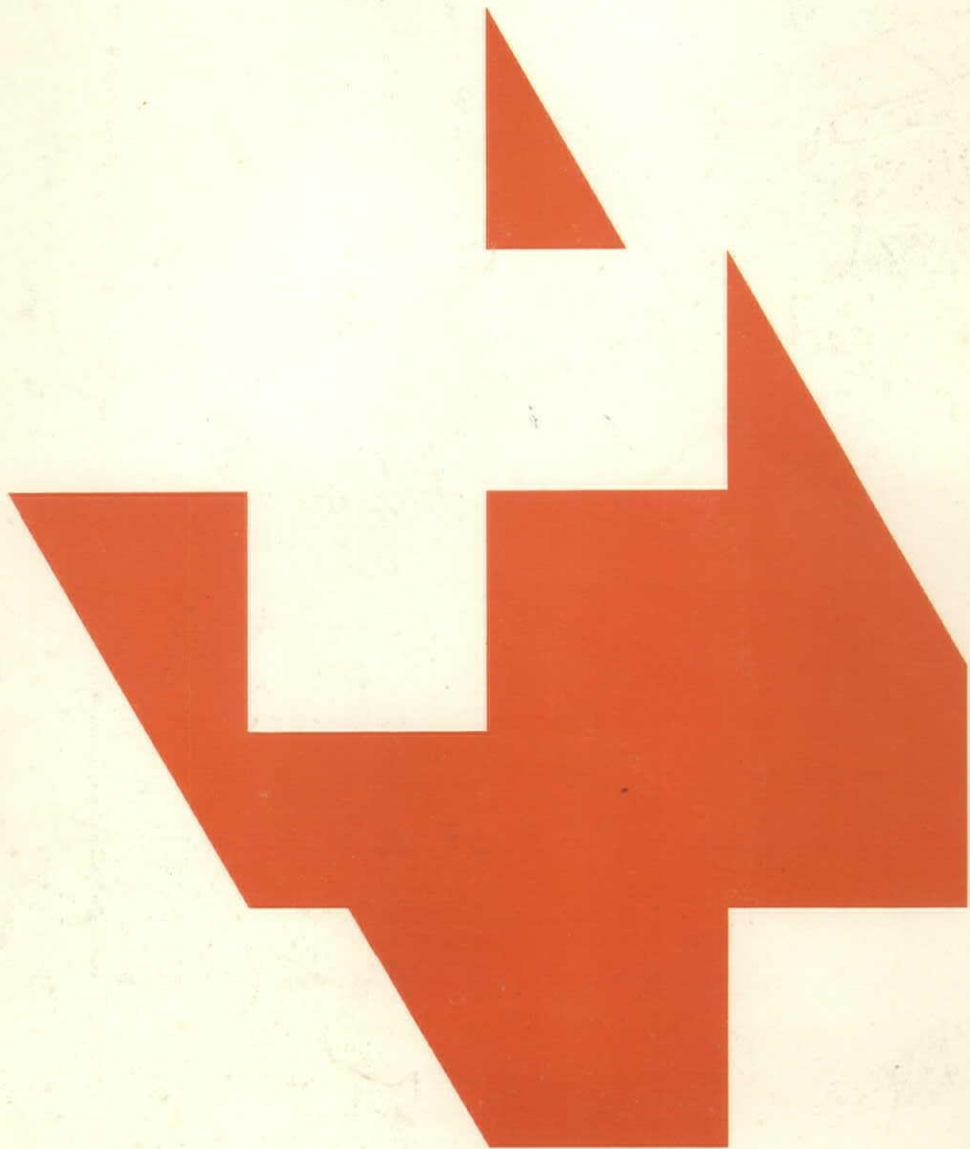


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A Roof (Hopefully) over Everyone's Head: This issue of the AIA JOURNAL is devoted exclusively to housing or, to use a more appropriate term, "human shelter." As is so aptly spelled out in the overview on pages 18 and 19, the articles deal with aspects of the subject that are of deep concern to the architect, both as a professional and as a citizen. It is not my purpose here, then, to dwell on the magnitude of the current situation. And so far as forecasting goes, what will happen in 1974 appears to be anyone's guess, although some economists are predicting an upturn in housing starts before mid-year.

Meanwhile, back to the practitioner himself. Robert H. Mutrux, AIA, at a recent meeting of the Institute's Housing Committee, declared: "As architects, we have our private litany of excuses, each with a ring of validity. Federal, state and municipal governments have failed to contribute sufficient funds; the profit-motivated developer and the self-oriented taxpayer couldn't cooperate with less enthusiasm. Land, material and labor costs, not to mention zoning restrictions and building codes, create a seemingly insurmountable list of obstacles. Out of confusion, frustration and understandable impatience we are satisfied, along with the rest of the population, to sweep the whole affair under the rug."

Be that as it may, the Housing Committee is moving ahead in certain areas, one of which is an attempt to establish guidelines to clarify relations between the architect and the developer—a subject that has long been overlooked and neglected by the profession. In 1972 the National Association of Home Builders conducted a survey of architectural firms, but the results were never summarized or published. Inheriting the tabulations, the Industry Affairs Subcommittee of the AIA Housing Committee has been undertaking a broader study of its own and hopes to publish the findings under the title "The Housing Developer as a Client." Kermit Dorius, AIA, who compiled the information with the help of Walter Richardson, AIA, has made, among others, these preliminary observations:

- The locale is extremely significant in determining the type of project, scope of service, client expectations and degree of involvement by the architect. (For example, the survey refers specifically to California with its far-reaching environmental quality legislation affecting all construction within the immediate coastal zone.)
- Most firms experienced in housing are negotiating fees based on items of service rendered, not on percentages of construction costs.
- Prompt payment of services is one of the most critical and difficult problems for architects doing merchant housing.
- The diminishing supply and escalating cost of land have eliminated much of the repetitive single-family detached dwelling, easily drawn and easily copied.

As a concluding remark, Dorius maintains, "The opportunity for good architectural design in the nation's housing industry is unlimited, and the need for close cooperation between architect and developer is undeniable." When the JOURNAL does its next issue on housing, I hope we will be able to report real progress in that regard. *Robert E. Koehler*

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Performing Arts Hall Opens in Akron, Praised for Flexibility and Acoustics

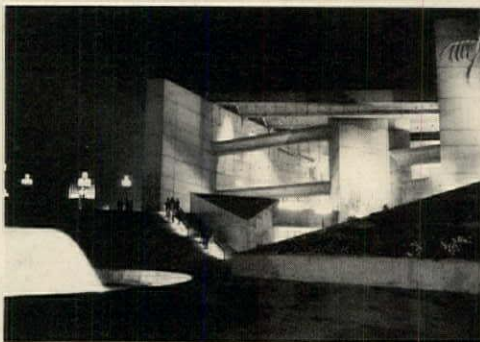
Akron, Ohio, was selected by the AIA Board of Directors in 1972 to receive the Institute's Citation for Excellence in Community Architecture in recognition of the city's efforts to create a revitalized environment in its central area. The University of Akron, located in the city's inner core, was commended for its coordinated long-range expansion and renewal program.

The university has further strengthened the cultural link between the campus and the community with its recently opened Edwin J. Thomas Performing Arts Hall. The \$13.9 million building is described by George C. Izenour, theatrical designer, as "the most flexible building of its kind in the world." He designed the hall's movable ceiling. Caudill, Rowlett & Scott were consulting architects, and the final architectural plans were produced by Dalton, van Dijk, Johnson & Partners.

The hall's auditorium can be changed to accommodate 900, 2,400 or 3,000 people because of the movable ceiling. Composed of steel panels, the ceiling can be retracted for the seating of 3,000 persons. When the middle section of panels is lowered to block the flying balcony, 2,400 people can be accommodated. An intimate seating of 900 can be obtained by lowering the third section of panels.

Counterweights which suspend the ceiling are located in the lobby and have a weight of 47 tons to more than balance the 44-ton ceiling. Izenour points out that the visual aspect of the counterweights is both architectural and esthetic. University of Akron architect Rudolph J. Tichy, AIA, says that money was saved by building one hall instead of three structures.

There is also flexibility of concept, remarks Charles E. Lawrence, FAIA, of CRS. "From the beginning," he says, "it was clearly stated that the goal would be a joint effort, expressing the cooperation and unity between the university and the city of Akron." One entrance faces the campus, the other the street that crosses a bridge into the downtown. "The lobby itself is sort of an easy traffic flow from campus or city," he remarks. The glass walls permit passersby to be aware of the



Ceiling counterweights are the focal point in the main lobby; a morning-glory design fountain fronts the theater's steps.

activity inside. Lawrence says that an effort was made in this direction so that "people passing by could sense that there were life and activity occurring within the house."

The concrete and glass structure covers three acres. A great wall sweeps around the rear of the building in a shallow curve. The wall is 90 feet tall, 8 feet thick and 585 feet long and acts as an acoustical barrier to sounds outside the structure. Vern O. Knudsen, acoustical expert who helped design the hall, says that the building is "utterly free from noise," despite the fact that it is located adjacent to railroad tracks.

Like the auditorium, the stage area can be altered in size. The proscenium can be altered to help create a small stage area for even a single actor or increased to accommodate a large symphony orchestra.

Even the tiered flower beds help with the acoustics. They are arranged into the angular side walls to further absorb out-

People come together for varied reasons: in Akron, Ohio, to celebrate the opening of a new performing arts center, in the nation's capital to discuss problems of architectural librarians and also to urge good design upon corporations.

side noises and to add natural beauty. Another adornment of the landscaped grounds is a water fountain which pumps 3,000 gallons of recirculated water per minute.

Meeting of Architectural Librarians Planned at Time of AIA Convention

The AIA annual convention will be held in Washington, D.C., on May 19-23. On May 19, the AIA library will sponsor a meeting of architectural librarians. The program will be equally beneficial for librarians of architectural schools and architects' offices. There will be brief talks and an opportunity to discuss mutual problems and methods of solving them.

The AIA library is trying to develop a complete listing of architectural librarians in the country and urges all such persons to send information regarding name and place of employment. Those who are able to attend the meeting on May 19 may receive complete details from either George E. Pettengill, Hon. AIA, or Susan Cosgrove, AIA Library, 1735 New York Ave. N.W., Washington, D.C. 20006.

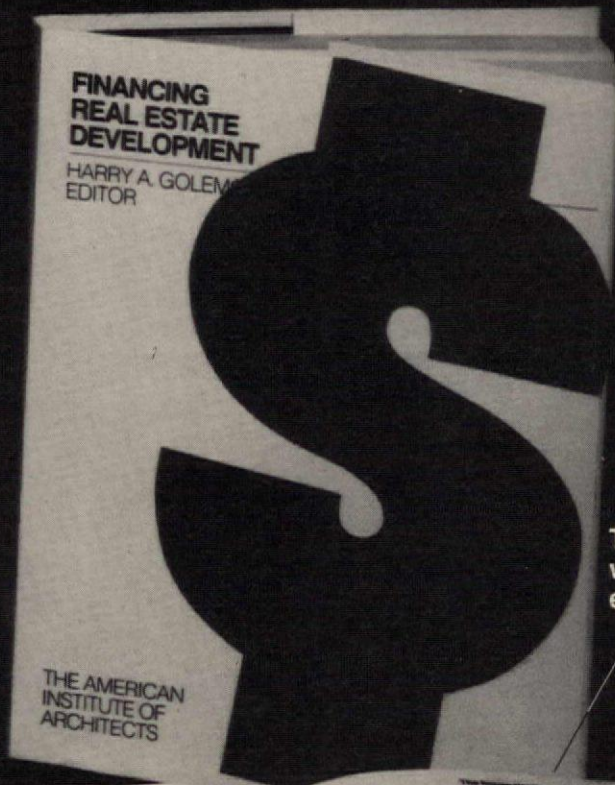
Architects in Industry Attend Seminar; Good Design in Corporations Urged

Among a corporation's responsibilities to the community are good planning and good architecture, and corporations who disregard these responsibilities will find themselves increasingly unwanted. These remarks were made by Wayne Doran, president of the Ford Motor Land Development Corp., at the second annual Seminar for Architects in Industry. The seminar, sponsored by the AIA, was held in Washington, D.C., in October.

Doran said that developers must "cure the problems" that they have created because profit has been the only criterion for development. He urged his audience, mostly corporately employed architects, to "step up to your employers" to make them aware that there is "no future in disregarding responsibility for good planning and design." Doran's firm is developing Renaissance Center in downtown Detroit, a shopping and office center designed by John Portman, FAIA, of Atlanta.

J. Michael Graney of the Business Roundtable urged architects to become

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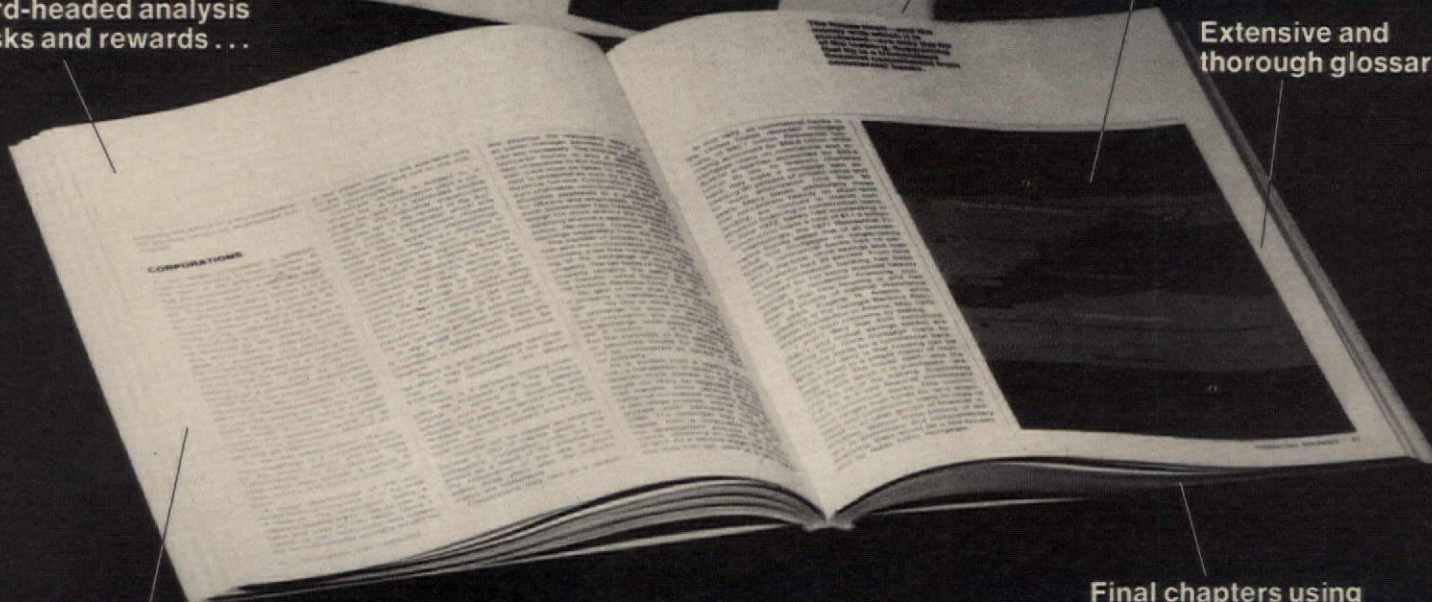
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An awards program forecasts smaller single-family homes. Also in the future may be a mandatory mail system for highrises to cut postal costs and reduce risks of theft.

more familiar with the construction industry. He said that coalition of building users can be powerful in bringing about changes in the technology and work practices of the construction industry. Other speakers included S. Scott Ferebee Jr., FAIA, president of the Institute, who discussed the role of the corporate architect in the AIA.

The participants also attended workshops where they discussed such professional concerns as budgets, cost controls, the use of A/E consultants, scheduling and programming.

Standardized Components, Less Space, Among Trends in Home Awards Program

Since it was initiated in 1957, the Western Home Awards program has indicated design trends in residential architecture. If the 1973-74 entries are a forecast of the future, the movement is toward smaller homes. This reflects high land costs in relation to the total home price, increased cost of materials and smaller families. Condominiums, townhouses and cluster



developments were more in evidence in the ninth biennial than ever. Entries also reveal such components as greenhouse sections, corrugated roofs, industrial skylights and other high window lights and small paned metal-sash window walls. The awards program is sponsored by the AIA and *Sunset Magazine*.

Six entries out of more than 300 won top honor awards for structures worthy of study by the architectural profession.

Eight merit awards and 15 citations were also given to projects recognized as being outstanding examples of contemporary residential architecture.

The six top winning architects are David Jay Flood & Associates for a redwood beach house at Malibu, Calif.; Backen, Arrigoni & Ross, Inc., for an apartment project in Orange County, Calif.; Smith & Larson for a home at Pebble Beach, Calif.; McCue, Boone, Tomsick for a house in Berkeley, Calif.; Behn & Gavin for a residence in Los Gatos, Calif.; and Hall & Goodhue for a group of condominiums near Sisters, Ore.

Jurors were Cliff May, chairman, Los Angeles designer and subdivider; John Andrews of Sydney, Australia, a recent



Among the top winners are the Los Gatos residence with its eight standard greenhouse sections and an Oregon group of condominiums united by boardwalks.

winner of an AIA Honor Award for Gund Hall at Harvard University; Donlyn Lyndon, AIA, head of the Department of Architecture, Massachusetts Institute of Technology; David A. McKinley Jr., AIA, a partner in the Seattle firm of Kirk, Wallace, McKinley; Eudora Moore, design curator for the Museum of Modern Art, Pasadena, Calif.; Edward A. Williams, San Francisco landscape architect; and David Hartley, building editor of *Sunset Magazine*.

Plan to Cut Mail Costs and Theft Risks Meets with Success in Many Highrises

To cut escalating costs and the risks of theft involved in delivering mail to offices on all floors of highrises in larger cities, the US Postal Office is expanding a system called vertically improved mail (VIM). In the past postmen had to leave bags and bundles of mail unguarded in hallways while they delivered other mail at the highrises.

The VIM system has been installed voluntarily in thousands of office buildings around the country, and now postal officials are studying the possibility of making VIM mandatory for all large buildings with many tenants.

VIM requires a central mail room on the ground floor of a building with either window service or letter boxes and parcel lockers. The truck brings the mail, and it is sorted and placed in the boxes and lockers of tenants. The plan has many advantages in that each building tenant receives mail at the same time, there is more security and there is less traffic in corridors and elevators. The plan also reduces the number of postal workers drastically.

The VIM concept was developed by two Houston postal officials, Cliff W. Sparks and James Morrison, in cooperation with the American Locker Co. The company has designed appropriate equipment and has worked out a two-key locking mechanism. A restricted control key, available only to postal carriers, activates the mechanism.

The VIM system has met with particular success in Houston where it has been installed in 75 new highrises. Postal authorities have experimented in several other cities with varied VIM plans. In Cleveland, for example, a large bank building uses a conveyor belt that dumps sorted mail on each tenant's floor.

Findings in Dade County Housing Study Applicable in Other Parts of Country

A predominantly black area in Coconut Grove, Fla., can become a viable neighborhood instead of a "poverty pocket," indicated a recently completed University of Miami study. Headed by Joseph Mid-

continued on page 57

Robert Elkington, FAIA

Housing and the AIA: One of the nation's most pressing problems is the lack of adequate housing. It is presumptuous to assume that architects are not trying to help solve this tremendous social problem. The constraints shift, however, and to do battle with them is like fighting windmills.

The AIA's Housing Committee has joined the fight at any rate. Members of the committee come from many parts of the country, and their interests are varied. Each one has a contribution to make.

The committee is subdivided into three basic subcommittees to allow each member to contribute according to his interests. The subcommittees are Government Affairs, Research and Technology and Industry Affairs.

The Government Affairs Subcommittee has tried to develop new programs and to strengthen the old; to discuss new methods of financing; to watch and guide state legislation; and, in general, to encourage a rapport with the Department of Housing and Urban Development which will be of benefit to all architects involved in government subsidized housing. Unfortunately, recent chaotic conditions at HUD have made productive work in this area most difficult. We are ready, however, to do all that we can.

The Research and Technology Subcommittee has studied criteria for planning and design based on the researching of existing housing projects. It has made proposals for the study of codes and their effects and for developing criteria for the design of housing for the handicapped. It has studied the development process of an architect's patentable design for a hillside living unit. And, finally, it is working on a contribution for a massive project in a southern state which can be a living laboratory for information gathered by the Housing Committee.

The Industry Affairs Subcommittee deals principally with the National Association of Home Builders and is in the strange position of trying to interest other architects in doing work which the members of the subcommittee find so enjoy-

Mr. Elkington is chairman of the AIA Housing Committee and maintains a practice in St. Louis.



able and lucrative. The day of the \$25 set of plans is passing quickly. The projects are becoming more than "just housing." Many complexes include recreational areas and shopping centers and are, in fact, total communities. And the greater the competition, the greater the opportunity for the architect.

In my opinion, this is a specialty that is best handled by a firm whose principal is interested in the many facets of the developer game. The services can run through site selection, market surveys, programming, site planning, the design of all structures and interiors and, finally, sales aids and tools.

To render these services requires, in addition to the architect's normal skills, a knowledge of the market and of how to take economical advantage of both financing and the project's site. Not all builders desire the full services of an ar-

In the fight for better living conditions for all Americans is the AIA Housing Committee. But it is still looking for ways to overcome public apathy and government nonaction in the lower income field.

chitect, but the architect should be ready to perform. He must keep abreast of current trends. And since the purchaser, or user, is an anonymous client, a continuing customer reaction analysis is necessary in order to determine current design criteria.

The contract form is varied. The fees are dependent upon the architect's track record and his ability to capture the market. Fees should not be taken too lightly. An architect friend of mine in California has had royalties of \$60,000 a year; another in the Middle West has received \$35-to \$40,000 annually. This in spite of a fluid money market!

For architects who are interested in entering this field, the committee is preparing a brochure on "The Developer as Client." This publication will be submitted to the Institute's Board of Directors for approval and, if all goes well, it should be ready for distribution early next year. Write for it!

In addition to trying to interest architects in developers' work, the committee has prepared a presentation for the NAHB convention in January. The featured speaker is Archibald C. Rogers, FAIA, who is the AIA's new president. This undertaking is an attempt to promote an understanding of the AIA's national growth policy and to gain support of its proposals, the scope of which is broad.

Although it is active on many fronts and is accomplishing many things, the Housing Committee has not been able to find the key to overcoming public apathy and government nonaction in the field of housing for low and moderate income families.

We are told that in a large Midwest city, the monthly maintenance in public housing varies from \$16 for scattered site housing to \$85 for "reservation" style housing. So we contemplate: Who are the poor? And do the "classified poor" know that they are poor? What kind of housing does this market desire? What is adequate housing, and does it vary from place to place? Will all new housing construction reduce the need through the process of move-up? Are architects paying lip service to a need, or are they really confused about the methods of solution? Can, or should, we do anything? We wonder. □

Profile of the President

Archibald C. Rogers F.A.I.A.

How does a 20th century architect justify living in a 17th century mansion? People often ask him that question, says Archibald C. Rogers, the new president of The American Institute of Architects. He lives only in the "new" wing of the house, he explains. Actually, this is new only in comparison with the rest of the building. It was constructed in the 1730s.

But Rogers' choice of a historic farm near its antithesis—the modern urban center of Baltimore—is not really out of character. It reflects the diversity which characterizes his life and his work. Arch Rogers chooses to live in an antique-filled farmhouse, yet enjoys a reputation as an urban futurist; he raises tobacco but no longer smokes; he devours mystery stories, but his conversations are peppered with quotes from such philosophers as Paul Tillich and Jacques Maritain.

This diversity naturally leads to his view of the architect as generalist, a generalist whose purpose, in what Rogers calls one of the few remaining nonspecialist professions, is to synthesize solutions after considering all varying viewpoints. "The more facets an architect can recognize and negotiate into a design," he says, "the more effective his end product will be."

By way of example, he analyzes the design of a hospital. To develop the design, he notes, "one must fully understand a hospital's purposes: What does a doctor do? What are patients' greatest needs? To miss one factor is to produce an inferior product."

Rogers realizes that some architects whose view of architecture is less all-encompassing consider him a theorist. But he has discovered through his own experience the advantages of a diversity of interests. It was, in fact, his ability to combine disciplines that led him to the forefront of his profession and eventually to the AIA's highest office.

As early as the 1950s, Rogers came to the national Institute's attention. It was then that public consciousness was focusing on the areas of urban design, environmental impact and the question of effective land use. Rogers, having pursued these interests on his own, was already conversant in all three areas. He was a natural source when the AIA tapped new

members for its committee on urban design. Over 10 years this committee had grown in scope and direction and eventually gave birth to a group of urban specialists and architects in the form of a five-member (later six) National Policy Task Force. Rogers was its chairman.

When the task force published its first report in 1972, Rogers' influence was readily apparent. Called a "Strategy for Building a Better America," the plan urged that the government acquire land for the development of neighborhood-sized "growth units." Each unit, whether new or rehabilitated, was to be designed to include all neighborhood elements: homes, churches, schools, shopping, etc.

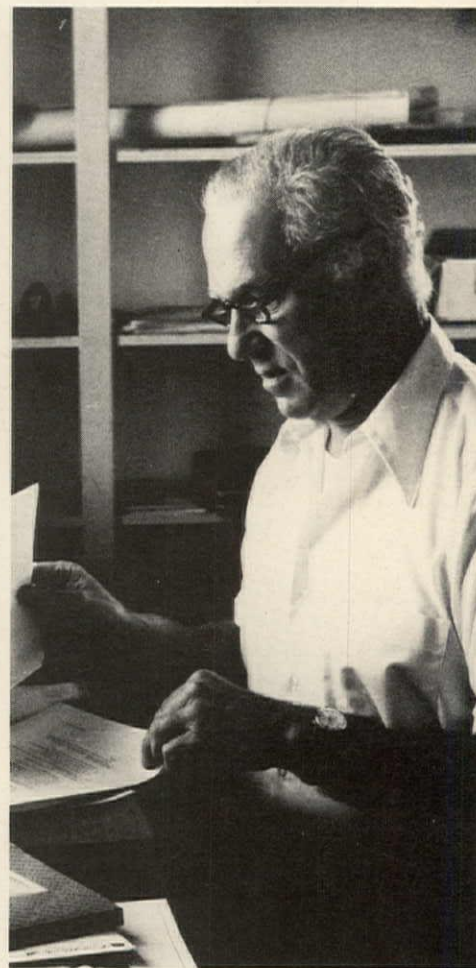
But the report was just the beginning. The plan had to be presented convincingly to the profession and the public. Rogers took it upon himself to do much of the presenting. As an advocate before Congress for the task force proposals and later its spokesman before the public, he promoted the policies in a manner so engaging that he sold himself as well as the product. Demand to hear him speak increased, and in 1973 alone Rogers has had over 200 speaking engagements on behalf of the AIA.

With the groundwork solidly laid, the task force was discharged in December. In this year of his presidency, Rogers anticipates enactment of several of the task force recommendations into law.

Rogers has not synthesized changes through the AIA alone. He is chairman of the board of RTKL Associates Inc., a Baltimore architecture and planning firm which he founded in 1946. The firm has multiple interests, dealing not only with individual structures but in such areas as community design, new towns and systems design.

Through his firm, Rogers in 1967 was able to promote one of his ideas which has since received widespread application: using design-team units to tackle urban design problems.

Baltimore was then facing what seemed an insurmountable question of highway placement. Opposing factions had been asserting their various pressures and had been clamoring for attention for several years. Rogers, a past president of the



Baltimore Chapter AIA, was asked by the chapter to take an interest in the proceedings. Urging that the local power holders look at the question of highway placement not as a problem but as an opportunity to design a new urban environment in the process, Rogers, drawing on his background within RTKL, set forth guidelines which led to a uniting of all the required disciplines into one urban design concept team. Money came from the Highway Trust Fund—a "first" in that the fund was used for other than narrowly defined highway purposes.

RTKL had applied the concept-team idea before and continues to do so, especially in the areas of urban renewal. Through RTKL guidance, Hartford, Connecticut; Baltimore; Jacksonville, Florida; and downtown Cincinnati all came to revitalize their own urban cores. In Cincinnati, RTKL's suggestion to set up a

The door to a vital humanistic architecture must be opened even more, maintains new Institute President Archibald C. Rogers, FAIA. He sees public service as the key.



decision-making panel for considering alternative designs allowed the city to find a way to redevelop its downtown area after three earlier plans had failed. Rogers says of this accomplishment: "The key to success was the redesigning of the decision-making procedure, not the architectural plan which, in the draft, was similar to the earlier ones that failed." Cincinnati's renewal efforts were award-winning ones for RTKL. The firm has been honored three other times for outstanding architectural projects.

The single RTKL work that Rogers most respects is the Church of the Redeemer in Baltimore. From a design standpoint, he considers it a work of art—and art remains of utmost importance to the man. When he defines his career choice, playing on Winston Churchill's wit, Rogers describes the architect as "an artist, wrapped up in a professional, surrounded by a businessman." Of these roles, he believes, primacy belongs to the artist.

Rogers was graduated from Princeton in 1939 with a BA in architecture (he received an MFA in 1942) and, like many new graduates at that time, he held the more limited view of the architect as artist only. That element was his reason for becoming an architect: "I wanted to create art and my one concern was how I could

get people to commission my work," he recalls.

An object lesson came his way to expand his definition of the architect early in his career. As an apprentice architect hard at work in his firm he was assigned the sole responsibility for designing the top parapet for Tiffany's then-new jewelry store on New York's Fifth Avenue. Rogers was elated. (He had always found drawing difficult and worked endlessly to improve it.) He labored assiduously at his assignment, finally producing what he considered to be a work of art. When he saw the building in place, however, it was readily apparent that no point on the street offered even the slightest view of his design. A lesson was learned: Art work was important, but not everything to architecture. Getting people to appreciate it was going to take more than the creation of an "artful" design. Ever since, it has typically been Rogers' theoretical concepts rather than his designs that have gained him recognition.

Since founding his firm, Rogers has constantly sought to broaden his outlook on architecture. Acting as co-chairman of the Soviet-American Symposium on Architecture and Urban Design and later as chairman of two other symposia focusing on Indian-American and Israeli-American

design has afforded Rogers a chance to teach and learn architecture at an international level as well as to travel (one of his keenest outside interests) with his wife Lucia, whom he married in 1947.

Advancement to Fellowship in the Institute came in 1967. In addition to his contributions to the profession of architecture, he has given extensive service to community affairs. Rogers has held positions on the Governor's Council on the Arts in Maryland, the Expressway Advisory Committee of the Maryland State Roads Commission, the Anne Arundel County Zoning Commission and its Sanitary Committee, the Greater Baltimore Commission and its Planning Council, the Maryland Board of Examiners for Registration of Architects, and the Architectural Review Board for the D.C. Redevelopment Land Agency. He is a trustee of Princeton University and a lecturer at the Virginia Theological Seminary.

Rogers sees his year as AIA president as an opportunity to explore still other architecture related areas. For example, he sees the mid-career architect as a person often caught in the routine of day-to-day practice. "This mid-careerist," he says, "could likely benefit by taking mini-sabbaticals involving returns to architectural schools, or travel, writing and research projects that would offer him a new approach to his work."

Rogers also wants to promote a re-study of the AIA's current code of ethics. He feels that certain of the present standards may no longer be applicable because of changes within the profession, and that parts of the existing code might be re-drafted or eliminated to prevent what he terms "an imposed hypocritical behavior upon the AIA Board and the members."

He is also concerned with bringing the AIA into a greater attitude of public service. Design assistance teams to aid in the aftermath of major disasters is one example of the type of function Rogers says architects could offer.

Rogers feels that the door to a vital humanistic architecture must be opened even more, and that public service is the key. As a man of generalist views, Rogers seems likely to hold that key. *Carol Rose, staff editor, AIA Publishing Services.*

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AIA JOURNAL



Struggles and Stalemate

Michael B. Barker

This issue of the AIA JOURNAL on housing comes at a particularly timely point in the difficult struggle and emerging stalemate between the White House and the Congress over major domestic policies, Watergate notwithstanding. Last month I attended a meeting of what is dubbed the "Ad Hoc Housing Group" here in Washington. This is a group of public interest organizations advocating improved housing, particularly for low and moderate income people. The group meets to plan strategies for political action in the cause of better housing for the nation.

The tone of the meeting was one of frustration and anger, with intermittent doses of resignation. It was observed that like two prehistoric creatures locked in an obscure death struggle, the Administration and Congress do battle while those who need and who advocate better housing sit incredulously and disparagingly on the sidelines. The formerly action-oriented interest groups have become befuddled and somewhat mesmerized spectators. In the meantime, the Administration's freeze on spending for the existing housing programs means that very little subsidized housing is getting built. Those who cannot acquire decent housing without subsidy must wait while these two clumsy giants play out their struggle in a rhythm which seems detached from the needs of the nation.

As an introduction to a set of excellent articles contained in this issue, I would like to lay out how we got to where we are and provide some glimpses on where we should be going. In my view, there are four major potent forces at work: 1) the thrust of new federalism, 2) the housing grant program mess, 3) the realization that physical shelter cannot do it all, and 4) the environmental movement.

The new federalism that the Administration has been pushing during its tenure is manifested in the housing area by a decentralization of decision making over housing needs and programs from the federal level to the state and local levels. The logic of "power to the people," which on the face of it seems as practical

as it is sincere, has been seen as neither by housing advocates. Indeed, those who have fought long and gallantly for housing subsidy programs have observed that state and local government inaction caused the centralization of the programs in Washington in the first place.

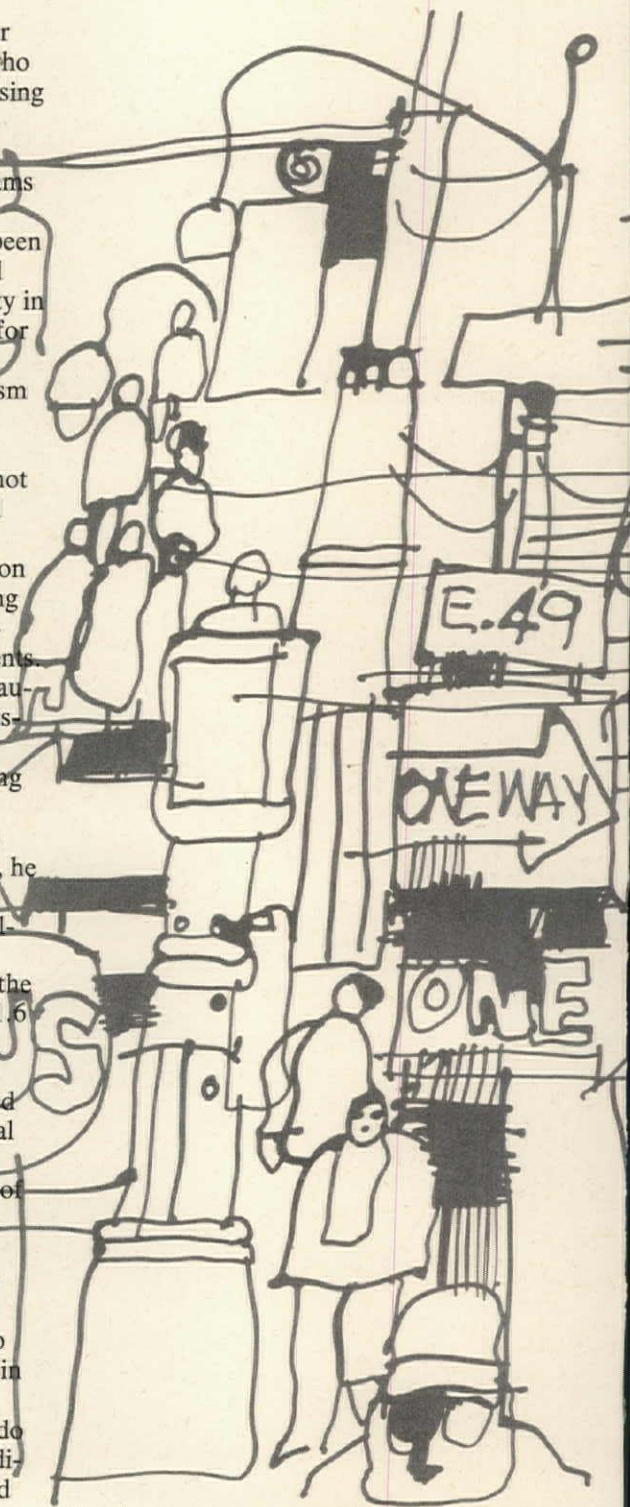
Further, it is argued that there has been no substantial new evidence as to local governments' willingness and capability in housing to indicate that these reasons for centralization have been reversed. In brief, the net effect of the new federalism in respect to housing is a major withdrawal of publicly subsidized housing. However, the housers themselves are not free from justified criticism and partial blame for this retreat.

Over the years, the housing legislation has been continually amended, resulting in over 200 individual categorical programs often with conflicting requirements. Architects know well the costs of bureaucratic bungling and red tape in the housing programs. George Romney, when Secretary of the Department of Housing and Urban Development, openly admitted that the housing legislation was virtually impossible to administer. Yet, he brought production of housing, particularly under the 236 Program, to an all-time high. Indeed, as Secretary Lynn's paper points out, in the past five years the federal government subsidized nearly 1.6 million units of new housing and over 400,000 units of existing and rehabilitated housing, more than was subsidized in the preceding 34 years of the national housing program. But, in spite of this performance, the housers' burlesquing of the grant mess gained uncontrollable momentum. The old categorical grant programs would be simplified and consolidated. This mess provided the Administration just the excuse it needed to stop funding these programs and bring in the ideas of new federalism.

The realization that housing cannot do the whole job has added an additional dimension to the struggle. In the early and mid-60s, a rising social consciousness in the nation caused the Congress to respond with larger and larger appropriations for urban renewal, model cities and housing. It was the conventional wisdom that these

hardware programs could go a long way toward solving our toughest social issues.

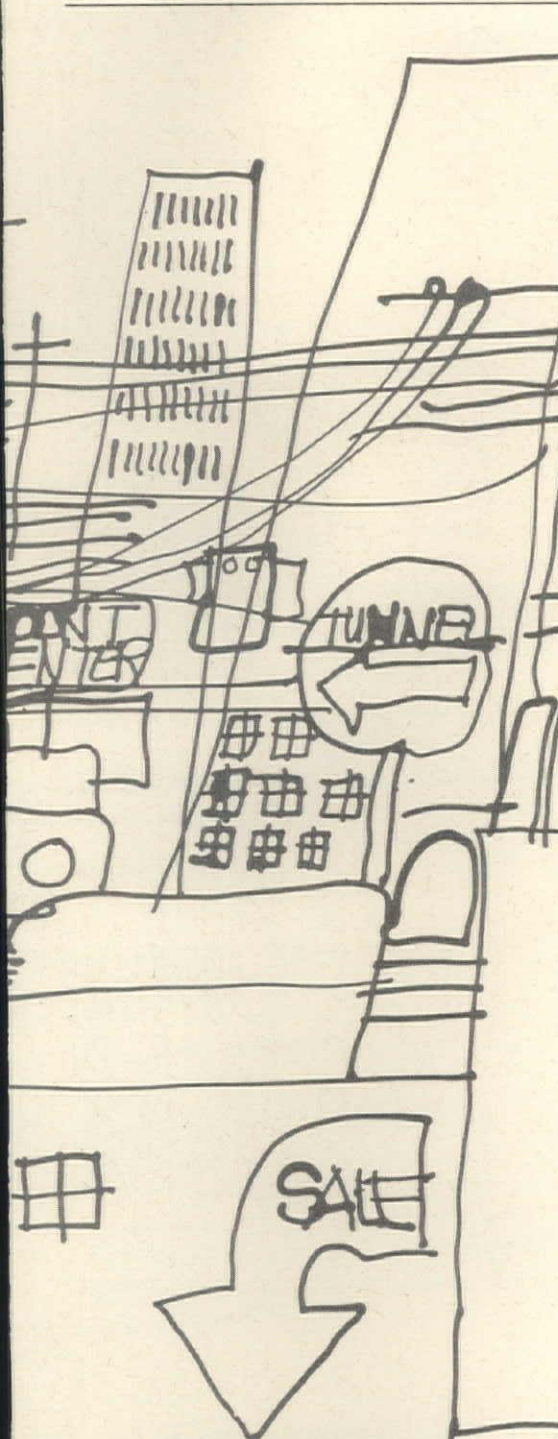
In the late '60s and early '70s, the realization dawned that good physical plans alone, as in the case of Pruitt-Igoe, would



Mr. Barker is administrator, AIA Department of Environment and Design.

Those who have fought long and hard for housing subsidy programs have seen them all end up in Washington due to state and local government inaction. Now, the Administration's freeze on spending means that little subsidized housing is getting built.

To get out of this impasse, it is essential that the Congress, the Administration and the Institute cooperate on an agenda to build a new constituency not for housing alone but also for community development.



Drawings by Michael David Brown

agement and other social services were as important to low and moderate income families as physical facilities.

It wasn't long before the media and academicians began demonstrating with vigor the failure of the housing programs to solve the nation's social ills. Slowly, but inevitably, the constituency for housing subsidies dwindled, particularly as subsidized housing entered the suburbs. Putting it bluntly, Congressman Thomas L. Ashley (D.-Minn.) said: "The problem is obvious. Housing has been overtaken by the race issue." Many liberals began to peel off and gravitate toward the "environmental movement." The Kaiser Commission Report can be seen as a last gasp of the massive public support which backed housing programs. This fine report was little read and most certainly little acted upon.

On top of all of this, along comes the environmental movement which, of course, has been long overdue but has, in its explosive emergence, caused aberrations that have a deleterious effect on housing. The "no growth" movement, which is gaining momentum around the nation, in many instances is but another device to save suburban communities from providing shelter for low and moderate income families, some of which may be black. Wilbur R. Thompson's enlightening piece gets at this question.

The environmental movement has claimed many of the former supporters of housing; thus, where housing was once fashionable as a cause for liberals, it is paling for many beside the resplendent but less controversial environmental cause. I believe it is simply easier for Americans to identify with a hillside being bulldozed for subdivisions—a hillside, incidentally, which they enjoyed as open space prior to its development—than to the shelter needs of low and moderate income people whose lifestyles they do not share. This represents a fundamental value shift in the American populace.

Where does all this leave us? In the immediate future we will probably see an extension of some or all of the existing categorical grant programs by the Congress without an "anti-impoundment-of-funds" provision. The Congress knows

that it will not be able to override the President's threatened veto if the Proxmire amendment to the housing legislation (one that prevents the President from impounding housing funds) is a feature of the bill that is sent to the President for his signature.

Put simply, there will be no major federal commitment to subsidized housing in the next few years. In a two- or three-year time frame ahead, I see the following agenda for the Congress, the Administration and most certainly for The American Institute of Architects:

- *Integrate* federal community development assistance such as renewal, model cities and neighborhood facilities with the federal housing assistance programs; housing cannot be detached from its community setting.
- *Consolidate* the categorical grants in housing and community development into a more flexible block grant or revenue sharing format so that balanced community development programs can be established and funded with some continuity and in response to local need rather than bureaucratic regulation.
- *Maintain* the federal interest in national housing goals by appropriate strings, i.e., funds should not go to communities which discriminate against low and moderate income families (black or white), whereas priority funding should go to those metropolitan areas which can put housing near jobs on a regional base.
- *Increase* the federal level of effort in housing until state and local governments can adequately demonstrate a willingness and capability in meeting national housing goals themselves. Continue production subsidies as well as "creative economics" (mortgage supply and interest subsidy programs) while the various forms of direct cash assistance to families for housing are studied and evaluated.
- *Build* a new constituency for community development, housing and environment around the growth unit idea proposed by the AIA, an idea which can implement social, economic and physical goals. This is a unique opportunity to resynthesize a constituency in the country around the idea of a quality environment, both man-made and natural. □

not create a stable society or a suitable living environment. Yet the momentum of the physical determinists carried on into the late '60s and early '70s with only a growing awareness that counseling, man-

The Issues As Seen by the Administration

James T. Lynn

On September 19, President Nixon submitted to the Congress and the American people his recommendations for a new national housing strategy, a far-reaching series of proposals charting a new course in our nation's search for solutions to its pressing housing needs.

Since that time, these proposals have been the subject of study and debate at hearings and conventions, in boardrooms and city halls, alternately applauded, criticized or endorsed with certain provisos, depending upon the spokesman's assessment of America's housing needs and, concurrently, the community development needs of our nation.

But while opinions may differ, a consensus is evident amid the debate: Nobody wants the housing and community development situation in this country to stay the way it is today.

The growing disenchantment of the past few years with many aspects of the federal housing effort and with the major federal programs dealing with community growth and redevelopment has matured as full-scale dissatisfaction. This was nurtured by skyrocketing housing costs, an alarming shortage of mortgage credit and a growing awareness that despite the commitment of billions of dollars we still haven't fulfilled the nation's housing goal of "a decent home in a suitable living environment for every American family."

This unease is shared by housing and urban experts, by the political leadership in states and communities as well as at the national level, and certainly by the ultimate consumer, the American public. Just as certainly, The American Institute of Architects has shared in this disenchantment with the existing categorical urban development programs and the traditional housing programs.

As your First Vice President Archibald C. Rogers noted in testimony July 27 before the Senate Subcommittee on Housing and Urban Affairs, the AIA's concern with the process of community development stretches back some 10 years. And your views, as expressed by Rogers, are much in line with our own.

Mr. Lynn is Secretary of the Department of Housing and Urban Development.

We on the federal side strongly agree that "for too long the nation has been struggling in a quagmire of red tape in our community development programs"; we share your conviction that "operational characteristics (of the traditional grant programs) leave much to be desired"; and we welcome the broad support of the AIA and its members of initiatives to consolidate the present patchwork of categorical grant programs for community development.

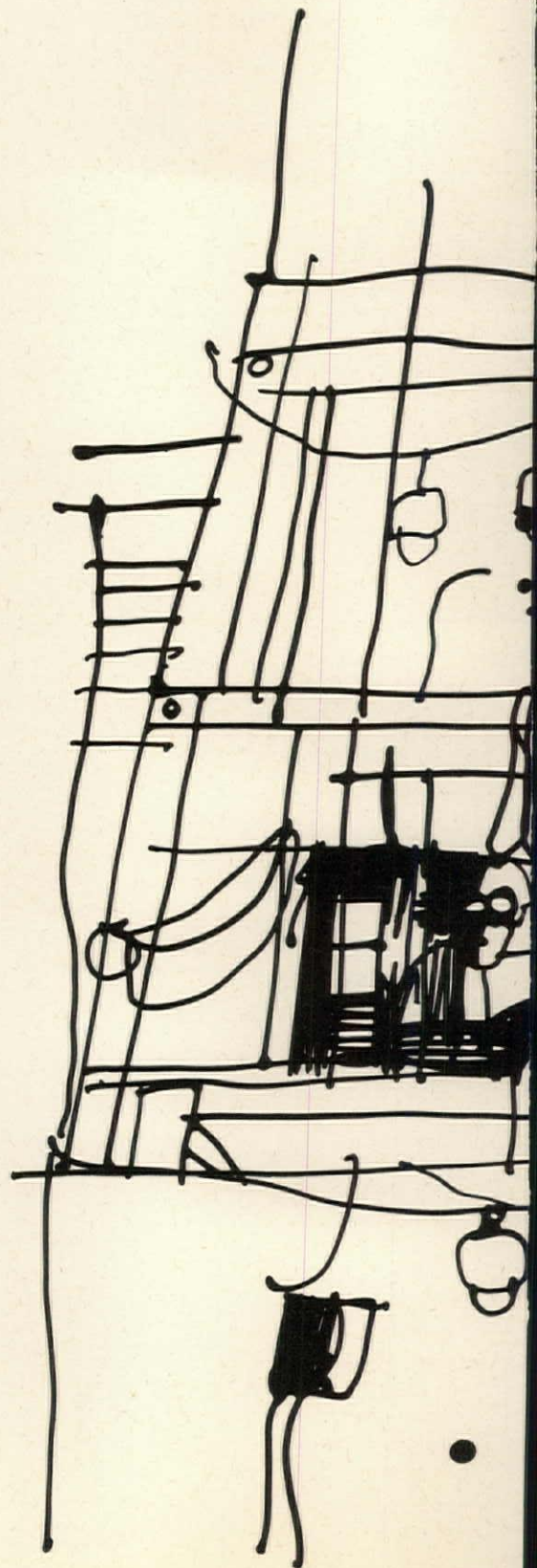
As you know, the proposed Better Communities Act is designed to do just that: to replace the categorical programs with a special revenue sharing system that would enable local leaders to use federal funds for community development in accordance with local priorities and objectives.

I am aware, of course, that we differ to some degree on how best to achieve it, but our ultimate goal is the same: the design and development of quality living for every American.

Enough of BCA for awhile; I was asked in this article to discuss the President's Housing Policy Recommendations. I would note only that the BCA and the housing policy are closely related and together form a legislative package recognizing the impossibility of devising a housing policy without taking into account all the community development problems of our nation.

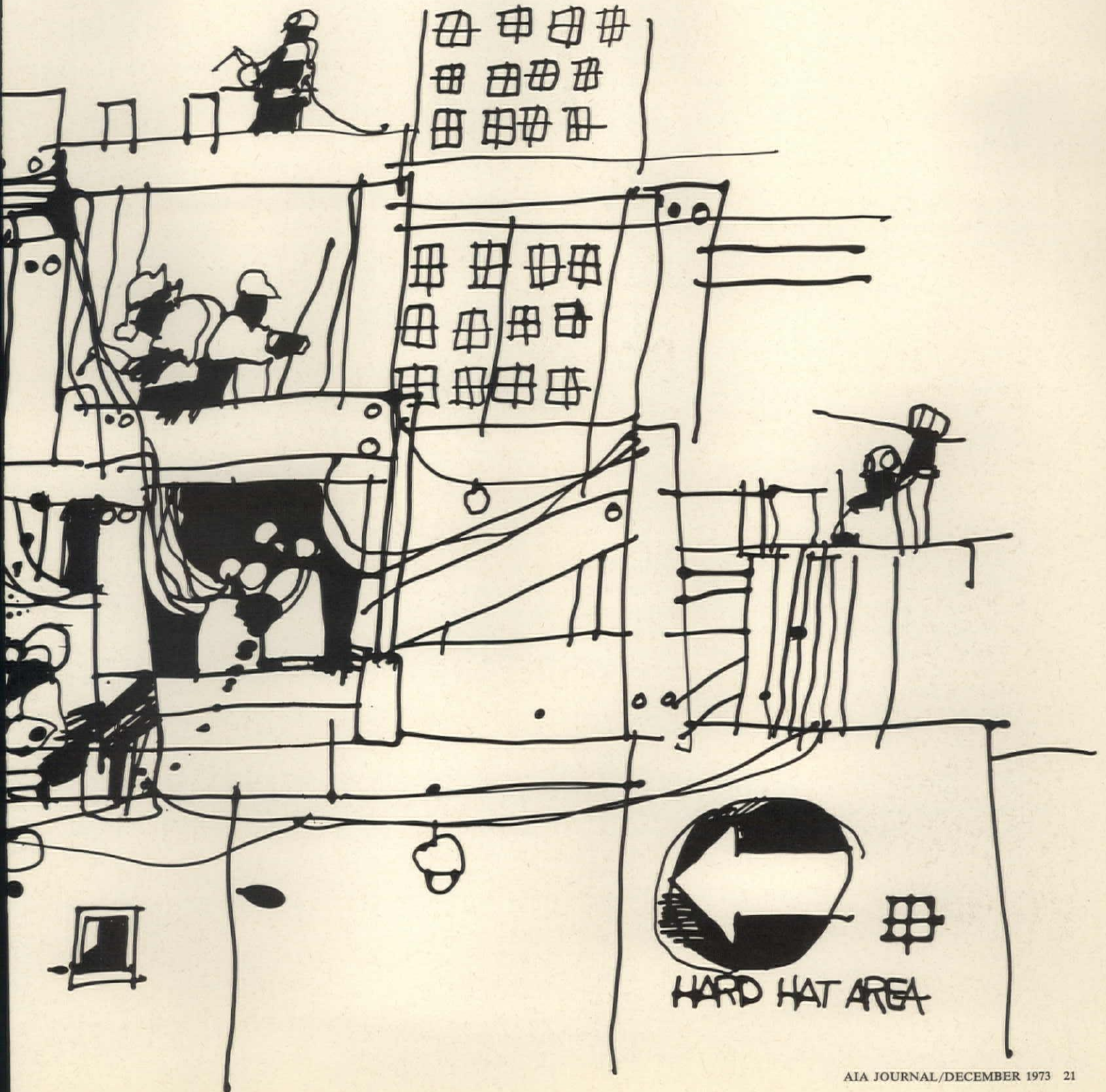
Before getting into the proposals, let's cover the AIA's own general opinions on housing policy. I say "general opinions" because this is the framework within which they were offered by William L. Slayton, your executive vice president, in response to my invitation for AIA participation in our housing policy study. Regrettably, the results of an in-depth study being conducted by the Institute's special Housing Policy Task Force were not available in time for the May 1 deadline for submission of proposals to our own Housing Policy Review Task Force. I am confident that your findings, when they are available, will be of special interest and value to my agency, the Administration and the Congress.

With respect to the AIA's opinions on housing policy cited in Slayton's letter, I



To solve our housing needs, President Nixon proposes, in three ways, to help alleviate the immediate mortgage credit problem and to improve the long-term supply of housing credit and people's ability to use it.

The Administration also favors direct cash assistance to the underprivileged and is now seeking the necessary information to make a decision in 1974 or early '75.



Subsidized housing is not coming to an end, however. The President envisions some federal construction as being an integral part of the housing future.

am gratified to note that many of them—the major ones—are directly and positively addressed to the President's new housing recommendations.

The AIA felt in April, when the Department of Housing and Urban Development's study was still underway, that 1) housing allowances were "a promising approach" to housing the poor; 2) greater emphasis should be put on the use of existing housing and limited use on new construction to meet housing needs of low and moderate income families; and 3) the federal government should play a stronger role in stimulating supplies of mortgage money.

The AIA's recommendations are identical to the major thrust of the President's proposed new housing policy. The President's recommendations also recognize the validity of the AIA's admonition that some new construction will be needed in areas with low vacancy rates to avoid inflating costs and rental of existing housing.

Our response to this problem lies in the 200,000 housing units cited in the President's housing message: Of this number, 50,000 units will be for leased existing housing; the remaining 150,000 include 75,000 units for new construction for leasing, the other 75,000 will be to meet previous commitments, involving limited use of Section 236 and Rent Supplements. This is in addition to about 124,000 units already in our pipeline.

The President's legislative and administrative proposals cover a number of related areas. One of these is to help alleviate the immediate housing credit problem and to improve the long-term supply of housing credit and the ability of people to use it.

The easing of mortgage credit would be accomplished in three ways; two have already been accomplished administratively.

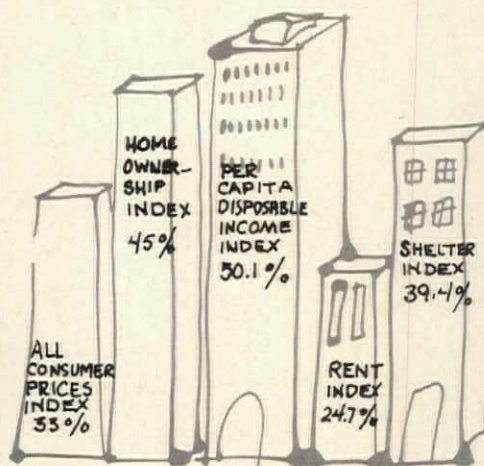
The Federal Home Loan Bank has instituted a new program of "forward commitments" covering some \$2.5 billion in loan commitments to savings and loan institutions.

On October 5, I announced the procedures by which HUD's Government National Mortgage Association will operate the \$3 billion Tandem Plan assistance for home buyers announced in the President's

Message on Housing Policy proposals. GNMA began on that date to provide money for mortgages insured by the Federal Housing Administration at an interest rate below current market rates.

The Administration is asking the Congress to authorize increases in the permissible mortgage amounts of FHA-insured loans, both for single family and multifamily units. The present limits were realistic when they were set in 1968, but the ceiling and down payment terms are totally unrealistic in today's market.

To improve the supply of housing



COSTS OF HOME OWNERSHIP AND RENTING COMPARED TO PER CAPITA DISPOSABLE INCOME

credit for the longer term, thereby making it easier for both urban and rural homeowners to obtain decent housing, the Administration has made the following legislative proposals:

- To permit home buyers to pay market-level interest rates and still be eligible for federal mortgage insurance. This procedure would eliminate discount "points" which too often raise the price of the home, the size of the down payment, the cost of insuring the property and the magnitude of the property taxes and mortgage payments.
- To authorize more flexible repayment plans under federally insured mortgages. What HUD is looking for is the authority to innovate on a careful experimental basis with different approaches, for example, gearing the level of repayments to expected changes in family income. A

young family earning less would make smaller payments in earlier years, larger payments would come as its income grows.

- To establish a mortgage interest tax credit to ensure a steady supply of housing credit. A tax credit on interest earnings—of up to 3½ percent—would be given to financial institutions that invest a certain percentage of their portfolios in residential mortgages. This credit would rise to the full 3½ percent when at least 70 percent of a portfolio is invested in residential mortgages.

- To further the development of private mortgage insurance companies. Such private companies, performing a function like those of the FHA, Veterans Administration and Farmers Home Administration but at lower premium rates, recently have become a significant factor in the housing market. We will, therefore, be submitting legislation aimed at allowing these companies to purchase inexpensive federal reinsurance.

These are the primary tools we are putting to work or requesting from the Congress to ease the current credit situation and improve the availability of credit, the lifeblood of our housing efforts.

They are desperately needed, designed to lengthen our strides toward the national housing goal and build upon past accomplishments. And our progress has been considerable. In the past five years, we have built and the federal government has subsidized nearly 1.6 million units of new housing and over 400,000 units of existing and rehabilitated housing. That is more subsidized housing than was built in the preceding 34 years of the national housing program.

And yet, as our housing study confirms, the subsidized housing programs have left a great deal to be desired both from the social and economic points of view. As the AIA noted in its Senate testimony, there is a need to "change the ground rules that now shape, and distort the shape, of American communities." The AIA's "opinions" paper also recognizes the Section 23 leasing program as one approach to "providing more housing options, permitting the dispersal of low income families and helping avoid concentrations of the poor."

The goals of the Administration and of the AIA are identical when it comes to housing, the HUD Secretary points out.

Though suggested methods to achieve these goals differ, it must be possible to cooperate in an atmosphere of mutual respect in order to get to the roots of the problems.

This viewpoint, too, dovetails with the Administration's approach. In our view, the existing housing stock is not only a vital national resource that must be conserved but also a vital human resource, a supply of almost instant housing for the poor, now destined to wait out admission to public housing or new housing that may not be available for years.

In addition, families have been offered subsidized housing on a "take it or leave it" basis, which means that they lose their basic right to choose the house they will live in and the place they will live. Too often they are simply warehoused together wherever the government puts them.

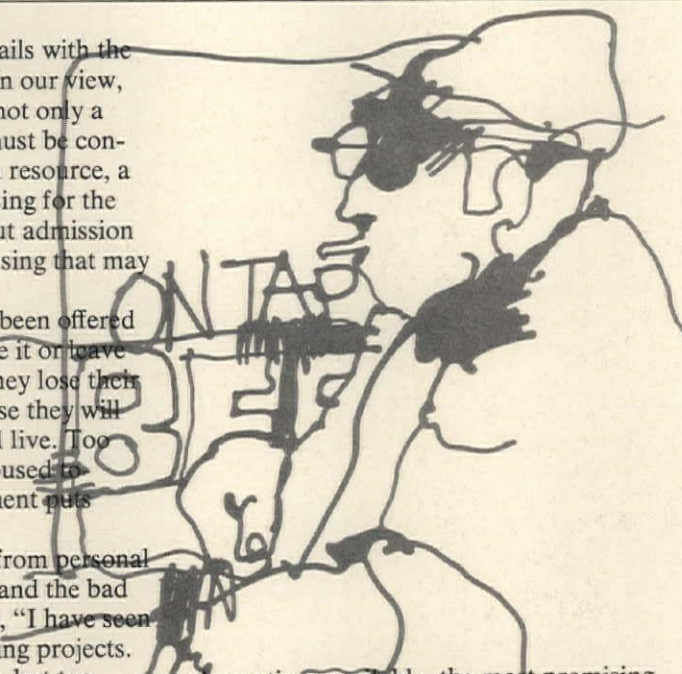
The President also spoke from personal knowledge of both the good and the bad in public housing. As he said, "I have seen a number of our public housing projects. Some of them are impressive, but too many are monstrous, depressing places: run-down, overcrowded, crime-ridden, falling apart. The residents of these projects are often strangers to one another, with little sense of belonging. And because so many poor people are so heavily concentrated in these projects, they often feel cut off from the mainstream of American life."

The President also pointed out that rather than treating those in equal circumstances equally, the present system arbitrarily selects only a few low income families to live in federally supported housing, while ignoring others. In fact, of every 15 persons eligible for housing assistance, only one actually gets it—an unsatisfactory 6 percent.

There has to be a better way to help the 3 million American households that still live in substandard housing.

The President pointed out that the main flaw in the old approach to meeting the housing needs of low income families was in its underlying assumption that the problem of the poor was "lack of housing rather than lack of income." He noted that the old policies attacked the symptom rather than treating the root cause: the inability to pay for housing.

"Not surprisingly," the President said, "our recent housing study indicates what others have been saying: Of the policy



alternatives available, the most promising way to achieve decent housing for all of our families at an acceptable cost appears to be direct cash assistance."

He made the point that in the long run, direct cash assistance would appear to be the most equitable, "a policy that will work, not a policy where success will always be a mirage."

In other words, we believe that by the direct cash assistance approach we would maximize the utilization of existing decent housing, afford low income families freedom of choice and reduce the cost per family as compared with the present approach, which focuses on subsidizing new housing construction.

An operational program would call for cash assistance that would be scaled to make up the difference between what a family could afford for housing on its own and the actual cost of decent housing in the area. We have come up with an estimated funding figure of \$8 billion to \$11 billion a year. For that reason, this kind of program will have to be phased in over a number of years. Quite probably, the first phase would cover the elderly poor.

But the President also warned that as with any new approach, "We must also move with caution."

Consequently, we at HUD will continue to experiment with the direct cash assistance approach and will increase our

efforts in this direction. The President said he believed we will have the basic information we need to make a final decision on this approach late in 1974 or early in 1975.

Meanwhile, however, we are not getting out of the subsidized housing business entirely. This is a point I wish to stress—and stress strongly—with the AIA and other important organizations.

As mentioned earlier, the President has called for additional approval in this fiscal year of 200,000 subsidized units, 150,000 of which would be new construction, about half of these under Section 236 programs to fulfill assurances to urban renewal agencies, community developers and for rehabilitation compacts and agreements with local governments.

We would administer one of these existing programs (Section 23, construction for leasing) to make maximum use of the freedom-of-choice principle inherent in the concept of direct cash assistance. Eventually, with Congressional authorization of our proposed new construction program, we would expand the development and ownership of projects under Section 23 to private builders.

I want to make it clear that this construction program is not a temporary phase. We envision some federal construction as being an integral part of the housing future, particularly in those areas of short housing supply where the introduction of direct cash assistance might otherwise drive up the cost of housing and rents.

While I have already touched on the points where we agree, I would be less than candid if I did not add that there are substantial differences between us.

However, I am strongly convinced that people of good will can disagree yet continue to work together in an atmosphere of mutual respect. The AIA and HUD have had a long and productive association and our goals are identical—to achieve what the President called for in his housing policy recommendations:

"The American dream cannot be complete for any of us unless it is within the reach of us all. A decent home in a suitable living environment is an essential part of that dream." □

Capitol Hill Has a Different View

George Gross

The President's housing recommendations, submitted to the Congress after nearly eight months of study, fall into two categories: proposals to 1) alleviate the current mortgage credit crisis and 2) terminate existing federal programs aimed at improving the conditions of low and moderate income families in favor of a new system of cash assistance.

In the first set of proposals, the President recommended the setting of Federal Housing Administration rates at market levels, increased FHA mortgage ceilings, a \$2.5 billion program of forward commitments" by the Federal Home Loan Banks to member savings and loan associations, and resumption of the Government National Mortgage Association tandem plan.

These approaches involve very little that is really new and much that is merely a repetition of past techniques. For example, existing law already permits the making of forward commitments to savings and loan associations and the provision of GNMA special assistance to the mortgage market, which could have been implemented by the President at any time. Existing law also allows the Secretary of the Department of Housing and Urban Development to establish the FHA interest rate at market levels; and the plan to increase FHA mortgage ceilings was approved earlier this year by the Housing Subcommittee.

The second set of proposals—those dealing with the Administration's alternatives to our existing housing assistance programs—has been presented to Congress with a lack of precision unmatched by any past Administration. HUD Secretary James T. Lynn and other Administration spokesmen may believe that they are engaged in a meaningful dialogue as to the best way a new housing program might be structured, but the most critical issue in the majority of observers' minds is whether it can fairly be said that the President has any serious commitment at all to fulfilling the housing needs of the nation's lower income families.

Mr. Gross is counsel, Subcommittee on Housing of the Committee on Banking and Currency, US House of Representatives.

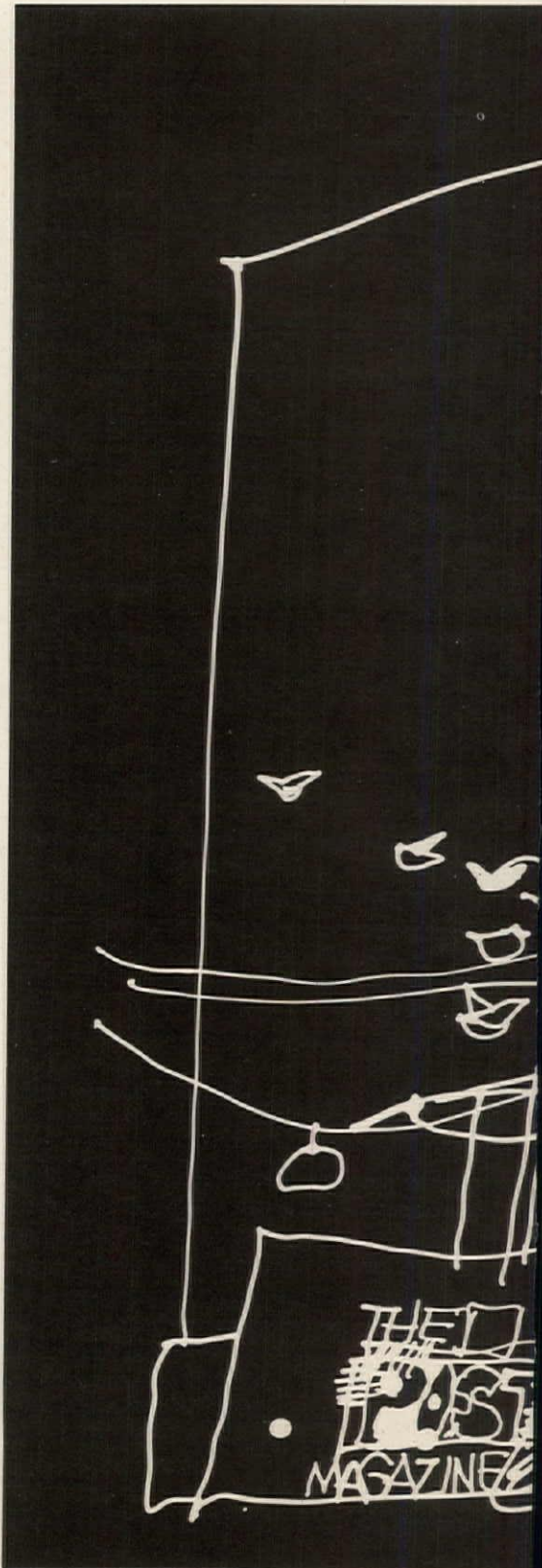
Let me try to summarize the elements of the Administration's housing strategy as I understand them from various HUD statements, specific housing legislation submitted to Congress and accompanying administrative actions:

- The suspension of the Section 235 homeownership assistance program and construction programs authorized under the public housing law would be continued and all of them legally terminated under the provisions of the Administration's housing bill (HR 10688).
- The suspension of the Section 236 rental assistance and rent supplement programs would be lifted during the current fiscal year in order to fulfill various forms of commitments made by HUD prior to January 5, 1973, and these programs also would be legally terminated under the provisions of HR 10688.
- Some activity (by no means clear how much) would continue under the Section 23 leasing program, but with administrative changes which, according to many witnesses, could make the program unworkable for new construction. This program, too, would be legally terminated under the provisions of HR 10688.
- A new program is recommended to subsidize up to 20 percent of the rental units in newly constructed projects under a revised Section 23 program, which would continue indefinitely as a minor component of a national housing allowance strategy. Numerous witnesses have testified that, as presented to Congress, the new program would be unworkable.
- Finally, further experimentation is recommended in the housing allowance demonstrations initiated in early 1973. A theoretical preference for cash allowances for housing over existing program techniques is asserted, with a report and legislative recommendations promised to Congress in late 1974 or early 1975.

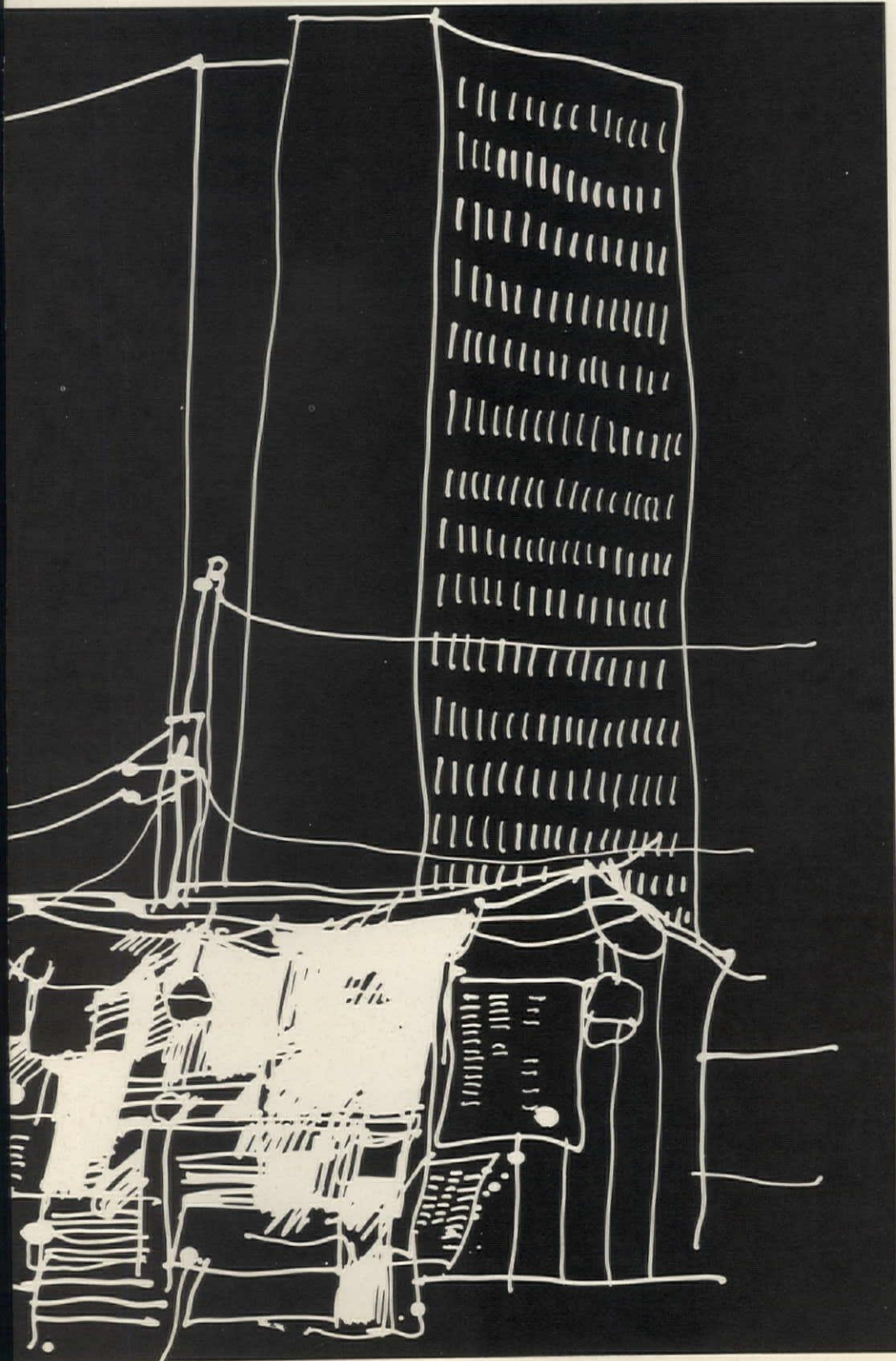
There is, of course, very little in this brief summary to engender confidence in the President's commitment to housing the poor. Indeed, the Administration appears to have gone out of its way to scatter ominous hints that cash allowances for housing will remain merely an attractive *idea*.

Thus the President's long-awaited hous-

We've heard that song before, is an attitude among Congressional leaders when it comes to the President's proposed housing program; it's merely a repetition of past techniques.



The President's proposal regarding ease of mortgage credit covers ground that already is covered, lawmakers say; his cash assistance programs have been presented to Congress "with a lack of precision unmatched by any past Administration."



ing message devoted far more space to stressing caution on adopting this "most promising approach" to the matter than to discussing the advantages of cash allowances. The legislation submitted to Congress echoes this caution by stating that the purpose of cash allowance experiments is to determine "whether a policy of direct cash assistance to such families, with first priority to the elderly poor, *can be* put into practical operation [author's italics]. The legislation also asks Congress to base national housing policy "upon the disciplines and economics of a free housing market," an unclear but nevertheless foreboding admonition.

Many members of the Housing Subcommittee believe that it is a trap to spend the next several years debating the pros and cons of cash allowances for housing and to be lulled with temporary and limited housing measures. It is inconceivable that the Administration would pursue a housing policy estimated by the President to cost \$8 to \$11 million annually when fully operational, with excellent prospects for ever-increasing costs in future years. These members think that Congressional efforts should be directed toward developing a realistic and enduring housing policy as expeditiously as possible.

I hope, but really do not expect, that the Administration will realize the irresponsibility of its approach and join Congress in this effort. Without its cooperation, of course, those interested in maintaining the nation's commitment to housing the poor must work more resolutely than in the past.

The Barrett/Ashley proposal for housing block grants is intended to resolve some of the major difficulties plaguing the existing assistance programs. I am convinced that the benefits that would accrue to communities and to low and moderate income families as a result of its adoption would be substantial, and I am happy that The American Institute of Architects endorsed this bill at our recent hearings.

The benefits of the housing block grant program can be summarized as follows:

Unified community development and housing programs. Cities of 50,000 and over could plan their community development and housing programs on a unified

Many members of the Housing Subcommittee believe that it is a waste to debate pros and cons of cash allowance and of temporary and limited housing measures when a realistic and enduring policy is so sorely needed.

If Congress and the Administration cannot cooperate in reaching our goals, then those interested in maintaining the nation's commitment to housing the poor must work even harder than in the past.

and coordinated basis. They would receive two block grants simultaneously: one for community development and one for housing. The housing block grant would enable them to carry out the requirement contained in the community development legislation. The immediate availability of housing subsidy funds, under the city's control, would end the common situation of renewal land planned for housing remaining vacant because subsidy funds were unavailable.

Flexible use of funds. Cities could use housing block grant funds for the same basic activities now financed by HUD, i.e., interest subsidy and rent supplement payments, rehabilitation loans and grants, leasing of units and "seed money" loans to nonprofit sponsors. However, they would be free to use the tools they most need in their communities, which is not true under the existing categorical programs. For example, many cities can use far more leasing or rehabilitation loan and grant funds than are now available to them; yet because of the specific dollar amounts available for each of these programs, which overemphasize production needs, municipalities are forced into the production programs, which are far more time consuming and costly. Other cities, with tight vacancy rates and growing populations, need far more production subsidies but

must settle for much smaller amounts. The housing block grant program accommodates the needs of both types of cities, permitting each to concentrate its subsidy funds on its particular requirements.

Removal of strict federal criteria which hamper housing construction. The Barrett/Ashley bill would eliminate existing law governing mortgage and income limits, restricted use of existing housing and the amount of subsidy per unit. Specifically:

1. HUD would set *mortgage limits* through the prototype method, thus recognizing regional differences in land and construction costs.
2. *Income limits* would be set at 80 percent of median income in each metropolitan area, removing the anomaly of different income limits in neighboring communities.
3. Maximum subsidy per unit would be liberalized so as not to exclude very low income families.
4. No restrictions would be set on the use of the existing housing stock, permitting cities to deal effectively with their local housing conditions.

Mortgage credit at lower interest rates. New housing assisted under the program could be financed at lower interest rates, allowing a given amount of housing subsidies to reduce rentals to lower levels in order to serve lower income families.

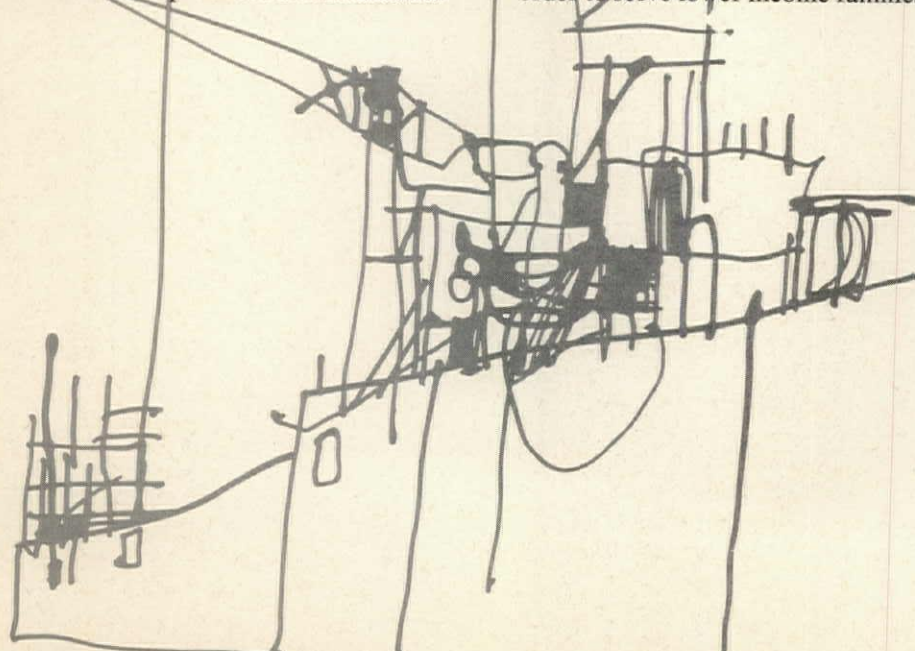
Long-term financing would be provided in this manner.:

- FHA mortgage insurance at market rates
- federally guaranteed *tax-exempt bonds* where the housing is to be *publicly owned* (as by a local public housing authority)
- federally guaranteed *taxable bonds* with a 30 percent interest subsidy by HUD where the housing is to be *privately owned*.

The first two methods continue provisions of existing law; the third, however, is a new financing tool which might work this way: A state housing finance agency, for instance, would borrow a taxable rate, say, 8 percent. HUD would fully guarantee principal and interest on the obligations, agreeing to pay the holders 30 percent of the interest on the bonds. This would reduce the effective interest rate to 5.6 percent. The state agency would lend the funds to a housing sponsor at the same rate, and the city would then use its housing block grant funds to write down actual rent levels for housing occupants even further.

The taxable bond-30 percent interest subsidy for state and municipal borrowings is proposed in the Administration's tax package as well. Its use in a housing program would encourage additional state efforts to the benefit of recipients and the Treasury, too, through the reduction of costly tax-exempt borrowing.

Upon introduction of HR 10036, Congressman Ashley said: "We believe the country's cities have the capacity to develop and carry out the housing assistance programs called for in the bill. Four-fifths of the nearly 500 metropolitan cities are involved in either the low rent public housing program, the urban renewal program, or both. More than half of these cities are currently involved in both programs. These figures demonstrate that our metropolitan cities have substantial experience in carrying out housing activities and relating those activities to their community development programs. We believe that with sensitive and understanding policy guidance from HUD and with the full support of Congress, our cities will be able to translate that experience into more effective housing activities." □



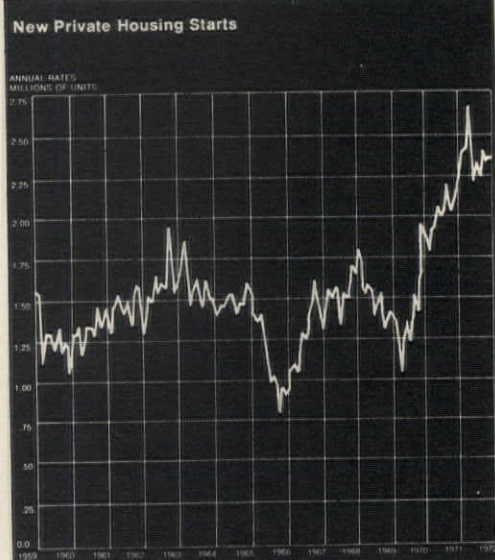
Where Did the Mortgage Money Go?

M. Carter McFarland

The other day a prominent mortgage banker observed that "a sense of *déjà vu* is settling over the housing industry." Roughly translated this means "I have a feeling that we've been through this before." He was referring to the growing shortage of mortgage funds for housing, and he is correct. We have been down this path many times before. In fact, within seven short years we have experienced a mortgage "credit crunch" in 1966, another in '69, and now in '73 a third episode is coming into full bloom.

What does this have to do with architects? Quite a lot to those who work partially or solely in housing. The supply of mortgage funds is the lifeblood of housing construction. When mortgage funds are plentiful, housing construction booms: Builders are happy, home buyers and home sellers are happy, and architects who are involved in the housing field find jobs and collect their fees.

As the accompanying chart shows, the story of housing construction over the years has been an erratic one of sharp sprints and slumps. This jittery pattern is



directly related to similar irregularities in the availability of mortgage finance. The credit crunches of 1966 and '69 are vividly reflected in the sharp downturns in the volume of housing produced. The cur-

rent credit crunch is only just the beginning, and its effect on housing starts is not yet dramatically apparent. But the experts are unanimous in predicting a slump in the second half of 1973.

Why this periodic disruption in the supply of mortgage funds and, consequently, in the level of housing construction? The answer is rooted in the nature of the country's financial markets and in the special characteristics of the financial institutions—public and private—which supply mortgage loans for housing.

Before we get into that, it would perhaps be wise to note another puzzling characteristic of the flow of mortgage funds. The supply of mortgage money is quite perverse because it moves in the opposite direction from swings in the economy generally. The economists call this counter-cyclical behavior. What it means is that when the economy in general is slack, mortgage funds tend to be plentiful and housing construction roars along at a robust pace. But when the general economy is booming, the supply of mortgage funds dries up or disappears, thus depressing the volume of housing production.

Both the great fluctuations and the counter-cyclical pattern of housing activity relate to the behavior of the money market. Just as there is a market for automobiles where buyers and sellers meet, there is also a market for savings. Here the sellers are those who have saved money and have capital to invest, while the buyers are the many organizations and individuals who try to acquire capital. The latter are large corporations who seek funds for expansion and the purchase of plants and equipment; small business concerns; local governments; the federal government which borrows on the capital market by the sale of notes and bonds; and home purchasers. (In the money market, too, are housing developers who borrow funds to finance the construction of rental housing.)

The price of capital funds (savings), which varies as supply and demand change, is, of course, the interest rate. The stock exchange is probably the best organized market where the supply and demand for capital meet. The demand for funds may take the form of *equity invest-*

ment, as in the case of preferred and common stock, or it may take the form of *loans* in the case of bonds and mortgages.

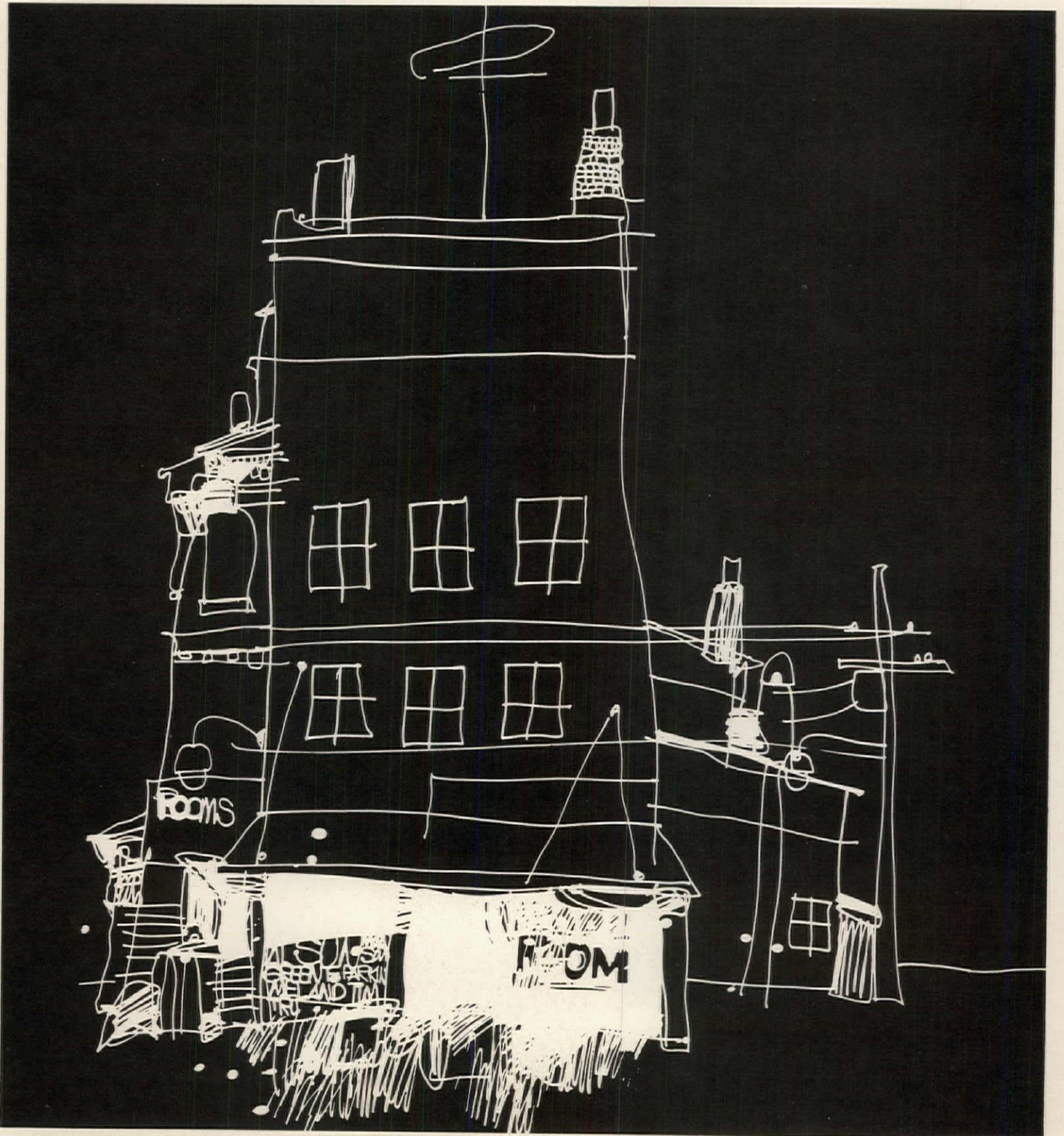
To understand why mortgage funds behave in the peculiar way they do, it is necessary to recognize the role of the Federal Reserve Board which, controlling and supporting commercial banks throughout the country, can greatly increase or decrease the amount of money and credit



Mr. McFarland is director, AIA Urban and Housing Programs.

The supply of mortgage funds is the lifeblood of housing construction. When it is plentiful, architects involved in the field find jobs, and all is well within the industry.

With tight money, loans become harder to get, interest rates higher and mortgage terms more conservative; potential borrowers disappear.



The relief in such disastrous cycles lies not only in the financial institutions but also in the federal government's manipulation of federal expenditures and taxation.

To help the situation, practitioners should do what the homebuilders are doing: lobby for the government to balance the budget.

available in the market at any given time. It does this in three ways:

- by changing the reserves that commercial banks are required to maintain in relation to deposits
- by changing the rediscount rate at which member banks can borrow from the FRB
- by purchasing or selling the government bonds which it holds.

These FRB powers are exercised to stabilize the economy. When the economy is slack, the FRB follows a loose money policy which produces a readily available supply on the money market at low interest rates; when the economy is booming and inflation threatens, the FRB often pursues a tight money policy which reduces the supply of funds available and pushes interest rates up.

To these changing conditions on the money market, the supply of mortgage credit reacts violently—more violently than any other segment of the economy. When money is tight and interest rates are high, mortgage money is hard or impossible to get; when money is loose and interest rates are low, the supply of mortgage funds is plentiful. This accounts for the sharp fluctuations in the volume of housing production shown in the chart. Why does the supply of mortgage funds and, as a result, housing production behave in this exaggerated way? The answer is threefold:

1. New housing construction and the purchase and sale of existing houses are extremely sensitive to increases in interest rates, which rise sharply when the economy is booming and the FRB is putting the brakes on by tightening the supply of money. A 1- or 2-point increase in mortgage interest rates will drive thousands of home purchasers out of the market. This contrasts acutely with borrowing by corporations which is quite insensitive to interest rate increases.

2. Commercial banks, major suppliers of mortgage credit, tend to specialize most heavily in business loans and feel a primary allegiance to business borrowers. Thus, when the supply of money gets tight, the commercial banks turn away from mortgage lending in preference of the more favored business loans. Many potential mortgage borrowers find that

credit is simply unavailable from commercial banks.

3. The lending institutions which specialize in mortgage lending and provide a large portion of mortgage loans—the savings and loan associations and mutual savings banks—themselves become the victims of tight money supply. When money is tight and interest rates are rising, the owners of savings accounts withdraw their funds and invest them in bonds or even the stock market where yields are higher. These thrift institutions lose millions of dollars in deposits and correspondingly have less for mortgages.

During a period of tight money, loans not only become harder to get and interest rates higher but mortgage terms also become more conservative, i.e., down payments are higher and loan terms are shorter. This drives even more potential borrowers out of the market.

The causes and effects which have been described have caused many people to observe that housing production and mortgage lending bear the principal brunt of the FRB's anti-inflation policies. Fifteen years ago these severe swings in housing production were considered inevitable by economists and monetary specialists. In recent years, however, there has been a growing awareness that this phenomenon had to be moderated and the supply of funds stabilized.

During recent years, too, some new institutions have been created and some old ones have developed new policies, all aimed at making it possible for housing to compete more effectively for credit in times of tight money. Chief among these institutions are the Federal Home Loan Bank System (FHLBS), the Federal Home Loan Corporation (FHLC), the Federal Nations Mortgage Association (FNMA) and the Government National Mortgage Association (GNMA).

Also involved are Federal Housing Administration and Veterans Administration guaranteed mortgages as well as certain private firms which provide mortgage insurance. The effect of all of these institutions is to create links between the mortgage and the securities markets, providing more funds for mortgages during periods of tight money through the diversion of

funds from the securities markets into mortgages.

It should be underscored that this new apparatus does not insulate the mortgage market from monetary policy and the effects of periods of tight money. But it does permit housing finance to compete more effectively with corporate and government finances.

The ultimate relief for the disastrous cyclical swings in housing production and finance lies not in the institutions just listed but in the federal government using other means than monetary policy to stabilize the economy. The alternative is fiscal policy, or the manipulation of federal expenditures and taxation. According to sound fiscal policy, the federal government's budget should show a surplus when the economy is booming. On the other hand, when the economy is sluggish, a budget deficit will offer a stimulant. Therefore, the best and simplest way to minimize the ups and downs in housing production is for the government to use fiscal rather than monetary policy to stabilize the economy.

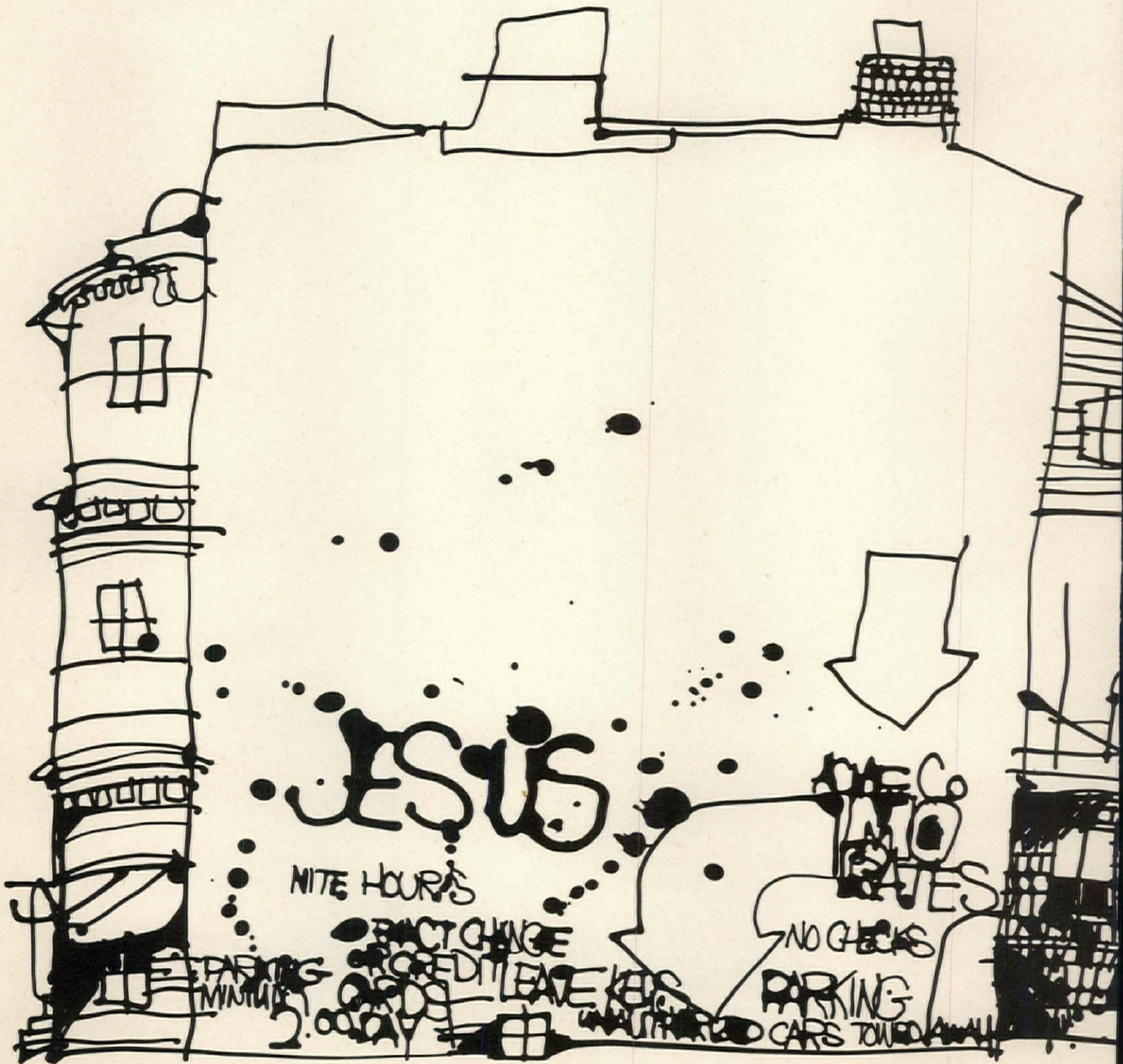
Despite the fact that all experts agree on virtues of fiscal over monetary policy from the standpoint of housing, the saying is easier than the doing. Today's situation is a good example. The economy is booming with a high level of inflation; it needs to be throttled down. The application of fiscal policy to this situation would require a budget surplus which means either a sharp curtailment in federal spending or an increase in taxes. Both of these are politically unpopular.

The President has said again and again that he will not raise taxes. In the absence of the proper fiscal policy to dampen inflation, the FRB has been forced to try to contain it through the use of monetary policy alone. So money is tight, interest rates are high and housing, as it always does in these circumstances, is suffering.

What should architects do about this situation? Practitioners, especially those involved in housing design, should do what the homebuilders are doing: lobby for the government to balance the budget (or even run a surplus) and cease relying on monetary restraint as the sole means of checking the economic upswing. □

Problems That Sprout in the Shadow of No-Growth

Wilbur R. Thompson



At first blush, this thing we refer to as no-growth seems to aim right along the lines to the target of our environmental movement.

If we ever did fully believe that raw growth was the universal solvent, we have been disabused of that naive notion for some time now. Today, almost as many places are trying to slow or stop growth as are seeking to promote it. Oregon has gained headlines over its invitation to come and visit but not, please, to come and stay, while in northern Mississippi, Tupelo, not to be distracted, still seeks "development" through growth and welcomes its steady influx of manufacturing plants, and nearby Corinth seeks to duplicate its "success."

Growth tightens the local labor market: good. There are considerable benefits bestowed by a) the process of growth and b) the larger size which is its inevitable consequence. It is appropriate to mention briefly a few of the more obvious benefits at the very beginning, both for perspective and also lest we forget. Raw growth in local job formation—of almost any kind and wage—acts to tighten the local labor market and serves thereby to raise and equalize incomes. The most able workers tend to be fully employed almost all of the time, and so it is primarily the less able who gain most as new jobs open up and as opportunities for upgrading improve. It is the lower income families who are most anxious to put a second earner to work, closing a little the income gap at the bottom.

But raw growth has even more to offer Tupelo, for with larger size the local economy becomes more diversified, and the local labor achieves greater balance and offers new opportunity. Winter seasonal demands for labor in some industries offset summer peaks in others, stabilizing employment. A variety of part-time work appears to fill the needs of the elderly, school-age youth, the handicapped and

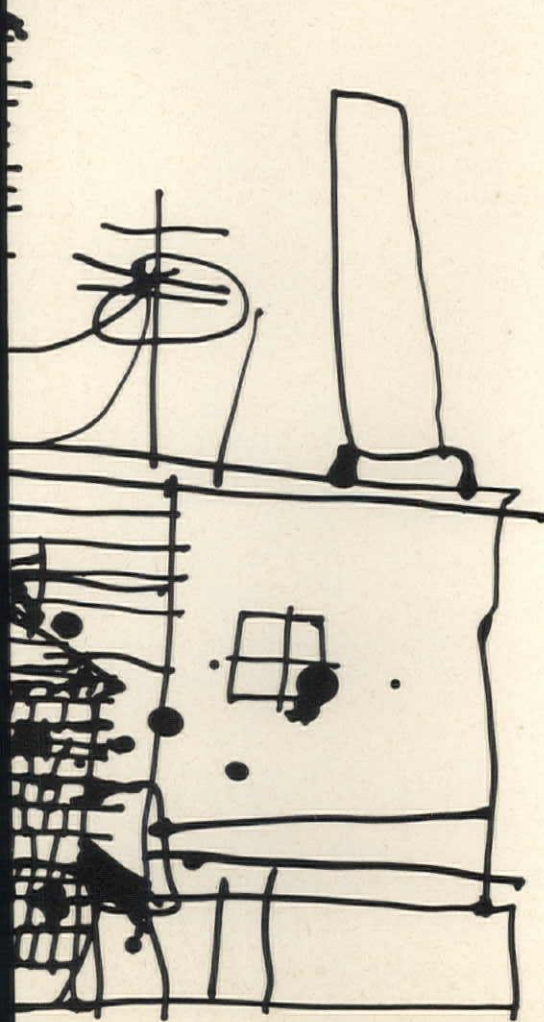
Mr. Thompson, urban economist, author of *A Preface to Urban Economics* and numerous other books and articles, has served as a consultant to national and local governments. He is presently a resident of Phoenix and is a part-time professor of economics at Wayne State University in Detroit and in the Urban Journalism Program of Northwestern University in Evanston.

women with children at home. A rich mix of products and services generates demands for a wide range of skills and puts in place "occupational ladders" that give real meaning to on-the-job training as an alternative to formal schooling.

Finally, only with a much larger urban scale is Tupelo likely to provide the variety of professional work that makes it possible—probable—to offer *both* an educated husband and his educated wife suitable employment. The most critical resource of all, talent, is increasingly offered in "joint supply," both or neither. In short, those who would, in the name of environmental responsibility, slow or stop the growth of local employment and population must accept serious labor market and manpower planning responsibilities.

Growth tightens the local housing market: not so good. A local economy may generate vigorous growth in employment because it has fast-growing industries: the automobile industry in the 1920s, electronics and space industries in the '50s and '60s, and perhaps the health industry in the '70s and '80s. Or a local economy can flourish on a base of old industries by acquiring a larger and larger share of that which at the national level are slow-growing industries, such as for instance textiles and apparel in the Piedmont. In either case, the local prosperity stimulates heavy in-migration which, added to the natural increase in local population, outruns the sluggish increase in the stock of housing. The unusually tight local labor markets in the Piedmont are, for example, matched with even tighter housing markets. Most important, even if the newcomers are a cross section of all income classes (and not largely poor, as popular impression has it), the shortage will be most severe and persist the longest in low income housing.

The supply of high income housing can be appreciably increased in a single building period—a year or so—and the price rise here will tend to be modest and short-lived. But low income families live, by and large, in old houses that have filtered down from earlier owners, and at any given time the supply of 40- to 60-year-old houses is limited, virtually fixed in supply. (How would you increase the supply of



Consider growth: It increases the tax base and tightens the local labor market; but then it also tightens the housing market, forcing compromises in our commitment to "social mix" and putting pressure on housing authorities to stick with repetitious apartment building design.

50-year-old houses!) The very poor can, of course, make painful sacrifices in other spending and bid away a few 40-year-old dwellings from the near poor, who will release them only if they, in turn, can bid away an even greater number of 30-year-old units from the middle class. Remember that all income classes are growing in number and therefore the near-poor also needed more dwelling units, even before they released some to the poor. Under rapid local growth, every time a given income class passes down a few extra dwelling units (beyond the normal rate of filtering), it greatly intensifies the short-fall in its own normal supply. In other words, the filtering down of used housing can be accelerated under growth pressures but only slightly, and even then only at a very sharply increasing supply price for housing.

Housing shortages: a compromise of urban environmental policy. An acute shortage of good used housing is problem enough, but there is further cause for concern in the various market and political pressures engendered by that shortage. Recall that in 1945, we came out of the war with a critical shortage of housing in all price brackets. This huge backlog demand for housing, primarily traceable to five years of war but reinforced by a decade of depression that came before, confronted the nation with a difficult choice: produce as many houses as possible with the least delay, or put to practice the best in residential design. Our individual frustrations with postponed marriages, seemingly interminable periods of being doubled up with parents and other factors overwhelmed our modest interest in better communities, and so the construction industry responded speedily to market dictates with the "efficient" production of vast tracts of what later came to be called ticky-tack housing.

Nationally, our current rate of housing construction has slipped well below the projected "need" of 2.6 million units annually, and this gap has widened appreciably wherever the local rate of population growth and household formation exceeds to a large degree the national average rate of growth. Our currently mounting housing shortage surely threatens new harsh

compromises with good practice in city building, especially in our most rapidly growing urban areas, precisely those places where most of our children will live. Our new-found concern for the protection of the natural environment is threatened in rapidly urbanizing areas by local housing crises as surely as it is being shaken by the energy crisis. The shift from traditional suburban building practice to experimental forms, such as new towns, is burdened by their high "opportunity cost"—the larger number of standard housing units foregone, and the longer waiting period needed to "do it right."

Turning to another dimension of potential environmental damage, architectural critic Ada Louise Huxtable has, in commenting on the Forest Hills project in New York City, expressed concern that rapid growth puts heavy pressure on housing authorities to stick with familiar designs, and not innovate. But replicating highrise public housing projects can hardly be defended today in light of the recent Pruitt Igoe project demolition in St. Louis and the findings of the New York University study team led by Oscar Newman, which estimated crime rates in interior public spaces in 13- to 30-floor buildings at seven times the rate per 1,000 families found in three-floor walk-ups.

We just cannot afford, in social cost, to stick with familiar designs that spawn some of our most serious urban problems. Which would you rather have: delays in relieving housing shortages or environments that nurture crime? Growth has its price.

Housing shortages: a compromise of urban social policy. Rapid local growth and severe housing shortages could also force serious compromises in fundamental social policy, as reflected, for example, in the strength of our commitment to "social mixing." Those who oppose residential desegregation by income and race gain a much stronger bargaining position if the proponents of social mixing must also worry about an inadequate total supply of low income housing, wherever located. Affluent liberals will be hard put to hold their poor and black allies in line if white segregationists offer their political support for increased low income housing

appropriations if the "mixers" will only drop their demands for mixing. To the poor, better housing *now* is likely to outweigh great moral heights to be gained down the line—the old "pie in the sky" internal tension of early unionism.

Again, housing allowances or rent supplements are currently much in favor as a less paternalistic way of moving the poor into better housing. In a slow-growing locality with a slack housing market, a high vacancy rate is protection against the risk of greatly inflating rents by simply handing out rent money—approaching low income housing problems solely from the demand side. But under the heavy pressure of rapid growth and tight housing, rent supplements may solve only the financial problems of landlords; working instead to increase housing supplies would seem to go more to the root of the problem. When housing is in short supply across the board, direct public investment, as in public housing, or construction subsidies to elicit private investment may be less permissive but more efficient.

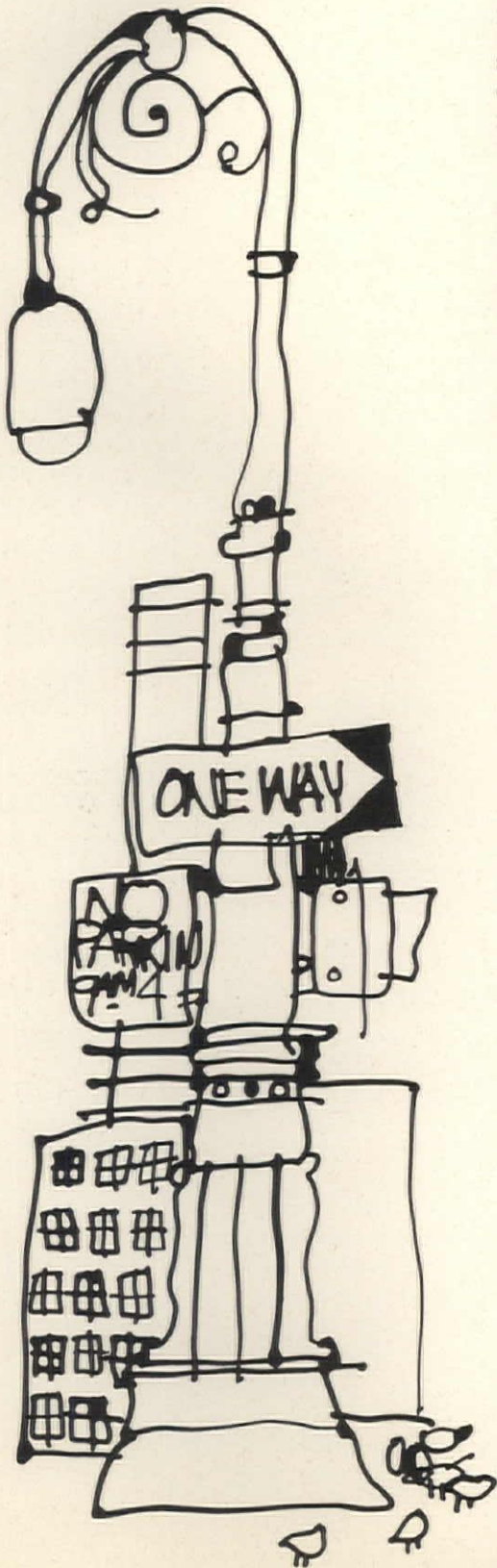
All in all, rapid local growth and a tight housing market would seem to threaten a host of national social policies and supportive city building practices that we faithfully preserve by dutifully transferring them from goals statement to goals statement ad infinitum.

Jobs or Housing: a Hobson's choice? Under vigorous growth, the marginal members of the local labor force find work and the distribution of income becomes less unequal, but these minimum-wage workers face a serious housing crunch which at least partly offsets their income gains. Much worse, those not in the labor force—the elderly, handicapped and female heads of households—suffer rent increases with no income offset. Local prosperity can impoverish some and in absolute terms, not just relative to others. Seen in this light, it is irresponsible to promote local industrial expansion without coupling this action to a low income housing program that picks up the pieces. But we do it all the time.

The rough outlines of this hard trade-off between full employment and good housing can be darkly seen in the results of some recent surveys. In a study for the

But to try to slow local growth by slowing housing construction is to work backward: Local land values and house prices would skyrocket, driving the poor out of town.

And the case for no-growth — the protection of the natural environment — is highly suspect when the protectors live on huge lots with two or more cars in every driveway, making waste the good old American way.



National Academy of Sciences, Thomas Pettigrew calls our attention to a 1968 survey of Detroit blacks in which "three of the six chief perceived causes of race riots relate directly to housing: 'poor housing,' 'overcrowded living conditions,' and 'dirty neighborhoods.'" And "four of the seven issues considered by Miami blacks as 'big problems' for them involved housing." Both Detroit and Miami were, during the '60s, high growth areas, and the blacks are, of course, at the bottom of the housing ladder.

The focus sharpens when we compare the survey finding that "rural and small-city blacks reported far greater housing improvements than big-city blacks." (Slow-growing towns?)

One can, on the basis of other surveys of Detroit carried out by the Wayne State University Center for Urban Studies, make a reasonably convincing case that in the late '50s, a period of local stagnation beyond that of the nation, the problem of the poor was unemployment; and, in this boom year 1973, the local problem of the poor is housing. Growth or no-growth presents a Hobson's choice.

"Best" rate of growth: whose? Ideally, an urban area would, to the extent that it could, sort out and weigh the many benefits and costs associated with various rates of local growth and then move to control its own growth. Clearly, we have much more to learn about these matters but, beyond that, there is little evidence that we are in a position to manage local growth in the social interest.

Two serious complications come to mind:

1. We are not all of one mind on the "best" rate at which to grow.
2. The process of growth is a complex compound of unpredictable disequilibrating forces, as well as the more predictable equilibrating tendencies on which most economic theory rests.

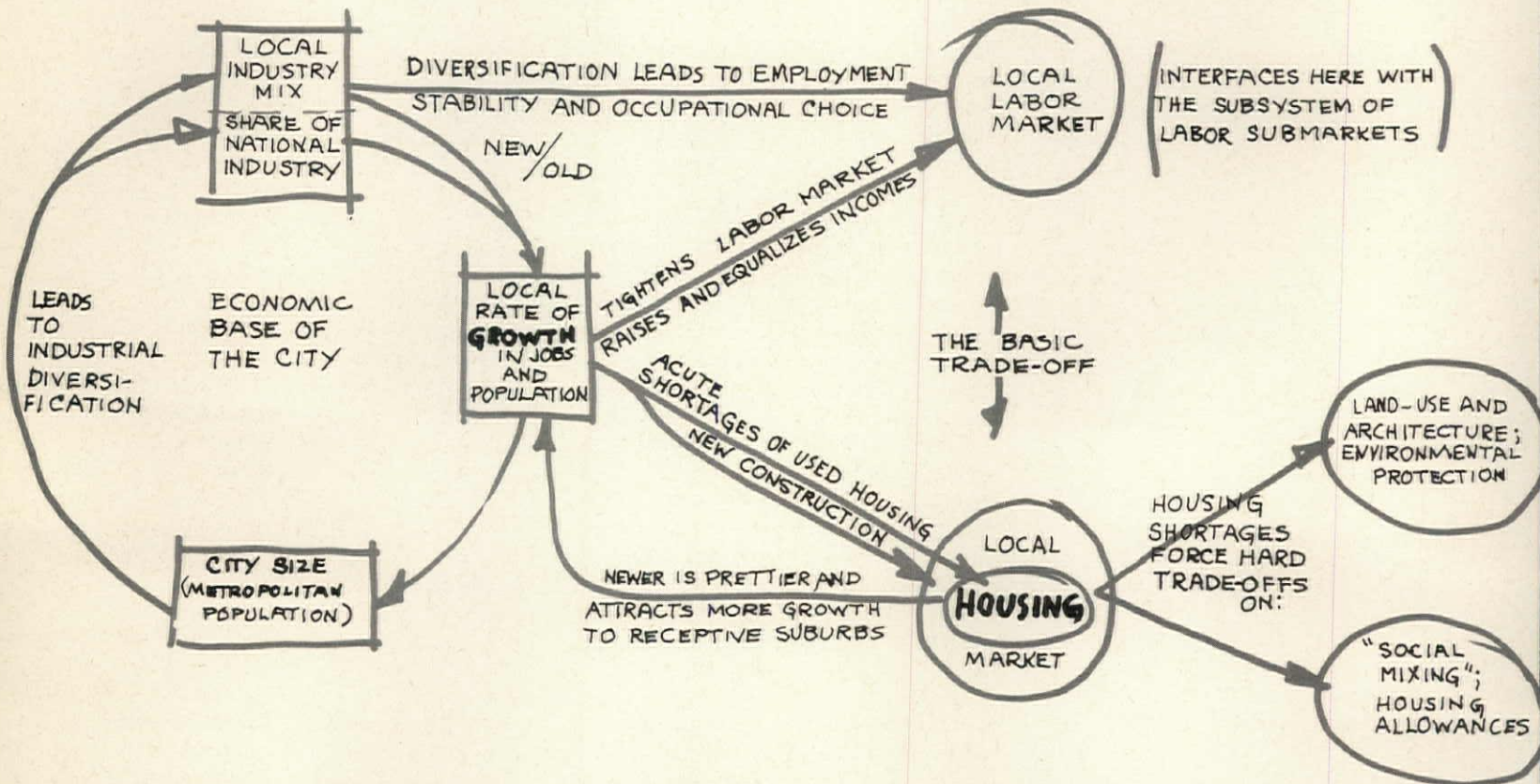
Local policies designed to slow growth, favored by some, will be resisted by others who benefit from economic expansion. First, and most obvious, we have the local property owners who stand to make sizable capital gains from rising prices of land and buildings, not the least of which is that most numerous class, homeowners,

whose gains are more than just "paper profits" to the degree that they are heavily mortgaged (i.e., have been "trading on the equity"). Perhaps next in importance are the owners of businesses serving the local market: bankers, retailers, real estate brokers and, of special interest, the local newspaper that molds public opinion. Harder to evaluate, the marginal members of the labor force—the last hired and first fired—may not in themselves be a power to be reckoned with, all power to the people notwithstanding, but may in coalition with their champions, the old-line liberals, add a strong voice for local economic expansion.

Conversely, there are many whose interests are served by slow growth or even no-growth although, at least until recently, these groups seemed to be much less aware of their self-interests or perhaps just less vocal. The group most vulnerable to the strains of rapid growth and the ones with probably the least political clout are renters who are not in the labor force, who have little if anything to gain from a tightening of the local labor market and who must rent in a tighter housing market. But they are joined today by a swelling number of amenity seekers: affluent residents living on out-of-town property income; wealthy, nonresident, second-home owners (so common in the northern New England states); and amateur ecologists, professional radicals and assorted new-style liberals, all much more articulate and knowledgeable about the nature and uses of political and economic power.

Faster growth: younger and prettier. The management of local growth is made even more difficult by the presence of "disequilibrating tendencies" not unlike those suggested by the old homilies "success breeds success" and "when it rains, it pours." Rapidly growing places are bright and clean and do attract more growth, just as declining places begin to wear out and look it, and are increasingly hard to sell to footloose business prospects. Gene Clabes reported from Evansville that a major petroleum manufacturing corporation rejected that city as a location in part because its directors preferred a community that was growing at

However, as long as we permit and encourage simple centrifugal growth around urban areas, we will have all the problems of boom and bust. Does the answer lie in Zero Population Growth, in spite of declining tax bases and other ills that would accompany it?



ONE PERSPECTIVE ON THE **GROWTH AND HOUSING** SUBSYSTEM OF THE LARGER URBAN SYSTEM

an annual rate of 2 to 3 percent (well above the national average rate), in sharp contrast to Evansville's ½ percent. If bigger is not better, newer is usually prettier.

Even in the large metropolitan areas that tend to grow at the national average rate there is a strong bias toward accommodating even the most rapid growth. A run-of-the-mill growth rate, such as the typical 14 percent of the 1960-70 period, becomes leveraged upward into a decennial rate of 100 to 200 percent in the suburbs and downward into 10 to 20 percent declines in central cities. As long as we permit and encourage simple (-minded?) centrifugal growth even in the largest urban areas, growth will strike these areas very unevenly, bringing all the problems of boom and bust. And those local governments most in charge of growth where it is occurring—the suburbs at the building frontier—are typically new, naive and

weak, and see their own self-interest in rapid growth.

Suburban self-interest in growth lies not just in additions to tax base. More and more, we have all become sophisticated about the additional local expenditures required to service that growth. More subtle (and perhaps only dimly perceived) is the arithmetic of aging.

Suburbanites take pride in the fact that their environment is new and attractive, and they would like to remain young forever. But the only way that a community can continue to have, say, one-half of its housing less than 10 years old is for it to double in size every 10 years. (The reader is invited to work out the immutable arithmetic.) Not to grow that fast is to age, inexorably; and to age is usually to become poorer.

No given community can, of course, grow that fast for very long; annexation

is not all that easy or open-ended. But this merely means that the baton must be passed from one "exhausted" suburb to another, each of which can remain young and affluent, temporarily, by maintaining a dizzying pace in new construction. That is to say, with no effective regional government and with "untrammelled rights of private property," the basic metropolitan area growth decisions are made by the newest, youngest and most naive political subdivisions on the narrowest of grounds and, typically, "all systems are go."

No-growth: conservation or self-indulgence? The question of the day is: Can attractive communities choose, effectively, not to grow? A no-growth strategy begins typically with such tactics as denying building permits or delaying utility extensions into new residential subdivisions. While the effectiveness of these actions will undoubtedly vary with the circum-

Could a socially responsible policy at higher levels of government, blended with sophisticated city management, turn depopulation into an opportunity?

ZPG could open up and speed the recycling of our sick inner cities. The time may be near when we may unload our towns and try again.

stances—and our experience here is so limited that early predictions must be highly speculative and provisional—some of the more unpromising situations invite tentative comment or first reactions.

Suppressing residential construction in a place like Boulder, Colorado, seems destined to produce some unhappy side effects, unless handled with great care and sophistication. Located within easy commuting distance (30 miles) of the center of Denver, a metropolitan area growing at double the national average rate, favored by a beautiful mountain setting in an age of affluence, leisure and outdoor recreation, founded on the growth industry of higher education and drawing the typical research and development spinoffs, Boulder pursuing no-growth is like having four aces and trying to lose.

To try to slow local growth by slowing housing construction is to work backward. This seems, at least at first blush, to be analogous to containing inflation by capping it with price controls, without taking the supporting monetary and fiscal actions. A good guess is that local land values and house prices would rise sharply if the growth pressures were restrained for very long. Presumably nothing has changed the attractiveness of Boulder as a place to live. In fact, to the high bidders—the educated and affluent of the Denver area—this already favored place, now protected from invading hordes, could easily be even more attractive than before. All in all, it is hard to avoid concluding that this, for some, primrose path avoids the pitfalls of growth by driving the poor out of town. This may not have been the proponents' intention but "the road to hell." And the "poor" could come to include college instructors with families bigger than their incomes.

The long-run outlook for this quick-and-dirty approach to growth control is no better. Why would the courts validate a tactic which holds the local population in check by rationing out the poor? How does this differ in effect from large-lot zoning and other land use devices that create all-high-income communities, devices that are being overturned one after another in a continuing series of court decisions? The sincerity of any brief for

the case of no-growth—the protection of the natural environment—is bound to be highly suspect when the protectors live sprawled over half- and full-acre lots, with two or more cars in every driveway, and when they make waste in the good old American way. Any policy which permits the local inhabitants to hold their numbers in check simply so they can push their consumption per capita to the limit would seem to be more self-indulgent than environment-concerned.

Still, one can imagine the "judge" responding more sympathetically to a community that came for the support of a no-growth policy that was: a) founded on strong land use controls that looked with special favor on multiple dwellings and/or cluster development; b) synchronized with a public transportation plan that reinforced low fare (or no fare) transit with selective automobile tolls and prohibitions; c) designed to bring home and work to within walking or bicycling distance in many circumstances; and d) was, of course, financed so as to make ample provision for subsidized low income housing. A serious agenda of good faith should precede the exercise of the power to deny admission to town, that is, to restrict the rights of others.

Instead of trying to control city size by restraining residential development, it seems much more logical and efficacious to go directly to the heart of the matter and control the job formation that generates that growth, to work from cause to effect. Returning to the example above, Boulder could choose instead to argue, before the State of Colorado, the case for decentralizing the University of Colorado, spinning off parts to other attractive sites.

This is not at all unrealistic; the medical school is already in Denver and community colleges have become nearly universal means of siphoning off excessive growth from main campuses. Such an action would be especially appropriate because Colorado has a big stake in the proper care and feeding of a strong center of research and development and graduate study. The greater Denver area is in competition with Minneapolis-St. Paul and Dallas-Fort Worth and other "near-by" regional capitals, and in that role it

has need of a rich cultural and professional base as well as a pleasing natural environment.

ZPG: a silver (-plated) lining? One cannot fail to be tantalized by the thought that if growth is not the universal solvent, perhaps no-growth is that solvent. Clearly, if the local labor force and population do not increase, then we would not need to add more houses, on net. We would need only to feed into the filtering process enough new housing to provide for normal depreciation and replacements, plus whatever overall upgrading across the board we feel that we can, as a nation, afford. Housing would be inadequate only to the extent households were too poor to afford better quarters—problem enough without population growth adding to that inadequacy. No-growth would be a big step toward the solution of the housing problem.

But zero population growth, nationwide, might well substitute its own set of housing problems. Over the past 20 years, even supported by natural increases of 18 and 14 percent per decade, the population of many of our largest central cities (those that have been unable to grow by annexation) have declined by 10 to 15 percent per decade.

Would not the much sharper decline foreshadowed by ZPG threaten housing abandonments, declining tax bases and other pathologies of depopulation much more intensely than those with which these central cities are now struggling? While careful discussion of the economics of central city depopulation must be left to others or for another time, offhand, it is well within the bounds of credibility that socially responsible policy at higher levels of government blended with sophisticated city management *could* turn even this problem into an opportunity. Zero population growth *could* open up and speed the recycling of the inner city. Just as the postwar population explosion and rural to urban exodus overloaded inner cities, the time may be near (and be coming faster than we ever anticipated) when we will be offered the opportunity to unload them and try again, for example, Harvey Perloff's in-town new towns. Better luck next time! □

What Really Happens When Tenants Leave

Brian J. L. Berry

Housing abandonment continues apace in the nation's major central cities. Although exact statistics are not available, where special surveys have been completed the number of buildings and housing units involved appear to be very large. One estimate places the gross loss of housing units in the 25 largest central cities between 1960 and 1970 at between 5 and 10 percent of the stock in 1960.

In Chicago, over 2,100 residential and 300 business or industrial structures, involving 14,000 housing units, or 1.25 percent of the 1970 housing stock, were officially abandoned during 1970. Official abandonment involves the processing of a structure through the Demolition Court of the Cook County Municipal Court. It

flicts neighborhoods with abandonment proceeding at this pace. Apparently, "contagious" clusters of abandoned buildings create the bombed-out physical appearance of European cities in 1945. But there is less agreement about the processes causing abandonment. Two major arguments have been advanced: one by civil rights activists, the other by housing economists.

Many civil rights organizations have said that abandonment represents a combination of racially inspired social change and conspiratorial discriminatory behavior by urban institutions. In a widely circulated report of the National Urban League, for example, abandonment is seen as the result of a six-stage process:

1. A decline in the socioeconomic status of a neighborhood
2. A racial or ethnic change
3. Property speculation
4. A weakened market condition in the neighborhood
5. Disinvestment
6. Final abandonment.

The abandonment process, according to the Urban League, commences with neighborhood transition. As middle-class whites leave, they are followed by those lower in the economic scale, most often blacks. Exploitation of the neighborhood follows. Real estate operators often convert buildings to provide more, smaller dwelling units, or crowd large families into existing apartments. The increased income from these tactics is not reinvested in property improvements, and the value of the property becomes inflated well above its real level.

The neighborhood that results from these manipulations is unstable and socially disastrous: a "crisis ghetto" has been born. This is characterized not only by the poverty and minority status of its inhabitants and its deteriorated housing but also by a decrease in income and an increase in social pathologies and unemployment. Rent collection and maintenance become sporadic, public services are nonexistent or scarce; the area becomes an enclave of the aged and the young as those who are able to flee do so.

The step before abandonment is disinvestment; the owner no longer sees any

economic potential in his property. There may be no potential buyers because of overinflated prices and market exploitation. Operating costs may be larger than income from rent due to vandalism, non-payment of rents, or stringent enforcement of housing codes which require expenditures considered to be impractical. At this juncture, the owner may stop paying taxes, default on his mortgage and cut all maintenance. Disinvestment also occurs when opportunities for refinancing are no longer available, because financial institutions "red-line" the neighborhood in view of past defaulted and delinquent payments and fear of taking future risks.

Abandonment is the final stage. Rent is not paid, rampant vandalism is unrepaired, maintenance is neglected and most tenants leave. Often, the property is placed on lien by the city and resold or demolished; sometimes derelict buildings are burned down.

The Urban League's report was insightful and provocative. However, housing economists have argued that a much broader framework linking new construction to housing chains and ultimately to abandonment is necessary if a full understanding of the nature and implications of the phenomenon is to be provided. Consider the data presented in Table 1. The nation's housing stock was improved by addition of over 17 million units in the 1960-70 decade, of which 15.5 million were new houses and apartments. Demand grew by addition of 10.4 million new households, and 6.7 million units were withdrawn from the inventory. Significantly, the number of units dilapidated or lacking plumbing facilities decreased from 8.4 to 4.2 million, most of the decrease accounted for by withdrawals from the stock, many of which involved abandonment. Indeed, in the two decades 1950-70, 30.5 million new units were built while net household growth was 20.4 million, and the aggregate number of substandard units decreased from 17 million to less than 5 million.

What is indicated is that "filtering" has been working rather well. When new construction exceeds the rate of growth of demand, there is downward pressure on prices of existing units. Hence, under gen-

COMPONENTS OF HOUSING CHANGE IN THE US, 1960-70

	Numbers of units (in thousands)
Housing inventory at beginning of decade	58,326
Units added to housing inventory:	
New construction	15,514
Other sources	1,600
Units lost from housing inventory	-6,761
Net change accounted for by:	
New households	10,426
Available for sale or rent	158
Other vacancies	-231
Housing inventory at end of decade	68,679

Table 1

thus may understate the actual magnitude of abandonment while it lags behind the fact.

Three-quarters of the abandonments were located in 17 of Chicago's 76 communities; 16 of the 17 are predominantly black and the other contains a large Spanish population. In these minority areas official abandonments in 1971 exceeded 4 percent of the housing stock in 1970.

Few can deny the devastation that af-

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Abandonment is a mechanism whereby the worst housing is being removed from the market. It works as a filtering process: Housing filters down the income ladder while families filter up the housing stock.

The worst housing stock can be abandoned by those on the lowest rungs of the income ladder. But with abandonment, concentrations of welfare poor are left behind.



eral conditions of inflation in the economy, the inflation of new housing prices exceeds the rate of inflation of older units. Downward pressure on the prices of older houses enables each successive position down the income scale to obtain better housing. Housing "filters down" the income ladder while families "filter up" the housing stock. Moreover, the worst housing stock can be abandoned by those on the lowest rungs of the ladder.

Indeed, for each 100 new housing units constructed, studies of chains of housing moves show that between 240 and 350 families are able to move into more satisfactory housing, 100 into the new units and the rest into existing units made vacant by the successive turnovers that result. Generally, the family that moves in has a lower income than the one departing. As the homes involved in a sequence of such moves—made possible by a new housing start—are traced, the value of the housing unit involved in later moves is lower than units preceding it in the chain. At the lower end of the value spectrum, about 4 percent of the moves generated by new housing starts have been shown to involve poor families moving out of substandard housing, and one out of five chains ended in demolition or other permanent withdrawal from the housing stock. Housing chains set in motion by new construction account for about half the residential relocations in the United States annually; the other half involve life-cycle changes and occupational career trajectories, including interregional job transfers.

Now picture the geography involved. Rapid development of new housing supplies is concentrated in the expanding suburban fringe; the oldest housing stocks are concentrated in the cores of the central cities, occupied by the poor, especially the minority poor. Each successive link in a housing chain initiated by new construction in suburbia extends further into the core of the city. Along the chain, one moves from growing to stable to declining neighborhoods, from white to minority occupancy and, within each ethnic or racial group, from child-rearing middle-class families at the outer edge to the elderly and the less affluent in the inner-

This has calamitous behavioral consequences: escalating crime rates, continuing dependency on poverty, social disorganization.

Housing abandonment is not the problem: It is a good sign that the market is working. The problem is abandoning of disadvantaged groups in castoff neighborhoods, and it should be treated as such.

most neighborhoods. Accompanying is the residual concentration of disadvantaged groups left behind by all who can make at least fingertip contact with the private housing market. And contrary to the popular myth that equals black with ghetto and ghetto with poverty, minority groups are major beneficiaries.

by the welfare poor, 13,250 of 19,000 units of public housing built in the decade were located within the 1960 ghetto. Also manifesting the changed market conditions, Chicago's overall vacancy rate increased from 3.7 to 4.6 percent, with the rate exceeding 6 percent within the area of the 1960 ghetto and falling to a low of

other cities. What it signifies is, first of all, that filtering processes are working. Abandonment is, in effect, the current mechanism whereby the worst housing is being removed from the market. An ideal filtering process should have this result without adverse effects on the housing of those at the lowest rungs of the economic ladder, however, and it may be questioned whether this is the case. Normal market mechanisms are enabling the working poor to leave the worst housing, but as is suggested by reinterpretation of the National Urban League's materials on abandonment, the welfare poor, without the means to gain access to the private housing market, are left behind. And if concentration of disadvantaged groups in public housing complexes such as St. Louis' Pruitt-Igoe development produced calamitous behavioral consequences, similar consequences are clear in the escalating crime rates, continuing dependency and poverty and profound social disorganization that is now true of the abandoned populations concentrated in the traditional ghettos and the areas on which they prey.

Housing abandonment is *not* the problem; it is a positive sign that the market is working. However, there is another kind of abandonment that is taking place that is far worse: abandoning of disadvantaged groups in cast-off neighborhoods. This is the problem of urban USA and should be recognized as such. □

COMPONENTS OF HOUSING CHANGE IN THE CITY OF CHICAGO, 1960-70

	Numbers of units of	
	White residential areas	Black residential areas
Housing inventory at beginning of decade *	924,146	233,263
Units added to housing inventory by new construction	85,382	33,102
Units lost from housing inventory by demolition	75,000	63,000
Transfer from white to black occupancy	-128,829**	111,275
Housing inventory at end of decade	805,699	314,640

* Occupied housing units

** Difference due to increase in vacancies leading to abandonment

Table 2

To illustrate, in Chicago between 1960 and 1970 the white population decreased by 550,000 while the black population increased by 300,000. As white families withdrew to the suburbs, black families gained access to large numbers of good quality housing units in previously white areas. There, population increased and school enrollments escalated as black child-rearing families replaced whites at later stages in the life cycle. In turn, the traditional south- and westside ghettos were depopulated. The population in the 1960 area of the ghetto declined 19 percent in 1960-70, and the communities in which population declines in the decade were greatest were also the communities with the greatest official abandonments in 1971: Garfield Park and Lawndale, Oakland and Woodlawn. Increasing the pressures on substandard private market housing that would otherwise be occupied

1 percent in the 1960-70 ghetto expansion zone.

As Table 2 shows, white housing demand decreased in the decade in Chicago by some 120,000 units, and an excess of new construction over demolitions in white residential areas permitted 128,000 units to be transferred to black occupancy. In black areas, new construction plus transfers from white ownership enabled the black housing inventory to increase by more than 80,000 units while 63,000 units were being demolished within the area of black residence in 1960. The greatest shift was the transfer of large numbers of upwardly mobile black middle-class families into good quality neighborhoods more commensurate with their child-rearing housing needs. Black home ownership in Chicago more than doubled during the decade.

The same story is repeated in many

References

- Frank S. Kristof, "Federal Housing Policies: Subsidized Production, Filtration and Objectives." Part I: *Land Economics* XLVIII (Nov. 1972), pp. 309-320. Part II: *Land Economics* XLIX (May 1973), pp. 163-174.
- John B. Lansing et. al., *New Homes and Poor People*. Ann Arbor, Mich.: Institute for Social Research, 1969.
- National Urban League, *National Survey of Housing Abandonment*. New York: Center for Community Change, 1971.
- Pierre de Vise, "Chicago's Housing Shortage: Reality or Myth." Paper read to the Chicago Council on Foreign Relations (Oct. 1971).

Energy: Shaper of Future Living Patterns

Edmund N. Bacon, FAIA

Those who think the lack of availability of cheap gasoline will have little effect on the form of cities are probably as far wrong as were those, early in the century, who thought that its original application to the powering of motor vehicles also would have little effect. The difference is that the application was a relatively fleeting phenomenon, whereas the nonapplication will be permanent, simply because there will be no more gasoline to apply. The beauty of the present situation is that the current flurry, developed around the term "energy crisis," is a sure and accurate precursor of what will prove to be a universal fact: lack of availability of cheap gasoline.

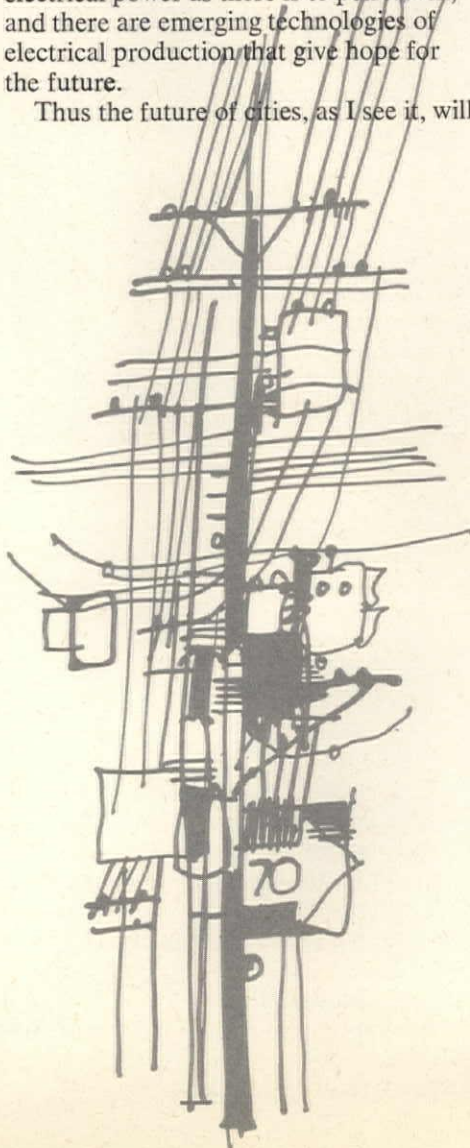
However great the effort to obscure this bald fact by frantic accusations of monopoly manipulation, artificial shortages and international blackmail, nevertheless, the world supply of oil is limited. The known oil resources will last only 10 years according to some sources, assuming that acceleration of consumption remains the same, that the present market continues and that the world in general will continue to accept the same unequal consumption in which we in the United States, 6 percent of the world's population, consume 35 percent of its oil. If the price of oil is doubled, presently uneconomic reserves would meet the world demand for 50 years. If today's "have nations" (in the oil sense) choose to look beyond the 10 or the 50 years and save some of the remaining oil for their children and grandchildren, we in this country will be forced to make some basic adjustments sooner than even the most farsighted among us had imagined.

Of course, in some far distant future, a motive power providing individual mobility comparable to gasoline may be discovered. Meanwhile, the technology of electrical production and the resources to back it up are so much further advanced than are those of the post-petroleum automobile that we may look forward to an extended period of transition from petro-

leum-based energy as the motive power of our transportation to the very much more place-bound electrically driven transit systems. During that period the experience with electrical transportation, along with the memory of the destructive effects of gasoline vehicles on both city and countryside, may produce such changes in the general value system that, even if it proves to be technically feasible, individual mobility may never be restored to the degree to which it is practiced now.

I do recognize that electrical production, too, is in trouble. Here, however, we are dealing with a situation markedly different from that of petroleum. There is no simple finite end to the availability of electrical power as there is to petroleum, and there are emerging technologies of electrical production that give hope for the future.

Thus the future of cities, as I see it, will



There are bright sides to the energy crisis if we only look for them. The positive side of the picture is not gloomy at all.

be deeply influenced by the emerging phenomena. One is the gradual transition from petroleum to electricity as the transportation power base, with a consequent reduction of mobility and growing dependence on place-bound electrical transportation systems. Another, a gradual change in lifestyle, is the shortening of the workweek and the lengthening of the weekend. These two go along together, each affecting and being affected by the other, and both together affecting the city.

It is fairly easy to set up the scare picture: the suburban shopping center standing half empty, its parking lot a barren waste and its palatial malls resounding with the echoes of the few who are there, because most cannot get or cannot afford the gasoline to get there. It is harder, but more useful, to set up the opposite side, to try to picture the positive results to a society that is based on an electrically driven transportation system.

First, of course, is the absolute necessity of a total network of electrical transit lines, not only in the great metropolitan centers but also in the smaller cities. It is odd to review the current attitude that we cannot afford such systems. I think we have forgotten that electric transit systems far preceded gasoline-driven transportation and that, during the latter part of the last century when our country was much poorer and much less technologically advanced than now, we developed a splendid electrical transportation network. Starting with the 1888 electrical trolley system in Richmond, Virginia, we had in operation by 1917 over 1,000 separate transit companies with some 60,000 non-polluting street cars carrying close to 11 billion passengers a year over 26,000 miles of track. (Thanks to William Middleton in the February 1973 *American Heritage*.)

As always, a change in the nature of transportation had an immediate and decisive effect on the form of the city. In this case it opened up the city to the hinterland, allowing people to pour out from the congested central city into the surroundings, creating a new urban phenomenon: the streetcar suburbs. But in the 19th century the way to get to the streetcar was to walk; so the form the suburbs

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Remember the electrical transit lines, or streetcars? We had them way back when, when we were poorer, less technologically advanced. We can have them again.

took was fairly dense developments in fairly narrow strips defined by the electric transit lines, the width being determined by the distance people were willing to walk to the trolley. It was only after gasoline-powered automobiles became widely used in the 20th century that the edges of the earlier urban corridors became blurred and that the outpouring spread in a great wave over huge areas, with so much damage to the countryside.

We may expect the outpouring from the cities to continue, but its future form will resume many of the old characteristics of the old streetcar corridors, except that the lateral dimension of development will be determined not by the measure of the human foot but by the distance capacities of electrically driven subsystems.

Simplest of electrical transportation units is the elevator, and surely there will be a great influx of highrise apartment houses within walking distance of electric transit line stations when the meaning of the gasoline shortage really becomes felt.

Beyond this, there would seem to be a new dimension of urbanity determined by the range of the battery-driven electric vehicle, widely used by what I call the "golf cart culture." These nonpolluting vehicles have received wide acceptance in recreational and resort developments and could become the main way to the station for the daily trip to town. Plugged in each night to the electrical system, the batteries are recharged and fresh for the trip next day. The present daily range of this vehicle is, I think, in the neighborhood of 14 miles, thus establishing 7 miles from the transit line as the limit for lateral urban growth. Of course, technology may extend this limit somewhat, but it will be a far distant day (if ever) that battery cars will achieve anything like the mobility of those that are gasoline driven.

We now see the metropolitan region as rather dense corridors of development along electric transit lines, with major centers of employment, retail and business activities at the points of juncture of these lines.

This almost inevitably will mean a resurgence of land values and economic activity in the centers and subcenters of existing cities, a more intensive use of the

expensive infrastructure that already exists there, and a gradual decline and atrophy of the subcenters dependent on gasoline to be reached.

For local shopping, community and home-oriented recreation activities, a location near the transit station seems logical. This would fall near the geographical center of the golf-cart-oriented housing. Two golf carts per family would be far less extravagant of resources than two automobiles.

Going along with all this is a subtle and pervasive change in lifestyle and the value systems which determine it. The entire issue of nature and the city takes on new meaning.

We are just at the point, I think, where the whole idea of the suburb—that you can have your cake and eat it, too—has proved to be a delusion because what is there is neither nature nor city. I think the gasoline shortage will accelerate a trend, already clearly present, for an increasing number of families to seek for both adults *and children* the advantages of urbanity that can only be achieved in high density developments for the workweek, and an escape into natural surroundings during the weekend. The shortening of the workweek and lengthening of the weekend would facilitate this trend and would have far-reaching effect on the form of cities. It would tend to reduce the blurring of the distinction between country and city and would strengthen the development of moderately dense urban corridors with truly open country between. Such development would provide huge economies in the public service delivery systems—water, sewer, electricity, gas (if any), road, transit—as compared with those required for urban sprawl.

Now comes the question of the transportation outward from the urban center for the long weekend, be it to a campsite in the state parks, the weekend cottage in the country or the motel at the mountains, lake or seashore. Here, the use of gasoline-powered vehicles has a logic and justification that does not exist for the twice-daily commutation trips; the destination is not a concentrated one shared by vast numbers of people. Just the opposite, the idea here is the widest possible dispersal,

the destination most distant from anyone else. I recognize that there will be recreation concentrations served by electric lines, the beaches and amusement parks, but the great push will be dispersal over the countryside where the mobility of individually powered vehicles is needed and where the air pollution effect is minimal because of the very dispersion.

I am aware of the fact that eventually gasoline, even for this purpose, will not be available. What I am trying to do is to lay out an interim course which recognizes this ultimate reality and which sets a direction of adjustment which strengthens the social structure in the process.

The political consequence of this new awareness will be a shift in public spending away from automobile-based facilities, superhighways, highways and parking garages, with increasing emphasis on electrical transportation systems and electrical transportation research. The planners will have to recast their ideas and rewrite their regulations concerning roadways and parking required for new development. There will be an enormous shift in real estate values, away from scattered suburban and exurban areas into new concentrations along electric transportation lines. Old centers of existing cities will take on new value. Only a slight increase in gasoline price and only a few experiences of gasoline unavailability will affect enough people to start the new trend rolling. Institutional investment policies will follow suit. Architects and landscape architects will start to function on a new programmatic base. It will be their job to show how high density and good living values can be simultaneously achieved.

Of course, many will disagree with several of my proposals and with the accuracy of my predictions. But at least we are beginning to realize that the petroleum shortage is real, and, in consequence, we may begin to accept the shift from petroleum to electricity as our main source of mobility. It would be well for us to start now to think through the consequences of these facts and to sketch out a vision of an American lifestyle which preserves and accentuates our traditional living values, but which accepts the realities of the world energy situation. □

The way to reach that streetcar was to walk; now, maybe it will be by nonpolluting, battery-driven electric vehicles.

This spells dense corridors of development along electric transit lines, as well as a resurgence of land values and economic activities in the centers and subcenters of existing cities, whose infrastructures will now get new meaning.



Zoning with the User in Mind

Alexander Cooper

To the extent that New York City, and most other cities as well, must compete with the suburbs for tenants, the quality of new housing affects the city's very survival. Moreover, quality bears a ponderable relationship to the more conventional concern for quantity as, increasingly, neighborhoods resist what they consider the disruptive intrusion of new highrise apartment buildings.

This issue of community opposition to new housing is far from simple. There is no doubt, however, that inappropriately designed towers and slabs have contributed to the present turmoil that threatens to diminish intolerably the production of housing, if not halt it altogether. A recurring theme of the conflict is one of scale: highrise versus lowrise housing. Scale used to be simply a trade word among design professionals; now it has become a popular cause from coast to coast and an expression of a deep-seated preservation instinct. The recent public referendum in San Francisco, which intended to impose drastic height limits of any new development, came very close to adoption.

Early in 1972, when Mayor John V. Lindsay asked his Urban Design Council (an independent group of private citizens supported by a professional staff paid by the city) to investigate ways to improve the quality of the city's new housing, it was abundantly clear that the assignment had a great deal to do with the city's economic and social well-being. And while we were, at that time, aware of the many different implications of the word housing, we were only vaguely aware of the elusive and frail nature of the word "quality." The many perceptions of quality, like beauty, have traditionally been violently personal and often conflicting among the various interests in housing. After a full assessment of all the viewpoints and after long months of deliberation, we have arrived at what we believe to be a humane,

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rational and workable definition of quality: one which accounts for the architects' concern for propriety, the builders' concern for efficiency, the owners' concern for marketability and the tenants' concern for livability.

We have shaped the definition around those forces which have the most immediate, and ultimately most sustaining, vested interest in the quality of housing: the neighborhood and the tenant. Quality in housing may not exist independent of its surroundings. Housing quality must be considered synonymous with neighborhood quality. Solid neighborhoods add luster to unspectacular buildings, while even the most satisfactory apartment house has trouble surviving in a disintegrating neighborhood. This sense of place, of diversity and of distinctiveness is precious to a city as well as to local residents, contributing to morale, self-respect and sense of community. It must be protected.

Our second determinant of quality is the individual tenant. While many theories of user need have been postulated over time, little of what is built today reflects the current attitudes of predispositions of tenants. The traditionally low vacancy rate in New York City, for example, operates in favor of the seller, so that it is more often the protective instinct of management toward property which assures a minimum level of services rather than any thoughtful response toward tenants' needs.

With these two reliable indices of neighborhood and tenant, quality has been postulated within four basic areas: neighborhood impact; recreation space; security and safety; and the apartment. We began the formulation with over 70 discrete items which have now been reduced to 37 weighted and sharply differentiated elements. This refinement is the result of a year-long testing program during which time we subjected a variety of existing buildings in neighborhoods of varying densities and scale to the rigorous criteria of objectivity and equity. We further discarded difficult-to-measure elements so that we know that the final product is both feasible and practical.

With a definition in hand, we set out to determine the best instrumentality for

achieving that quality. Although we considered several approaches, including the Building Code and the Housing and Maintenance Code, we soon realized that zoning is the appropriate vehicle. For surely it is axiomatic that zoning designs a city.

The council has proposed a completely new approach to zoning for residential construction—an approach that would set the same standards for subsidized as well as for private housing and that would transcend the traditional boundaries of the individual zoning lot to recognize the primacy of the neighborhood. Unlike the present zoning regulations, our proposals do not mandate all requirements nor offer voluntary bonuses for specified amenities. Instead, within given limits, the entire process would be elective, setting goals rather than minimum standards that effectively become maximum achievements.

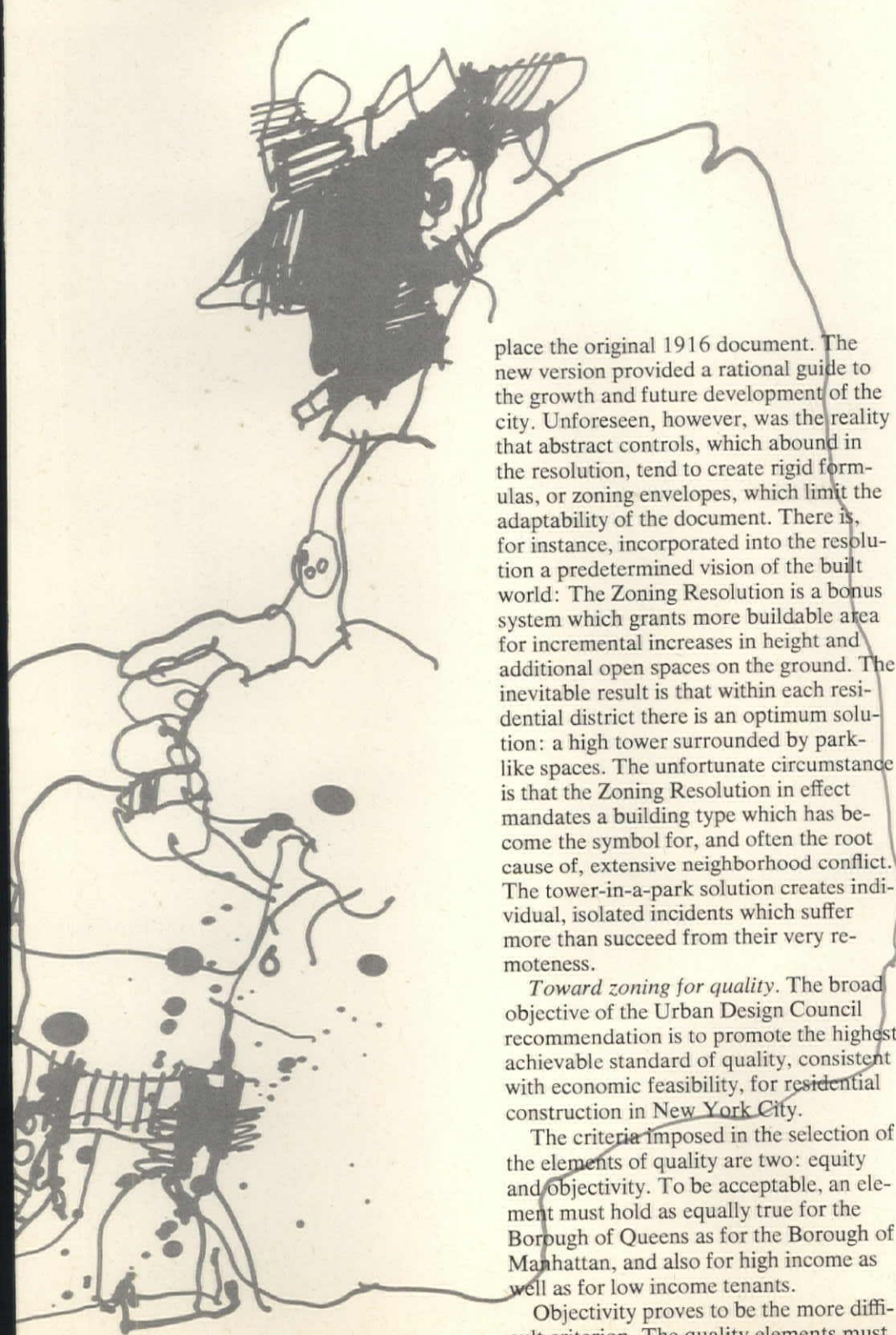
In order to put up a new residential building, a developer would have to earn a sufficient number of quality points in the four identified programs of quality: neighborhood impact, recreation space, security and safety, and the apartment. The point system is delicately calibrated: Different values are given for different elements and for varying degrees of compliance with each specific goal. For 22 of the elements, a minimum level of compliance is specified; extra points would be gained by going beyond that minimum. The degree of compliance of the other 15 elements would be left to the discretion of the developer.

Although minimum compliance with the 22 basic elements would yield a project of acceptable quality, the scoring has been established in such a way that there is always an incentive to achieve higher levels of quality to the mutual benefit of developer and tenant. By its flexibility, the proposed zoning would offer a free-choice system that for the first time accurately mirrors the selective process of design. A developer and his architect could choose to amass points by enlarging room sizes while sacrificing some degree of visual privacy, or by providing larger windows but deleting balconies.

Zoning today. In 1961, after many years of exhaustive preparation, New York City adopted a new Zoning Resolution to re-

In housing-troubled New York City, the Mayor's Urban Design Council is investigating ways to improve the quality of the living environment. All housing built under present zoning laws was examined.

Stereotyped structures, regardless of density, location or type of financing, were what the council found. Zoning, it concluded, is the appropriate vehicle with which to reach better quality.



place the original 1916 document. The new version provided a rational guide to the growth and future development of the city. Unforeseen, however, was the reality that abstract controls, which abound in the resolution, tend to create rigid formulas, or zoning envelopes, which limit the adaptability of the document. There is, for instance, incorporated into the resolution a predetermined vision of the built world: The Zoning Resolution is a bonus system which grants more buildable area for incremental increases in height and additional open spaces on the ground. The inevitable result is that within each residential district there is an optimum solution: a high tower surrounded by park-like spaces. The unfortunate circumstance is that the Zoning Resolution in effect mandates a building type which has become the symbol for, and often the root cause of, extensive neighborhood conflict. The tower-in-a-park solution creates individual, isolated incidents which suffer more than succeed from their very remoteness.

Toward zoning for quality. The broad objective of the Urban Design Council recommendation is to promote the highest achievable standard of quality, consistent with economic feasibility, for residential construction in New York City.

The criteria imposed in the selection of the elements of quality are two: equity and objectivity. To be acceptable, an element must hold as equally true for the Borough of Queens as for the Borough of Manhattan, and also for high income as well as for low income tenants.

Objectivity proves to be the more difficult criterion. The quality elements must necessarily lend themselves to measure-

ment. This mechanical requirement tends to eliminate those elements which primarily involve subjective value judgments. For example, there are limitless personal attitudes regarding apartment quality. Practical necessity as well as personal preference dictates a variety of lifestyles, from loft spaces to houseboats, all of which are viable and should not be precluded by a new zoning formulation. Personal style is better left unregulated.

Following the dual principles of equity and objectivity, 37 specific elements have been established as constituting housing quality. The elements are grouped into the quality programs already mentioned:

Neighborhood impact. One of the primary aims of the new proposal is to stimulate new housing that will be regarded as beneficial rather than disruptive by the adjacent community. Respect for prevalent scale of the neighborhood is assured by establishing the height of a project in relation to that of surrounding buildings. To extend this good neighbor policy, elements are included which minimize the effect of shadows cast by the project on adjoining public and private properties, whether open space or buildings. Developments which provide continuous street facades and activities are considered more favorably than those which tend to break continuity or have empty spaces on the street. Another element promotes the infusion of greenery into the city by mandating the planting of new trees on the sidewalks.

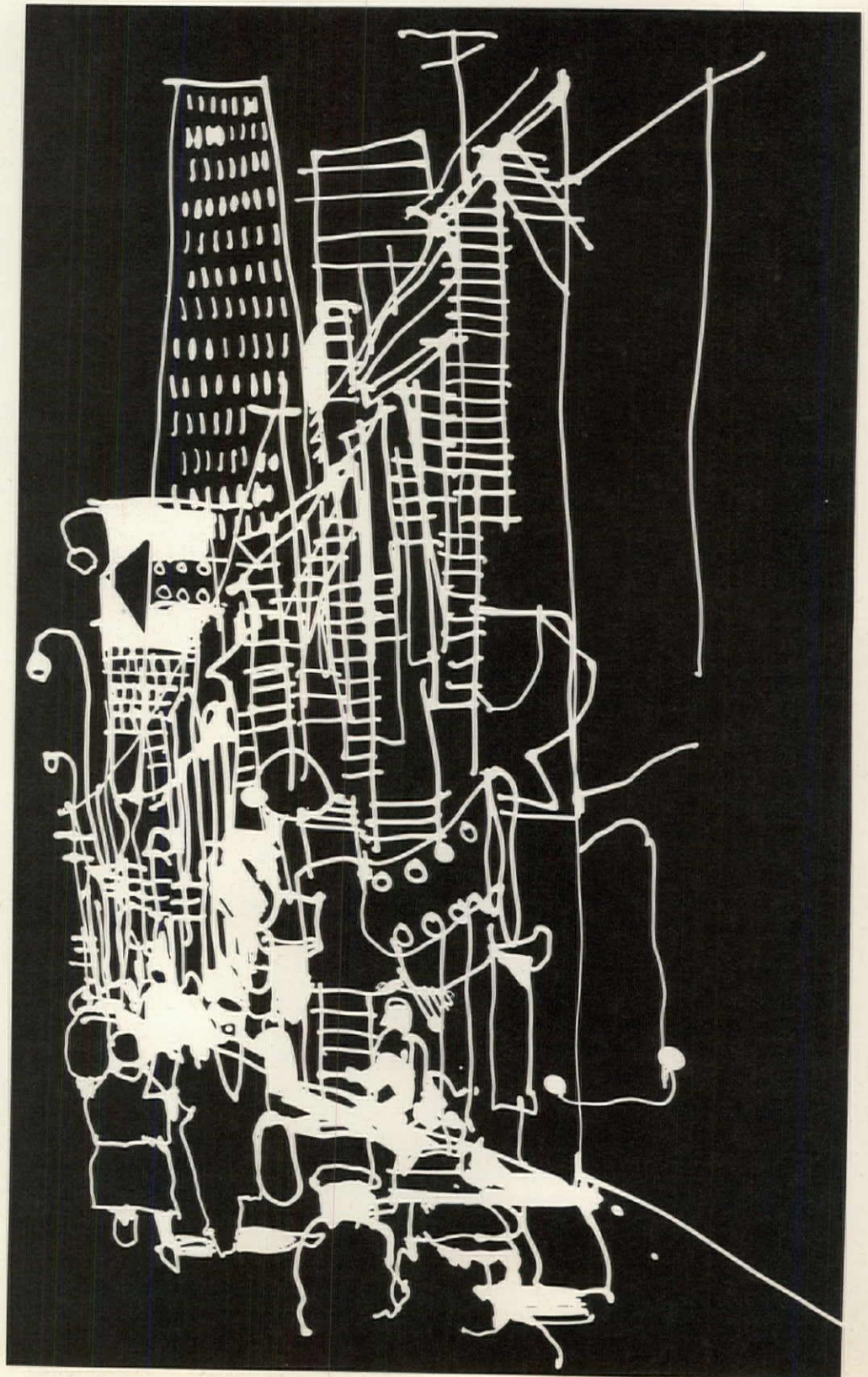
Recreation space. The recreation program constitutes perhaps the most dramatic departure from prevalent theory and practice. Open space as required by regulations is typically open, but seldom space. The program aims to relate, for the first time, the nature and extent of facilities provided to the occupancy characteristics of the intended residents. The intent is twofold: first, to provide private recreation space for the exclusive use by the tenants; second, to provide semiprivate space for use by tenants and the community. Any new housing development will accommodate, within predictable limits, a fixed number of children and adults. Based upon these projections, specific types of recreation space must be pro-

The negative rigidity of minimum standards, when applied on a city-wide basis, generates uniform rather than varied design solutions. A flexible zoning system with emphasis on human and environmental elements is sought.

vided for the benefit of the various age groups. The required recreation space is based upon a reasonable minimum need and may not be impinged upon for any other purpose, such as parking.

A second major departure is embodied in the definition rather than allocation of recreation space. Presently only the space at ground level or on a roof no more than 23 feet above ground level is permitted to count toward an open space requirement. This limitation is too restrictive. It is proposed instead that required recreation space be permitted not only on ground level but also on roofs wherever they are suitably and conveniently developed for the use of the residents. Covered, or weather protected, space is also suitable for recreation purposes, and in certain instances even appropriate indoor space can be counted toward the required program. This more intensive use of site for recreational purposes is both a psychic necessity and a design opportunity to create new forms of urban amenity. Beyond type, size and location, standards are proposed to assure the adequate provision of winter sunlight, landscaped areas, sufficient on-site trees and properly placed benches. Another element is the visual shielding of required off-street parking spaces.

Security and safety. In that security and safety represent mutual concerns of both tenants and management, this aspect is crucial to any concept of housing quality. To date these concerns have been satisfied by the often belated application of human, canine or mechanical hardware. The proposed quality elements incorporate the principle of maximum visual surveillance as a deterrent to potential personal or property damage. The program is not offered as an alternative to sophisticated crime prevention technology. It is postulated rather that a considered design approach to the problem may achieve significant benefits for the residents with a minimum of effort. Consequently, those areas of documented high crime activity within a housing development are identified and programmed for visual exposure: high visibility of elevator lobbies, circulation stairs, parking lots and outdoor recreation spaces.



Zoning for residential construction would set the same standards for subsidized as well as for private housing. Traditional boundaries of the individual zoning lot would transcend to recognize the primacy of the neighborhood.

Quality is postulated within four basic areas: neighborhood impact; recreation space; security and safety; and the apartment. Goals are set rather than minimum standards.

The concept, simply stated, is that organizational decisions regarding public, semiprivate and private spaces can be made which tend to foster recognition of neighbors and outsiders. The resulting sense of intimacy and identification will tend to inhibit crime and vandalism. This premise regarding security and safety is an essential ingredient to housing quality.

The apartment. The program for living space contains no surprises. From caves to space capsules there are few surprises left. There are instead only common, ordinary and elemental qualities which by now are conceived as basic rights.

The program intends no breakthroughs but rather a simple, self-evident catalog of reasonable considerations for programming sound housing. Large size in an apartment is noncontroversial and desirable. The element which calls for sunlight in the apartment is more directed to the orientation of a building on a site than to preventing windowless apartments. Further provisions assure visual privacy between apartments, daylight in kitchens and an adequate garbage storage and removal system. There are performance guidelines regarding balconies, if provided, and daylight in hallways.

The process. The resulting proposal differs conceptually from both the traditional zoning exercise of "minimum standards" and the more recent trend of "incentive" zoning.

The negative rigidity of minimum standards, when applied on a citywide basis, generates uniform rather than varied design solutions. The incentive approach relies on economic energy which is tragically lacking in today's housing market. This lack of incentive is particularly true of the publicly assisted programs, where social objectives operate differently from the more traditional profit incentives. For these reasons a totally new approach was developed.

The Housing Quality Program relates zoning to the actual design process, the basis of which is choice. All design professionals exercise choice, either consciously or subconsciously, among the range of variables available. This exercise of choice constitutes the basic mystery, and sometimes poetry, of the profession.

A primary objective of the proposal is to codify those variables.

A system of trade-offs among real world choices has, therefore, been institutionalized. The scoring mechanism is a rating system which, for any new housing proposal, develops a numerical value up to a theoretical maximum of 25 points for each program. These program points are then converted to a quality of development for a given site.

Each of the four quality programs contains a number of quality elements. Each of these is assigned a weighted value so that the score adds up to a total of 25 points per program, as shown in the summary table. In this manner, each of the four programs is considered to be of equal importance. It is true that in some areas of the city, the concern for neighborhood impact might predominate over, for instance, the issue of recreation space. This variation in emphasis is accommodated by simply predetermining to score higher for that program. Indeed, the priorities among the programs can be established before any detailed design work begins on a project. The council decided to score each of the four quality programs separately. If it were permitted to add together the points from each program, the potential for abuse would be great: An entire program could be electively discarded. The disaggregated rather than aggregated system is employed as a further guarantee of responsible design.

Many alternatives were explored to relate the concept of quality to density. Two basic principles guided the formulation: First, existing use classification (residential, commercial, manufacturing) and district mapping (the boundaries which define separate districts) are accepted as givens; second, the Urban Design Council believes that no further increase in density, beyond presently permitted maximums, is warranted.

Based on these assumptions, the proposed system would grant incremental increases in density for progressively higher attainment of quality. The various elements within a program are stated as goals rather than as minimum standards. Maximum points are obtained by full compliance with the proposed goal. Each goal

implies the possibility of achieving 100 percent compliance, and hence the full point score for that element. Less than full compliance is rewarded with fewer points, and noncompliance is permitted as well. The number of program points earned through compliance with the stated goals is converted to a quality rating. This measure is stated in quality points, up to a maximum of 20 for any development. The quality points are then used to determine the buildable area permitted on a site. A sliding scale of floor area is employed, up to the present maximum limit for each residential district.

There is also a mandatory aspect to the scoring mechanism. Certain elements within each quality program are considered absolutely essential to attaining an acceptable level of quality. For these particular elements (22 of the 37), a minimum level of compliance is stipulated. This device serves as a warranty against mindless design. Minimum compliance for an individual element is rated at zero. Therefore, a building that develops no quality points, by minimally complying with the mandated elements, and discarding all the others, can still be built. The project will have achieved an acceptable level of quality, i.e., it will generally conform in scale to the neighborhood; it will have adequate recreation space for the tenants; it will have incorporated security precautions; and it will have apartments of good size with adequate sunlight. It would be permissible to construct such a project, if at a reduced density. The scoring mechanism has been weighted so that the incentive to achieve higher levels of quality will always be operative for the mutual benefit of the developer, the architect and the tenant.

Administration. Any new zoning proposal, no matter how compelling or sophisticated, can be brought to ruin if the details of administering the program are overly complex. For this reason we propose that the mechanics of zoning administration remain unchanged. The Housing Quality Program would in no way jeopardize the statutory authority of the agencies (City Planning Commission, Board of Standards and Appeals, the Department of Buildings and the Board of Estimate)

Thirty-seven sharply defined elements are given within the quality areas. Different values are given each element and for varying degrees of compliance with each goal.

The council's concept still requires work; questions arise: Will new zoning alone do the job? What about the cost? Still, it is a step toward zoning with the user in mind.

which bear the major responsibility for administering zoning. Further, each of the 37 quality elements has been framed in such a way that it can be illustrated and measured. No element is beyond the competence of the architect to ascertain, or of the buildings examiner to certify. The dual objective of clarity of intent and simplicity in execution has been scrupulously maintained.

Cost. No consideration of housing quality can be divorced from the dictates of cost. It is a widely accepted cliché that anything having to do with "quality" will cost more. The objective of the council is that the cost of building housing not be increased as a consequence of implementing this proposal. We are confident that this objective has been met; that designing a project to achieve a high quality rating is no more expensive than designing a project to the standards of present zoning.

Three specific strategies have been employed to assure this result. First, an extensive program was undertaken to test a broad range of newly completed buildings, each designed in accordance with the 1961 Zoning Resolution. A variety of types, from garden apartments to highrise, were selected in each of the zoning districts. One of the unforeseen conclusions of the testing is that many existing buildings do score a remarkably high number of quality points. A second surprising conclusion is that projects designed for the subsidized housing programs and built within the statutory funding limits of those programs often score higher than conventionally financed buildings. In summary, many buildings already built can, with minor adjustments, achieve considerable quality as defined by the Housing Quality Program with no additional cost.

Second, a continual cost analysis of the individual elements was carried out as the proposal developed. The theory of trade-offs was applied to costs as well. For some elements, full compliance with the stated goal would cost more than conventional practice. Large room sizes are a prime example. Full compliance for the majority of elements would have no cost consequences. Some of the elements would in fact produce cost reductions. While 100 percent compliance with every quality

element might indeed add costs to the project, such compliance is not necessary to produce a high quality building.

Third, the effect of the Housing Quality Program is to create balancing economic efficiencies by eliminating certain constraints built into present regulation. By removing the limitation on how much of a site a building may cover, the potential for cost reductions is dramatic. The existing 40 percent maximum coverage for a residential tower, if increased to 50 percent, would permit a 25 percent reduction in the height of the building. The economics of lower height and larger individual floors are obvious. Similarly, any project now compelled to use reinforced concrete as the basic building material might well be able to use less expensive types of construction. By these three mechanisms, the council has insured that the Housing Quality Program would not inhibit housing production.

Whither? The Housing Quality Program became public in July. Since that time, presentations have been made throughout the city to community planning boards, various civic groups and professional organizations. A citywide workshop was conducted by the City Planning Commission in September, and borough-wide presentations and discussions are being held. Public reaction tends to be as radical as the proposal, ranging from "Grass will grow in the streets" (from those who have just now, after 12 years, learned the existing Zoning Resolution) to "It's good. It should be approved" (from some mayoral candidates who have not yet seen it).

More reasoned reaction is that the proposal tends to address in a serious manner those issues uppermost in people's minds. The City Planning Commission intends to modify the council's proposal in accordance with the sentiments voiced through the exposure process. It will then carry the revision forward for public hearings by mid-'74.

That zoning has been pinpointed as the major determinant of the city's built form and that hard numbers have successfully been applied to quality of life are positive developments for both the architectural profession and the public. □

PROGRAM ELEMENTS		MAXIMUM VALUE	
	Built Up	Non Built Up	
NEIGHBORHOOD IMPACT			
1. Street wall setback*	4.55	n.a.**	
2. Sunlight in open space*	3.60	4.70	
3. Length of street wall*	3.60	7.55	
4. Shadow on buildings*	3.05	5.40	
5. Height of street wall*	3.05	n.a.	
6. Street trees*	2.85	4.15	
7. Height of building*	2.15	n.a.	
8. Transparency ratio of ground floor*	2.15	3.20	
	25.00	25.00	
RECREATION SPACE			
			MAXIMUM VALUE
1. Type and size*			8.50
2. Winter sun			5.00
3. Landscaping			2.75
4. Covered parking			2.65
5. Visibility of parking*			2.65
6. Trees*			2.45
7. Seating			1.00
			25.00
SECURITY AND SAFETY			
1. Visibility from public space to elevator door or general circulation stair			3.90
2. Visibility of private outdoor space from lobby*			3.90
3. Surveillance from large apartments			3.30
4. No. of apartments serviced by lobby			2.90
5. Visibility of parking from exit point*			2.25
6. Visibility of parking area from lobby			2.20
7. Distance from elevator to apartments*			1.85
8. Road separation*			1.80
9. Visibility from elevator door or general circulation stair to apartment door*			1.80
10. Visibility of mail room			1.10
			25.00
APARTMENTS			
1. Size of apartment*			3.75
2. Sunlight in apartment*			3.20
3. Window size*			3.20
4. Visual privacy—apartment to apartment*			3.20
5. Visual privacy—street to apartment			1.75
6. Balconies			1.70
7. Daylight in hallways			1.50
8. Distance from parking to garage exit*			1.50
9. Daylight in kitchen			1.50
10. Pram and bicycle storage			1.30
11. Waste storage facilities*			1.20
12. Garbage pickup facilities			1.20
			25.00

* Minimum compliance levels established
 ** n.a.—not applicable

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Urban Housing: The Proceedings of the International Conference on Urban Housing, May 7-9, 1973. Edited by Vasily Kouskoulas. Detroit: Civil Engineering Department, Wayne State University, 1973. 277 pp. \$20.

This book, a symposium of papers read at an international conference, covers a lot of territory. The chapter headings suggest the range of subjects: Urban Environmental Analysis, Environmental Relations, Socio-Economic Evaluation, Planning and Design, Construction and Operation. The 41 well-written, though somewhat theoretical, essays cover almost every imaginable aspect of housing and related development. Although rigidly structured in outline, the book is by no means even, or even consistent, in its treatment of the various subjects.

The contributions range from simple descriptions, as in the case of institutional arrangements in Latin America and a discussion of various outstanding apartment developments in urban renewal areas, to theoretical essays on planning and land use and a description of various types of novel structural systems. Treated also are transportation, solid waste disposal, housing finance, socioeconomic integration, housing for the elderly and rehabilitation.

The reviewer was particularly intrigued with Professor Patrick Horsbrugh's treatment of "synecotecture," which advances the thesis that "no substantial improvement in urban habitation is likely to be achieved unless and until buildings are designed with capacity to sustain vegetation, both inside and outside the structure, in quantity, continuously, and in closest person-plant proximity." For large apartment buildings he even recommends that the roofs be planted with grass.

Interesting also was Professor J. W. Strutt's and Professor S. G. Haider's essay on "non-orthogonal geometrics in urban forms and patterns." Here they explore a variety of geometric forms for housing, much reminiscent of Moshe Safdie's work before and after his famous Habitat.

This book is literally a smorgasbord of ideas and opinions relating to housing, planning and structural systems, with

much on particular housing programs thrown in. The essays are, for the most part, quite sophisticated in content. The architect will find much of interest here—some of it old, some of it quite new, some of it average, some of it very original.

M. Carter McFarland, Director, AIA Urban and Housing Programs

Master Builders of the Animal World.

David Hancocks. New York: Harper & Row, 1973. 138 pp. \$8.95.

It's appropriate to include this book with others on housing. David Hancocks, the author, who is now working on a new zoo project in Seattle, once meant to



specialize on housing for people, but he found the housing built by animals to be more challenging and now devotes his time to zoological architecture. He knows his subject well and is able to write in a most interesting manner. His vivid descriptions of the buildings of the animal world are complemented by hundreds of illustrations.

"Modern architecture," writes Hancocks, "faced with the universal problem of a housing shortage so acute that even people existing within a damp basement . . . cannot be included in the official lists of the homeless, continue to expend their energies for the most part upon the architecture of pomposity and prestige. They do not seem willing to learn from the lessons of economy which have ruled the survival of all other species. . . . They have not become aware that social orders

Housing is a worldwide concern and a social problem for industrialized and developing countries alike. Recent books view the subject from a number of vantage points.

evolved by other species have found their expression in true architecture." In every example of successful architecture in the animal world, "form is dictated by function." And he observes that "for elegance and precision, for structural ingenuity and for powers of improvisation, the animal builders are better at architecture than we are."

It might be well to note that animals which live in conditions which appear to us as overcrowded never exceed a density that keeps their specific individual distances from being maintained, as Hancocks remarks. Gulls, for example, build their nests just beyond the pecking dis-

tance of each other. The animal world has much to teach us regarding both structure and social behavior.

"Go to the ant, thou sluggard; consider her ways, and be wise," is a Biblical admonition for those among us who are inclined to be lazy. Lazy or not, the architect who is somewhat complacent about his "modern" designs may yet learn a few things from the ant besides admiration for its example as a go-getter. It's also a builder of amazing abilities.

The ant's underground nest is a maze of tunnels with deep vertical shafts containing a great number of chambers with galleries extending hundreds of meters in length. Because the ant cannot regulate its body heat and is susceptible to the slightest changes in temperature, the surface of its mound must be constantly manipulated to control heat loss. Ventila-

tion shafts can be enlarged or reduced to fit the climate of any given day. Quite a lesson in this day of an energy crisis.

Or consider that master builder, the dormouse, who weaves a spherical nest of summer grasses, camouflaging it all, and then in autumn moves to underground headquarters for comfort. It's cheaper than a trip to Florida. And the rufous-crowned finch lark, who lives in Kenya's hot and dry tracts, airconditions its nest. The base is formed of small pebbles, and the slightest breeze blows through. Larger pebbles on the exposed perimeter keep it from slipping into the mud against which the nest is constructed.

The rufous-breasted castlebuilder of Central America likes a bit of comfort, and its orderly home has a hallway carpeted with fragments of cast reptile skin. We don't know why, but some birds like a bit of beauty. Starlings, for example, will gather sycamore blossoms to decorate their nests.

And there's the duck-billed platypus who excavates its tunnels in riverbanks, giving them an arched roof and a flat floor, the whole construction being extended with new nesting chambers added every year. And, of course, there's the city builder, the prairie dog, whose network of underground burrows and nesting chambers once formed colonial townships over hundreds of miles.

This completely fascinating book describes the building techniques and behavior of hundreds of animals: the spider's aerial home, the beaver's dam, the underwater architecture of the octopus, the garden snail's mobile home. There's information about their construction management, their joint ventures, their building teams, their eternal struggle to keep a roof over their heads.

It would be intellectually dishonest to attribute anthropomorphic sentiments to the building activities of other animals, comments P. J. Olney, curator of birds at the Zoological Society of London, in the introduction. But, he continues, it's just as false to belittle the building techniques used as being based merely on a system of reflexes. "And though only man builds for his own esthetic pleasure, he is in the fortunate position of being able to appreciate and learn from the many beautiful and fascinating constructions that other animals make." Do read the book, learn and appreciate. It may make you feel rather humble, but it's guaranteed to entertain, to inform and to make you proud that, after all, you yourself are a part of the animal kingdom. "Each animal structure is a masterpiece in its own right," concludes Hancocks, "and although we may dismiss many of their attempts as crude or simple they nonetheless play some role in the development of our concept of architecture." *Mary E.*

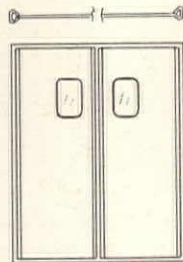
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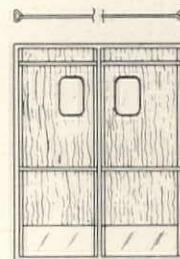
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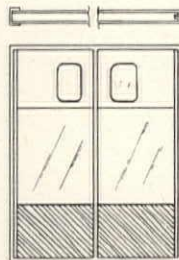
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LWP 4: Same as "LWP 3" except with decorative high pressure laminate both sides. Decorative doors are practical with protective accessories. Door illustrated has 12" high Base Plates and two sets of Bumper Strips.



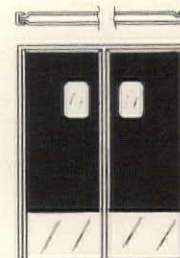
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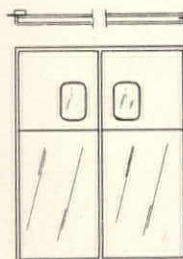
SCP 5

SCP 5: A Solid Core Door 3/4" thick. Illustrated door has Anodized Aluminum, Top Panels, 18 gauge steel center panels (SS front, Galv. rear), 14 gauge high carbon steel kick plates. Write for options and other Solid Core Door models. Applications same as "LWP 3", a heavier door but same easy action.

SCP 8: A Solid Core decor door. Illustrated door has 18" high Base Plates and Edge Trim (18 gauge Stainless Steel). Decorative High Pressure Plastic Laminate above Base Plates to top of door both sides. For Food Service and other areas where Solid Core Decor doors desired. Write for other models and options.



SCP 8



SCC 1

SCC 1: Gasketed, Solid Core Door 3/4" thick. Illustrated door has Anodized Aluminum top Panels and 48" high 18 Gauge Stainless Steel Base Plates. For Refrigerated areas, Work Rooms, Processing and Cooler to Processing. Write for options and accessories. Ask about 1 1/2" thick Foam Core Doors.

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Suburbia. Bill Owens. San Francisco: Straight Arrow Books, 1973. Unpaged. \$5.95. **Handmade Houses: A Guide to the Woodbutcher's Art.** Text by Art Boericke, photos by Barry Shiparo. San Francisco: Scrimshaw Press, 1973. Unpaged. \$12.95.

How clever I am to review these books together—how witty, how prescient, how liberal—ah, yes, I too live in the glass



house at which I am about to throw stones. That's why I am attracted to these books; *could not* live without them; yet cunningly got them for free. They bounce off each other like golf balls in a tiled bath, reverberating with the exact same mentality. Only one is a book of Joy, of Goodness, of the Right Thing—and the snazziest large format color you've ever seen. The other is of darkness, of evil, of the bounce-light black and white somber photo, of Badness and Despair.

Straight Arrow Books, publisher of *Suburbia*, is an arm of Rolling Stone Press, as you may know. Bill Owens shot *Suburbia* while working as a photographer for the Livermore, California, *Independent* (his cover, his straight identity, his license for dirty tricks). With a straight face he tells us that the subjects of this volume have found the American Dream. He dedicates the book to them, says that they are his friends and that he knows them. He must have won their trust somehow since the book includes several bedroom-type shots.

Yet I think that these pictures must rate as among the most vicious ever taken. Owens pretends to be nonjudgmental, but the pictures are humiliating, degrading and unctous in the extreme as he zeroes in on every hair curler, every beer belly, every snarl. Cluck your tongue, and whistle softly; *we* are not among them.

I have always said that, politics aside, I'd rather have a conservative for a companion than a liberal. If you annoy a conservative, he will punch you in the nose, while a liberal will either put sugar in your gas tank or cast aspersions on your sexual persuasion at cocktail parties. Owens is an enemy of those people he has photographed, and he tricked them into thinking otherwise to do a book that we liberals would approve. It makes me sick.

"*We are stardust, we are golden—and we've got to get ourselves back to the garden . . .*" ("*Woodstock*," by Joni Mitchell.)

Handmade Houses is introduced by Sim Van der Ryn, who as a (tenured) faculty member at the University of California at Berkeley has mutated into a quantity that is awkward to the academic community. He teaches self-realization (outdoors, in the country) through the art and craft of scavenging and building.

The text of the book is a style that I call "neo-folksy hee-haw." Sample: "Pretty damn good for just \$800 in materials, especially with all that glass . . . It's all in knowing how, or mostly so. The rest is work." This affected argot is accompanied by the most sumptuous, expensive color photos around—and it shows in the price of the book. This is your fairly phony back to nature trip—an urge not so much rising



out of a pure breast as it is a stylish collegiate movement with agreed-upon rules and regulations.

There is a certain similarity in the projects depicted—in the stained glass, the raw wood, the natural foods look, that represents a fairly tight discipline. It's an annoyingly "snuggly" group—them against us—just like the producers of *Suburbia*. We all have books on the coffee table—just different titles. The point (for me at least) is not that suburbia is tidy (or deadly) or that nifty sheds are nicer (or a communist plot) but that artifacts and architecture *are* extensions and manifestations of people's personalities. How accurately do they do this job? How accurately do we want them to? What depresses me personally is that this process of symbolizing identities is being done on a whole subculture basis rather than a person-by-person basis.

But the *real* reason a reviewer bitches so much is not because of the book at hand but because it doesn't fit the ideal of the book which the reviewer had in mind. One of my little projects for the future is

also a book of homemade architecture—but as created by a wider cross section of people than the Northern-California-White-Drop-Out-Natural Foods subculture. And I would like to give equal time and space to the character structures of these people: that which drove them to the effort and made the places the way they are.

In its own charming way, *Handmade Houses* is just as thing-oriented as "Better Homes & Gardens." *Dave Clarke, Director, AIA Education Programs*

Housing Urban America. Edited by Jon Pynoos, Robert Schafer and Chester W. Hartman. Chicago: Aldine Publishing Co., 1973. 597 pp. \$25.

This book is a collection of articles from many sources. As the editors comment, the approach is much broader than "the traditional concerns with overcrowding, physical deficiencies and inadequate facilities." The 51 assembled articles are divided into five major sections on politics, social aspects, economics, production and policies and programs.

An indication of some of the articles in each of the sections will give an insight into the book's scope. For example, in the section on politics there are articles on such subjects as the homebuilders' lobby and redesigning the landlord-tenant law. An interesting article in the section on social aspects concerns the environmental preferences of future housing consumers. The section on economics contains contributions on housing market segregation, restrictive zoning, price discrimination against blacks and other studies.

Fiscal and monetary policy is considered in the fourth part on production, as well as other topics such as building codes and income taxation. The final section on policies and programs contains a number of pertinent contributions on such matters as new communities, the new federal housing policy and the lessons of Pruitt-Igoe in St. Louis.

Modular Housing: Facts and Concepts. John A. Reidelbach Jr. Boston: Cahners Books, 1971. 237 pp. \$27.50.

This is a data-filled book based upon a mail survey of what the author attempts to limit to the modular housing industry. It is a follow-up to a similar book published in 1970 and precedes one issued in 1972. The viewpoint is that of a conventional house builder; as such, it places the majority of attention upon conventional wood frame construction simply transferred from the factory to the site. Only cursory attention is paid to multifamily housing and to steel and concrete systems. The architect, from the author's point of view, is a beautician who is having difficulty adapting his trade to this new animal, the modular house.

The data consists of details such as

the number of modular companies, production and cost, with little space given to actual construction details and the roles of related groups to the housing industry. Inherent within the topic and method used to develop and present information is the problem of outdated material. From the viewpoint of the wood frame modular housing industry, this is a commendable book, hopefully of some value. To the architect, however, it offers little information—and no stimulation. *Jack Alan Kremers, AIA*

Housing Demand: Mobile, Modular or Conventional? Harold A. Davidson, New York: Van Nostrand Reinhold, 1973. 285 pp. \$17.50.

Davidson says that his aims in this book are fivefold: to depict the major problem areas and new developments relevant to the current and future total housing market; to analyze the historical growth of the mobile home industry; to evaluate the factors limiting the growth of mobile home sales; to forecast the demand for mobile homes through 1980; and to evaluate the effects of changes in demand on the financial structure of the industry. He discusses in detail such topics as the quality of mobile home parks, taxation policies, zoning regulations, the financing of mobile home purchases, the competitive relationship between the sales of mobile and modular housing units, etc.

Davidson concludes that the growth of mobile home demand will continue through 1980, but that the rate of growth will decline consistently. The mobile home industry, however, will remain an important part of the total housing market. A future trend, he maintains, will be the redesign of exteriors to resemble conventional housing. He also believes that mobile home units will increasingly be placed on permanent foundations.

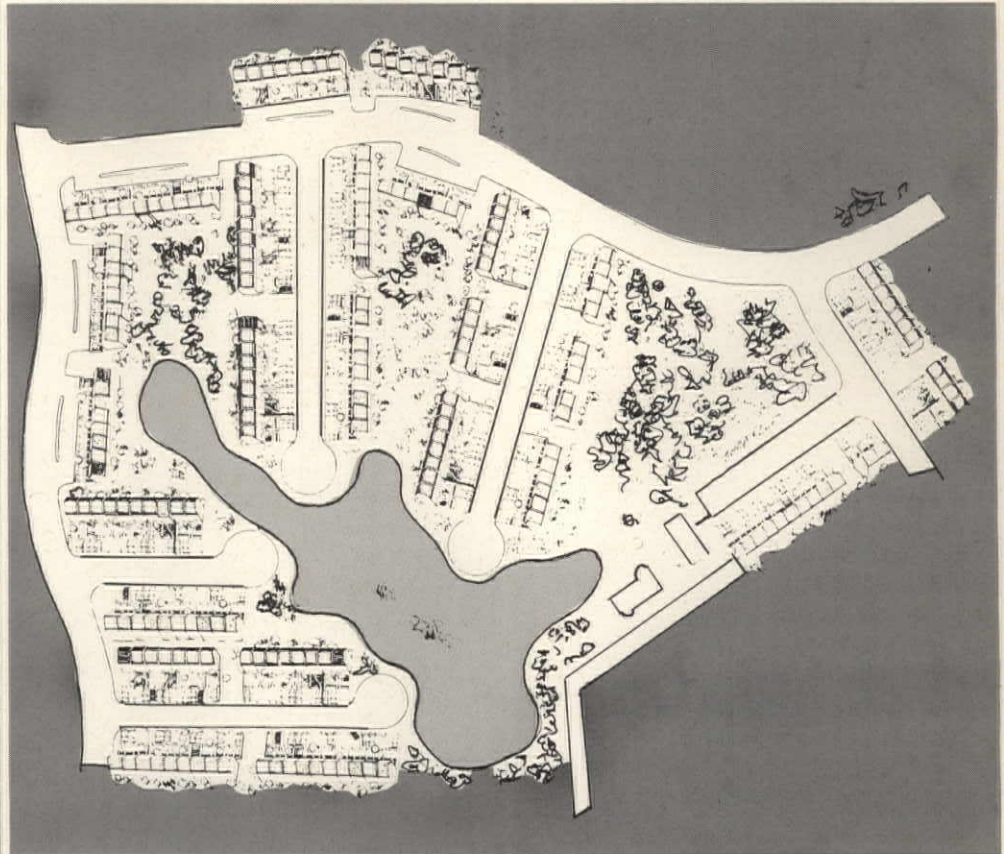
Townhouses & Condominiums: Residents' Likes and Dislikes. Carl Norcross. Washington, D.C.: Urban Land Institute, 1973. 105 pp. \$15.

As just about everybody knows by now, townhouses and condominiums have swept the housing market in recent years. But what about the people who live in them? Do they like them? What do they find wrong with living in attached houses and in high density areas? Their comments contained in this book will give builders and architects some helpful suggestions. Norcross states rightly that owner satisfaction has a great impact on property values, and it behooves all concerned with the housing business to know about the consumer and his opinions.

This is a study of 1,800 people and families who live in 49 projects in the Washington, D.C., area and in California. Six new towns are represented in the survey as well as other large developments.

Norcross found that three-fourths of the residents say that they are reasonably satisfied, but the other one-fourth is both unhappy and vocal. Those who are more or less pleased cite the conveniences, friendly neighbors, almost maintenance-free living, nearby recreation, dollar benefits over renting and the opportunity to

homes are particularly pertinent. The developer may not be responsible for all the problems, but he will be blamed. Here are some realistic suggestions about how he can improve the situation. No residential community, concludes Norcross, can be a success unless a large share of its residents are satisfied.



own their own homes without paying a higher price for a single-family unattached dwelling. Satisfaction is stronger in California than in the Washington area.

Those who are unhappy complain about crowding and the lack of privacy. They don't like noisy neighbors, children and dogs. Owners don't like renters, believing that they cause a townhouse neighborhood to decline. They find parking inadequate, and they are irritated with the way homeowners associations are managed. What they dislike most of all is poor construction. They also say that there were unrealistic estimates given them about utility costs, taxes and association dues.

The lower the density, the higher the owner satisfaction. The higher the price, the happier the owner. Norcross says that an owner's feeling about density is an emotional thing. Important to the owner are such things as open spaces and greenbelts, pleasant views, short rows of houses, variations in architectural design, closed patios, etc. The land plan is as important as the architecture.

This book will give the architect some helpful and concrete information about what it takes to make people satisfied with townhouses and condominiums. The sections on density, land planning, parking and inside and outside design of the

Low and Moderate Income Housing in the Suburbs: An Analysis for the Dayton, Ohio, Region. Nina Jaffe Gruen and Claude Gruen. New York: Praeger, 1972. 236 pp. \$15.

This is an investigation of the economic, social and sociocultural attitudes of the people who will be affected by the Dayton plan for low and moderate income housing in the surrounding five-county suburban region. The authors set forth guidelines to meet housing requirements which will also preserve community stability. They suggest outside funding to cover nonhousing needs.

Families in Public Housing: An Evaluation of Three Residential Environments in Rockford, Illinois. Urbana, Ill.: University of Illinois, Committee on Housing Research and Development, 1972. 91 pp. \$5.

A contribution in the important area of user attitudes and needs, this study describes family housing constructed in Rockford, Illinois, by the Housing Authority and sets forth information about how the residents view their homes, including layout and site. The expectations of the designers regarding how the houses and the site would be used are placed against the actual activity and behavior of the residents. *continued on page 54*

The Evangelistic Bureaucrat: A Study of a Planning Exercise in Newcastle upon Tyne. Jon Gower Davies. London: Tavistock Publications, 1972. 229 pp. 3 pounds.

Testifying to the conflict between "the planner and the planned," this book concerns Rye Hill, an urban community in a decaying twilight area in Newcastle upon Tyne, England. Its residents include immigrants, "deviants" and "respectables." The people responsible for the community's planning and rejuvenation are part of the local government apparatus and are middle class. Their lifestyles, says Davies, as well as their values and options are at variance with those of the people who inhabit Rye Hill. As a result, Davies contends that the decisions of those in authority promote rather than arrest the decay of the neighborhood.

The complex interaction between planner and planned is analyzed. The author is frank in stating that he criticizes planning "and to a large extent holds planners up to ridicule." He uses the failure of Rye Hill, caused by these "evangelistic bureaucrats," to show what he calls the "destructive consequences of men inspired by self-induced charisma, and of schemes based upon an obsession with modern technology." The book may make hackles rise, but the author presents some telling points.

Architecture for the Poor: An Experiment in Rural Egypt. Hassan Fathy. Chicago: University of Chicago Press, 1973. 233 pp. \$10.95.

Fathy, an Egyptian architect, appeals for a new attitude toward rural rehabilitation. He theorizes that the rural poor would be best and most economically housed if the materials immediately at hand were used such as mud brick in the Middle East and wood in southeast Asia.

With someone to show them how and with access to some architectural design, the author believes that the poorest people can build their homes themselves in a manner that they can afford and that will be socially and esthetically in tune with their indigenous needs.

During 1945-46, he put his theory into practice, designing the village of New Gourna for a group of Egyptian peasants. He worked with each family to give the home individuality. He built a brickyard to make the mud bricks. He designed a mosque, a marketplace, a theater, schools.

This story of his accomplishments makes for fascinating reading. "Even in its failures—and there are aspects of this in Dr. Fathy's work—much can be learned," comments William R. Polk, president of the Adlai Stevenson Institute of International Affairs, in the foreword. "One thing is clear. There is no substitute, even in the world of speed, mass and abstraction, for the gifted individual who cares."

Introduction to Contemporary Indigenous Housing. Norbert Schoenauer. Montreal: Reporter Books, 1973. 133 pp. \$5.95.

It's the women who construct the beehive huts which are the ephemeral dwellings of the BaMbuti Pygmy. They twist and twine small saplings into a lattice framework and then make a thatching of large mongongo leaves. And if a woman dislikes a neighbor whose hut is opposite her own, she will change the entrance to face another direction or move to another site altogether.

The nomadic Tungus in eastern Siberia live in tents. Their dwelling, by necessity, is easily transportable, and they move about in a defined clan territory where the density is about one person for every 100 square miles. In contrast, more permanent dwellings built from durable materials are the homes of Bernese farmers in Switzerland. Under one roof is a multi-functional building containing the family dwelling, the stables, the hayloft, the storerooms and the threshing floor.



These and many other examples are given in this book on contemporary indigenous housing to illustrate how architecture responds to cultural and physical forces. Through a study of the evolutionary stages of housing an insight can be gained into form. As the author explains, "time" is really only one factor to be considered in judging architectural development. Even today it is still possible to study existing simple cultures, although it will not be long before such uncomplicated social organizations will disappear through acculturation. And the chance to present a history of housing using examples of indigenous dwellings will vanish as well. The examples that Schoenauer gives in the book are made more interesting because they are of dwellings actually inhabited by people today. The drawings by the author and George Juhasz tell a story themselves and add greatly to the book.

Plan Reading for Home Builders. 2nd ed. J. Ralph Dalzell; revised by Frederick S. Merritt. New York: McGraw-Hill, 1972. 163 pp. \$8.95.

If an architect has an eager client who

wants to be able to read construction plans, this book may help.

This second edition is an updating of a book formerly published under the title of *Blueprint Reading for Home Builders*. The title has been changed to reflect changes in the methods of reproducing drawings. Black and white prints are now common. The new edition also has changes in some of the symbols, and specifications are organized differently. These changes do not affect the basic principles, but the text and illustrations show the differences in construction practices that have come about since the first edition was published in 1955.

You Don't Have to Be Rich to Own a Brownstone. Joy and Paul Wilkes. New York: Quadrangle/New York Times Book Co., 1973. 139 pp. \$6.95.

If you want to live in the city but have a limited income, a practical way out is to renovate an old house. You'll have to do the work yourself to save money, but Joy and Paul Wilkes, authors of this book, make it all sound fun even if a lot of hard work is involved. They bought a brownstone in New York City with another couple and have converted it into a most attractive place to live. With high prices and the housing shortage, maybe others will have the ambition and drive to buy a structurally sound old house and make it into a home.

The Wilkes pass along all the information they have accumulated on restoring old houses—and do it with verve and wit. They give the reader nearly everything he needs to know, covering every aspect from getting a loan to having a housewarming party.

Space Adrift: Landmark Preservation and the Marketplace. John J. Costonis. Urbana, Ill.: University of Illinois Press, 1973. \$6.75 AIA members, \$7.50 non-members.

It is surprising that the cause of landmark preservation could be the beginning of the resuscitation of the concept and practice of land use control through zoning. More and more urban specialists are beginning to attack the validity and, indeed, the effects of zoning in achieving desirable physical and social objectives in our urban areas.

What was once considered the most important tool for implementing comprehensive land use plans has recently been criticized as having only achieved a protection of property values, artificial separation of land uses and undesirable social consequences through aberrations of the process called fiscal and exclusionary zoning. The property taxation system and the real estate marketplace are said to have eroded the physical and social objectives of zoning to the extent that it can only serve special economic interests. Costonis

is a man who understands the relationship of the zoning process to property taxation and land economics. His book proposes a method to overcome these basic shortcomings in a pragmatic and creative way.

Using landmark preservation as his cause célèbre, Costonis matches the zoning process to cultural objectives by developing a system within the context of zoning to transfer development rights. In the process, he has bared the faults of zoning and proposed politically and economically sound solutions to overcome these deficiencies. Students, critics and practitioners of zoning will be impressed by his insightful analysis.

Zoning in its literal sense is a misnomer. The segregation of land uses to which "zoning" refers has been superseded by more comprehensive concepts of land use control. Typical municipal ordinances include planned unit development, historic or cultural districts and, in many cases, sight and design review provisions. Development rights transfer provisions, such as those in New York City and San Francisco, are further evolutions in land development control. Costonis' work carries the evolution logically forward.

His proposal provides for the selling of the unused development potential (rights) of sites which are occupied by historic buildings and the establishment of a central bank to buy and sell rights. Owners of historic property would enter into a deed covenant to limit the use of their property after the rights are sold. The biggest potential "hitch" in the whole scheme revolves around the possible weaknesses of the planning and zoning process in the local community. It could be that development rights have no marketable value in a community where zone changes and variances are easy to obtain.

With the deck loaded in favor of "highest and best use," The American Institute of Architects' 50 state Historic Preservation Coordinators have desperately watched the destruction of over half of the 12,000 buildings listed in the Historic American Buildings Survey. It is time to work vigorously for improving land use development control processes at the state and local levels. This book can be a manual for action. *Michael B. Barker, Administrator, AIA Department of Environment and Design.*

Do-It-Yourself Housebuilding Step-by-Step. Charles D. Neal. New York: Macmillan, 1973. 246 pp. \$12.95.

This guide to building a one-story house, garage, cabin or weekend retreat will be of help to the do-it-yourself enthusiast. The architect could use it with a client to help him understand some of the problems of planning and construction. The second part on "Keys to Better Building" may be particularly pertinent. □

LETTERS

The Sky Is Falling: Please add my name to all of those who have congratulated the AIA JOURNAL on its new format.

In September, page 86, there is an item about the Manhattan hotel in Times Square designed by John Portman, FAIA. In the fourth paragraph it is stated: "Atop the hotel will be a sky-level cocktail lounge, and one flight of circular stairs below will be a revolving restaurant."

Is the figure given that the 54-story hotel will rise 618 feet above street level accurate? Or is, indeed, Chicken Little correct that the sky is falling?

*Ben E. Graves, Hon. AIA
Chicago*

Life-Cycle Costing: I read with great interest the article "Here You Have It: Life-Cycle Costing" by Robert Ramsey and Robert Guthrie in the July issue. In general, the article gives a good summary of the landmark project, Social Security Administration Payment Centers.

As co-author of the *PBS Performance Specification for Office Buildings*, as former systems consultant to the executive architects/engineers on this project, as an architect who has been actively engaged in systems building and performance specifications since 1967 and as a member of the AIA Systems Committee, I should like to correct one erroneous statement in the article.

In discussing the creation of a life-cycle cost formula, the authors state: "We believe it is the first time in the history of such a project that this had been done." Although this belief may be genuine, it is not supported by facts. The RAS (Recherches en Aménagement Scolaire) Performance Specification, dated June 1968, and prepared by IRNES, Inc. (Institut de Recherche en Normalisation Economiques et Scientifiques) for the Montreal Catholic School Commission—a project supported in part by the Educational Facilities Laboratories, Inc.—contains a life-cycle cost formula as the basis for system contract awards (p. 19, Book 1, Information for Bidders). This formula translated the bid price, corrected with equalization factors, into an *equivalent annual investment*, to which is added the *annual costs of operation and maintenance*.

In addition to preceding the General Services Administration project by four years, the RAC formula is more sophisticated than the GSA formula from a purely economic point of view. This is for two reasons: 1) The GSA formula assumed the life of all subsystems to be 40 years, while the RAS formula used the predicted actual life of each component. Clearly, the GSA assumption is erroneous and would tend to give a relative advantage

to short-lived components by not including their replacement costs; 2) the GSA formula did not take into account the "cost of money" by, in effect, assuming a zero discount rate for future expenditures. RAS used a realistic discount rate.

The causes of life-cycle costing and systems building have been heavily bolstered by the SSA Payment Centers Project. They have, however, been developing steadily by many people in a variety of projects ever since the Southern California School Design study in the early '60s. It would seem proper for an important article on the former to at least acknowledge the latter.

*David B. Hattis
Executive Vice President
Building Technology
Silver Spring, Md.*

In response to David Hattis' comments, I would like to clear up two points.

We were certainly aware of the life-cycle cost formula in the RAS Performance Specification but were not aware that it was used to award a major project.

As for acknowledging the previous work of others, it is always assumed that all progress is based on and is a continual growth process derived from previous developments. As for the sophistication differences, all efforts of this type of work proceed from the absolute to what is possible to accomplish at the time.

Hattis apparently does not understand that the replacement of short life components is included in the GSA formula. For example, the replacement of lamps providing illumination is covered by the maintenance portion of the formula, which states that the systems contractor must maintain the performance of the system in use.

*Robert R. Ramsey
Vice President
Leo A. Daly
Omaha*

Credit Where It Is Due: I have received much favorable comment about the article that I wrote for the September Journal on "An American City's Tradition of Art." Credit should be given to Eliot Noyes, FAIA, of New Canaan, Conn., for the drawing of the bull's head which adorned a column at Persepolis and was depicted on page 18. He was my assistant on the Oriental Institute expedition in 1936 which was mentioned in the article.

*John S. Bolles, FAIA
San Francisco*

The Pleasures of Guam: When I saw the photograph of the Country Club of the Pacific in Guam in the August issue, I fondly remembered the round of golf I played there with my colleagues a couple of months ago. The clubhouse is beautiful in its setting in the palm trees.

Other things are happening in Guam. Our subsidiary firm, Esco International,

is working on the 305-room Daikyo Hotel at Tumon Bay, which will be ready for construction later this year. It will have an 18-lane bowling alley, lanai suites, four restaurants and a group of stores. The project, which is the design of Walter W. Case, AIA, our chief architect on Guam, will serve Japanese tourists primarily.

*Kurt W. Meyer, FAIA
Los Angeles*

A Very Good Question: For years I have lived in apartments and have encountered the same problem. I wonder why. All apartments are designed the same impossible way.

The problem is this: How do you empty the dirty (slop) water after you have washed the kitchen floor? Kitchen and bathroom floors should be washed regularly. The bathroom is no problem. One can dispose of the dirty water readily enough in the obvious place.

The kitchen is a different matter. Every building is designed the same way. After one gets through washing the kitchen floor, it's necessary to drag the pail all the way from the kitchen to the bathroom to get rid of the filthy water. One has to drag the pail through the living room to get to the bathroom commode to empty the filthy water. Why is this?

I get irked every time I have to drag the filthy kitchen floor water to the bathroom to empty the pail or pails used in the process. This is senseless to me. Why hasn't someone come up with a place near the kitchen where the water can be emptied? It strikes me as sheer laziness and ineptitude on the part of designers.

If anyone can come up with a legitimate reason, I'd love to hear it. I am really serious. I can't help wondering why apartment buildings are designed this way. And they all are. Letters to the editor of this magazine will be forwarded to me.

*Mabel M. MacDonald
Washington, D.C.*

Associate of Taut: In September there was an article by me titled "Prophets of Future Environments" in which I discussed the contributions of German architect Bruno Taut. He was associated with Franz Hillinger, who became the director of the design division of the GEHAG, a large nonprofit housing corporation in 1929. Under Hillinger's direction and with Taut's architectural leadership, designs for more than 10,000 dwellings were executed.

Hillinger died in New York City on August 18 at the age of 78. After immigrating to this country at the age of 61, he worked with New York City firms, but his significance as an architect dates back to his work in Germany and Turkey.

He was born in Hungary and went to Berlin in 1919. After receiving his diploma, he soon became attracted to the

great task of housing which faced Germany at the time. This brought him in contact with Taut and Martin Wagner who initiated the GEHAG in 1924.

Hillinger was also Taut's assistant at the Technical University in Berlin. After Hillinger left Nazi Germany in 1937, he went to Turkey to work as an architect for the Ministry of Education, taught at the Art Academy in Istanbul and was director of the architectural school in Ankara. In 1952-56 he was in charge of the supervision of construction of the vast parliament building which was built after the designs of Professor C. Holzmeister. Throughout his career, Hillinger also designed many private homes.

All of us who knew him enjoyed his great friendliness and the generosity with which he shared his many talents. He gave always considerably more than he received. I myself have lost a wonderful friend and erstwhile teacher, and the profession of architecture has lost a man of important stature. *H. H. Waechter, AIA
Creswell, Ore.*

School Design: The introduction by Maurice Payne, AIA, to the October issue on school design (p. 17) couldn't have stated the opportunities in this market better. I am referring specifically to the summarizing sentence: "In all, the educational facilities business never provided more possibilities for an architect to exercise his imagination." This plus the excellent examples of educational architecture add up to an outstanding issue. Congratulations to all! *Thomas A. Bullock, FAIA
Houston*

EVENTS

Dec. 15: Applications due, AIA/National Clearinghouse for Criminal Justice Planning and Architecture Student Competition for a Model Correctional Delivery System of Facilities and Programs. Contact: Bruce Hutchings, AIA, NCCJPA, 1102 W. Main St., Urbana, Ill. 61801.

Dec. 31: Entries due, International Aluminum Extrusion Design Awards Program. Contact: Aluminum Association, 750 Third Ave., New York, N.Y. 10017, or Aluminum Extruders Council, 120 Ogden Ave., Hinsdale, Ill. 60521.

Jan. 3-4: Building Officials and Code Administrators International, Inc., Mid-Year Meeting, Sheraton Hotel, Fort Lauderdale, Fla.

Jan. 10-12: Grassroots Conference East, L'Enfant Plaza Hotel, Washington, D.C.

Jan. 14-18: Seminar on Crime Prevention for Retail Business, University of Louisville, Louisville, Ky.

Jan. 15: Applications due, Training Courses in Conservation/Restoration, International Centre for the Study of the

Preservation and Restoration of Cultural Property, Rome. Contact: Advisory Council on Historic Preservation, Suite 430, 1522 K St. N.W., Washington, D.C. 20005.

Jan. 15: Applications due, Brunner Scholarship Award. Contact: New York Chapter AIA, 20 W. 40th St., New York, N.Y. 10018.

Jan. 15: Applications due, Grants Program on City Options. Contact: National Endowment for the Arts, Architecture + Environmental Arts Section, Washington, D.C. 20506.

Jan. 15: Entries due, Student Competition on Combining Energy and Design. Contact: AS Competition, Association of Student Chapters/AIA, 1735 New York Ave. N.W., Washington, D.C. 20006.

Jan. 16-20: Scandinavian Lighting Fair, Bella Centret, Copenhagen, Denmark.

Jan. 17-19: Grassroots Conference West, Vacation Village, San Diego, Calif.

Jan. 20-24: National Association of Home Builders Convention and Exposition, Astrodomain, Houston.

Jan. 21-23: Grassroots Conference Central, Crown Center, Kansas City, Mo.

Jan. 22: Nomination forms postmarked, R. S. Reynolds Memorial Award for Distinguished Architecture Using Aluminum. Contact: Maria Murray, AIA Headquarters, 1735 New York Ave. N.W., Washington, D.C. 20006.

Jan. 24-25: Seminar on Real Estate Development for Architects, University of Wisconsin, Madison, Wis.

Jan. 31: Entries due, National Plywood Design Awards Program. Contact: American Plywood Association, 1119 A St., Tacoma, Wash. 98401.

Feb. 8-9: AIA Development Team Conference, New Orleans.

Feb. 11-15: Seminar on Crime Prevention for Industry, University of Louisville, Louisville, Ky.

Mar. 11-15: Interactive Computer Graphics in Engineering Analysis and Design Workshop, University of Arizona, Tucson, Ariz.

Apr. 1: Entries due, Competition for a Hypothetical Neighborhood Health Care Center. Limited to professionals under 33 years of age who are not enrolled in full-time academic programs. Contact: Byron Bell, National Institute of Architectural Education, 20 W. 40th St., New York, N.Y. 10018.

Apr. 15: Applications due, Kate Neal Kinley Memorial Fellowship for the Study of Fine Arts. Contact: Dean Jack H. McKenzie, College of Fine and Applied Arts, 110 Architecture Building, University of Illinois, Urbana, Ill. 61801.

Apr. 19: Submission of design due, LeBrun Traveling Fellowship. Contact: New York Chapter AIA, 20 W. 40th St., New York, N.Y. 10018.

May 8-10: International Symposium on Plastics in Building, Rotterdam, Holland. □

GOING ON

going on from page 8

dlebrooks, AIA, associate professor of architecture and director of the Community Development Organization, UM Center for Urban and Regional Studies, the research into housing design and neighborhood preferences was funded by the Department of Housing and Urban Development through metro HUD.

The researchers investigated the Black Grove area, visiting 539 households to find out what low and middle income families want in housing and to make recommendations to Dade County planners.

Among the findings:

- The least desired type of unit is that in a highrise, high density development; low/moderate income families with children want ground level access to the housing unit as in single-family dwellings, townhouses or garden apartment buildings. The majority of the respondents thought that the elderly would prefer to live in separate units designed especially for them. It is recommended that lowrise units which lend themselves to home ownership be constructed.
- Privacy and territory are the top priorities in the design of exterior spaces. It is recommended that future developments provide for recreational and open spaces for all age groups.
- Although the majority of the respondents and their families have not been the victims of crime in the past year, the majority of black respondents thought that the area was not a safe place to live. It is recommended that architects and urban planners give special attention to security measures in designing low and moderate income housing.

Contractors' Group Applauds GSA Plan To Eliminate Seasonality in Building

"Delays in construction due to seasonal weather conditions have plagued the construction industry," said Larry F. Roush, commissioner of the General Services Administration's Public Buildings Service, when he announced that the government agency has initiated a plan aimed at eliminating seasonality. The directive calls for weather protection for floors, masonry scaffolds, fabrication sites and other work areas where it is needed to insure an orderly progress of work on GSA job sites. Roush declared that the new requirements will be of special benefit to construction workers who otherwise face seasonal layoffs due to poor weather conditions.

The plan was proposed initially by the American Subcontractors Association which represents subcontractors in all building trades. ASA estimates that subcontractors are responsible for about 80 percent of all construction in the US today.

The association has applauded the GSA plan as a "revolutionary concept that will help eliminate costly seasonality in construction."

Ronald Bratti, ASA first vice president, predicted that the plan would encourage subcontractors to bid on GSA jobs in preference to private work where the "weather protection concept has not been widely adopted." He said that "the subs will be better able to schedule work, setup time will be reduced and costs will be lower." ASA is of the opinion that the closing in of buildings will insure completion dates on government jobs, that con-

tractors' claims for time extensions and money due to escalation will be reduced and that, in addition, on-site overhead will be minimized.

New Town-in-Town Focuses On Needs of Elderly Citizens

The town of Amherst, Mass., had an unusual opportunity in 1969 when a site in the center of the town became available for redevelopment. Over a three-year period, three committees gathered data, soliciting opinions from over 30 local organizations and a cross section of citizens.

As a result of the careful planning and

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FOR APARTMENT COMPLEXES



Left, the TM 8830-DD units. 96 of these units were specified by the architect for a Pennsylvania apartment complex. At right, the popular TM 1030 DD.

Tee-M Storage Systems belong in your plans.

**RUGGED
ATTRACTIVE
CONVENIENT**

MODEL DESCRIPTION					
Standard Tee-M Units for 30 gallon cans					
Model No.	Cap. (30 Gal. Cans)	D	H	L	App. Crated Shipping Wts.
TM 200	2 cans	27"	55"	49"	350 lbs.
TM 300	3 cans	27"	55"	74"	450 lbs.
TM 400	4 cans	27"	55"	97"	600 lbs.
TM 500	5 cans	27"	55"	121"	750 lbs.
Special Units for 55 gallon drums					
Double Depth Tee-M Units for 30 gallon cans					
TM 4430-DD	4 cans	54"	55"	49"	650 lbs.
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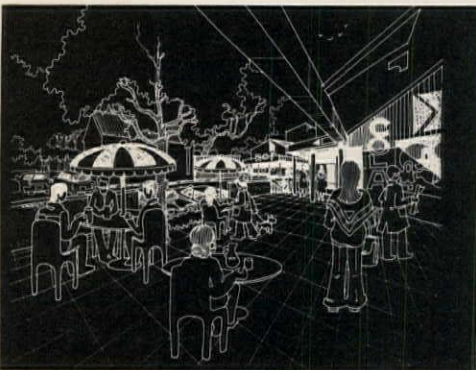
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analysis, it was decided to develop an area to be called Boltwood Walk on a 9.6 acre site. Funds for preliminary planning have been obtained from the Commonwealth of Massachusetts and the town. It is expected that the mix of public and private interests within the boundaries of the project will create more than enough income in the form of increased tax revenues to cover the net cost and that the project will be financially self-liquidating over a 26-year period.

Although Boltwood Walk is a new focus in the historical, economic and cultural center of the community and will provide all citizens with amenities, the plan is to



Boltwood Walk is being viewed as a model applicable to similar cities.

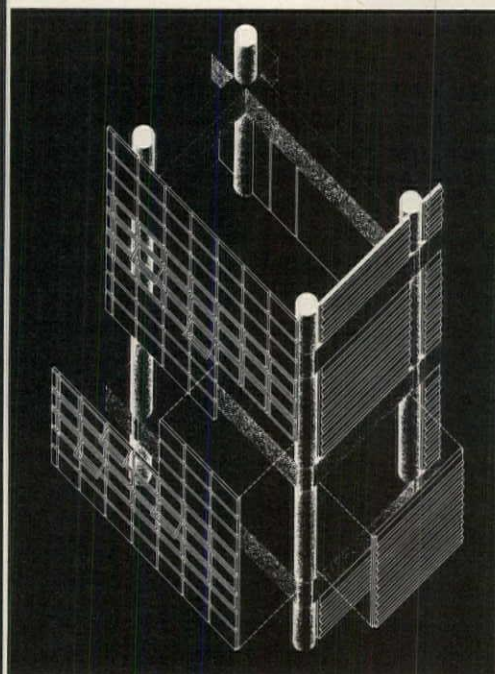
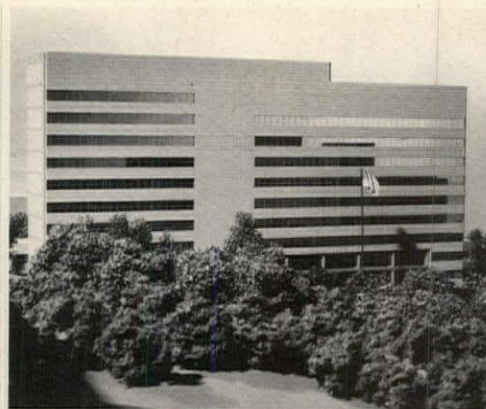
recognize the needs of elderly citizens who will be the primary residents in the housing to be developed. Older citizens from all walks of life and all economic levels will have a variety of supporting services to help them retain independence. Design of all housing will serve the special needs of the elderly and the handicapped, and within the site older residents will have access to facilities to help them maintain the highest level possible of health.

In addition to the housing, Boltwood Walk will be a landscaped area with shopping and other community facilities for all the town's residents to use and enjoy. There will be restaurants, meeting places, club spaces and a community athletic facility.

The Amherst Redevelopment Authority is presently seeking "the best talent available to assist it in creating this innovative and exciting project," says William P. Condo, the authority's executive director. A booklet which describes the Boltwood Walk plan has been published. Arrowstreet, Inc., Donlyn Lyndon; and Philip B. Herr & Associates are the architects and planners.

New Embassy Office Building in Tokyo Sited on 3.14 Acres Near Okura Hotel

One of this country's largest embassy buildings is under construction in Tokyo. It ranks in size only behind the State Department facilities in London and Mexico City. The 245,000 square foot structure is the design of Gruen Associates, with Cesar Pelli, AIA, partner in charge.



Embassy's structural frame of round columns and rectangular beams is exposed.

Pelli remarks that the building's long facades enclose flexible, modular office space. "This enclosure is a thin curtain of glass and precast concrete with a modular abstract grid that corresponds to the office module and to story heights and window dimensions. This wall is expressed as a membrane, thin, light, hard, with aluminum reveals."

The office building is composed of a long 11-story office tower and a parallel three-story office wing separated by a central court containing an auditorium, terraces and gardens. The architects comment that the structure is designed to earthquake requirements even more stringent than those of the US. "The Japanese require a structure capable of withstanding lateral forces 21 percent of gravity while the US Uniform Building Code standard for the same structure is approximately 3 percent of gravity."

Pelli is enthusiastic about the site which he says would be a good one anywhere, "but in the city of Tokyo it is extraordinary." He comments that the building is designed and sited so as to appear to grow out of the hill at the back of the site. An integrated part of the Tokyo urban fabric, the structure will look "uncom-

posed, unmonumental." The old chancery is being demolished to make way for the new building. The ambassador's residence to the south will be retained, and the garden between the residence and the embassy will be preserved.

Construction cost is placed at about \$12.2 million. It is anticipated that the project will be completed within 36 months. The Department of State's Office of Foreign Buildings Operations' design standards are that embassy facilities "shall be provided in an architectural form representative of the US expressing such qualities as dignity, strength and neighborly sympathy."

ULI 11-Point Position Paper Calls National Land Use Bill Deficient

An 11-point paper recently released by the Urban Land Institute states that the Land Use Policy and Planning Assistance Act of 1973 (S. 268) and its companion measure H.R. 10294 are deficient because environmental considerations are over-emphasized in comparison with other legitimate land use needs. ULI urges "a balanced approach between meeting the needs of a growing population and preserving the quality of our natural environment." The organization states that many development projects "provide testimony to the fact that a desirable compromise can be made between what sometimes appears to be incompatible objectives of growth and environmental protection."

The paper recommends that land use planning and implementation programs should be conducted to ensure: provision of adequate housing and employment opportunities; orderly development of a balanced transportation system; provision of adequate public facilities; orderly restoration of air and water quality in urban areas and maintenance of present quality in rural areas; provision of adequate facilities to meet needs of interstate commerce and foreign trade; provision of an adequate supply of energy and natural resource material in a manner consistent with policies to control environmental quality, to replenish replaceable resources and to restore the landscape to its natural form; conservation of areas of important ecological, historic, cultural, esthetic and economic value.

In its 11-point recommendations, ULI urges that the federal government as well as the states exercise their land use responsibilities and that the legislation authorize a special separate Congressional "oversight" committee, an advisory committee of state representatives, speedy grant approval process, delegation of authority by state to local governments, control of land subdivision and development and a major research program.

The full text of the paper may be obtained from ULI, 1200 18th St. N.W., Washington, D.C. 20036.



Facilities will provide a range of services for patients in the Middle East.

Aga Khan Medical Center Project In Pakistan Goes to Boston Firm

The Boston-based architectural firm of Markus Nocka Payette & Associates has been selected to draw up final plans for the Aga Khan Foundation Medical Center in Karachi, Pakistan. Acceptance of the firm's design has been confirmed by Pakistan's President Zulfikar Ali Bhutto.

The center will include a 670-bed hospital, a 500-student medical college, a nursing school, housing for staff and students and an Islamic mosque. Thomas M. Payette, AIA, says that the "best in Western medical technology will be combined with the great tradition of Moslem culture."

"This tradition," the architect notes, "maximizes the use of reflective pools and running water as well as landscaped gardens and interior courts. In contrast to Western structures, Islamic buildings seek to blend with their environments. . . . The 'spaces' within the building — the courts and other unroofed areas — are an integral part of the architectural concept."

Because of Karachi's shortage of energy resources and its severe and fluctuating climate, the center's design is based upon the principles of climatic control. All facilities will be oriented to the prevailing winds. Solar devices will be used and rooftop cooling pools. All structures will feature construction which permits daytime heat to be stored for release into interiors during the cool nights. Conventional airconditioning systems will be limited to such areas as the operating rooms which require precise environmental control.

Sitework for the complex has already begun, and construction is expected to get underway early in 1974.

Work on Crumbling West Front to Wait; No Funds Appropriated for This Year

The West Front of the US Capitol will neither be restored nor extended this year. The Congress proposed a total budget of \$640 million to meet its needs during the year that began on July 1, but a compromise budget of \$605 million was decided upon with West Front expenditures eliminated.

A report of the conference committee

on the budget noted that the House had held no public hearings on the proposed underground wing for the West Front (*see* Aug., p. 71) and that House conferees "were in no position to consider the proposal."

Architect of the Capitol George M. White, FAIA, commented that the West Front will not fall down any time soon and that any future requests for funds that he may make of the appropriations committee will depend on the wishes of the Commission for the Extension of the US Capitol.

Four Projects Selected for Top Honors In Chief of Engineers Awards Program

The US Army Chief of Engineers conducts a design awards program annually to promote and reward the production of esthetically and functionally distinguished design for buildings and structures erected throughout the world by the Corps of Engineers.

Various Corps of Engineers' districts submitted 32 entries in this year's awards



program. Three won awards of merit and one an honorable mention. Top winners are:

- Moncrief Army Hospital, Fort Jackson, S.C., designed by Lyles, Bissett, Carlisle & Wolff for the Savannah District
- Weapons Training Facility, Fort Knox, Ky., designed by Sverdrup & Parcel Associates for the Baltimore District
- Overlook Shelter, Cochiti Dam, Sandoval County, N.M., designed by the Albuquerque District.

Lea, Pearson & Richards won an honorable mention for the design of the US Army Library, Fort Lewis, Wash., for the Seattle and Sacramento District.

Jurors for the awards program were S. Scott Ferebee Jr., FAIA, president of the AIA; Arthur Cotton Moore, AIA, Washington, D.C.; and William Turnbull Jr., AIA, San Francisco.



Army Engineers cite a hospital (upper left); an overlook shelter (lower left); a library (upper right); and a weapons training facility (lower right).

Ecologically Oriented Research Underway; Paving Material Studied

The Woodlands, a new town now being built north of Houston, will have one of the nation's first "ecological" parking lots. The pavement, developed by the Franklin Institute Research Laboratories of Philadelphia for the Environmental Protection Agency, is a porous asphalt that lets rain

water seep through and return eventually to the natural water table.

The pavement, installed by the Mitchell Energy & Development Corp., will cover a half-acre site and will serve a complex of buildings and recreational facilities. An adjacent lot will be paved conventionally for control and comparison purposes.

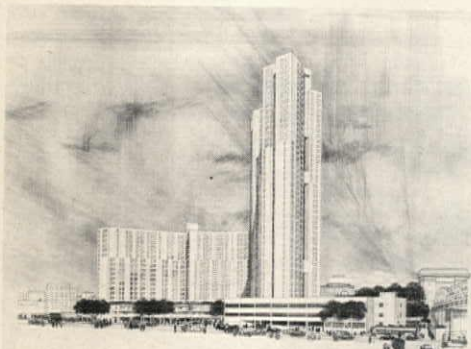
A porous pavement has been developed by the University of Delaware, but the lot at The Woodlands is said to be the first used for research purposes. A battery of instruments, some inbedded in the pavement, will monitor the performance and effectiveness of the material. Tests will be made regarding any improvement in water quality as compared with conventional storm runoff, which is known to be highly contaminated. Safety aspects of the porous asphalt will be researched as well.

Only large rocks are used in the material, and they tend to create "pours" when the asphalt is installed. A 12-inch bed of rock will underlay the lot, creating a reservoir capable of storing 5 inches of rain until it oozes into the soil. It is believed that the pavement itself is capable of taking 70 inches of rain per hour.

The institute will monitor and collect data on the test lot, and the information will be used in a broader study of Montgomery County drainage now being conducted by Rice University for the EPA. Research results will be computerized and made available to developers.

Confucius Plaza in New York City Combines School, Housing, Offices

Ground has been broken for a \$45 million school, housing and community complex in New York City's Chinatown. Architects are the Manhattan firm of Henry L. Horowitz & Wei-Foo Chun. Confucius Plaza, as the project will be called, is sponsored by the New York City Educational Construction Fund and the Housing and Development Administration. At the groundbreaking ceremonies recently,



Housing, school, commercial and community facilities will be combined.

Mayor John V. Lindsay said that it will be "an imaginative and sensitive complex to which the Chinatown community and the city will look with pride."

Bounded by the Bowery, Manhattan Bridge and Division and Canal Streets, the site is approximately 6 acres in size. Due

to the density of the proposed development and the site's configuration, the project will consist visually of one building of varied heights, but actually there will be three contiguous structures. A public plaza will face the community to the south, and a school playground will be located between the school and the bridge.

The program calls for 762 dwelling units of middle income housing, a 1,200-seat primary school, community facilities, shops and residential parking.

The housing portion will be contained in two contiguous buildings, one 19 and one 44 stories in height. The school will be a three-story wing which will face Division Street. The community facilities area will include a day care center, a medical clinic, offices and an elderly citizens' day care center. The rental office space will be arranged on the three lowest floors. Shops will be located at the ground level. Residential parking on two levels will be under the school and its playground. The plaza will combine brick and concrete paving and planting.

Mayor Lindsay says that the complex "will become the new center and focal point of the vibrant Chinatown community. . . . Not just a new school and some housing, but a new-town-in-town." The development is the 13th to go into construction under the program of the Educational Construction Fund, a public benefit corporation that plans and finances the construction of public schools in combination with residential and commercial buildings.

Steel-Framed Buildings Honored by AISC; Jury Notes Impact on Design Trends

The jurors of the 14th annual architectural awards of excellence program sponsored by the American Institute of Steel Construction said that they were impressed "with the overall quality and great variety of the buildings submitted as entries." Among the 12 winning designs in the program which honors steel-framed structures are a remodeled factory, a church, a shopping mall, a police station and a gazebo.

The winning buildings and architects:

- Oxford Valley Mall, Middletown Township, Bucks County, Pa.: Cope Linder Walmsley



- Gazebo, North Little Rock, Ark.: Euine Fay Jones, AIA
- Feather Factory, San Francisco: Knorr-Elliott & Associates
- Fourth District Headquarters, Metropolitan Police Department, Washington, D.C.: McGaughan & Johnson
- College of Du Page Instructional Unit I, Glen Ellyn, Ill.: C. F. Murphy Associates
- Regency Hyatt House, San Francisco: John Portman & Associates
- Pine Knob Music Theatre, Independence Township, Mich.: Rossen/Neumann Associates, Inc.
- First and Second Church in Boston, Boston: Paul Rudolph, FAIA



A gazebo, a church, a music theater (top to bottom) and a remodeled factory (left) are included in the premiated entries.

- S. S. Kresge International Headquarters, Troy, Mich.: Smith, Hinchman & Grylls Associates, Inc.
- One Liberty Plaza, New York City: Skidmore, Owings & Merrill
- The Omni (Atlanta arena), Atlanta: Thompson, Ventulett & Stainback, Inc.
- Contemporary Resort Hotel, Walt Disney World, Fla.: Welton Becket & Associates.

Jury members were Pietro Belluschi, FAIA, the AIA 1972 Gold Medalist; William W. Caudill, FAIA, Houston; Victor O. Gray, vice president, Consulting Engineering Council; Ambrose M. Richardson, FAIA, chairman, Department of Architecture, University of Notre Dame; and Archibald C. Rogers, FAIA, first vice president of the AIA.

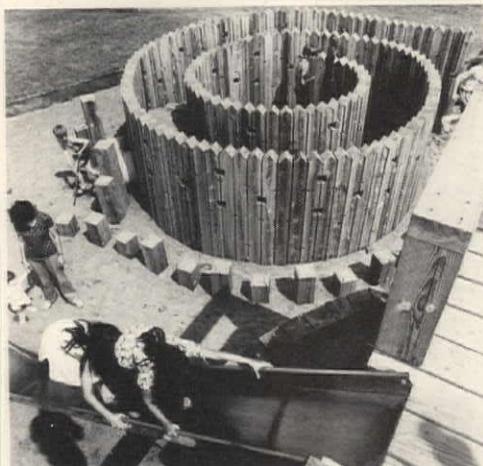
The jury noted that this annual awards program "is tremendously important for its long-term impact on architectural trends. . . . The effect is subtle and is not immediate. But there is a definite long-range effect on all architectural designs. . . . The winning selections are important in giving architects some guidance and direction."

VA Accommodates Handicapped, Issues Improved Standards

The Veterans Administration has issued new guidelines to help overcome architectural barriers for the handicapped. The new construction standards will be applied by architects, engineers and designers in the VA's Washington, D.C., office and in its 169 hospitals as well as by private A/E firms engaged to design VA facilities.

Most of the improved standards are aimed at existing VA buildings. The standards call for public toilet facilities that are wide and deep enough to accommodate wheelchair users. Other standards pertain to lower drinking fountains, at

least one public telephone for handicapped persons on each floor and modifications in passenger elevators. Expansion and strengthening of standards for VA site development planning include wider sidewalks and gradients of not more than 3 percent. Other points concern improved accessibility in parking lots and curb ramps at intersections of roads and walks.



The maze and sliding board are part of the children's "adventure playground."

New Park in Pennsylvania a Winner, Planned for 14,000 Daily Visitors

The first major park in Lackawanna County, Pa., was carved out of rolling woodland on a site 11 miles north of Scranton. The cost of acquiring the land and developing facilities for the park,

which opened in mid-1972, amounted to \$4.67 million.

The Pennsylvania Society of Architects AIA recently awarded the state's Bureau of Parks and the firm of Bellante, Clauss, Miller & Nolan, Inc., its distinguished building award for the new Lackawanna State Park. The firm, which serves as the state's architectural and engineering consultants, has designed hiking and nature trails, landscaped areas, water and sanitary facilities, park roads and buildings, picnic and parking areas and pool and playground facilities.

In the second phase of construction, the firm has planned a 100-acre camping area and has designed five additional buildings along new roads to tenting sites. The construction costs will amount to approximately \$1 million.

CUHA in New Jersey Wins Competition; Jury Praises Layout of Design Plan

Madison Township in Middlesex County, N.J., is a growing municipality of more than 50,000 people. To meet the needs of the burgeoning community, an architectural competition was held recently to select an architect for the design of a new \$2.5 million municipal center. The winner is the Princeton, N.J., firm of Collins Uhl Hoisington Anderson. CUHA architect Harlow Pearson headed the design team.

The jury declared that the winning design went beyond the requirements of the

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competition's basic criteria and objectives "to provide an outstanding design for the municipal center which will give Madison a sense of civic pride and provide a strong sense of identity to visitors from the region." The jurors commended the functional layout of buildings, the uses of open space and the plan for pedestrian and vehicular circulation as well as the site of the municipal garage and the accessibility to the police department.

The township's planning consultant (Abeles, Schwartz & Associates of New York City) initially wrote to all members of the New Jersey Society of Architects in nine counties of northern and central New Jersey asking for expressions of interest and answers to a questionnaire. As a result, 25 responses were received from interested firms. These were evaluated by a selection committee of officials and leading citizens, and eight firms were asked for interviews. Finally, five firms were selected from the interviewees and asked to submit entries.

The jury reviewed all drawings and models of the five entries and made its final selection by unanimous secret vote. Geoffrey Freeman, AIA, served as chairman of the jury which included AIA members John Stonehill, Henry C. K. Liu and Brian Smith, and Mayor Thomas J. English, Mrs. Daryl Hiller and Russell Azzaello. Professional advisers for the competition were Richard Blinder, AIA, and Bernhard Haeckel.

Capitol Building Medal Now Available

This nation's Capitol appears on a handsome fine art medal issued recently by the US Capitol Historical Society. George Washington appears on the reverse and is depicted at the cornerstone laying of 1793.

The medals are available to the public (\$8.50 bronze, \$45 silver serially numbered) and are given in vermeil to contributors of \$180 or more. President Nixon was presented with No. 1776 of an edition limited to 1976.

Orders for the medal may be placed with the society, 200 Maryland Ave. S.E., Washington, D.C. 20515.

Deaths

CECIL F. BAKER, Wareham, Mass.

EDWARD BODET, Houston

CORNELIUS V. R. BOGERT, FAIA, St. Petersburg, Fla.

FREDERICK S. CATES, Baltimore

NORRIS I. CRANDALL, Washington, D.C.

WILLIAM H. CREASER, Lathrup Village, Mich.

RALPH T. DITTMER, Flint, Mich.

OSCAR SIVERS EKDAHL, Topeka, Kan.

THEODORE CHARLES KISTNER, Los Angeles

GEORGE I. LOVATT JR., Cynwyd, Pa.

ILTON EVERETT LOVELESS, Los Angeles

CHARLES F. MASTEN, FAIA, San Francisco

JOHN HANS OSTWALD, FAIA, Berkeley, Calif.

Newslines

Roy E. Graham, AIA, has been named resident architect for the Colonial Williamsburg Foundation. He will administer and direct the departments of architecture and engineering, architectural research and records and landscape architecture. He was formerly associate professor of architecture at the University of Texas.

Federally financed housing for the elderly will be the topic of a three-year study by the Massachusetts Institute of Technology and the Philadelphia Geriatric Center, made possible by a \$573,000 grant from the Department of Health, Education and Welfare's Administration on Aging. Overall design and operation will be appraised, and the study will determine necessary crime prevention and safety specifications for future dwellings.

Julius Shulman, winner of the 1969 AIA Architectural Photography Medal, has conducted seminars for architects recently. Three-day sessions were sponsored by the Nebraska Chapter AIA and by Colorado practitioners.

Mobile Homes are used by the Department of Housing and Urban Development as temporary housing for disaster victims. There are now more than 2,500 mobile homes at various strategic storage centers ready for immediate shipment to any disaster area. Recently the American Association of State Highway Officials adopted a nationwide policy to speed the mobile homes on interstate routes by eliminating requirements for individual permits in each state through which units may pass.

George Schoneberger, AIA, was recently named chairman of the Phoenix Planning Commission.

Housing data for the US is contained in a recent report by the Census Bureau.

Titled "Volume 1, Housing Characteristics of States, Cities and Counties, Part 1," it may be ordered from the Superintendent of Documents, Washington, D.C. 20402. The price is \$6.25. The report reveals that there are 2.9 million families who have second homes, the number having doubled since the 1960 census. Paradoxically, more than one-third of homes are airconditioned, but 16 percent or 11.6 million use a well as their only source of water. And 2.9 million do not use a public sewer, septic tank or cesspool.

Carlisle H. Humelsine, president of the Colonial Williamsburg Foundation, has been elected chairman of the board of the National Trust for Historic Preservation.

More than half of the world's inhabitants will live in urban areas by the year 2000. A world housing survey prepared by the

Centre for Housing, Building and Planning of the United Nations reports that in 1920 there were only 11 cities of over 1 million people, but by the end of the century there will be over 300 such cities.

Yet "a great number of countries persist in misunderstanding or ignoring the mechanism of urbanization and its causal relation to the distribution of population."

Housing deteriorates in developing countries because of the lack or misapplication of resources to meet the needs of a growing urban population. The survey will be revised before submission to the General Assembly in light of comments by committees, states, agencies and organizations.

Norman DeHaan, AIA, who is president of his own interior design company in Chicago, was elected president of the American Institute of Interior Designers at its recent annual conference.

Transportation needs of elderly and handicapped city dwellers and freer movement of goods within the metropolis will be studied under a \$200,000 contract awarded by the Department of Transportation to the Polytechnic Institute of New York. This contract is the second largest to date in the newly established University Research Program administered by the Office of the Secretary of Transportation.

Ada Louise Huxtable, winner of the AIA Architecture Critics' Medal in 1969, has been named a member of the editorial board of the *New York Times* and will divide her duties between the board and expanded responsibilities as architectural columnist for the Sunday paper. Her successor as architectural reporter is Paul Goldberger.

Chicago architecture is featured in two exhibits that are being well received in European countries. The first, "The Evolution of the Chicago Hi-Rise," opened in Stockholm at the beginning of the year and is traveling to other Scandinavian cities. The second, "100 Years of Architecture in Chicago," was unveiled in July at the State Museum for Applied Art in Munich, Germany. It will travel to cities in Germany, Scandinavia and Switzerland. Organized by a young German architect, Oswald Grube, the exhibit has been visited by many people. Grube also prepared a comprehensive catalog for the exhibit. Carter H. Manny, FAIA, president of the Chicago Chapter AIA, attended the opening ceremonies in Munich.

The architectural work of Hugh A. Stubbins Jr., FAIA, of Cambridge, Mass., was the subject of a recent photographic exhibit titled "Hugh Stubbins, the Architect and His Work" at the St. Peter's Gallery in New York City. □

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