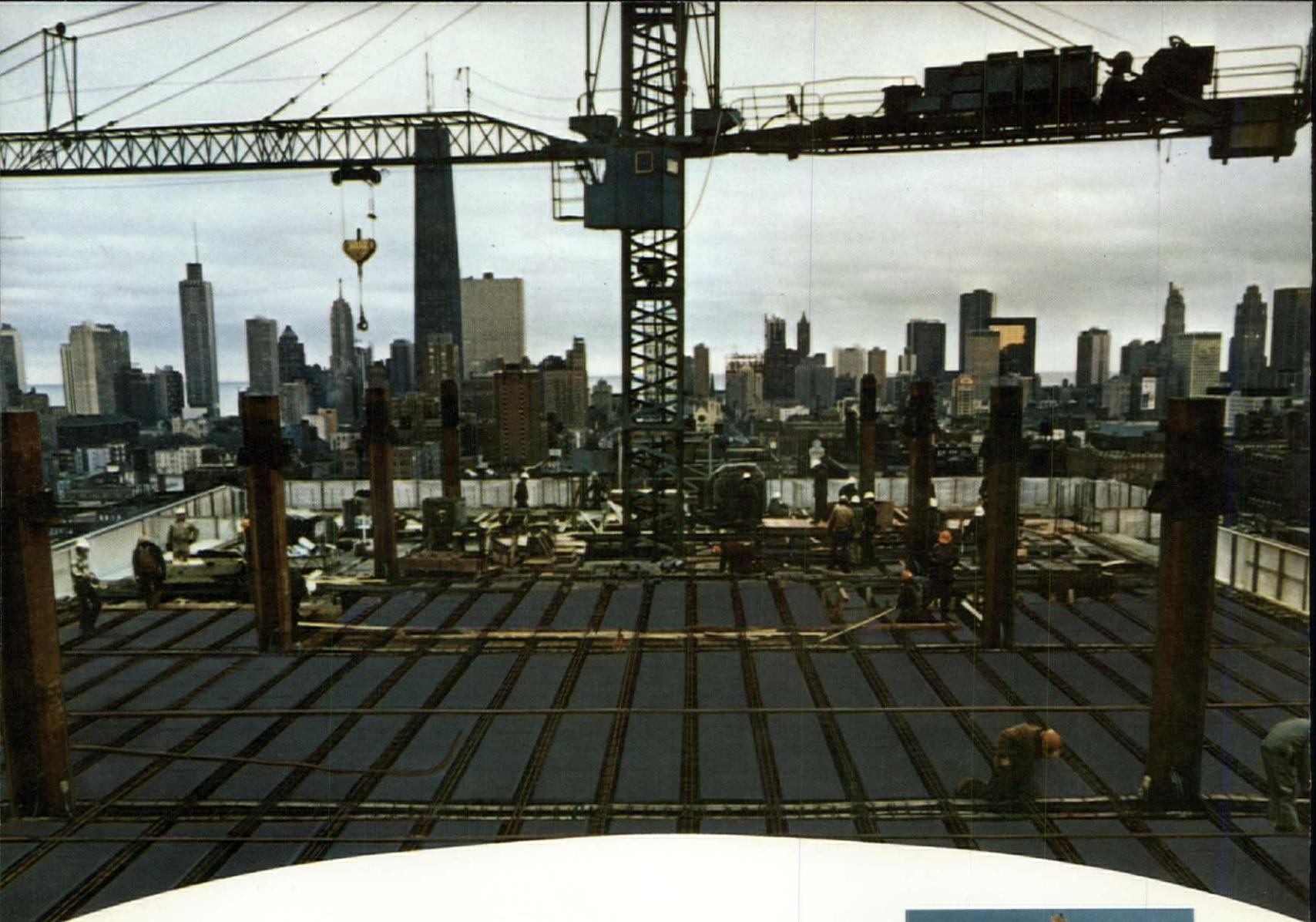


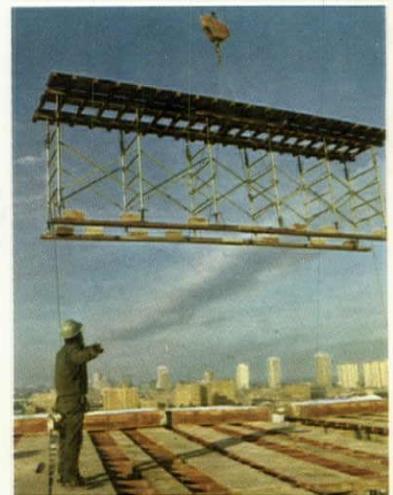
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# AIA JOURNAL

<b>Architecture and Growth Policy — Donald Canty</b>	15
There will be development — lots of it. The question is: How do we shape it?	
<b>Precedents for Growth Policy:</b>	
<b>The Paris Area — Lathrop Douglass, FAIA, and Aaron Chelouche, AIA</b>	17
<b>The Twin Cities — Robert T. Jorvig</b>	18
<b>The States — from a report by Richard N. Tager</b>	21
Everywhere, there is sharpening awareness that growth must be controlled	
<b>Phoenix: Rx for Planned Development</b>	22
A team applies design to the formulation of a framework for the future	
<b>A St. Paul Landmark Saved by a Bill — Mary E. Osman</b>	32
Or let's say two bills: the Surplus Property Act of 1944, and a symbolic \$1	
<b>Games That Buildings Play with Winds — Ralph W. Crump</b>	38
No fun to pedestrians, they are now getting more attention from designers	
<b>An Experiment in Production: Integraphs — Donald E. Jarvis, FAIA</b>	41
Integrated written and graphic instructions, the system speeds up document work	
<b>Housing Criteria Drawn from Human Response — Theodore Liebman, J. Michael Kirkland and Anthony Pangaro</b>	46
They are based on the belief that design has direct social consequences	
<b>Precedent-Setting Swap in Vermont — Leonard U. Wilson</b>	51
A town without a school or post office plans for growth — on its own terms	
<b>Departments</b>	
Going On	4 Events 59
Books	54 Advertisers 64
Letters	58

**Cover:** Peter Bradford

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## Selling the Air Above Historic Buildings for Funds to Save Them

Washington, D.C.'s Zoning Commission has acted to save a landmark structure and, in the process, to set an example whereby historic buildings everywhere may gain a new lease on life. The city is the first in the nation to put into effect a proposal first advanced by John J. Costonis, professor of urban planning law at the University of Illinois in Urbana-Champaign.

Costonis' idea is to let owners of historic structures sell the unused development rights above the old building to developers who will use the gained rights to erect larger structures elsewhere in the city. The landmark owner then uses the money he gains to maintain the historic building.

The decision in the nation's capital involves the Heurich House on New Hampshire Avenue, which is owned and occupied by the Columbia Historical Society. The society has been struggling to keep the Victorian mansion, and the zoning law would have permitted the society to tear the house down and build a large office building 90 feet high on the site.

Now, thanks to the Zoning Commission's decision, the society can transfer 40 feet of air space to the Dupont Circle Joint Venture, and the developers can build on adjoining property a structure up to 130 feet in height. As the *Washington Post* observed editorially, "This should not bother anyone because the new project will reach that height in the middle of the block where it won't be offensive." The society must use the income it gains to maintain the Heurich House, to enhance it and its gardens and to operate it as a public museum.

Costonis has pointed out that many cities have zoning laws regarding the height of buildings and that historic structures are often small in comparison with modern highrises. Many architectural masterpieces are torn down because the developer cannot afford to save them and must build larger complexes on their sites. Costonis also has proposed a development rights bank whereby unused air rights



would be pooled and sold by a city over a long-term period. A revolving fund, created by the sales, would be used to acquire air rights of any threatened building of historic or architectural merit.

Costonis has made a two-year feasibility study of his proposal under a grant from the Department of Housing and Urban Development, and under his direction the legal, economic and planning details have been worked out by urban planners and economists.

Meanwhile, Secretary of the Interior Rogers B. Morton has proposed that Chicago's Loop area be designated a National Historic Park, and he gave official federal support to Costonis' proposal. In spite of the demolition of many architectural landmarks in the area, including the Stock Exchange, there are still at least 25 examples remaining of work by such architects as Frank Lloyd Wright, Daniel Burnham and Walter Burley Griffin.

Morton proposes a joint federal/city commission to administer the park. Owners of the historic buildings would sell their development rights as proposed by Costonis and would be legally obligated to maintain the landmark building in its original form. A commission, headed by William E. Hartmann, FAIA, vice president of Skidmore, Owings & Merrill, has been appointed by Mayor Richard Daley to study Morton's proposal. If the city approves, Chicago will develop a low-risk demonstration project with federal seed money.

## Dry Run of the Architect on the Development Team

"Let's make beautiful music together. I'm a landowner. You're an architect who can create a great project in harmony with the neighborhood and the larger environment. Will you be codeveloper?"

As a would-be entrepreneur, how would you react? Do you dash off to the nearest bank to borrow the needed money?

No, you don't, said Carl J. Tschappat, a partner of Land Development Analysts, Atlanta, answering his own questions.

"First, you check into the area's zoning laws, vacancies, rents. When you've got your numbers package to make sense, then comes the time to talk to the best money source, which may not be a bank at all."

Benjamin V. Lambert, a mortgage banker and president of the New York City firm of Eastdil Realty Inc., talked the same language: "An architect with just an idea is a weak candidate for a loan—in fact, he shouldn't even be one."

The two were taking part in the AIA Development Team Conference held in New Orleans in early February, and it was comments such as these the 170 attendants from 38 states (including Hawaii) had come to hear. But in the main, it was a doing, not listening, session that conference chairman Herbert E. Duncan, AIA, and conference director Robert Allan Class, AIA, had arranged in order to encourage firms, large and small, to expand practice by getting into development while at the same time getting better control over their projects.

The two-day affair had a "match" day and a "mix" day: the match, with participants divided into study groups or "tracks" on three skill levels, A, B and C, starting with fledglings, and each track with its own "faculty" member (of whom Tschappat was one); the mix, with the tracks broken up and reshaped into teams working on solutions to problems such as confront any developer in the throes of planning a condominium, an office building, a medical office building or a shopping mall.

Experts who might in reality make up a development team (Lambert was one)

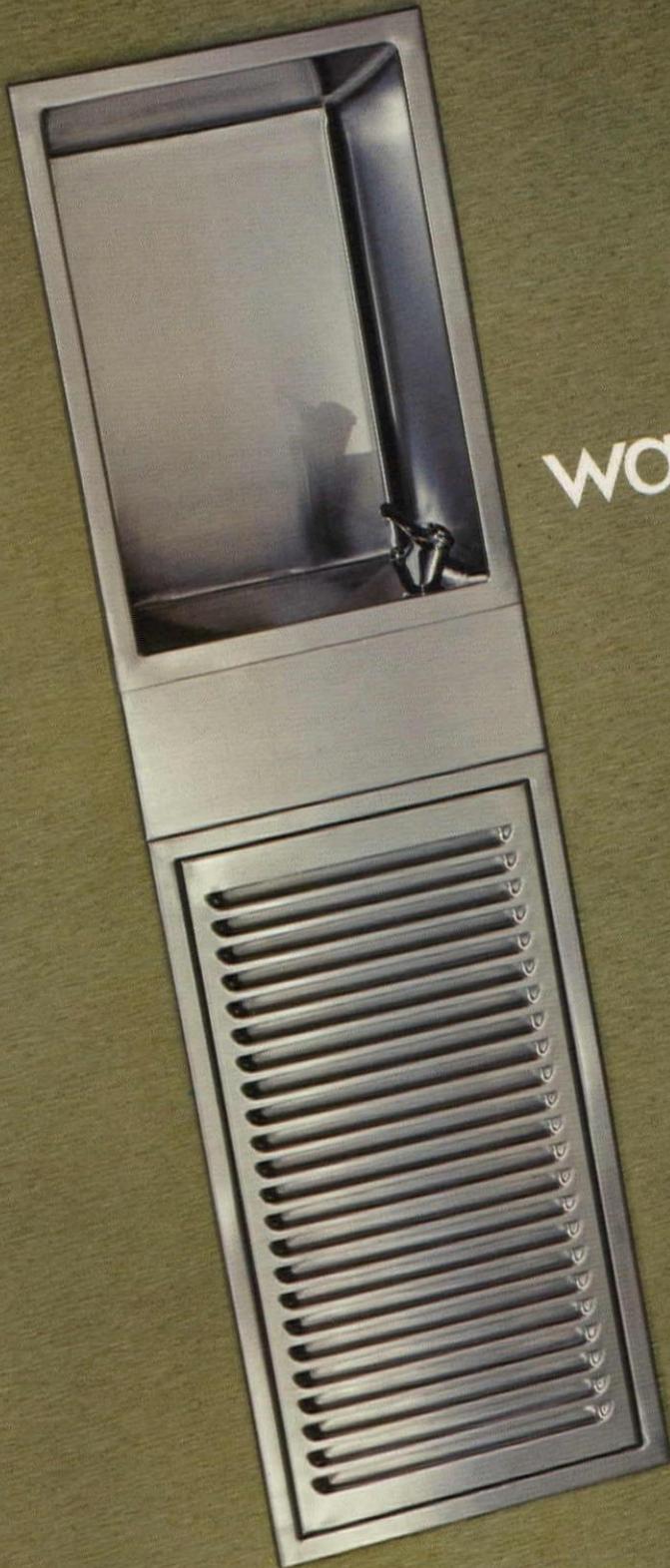
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had been brought together as resource people: mortgage bankers, tax and legal counsels, real estate, economic and development consultants, investment builder/developers and architect/developers (a list of faculty and resource persons is on p. 64). Questions would spring up in one of the groups, and a phone call would bring an expert there.

"As a beginner, it was a bit over my head to start with," said one A-tracker, who nevertheless quickly caught up with the jargon of the financial world. Interest rate cards—those real estate salesmen's bibles—were handed to B-trackers, who had exchanged slide rules for calculators and tried to figure out the best of several development options while giving the most to both the community and their own tills.

William P. Wenzler, AIA, on track B, had come to find out what part his firm should ask for in a partnership with developers (his findings: don't sell your services short; development is more than slightly expanded architectural services). Already sophisticated developers, he and his partner William E. Flaig were attending different tracks to bring home as much knowledge as possible. Flaig, in track C, listened to ideas on marketing techniques and heard discussion between not-yet-developer but knowledgeable George E. Godwin, AIA, young partner of the Charlotte, N.C. firm of Clark, Godwin, Harris & Li, and James A. Montague, AIA, a vice president of the Rouse Company of Columbia, Md. renown.

"Development is team work all the way," said Montague. "During the design phase, the architect is leader; during the financial phases, the mortgage banker is leader, and so on through the process."

Teamwork was the recurrent theme throughout the conference, and it surfaced in full force during the mix-day session of problem solving, when teams struggled to come up with answers to growth trends, marketability, best land use, density and ways of financing in connection with their given problems.

"Can't you stay within your budgets? Your proposals would have bankrupted any developer," Lambert told one group.

"It's frightening to see how little experience architects have in this field," said Montague, who had come to check the state of the art. And, he predicted, "architects will be out of the running if they don't get into step with the times."

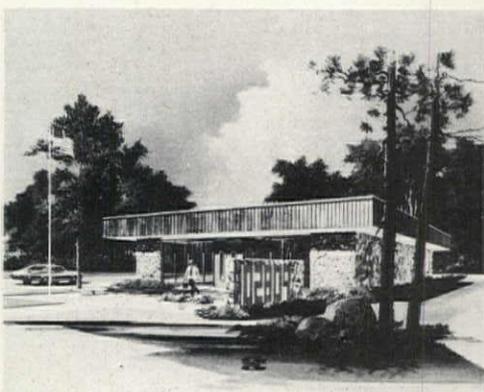
Participants were sent home with some mind-boggling questions from the resource group, the last coming from Harry A. Golemon, AIA: A developer offers you a 50 percent equity position in exchange for 50 percent of the architectural fee. What's your answer?

"What's yours?" one participant shot back. "Why should I tell you?" Golemon laughed. "In this game, everyone has to make up his own mind."

## Post Offices off the Assembly Line

The U.S. Postal Service will switch to standardized, factory-made buildings for as many as 500 of its local facilities in each of the next five years. The structures will be "procured and built" by contractors without involvement of on-site architects.

Designs for the industrialized community post offices were developed by Dalton Dalton Little Newport of Cleveland under



contract to the Army Corps of Engineers. Until recently, the Corps acted as agent for the design and construction of postal facilities.

Three basic buildings of 1,000, 2,000 and 3,000 square feet, each expandable by 50 to 100 percent through the addition of industrialized increments, have been developed. There are four differing architectural "styles": (from top in adjacent photos) "colonial, contemporary, northwest and southern."

Robert E. Isaacs, AIA, assistant postmaster general for real estate and buildings, says that an estimated three-fourths of all postal buildings, which number roughly 44,000, are less than 6,000 square feet in size. The Postal Service has budgeted about \$200 million for land and construction costs to get the standard facilities program underway.

Robert A. Little, FAIA, director of design for DDLN, explains that "differing roof treatments" will accent each of the four styles. The designs "rely on two alternative steel structural support systems, bar-joist or space frame; panelized walls, floors and ceilings; a series of wet cores and HVAC systems scaled to the size of the building desired."

## Bradley Keynotes 1974 Convention

The theme of the AIA convention to be held in Washington, D.C., on May 20-24 is "A Humane Architecture." Archibald C. Rogers, FAIA, Institute president, says that the nation's capital and the nearby historic port city of Baltimore offer "rich examples of America's oldest architecture and her newest. And both can provide us with the guideposts toward a humane architecture with all of its implications for a more rewarding way of life for all her citizens."

The keynote address on May 20 will be given by Los Angeles Mayor Thomas Bradley. Theme session moderators will include Robinson F. Barker, chairman of the board, PPG Industries; Judith Roeder, AIA, Department of Planning, Pittsburgh; John Eberhard, AIA, president of the AIA Research Corp.; and Theodore Liebman, chief architect, New York State Urban Design Corp.

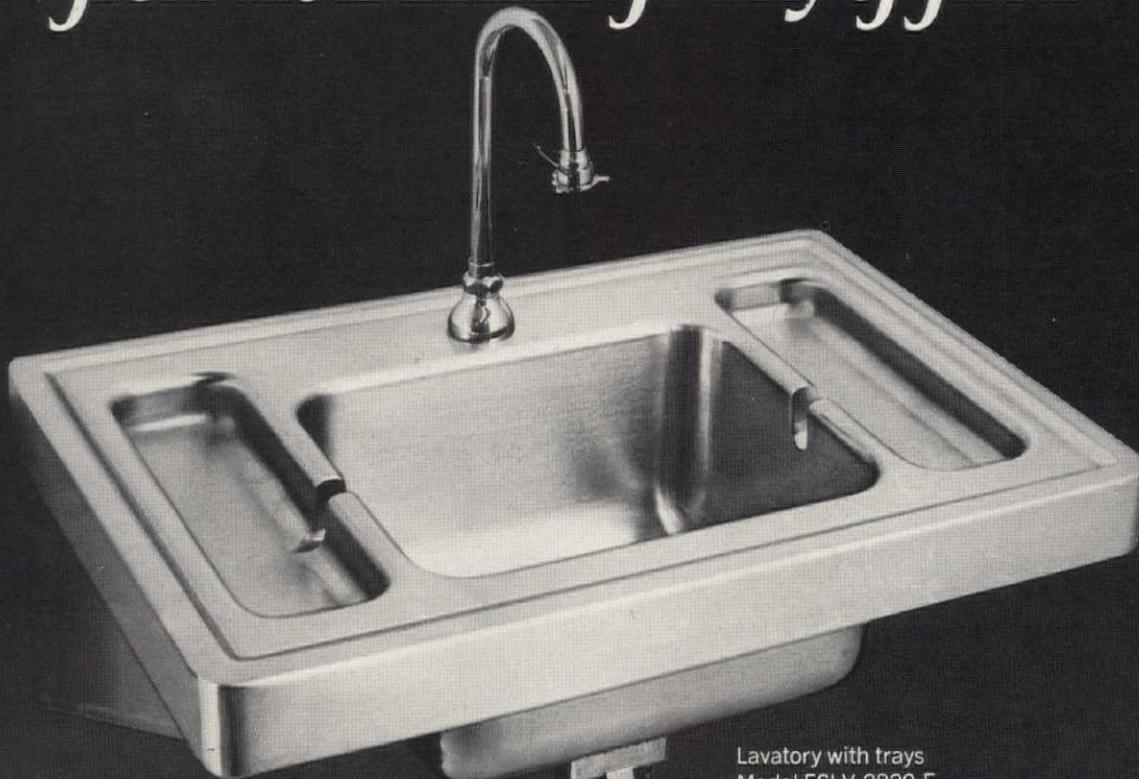
The Marketplace of New Ideas, introduced at the 1972 convention in Houston, will give conventioners a broad and diversified professional practice program. Seminars and workshops will focus on such subjects as value analysis engineering, energy conservation, design/build/bid, environmental impact statements, current housing programs and policies, women in architecture, systems building and professional liability insurance.

An unusual feature of the 1973 convention will be the arrangements of ap-

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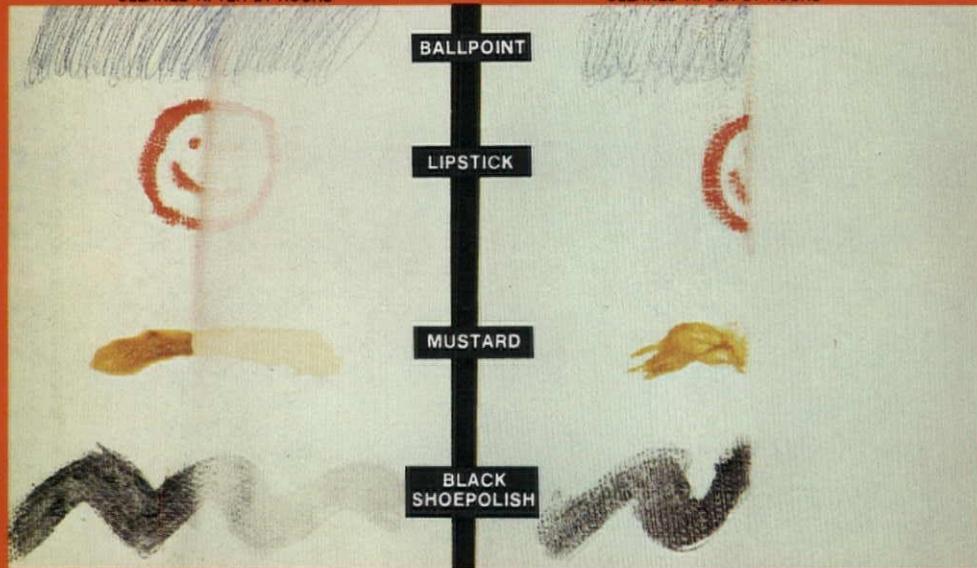
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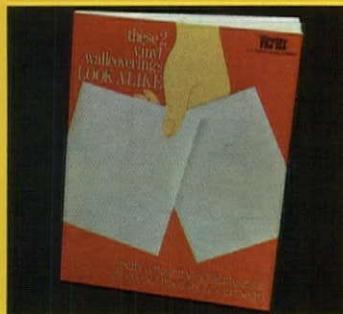
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pointments between architects and federal agency representatives. An appointments desk will be set up on Tuesday, May 21, at the Sheraton-Park Hotel.

Host chapter and social events will include a Pension Building ball and the Baltimore Chapter's "Red Velvet Swing." Architectural tours will cover the capital city itself, Baltimore and the new towns of Reston, Va., and Columbia, Md.; Washington area residences; and construction of the area's metro transit system.

After the convention, architects may want to go on tours of Williamsburg/Richmond, Va.; Harper's Ferry, West Va.; and Annapolis, Md. Those who really want to travel can attend a re-convened session in Madrid. Travelers depart on May 24 and return on June 8 after visits to Athens, the Greek islands, Yugoslavia and Rome.

## Eleven Elected to Honorary Fellowship

Eleven architects have been elected by the AIA Board of Directors as honorary fellows of the Institute. This recognition is "reserved exclusively for architects of esteemed character and distinguished achievement who are not U.S. citizens and do not practice in this country or its possessions."

The 1974 recipients, who will be invested during the AIA annual convention in May, are:

- Luís Barragán, a Mexican architect who is best known perhaps for his design and development of Pedregal Gardens, a residential section carved from lava fields near Mexico City.
- Henryk Buszko, president of the Polish Architects Association and a member of the board of the International Union of Architects, who has long been active in housing and town planning.
- Juan José Casal Rocco, who practices in Montevideo, Uruguay, and is secretary-general of the Pan-American Federation of Architectural Associations.
- Allan F. Duffus, president of the Royal Architectural Institute of Canada, who is presently in charge of a project to restore 28 historic buildings on the Halifax, Nova Scotia, waterfront.
- Alex Gordon, past president of the Royal Institute of British Architects and of the South Wales Institute of Architects, who has received many awards for his design of housing, university complexes, industrial and commercial structures and cultural buildings.
- Colin Laird, who is an architect in Port-of-Spain, Trinidad, West Indies, and is recognized as one of the outstanding professionals in the Caribbean.
- Hans Bernhard Reichow of Hamburg, West Germany, who is architect of the garden city of Hohnerkamp at Hamburg-

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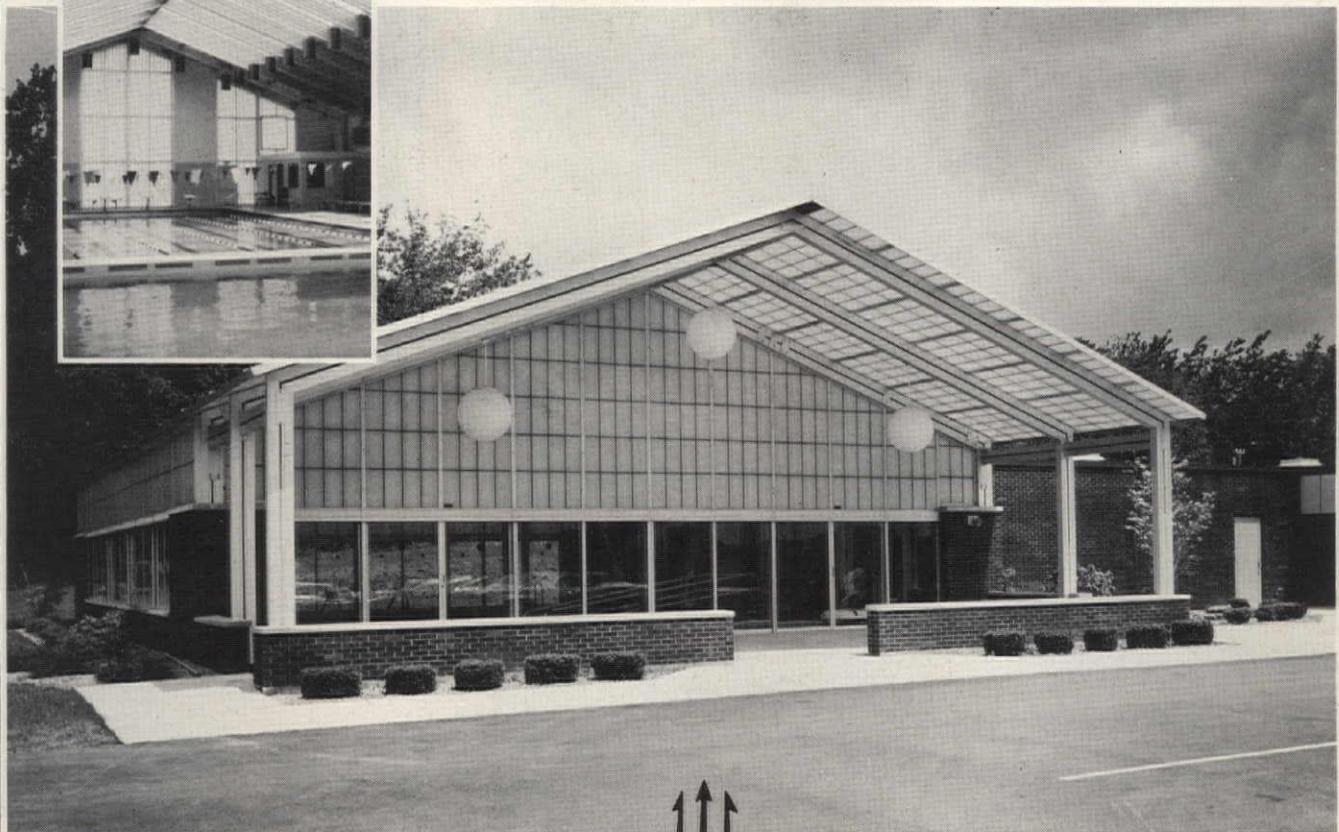
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- André Remonet, Paris architect of renown, who is president of the Franco-British Union of Architects and secretary-general of the French section of the International Union of Architects.
- German Samper Gnecco, member of the city council of Bogotá, Colombia, who worked with Le Corbusier on plans for the city of Bogotá and the planned community of Chandigarh, India, and who represents Colombia on the directors council of the Pan-American Federation of Architectural Associations.
- Peter Shephard, professor of architecture and environmental design at the University of Pennsylvania and dean of its graduate school of fine arts, who was a member of the design group which prepared the Greater London Plan and is a former president of the Royal Institute of British Architects.
- Michel Weill, secretary-general of the International Union of Architects, and a recipient in 1962 of the R. S. Reynolds Memorial Award for distinguished architecture using aluminum.

## Ten Elected to Honorary Membership

Honorary membership in the AIA is extended to persons outside the architectural profession who have rendered distinguished service to the profession or to related arts and sciences. Not more than 10 persons may be admitted to membership in each calendar year.

One woman and nine men have been elected to honorary membership by the AIA Board of Directors. They are: R. Mayne Albright, attorney for the North Carolina Chapter AIA and the North Carolina Board of Architecture; Alan C. Green, secretary-treasurer of the Educational Facilities Laboratories, Inc.; the Honorable Ernest F. Hollings, Senator from South Carolina since 1966 and leader in the causes of historic preservation, coastal zone management and a comprehensive national energy policy; Ada Louise Huxtable, architectural critic and member of the editorial board of the *New York Times*, and recipient of the AIA's Architecture Critics' Medal in 1969; John B. Johnson, chairman of the Dormitory Authority of the State of New York; Fotis N. Karousatos, executive director of the Florida Association AIA; James W. Rouse, builder and developer of the new town of Columbia, Md.; Philip D. Stitt, editor of *Arizona Architect* and organizer of the Arizona Society of Architects AIA; Russell E. Train, administrator of the Environmental Protection Agency; and William G. Wolverton, controller of the AIA since 1957. *continued on page 12*

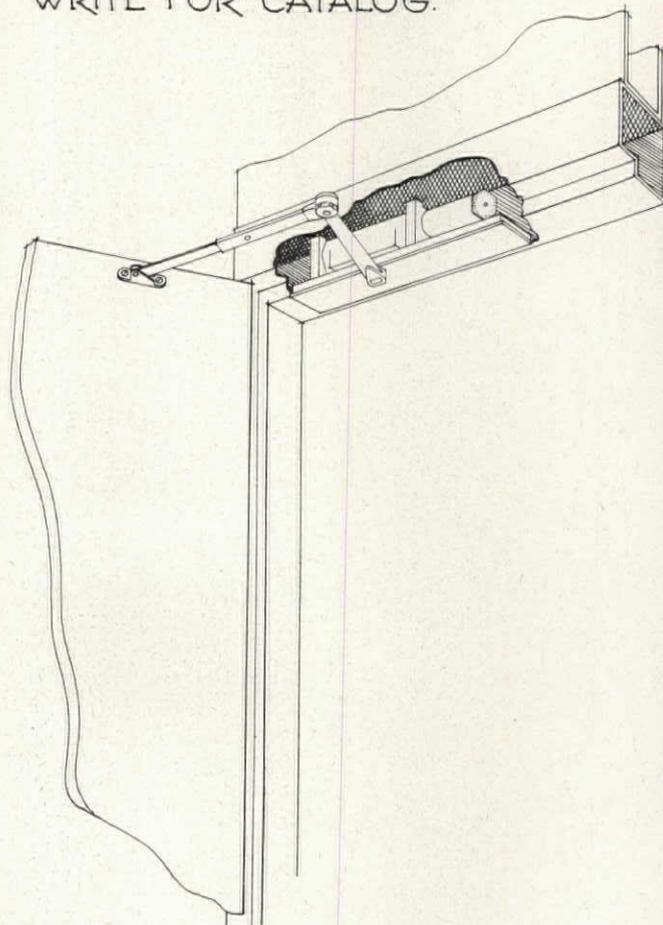
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## Roche and Dinkeloo Named Architectural Firm of the Year

The Architectural Firm Award is the highest honor that the AIA can confer on a firm. The 1974 winner of the award is Kevin Roche John Dinkeloo & Associates, headquartered in Hamden, Conn.

The Jury on Institute Honors commended the firm for its "creative approach and understanding of form" which have influenced the "total design philosophy of the architectural profession." Both partners in the firm were members of Eero Saarinen & Associates, of which their organization is a direct outgrowth. The jury declared that the firm "has extended and matured with its own identity and has made vast contributions to the architectural worth of the world."

Buildings designed by Kevin Roche John Dinkeloo & Associates include the Ford Foundation headquarters in New York City; the Oakland, Calif., Museum; the Knights of Columbus headquarters building, New Haven; the U.S. Post Office facility, Columbus, Ind.; the new campus of the Rochester Institute of Technology; the Veterans Memorial Coliseum, New Haven; the Power Center for Performing Arts, University of Michigan, Ann Arbor; the Aetna Life Insurance Computer Center, Hartford; the Irwin Union Bank & Trust Co., Columbus, Ind.; and the Worcester County National Bank, Worcester, Mass.

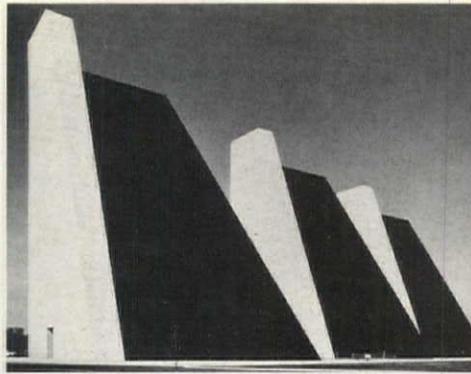
Shown at right are the College Life Insurance Company of America building in Indianapolis, and the interior of an office building and bank in Toronto.

## Medals for Allied Arts and Professions

Kevin Lynch, professor in the Department of Urban Studies and Planning at the Massachusetts Institute of Technology, has been selected to receive the 1974 Allied Professions Medal of the AIA. The medal, which will be presented during the AIA convention, is given in recognition of achievement in the design professions related to architecture.

Lynch's career has spanned 25 years of influential research, education and practice in the field of urban design and planning.

He is the author of numerous articles and books, including *The Image of the City* (1960); *Site Planning* (1962; second edition, 1971); and *What Time Is That Place?* (1972). His urban design projects, regarded as "models in the field," have included the preparation, with John Myer, FAIA, of the original plans for the Boston Governmental Center and the redevelopment of that city's downtown waterfront,



as well as numerous projects for other cities in the U.S. and Latin America.

The winner of the 1974 Industrial Arts Medal—awarded annually by the AIA for excellence in design for execution by machine in such fields as furniture, textiles, typography, building products and equipment and consumer products—is Ing. C. Olivetti & Co. Olivetti is being recognized for its "long innovative history of coordinating all the manifestations by which an organization is known by the public": appearance of its products, the language of its communications and the public and social events it presents and in which it participates. In addition to manufacturing such equipment as typewriters, calculators, computer terminals, office furniture, etc., the firm has built structures of outstanding design. It has sponsored art exhibits and has published books. Its company town, Ivrea, Italy, has highly experimental social, educational, recreational and cultural facilities.

Another award to be presented at the AIA convention in May goes to San Francisco sculptor Ruth Asawa Lanier. She will receive the 1974 Fine Arts Medal, awarded by the AIA for distinguished achievement in the fine arts related to architecture.

Many of Mrs. Lanier's works have been commissioned for architectural placement. Among these are a group of hanging sculptures of crocheted wire executed for the Joseph Magnin Co., a mosaic wall in Bethany Center Senior Housing, the fountain with mermaids and sea turtles

in Ghirardelli Square and a fountain for Hyatt House at Union Square—all in San Francisco.

The 1974 Craftsmanship Medal, given annually by the AIA to an individual craftsman for distinguished creative design and execution where design and hand-craftsmanship are inseparable, will be presented to Sheila Hicks.

An American who now lives in Paris, Ms. Hicks is known for her wall hangings which incorporate a variety of techniques including weaving, knitting and wrapping. Among her commissioned works are wall hangings for the Ford Foundation headquarters building in New York City, the Rothschild Bank in Paris and the Iturbide Palace in Mexico City. The Jury on Institute Honors called Ms. Hicks a "consummate artist [with] specific power to liberate her ideas and give them bodily form."

The 1974 Architectural Photography Medal will be presented at the convention to David Hirsch of New York City. An architect as well as a photographer, Hirsch was commended by the AIA for his "dramatic use of light and shadow to express a structure's relationship to its environment." Now associated in an urban design project for the mayor's office in Brooklyn, N.Y., Hirsch continues to have his architectural photographs published in professional magazines and books.

## Jack Train Selected for Kemper Award

Jack D. Train, FAIA, an associate in the architectural and engineering firm of Metz Train Olson & Youngren, Inc., in Chicago, is the recipient of the Edward C. Kemper Award of the AIA. The award is given annually in recognition of an AIA member who has contributed significantly to the Institute and the profession.

Train has served as AIA commissioner of professional practice and as chairman of the AIA task force on the study of standards of professional practice. He was a member of the AIA task force to study the cost of architectural services in 1968-69; in 1971-72, he was chairman of the task force on rewriting and computerizing the AIA cost accounting system. He has been vice chairman of the AIA automated practice technology task force since 1971.

Developer and former chairman of the board of Production Systems for Architects and Engineers, Inc., Train has been a director of PSAE since its inception. He is currently serving on the AIA task force to develop programs for architectural internships, a program that he initiated through his own architectural firm in an experiment at the University of Illinois in Urbana.

Train has been president of the Chicago

*continued on page 59*

Donald Canty

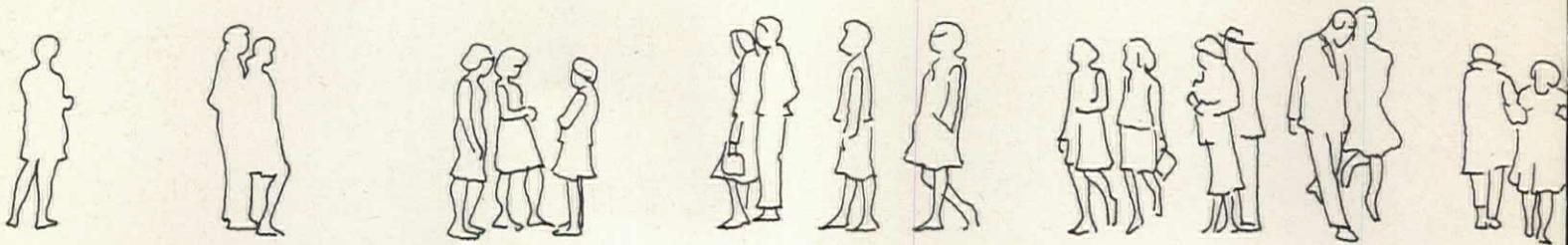
**“What the hell do architects know or care about national growth policy?”**

The question came not from a planner or public official, but from an architect who felt that his profession should stick closer to its last of building design.

The answer attempted here will be twofold: dealing first with the reasons why architects should care about growth policy, then examining the kind and extent of knowledge that they can bring to the subject.

One reason for caring is that architecture, as a profession, must serve a public interest beyond its immediate clientele. Just as the legal profession serves justice and the rule of law, the medical profession the advancement of health, so architecture is the primary profession serving to maintain and enhance the quality of the physical environment.

**How growth is controlled and**



shaped, what it wreaks upon the land, determines the quality of the American environment. Thus public policy determining these things, at any level of government, must be within architecture's professional purview.

There are also reasons for caring that come closer to individual professional practice, including that of the architect quoted above.

For the ways in which public policy deals with growth, either at the national level or through an accretion of state and local decisions, have much to do with whether architecture—as an end product—is achievable.

Permissive public policies, which leave decisions about growth to the vagaries of the marketplace, severely limit the possibilities of architecture having much impact upon the environment, or even happening.

We have a great deal of experience with such policies in this country, and the results are to be seen all around us. There are occasional examples of architecture, where for reasons of image, or inadvertance, or genuine conviction, a client has allowed or encouraged the achievement of quality.

But these are isolated and sporadic exceptions, overwhelmed by the sprawl and spoilage, the waste and social division, spawned by the *laissez-faire* ap-

**There will be development, and lots of it.**

**The architectural question is how it will be shaped.**

proach to growth and its impact upon the land. Someone once ruefully described architecture's contribution to the American physical environment as the casting of a handful of diamonds upon an immense slag heap.

Now, in reaction to past permissiveness and the environmental havoc it has wrought and to the finity and looming scarcities of natural resources, an increasing number of Americans are calling for the complete cessation of growth.

Such calls are usually local and often defensive. They are really aimed at shifting growth rather than stopping it. Now that

the costs of growth have become apparent, let some other locality pay them.

On the national level, calls to stop growth, in terms of additional development, are futile. For even if zero population growth is achieved, we are experiencing a record number of new household formations as a result of past "baby booms." And these new households need shelter, shops, schools, and all of the other facilities of which communities are, or can be, made.

Thus, a particular task of the architectural profession is to turn the new public concern with environmental quality from development nihilism to such shaping.

So there will be new development, and lots of it. The architectural question is not whether it can be stopped, or where it might be shifted, but how it can be shaped.

This was the central task undertaken by AIA's National Policy Task Force, whose report recommended the injection of public purpose and qualitative goals into the processes of growth and development. And if these things are injected, so is architecture—and on a scale that can have tangible environmental impact.

The task force report brings us to the question of what the architectural profession has to offer in the shaping of growth policy. Even the architect quoted at the outset acknowledged that the report had been a significant contribution to the discussion of such a policy on the national level (although he injected the word "surprisingly" before significant).

Now some 40 other national organizations have joined AIA in working toward formation of a coalition to support enactment of a growth policy along the lines of the report. The mix of these organizations is in itself significant: They range from allied fields such as planning and construction to conservation, public interest, and business groups. They constitute a diverse, prestigious, and potentially powerful new force in the burgeoning effort to persuade the nation to take a positive hand in the shaping of its environmental future.

Now a new report has emanated from the work of the AIA task force that takes a peculiarly architectural approach to the subject. The report is titled "Structure for

a National Growth Policy" and its core is a set of what are essentially performance specifications for such a policy. They are, in rough outline:

1. Provision of new opportunities for the poor and minorities to move out of the impacted central cities and into other parts of metropolitan areas, and encouragement of the more affluent to return to the cities.

2. Protection and purification of the natural environment, preservation of historic areas and buildings, conservation of energy and resources, including the land itself.

3. Creation of balanced and comprehensive transportation systems, designed according to social and environmental as well as physical criteria.

4. Development at the scale of communities rather than housing projects, with as much attention to services as to facilities.

5. Reduction in the cost of housing construction and provision of subsidies to users as well as builders and sponsors.

6. Linkage of new development on open land to redevelopment of substandard neighborhoods.

7. Reform of the tax and fiscal systems to encourage achievement of the policy's goals through private as well as public investment, and to better match resources and needs.

8. An increase in the capacity of state and local government to meet the responsibilities devolved upon them by federal revenue sharing, and restructuring local government to create new and politically accountable instruments on the metropolitan as well as the neighborhood levels.

This is a sophisticated set of specifications, reflecting the development experience and qualitative commitment of the profession and its leadership.

The profession's principal occupation remains design. The application of design to the formulation of growth policy, in this case at the local level, was demonstrated by the January visit of an AIA Regional/Urban Design Assistance Team to Phoenix, Arizona, described on pages 22-31.

The team took as broad a look at Phoe-



nix as did the task force at national growth policy, and covered many of the same concerns.

It recommended significant changes in the plans, policies, and institutions of the Phoenix area. But then it went beyond these things to the third dimension, sketching a vision of what such changes could mean in design terms. This is another capability, and a unique one, that architecture has to offer in the shaping of growth policy—and of growth itself. □

## Precedents for Growth Policy: The Paris Area

**Lathrop Douglass, FAIA, and Aaron Chelouche, AIA**

Architects and planners in the United States can obtain valuable guidelines from urban development plans now being carried out in Europe. A notable example is the extensive program for controlling the growth of metropolitan Paris.

Historically, the small towns and villages 15 to 20 miles from the center of Paris have had little connection with the city itself. In recent decades, however, as the result of the enormous increase in metropolitan population, these towns have felt the pressures from the big city and have all begun to grow rapidly. The government has recognized the fact that uncontrolled growth of these towns would create chaotic conditions, and consequently during the past decade it has set up a series of programs designed to achieve order in the expanding scene.

The government has selected a number of the peripheral towns that it considers to be the more important and faster grow-

**Messrs. Douglass and Chelouche** are partners in Lathrop Douglass-Aaron Chelouche, SARL, a French-based planning and consulting firm involved in urban planning and shopping center design in France.

ing, and has established for them complete procedures for the planning and development of new central business districts, new rigidly controlled highrise residential neighborhoods, and other needed facilities.

Furthermore, recognizing the relationship of the new increment of suburban population to the central city, it has planned extensions of the Paris subway system to these new town centers so that they will be effectively linked by up-to-date mass transportation to all of Paris. Additional linkage will be provided by a system of ring roads similar to those around many American cities, although the pace of highway construction is slower in France than in the U.S.

In planning the central business districts for the "new-old" towns, public agencies prepare master plans, buy up vacant or nominally priced land, construct local prefectures and other government buildings, and provide transportation and other public necessity items. After making provision for open space, the remaining available land is sold to developers at a figure which pays for the public improvements and, hopefully, allows the developer to achieve the new town center or residential district as basically conceived and in such a way that the venture can be a profitable investment.

Because of the fact that in France more equity, or "front" money, normally is required for private developments than in the U.S., it is customary for one of the major banking interests of Paris to be included on the development teams. These development teams for any given town may undertake residential areas, or the entire central business district, or only portions thereof. The only comparable situations already in existence in the U.S. probably are Reston, Virginia, and Columbia, Maryland, both of which, however, are strictly new towns and not enlargements of existing ones.

The scope of the Paris master plan can be appreciated by a brief look at its individual projects.

Place de la Défense is a skyscraper development just outside the city limits of Paris. It was shown as an extension of the Tuileries-Champs-Élysées axis on

maps dating back to the 17th century. The low hilltop location is about two miles along this axis beyond the Arc de Triomphe in an area that had developed sparsely and fallen into slum conditions.

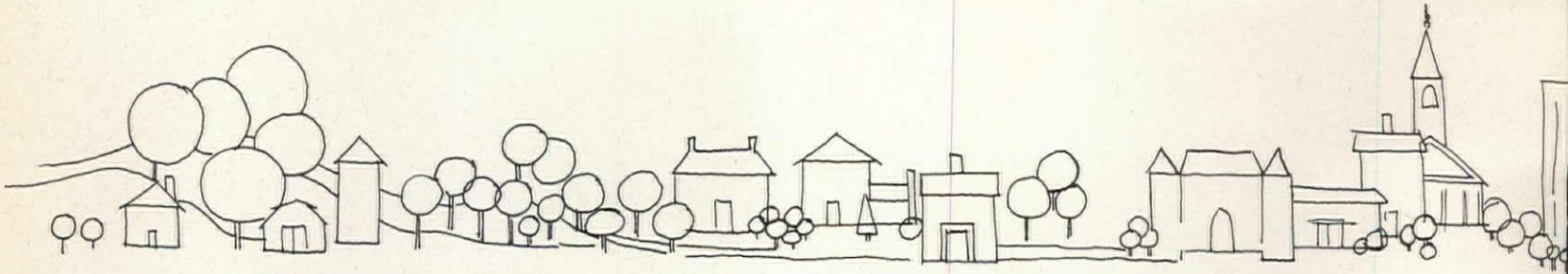
The government in the 1950s recognized the imminent advent of a tremendous demand for office space. Wanting to preserve central Paris from the highrise construction that has destroyed or marred the old districts of so many cities, it set up a program somewhat similar to that of the E.U.R. outside of Rome, an entire new town of office buildings, apartments, an exhibition hall and other facilities. (The E.U.R. was started by Mussolini before World War II and largely completed in the last two decades.)

At Place de la Défense, progress was slow at first, but when Esso Française wanted to consolidate its scattered offices in a major new building, the government persuaded it to be the bellwether. In due course, and after the construction of the Esso Building, the frequently changed master plan for the area became finalized. Now Place de la Défense at last has become the major office building district of

## Satellite communities have siphoned development that might have marred the city.

Paris, a veritable city in itself. The circulation plans of la Défense are extremely elaborate with individual levels allocated to the Metro, express vehicles, local vehicles, parking decks of various categories and open pedestrian promenades. Despite criticisms because some of the office towers are visible above or through the Arc de Triomphe when viewed from along the Champs-Élysées, the whole concept has worked out extremely well and has taken the pressure for construction of office space off the old part of Paris. This has enabled the government generally to preserve the historic central city, despite a few exceptions such as the tower and nearby solid wall of office construction in Montparnasse and the multiple office buildings along the Seine downstream from the Eiffel Tower.

In the peripheral environs of the city,



the government selected for "new town" center development the old existing villages of Creteil, Cergy-Pontoise, Noisy le Grand, Evry and Trappes, and also approved regional shopping center locations at Parly 2, La Belle Epine, Velizy and Rosny 2.

Of the "new town" centers, Creteil and Cergy-Pontoise have been given priority and are already under construction. Creteil is an old town located on a low hill a dozen miles to the southeast of the center

## The French have taken to regional shopping centers with enthusiasm.

of Paris. Already a large amount of high-rise apartment development, very handsome and well planned, has been constructed adjacent to the old town. The prefecture, an artificial lake, highways and other public facilities also have been largely completed and the central retail complex is under construction.

Cergy and Pontoise are adjacent old towns some 20 miles northwest of the center of Paris. The government decided on a single new town center to serve the growing population of both and on nearby open land acquired by a public agency, construction has been completed on the major part of the new highways, the prefecture and other public buildings and multifamily residential projects. Work is nearing completion on a central retail district with three levels of shopping, a landscaped plaza on its roof and office buildings atop the plaza. Public squares, multidecked parking, additional public buildings, amusement areas and underground service routes will be started soon. The whole program is divided into stages to keep pace with the growth of the local population.

Noisy le Grand, to the east, is generally similar in concept with a cultural center and university included. It is still in the planning stage, as is Evry, which is beyond Creteil en route to Fontainebleau.

Developed entirely by private capital, but related to the government program in view of the zoning regulations and available retail customer market, are Parly 2

and Belle Epine, the first two regional shopping centers in France. The former is a short distance north of Versailles, and the latter near Orly Airport adjacent to the huge new markets of Rungis that have replaced the famous old Les Halles in Central Paris. Both these shopping centers consist of multilevel malls and courts, extensive two-level retail facilities, decked parking and office structures. Their popularity is evidenced by the fact that at Belle Epine, 30,000 customer cars arrive on a busy Saturday. Other centers in the same category as Parly 2 and Belle Epine which have been built include Velizy, south of Versailles, and Rosny 2, to the east of the central city. One or two others will be built in the near future.

Thus the circumference of Paris will be bounded by a series of new town centers, each multilevel in circulation, each surrounded by new and old residential neighborhoods, and each connected by highways and by Metro to Paris, plus a series of regional shopping centers completing the retail facilities required by the enormous outward wave of population from the city of Paris into the surrounding countryside and villages. The U.S. would do well to emulate this pattern for the overflowing suburbs of its major cities. □

## Precedents for Growth Policy: The Twin Cities

**Robert T. Jorvig**

The growth of the Twin Cities area in the post World War II period has been typical of large urban centers throughout the nation with the resulting problems of urban sprawl: concentration of the old, the poor, and the black; deterioration of the center cities; separation of jobs from housing; increasing disparities in the financial cap-

**Mr. Jorvig** is executive director, Metropolitan Council of the Twin Cities area (Minneapolis-St. Paul).

ability of communities to provide essential urban services, and fragmentation of governmental structure.

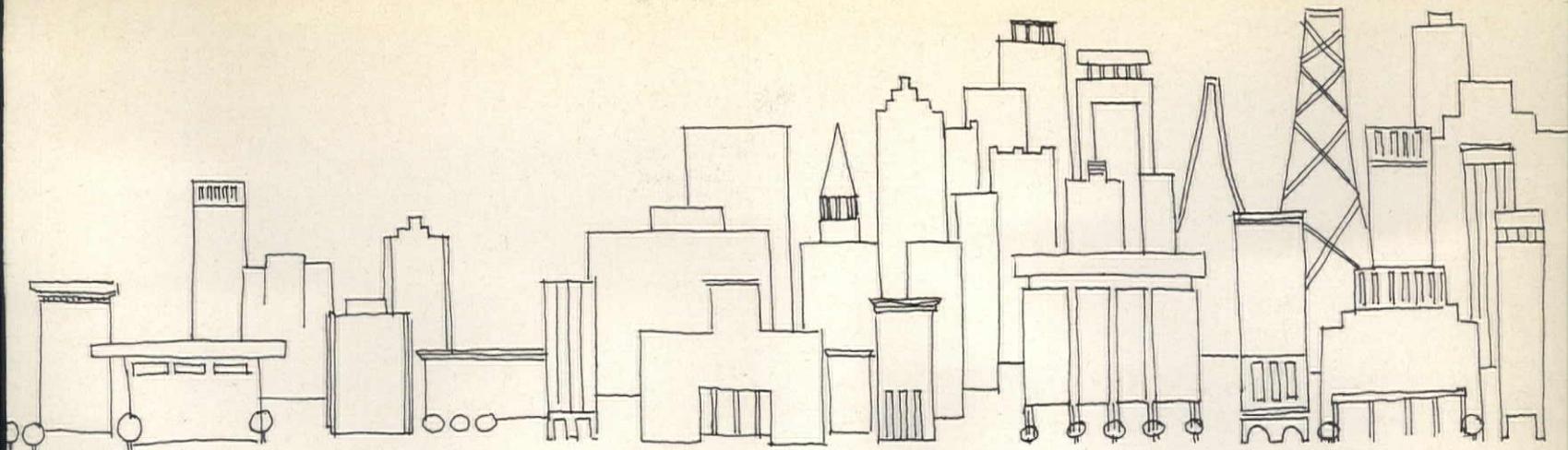
The difference between the Twin Cities area and many other major metropolitan centers is that it still retains many natural amenities and a high quality of life for its citizens. Its problems, though similar to other urban areas, are manageable. Our challenge is to deal effectively with these problems quickly before they reach the proportions that they have in many large industrial centers. The Twin Cities area and the Minnesota state legislature have already taken many steps toward this end.

The legislature in the early 1930s recognized the need for provision of services on a metropolitanwide basis by creating special-purpose districts with authority to plan, develop and operate regional sewage facilities. These were followed by an airport commission and more recently a mosquito control district, metropolitan transit commission, countywide park reserve district and watershed districts.

In 1957, the legislature recognized the need to coordinate these special functions by the creation of a tax-supported Metropolitan Planning Commission, charged to prepare comprehensive plans for the future development of the seven-county Twin Cities area. The experience of the Metropolitan Planning Commission supported the conclusions of the AIA National Policy Task Force that an advisory planning agency alone could not effectively implement regional growth policies. Although the special districts generally did an excellent job of planning and implementing programs in their particular functional areas, they did not provide an effective means for implementing a comprehensive planning policy.

Based on this experience and with substantial support from citizens and municipal governments in the area, the legislature in 1967 created the Metropolitan Council. It gave the council all of the planning powers of the MPC—plus the authority to review, and in effect, veto the plans of regional special-purpose districts.

In addition, it gave the council an advisory review of local comprehensive plans and charged the council to prepare a development guide for the metropolitan



area, to carry on research in a variety of metropolitan development problems and to recommend to the legislature solutions including the governmental organization best suited to implement the plans.

In 1969, the legislature provided a more affirmative process for planning and implementation in one functional area: metropolitan sewerage service. This legislation gave the council the responsibility for preparation of a metropolitanwide plan for sewage collection and treatment and authorized the appointment by the council of a Metropolitan Sewer Board to implement the plan.

Similar authority was given to the council in the area of solid waste. In this case, the general plans are prepared by the council and are implemented by the seven counties in accordance with disposal standards of the Pollution Control Agency. In both areas, the council as a general policy-making body can direct its full attention to its responsibility for planning and coordination, unhampered by operational and management work.

The organization of the council as a regional planning and development agency is unique. It consists of 15 members appointed by the governor with the advice and consent of the state senate. The chairman represents the metropolitan area at large. Each of the other 14 members represents a district comprised generally of two state senate districts, thereby providing representation on a one-man, one-vote basis. They are appointed for staggered six-year terms. The council was authorized to levy a tax of up to 7/10 of a mill in the area to carry out its legislative charge (\$1.7 million).

The council has prepared a metropolitan development guide with specific chapters on sanitary sewers, open space, solid waste, housing, airports, transportation, major diversified centers, criminal justice and health. Major emphasis last year and again in 1974 is upon preparation of a major new section of the guide entitled a "development framework." This will lay out a general growth policy for the area and the tools necessary for its implementation.

These policy guides are, in turn, used to guide development decisions in the

region and are specifically used by the council as a basis for decisions on the referral of plans of special districts, community comprehensive plans and applications for federal funding required under the federal government's A-95 review procedures.

As the AIA report notes, the heavy reliance on the real estate tax places all governmental units in competition for development, which must adversely affect their capability to make sound planning and environmental decisions. The metropolitan council made research on this problem an early priority. The legislature, in turn, supported a unique approach to this problem through passage of the Fiscal Disparities Act in 1971.

This legislation provides for a metropolitanwide sharing of a portion of all of the future commercial and industrial tax base in the area. Forty percent of the tax base of all such new development is placed into a metropolitan pool and then redistributed to all local governmental units based on a ratio of per capita need in relation to per capita assessed valuation. Sixty percent of such tax base is retained by the individual communities to support community service requirements for such development. The constitutionality of the act is currently being tested before the state supreme court. But despite this pending litigation, there are already indications of communities making development decisions based on the best use of the land as a result of the tax pool.

It is our hope that this concept will be built upon with experience and particularly that improved formulas will be used not only for the distribution of the shared tax base but also for distribution of state and federal aids. These distribution formulas at the state and metropolitan levels can also have a direct relationship and use in the distribution of federal funds under revenue sharing, thus further eliminating fiscal disparities.

Protection of the natural environment is an essential priority in any growth policy. Federal and state legislation has clearly established the protection of the environment as a national policy. However, we have not yet established effective and workable standards for the applica-

tion of this policy in a comprehensive planning context.

The council has secured legislation designed to deal with this concern in connection with the establishment of the new major airport to serve the area. This Airport Zoning and Development Act authorizes and directs the council to establish criteria as to the degree of care necessary to protect the environment within three to five miles of the airport site. It

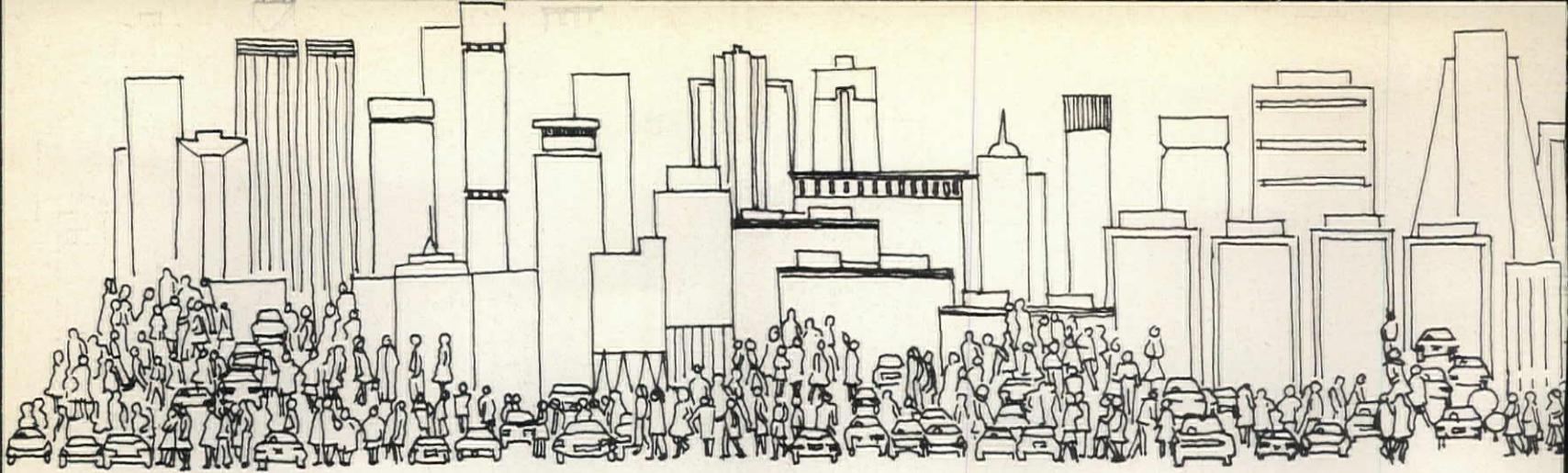
## Having tackled individual problems, the Metropolitan Council is now devising an overall growth strategy.

also requires that the local governmental units in the area adopt or amend their land use ordinances (zoning, subdivision controls, building codes) in accordance with these criteria. Experience in implementing this act may generate techniques that could have general applicability to development within the region.

The council policies fully support the concept of free choice in housing as set forth in the AIA statement. Toward this end, the council secured legislation designed to increase opportunities for low- and moderate-income families to obtain quality housing throughout the metropolitan area and in close proximity to employment centers.

The council also has adopted an allocation plan for low- and moderate-income housing. This is not simply a "fair share" plan, but an allocation of housing to priority areas based upon the location of employment opportunities and availability of transportation, schools and other community services needed by low- and moderate-income families. It also recognizes the long-range development goals set forth in the council's development guide. The council is working closely with the Department of Housing and Urban Development area office to coordinate the allocation plan with federal housing funding decisions within the area.

The federal housing moratorium has seriously impeded the allocation plan. However, it and the housing section of the development guide continue to have



an important impact on community planning decisions.

In summary, fiscal disparities legislation is having the effect of allowing local communities to make development decisions on more than a simple economic basis. Housing policy is designed to expand housing variety, to extend locational opportunities, to ensure proper community service levels and to encourage equal opportunity, in addition to meeting supply needs. The council's sewer and transportation programs are affecting the direction and limits of growth, in effect

## The Twin Cities experience suggests five criteria for regional planning agencies.

shaping development while protecting life quality. The open space program is being designed to protect natural resources, have a shaping effect and assure an acceptable level of life quality.

The capability of these individual functional programs to shape growth is, however, limited. There are obvious trade-offs between development and environmental objectives. The Development Framework Section of the guide now being forged will link all of these concerns in an overall growth policy. It is not expected to be a stopgrowth policy but a means of managing necessary growth in an orderly and economic manner.

A metropolitan capital improvement plan is expected to be an important tool in implementing such a policy. The AIA report's concept of growth unit could very well be an element of the policy.

I am not suggesting that the council is a model for the metropolitan planning and development agencies proposed by the AIA. In fact, I do not believe there should be a national model for such agencies.

Undoubtedly, they will develop through the kind of evolutionary process that we have seen in the Twin Cities area and will reflect the unique natural features, development potentials and political structures of their own areas.

Out of our experience, however, I would suggest several basic criteria for any such agency:

1. The agency should be created by statute and should be made up of generalists representative of the metropolitan citizens on a one-man, one-vote basis.

2. The agency should be provided with a continuing funding resource for its planning and coordinating function.

3. The agency should have sole responsibility for development of overall general system plans for regional programs. The functional operating agencies at the regional and local levels should be mandated to carry out their responsibilities for detailed planning, construction and operation in accordance with such general system plans. Such system plans of the regional agency should include policies aimed at solving problems, a plan indicating the general location of facilities to be provided, a capital program for timing and financing the facilities and guidelines for the development of detailed plans and specifications, including specific guidelines for dealing with environmental concerns.

4. The agency should have review authority to ensure that detailed implementation plans of the functional agencies conform to the overall system plan. This review function should include authority for approval of capital programs.

5. The agency should establish a clear and effective program of community and citizen participation.

These are minimal requirements that federal and state legislation should outline to enable regional agencies to carry out agreed-upon growth policies.

Our experience also indicates that there may be other additional powers that should be explored. One is in the capital programming area. The secret to success

## In the future: land purchase authority, regional capital programs, and development corporations.

in this case would be the ability to shift programs from year to year and to allocate dollars of public expenditure among various functions in a given time frame.

To more effectively use the shapers of metropolitan development such as utili-

ties, transit, open space and major regional activity centers, there is a need to more effectively influence development adjacent to transit and highway rights of way, particularly at station stops and interchange locations.

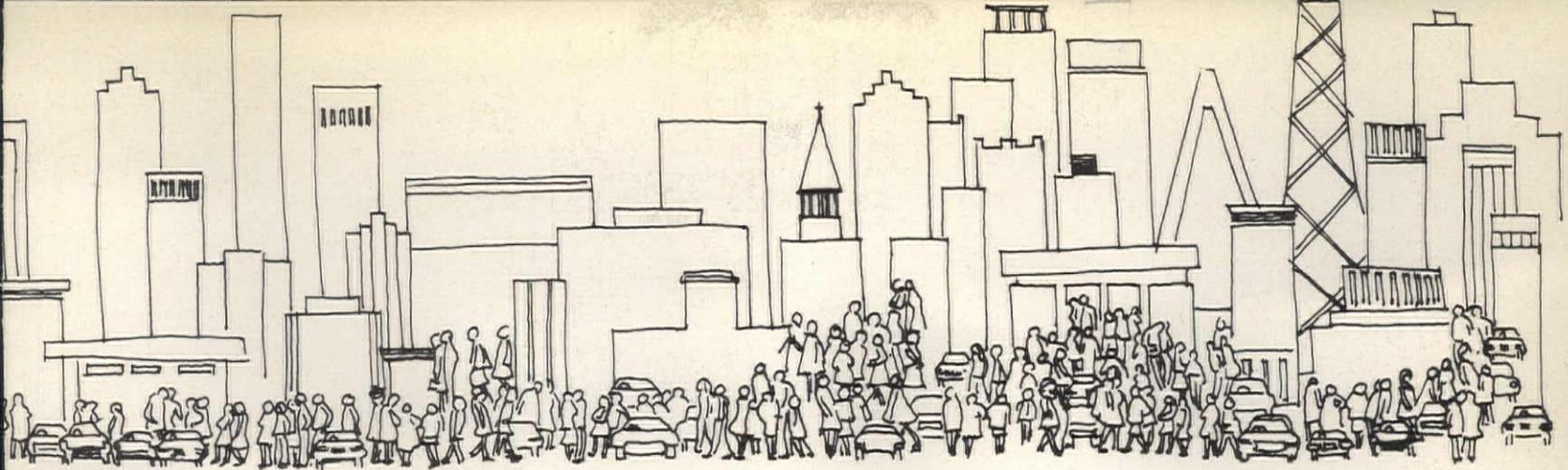
Advance land acquisition authority should be considered. A development corporation might also be established with powers to operate in a manner similar to a redevelopment agency. Such an instrument could help to shape development in accordance with growth policies and eliminate the kind of community disruption that takes place when essential public services must be provided after private development has been initiated.

It has been our experience that once enabling legislation of the type recommended in the AIA report is enacted, the really difficult work begins—namely, that of implementation. Laws calling for regional organization, public management of land development, coordinated public control over regional shapers and the financing of such programs cannot and will not be implemented overnight. If a hundred metropolitan councils were created throughout the United States tomorrow, with a mandate to begin operation immediately, time would be needed to build the policy-making capability, organizational and managerial system for operating such an agency even where councils of governments or other regional planning agencies already are in existence.

A wide variety of publics would need to be informed of the role of the regional agency and techniques developed for their meaningful participation in the development and implementation of regional growth policies. Sufficient planning and research would be necessary to provide a proper basis for regional policy formulation and decision making.

Short-term development problems and goals would have to be identified and translated into strategic programs. The growth unit concept of the AIA could be an effective tool for early implementation and demonstration of alternate development policies as well as a long-term metropolitan development strategy.

I am not saying these things to dampen the AIA's enthusiasm for carrying for-



ward its proposals. Quite to the contrary, I enthusiastically support the creation of the public development capabilities recommended in the AIA report. Rather, I want to make the point that securing the legislative capability to guide urban development is only the beginning of the action that needs to be undertaken to make urban growth policies work. □

## Precedents for Growth Policy: The States

The states are reasserting the control over land use that they have delegated to localities over the years. This is the major conclusion of a report entitled "Innovation in State Legislation: Land Use Management," conceived by the AIA Urban Planning and Design Committee and written by Washington, D.C., attorney Richard N. Tager.

The report summarizes recent state initiatives in two areas, land-use regulation and direct land acquisition. They include:

- Statewide land-use laws in Hawaii and Vermont. Hawaii's legislation divides the entire state into four general land-use districts: conservation, agricultural, rural and urban. Uses within each must conform to the nature of the district.

Vermont regulates certain types of uses anywhere in the state, including commercial or industrial developments on sites of 10 acres or more and housing developments of 10 units or more.

- State regulation in areas of "critical concern" in Delaware, Michigan and Florida. The Delaware and Michigan laws generally define such areas in terms of the natural environment, the Florida law extends to land having "major development potential."

- Massachusetts' unique use of state power to prevent exclusionary zoning that would bar low- and moderate-income housing. A sponsor of such housing anywhere in the state, if denied a local building permit, can appeal directly to a state

body with authority to overturn the local decision.

- Delegation of land-use control to regional bodies in Minnesota and New Jersey. Minnesota has given increasingly strong authority to the seven-year old Twin Cities Metropolitan Council (see page 18). New Jersey has established a Hackensack Meadowlands Development Commission with broad powers over development and land-use decisions in 14 municipalities and two counties in the northern part of the state.

The report finds fewer examples of states engaging in land acquisition, which it describes as the "most direct way to control the use of land." Only New York State, Puerto Rico and most recently Louisiana have state agencies empowered to buy and "bank" land.

Puerto Rico has the broadest land-acquisition law, but so far it has been used mainly to assemble property for conventional public works rather than as a growth-management tool.

Now, however, the Puerto Rico Land Administration is engaging in an experimental project "designed to achieve the integrated development of transportation and urban settlements." The report points out that the project will provide the agency with "its first significant opportunity to exercise powers as an urban growth manager."

Only in New York State have there been measurable results so far. There the report finds that the state Urban Development Corporation, which has land-purchase authority, is a "significant force for the promotion of orderly urban development in the state."

The report is part of AIA's followup on the work of the National Policy Task Force in the area of urban growth (see page 16). It is essentially a summary of a larger study being undertaken by Tager.

The summary report is available free to AIA members from headquarters. The full study will be available at the end of May for \$2 per copy.

"In addition to changes in the ground rules at the state level," the summary report notes, "new models for the role of the federal government in matters of urban growth policy are also emerging." The

report cites as evidence the several federal land-use bills introduced in this Congress and the breadth of the Administration's proposal for special revenue sharing in the area of community development.

"Rather than seeking to achieve narrowly defined urban policy objectives, the new direction in federal policy . . . is one which reinforces state initiatives in defining more relevant criteria for managing urban growth and creating broader-based mechanisms for promoting urban development in response to the social, environmental, and economic needs peculiar to each state," the report says.

Both the new state and federal directions, it finds, are products of "a sharpening awareness of the flaws in the way we have grown" and a new attitude toward urban growth.

The report concludes by defining this new attitude in the words of the Rocke-

## Recent state initiatives in land use reflect "a sharpening awareness of the flaws in the ways we have grown."

feller task force book *The Use of Land*, edited by William K. Reilly:

"Increasingly, citizens are asking what urban growth will add to the quality of their lives. They are questioning the way relatively unconstrained, piecemeal urbanization is changing their communities and are rebelling against the traditional processes of government and the marketplace which, they believe, have inadequately guided development in the past.

"They are measuring new development proposals by the extent to which environmental criteria are satisfied—by what new housing or business will generate in terms of additional traffic, pollution of air and water, erosion, and scenic disturbance."

These may be essentially protective and negative concerns, complicative of the architect's task. But they are necessary, and the other side of the environmental coin is a more positive concern with the achievement of environmental quality in what is built to accommodate growth.

And this is the stuff of which architecture can be made. D. C.

# Phoenix: Rx for Planned Development

An AIA assistance team  
visits one of the nation's  
fastest-growing  
metropolitan areas.





“What are the options that appear to exist with respect to mobility, lifestyle and urban form in the further development of metropolitan Phoenix?”

This was the complex question addressed to an AIA Regional/Urban Design Assistance Team which visited the Arizona city for four days in late January.

It was the first RUDAT to take on an entire metropolitan area. Sponsors were the Maricopa Association of Governments, the area's regional council and planning agency; the Central Arizona Chapter AIA; and a citizens' group called Valley Forward (through a grant from the Dayton-Hudson Foundation).

It was a particularly timely visit in terms of the current national agonizing over problems of growth. The Phoenix area, whose present population is just over one million, expects another 730,000 by 1983 and an additional million above that by 1990.

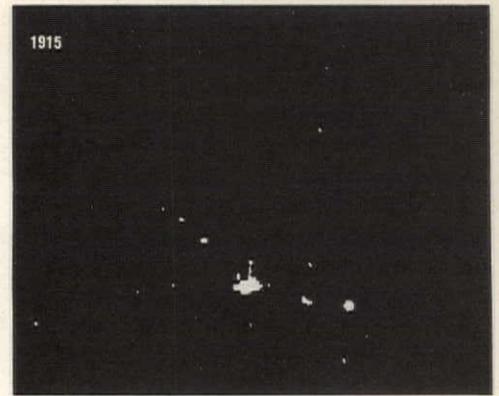
Phoenix has literally exploded in terms of both area and population since World War II. The stages of the explosion are shown in the diagrams at right, prepared by Arizona State University geographer Charles Sargent. The blobs represent land in or under development:

The form that this phenomenal growth has taken is shown in the photo at left. It is, in a word, sprawl.

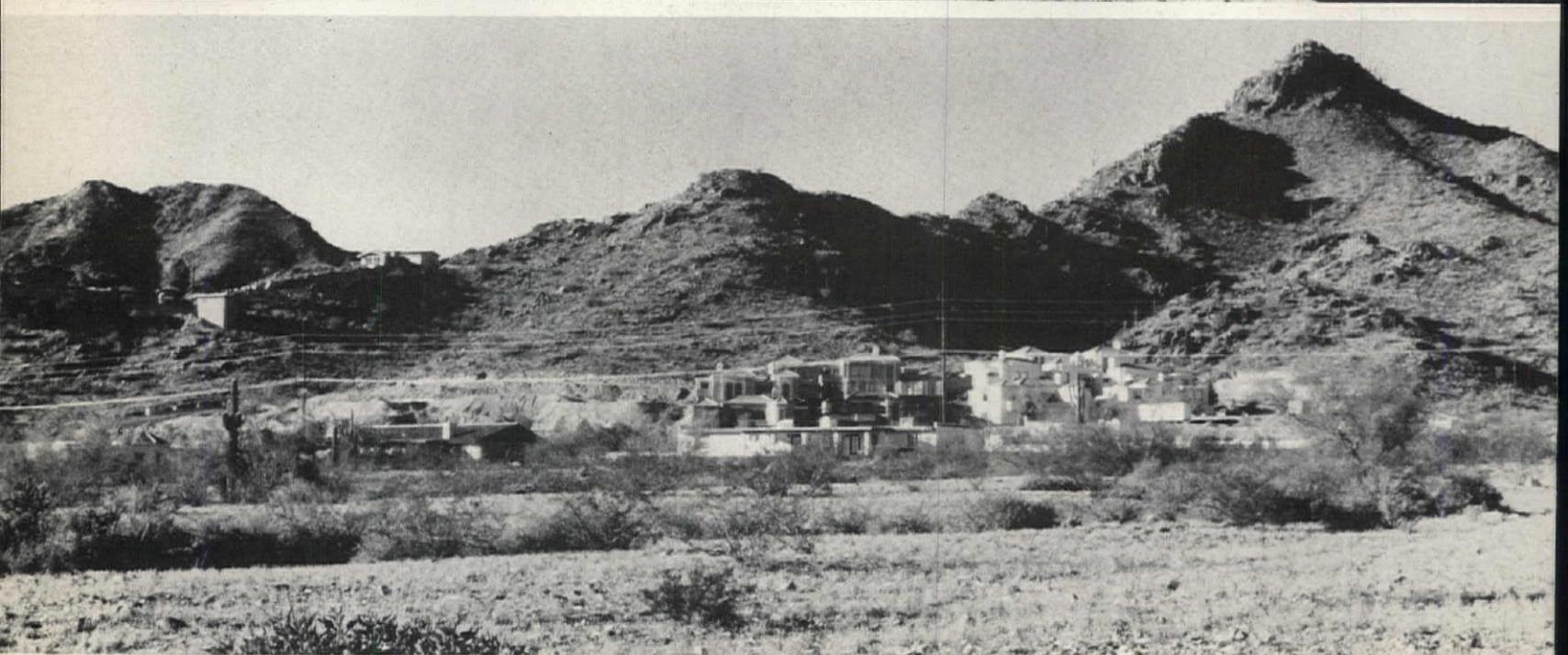
Phoenix itself encompasses 270 square miles, about half undeveloped. Density is 2,600 persons per square mile. Accommodating only the population growth expected by 1980 at this density would require the city to expand by another 211 square miles.

This was the context of the RUDAT visit. The team was led by Lawrence P. Melillo, AIA, of Louisville, Kentucky. Coordinator was James W. Elmore, FAIA, dean of the Arizona State University school of architecture.

Members were Charles A. Blessing, FAIA, Detroit's veteran planning director; transportation consultant Alan M. Voorhees; architect-planner John J. Desmond, FAIA, of Baton Rouge, La.; Harvard environmental sociologist John Zeisel; Utah State University ecologist John Neuhold; and University of Southern California economist John Niedercorn.



Phoenix is still surrounded by "wide-open spaces" but sprawl is eating away at them.





The team began its diagnosis with the land. The Phoenix area, its report notes, is "a flat, alluvial plain cut by washes and relieved by surrounding low mountains." The elevation is slightly over a thousand feet, the average annual maximum temperature 84.70 degrees, the average annual rainfall 7.46 inches. This is truly "Sun City."

It is also, in the words of the report, "a fragile environment" in which sustenance of human life is dependent upon a supply of water which may turn out to be insufficient for the area's anticipated growth.

Turning to the people of the area, the team characterized their way of life as being dominated by the "Western suburban ethic," a fondness for wide-open spaces where neither land, resources nor the potential for growth seem limited.

"Mobility, Phoenix-style" can easily mean a 15-mile drive from home to work-place; some so-called suburbs are 30 miles from the downtown core of Phoenix but still within the city limits.

This kind of travel is not well served by the existing road system, is defeating of both the sense and reality of community, but it is an accepted part of the "ethic" for those with means to live by it. For others it works particular hardships (which are not always visible from a passing car).

Growth and sprawl have brought dissatisfactions even to the relatively well-to-do. Says the team report: "Residents feel to a large degree that they are losing their grip on the simple-wide open spaces" as the ticky-tacky houses and strip commercial development spread across their desert.

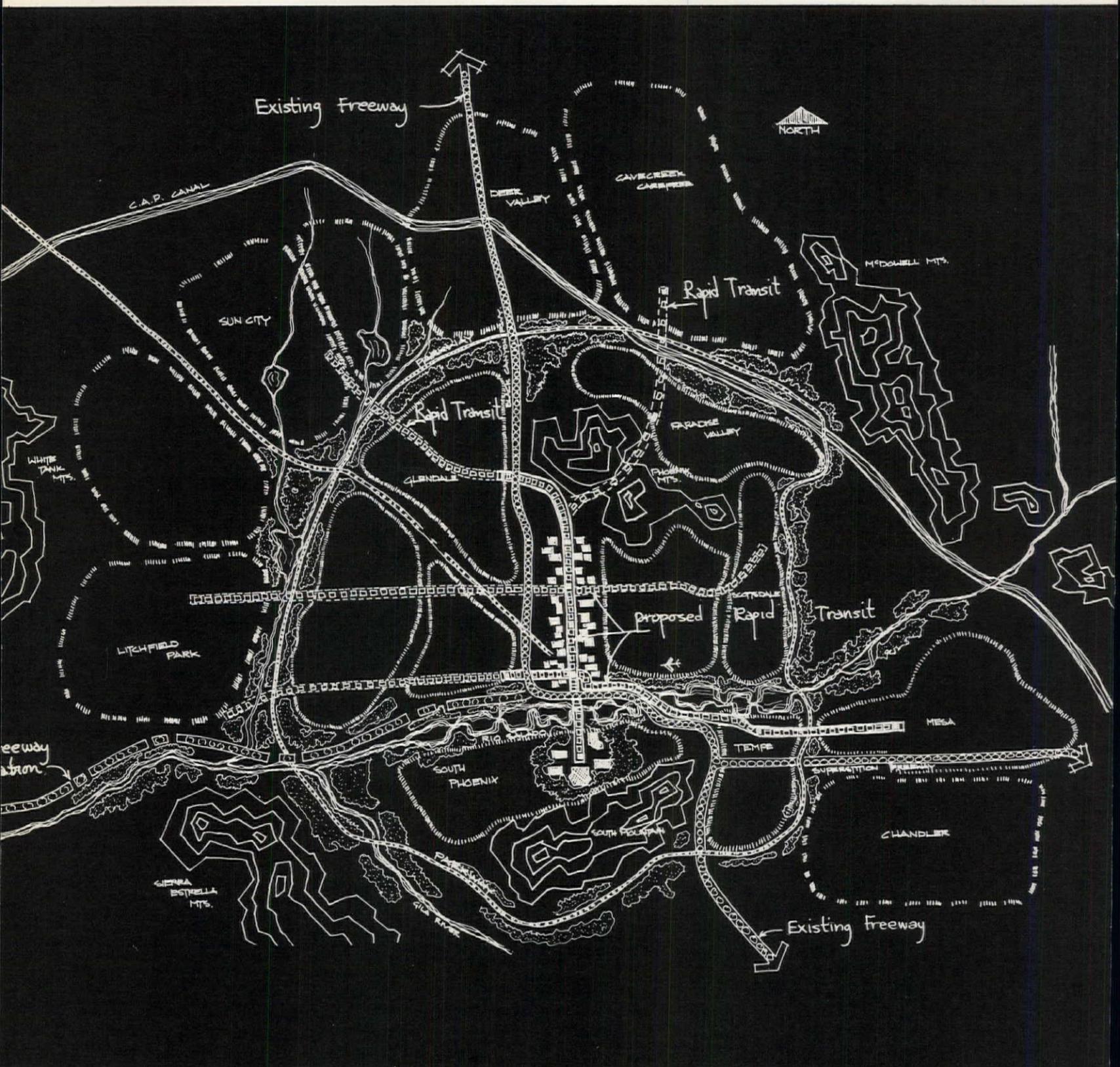
"They want to live in the Western ethic suburbia and at the same time have a level of services equal to more urban areas." Newcomers, especially older ones, come to the area because they like the climate but don't necessarily want to live in the isolation bred by sprawl: "They would like to see more conveniences, more supportive services."

Looking at some of these conflicting desires, the team found the seeds of potential change in the heedless, wide-open, environmentally scarring way in which the area so far has been developing.



*The two photos above are opposite sides of the same fringe road.*

The team traced the perils of uncontrolled growth and the promise of containment.



The team presented two "scenarios" for the area's future development. The first was "unlimited growth on the existing pattern." Not surprisingly, the team painted an unappealing picture of its likely results:

Leap-frogging subdivisions pushing ever farther into the desert; freeways following, bringing increased noise and air pollution; waste of land and energy and depletion of the ground water supply.

"The unlimited growth scenario tends to preserve the traditional Western lifestyle, but at greatly increased costs," the report warns.

Travel costs will increase with the distances between the focal points of area residents' lives, and will be pushed still higher by fuel shortages; food prices will increase as land is withdrawn from agricultural production; public services and facilities will become less available and more expensive.

There will also be less tangible costs to continued sprawl. "The fortunate individual who has health and a good job continues to have the freedom to live wherever he wants, go whenever he wants to go, and do whatever he wants to do," says the report. "However, the reverse of this freedom is continued isolation from the larger community and a feeling of anonymity.

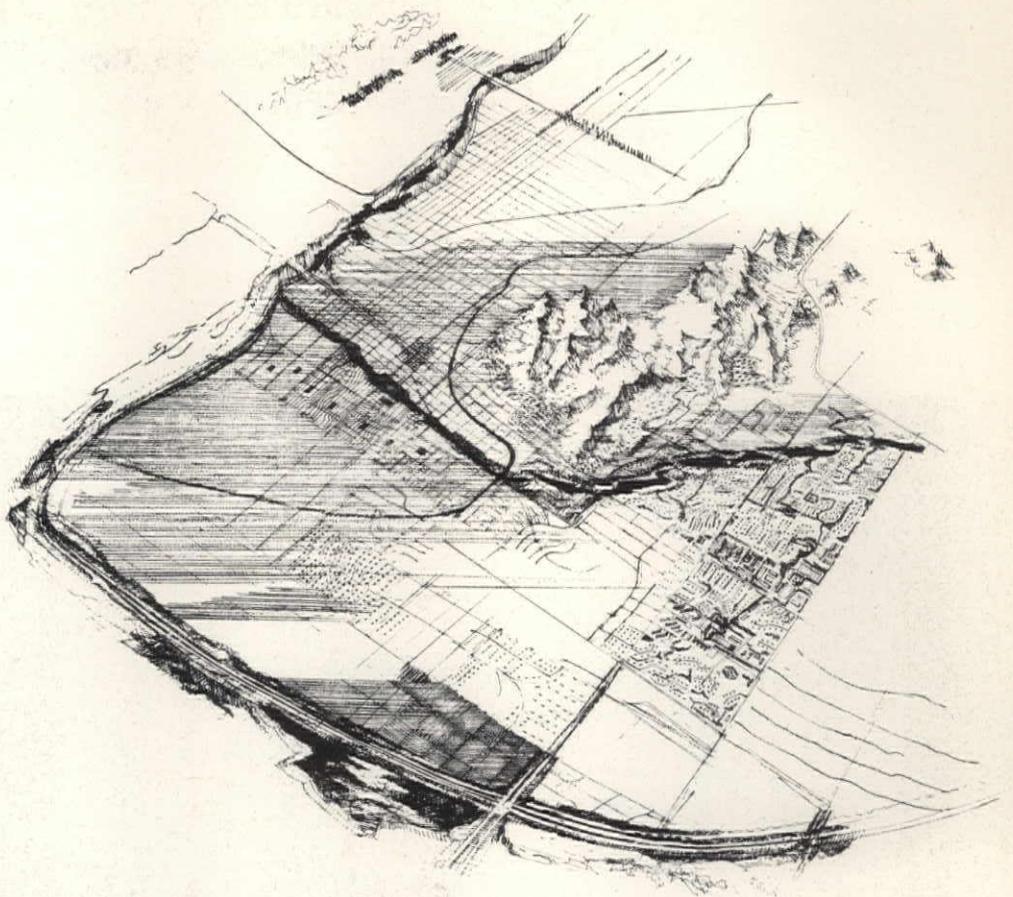
"In addition, the less fortunate young and old, as well as the poor and those in ill health, have no access to mobility and therefore do not enjoy the same freedom as the more fortunate."

Even the free and fortunate Phoenix area resident faces a "paradox" described thusly by the report: "Although he has high degree of small-scale control over his house, yard, horse and automobile, he loses control at the community level.

"In other words, he cannot prevent air pollution from blowing into his property or a rapid expansion of the welfare rolls as those who, for one reason or another, cannot adjust to the system give up and drop out."

The team then turns to its second scenario, controlled growth along the lines of the sketch plan shown at left.

In essence the plan proposes the casting of a green lariat around the inner metro-



politan area within which growth would be contained, at higher-than-present densities. The lariat would take the form of a landscaped peripheral parkway.

The area it encircles is bounded by mountains on two sides and Indian reservations on a third. Growth would be discouraged beyond the loop except perhaps for free-standing, self-contained new communities.

Some new freeways would be required, but they would be designed as surface-level parkways and carefully sited to delimit and define neighborhoods and communities within the area. The present arterial street system also would be improved. A transit system also is a key element of the plan, as is the upgrading and pedestrianization of downtown — these proposals are described in more detail on the following pages.

The plan would make maximum use of the area's natural features. The most dramatic is the Rio Salado (salt river), which cuts a wide and often dry swath through the area. The team adopts earlier planning proposals which would turn Rio Salado into a chain of lakes lined with parks and paths and also suggests that major commercial and residential buildings be developed along its shores, making it a kind of meandering cross-axis to the Central Avenue spine which bisects the plan vertically.

The team's major prescription for development within the loop is diversity. Single-family houses on large lots still

would be available to devotees of the "Western suburban ethic," but so would townhouses and apartments for those who prefer a more urban lifestyle.

The containment of growth, the report points out, would reduce virtually all of the costs of sprawl. It also would have some direct social and communal benefits.

The team explores these in relation to Paradise Valley (drawing above), a section of Phoenix where lots are uniformly large, incomes are above average, and a sense of community is almost nonexistent. The team predicts the following results if density were increased and a more diverse range of dwelling types built in Paradise Valley:

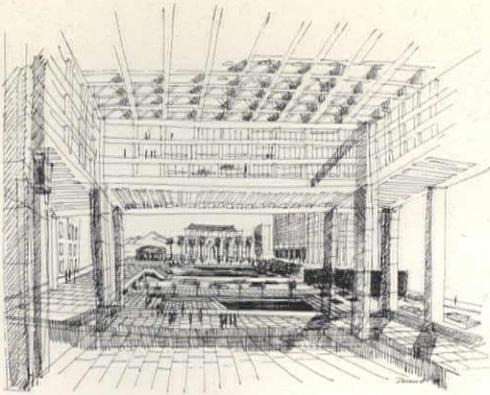
"There would be a necessary acceptance of people living nearby who have different small-scale activity patterns but who do not have different life goals. This means that there may be more activity on the front lawns of neighbors than in the back yard, and people may see more of each other rather than less.

"Local administration and local community decision making would eventually tend to reflect the differences among people. Community meetings might well become forums for discussion and resolution of differences rather than places to gather together to reaffirm similarities.

"There would be much greater opportunity for establishing community identity through stronger local community representation and stronger boundaries delineating Paradise Valley."

**Prescription for the  
Phoenix core: new focal  
points, pedestrianization  
and transit.**





The team gave special attention to the strengthening of the Phoenix core. At present, like the Phoenix area in general, the core is spread out and oriented to the automobile. The few major buildings are spaced widely apart and Central Avenue, the city's major spine, has an empty and endless look to it.

The physical character of the core reflects a relative decline in its economic significance to the area. A series of massive shopping centers have sprung up in the suburban reaches, and they account for a far greater share of the area's total retail sales than does the core.

The strengthening proposed by the team includes more intensive development, especially along Central Avenue, and a switch to an emphasis upon pedestrians.

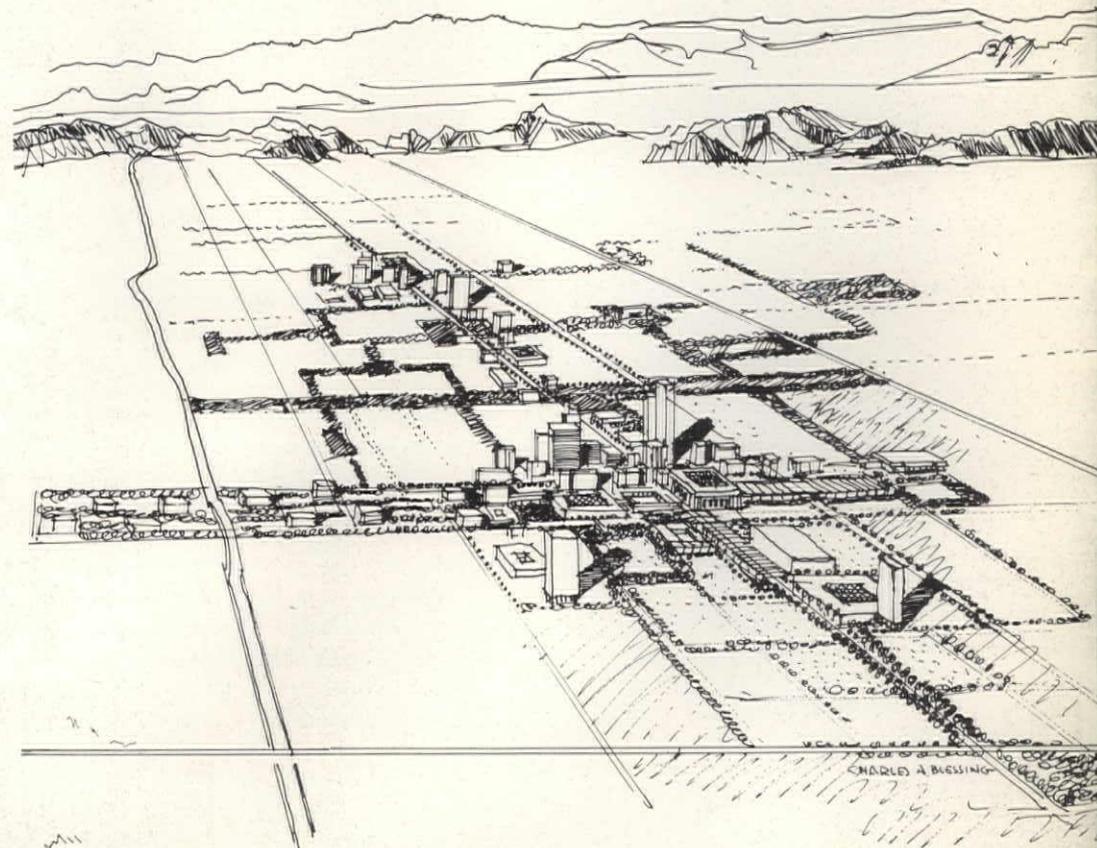
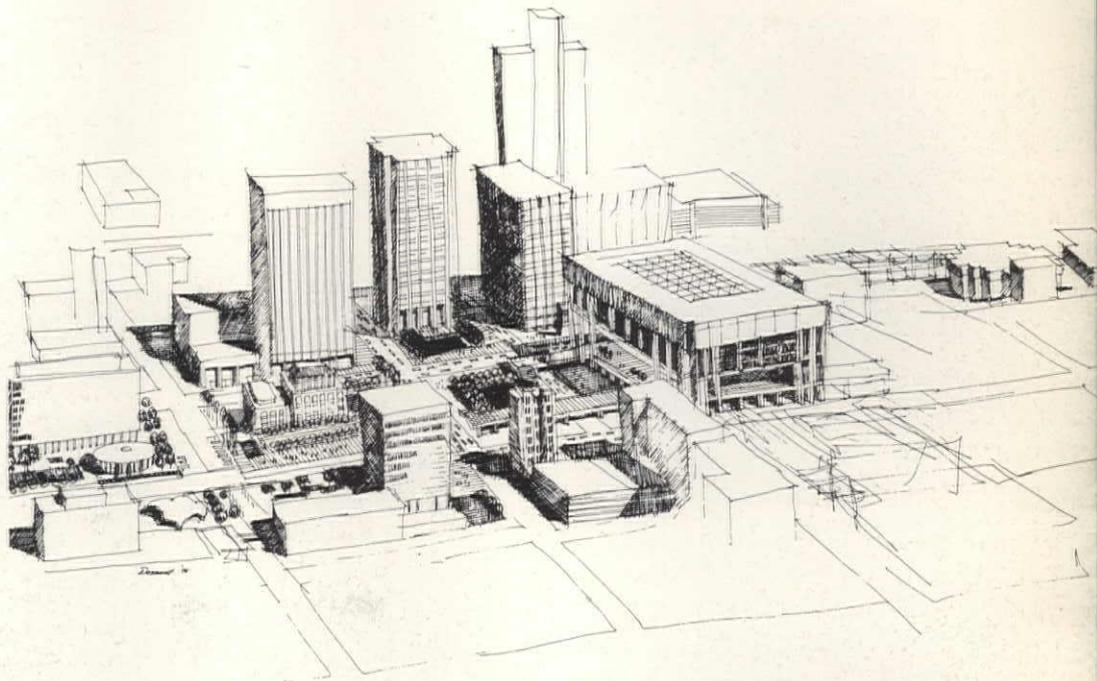
Focal point of downtown would be a "central place" (top right and above), a large enclosed public space whose uses were left undefined but which would serve as a "unifier and connector" of the core's uses and buildings.

Pedestrian ways would extend along the Central Avenue spine and its cross-axes and ascribe paths along the surrounding gridiron of streets (drawing at right), defining and connecting neighborhoods. The pedestrianization of the core, the team suggested, might even extend to making part of Central Avenue an enclosed galleria.

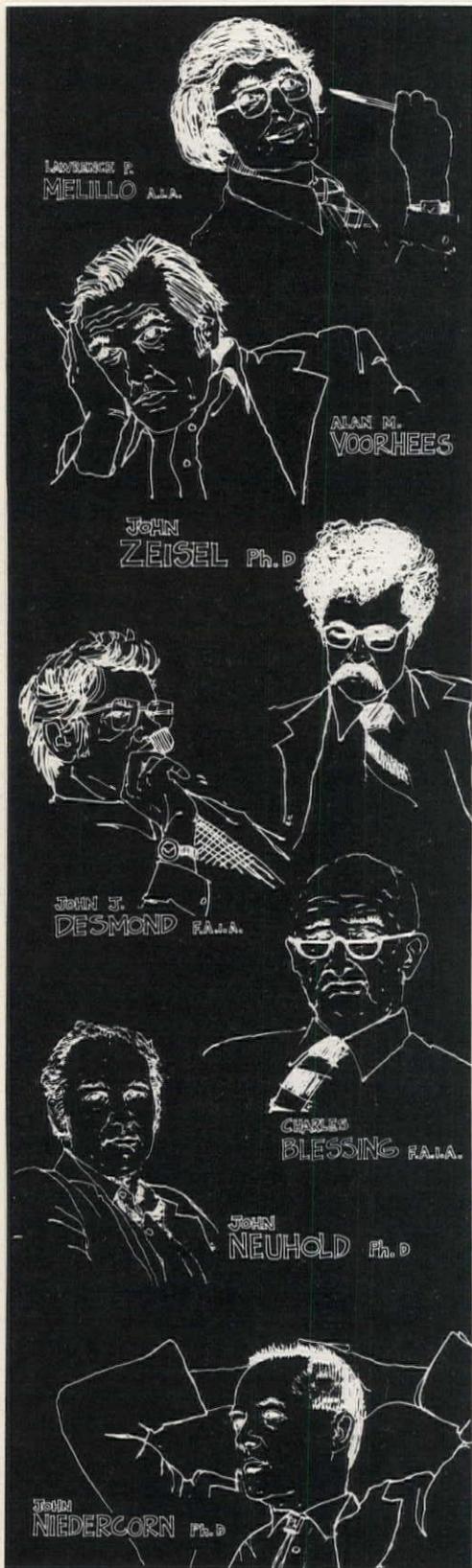
The Central Avenue spine would be bisected by the Rio Salado lake system and would end at a new "node," perhaps a sports center, when it reached the presently neglected South Phoenix area.

Largest of the team's specific proposals for the core was for a rapid transit system, starting with service along the Central Avenue spine and subsequently extending to other parts of the city and suburbs and to Sky Harbor International Airport.

The transit system eventually could reach some 230 miles. Transportation consultant Voorhees felt that such a system would be justified by the time Phoenix reached its projected 1990 population of two million. The extension of the system to its full length would be phased according to the pace and direction of growth.



## The team left behind a “plan for planning” — and for the implementation of plans.



Obviously no RUDAT can produce a finished plan in a few days, especially not on the scale of an entire metropolitan area. The Phoenix team took special pains to emphasize the point and to make clear that all they could do was identify and call attention to planning and urban design issues and leave behind a “plan for planning when their visit ended.”

The real work of shaping the future of Phoenix remains for local planners, architects, public officials and citizens. In its report, however, the team went beyond physical proposals to suggest a strategy for their implementation and a structure in which local planning could become more effective.

The structure would be hierarchical, with 20 to 30 planning groups at the local community level operating within a framework of a strengthened regional planning and development authority.

The team would lodge this authority in the Maricopa Association of Governments, which it says should have “not only the power to plan but also to influence the implementation of the plan, much as an architect would supervise the construction of his building.”

Specifically, the team proposed that the association have the power to prevent extension of water and sewer systems to areas where growth would be prohibited under the plan, and also to prevent the drilling of wells or development of special water systems in such areas. The team acknowledges that this “will probably call for special state legislation.”

While emphasizing more regional control, the team also places great stress upon a strong citizen role in the planning process. It proposes that the process be based on “a comprehensive feedback system between local citizens, professional advisory staff” and the association of governments.

“Changes in attitudes, values and personal goals of local residents must be determined from both social and behavioral survey research and from community participation in decision making through local meetings and representation integrally linked with the political system,” the team says. It notes that Arizona State University already is developing resources for the needed research.

Local and regional planning professionals, it says, “should evaluate alternative conceptions and plans in terms of criteria based citizens needs and selected by the citizens.” Planning decisions “should reflect the opinions and attitudes of the citizens and political leaders and not the professionals.”

Perhaps the greatest impact of a RUDAT is on public opinion and thus on the political possibilities for effective planning. By this measure the Phoenix exercise was an unusually productive one.

The team’s activities and report were generously and approvingly covered by the local news media (the full text of the report, with illustrations, was carried in a special section of the *Arizona Republic*).

And just after the team’s visit, Phoenix Mayor Timothy Barrow directed the city planning commission to study alternative growth patterns for the metropolitan area, with full participation of local citizens’ groups, and report to the city council by June 1975.

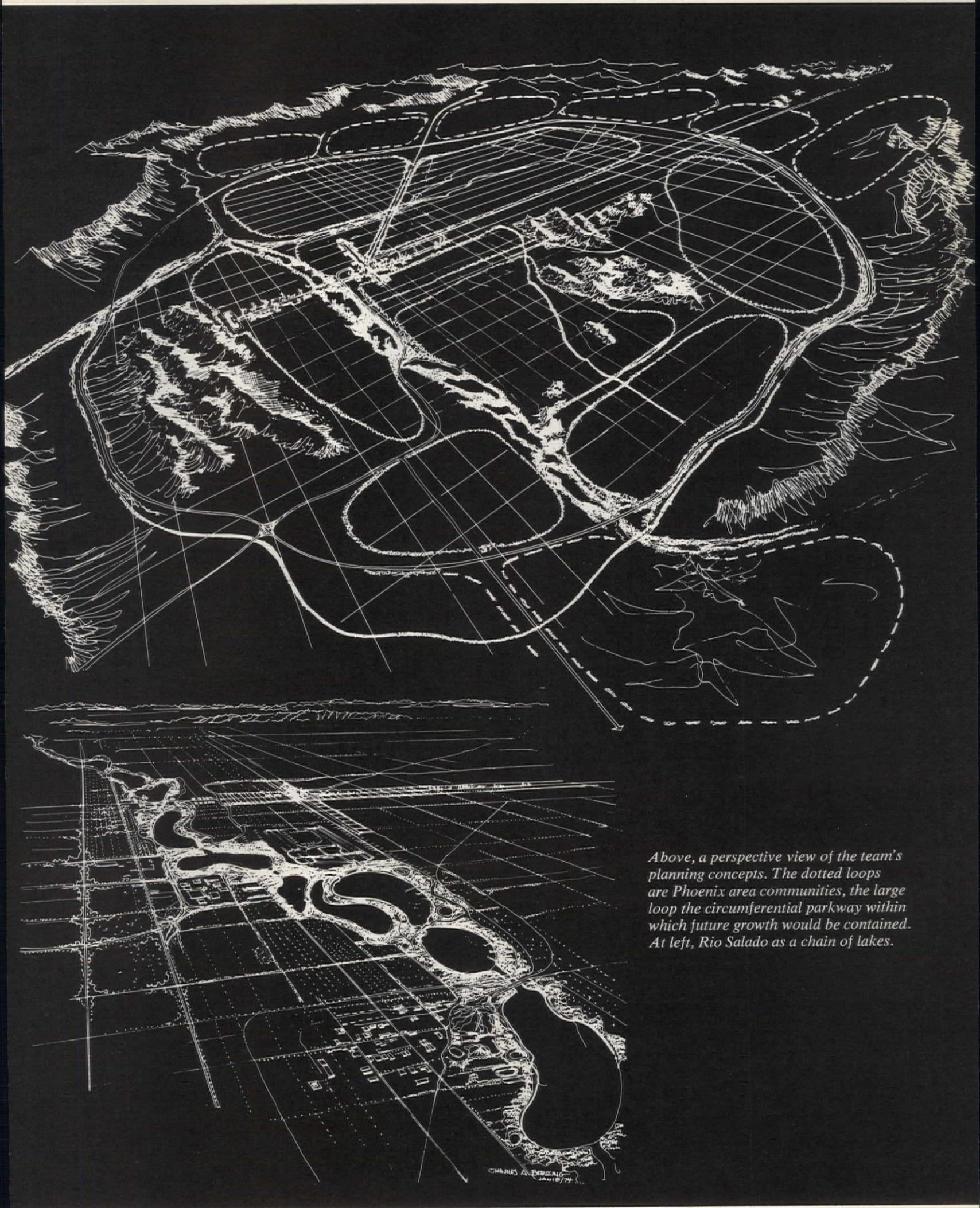
“We must realize that either we’re going to grow into a city or continue the limitless sprawl,” the mayor said. “We must design a city that is self-contained, with recreational and cultural facilities.”

Specific planning of some of these facilities also took a step forward just after the team’s visit. Public hearings were completed on the first phase of the Rio Salado project which would turn a 40-mile stretch of the river into 20,000 acres of parks, lakes, recreation areas and planned developments.

In its report, the team offers this measuring stick for the evaluation of such plans for the Phoenix area’s future:

“When all the data is in on what exists, on change, on alternatives, on the trade-offs between social, economic and ecological impacts, on the institutional changes required to make these plans work—when all this data is in we must step back, we must ask ourselves for each plan that is proposed and for each part of each plan, what will be the benefits that residents will receive and the costs which residents must pay in quality of life.

“We must ask how each plan meets the needs and desires of the residents of the area and the communities within it.” □



*Above, a perspective view of the team's planning concepts. The dotted loops are Phoenix area communities, the large loop the circumferential parkway within which future growth would be contained. At left, Rio Salado as a chain of lakes.*



# A St. Paul Landmark Saved by a Bill

The Old Federal Courts Building in St. Paul, Minnesota, won't succumb to the wrecker's ball, as was feared by many citizens when federal offices and courts moved out in 1968 to new facilities nearby. Thanks to the 1972 Amendment to the Surplus Property Act of 1944, which enables the General Services Administration to transfer surplus federal property of historic and architectural merit without charge to nonprofit groups for cultural uses, the old landmark now has new life.

The City of St. Paul gave a symbolic dollar to GSA in October '72 for title to the building. It was the first building to be so transferred under the new legislation. The city turned the building over to the St. Paul Council of Arts and Sciences, which has been busily raising funds for its restoration.

A report from the design firm of Dober & Associates, engaged by the council to study the feasibility of the building's reuse, concluded: "The building can be restored to a long and useful life, at a reasonable cost, without either changing its intrinsic character or causing undue operating burden." The council will use the building for its headquarters and will make it into an urban "people place" for the arts with galleries, theater and concert facilities, meeting rooms, restaurants and related shops.

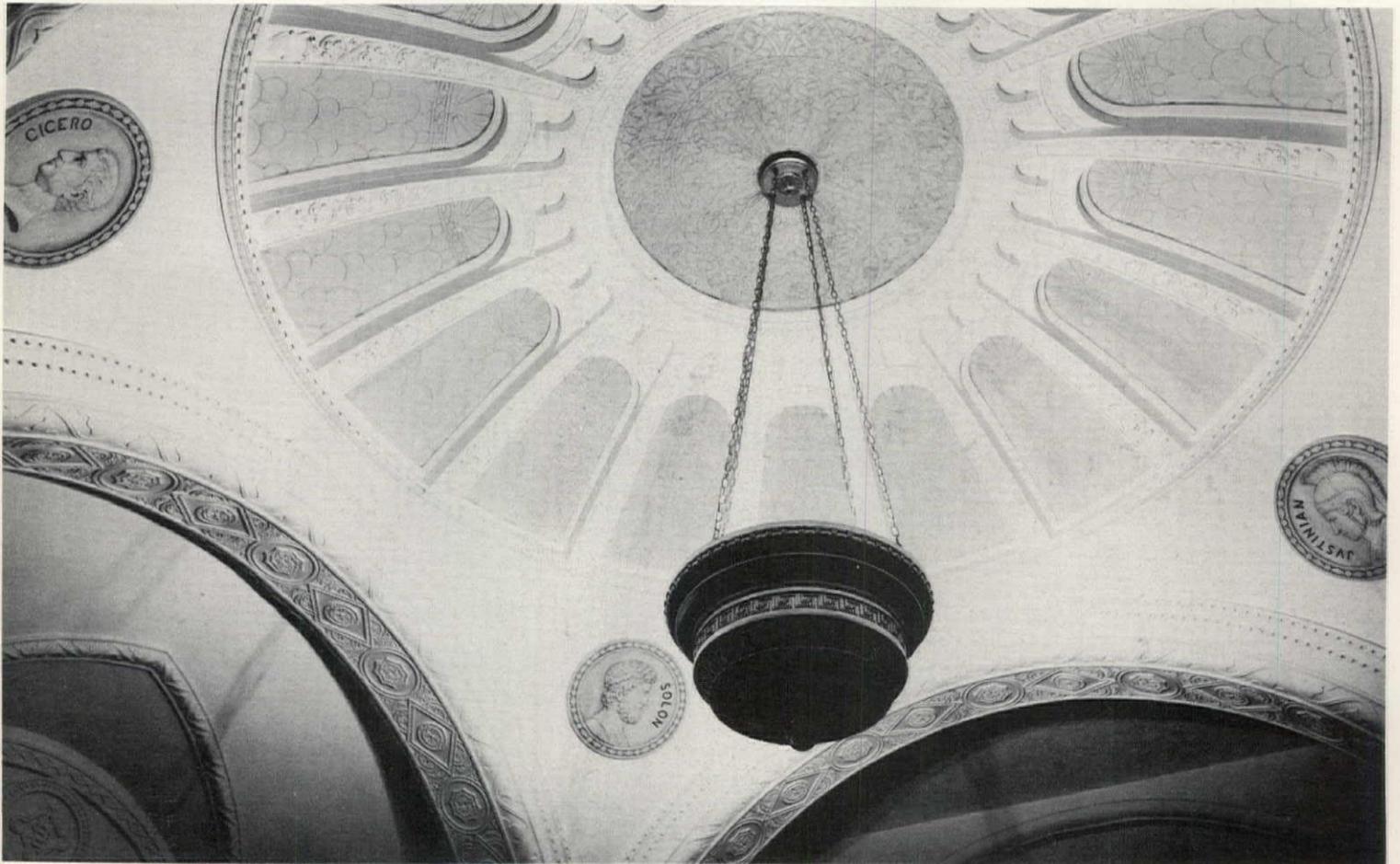
Designed by Supervising Architect of the U.S. Treasury Willoughby J. Edbrooke in the Romanesque Revival style to grace adjacent Rice Park, the Old Federal Courts Building was erected between 1892 and 1901 for about \$2.5 million.

The five-story structure, with its pink granite towers, turrets and gables, stands in dramatic contrast to more modern buildings in downtown St. Paul, where it occupies an entire block. Its arching windows; 20-foot ceilings; fireplaces and wainscoting of green, red, gray, black and white marble; hand-carved mahogany paneling and capitals; marble and ceramic floors in rich design; and open skylighted court all combine to make it a strong architectural statement of its time.

Just recently, the council appointed the Boston firm of Stahl/Bennett and Windsor/Faricy of St. Paul to restore and renovate its treasure. *Mary E. Osman*

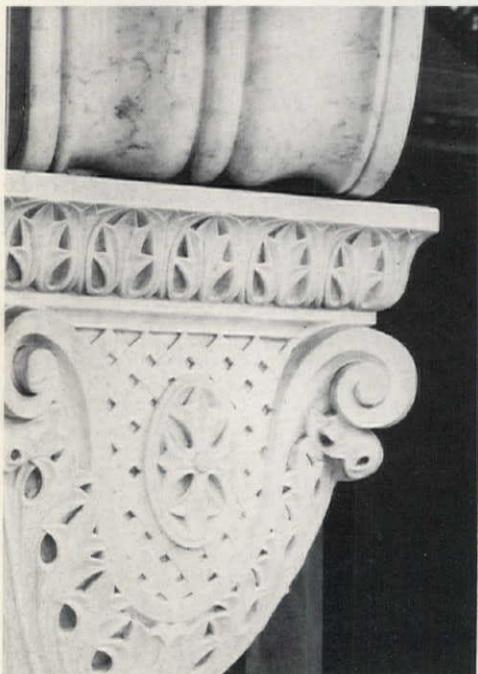


The robust exterior will require virtually no alterations and the interior only minor modifications.





The building is rich in ornate, and sometimes even playful, detail.

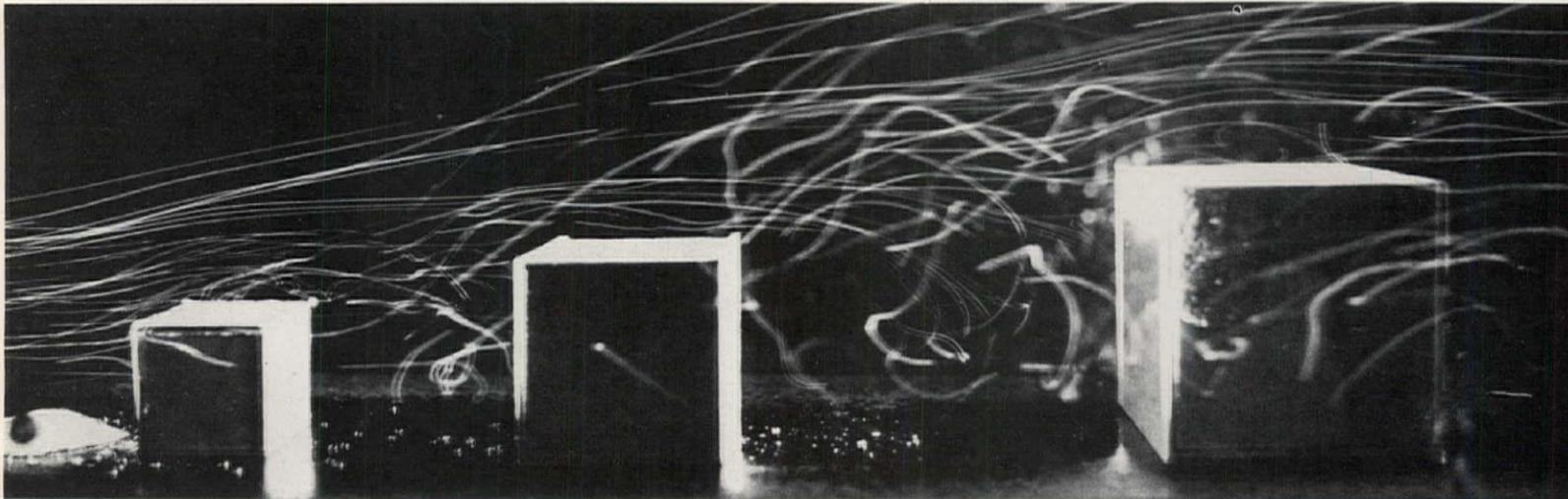




# Games That Buildings Play with Winds

Wind flow patterns created by some buildings put pedestrian comfort and safety at stake.

Ralph W. Crump



Architects are increasingly conscious of the effect of wind upon their buildings. Now new attention is being paid to the opposite phenomenon—the effect of buildings upon the behavior of wind, and thus upon the comfort and even safety of pedestrians passing through and around them.

Pedestrians may look to tall buildings, especially when clustered together, for protection against wind. But when a build-

**Mr. Crump** is assistant professor of architecture, Department of Architecture, Cornell University, Ithaca, New York.

ing rises 10 to 15 stories above its neighbors it has a dramatic and sometimes dangerous impact upon wind flow.

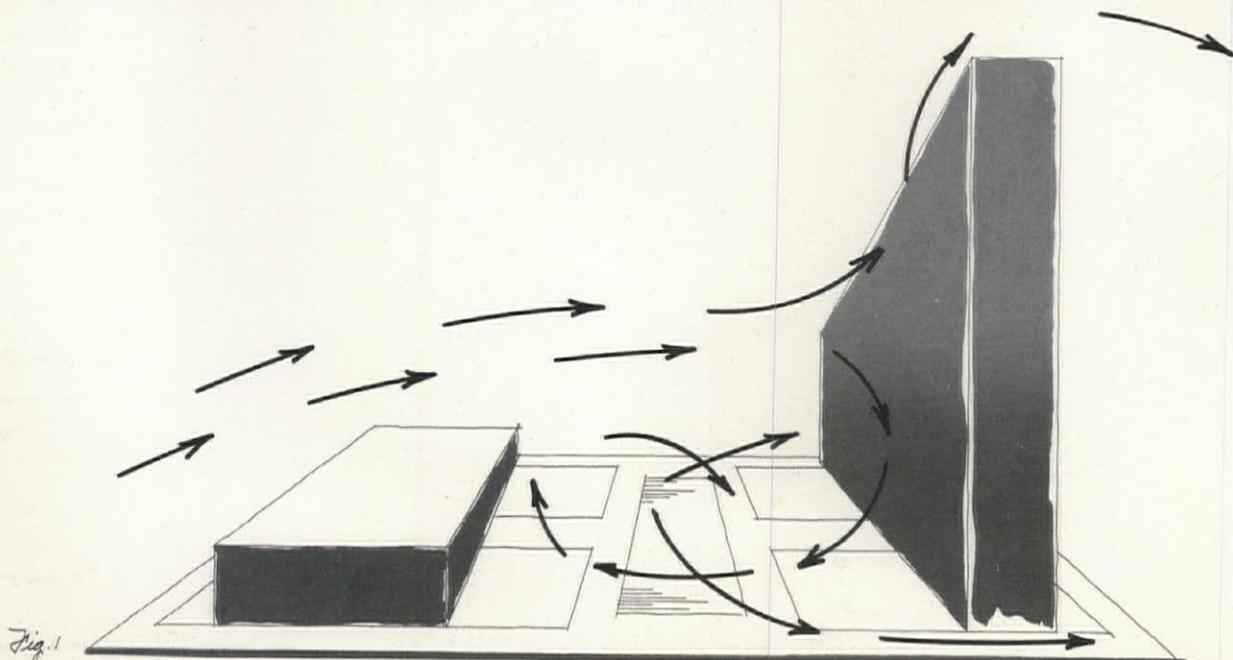
The wind divides about two-thirds up the height of the building (Figure 1). Some flows up and over the roof, but the rest blows down the facade, forming a vortex at ground level and turning around the corners. Here its speed can increase to three times that at the top of the building.

Not long ago in England, a woman walking around the corner of a 300-foot building was blown off her feet and subsequently died of a fractured skull.

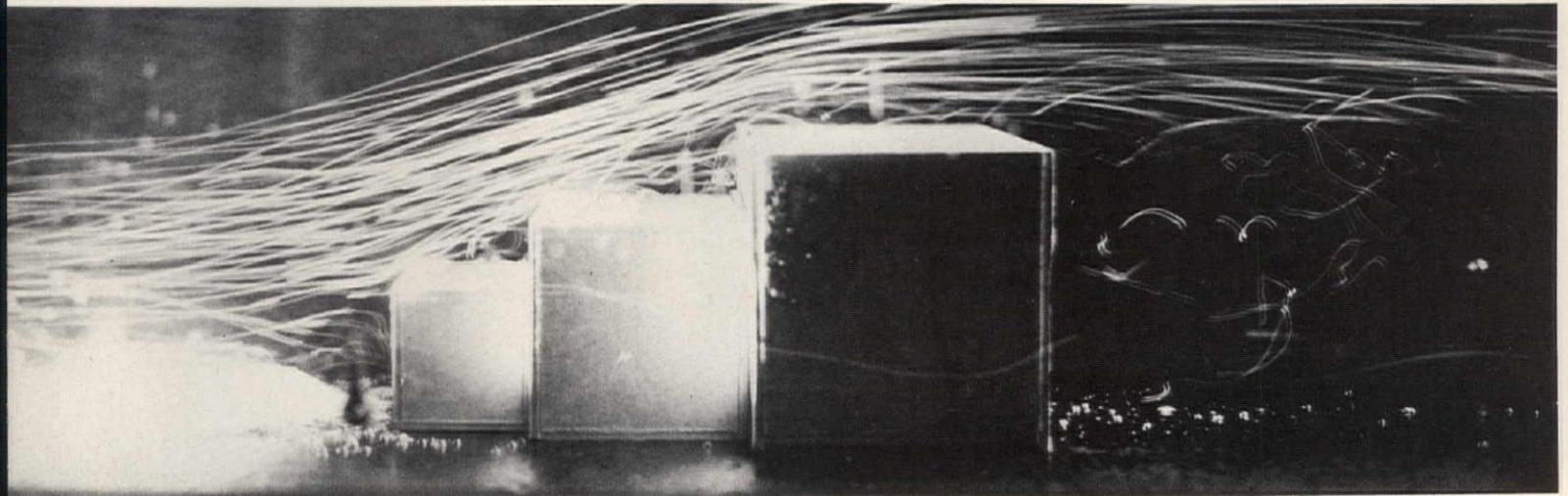
The force of the wind at the base of a tall building depends upon many factors, most of them pertaining directly to architectural design. Most critical are the height and width of the building.

Treatment of the ground level is also significant. Plazas can offer obvious hazards. And if the building is pierced at ground level by an open corridor or stands on open columns, virtual wind tunnels can be created.

The speed of winds through such openings can be greater even than on a windward plaza. This is because pressure on the downwind side is much greater than



## Testing building forms in wind tunnels provides data to replace rules of thumb about wind behavior.



to windward, and air flows from high-pressure to low-pressure areas (Figure 2).

If the building is more than double the height of its neighbors and twice as wide as it is high, wind speed through the passageway may reach three times the speed of the wind in open country. The force of wind increases with the square of wind speed. Wind gusts of 50 miles per hour can knock people over; therefore, it would take less than a 20-mile-per-hour wind to make such corridors dangerous.

Architects should also recognize the possible problems of interior ground floor areas, where doors facing high or low

pressure sides may produce violent air movements.

It is, of course, impossible to prevent generation of local winds in built-up areas. In fact, in hot weather such winds may be desirable. However, there are methods to control them. These range from changing the location of a building on its site to constructing fences adjacent to neighboring buildings.

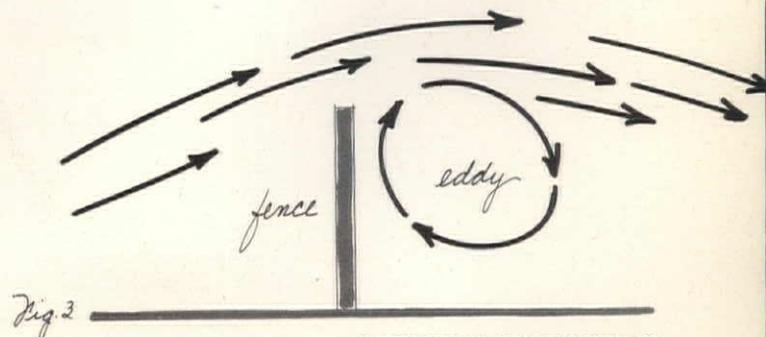
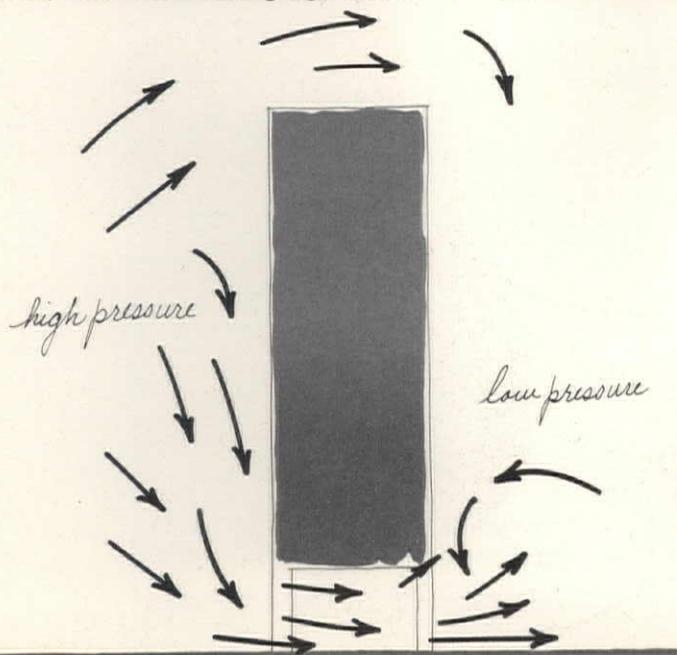
Generally, only buildings six stories or more in height and more than twice the height of surrounding buildings cause any problems. But wind speeds over 11 miles per hour become annoying; at slightly

higher speeds, dust and loose paper are blown about. In the average town such wind speeds are reached only occasionally, while around some tall buildings they prevail more than 25 percent of the time.

A wind tunnel is the best tool for obtaining data on winds around buildings. This is because the phenomenon is essentially three-dimensional and, more important, it occurs in a turbulent flow. Any unusual configuration in a structure, an alley or tunnel, a funnel shape or a court yard with openings in line or nearly so, suggest that a close study is in order.

In Haarlem, Holland, a series of wind

*The type of wind flows that may be expected around slab type buildings are shown above. The photographs belong to a series taken in the wind tunnels of the Department of Architecture, Cornell University. The tracers are helium bubbles which, due to their light weight, approximate air particles.*



## The problem can be eased through careful detailing, siting and massing of structures.

tunnel tests were made on a model of a housing development. The center of the group was programmed to contain a school and playgrounds, requiring a relatively wind-free area. The wind tunnel tests indicated that ground level winds would be intolerable in this area. The development had to be redesigned completely and tested again to make sure that the playground and school area was sheltered.

Short of redesign, rows of trees or fences can be used to control perilous or discomforting wind conditions. Trees have always been excellent windbreakers though, of course, the time factor may work against them.

A solid fence is unsatisfactory for control because the low pressure in the eddy area, resulting from the high-speed flow across the top, draws air upstream into reversed flow and forces the entire stream back into the wake (Figure 3). The wind stream in lee of the fence may actually have more force than the free stream itself.

A fence must let enough air through near the ground to prevent the eddy from forming. However, just venting a solid fence at ground level produces no significant improvement. Almost any pattern of perforated structure will keep wind velocities below 30 percent of the free

stream velocity for a distance of 11 fence-heights downstream.

In Russia's polar regions, where new towns spring up near gas deposits, nine-story buildings are placed on the outside of closed horseshoe formations. This ensures a zone adequately protected against snow drifts and provides space for schools and nurseries. Models of these developments were tested in a wind tunnel, and the results were excellent.

Buildings with through-openings on the ground level, particularly wide, shallow openings that do not cause great frictional losses to the flow, let air rush from the high pressure zone to the low. If the opening were extremely large, enough air could move through at sufficiently low velocities to balance the pressures. Aerodynamic devices may someday be tried in the opening to increase the friction.

A solution for now is to provide another opening, free of pedestrians, for the wind to go through. This might include a wide canopy or floor with a vent space above (Figure 4). A single canopy placed directly above the opening sometimes aggravates the situation. However, moving the canopy a few feet from the building (Figure 5) somewhat reduces the velocity through the openings.

Plazas in the path of strong winds are difficult to protect without a cover.

Wind speed varies with height above ground, depending on roughness of the surface. At the lower levels of the atmosphere the fractional drag of the surface modifies the air flow and produces a boundary layer in which there is a velocity gradient. The depth of this layer varies from about 1,000 feet over a level surface to about 1,800 feet over urban centers. Wind speed varies for different heights along the profiles. For instance, a 50-story building adjacent to open country or sea would be exposed to 96 percent of the mean wind-speed, compared to 70 percent were it located among tall structures.

A design guide should be used for wind environment conditions. Information on these for specific towns may be obtained from the National Climatic Center, National Oceanic & Atmospheric Administration, Federal Building, Ashville, North Carolina 28801, or from a state climatologist. Ask for records on wind directions, maximum wind speeds and, particularly, speeds of gusts of two to six second duration—these are most dangerous due to their violent and unexpected nature.

More research is underway on the implications of building geometrics and siting arrangements in relation to wind. This will bring the answers to some of our present problems—but architects must be ready to use them. □

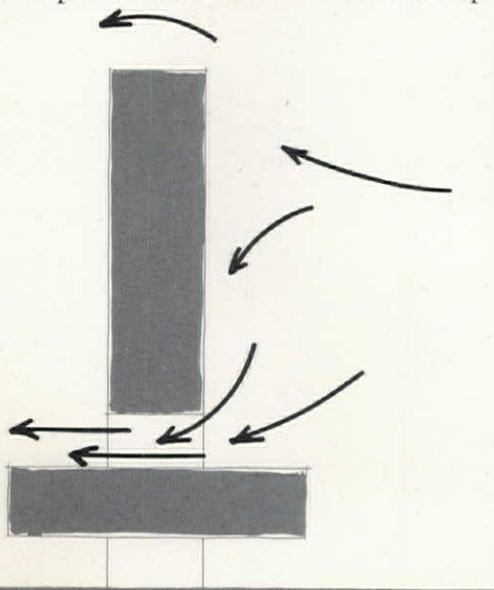


Fig. 4

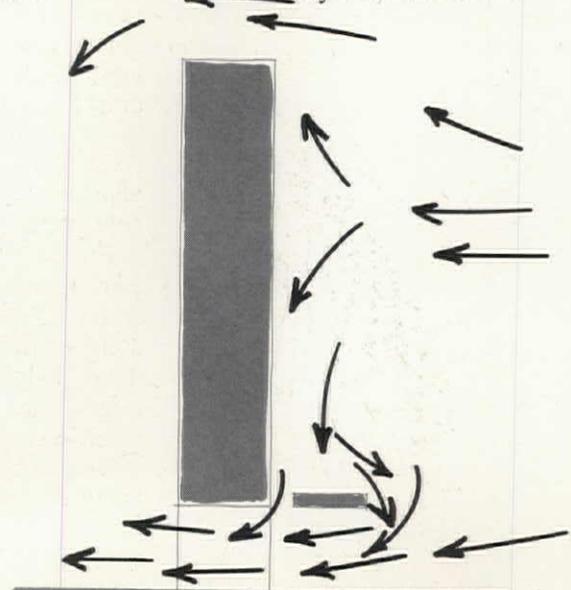


Fig. 5

# Integragraphs: An Experiment in Production

Donald E. Jarvis, FAIA

A couple of years ago we were involved in producing the most complicated set of contract documents for any building we had designed to that date. By the time we sent the set to the blueprinters—all 200 sheets of drawings and 250 pages of specifications—we were exhausted and convinced that there must be a better way.

Today, after an extensive experiment to revise the production of architectural contract documents, we have arrived at a system which we call Integragraphs, from "integrated written and graphic instructions." The method is to draw one base plan—one only—and have it photographed so we can use it over and over. We then make overlays, giving dimensions, material indications, etc. The base plan is then lithographed with one or more overlays. The result is a sharp, precise document.

The whole process depends upon photography for reproduction. This means that:

- All images must be drawn on the face of the paper.
- Images do not have to be translucent, as in ozalid printing or blueprinting.
- Paste-up marks and other blemishes, especially where they don't conflict with the drawing, can be corrected on the negatives.
- Line-photography is essentially binary—it either registers or it does not; variations of shading will not show up.
- Shading, patterns and varying intensities of the final image may be obtained by special photographic "screen" techniques.
- Reductions and enlargements are easily taken care of.
- Combinations of drawings can be accommodated by a multiple-exposure process of photography; typical sheet borders, titles, etc., can be added or altered at this stage if desired.

Large quantities of documents are economically available. In contrast to ozalid and blueprinting, lithography is a high-

**Mr. Jarvis** is a partner in the firm of Jarvis Putty Jarvis, Inc., Dallas. His booklet "Integragraphs: An Experiment in Architectural Communication," published by his firm, is available for \$4 on a first come, first served basis. The address is 2010 One Main Place, Dallas, 75250.

speed process, capable of producing vast quantities of copies. It is somewhat costly to change plates, start up presses, gain exact registry and smooth ink flow, but once the presses are running, several hundred copies are available for practically the cost of the paper. Most of our projects have been printed in quantities of 100 to 200 sets. Because of the overlays, a second color is easy to use. This increases legibility and minimizes confusion.

The size of the final product is an important early consideration. We have preferred to keep it to about 17"x22" (a multiple of 8½x11) although we have varied this slightly to fit a building's shape rather than alter scale or break the image apart.

Although this 17"x22" size does not make a reduction from the original absolutely necessary (all plans and details could be cut and matched to fit this size), we have found it convenient to draw most sheets at a scale exactly double the final document size. Plans drawn at 1/8-1/10" can be read at 1/16" if they have been prepared with the necessary care.

The Integragraphs system depends on the preparation of an architectural floor plan with a minimum of identifying marks on it, which we call a base plan. These plans are prepared on mylar because of its dimensional stability. Overlays are prepared to record each separate message—the dimensions, materials, indications, ceilings, fixtures and fittings, etc. Photographic reprints of the base plan are used by consultants as the basis for their work. As modifications are made to the base plan, new prints are circulated to all concerned.

For most large projects, architects conventionally separate mechanical or structural drawings but try to tell all architectural stories on one plan: finishes, dimensions, etc. With Integragraphs, a different organization is possible, one which results in a much clearer document.

To reach a practical organization, we analyzed a number of buildings and tried to isolate the components which make up a typical building project. We then grouped these into logical divisions or phases, which we call "chapters," each containing complete information about

**It means integrated written and graphic instructions, and speeds up the making of contract documents.**

## Practice Aids 19

that part of the project. The chapters generally follow the order of construction.

There are several advantages to chapter division, especially in using staff personnel to their highest potential. An architect can concentrate on one chapter, for instance, and study all ramifications of that portion of the building. It is even possible to match an architect's special experience and talents to his chapter: interiors, site improvements, and so on.

The Integragraphs organization also allows adequate importance to be given to various components of the building (i.e., fixtures, furnishings, ceilings). These tend to be overlooked or underdetailed in a conventional set of documents.

We have started analysis of costs of all our recent projects, breaking them down in accordance with the Integragraphs organization. We believe that this incremental method is the most effective technique available to the designing architect for cost control and estimating.

With the organization of Integragraphs, the use of fast-track follows naturally.

Of course, no one format will work efficiently for all building designs. Each design must be studied to determine its own inherent divisions. The chapter organization chosen will have a significant effect on time schedule for production as well as on priorities for detailing.

Although conventional drafting techniques allowed us to use such items as preprinted tracing paper or decals with standard notes and symbols, we have found that the Integragraphs system allows considerably greater freedom to use other aids.

The key to this freedom is that we need not keep everything translucent in order to achieve reproduction. The tracing paper (or mylar, where overlays are required) is still our basic material, but numerous items which are not transparent are stuck on the paper.

We drafted a number of items we use often—north arrows, graphic scales, keying marks, typical titles—and preprinted these on a sticky-back paper. Then we purchased a used headliner machine (our only capital expenditure for this experiment) which produces titles photographically like a glorified label-maker. The





## Any added cost of Integragraphs is offset by savings in time.

secretaries and office assistants usually operate this machine, not the architects.

Details in sketch form are often prepared on 8½ x 11 grid paper. These are frequently drawn freehand while the architect is working on the plan, elevation or section, and the detail solution is important to continued progress. The detail itself is filed and later pasted on the appropriate sheet.

We have found it possible to use details photocopied from previous projects or details from product literature which can be adapted to a current project.

On occasion we have incorporated photographs—of the site, existing conditions, equipment to be used—as part of the Integragraphs. It is especially effective to screen back a photo and then superimpose notes or drawings on it.

It has not been possible for us to compare all the costs of producing a project via Integragraphs with the traditional methods. For one thing, no two projects are exactly alike.

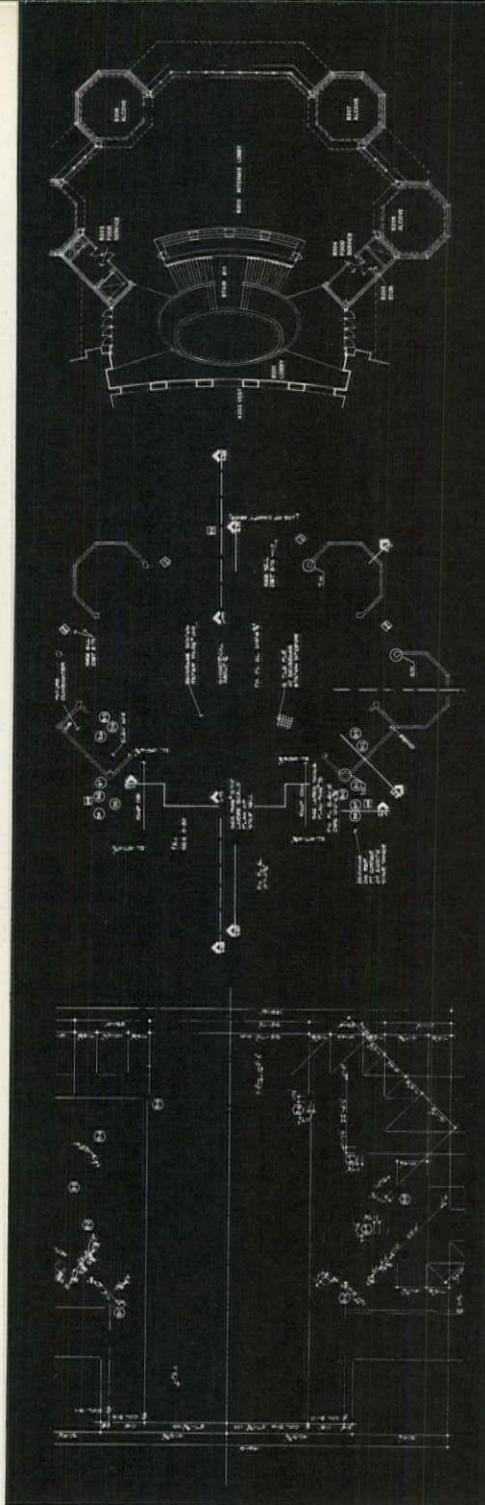
We have compared records of projects as similar as possible and find very little difference in costs of production on our second or third projects with Integragraphs (our first was a financial disaster). We assume that the efficiencies gained by the ease of drafting aids are offset by the inherent costs of producing overlays and paste-ups and the unfamiliarity of the process to members of the staff working with it for a first time.

The photographic work has been accomplished by local reproduction companies. Costs during the production of the documents have soared, but they are included in the job cost records and are generally offset by the savings in time.

We find that the actual reproduction costs of Integragraphs in quantities of 100 to 200 sets are about the same as conventional ozalid printing of 30 to 40 sets when such prints are not reduced.

Certainly there are drawbacks to the Integragraphs process. One is the cost of orienting an entire staff (and consultants) with a technology that is mostly new. On the other hand, everybody has joined in the spirit of experimentation.

Undoubtedly, the drawing of multiple overlays is unfamiliar and tedious. The



switching back and forth from sheet to sheet is a nuisance, for instance. But there are advantages: They allow the professional working on that overlay to bring his talents to bear on this one area of the building. Moreover, since they are prepared independently of the base plan, they can be printed separately in another color.

The "originals," being a hodge-podge of pasted-on items and reproduced details, are no longer works of art. To architects who have traditionally taken pride in beautiful drawings, this is an emotional hurdle to surmount—counter-balanced ultimately by pride in the final documents, the participation in an experiment, and the finished job.

Preplanning the final documents is a must, and this is more complex than preplanning a traditional set of documents. Instructions to the printers get to be voluminous.

The entire process is still complicated

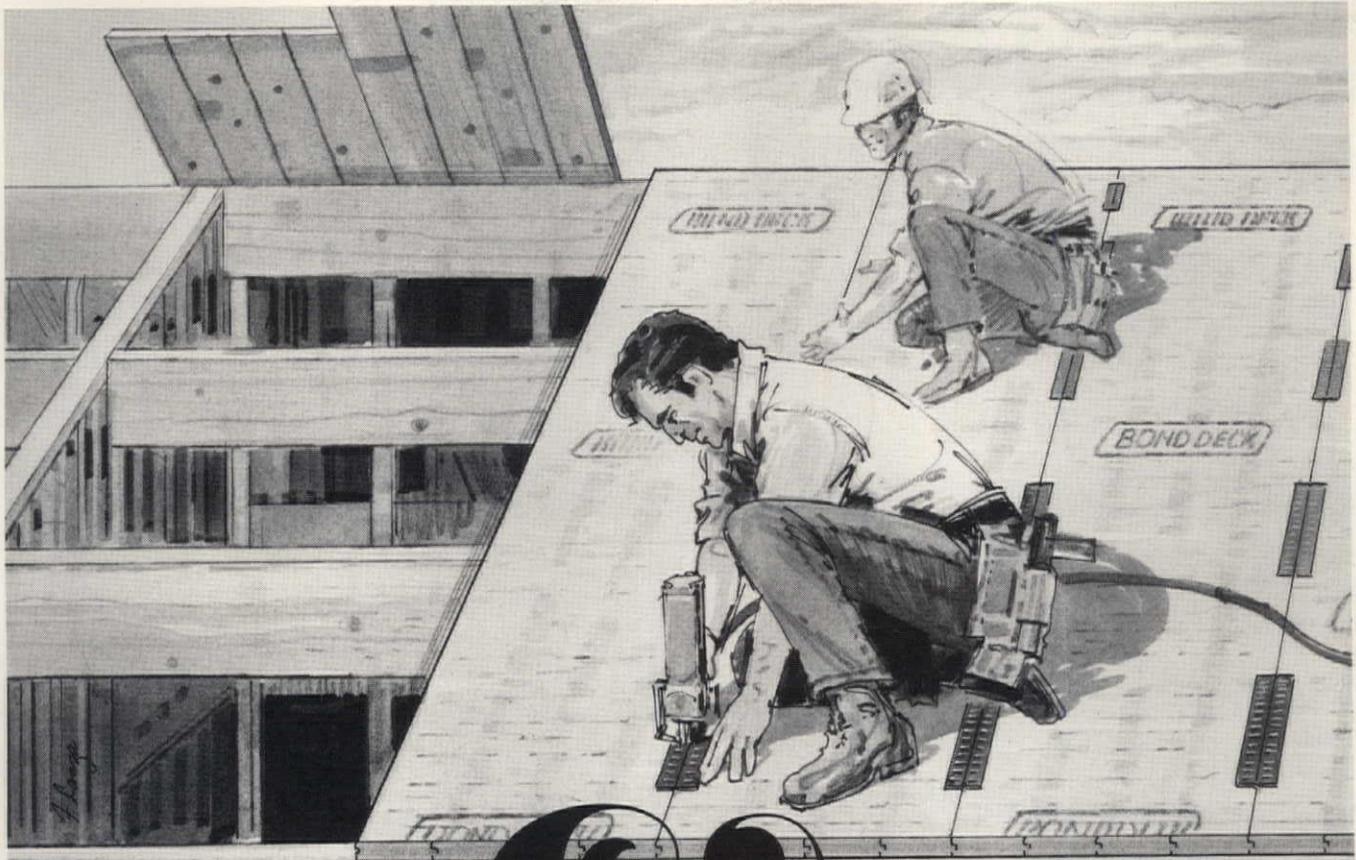
enough that we cannot justify using it on smaller projects. We do, however, use many of the skills and aids on smaller jobs, but simply reproduce them by photographing our drawings onto translucent prints, then printing them directly.

In developing the system, we have relied heavily on advice and encouragement from other professionals who have contributed significantly to our efforts. Foremost among these are C. Herbert Wheeler Jr., AIA, who has done such a great service to the profession through his management conferences at Pennsylvania State University, and Ned H. Abrams, AIA, whose work is a real pioneering effort. His enthusiastic sharing of his approach to the production of contract drawings is a real example of professionalism.

We plan to refine our techniques and work out the continuing bugs wherever we can. We hope to develop a "quick and easy" version of Integragraphs, something almost like freehand sketch plans with Magic Marker overlays, done on scratch paper, showing structural framing or duct runs. And we hope to encourage the development of new reproduction equipment, and maybe even to bypass lithography altogether. What is needed is something like a Xerox machine, capable of receiving large tracings and accomplishing reductions or enlargements. Precise registry is essential, as is the need for more than one color.

Sometimes we have to remind ourselves what our objective has been in developing Integragraphs. It is easy to be caught up in the spirit of experimentation so much that we go off on tangents. Occasionally someone attempts to complete an entire set of drawings with a minimum of lines photographed and pasted up in every conceivable way. All these are games that architects love to play, especially since such games tend to keep the system "pure."

We are convinced that the architect's work inherently involves written and graphic images. Our Integragraphs experiment attempts to recognize this fact and improve the techniques of architectural communication that are immediately available. □



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# Housing Criteria Drawn from Human Response

Theodore Liebman, J. Michael Kirkland and Anthony Pangaro

Just over two years ago, the New York State Urban Development Corporation began a process of developing qualitative standards for housing. The effort, which is continuing, is based on our belief that the architecture of housing has a direct social consequence.

Whether by intention and design, or through default, it will affect the users' behavior and perception. It is our conviction that only through a conscientious and continuous effort to ascertain human response to the built housing environment can we be informed on the relevant issues of housing design.

The state of the art of American urban housing since World War II has been a literal, if poorly executed, version of Le Corbusier's Ville Radieuse.

Corbusier and his associates had prescribed housing for the "universal man"—an international style. It was in fact a housing mandated by economic necessity and technological evolution.

It consists of repetitive floor structures whose height and spacing are disciplined by considerations of light, air and view. It assumes — and has itself helped to generate — a commonality of need and lifestyle. It makes no distinction between the needs of user groups, families versus elderly persons, for example; and it neither offers nor is informed by an understanding of socializing patterns.

This approach was devised in the 1920s, and still, long after our European colleagues have modified or abandoned it in designing housing for their relatively homogenous populations, we continue to apply it to the housing of a complex and pluralistic society.

We measure housing by quantitative standards such as dollar cost, size and density, while neglecting social and long-range economic variables.

**Mr. Liebman** is chief of architecture for the New York State Urban Development Corporation, and his co-authors are former members of his staff. **Mr. Kirkland** is now director of urban design for New York City's Office of Midtown Planning. **Mr. Pangaro** is development coordinator for the Southwest Corridor Study in Boston. Additional acknowledgement on p. 49.

Quantitative standards, which begin by suggesting minimum requirements, in fact create maximum limitations. Public assistance programs often stress minimum first cost expenditures without investigation or understanding of the life-cost implications for a development. The unresponsive products stand tall and strong but lack the qualities of home and community.

Our effort is to evolve criteria that will improve our and our architects' chances of achieving such qualities and upgrading the overall livability of the housing that UDC builds.

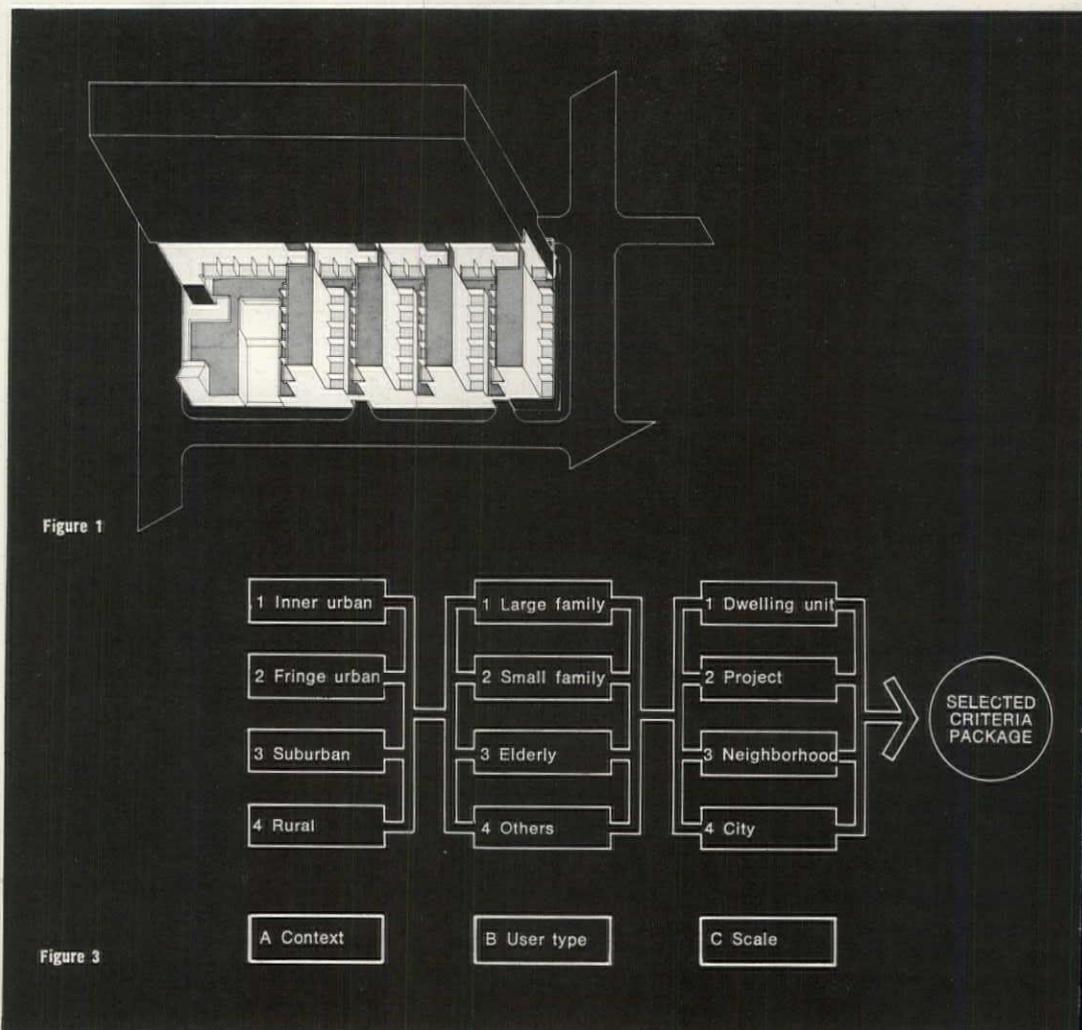
We began the effort by accumulating and synthesizing housing criteria developed in the U.S. and Europe. We also evaluated several then-current housing developments to determine the "fit" be-

tween their users' needs and the environments that the buildings provided.

One early issue that emerged was how well the buildings served special user groups such as large families and the elderly. In the case of one particular scheme, the environment provided for diverse groups of users was the same and served none well. In particular, it failed to address the social necessities of large families in terms of play space and parental supervision of children.

An alternative scheme, shown in Figure 1, was developed, placing large-family units at the building's base with those for smaller households and the elderly above. We have since sought a similar differentiation in other developments serving special client groups.

Our goal in the search for criteria is



# A state agency seeks to learn more about the social consequences of what it builds.

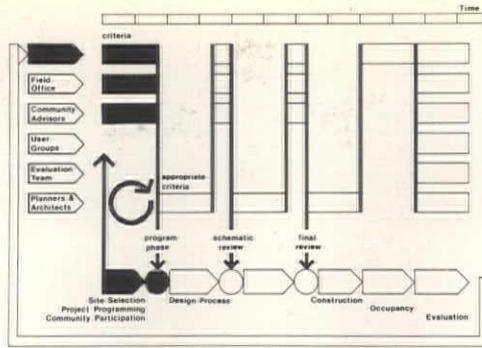


Figure 2

not to create another massive bureaucratic manual of fixed positions. Rather, through research, analysis, and demonstration we seek to establish a constantly evolving base level of information from which architects can proceed.

The specific objectives of the effort are:

1. To provide staff with information to be utilized in programming and reviewing housing schemes.
2. To create a number of explicit issues around which the discussion of housing can coalesce.
3. To prepare the way for optimal utilization of consultant resources on issues with impact and meaning.
4. To identify prototype demonstration projects for issues requiring more than ordinary attention.

The basic process in which we are en-

gaged is described in Figure 2. Site reconnaissance, general planning analysis and programming involve a task force from the UDC central office, representatives of the community and the field office (UDC has subsidiaries throughout the state).

When the site is selected and the program, schedule and criteria are established, the normal architectural design process begins. At review points, adherence to the criteria is discussed along with the more typical review for codes, light, air, etc.

The process extends beyond completion and occupancy when UDC conducts post-construction evaluations and feeds the findings back into the evolution of the basic criteria.

The formulation of criteria begins with the framework shown in Figure 3. Then

user/site/context matrices are developed — Figure 4 is an example — through which issues or characteristics are related to specific activities and thus yield the actual criteria.

The criteria are expressed in sheets such as Figure 5, which inform both the design process and the subsequent review. The "design aid" helps the architect articulate the location of other activity to the issue involved. Several sections of the criteria are incomplete and await input from the evaluation studies. At the larger scales we presently rely on site reconnaissance and planning analysis to help define criteria.

The most important and concrete manifestations of our analysis to date are embodied in the Low-Rise High Density housing prototype (LRHD). Since

context: INNER URBAN											
user group: LARGE FAMILY											
scale: DWELLING UNIT											
	a Entry/exit	b Private outdoor	c Food preparation	d Eating	e General living active	f General living inactive	g Sleeping	h Dressing	i Hygiene and personal care	j Maintenance	
1 Accessibility											
2 Accommodation furnishings											
3 Adaptability											
4 Orientation											
5 Environmental control											
6 Privacy											
7 Community											
8 Security											
9 Safety											
(Psychological impact)											
(Esthetics)											
(Economy)											

Figure 4

context: INNER URBAN
user group: LARGE FAMILY
scale: DWELLING UNIT

### Issue:

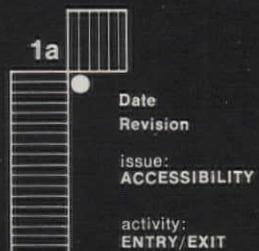
The accessibility of entry/exit to other areas is complicated by the fact that entry/exit is an important physical and social interface. Not only must functional requirements be adhered to, but also consideration must be given to weather and control.

### Activity:

- Entering house wearing overclothes
- Carrying groceries
- Children to play in private outdoor
- Coming in from play
- Stranger knocks, guests arrive,
- Children return from school
- Etc.

### Criteria:

- Should be able to store clothes and boots quickly and without tracking up floor
- Should be close to kitchen and/or pantry to unpack groceries
- If only one exit, should be close to private outdoor. If several, at least one close
- Should be close to toilet and basin
- Should be close to control point
- Should be far from sleeping/dressing



### Design Aid:

Entry/exit

- Circulation
- Private out
- Food preparation
- Eating
- Living active
- Living inactive
- Sleep/dress
- Hygiene
- Maintenance

close  
far  
neutral

Figure 5

# A prototype low-rise high-density project designed to fit user needs and behavior

our intention is to develop a method and priority for a kind of "social literacy" in the design of housing, highness or lowness per se was not the issue in development of the prototype. Rather, it was predicated upon user needs and tenant behavior.

Out of our earlier work, we distilled seven essential qualities of housing (whatever its size or style) which became the organizing issues around which criteria for the prototype were developed. The issues and criteria are shown in Figure 6 in comparison to the characteristics of present "state of the art" highrise housing.

The four main elements of the prototype are shown in Figure 7. They are the street unit and mews unit, each with different qualities and contexts, the mews as a special kind of open space (different

from the street) and the public stoop in relation to inset parking. Figure 8 is a view within the mews, looking past the stoops toward the rear of the street units and the pass-through to the street, and Figure 9 the view from the street. The units here maintain street frontage and enclosure and also provide the stoop as an outdoor space of proven popularity.

The LRHD prototype is being built and post-construction evaluation will continuously monitor its success with respect to its explicitly stated intentions. The results will be used to amend our criteria and inform our housing dialogue.

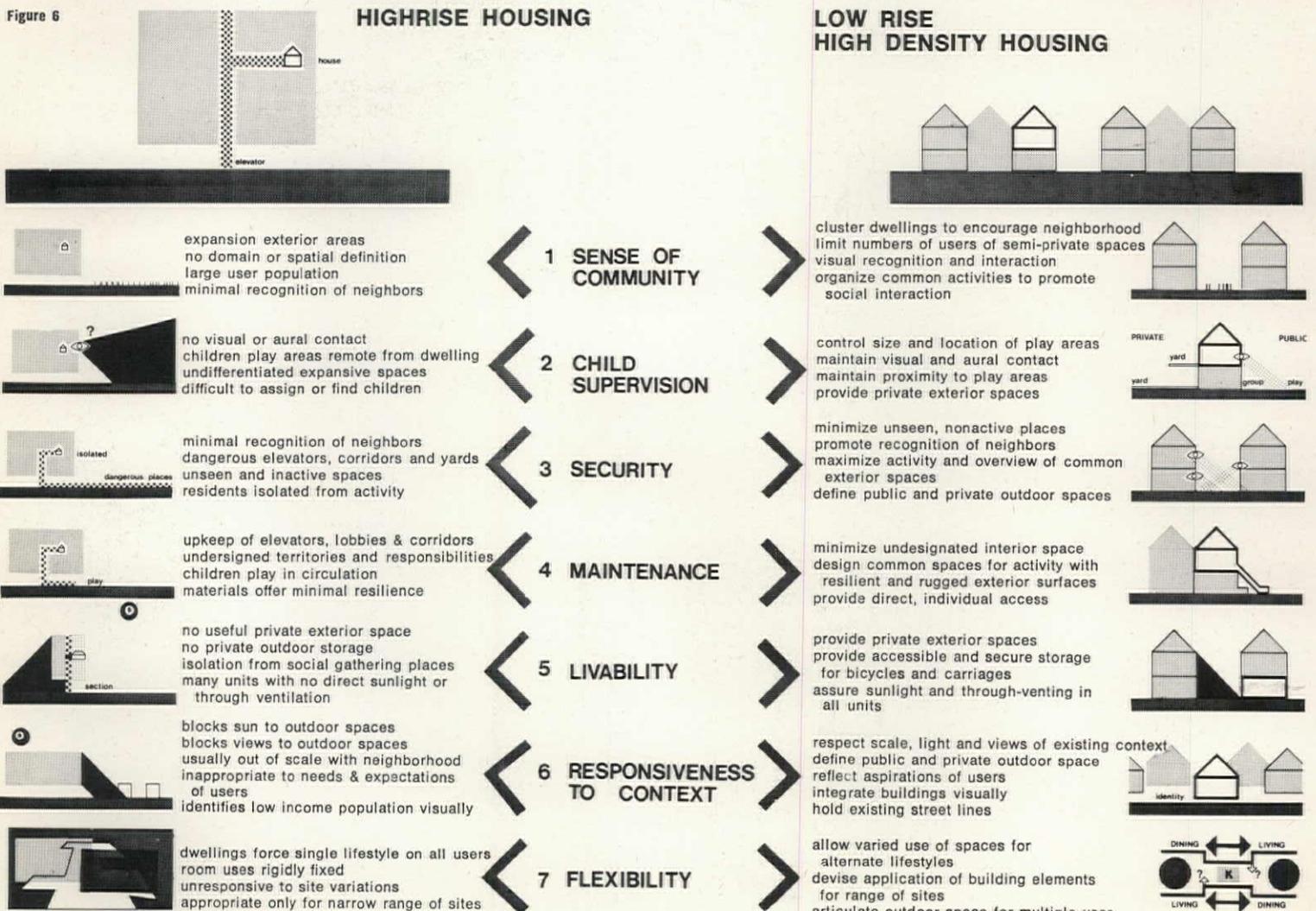
In order to improve our understanding of the cyclical process of analyze-design-build-evaluate, all of our staff members are invited to live in one of our housing

developments for one or two weeks and respond to questionnaires about their experiences. Aside from providing valuable feedback, there seems to have developed a better understanding of housing issues at all levels among our architectural staff.

As need is identified or generated through housing work, or suggested by research, we are pursuing other areas of investigation. These have included a special security study and prototypes of housing for the elderly and an urban day care center. The latter has been adopted by consultant architects and is under construction. It too will be put through a process of postconstruction evaluation.

As a group interested in housing research, we are paradoxically situated. We

Figure 6



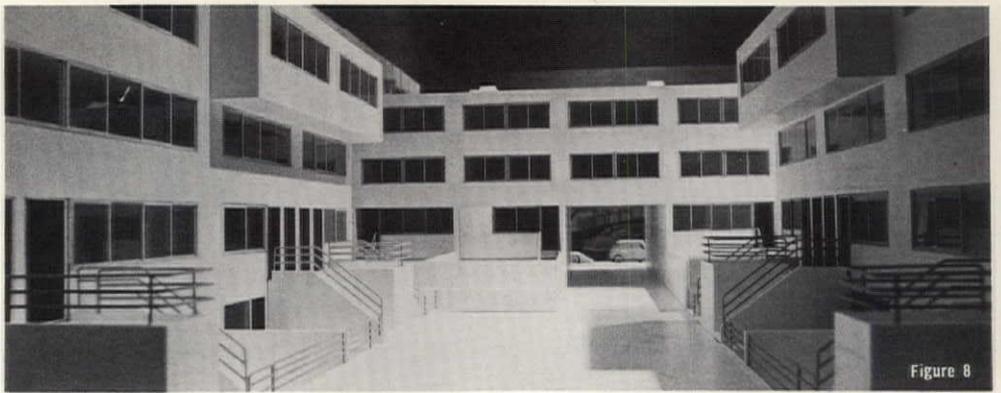


Figure 8

are charged with responsibility for the continuous production of housing, a task which requires daily attention. At the same time it is a uniquely advantageous position from which to build and test evolving concepts about the housing environment.

In our view, the first task is to determine and then insist upon the set of amenities appropriate to a particular living group in a particular contextual situation.

Translated into usable criteria, this process aids in directing the architect away from solutions generated solely by the pressures of land economics, in a context of minimum standards and maximum saturation, toward better satisfying the real needs of housing consumers. □

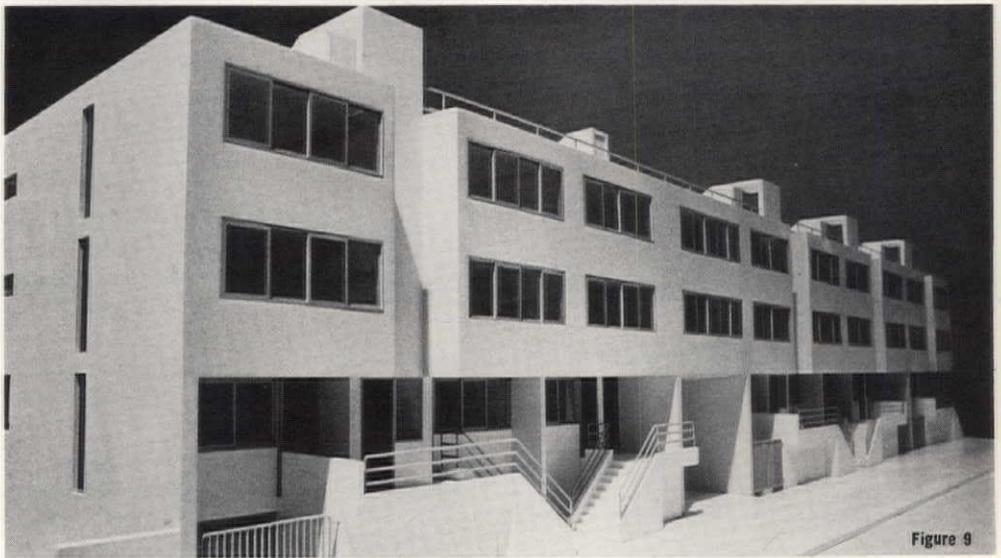


Figure 9

**SMALLER UNITS**  
HARD EDGE TO STREET  
LIVING SPACES VIEW STREET

**LARGE FAMILY UNITS**  
ADJACENT TO PLAY AREA  
WITH ADULT SITTING PORCH  
PRIVATE ACCESS

**PROVIDE SPACE FOR LIMITED NUMBERS OF RESIDENTS TO PROMOTE RECOGNITION**

**ACCUMULATE OVERVIEW AND ACTIVITIES AT ENTRY FOR SECURITY**

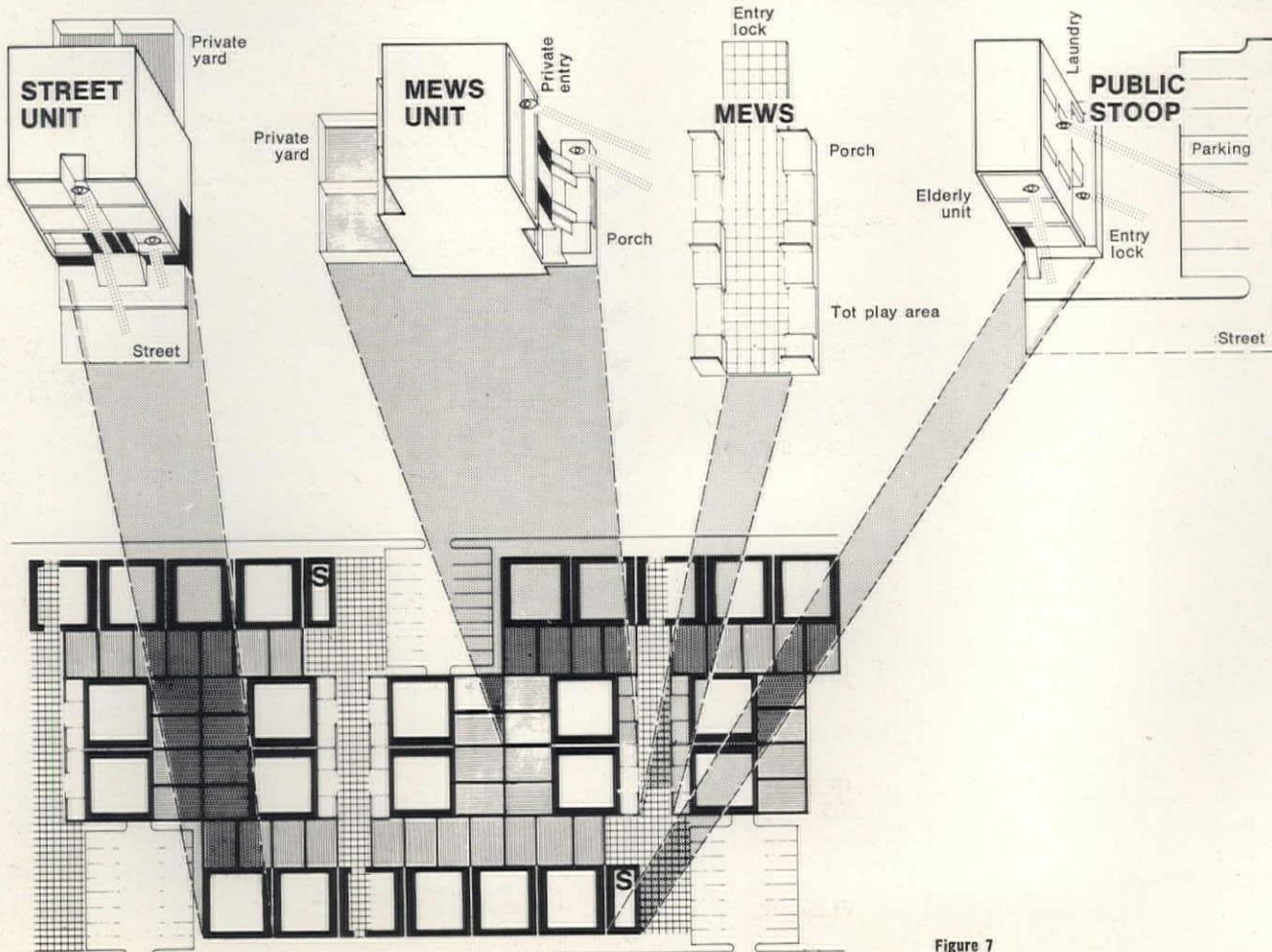


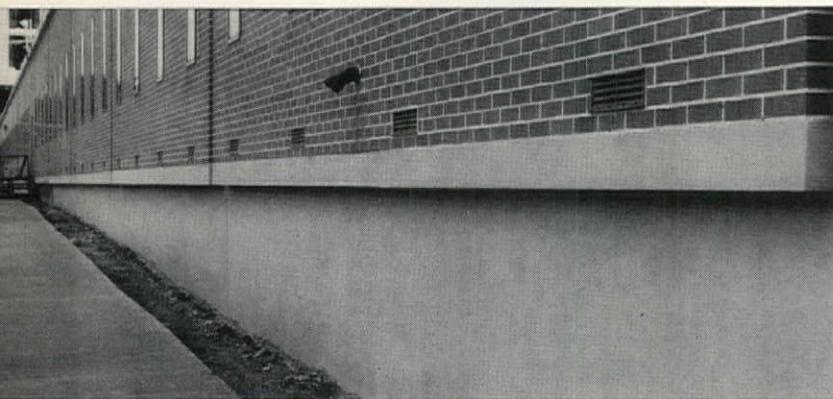
Figure 7



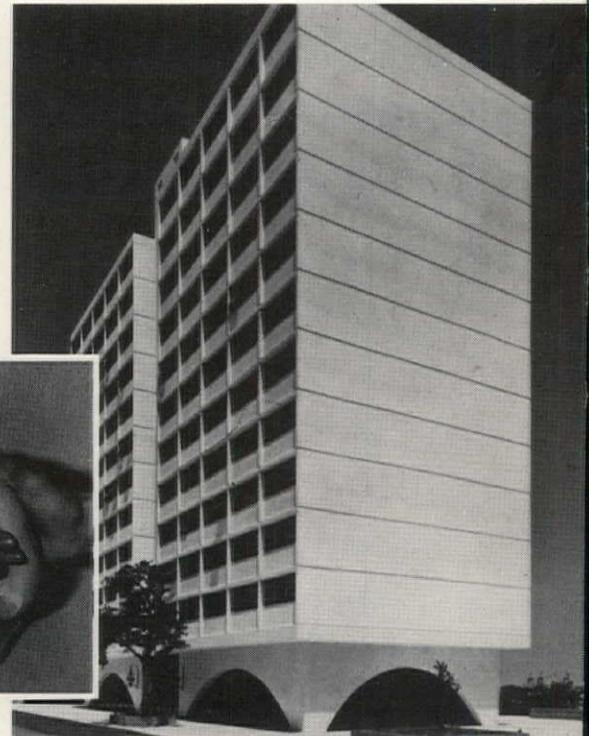
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# Precedent-Setting Swap in Vermont

A small town uses the concept of development rights transfer to build itself a new core.

Leonard U. Wilson

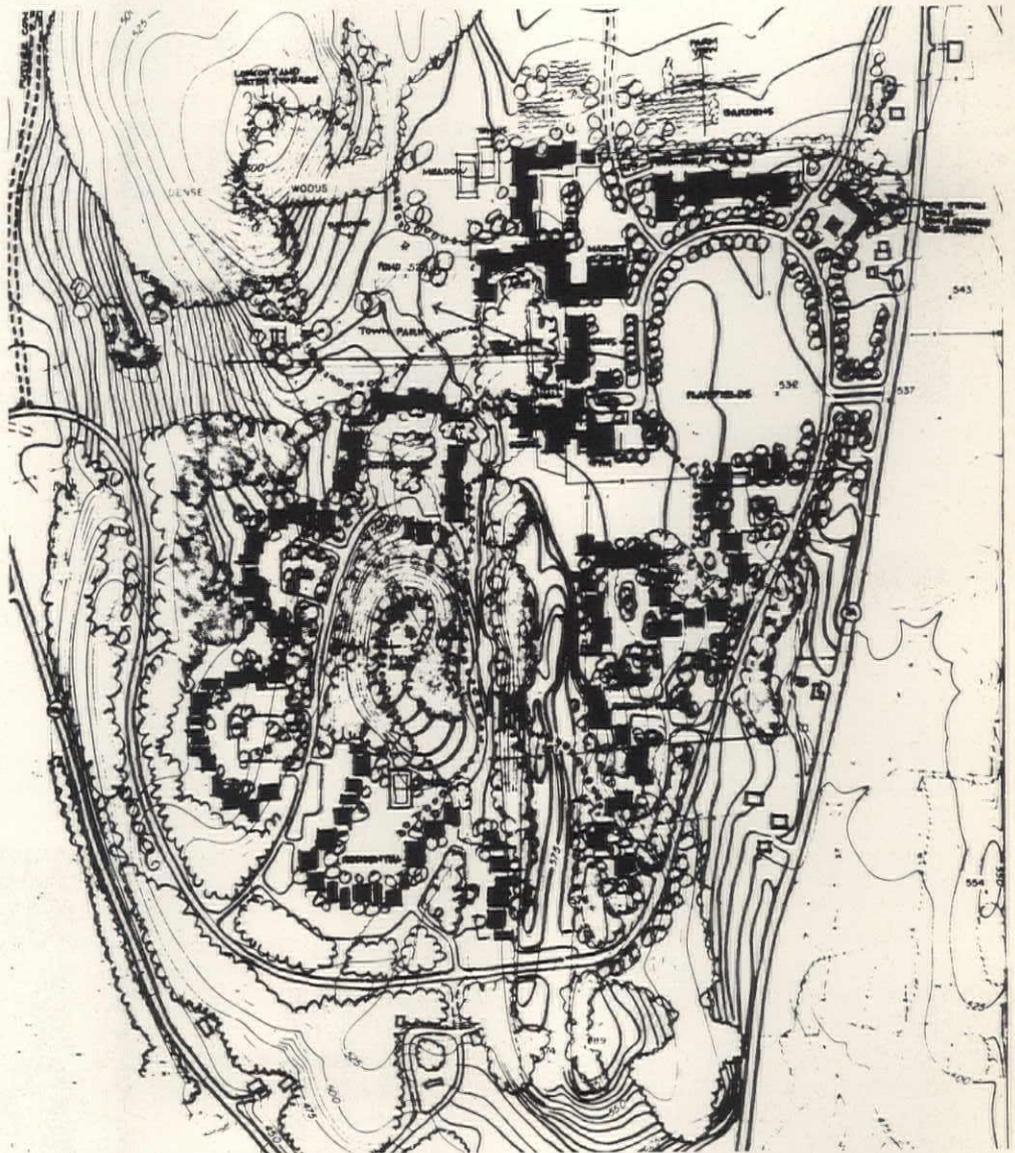
Vermont expects a continued steady increase in seasonal and residential development with its accompanying demands for space and facilities. The challenge is to accommodate this growth in new development that is compatible with the environmental quality, the existing landscape and the settlement characteristics of the state. There is limited space suitable for intensive residential, commercial, industrial and recreational uses, and planning and control are therefore essential. Vermont is discovering that the legal and planning techniques needed to properly manage the tempo and pattern of settlement are yet to be developed.

The town of St. George is undertaking an innovative community design that may provide some clues to the components of growth control policy. St. George is 2,304 acres of Vermont geography. It's a town without a school, post office, town hall, gas station or store. St. George, however, is on the outer fringe of the rapidly sprawling Burlington urban area and has been subject to growth pressures that have threatened a total conversion of the town from rural to low-grade suburbia.

Located 10 miles southeast of Burlington, the state's largest and most prosperous city, St. George is in the path of spillover. Expansion in Burlington and its eight satellite towns with a population of over 87,500 has been haphazard with congested suburban shopping centers, waffle-styled subdivisions and choked thoroughways. St. George has begun to experience this urban impact, and its population jumped from 108 in 1960 to 477 in 1970.

The people of St. George decided to welcome and plan for orderly growth. They have adopted the objective of balanced social and economic development through a new community concept. In May 1970 the people voted to buy 48 acres of land on which a town center could be built, and the state's architects and planners were invited to enter a competition for the design of a new com-

**Mr. Wilson**, former Vermont planning director, is senior planning associate with the architectural firm of Robert Burley Associates in Waitsfield, Vermont.



munity. Robert Burley Associates of Waitsfield submitted the winning scheme. The concept was subsequently incorporated in a revision of the official town plan and thus becomes the basis for detailed planning and preparation for development. The town has adopted a plan that creates a compact village where expected further growth will be focused. The fulcrum of the plan is a parcel of land which the town has purchased in the area where it has been determined that growth will concentrate. This parcel will become the center of a projected village with commercial, public, residential and, perhaps, industrial elements.

The town will use the leverage of the control of this land to persuade developers to participate in the community project on the town's terms. To achieve the objective of concentrating settlement and preserving the rural character of most of the rest of St. George, the town may oblige a developer to transfer to the town development rights purchased from owners outside the project area in exchange for the opportunity to develop in the core village area. For example, a developer wishing to construct 20 units of housing in the village area would have to purchase 20 acres of land zoned at one family to the acre elsewhere in St. George and transfer his ac-



quired right of 20 units of housing to the project area. The 20 acres from which the rights were transferred will remain open land in perpetuity or until the town releases it to meet future needs. The land will be taxed only at its value as undevelopable land.

St. George resident Armand Beliveau first conceived the use of development rights transfer as a means of implementing the community plan. Involved in local and regional planning, he learned by experience that the greatest hindrance to good planning and land use control in rural Vermont is the hostility of landowners who fear that zoning regulations will limit, if not eliminate, fair profits from the sale or development of land.

Beliveau sought a way of providing compensation for impaired property values at no cost to the municipality. He recognized the planning possibilities for the town if it were able to zone vast areas as agricultural or open with no complaints from landowners because they were compensated. Planning for growth and implementation could truly be accomplished to the advantage of the majority.

Beliveau's concept is based upon the separability of the *intrinsic value* of land from its *potential development value*. The latter could be established for one parcel but then transferred to another parcel. An oversimplified example of the formula is: Smith owns 100 acres of abandoned hill farm. A density of one dwelling unit on two acres has been established as reasonable and equitable. Smith, therefore, owns 50 development rights or "credits" plus 100 acres of land. The area, however, has been zoned 20-acre agricultural reserve based on growth and development policies of the town. Smith can sell up to 50 development rights and keep the land for nondevelopment uses or sell both land and credits. However, only a maximum of five development rights can be exercised on Smith's land; the other 45 must be used somewhere else in town.

A 20-acre piece of land owned by Jones is located in the village area where concentrated development is regarded as appropriate. Although it is zoned for four families to the acre, it has a development

credit value of only one unit per acre to maintain a reasonable and equitable balance among all town landowners. With only 20 credits available with the land, Jones must purchase an additional 60 to realize the full development value of his property. This, of course, creates demand for Smith's development rights and, therefore, he receives compensation for them.

A portion of the property tax is assigned to the "development rights," and a portion stays with the land (intrinsic value). Once development rights are sold or transferred the property is taxable at only its intrinsic value which is much lower. The town does not lose the total taxable value since the development rights are still taxable. Once development rights are sold from the land, the nondevelopability of the land is made part of the deed. Development rights are transferred by the same procedure as deed transfers. Development rights could be sold by Smith as he saw fit.

The town, therefore, can direct development according to town growth policies in the town plan. The region could also direct development between towns according to a regional plan. The state might also use this concept to distribute growth throughout the state, if so desired.

The number of development rights may be limited to fit a growth time of five years. Rights could accumulate at an annual rate as a means of fixing future growth rate or the number of development rights could be reassessed every five years with increases proportioned out to original holders of development rights.

A simplified form of the Beliveau concept has been adopted as the basic land strategy in the St. George project. The number of development rights assigned to each property equals the number of houses that could be built on the property under present zoning. That is to say, 20 acres in a zone which requires two acres for a dwelling unit would have 10 rights available for transfer to the development area.

Further implementation of the transfer concept is contemplated when the actual building of the new community begins. The planners intend to propose a rezoning of the town to greatly reduce densities with the provision that the present number of development rights remain with each

property. Property owners will be further restricted in the intensity of use of their land but will be compensated by the sale of their unusable rights.

Under this scheme the economic and environmental advantages of concentrated development and open space preservation can be achieved within the framework of established community growth and location objectives. Moreover, the concept of the transfer of development rights points the way to the resolution of the problem of compensating landowners for property rights otherwise impaired by control.

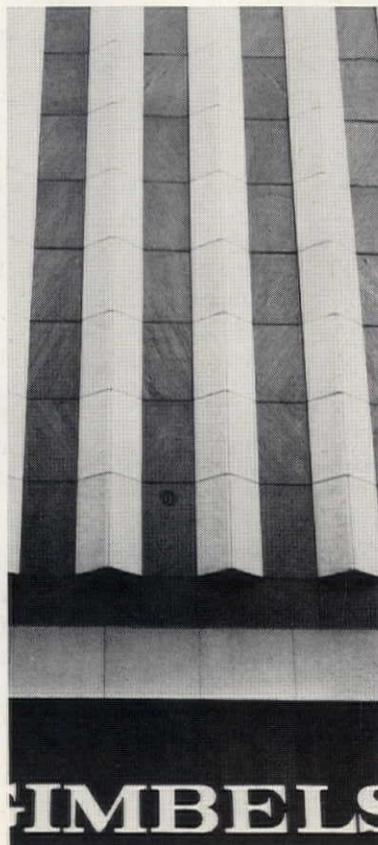
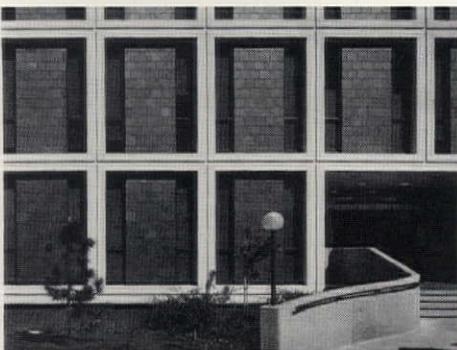
With the help of grants from the State of Vermont and the New England Regional Commission, the St. George community development project is moving forward. Negotiations are underway, and private developers are indicating an interest in participation. The physical program and plan for the project were developed by the Burley firm, which has been retained as project consultant.

Taken a couple of steps further than in St. George, the concept could become the basis of a zoning system that rewarded all landowners equitably whether or not



their land was designated for development. Lawyers who have looked at the concept see no fundamental legal impediments but acknowledge that a substantial amount of complex legal analysis would have to be done before the system could be made operational on a large scale. □

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**New Dimensions in Shopping Centers and Stores.** Louis G. Redstone, FAIA. New York: McGraw-Hill, 1973. 312 pp. \$16, AIA members; \$18.95 nonmembers.

If we were to select a building type that could be called unique to our times, my vote would have to go to the regional suburban shopping center. Although shopping centers per se are traceable to the ancient concept of cities, regional centers are based on a technology that is new to our time: the automobile age. The regional shopping center made its debut in the post-World War II era and has mushroomed into one of the most important influences on this generation's method of doing business and on our general mode of living.

Even with this impact on our lives, no one until Louis Redstone had taken the task of dissecting, analyzing and reporting on this architectural phenomenon, not in a philosophical but in a technical approach.

There has been change from the hit-and-miss methods first used by developers to a scientific, analytical approach to the decision-making process of planning, designing and building shopping centers. This book is a reference source for architects and developers who are building, or hoping to build, new regional shopping centers. It serves as a primer on the basic considerations that go into the decision-making process: site acquisition, marketing, traffic studies, leasing, financing, insurance, as well as the design and construction processes necessary to a successful project. Examples are given to illustrate the use of the design criteria.

By far the most interesting part of the book are the examples of new and, for the most part, beautifully executed shopping centers. The illustrations include both American and foreign shopping centers, presenting plans and photographs that point up specific features of interest. Examples range from Ala Moana, Honolulu, and Galleria, Houston, to Tysons Corner, Virginia. Thirty-seven regional shopping centers in all are singled out for analysis.

Another significant aspect is the review of store interiors in both major department stores and smaller specialty shops. In



*Del Monte shopping center, Monterey, Calif.*

many cases, the interiors appear to be far superior architecture than the total project, but this may be caused by the difference in scale.

For architects currently engaged in designing shopping centers or planning to enter the market to seek this kind of commission, this book is mandatory reading. It defines the basics while also furnishing references which reinforce the design quality that must be achieved in making a successful shopping center. *Steven H. Rosenfeld, Director, AIA Professional Programs*

#### **Town Centres: Planning and Renewal.**

Imre Perényi. Budapest: Akadémiai Kiadó, 1973. 119 pp. \$12.

Given the amount of space in American newspapers and journals which is currently devoted to the multifaceted problems associated with the decay of urban cores and proposals for urban renewal, Perényi's book seems particularly timely. The author, a Hungarian town planner, introduces his thesis by pointing out that the urgency of the problem of the renewal of most town centers in Europe is due in

large part to the fact that the last great wave of reconstruction in these centers took place about 70 to 90 years ago, creating a condition where 20th century towns and cities are still trying to function with 19th century centers. In his view, these town centers are both functionally and esthetically obsolete, and the stated purpose of the book is to lay down some basic principles in regard to the planning of new town centers and the renewal of existing ones.

Architects and planners who are seriously concerned with improving the quality of the environment are likely to find Perényi's image of the city center somewhat biased or even outmoded. For example, town centers are seen as "places which accommodate administrative, sociopolitical, cultural, educational, commercial, etc., institutions on a national, environmental, city, city district or regional level. Town centers are administrative, cultural and business cores, architectural focuses, forums expressing the new meaning of a modern town, where significant buildings and architectural ensembles, complete with avenues

and parks, are situated." Within this kind of "laundry list" approach, the operational aspects of the center become extremely important, and the designer's role is limited to "composing" the various elements which make up the center. The notion that the "composition" of architectural ensembles is the designer's main concern seems straight out of the 19th century.

Perhaps this is still the way that any town planner views the city—an abstract view which focuses attention on maps and diagrams, and places great importance on functional relationships and magnitudes of growth and change. Unfortunately, this view tends to ignore the fact that the center of a town is also a series of places where people live, work, play, get born and die. To designers or planners who are concerned with the quality of city life, the problems connected with the renewal of city centers have as much or more to do with how people experience the places which make up the center as they do with how they function operationally. Nevertheless, in spite of the fact that the experimental aspects of life in the city center are mostly ignored in this book, it does provide us with a good overview in regard to how centers do or should work.

The book is divided into six sections, opening with a brief résumé of the history of urbanization and the role of town centers in the past as compared with the present. General principles are developed for the planning or renewal of different classes of town centers which are then taken up in greater detail in the last five sections. Each of these sections deals with the special problems related to different categories of town centers.

The text is supplemented with 33 diagrams, 98 schematic plans and 243 photographs. Compared with recent American examples, the book is well designed. The illustrative materials are integrated with the text in such a way that it is possible to glance directly from the text references to the plans or photographs under discussion. The photographs, gleaned from a variety of sources, vary considerably in quality, but those of eastern European centers, which are of the greatest interest, are generally excellent.

The book is addressed to the general public rather than to architects or town planners, and anyone hoping to gain a more detailed understanding of the fine-grain problems related to the design of town centers will be disappointed. Over 50 towns and cities are included as case studies, many of which have been covered extensively elsewhere. The treatment of any one of them is cursory at best. Tokyo, the world's largest city, is allotted less than two pages.

In spite of this, two aspects of Perényi's presentation make it worthwhile for any-

one interested in urban design to hear him out. First, his book provides American readers with a good opportunity to review the kind of planning principles which are currently in operation behind the iron curtain from someone who is actively engaged in developing and implementing these principles. Second, in spite of the rather superficial treatment of even the smaller centers, the decision to include a large number of examples from many parts of the world should aid even professionals in making better distinctions between "universal" or strictly "local" problems and solutions.

For the American reader, the most interesting section of the book is likely to be the last chapter which is devoted to a discussion of town centers in Hungary. More definitive descriptions and analyses of the centers of relatively unknown places are given. In addition, there is a comprehensive review of the special problems confronting Budapest. In his discussion of this city, Perényi strips away the tourist's image of a romantic, old world capital in favor of a socialist planner's view of the harsh realities of the problems connected with the growth and restructuring of a modern metropolis. If nothing else, it is comforting to know that modern capitalistic states don't enjoy a monopoly in regard to the very tough problems stemming from unchecked suburban growth coupled with decaying urban cores.

*George F. Andrews, Professor of Architecture, University of Oregon, Eugene, Oregon*

#### **Politics of Land: Ralph Nader's Study Group Report on Land Use in California.**

Robert C. Fellmeth, project director. New York: Grossman, 1973. 715 pp. \$15.

An architect who is interested in planning could think of a long list of reasons not to read this book, but none would be adequate. The fact that he may not be a Californian would be the least logical reason, as the implications here concern everyone. The major reason might be that this volume is difficult to read. There is an emotional resistance to finding so many problems without immediate solutions unless one is an unreconstructed indignation collector. It is difficult to absorb the masses of detail of differing importance on a loose general framework.

As the Afterword stresses, another reason not to read the book was played up in California concerning the alleged mistakes found in the original report when it was released. It is claimed here that the errors are extremely minor. It does not matter to the average reader whichever the case; any mistake does not alter the overall understanding that one *could not have had* before the report was researched and published. Citing other studies as well, it gives a picture of the actual workings of our

democracy as they relate to land use and hence, ultimately, to survival. The disappearance—as well as poisoning—of farm lands in our chief agricultural state as elsewhere is but one of the most obvious problems discussed. This is an area in which architects play a direct part.

The report states and shows that we cannot rely on help from politicians trapped by campaign needs. To paraphrase Pogo, "We have met the enemy and find that we elected him." We can only rely on the ever-alert us.

Although it has been known that California is owned in huge chunks of land, it is surprising to hear that Fellmeth and his co-workers could not determine exact ownership in numerous cases, not even from tax rolls.

Among the other many surprises are:

- "Many of California's large land holdings were obtained fraudulently and are now being held illegally."
- "The water-rights system leads landowners to grab water resources and use them wastefully long in advance of need, in order to claim future rights. . . ."
- "The Public Health Department investigators found that nearly 90 percent of the farm workers they talked to experienced one or more symptoms commonly associated with pesticide poisoning. These reports have been suppressed."
- "In the case of Madera County . . . the 21,048 lots bulldozed over the past 20 years have supported a total of 100 houses."
- "Seventeen [Los Angeles City] departments answered, and only three could identify the nature and location of land under their own jurisdiction."
- "Automobile oil, truck and road construction interests have lobbied since the 1920s against public mass transit and for public subsidy of their own operations in California. They have engaged in direct and illegal conspiracy to purchase rail-transit systems and destroy them."
- "Once the state approved the site and plan for the [Palmdale] airport, federal agencies rubber-stamped it. None of these agencies, including the Department of Transportation, conducted the investigation required by the National Environmental Policy Act of 1969. Instead, they knowingly issued false reports."

After reading the book, I had the feeling that it almost appears that the prime purpose of governments has been to create wealth for the wealthy. While it seems unlikely that the recommendations will be adopted in whole, the philosophy as stated in the book seems obviously valid. It is that "those who benefit from the expenditure of public monies should generally pay the cost of providing that benefit."

In the past, we have not been too concerned with creation of wealth for others or the many costs to us of polluters. We

now must face the fact that unless changes are made we will continue systematically to encourage and actually to subsidize the destruction of our land. *John Blanton, AIA*

#### **The Lighthouses of the Chesapeake.**

Robert de Gast. Baltimore: The Johns Hopkins University Press, 1973. 173 pp. \$12.50.

Those who are intrigued by lighthouses will enjoy this book, and especially the photographs. They are outstanding.

De Gast tells the history of lighthouses of the Chesapeake Bay and in doing so regales the reader with tales of shipwrecks, fires, storms and wars that were endured by both the structures and their keepers.

The book's three major sections cover a short history of the lighthouses; illustrated essays on the lighthouses still standing in the Bay; and a short description of the 42 lighthouses that have been destroyed.

#### **The Business Condominium: A New Form of Business Property Ownership.**

David Clurman. New York: Wiley, 1973. 185 pp. \$14.95.

Small and moderate sized businesses are becoming increasingly attracted by commercial condominiums due to the increase in costs of land and construction. This book covers the reasons for business

condominiums, stressing the legal, management and financial problems involved in their formation and operation. There is a section on specialized business condominium areas: medical, dental and science buildings; industrial parks and complexes; cemeteries; landmark or restoration areas; parking garages; shopping centers.

"Name a business," says Clurman, "and you can visualize possible use of condominium methods." Even airports. Clurman suggests that two or more municipalities could construct an airport with exclusive areas used by each city and with runways, control towers and electronic systems made common areas. After the possibilities of the condominium form are implemented in a few years, Clurman predicts, American businessmen "will realize the tremendous aid that has been added to their enterprises by addition of this new real estate ownership device."

**Swimming Pools.** Jacques Debaigts. Rutland, Vt.: Charles E. Tuttle Co., 1973. 160 pp. \$17.75.

This handsome book contains examples of swimming pools in Italy, France, Spain, Switzerland and Germany. There are also a few examples of pools in Belgium, Denmark, England, the U.S., Mexico, Brazil and Tunisia. The text in three languages—French, German and English—gives concise information about the pools.

A striking example is a pool in Denmark, designed by architect A. Gunner, where the water's surface is entirely covered with plastic balls. Another which has a lively combination of colors is a pool on the ground floor of a home in Germany, created by architects Kammerer & Belz. All the pools are strikingly beautiful, in fact, and the book should be a source of inspiration to any designer who is interested in swimming pools.

**A List of Architectural Books Available in America before the Revolution.** Helen Park. Los Angeles: Hennessey & Ingalls, 1973. 79 pp. \$7.95.

Students of American architectural history and architectural librarians have been grateful to Helen Park for what is called the "Park List." This bibliographic tool was originally published as an article in the *Journal of the Society of Architectural Historians* in October 1961. Now, fortunately, it is available in book form. The bibliography greatly aids scholars who want to know which books were present in America at various stages of the colonial period, helping them identify sources for the various characteristics of architecture before the Revolution.

This edition is revised and enlarged as a result of Mrs. Park's more recent findings. Nineteen new titles have been added to the original 87.

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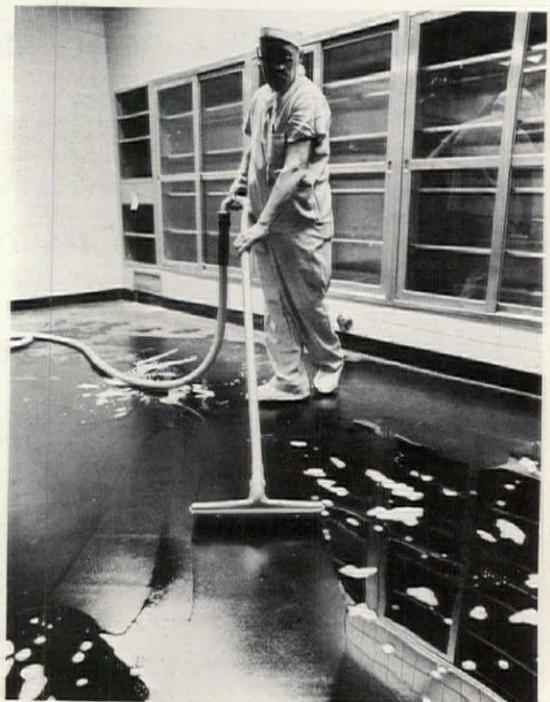
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**A Library Classification for City and Regional Planning.** Caroline Shillaber. Cambridge, Mass.: Harvard University Press, 1973. 100 pp. \$7.

It was in 1913 that the first comprehensive classification of city planning literature was devised by James Sturgis Pray and Theodora Kimball. The former was chairman of Harvard University's School of Landscape Architecture, the latter was the school's first librarian.

The classification scheme was published by Harvard. Caroline Shillaber, who is librarian for the Harvard Graduate School of Design, says in the foreword to a revision of the scheme that the book is long out of print, but for 60 years copies of it have been in continual use at Harvard and other institutions where city planning is taught. Librarians since the time of Theodora Kimball have added to and expanded the classification system.

This present edition incorporates the changes. It also includes a revision of another classification scheme, published in 1937 by Harvard University Press, which covered broader fields of regional and national planning, explains Miss Shillaber. This subject arrangement was prepared by Arthur C. Comey and Katherine McNamara.

The two classifications are now consolidated and printed in one sequence with subject indexes combined into only alpha-

betic list. The revision is adaptable to both large and small libraries. Any office, institution or individual who has a library of planning books will welcome this contribution by Miss Shillaber.

**The Villa Emo at Fanzolo.** Giampaolo Bordignon Favero. University Park, Pa.: Pennsylvania State University Press, 1972. 66 pp., 121 plates. \$29.50.

Scholars concerned with the work of Andrea Palladio will find this handsome folio to be a treasure. Villa Emo is significant because it is one of the few Palladian villas completed according to the architect's original plan, except for changes that may have had his approval. The villa is described in detail and compared with other Palladian structures. Perhaps the best part of all are the scale drawings and the magnificent plates.

The book is part of the "Corpus Palladianum," a series of monographs, each devoted to one of Palladio's major works.

**The National Directory for the Performing Arts and Civic Centers.** Editors: Janet Spencer and Nolanda Turner. Dallas: Handel & Co., 1973. 604 pp. \$24.

Arranged alphabetically by state and then by city or town, this directory provides information about performing arts and civic centers in this country. Such facts as names of staff members and

boards of directors, length of season, seating capacity, income and general purpose of the facility are given. Also, names of architects are indicated for some of the more recent structures. The book will be of use in reference sections of university and public libraries.

**New Architecture in New Haven.** Revised ed. Don Metz. Cambridge, Mass.: MIT Press, 1973. 88 pp. \$3.95.

The first edition of this work was published in 1966 at a time when the city was undergoing renewal, redevelopment and building programs. The revised edition brings the story up to date, giving a representative selection of the city's architecture of the past 15 years.

**Composite Steel and Concrete Construction.** P. R. Knowles. New York: Wiley, 1974. 200 pp. \$18.75.

The term "composite construction" is used in this book, explains the author, to refer to the interaction between concrete and structural steel in such combinations as a steel beam or truss interacting with a reinforced concrete slab. After a chapter on the early development and the economic advantages of composite construction, attention is given to its theoretical aspects. The final chapters cover practical design and construction of composite construction in buildings and bridges. □



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## LETTERS

**Due Credit:** Credit-giving is hard enough; credit-getting is even more difficult (see the otherwise accurate report on Louisville's River City Mall, page 56, in the November issue).

River City Mall was not "originally recommended by Victor Gruen Associates." The recommendation came some 15 years earlier from then Yale graduate student in planning, Dieter Hammerschlag, whose Professor Christopher Tunnard introduced him to the Louisville scene in 1956. Hammerschlag's plan was his master's thesis, carefully done, well illustrated.

It was widely published in the Louisville newspapers. As real estate editor and later urban affairs editor of *The Louisville Courier-Journal*, I wrote the major articles on Hammerschlag's plan and on subsequent experiments and plan revisions. The Hammerschlag graphics were turned over to the Planning and Zoning Commission and formed an integral part of the local plans prepared by Louisville Central Area, Inc., in the late '50s, which later were modified by Gruen Associates.

When River City Mall plans by landscape architects Johnson, Johnson & Roy together with Ryan Associated Architects of Louisville were unveiled two years ago, Hammerschlag was invited to Louisville and was honored as the originator of the plan.

Gruen Associates' contribution was substantial and added several important dimensions to the central business district plan, but by no means did it originate the mall.

Perhaps a larger issue is involved, not only here but in all American cities: the importance of local record-keeping. Most changing scenes are recorded erratically and in a self-serving manner—administrative histories of major projects, for example, are rarely kept or made available to the public. The best of those that I have seen was written by John Searles, then head of the Redevelopment Land Agency of the District of Columbia, and covered the early history of the southwest section of the city's renewal: complete, honest, succinct. Every city should have a Searles and, if not that, then the sort of record that he kept.

*Grady Clay, Hon. AIA  
Editor, Landscape Architecture  
Louisville, Ky.*

**Minimizing the Oil Crunch:** The article by Edmund N. Bacon, FAIA, on "Energy: Shaper of Future Living Patterns" in the December issue deserves serious consideration. It envisions a return to previous means of locomotion because of the severe

oil crunch—that may worsen as time goes on—and the concomitant change in "living patterns."

This, to my mind, represents a point of view that does take into consideration the great American ingenuity and inventive skill which, given the challenge, can well nigh overcome the impossible.

An important source of savings of the scarce fuel can be found in proper insulation of buildings, a field where architects can play an important part.

The New York State Division of Housing & Community Renewal conducted a thorough research study on this subject, as a result of which it was determined that proper insulation of exterior walls, including double-glazing of windows and thermo-barrier frames, can reduce the consumption of heating energy by 50 percent or more. A reduction of heating plant capacity and a substantial reduction in size of radiators or ducts would compensate for the additional cost of insulation, and the reduced fuel consumption would result in a profit to the building owners.

If electric heating elements were introduced within the window area, oil fuel could be eliminated altogether. If followed up and implemented, this would be a real contribution in minimizing the oil crunch.

The research study, volume 3, pertaining to the insulation of houses can be obtained from me upon request and payment of 50 cents to defray the cost of handling and mail. My address is 2020 N. Atlantic Ave., Cocoa Beach, Fla. 32931.

*Joshua D. Lowenfish, AIA  
Former Chief of Research &  
NY State Division of Housing &  
Community Renewal  
Cocoa Beach, Fla.*

**Corporate Architects:** Many thanks to E.V. Bertoia, AIA, and to the editorial staff for the sensitive article titled "A Matter of Choice" in the September issue. His thoughtful analysis should be understood by corporate architects, especially when this era of specialization has become an accepted fact of professional life.

I am a graduate architect and a regular subscriber to the AIA JOURNAL and other architectural magazines. From my own experience I can say that I have been employed by one of the largest hollow metal companies in this country and that my architectural experience is well respected and used in every possible manner.

My personal dealings with architects and contractors are surely more extensive than that experienced by any individual architect in a small- or medium-sized office. The architect is not self-sufficient. I realize this when I study the projects and see that the individual architect has a very limited knowledge of such matters

as fire-rating, the arrangement of double steel studs to receive frame anchors, the detailing of a stair-roof bulkhead, etc., etc.

In my opinion, architects who have specialized in the allied professions must have the same status as an architect who owns his own firm. The specialists can make an invaluable contribution to successful architecture.

*Rama Pr. Mukhopadhyay  
Brooklyn, N.Y.*

**Errors and Apologies:** With reference to the article titled "Methods in Steel That Speed Construction" by Leslie A. Barron in the January issue, I would like to clarify some grave errors.

The article states that "a system that incorporates the staggered truss technology and precast lateral support beams is Skipcon Building Systems, Inc., a subsidiary of Schrenko Steel Corporation." This statement is false. The system was developed by me as a result of over three and a half years of research. Schrenko Steel Corporation, through its executive vice president, Arthur Hassler, was the fabricator/erector for the first two buildings and will act also in the same capacity for the two structures being designed. I had given my permission to Schrenko Steel Corporation for its use of this system under the trade name of "Skipcon."

I have given my permission also to any and all architects to use the system and, in fact, have personally conducted three tours of the New Jersey Chapter AIA to the building while under construction. The system was published in the chapter magazine, *Architecture New Jersey*, about a year ago. The system is neither copyrighted nor patented and is free for all to use.

*Eugene A. DeMartin, AIA  
Lyndhurst, N.J.*

An apology is in order. In my article in the January issue, the development of the Skipcon System is credited to Skipcon Building Systems, Inc. It is my understanding that the individual who developed the system was Eugene A. DeMartin, AIA. The system is used by the Schrenko Steel Corporation.

I apologize also to the AIA JOURNAL for this oversight in the preparation of copy.

*Leslie A. Barron  
Vice President/Engineering  
American Iron and Steel Institute  
New York City*

**Please Write:** I am a 22-year old draftsman and a student at Accra Polytechnic, where I am studying architectural draftsmanship. I would be grateful if any architect or architectural student would correspond with me about architectural drawing and building practices in the U.S.

*David A. Parkins  
P.O. Box 3732, Accra, Ghana*

## EVENTS

**Mar. 27-29:** Symposium on Building Early America, Carpenters' Company of the City and County of Philadelphia, The Athenaeum, Philadelphia.

**Mar. 28-30:** National Office Products Association Convention and Exhibit, Los Angeles Convention & Exhibition Center, Los Angeles.

**Mar. 29-31:** Symposium on Women in Architecture, Washington University, School of Architecture, St. Louis.

**Apr. 1:** Applications due, Cintas Fellowships in the Arts. Contact: Institute of International Education, 809 United Nations Plaza, New York, N.Y. 10017.

**Apr. 1-4:** Design Engineering Show and Conference, McCormick Place, Chicago.

**Apr. 3-8:** Society of Architectural Historians Annual Meeting, Marriott Hotel, New Orleans.

**Apr. 8-10:** Course on Government Architect/Engineer Contracting, Los Angeles Marriott, Los Angeles.

**Apr. 15-16:** Community/School Workshop, Council of Educational Facility Planners International, Arlington, Va. Contact: Asst. Supervisor, Arlington County Schools, 1426 N. Quincy St., Arlington, Va. 22207.

**Apr. 18-21:** West Coast Women's Design Conference, School of Architecture & Allied Arts, University of Oregon, Eugene, Ore.

**Apr. 23-25:** National Interfaith Conference on Religion and Architecture, Stouffer Inn, Cincinnati.

**Apr. 28-May 3:** National Conference of States on Building Codes and Standards Annual Meeting, Villa Capri Motor Hotel, Austin, Tex.

**May 2-4:** Professions and the Built Environment International Conference, Graduate School of Design, Harvard University, Cambridge, Mass.

**May 11-16:** American Society of Planning Officials National Planning Conference, Palmer House, Chicago.

**May 14-16:** Designing for Fire Safety and Hazard Control Seminar, Factory Mutual Engineering Corp., Norwood, Mass.

**May 19-23:** AIA National Convention and Exposition, Sheraton Park & Motor Inn, Washington, D.C. (Reconvened session, May 27-30, Madrid.)

**May 20-26:** International Federation of Hospital Engineering Congress, Athens.

**May 27-30:** International Symposium on Low-Cost Housing, Sir George Williams University, Montreal.

**May 30-June 1:** Environmental Design Research Association Conference, Milwaukee.

**June 16-21:** International Design Conference, Aspen, Colo.

**June 16-29:** Scandinavian Architecture

and Urban Planning Seminar. Contact: The Danish Institute, Kultorvet 2, DK-1175 Copenhagen K, Denmark.

**June 16-July 26:** Health Systems Management Program, Harvard Business School, Cambridge, Mass.

**June 30-July 27:** Environmental and Social Planning in Britain Course, University of Manchester, Manchester, England. □

## GOING ON

*going on from page 12*

Chapter AIA and the Illinois Council AIA. He was elected an AIA national director for 1966-69 and served on the AIA executive committee in 1968-69. Train was recently appointed by Maryland Governor Marvin Mandel to a commission created to study the procurement of design services for state work.

### State Development Corporation Honored

The New York State Urban Development Corporation will receive AIA's 1974 Citation of an Organization. UDC was commended for its "concern for a livable environment" reflected in its "support of imaginative site planning, attractive design and responsible management."

UDC was given a mandate by the New York State Legislature in 1968 to "fill the needs of housing for low- and moderate-income families — needs which private enterprise has been unable to satisfy." The organization was charged as well to "assist industrial and commercial development and to provide needed educational, cultural and other civic facilities."

Since its creation, UDC has built or has under construction a total of 33,192 housing units for low- and moderate-income families and for the elderly. It is responsible for the planning and construction of three new towns and two developments in Rochester and Brooklyn which approach the scale of new-towns-in-town.

The organization works on the premise that housing has social consequences, and it emphasizes research and evaluation (see p. 46). This innovative approach, says the AIA, "has had a nationwide impact."

### Posthumous Award to Stephen Cram

Stephen van Daalen Cram, who joined the AIA staff in 1969 to coordinate the use of VISTA volunteers in Community Design Centers, has been awarded posthumously the annual Whitney M. Young Jr. Citation by the Institute for his "tireless

and widespread services to minorities and the disadvantaged during his tragically short career." Cram became coordinator of all the AIA Human Resources Council programs before he left the Institute in late '72 to join the firm of Robert J. Nash & Associates of Washington, D.C. He died suddenly on February 11, 1973, while competing in an industrial league basketball game.

The CDCs, which Cram was instrumental in developing, provide professional architectural and planning services on a voluntary basis to neighborhoods which could not otherwise afford them. The more than 70 CDCs in the nation are independent entities in communities extending from Harlem in Manhattan to Honolulu. The local centers, which have been aided by many AIA chapters, have conducted a broad range of programs.

### Author, Association Get Critics Awards

Walter McQuade, FAIA, a member of the board of editors of *Fortune* magazine, has been awarded the 1974 AIA Architecture Critics' Medal. He was commended by the Institute Board of Directors for his "thorough knowledge of design and construction" and his "significant contributions" as a critic and writer "to the understanding of architecture throughout the world."

In addition to his articles in *Fortune*, McQuade's architectural critiques have been published in many magazines, such as *Architectural Forum*, *Life*, *The Nation* and the AIA JOURNAL. He is author of *Schoolhouse*, a book published in 1958, and editor of *Cities Fit to Live In*, an anthology of essays on the urban environment published in 1972. In 1967, he wrote *The Threatened City*, a report of the Paley Committee, of which he was a member. The committee was established by then Mayor John Lindsay to study the urban crisis in New York City. McQuade subsequently was named to the City Planning Commission in Manhattan, on which he served for five years implementing the committee's recommendations.

The Regional Plan Association, New York City, has been named to receive the 1974 Architecture Critics' Citation for "Choices for '76," a multimedia approach to exploring urban problems. The program consisted of five TV shows broadcast by 18 stations in the New York-New Jersey-Connecticut region. Each of the shows dealt with a specific urban problem, such as housing, transportation and the environment. Citizens throughout the region, organized into listening groups, were provided with ballots so that they could respond to specific issues. Their choices were then publicized in local

newspapers. Hailed as an "affirmation of the democratic process," the programs enabled citizens to participate in decisions for the future of the region.

## Knowles Receives Research Medal

Ralph Knowles, AIA, professor of architecture and acting dean of the School of Architecture and Fine Arts, University of Southern California, has been selected by the AIA to receive its 1974 Medal for Research. The medal, awarded annually, is given for "distinguished achievement in research in architecture or the environment."

Knowles has conducted research for more than 12 years into the effects of climate, new technology and energy consumption on the configuration of buildings and the use and development of land. His pioneering findings have been published extensively in books and journals.

Knowles has taught his students "methods of rational and humane design" and has applied this same methodology to building projects across the nation.

## Rockefeller Center Energy Experiment

The RCA Corporation plans to make an addition next year to its headquarters

building in Manhattan's Rockefeller Center that will serve as a pilot project in energy technology. It will be the first commercial application of solar heating techniques in New York City and among the first in the U.S. for nonresidential use.

The two-level structure of lightweight prefabricated modular elements, to serve as a management conference center, will rise from an open terrace on the 12th floor level of the 70-story highrise. It will be wedged between the main tower and the west annex.

The orientation of the structure to the sun and the abundant use of glass will help provide the extensive natural lighting. A minimum of artificial illumination will be needed, and then only for particular tasks, according to architects Ford & Earl.

Mechanical systems have been designed by the architects in conjunction with the engineering firm of Syska & Hennessy and experts at RCA Laboratories. Some of the technology proposed by the designers:

- Panels on the solid exterior surfaces will capture solar energy in the form of radiant heat to be stored and used to substitute for other forms of energy. By using inexpensive salt hydrates, heat from solar energy will absorb the sun's rays in the day and at night give off the stored heat. Through the use of photovoltaic cells with silicon panels, solar energy can be used to produce electricity. The solar energy collection system will help meet

heating requirements in winter and will be flexible enough from within so that future application of cooling airconditioning may be made as the laboratory systems become feasible.

- A heat recovery system will collect and store excess energy from surplus interior heat and direct exterior radiation until ready for conversion to heat on demand.
- In place of the more constant volume reheat system, a variable air volume system will reduce air circulation in enclosed spaces according to needs.
- A computerized monitoring system will sense and evaluate inside and outside conditions and automatically regulate the other building systems to minimize energy consumption.

## Overcoming a Scarcity of Blacks

The nation's black colleges and the design professions must mount at once a vigorous joint effort to correct the scarcity of blacks in the design professions, declared top-ranking administrators of black colleges at a recent two-day seminar on "Professional Careers for Black Students in Architecture, Engineering and Planning." The seminar was held in the Cleveland offices of its sponsor, Dalton Dalton Little Newport, as part of its Affirmative Action Plan. *continued on page 62*

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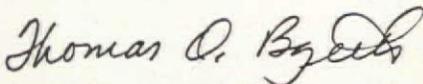
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The educators established these goals:

- Explain the opportunities for employment and advancement to college and high school students.
- Encourage young blacks in high school to take courses that will make them eligible to enter college and prepare to fill those openings.
- Arrange personnel exchanges for black college faculty members and design professionals so that each may gain familiarity with the other's problems.
- Provide work experience for black students in the design offices during undergraduate years to familiarize them with the business world and to give them the confidence to succeed in fields now predominantly white.

John H. Spencer, AIA, chairman of the Department of Architecture at Hampton Institute, remarked that often nothing is said to black youths by their high school counsellors about the opportunities in the design professions. He also stated that parents "who are uninformed and conditioned by years of limited opportunity prompt their children to prepare for the 'safe professions' of teaching, social work and preaching."

Others, including Dr. G. Leon Netterville Jr., president of Southern University, Baton Rouge, said that black colleges have difficulty in obtaining sufficient funds from state and federal governments. White design firms were urged to aid with the problem by Dr. Zubie W. Metcalf, assistant vice president for academic affairs at Tuskegee Institute. White firms, he said, insist that they have a need for black professionals, but they "seem to make little input to solving the shortage."

Robert A. Little, FAIA, director of design at DDLN, said that one of his firm's aims is to have a minimum of 10 young black professionals moving into leadership positions over the next three years. Calvin B. Dalton, DDLN president, said that he was interested in a suggestion made that black colleges adopt high schools. He said that it would be an "equally good idea for black colleges to adopt one or more design firms."

## People Aren't Pollution

"Though human beings may be polluters, they are not in themselves pollution," said Judge Julius J. Hoffman in Chicago's U.S. District Court when he ruled out a suit brought by a group of homeowners who sought an injunction against the Chicago Housing Authority under the Environmental Protection Act. The homeowners wanted the court to forbid, on antipollution grounds, scattered-site public housing in various all-white, higher-income neighborhoods. Judge Hoffman held that the law regards public tenants as "free, legally responsible individuals—not as sociological factors in deterministic formulas."

## Deaths

**Arnold A. Arbeit**, Scarsdale, N.Y.  
**Richard Bouillon**, Seattle  
**Samuel D. Collier**, Montgomery, Ala.  
**Robbins L. Conn**, Boynton Beach, Fla.  
**R. S. Coupland Jr.**, Metairie, La.  
**George D. Crumley**, Columbus, Ohio  
**Theodore F. Davis**, Annapolis, Md.  
**William Hastrup**, Fresno, Calif.  
**J. Albert Heisler**, Richmond, Va.  
**Meyer Katzman**, New York City  
**William L. Lincoln**, Nashville  
**Peter G. Pierik**, Syracuse  
**Kenneth R. Plank**, Dowagiac, Mich.  
**Angelo M. Riccio**, Harrison, N.Y.  
**Donald M. Robertson**, Lawrence, Kan.  
**William I. Rosamond**, Columbus, Miss.  
**Roland W. Sellew**, Sarasota, Fla.  
**Alexander Shaw**, Bel Air, Md.  
**Frederick V. Von Osthoff**, New Orleans  
**Leonard H. Webb**, Youngstown, Ohio  
**Frederick J. Woodbridge**, FAIA,  
New York City

**Wayne S. Hertzka, FAIA:** Chairman of the board of Hertzka & Knowles, a San Francisco-based architectural firm, Hertzka planned many of that city's structures, including St. Mary's Hospital, headquarters for the Pacific Gas & Electric Co., and the Hong Kong Bank Building.

He died on November 17 at the age of 66. He served as second vice president of the AIA in 1963, as president of the Northern California Chapter AIA in 1955 and as president of the California Council AIA in 1960.

**Harris Armstrong, FAIA:** The designer of many structures in St. Louis, where he headed his own firm, as well as in other cities, Armstrong included among his principal works the Dental Building, Clayton, Mo.; the U.S. consulate, Basra, Iraq; and the McDonnell Aircraft Corp. engineering campus and the Washington University laboratory buildings, St. Louis. He received many awards for his projects. When the *St. Louis Globe Democrat* reported his death on December 15 at the age of 74, the newspaper commented editorially: "His work was characterized by a fondness for sweeping, graceful lines that harmonize with natural surroundings."

Hertzka died suddenly of a heart attack while attending a meeting of the board of directors of the Community Music School of Webster College. He was president of the St. Louis Chapter AIA in 1960-61 and served as chairman of the AIA Committee on Institute Honors in 1962-64.

**Edwin Bateman Morris Jr., AIA:** Known to his many friends as Ted, Morris served as public and professional relations director of the Institute in 1955-56 and as assistant to the executive director from 1956 to 1959. Following his association with the AIA, he moved to New York City

where he worked as architectural adviser to the U.S. Steel Corporation. In 1961, he became associated with the Manhattan architectural firm of Max O. Urbahn Associates. Later, he practiced as an architectural consultant and also published the magazine *Empire State Architect* before returning to the Washington, D.C., area about three years ago. Morris died on January 15 at the age of 60.

Before his association with the AIA, he worked in the office of the Supervising Architect of the U.S. and with the Public Health Service where he acted as a consultant on hospital architecture and was a member of the team which launched the Hill-Burton Hospital Program.

He had scores of admirers of his pen and ink drawings, some of which were published in the *AIA JOURNAL*. He was the son of Edwin Bateman Morris, FAIA, who died in 1971.

## Newslines

**Temporary housing for disaster victims** will be examined in an eight-month study by the New York City firms of Abeles, Schwartz & Associates and Beyer-Blinder-Belle. Under a contract awarded by the Department of Housing and Urban Development, the firms will evaluate types of temporary housing and will recommend how the federal government can respond faster and more effectively, at less cost, to emergency housing needs. Special attention will be given to storage and reuse capability, mass production, portability and minimum site preparation. One or more of the recommended housing systems will be selected by HUD for demonstration and final evaluation.

**Production Systems for Architects & Engineers, Inc.**, is looking for a mechanical program director. PSAE, headquartered in Washington, D.C., was established by the AIA in 1969 to develop and operate a national automated master production system for the building construction profession.

Applicants for the position must have a B.S. degree in mechanical engineering or equivalent experience with a background of 10 years in the design of mechanical systems for buildings and a special interest in mechanical specifications and their coordination with drawings and engineering.

For further information, contact John H. Schruben, FAIA, executive vice president of PSAE, 1735 New York Ave. N.W., Washington, D.C. 20006; the telephone number is (202) 785-7369.

**The Producers' Council Achievement Award** for 1974 went to Fred McKie, FAIA, of Houston for "his use of quality building materials and for his many contributions to the architectural and engineering professions."

**The more than 15,000 condominiums and homeowners associations** in existence now have a research and education resource of their own. The associations, which represent some 3 million families, are invited to join the Community Associations Institute established by the Urban Land Institute and the National Association of Home Builders. The CAI aims to assist local associations in the development of effective policies and methods of sound planning, development, management and maintenance. Information may be obtained from ULI, 1200 18th St. N.W., Washington, D.C. 20036.

**Leon Bridges, AIA**, principal in the Baltimore firm of Leon Bridges Co., was one of three honored as "outstanding young Marylanders" by the Baltimore Junior Association of Commerce. Bridges was cited for his contribution to the revitalization of the "American idea of free enterprise by attainment of outstanding and deserved success in his chosen field."

**Hugh N. Romney, AIA**, of Hawthorne, N.J., has been elected chairman of the National Institute for Architectural Education's board of trustees.

**Louis I. Kahn, FAIA**, of Philadelphia has been awarded an honorary doctorate by the University of Maryland.

**The American Institute of Steel Construction** has elected as its president Van Tyle W. Coddington. He is chairman of the board and president of Lakeside Bridge & Steel Co., Milwaukee.

**Roy M. Drew, FAIA**, partner in the La Jolla, Calif., firm of Mosher/Drew/Watson Associates, has been elected president of the board of directors of the San Diego Maritime Museum Association. He was a director of the association previously.

**A new monthly abstract journal**, sponsored by the National Science Foundation's Research Applied to National Needs Program, has the goal of disseminating as rapidly as possible the published results of energy research. It covers articles and books on energy sources; electric power (generation, supply and demand, transmission, environmental effects and use); and energy production, consumption, supply and demand and policy. Titled *NSF-RANN Energy Abstracts*, it is available without charge from Miriam P. Guthrie, Editor, NFS-RANN Energy Abstracts, Oak Ridge National Laboratory, P.O. Box X, Oak Ridge, Tenn. 37830.

**Harold T. Spitznagel, FAIA**, who heads the Sioux Falls, S.D., firm of the Spitznagel Partners Inc., has received the South Dakota Governor's Award for Distinction in Creative Achievement. □

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**The Criteria for Housing** program of the New York State Urban Development Corporation (p. 46). Other participants: Edward J. Logue, president and chief executive officer; John G. Burnett, executive vice president; Robert G. Hazen, general manager; Stephen A. Lefkowitz, general counsel; Herbert A. Tessler, director, Design and Construction; D. David Brandon, director, Program Development; Frank S. Kristof, director, Economics and Housing Finance;

William H. Hayden, director, New York City Regional Office; A. Edwin Wolf, Joseph E. Brown, Jon Kaufmann, Fred Man Chan, Alex Chu — design interns; Institute for Architecture and Urban Studies, David Todd & Associates — consultants on low-rise high-density housing prototypes.

**AIA Development Team Conference** leaders (p. 4): Featured speakers: Gerald D. Hines, investment builder/developer, owner, Gerald D. Hines Interests, Houston; Rodolfo J. Aguilar, AIA, architect/developer, president, ADH Systems, Inc., Baton Rouge. Resource experts: Donald E. Bodley, development consultant, president, Bodley Associates Inc., Houston; James R. Crozier, economic consultant, vice president, Gladstone Associates, Washington, D.C.; John P. Dolman, real estate consultant, vice chairman, Jackson-Cross Co., Philadelphia; Barry M. Fitzpatrick, legal counsel, partner, Shaffer, McKeever & Fitzpatrick, Rockville, Md.; Harry A. Golemon, AIA, architect/developer, editor/contributing author of *Financing Real Estate Development*, partner, Golemon & Rolfe, Houston; Benjamin V. Lambert, mortgage banker, president, Eastdil Realty Inc., New York, N.Y.; Joel N. Simon, tax counsel, partner, Arent, Fox, Kintner, Plotkin & Kahn, Washington, D.C. Faculty: Jack P. Friedman, instructor in valuation and taxation, Georgia State University, Atlanta; Dennis Holcombe, instructor in real estate and appraisal, Georgia State University, Atlanta; Terrence L. Love, marketability research consultant, partner, Land Development Analysts, Atlanta; Laura K. Shiro, organization psychologist, Michigan State University, East Lansing, Mich.; John H. Suehr, professor of administration and higher education, Michigan State University, East Lansing, Mich.; Carl J. Tschappat, chairman, Department of Real Estate and Urban Affairs, Georgia State University, Atlanta.