accounting and cost-keeping systems, job organization, labor relations, safety, etc.

Structural Steel Designers' Handbook. Frederick S. Merritt, Editor. New York: McGraw-Hill, 1972. Various pages. \$24.50.

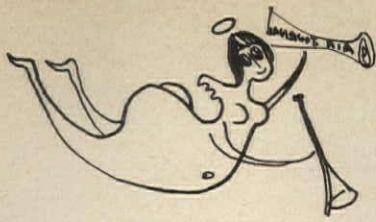
Structural engineers will find this book a source of information for complex structural steel design and analysis. Each of the 14 sections is written by an engineering expert. Numerous examples illustrate various design procedures.

Applied Plastic Design in Steel. Robert O. Disque. New York: Van Nostrand Reinhold, 1971. 243 pp. \$13.95.

Based on the most recent American Institute of Steel Construction rules and specifications, the aim of this book is to give step-by-step procedures for the plastic design of steel structures. Another purpose, states the author, is to emphasize the ductility of steel.

Planning and Estimating Dam Construction. Albert D. Parker. New York: McGraw-Hill, 1971. 406 pp. \$24.50.

This comprehensive book gives the estimator and engineer specific and detailed information on planning, scheduling and bidding dam construction. □



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letters

In Response to the Energy Crisis

Our society has too often tolerated and even rewarded inefficiency. That this is true in the energy industries was certainly demonstrated beyond doubt by Richard Stein, FAIA, in his excellent article "Spotlight on the Energy Crisis" in the June issue.

Other architects as well as consulting engineers, utility company sales engineers and developers, among others, must soon realize that we must become more efficient, not less, in our use of the nation's vital nonrenewable natural resources and that to do this an immense amount of personal energy must be expended in the very near future if the complicated solutions to pressing energy problems are to be conceived, developed and proved.

Unfortunately, very few are now working in this area. And hardly anyone is now considering the approach advocated by Stein: wringing more *usable* energy from the energy resources we are now consuming.

We noted sometime ago in a position paper, "The U.S. Today: A Nation of Energy," that the efficient use of the energy resources we are now consuming would provide "the dual benefit of conserving vital natural resources by extracting and using more of the potential energy available in a given unit of resource material and of reducing pollution by not only using less but also by having less 'left over' when the resource is converted into a desirable energy form."

At our firm we advocate an on-site energy system approach for supplying the demand of large volume energy consumers and thereby achieve operating efficiencies in the 70 to 80 percent range—two to three times better than the average electric utility. We are encouraged to see that others, such as Stein, are also researching and giving thought to the important facets of the energy problem. We hope that the article serves to stimulate additional rethinking of commonly accepted doctrine and practices in this area.

WILLIAM J. WEAVER JR.
President
Ohio Energy Systems, Inc.
Columbus, Ohio

"Spotlight on the Energy Crisis" by Richard G. Stein, FAIA, indeed alerts architects to the problem of designing energy-saving buildings and using materials produced with low energies.

However, as I stressed in my book *Climate and Architecture* over 20 years ago, there are so many energies which can be used and which we do not use: those of the sun, the wind, temperature differences, precipitation, the oceans, the earth, rivers and more. These are generally available to us as *income* energies and are plentiful and inexhaustible. When we use fossil fuels to produce energy

we use up a *capital* energy. Even in the case of nuclear reactors, we use up a capital energy, no matter how small a quantity of fissionable material is employed.

These opinions were confirmed in 1952 when the President's Materials Policy Commission headed by William Paley stated that this country was in real danger of running out of fossil fuels by 1975 — just three years from now — unless drastic steps were taken. Not only would they be partly or fully exhausted but the costs of taking them out of the ground would be prohibitive. This situation has long ago been reached in England where the energy used to mine coal is almost equal to the energy derived from the coal that is mined.

Perhaps I was ahead of the time by pointing this out at colleges, universities and even at AIA conventions, where the papers gave it considerable coverage as far back as Boston 1954. But the real credit is due to all those native civilizations who have always sought comfort by recognizing climate in the designs of their habitations. My forthcoming book *Ecology and Architecture* explores this subject further.

Stein is doing a good job trying to cure the symptoms but not the basic illness. We need a different approach to the cure of our buildings and cities by using nature to work with us.

JEFFREY ELLIS ARONIN, AIA
New York City

ABC (Architects, Be Careful!)

We are all familiar with HUD, SAC, RADAR and the like. I recently came across SUMMON (Students at the University of Miami Move On Need). It seems that the architectural profession is missing out on the use of acronyms, although we are now exposed to RAP (Review of Architectural Periodicals).

Proper use of an acronym as the title of an architectural firm could convey many messages, reflecting the philosophy of the firm or, in some subtle way, circumventing what's left of our ethical rules by suggesting an advertising message. The idea might appeal to those firms now hampered by partners' names either too lengthy, too hard to pronounce or possibly extinct. Even state licensing boards should find their task easier — all they have to do is find the word "architect" somewhere in the acronym.

For starters, how about GANG (Great Architects Need Greenbacks)? Or for those who find it difficult to get a job without direct advertising, consider CHEAP (Compensation Halved Eager Architects Promise). ARF (Architectural Renderings Free) will appeal to clients who are dog lovers.

For the specialists, we might have PRE-FAB (Plywood Research Fosters Architectural Beauties) or LIVABLE (Live In

Vibrant Architect's Building for Longer Enjoyment). There are also the more obvious: DOCTA (Doctors' Architect) and HOUSA (Housing Architects).

For those members of the profession who have some special direction in life, we suggest SEXUAL (Super Executive Architects Liaison) or GAY (Gorgeous Architect? Yeah!) or SWINGA (Seven Willing-to-Indulge-in-Naughty-Games Architects).

Some to be avoided may be QUACK (Quick Unassuming Architect Crams Knowledge) and LAWSUIT (Leading Architect With Several Unfortunate Impending Torts). A heart-rending name might be AID (Architect In Distress). And for those clients who read all the architectural periodicals and know the jargon, how about ZAP (Zero Architectural Philosophizing)?

KENNETH D. WHEELER, AIA
(Architect In Acronyms)
Denville, N.J.

RUDAT Teams

The excellent item on the AIA Regional/Urban Design Assistance Team's study of Fairfax County, Va., in the June issue's Outlook erroneously states that Lamont C. Cole served on the team. He did not, but Dr. John Reed, professor of ecosystems analysis at the University of Wisconsin, did.

Reed made a strong contribution to the team's effort. A brilliant statement by him elucidates a confused issue faced by all of us. It is a clear message to all urban planners and architects.

Incidentally, the RUDAT teams are getting bigger—they now average six members—and are becoming more sophisticated. They use advanced presentation techniques, tour the sites by air and publish profusely illustrated reports, usually before they leave town. The members rarely require hospitalization! L. P. Melillo, AIA, of Louisville, Ky., now shares the organizational job with me.

HENRY STEINHARDT, AIA
Mercer Island, Wash.

ED. NOTE: We regret that the source material used to write the news item was incorrect. But we are happy for the opportunity to publish here the comments referred to by Mr. Steinhardt.

John Reed's Statement

Testimony and conversation with citizens, county employees and elected officials indicate confusion, bordering on friction, whenever such words as conservation, preservation and ecology are used. This is not unusual to the Fairfax County situation, but it has been identified as a factor that produces more heat than light—a situation charged with emotion.

It is proposed that the adversary effects of 'conservationists' versus others be supplanted by a systematic, rational and objective approach to matters related to environmental quality. Those who resort to the doomsday philosophy via emotional and poorly informed techniques can be challenged for facts to substantiate their positions.

Conflicts can be ameliorated by promulgating the concept of a balanced ecosystem as the key to optimal environmental quality, i.e.,

a situation with minimal stress for living and thus the basis for a good quality life.

Horizons can be broadened by recognizing that environmental problems transcend political boundaries. Interest can be stimulated to the extent that some persons, even on a voluntary basis, can become enthusiasts in productive activities such as collecting appropriate data from historical sources, inventorying present conditions and monitoring change in such environmental matters as the use of the land, the quality of the water and the air and the natural history of their locality.

The concern of all levels of government could well include even further development of an ecological and environmental inventory and a record of its past, present and future. The overall objective would be to create a data bank consisting of facts that presently do not seem to exist. Such a data bank would be invaluable for use by those who plan for the future as well as for those who have the responsibility for immediately resolving crises that might alter the quality of the environment.

The advantages of having ecological facts, trends and cause-and-effect relationships as a basis for decision making and for action programs are obvious. The conflicts that now inspire emotionalism and separate competent and well-meaning persons and groups certainly could be avoided by structuring a situation in which trade-offs are possible to permit compromise between economic and conser-

vation (ecological) interests that now oppose each other.

There is still another important aspect of recognizing, maintaining and promoting environmental quality and that is by promulgating the awareness of man's close and inextricable relationship to the environment through the public school curricula. Community and adult education programs can also be directed to the same goal. The library, the parks and museums are the instruments that can facilitate and enhance progress to this end for citizens in all walks of life. Environmental awareness is but another facet of a person's sense of social responsibility.

A Hospital Open House

The article "How to Dedicate a Building" by Martin A. Brower in the January issue was most informative. The author handled the broad and complicated topic well indeed.

Recently the opening of the new Carroll King Steele Wing of the Addison Gilbert Hospital in Gloucester, Mass., provided an excellent public relations and public service opportunity for both the architects and the hospital. Ritchie Associates, Inc., of Chestnut Hill, Mass., the architects, offered their services to the hospital's open house committee working on activities to introduce the \$2.5 million facility to Cape Ann.

The firm provided an eight-minute slide and sound show, a photomural exhibit and directional signs for tours by the public of

the new wing. Sequence of the show was based on views of the area, progress photos of the wing under construction, shots of patients and staff, angles of equipment and machines, and floor plans. The presentation was run about 35 times during the open house. Suspended from pipes overhead were five wood panels in yellow, white or green on which were mounted 3x3-foot blowups from the actual building construction.

Rounding out the event were refreshments provided by the women's auxiliary of the hospital. A skylighted general storage area adjacent to the new wing was turned into a reception room for the refreshments, exhibit and slide show.

More than 1,000 people came to the open house. The audio-visual presentation made the story of the new hospital facility come vividly alive for the residents of the community. It worked so well that the architects have been asked by three other hospital clients to assist them with their respective open houses.

Any queries or additional details about the architects' a/v efforts will be gladly answered.

VILMA BARR

Public Information Director
Ritchie Associates, Inc.
Chestnut Hill, Mass.

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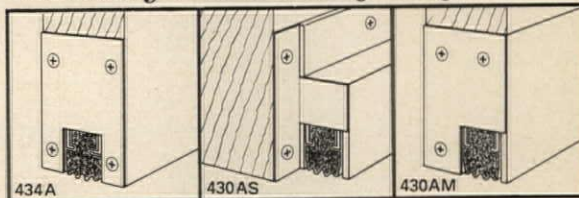
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- Sept. 27-30:** South Atlantic Regional Convention, Carolina Hotel, Pinhurst, N.C.
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Oct. 11-13: Central States Regional Conference, Hotel Fort Des Moines, Des Moines, Iowa
Oct. 18-21: Western Mountain Regional Conference, Four Seasons Hotel, Albuquerque, N.M.
Oct. 19-22: New York State Association of Architects Conference, Flagship Hotel, Rochester

National

- Oct. 5-6:** AIA Conference on HUD-Assisted Housing, Mayflower Hotel, Washington, D.C.
Oct. 8-12: Prestressed Concrete Institute Convention, Marriott Motor Hotel, Atlanta
Oct. 10-11: AIA Architects in Industry Seminar, Urban Life Center, Columbia, Md.
Oct. 16-17: Value Engineering for Construction Institute, University of Wisconsin, Madison, Wis.
Oct. 17: American Arbitration Association Construction Industry Conference, Albany Hyatt House, Albany
Oct. 26-29: National Trust for Historic Preservation Annual Meeting, Washington Hilton Hotel, Washington, D.C.
Oct. 30-Nov. 1: Acoustical Training School, Dearborn Inn, Dearborn, Mich.
Oct. 30-Nov. 2: Industrialized Building Exposition and Congress, Kentucky Exposition Center, Louisville, Ky.

International

- Sept. 25-30:** International Union of Architects Congress, Varna, Bulgaria
Oct. 4-6: International Noise Control Engineering Conference, Shoreham Hotel, Washington, D.C.
Oct. 5-7: International Conference on Architectural Registration, Hotel Argentina, Dubrovnik, Yugoslavia

Awards Programs

- Sept. 30:** Entries due, Preservation or Improvement of Highway Environment Awards Program. Contact: Office of Environmental Policy, Scenic Enhancement Division, Federal Highway Administration, Washington, D.C. 20590.
Sept. 25: Entries postmarked, National Swimming Pool Institute Awards Program. Contact: NSPI, 2000 K St. N.W., Washington, D.C. 20006.

Tours

- Oct. 12-29:** Asian Urban Housing and Planning Tour. Contact: Nonprofit Housing Center, 1717 Massachusetts Ave. N.W., Washington, D.C. 20036. □

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