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Circle 1 on information card

The logo consists of the lowercase letters 'ai' in a bold, red, sans-serif font. The 'a' and 'i' are connected at the top. The background of the entire advertisement is a photograph of a modern interior furniture display set within a construction site. The scene features concrete pillars, rebar, and a crane in the background. In the foreground, there is a large, tufted, brown corduroy sofa and a matching armchair. A glass-topped coffee table with a chrome frame holds a vase of flowers and a black ashtray. In the middle ground, a man and a woman are standing and talking. To the right, a worker in a yellow hard hat is visible on a higher level of the construction. The lighting is a mix of natural light and warm, glowing floor lamps.

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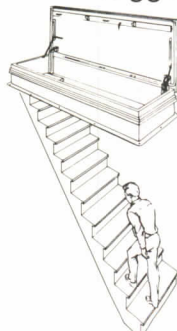
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AIA JOURNAL

Four Places Where Urban Design and Planning are Paying Dividends An Analysis of Urban Accomplishments—Louis B. Schlivek 17

Kalamazoo 20

From relative obscurity, Kalamazoo has achieved its own measure of recognition with a 16-year-old pedestrians-only downtown mall, and now a new civic center. Likewise, Kalamazoo's suburbs are bearing the fruit of careful planning of new housing developments.

Cincinnati 26

It was, and is again becoming, the Queen City of the Ohio River. With a new downtown plaza and concentrated renewal efforts in near-in neighborhoods, Cincinnati is experiencing a revitalization worthy of national attention.

Minneapolis 32

With vigor, Minneapolis and its twin city, St. Paul, attack problems and find solutions for them. And the solutions have ranged from the eight-block Nicollet Mall to new cultural facilities to near-downtown housing. The Twin Cities area is now approaching bigger issues with a new regional mechanism known as the Metropolitan Council.

Toronto 41

It is the most cohesive urban region in North America, and much of its order must be attributed to the transit system. But Toronto has discovered that too much of a good thing can be a problem, and politicians and planners alike are rethinking the city's future.

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Cover: Louis B. Schlivek

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A FIRST IN FIRE-PROTECTION.

Kansas City Bank Tower combines fluid-filled columns and flame-shielded spandrel girders.

The painted steel exterior of Kansas City's handsome new 20-story Mercantile Bank Tower encloses a number of unique structural concepts. Chief among them are liquid-filled columns, flame-shielded exposed spandrel girders and a unique steel space truss transfer structure.

Space truss and liquid-filled columns open up pedestrian area.

The architects plan for an open pedestrian area beneath the tower led to the design of the space truss and the liquid-filled columns.

The 18-foot deep space truss transfers the weight from 24 columns in the upper 16 floors to five base columns and the core. The five columns are 60 feet long, are cross-shaped and are fabricated from four standard W-shapes. The columns are filled with a solution of water and antifreeze. This system of column fire protection proved to be more economical than covering the columns with fire retardant material and cladding with steel covers.

The space truss which encloses the building's mechanical floor is composed of W-shapes forming vees inclined outward at a 45° angle. Top and bottom chords are

structural steel W-shapes with composite concrete slabs. The lower slab is post-tensioned with strands running diagonally which transmit tension forces to the core. This design resulted in further reduction of structural steel and a substantial saving in reinforcing steel.

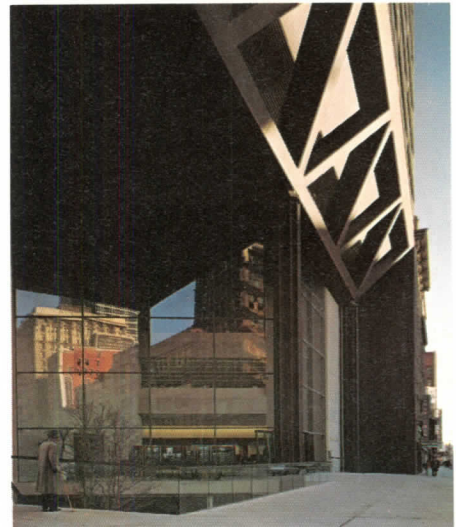
Flame-shielded spandrels function as curtain wall.

The flame-shielded girders serve a dual function of structural component and wall enclosure. They form a part of the framing system replacing the more conventional concealed spandrel girders required to carry the floor loads. While acting with the exterior columns to resist all the wind forces on the tower, these exposed members provide 50% of the exterior wall. The top and bottom flanges with fire protective material on the inner surface provide the necessary protection for the girder webs in the event of fire within the structure. Full-scale mock-up and Underwriter's tests conducted in accordance with ASTM standards have shown this type of design will enable the steel girders to maintain flange and web temperatures below the limits

established by ASTM E 119. In addition, the top flanges of each girder provide the form for the concrete floor above.

The Mercantile Tower contains 248,000 square feet and required 2200 tons of structural steel. It is a fine example of innovative architecture and engineering and the use of painted, exposed steel that works both aesthetically and structurally.

U.S. Steel is preparing a structural report on the Mercantile Bank Tower and we will be happy to send you a copy. For your copy, contact a Construction Representative through your nearest USS Sales Office, or write United States Steel, Room C425, P.O. Box 86, Pittsburgh, Pa. 15230.



Owner: Walnut Associates, Kansas City, Missouri.

Architect: Harry Weese and Associates, Chicago, Illinois.

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Mechanical and Electrical Engineers: Martin, Nagy, Tonella Associates, Inc., Chicago, Illinois.

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Structural Steel Fabricator: Havens Steel Company, Kansas City, Missouri.

Spandrel Fabricator: Southwest Ornamental Iron Co., Bonner Springs, Kansas.



United States Steel

NCARB Focuses on Internship, Degree Requirement

"Architectural education should be an uninterrupted, ordered sequence that begins with architectural school, continues through an internship period and on through registration and practice," said Institute President William Marshall Jr., FAIA, in a keynote address at the 54th annual meeting of the National Council of Architectural Registration Boards in New York City in June.

AIA should "reshape" itself in the same way, said Marshall. "It should fill the needs of students entering architectural school, continue to serve during internship and throughout the life of the individual—responding to each condition as appropriate, including even retirement years—and setting appropriate dues at each level. Once a commitment to architecture is made, each person should automatically proceed through appropriate AIA membership categories."

Marshall said that AIA and NCARB are collaborating on several matters of mutual concern. One of their more important "joint ventures" is the development of a new internship program "to close the gap between formal education and registration." Marshall said that with the cooperation of other organizations this "flagrant gap in the process of architectural education" is finally beginning to be closed. The program is being developed through an AIA/NCARB coordinating committee (Charles A. Blondheim Jr., AIA, NCARB first vice president, chairman, representing NCARB, and Elmer E. Botsai, FAIA, vice president of the Institute, vice chairman, representing AIA).

In his report, Blondheim said that when most young people finish architectural school, they "vanish from the profession's view for three, four or more years. . . . We have no real idea of whether they are sharpening their skills and gaining the knowledge that they should have to qualify for registration. . . . They know in a vague way that at some point in the future they'll have to buckle down and take the

registration exam, but they have no idea of what will be expected of them." He said that it is essential for the registered architect to acquire "at the earliest stage of his career the habits, the judgment and the integrity that must serve him for a lifetime."

The coordinating committee recommended that a pilot program be started in January 1976 and that the initiation of a national intern-architect development program begin in 1978. The pilot program, to be implemented in the states of Colorado, New Jersey and Texas, will involve about 40 intern-architects within each.

The pilot program, which will last for about 12 months, has as its objectives: refining the advisory system and monitoring the effectiveness of the system and the procedures of the professional adviser; identifying the kinds of continuing education or supplemental courses required; evaluating the effectiveness of forms, documents and records; gaining insights into the attitudes and problems of the professional sponsor, and receiving feedback from the intern-architect and all others involved in the program.

Participants must have at least one year's practical experience following termination of academic training. Graduates from many different schools of architecture will be chosen, and they will represent a cross section of scholastic performance. Participating employers, as professional sponsors, will be selected from both urban and rural areas and will represent a diversity in firm size and operating methods.

Coordinating committee members told the NCARB delegates that a meaningful internship program will require a candidate for registration to have been exposed to "all the fundamental aspects and tasks comprising the practice of architecture. . . . Their satisfactory completion will be verified, recorded and evaluated. . . . Thus the candidate . . . and all supporting bodies will be not only honor bound to assure the program's success but also mandated to do so. Therein, we believe, lies the great promise of not only redressing an historic oversight—the internship gap—but also of elevating architecture to a new level of accountability, a new standard of excellence."

The intern-architect development program is designed with flexibility to permit easy adaptation to changes in practice. Although the program calls for specific exposure to fundamental areas of practice, it also is open to permit expressions of individual interests in other areas closely related to professional practice. The program is conceived to be of significant benefit not only to intern-architects but also to employers and society as well.

To coordinate, assist and serve all individuals, boards, institutions and organizations in professional, technical and administrative matters related to the program, NCARB has designated Samuel T. Ballin, AIA, as national director of the program. He has now assumed the position of director of professional development for NCARB.

In his address, Marshall also touched on another important matter of business before NCARB: a proposed requirement that applicants for NCARB certification, with a few exceptions, have degrees from accredited schools of architecture (*see* June, p. 23). This, said Marshall, is "something of a bone of contention." In May, AIA's board of directors had voted unanimously to oppose the degree requirement in support of a policy which states that "accredited college education" is the "best but not the only means of attaining the knowledge and developing the thinking processes necessary for competency at entry to the architectural profession."

Later, during a business session, the delegates defeated the proposed resolution by a vote of 28 to 19 with two abstentions.

In another matter of business, the delegates debated the famous 1974 "Resolution 11B" issue. Deferred for further study at last year's NCARB meeting at the request of the Association of Collegiate Schools of Architecture, the resolution called for a change in NCARB's Table of Equivalents for Education, Training and Experience, to allow a maximum of five years of educational credit for all first-professional degree holders, including those with five-year bachelor's degrees and six-year master's degrees.

This was proposed because the schools of architecture had not provided adequate

continued on page 10

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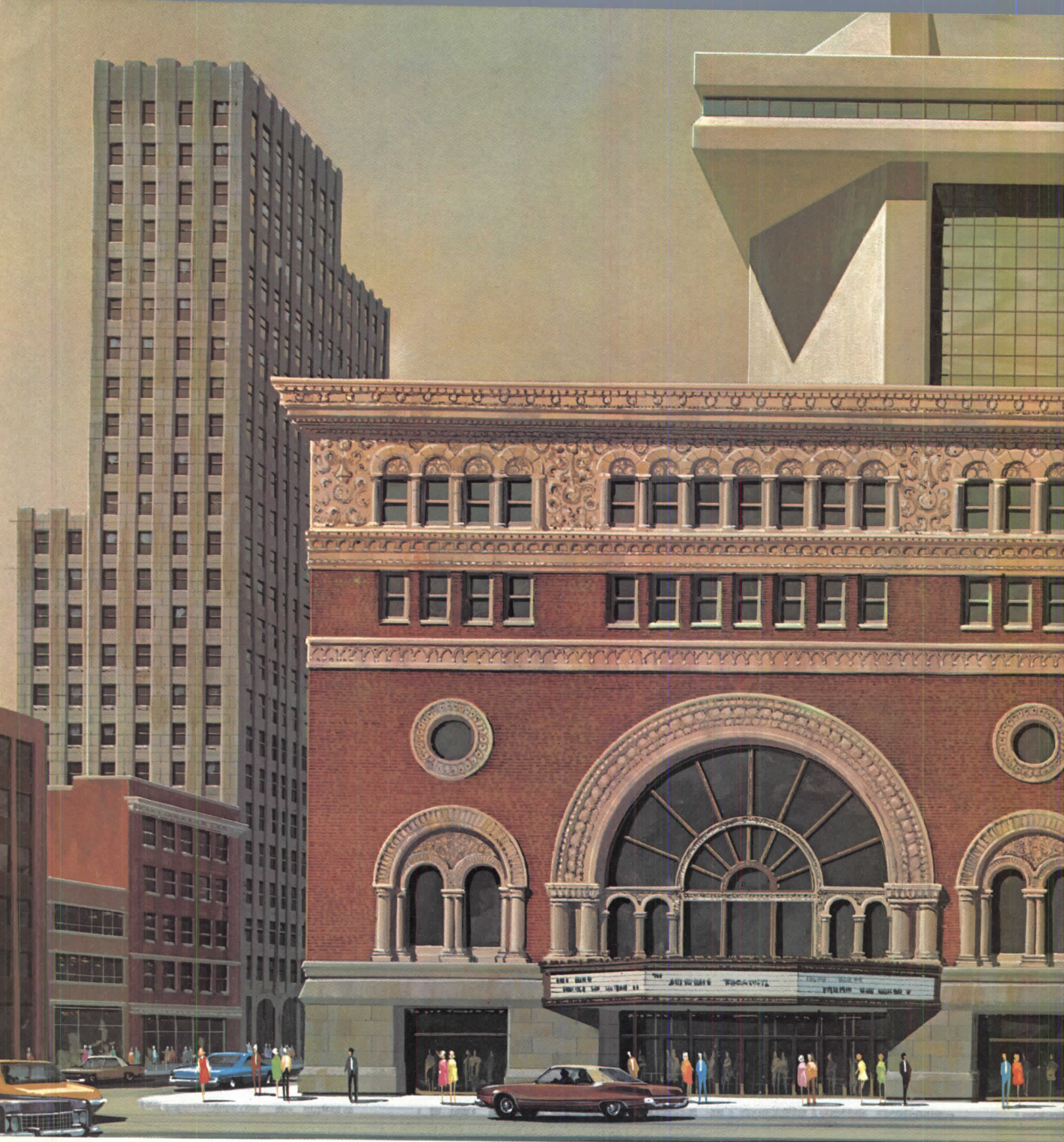
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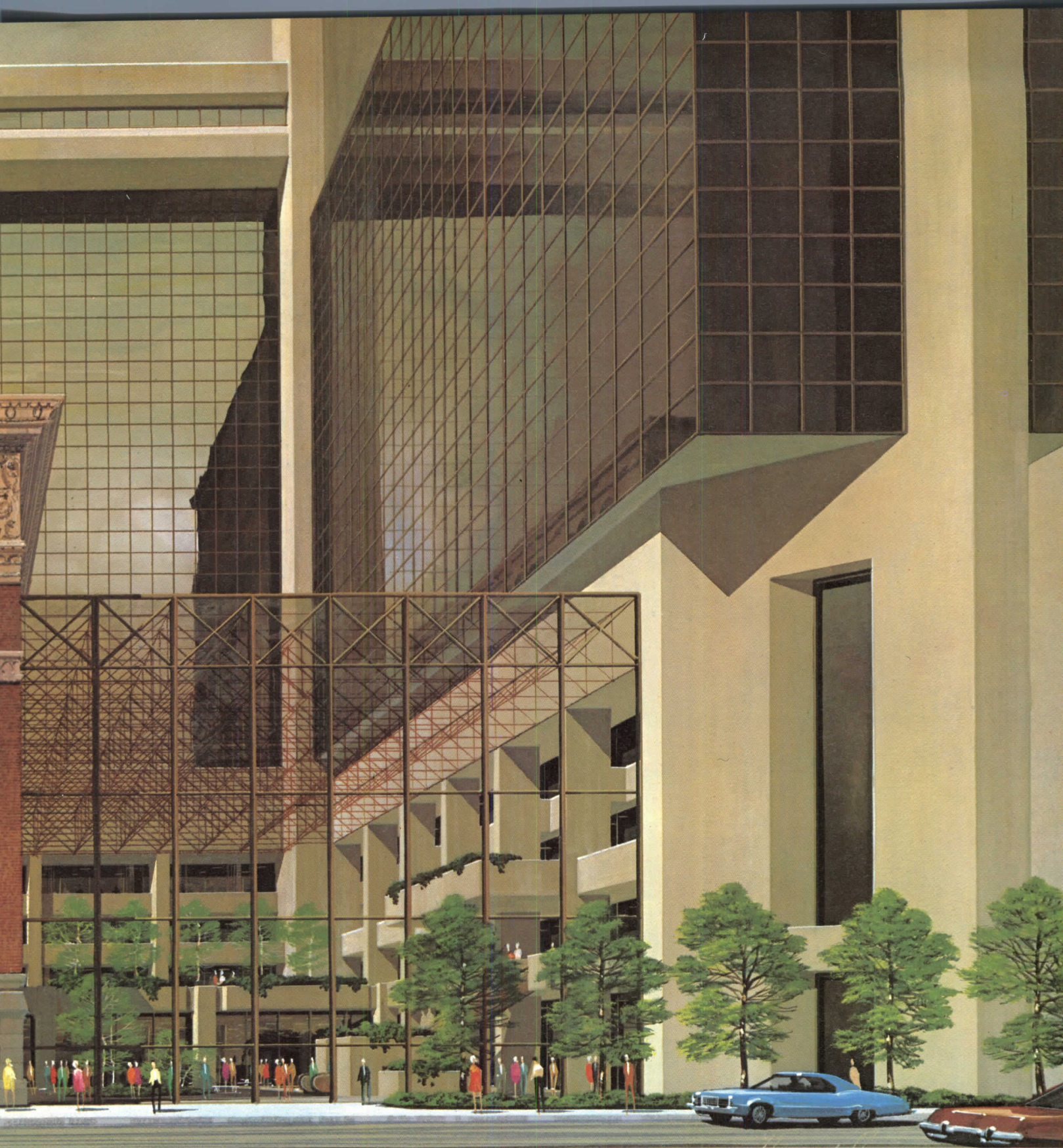
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Going On from page 6

evidence or justification of the added value of a six-year professional degree program over a traditional five-year program. This year, after discussions with ACSA but over the strong opposition of the Association of Student Chapters/AIA, the NCARB delegates approved a new compromise resolution which formalizes the change in equivalents but mandates an automatic review in two years, after ACSA has had an opportunity to articulate the differences in the variety of degree programs offered by its member schools.

In other business, William C. Muchow, FAIA, of Denver, was elected president of NCARB. Other officers elected: Charles A. Blondheim Jr., AIA, Eufaula, Ala., first vice president and president designate; Paul H. Graven, AIA, Madison, Wis., second vice president; John R. Ross, AIA, San Luis Obispo, Calif., secretary. Mace Tungate Jr., FAIA, Houston, was appointed treasurer to fill the one-year vacancy that occurred when Blondheim resigned that post to become first vice president, president designate.



Robert Armory's "Helion," exhibited last year in the AIA headquarters courtyard, will be a focal point in the plaza of a recently completed 33-story office tower at 100 Summer St. in Boston.

For the Record: AIA Convention Action

The theme of the 1975 AIA convention in Atlanta in May was "Survival of the Species." But, as one national magazine commented, "survival of the species known as architects" was an underlying concern. It was evident in discussions about proposed resolutions that both the board of directors and AIA components are determined to achieve economies in a time when economic problems are a stark reality for the majority of the membership.

Four resolutions, submitted by components to the resolutions committee (Darrel D. Rippeteau, FAIA, chairman) prior to the convention, concerned reductions in headquarters staff and programs and in membership dues. The board presented delegates with a substitute resolution, aimed at giving the AIA officials more leeway, which passed. It resolves:

"That the membership supports the board's efforts to hold 1976 program and budget at the 1975 expense level and supports the board's efforts to hold or reduce income and staff to levels consistent with basic Institute goals and objectives."

William Marshall Jr., FAIA, president of the Institute, explained that the sum of \$350,000 will be "frozen" until projections for 1976 can be more accurately determined. Some 20 programs are affected by the freeze.

Louis de Moll, FAIA, president-elect, said that the board is "committed to holding the 1976 program and budget to a level no greater than 1975, which, in effect, represents a 17 percent reduction from a budget outlined in 1974." This means, he said, that individual corporate dues may be reduced in 1976. He urged the delegates not to cut programs "ruthlessly" until plans aimed at strengthening AIA components have been executed.

A resolution was passed which creates a task force to propose changes in dues. Its mandate is to evolve an equitable system which "allocates sufficient amounts to each level of AIA national and components" for the performance of tasks.

One of the resolutions that was passed calls for greater investment by AIA. The resolution mandates that AIA "immediately commit its resources to develop specific recommendations on performance or energy budget alternatives in a form suitable for adoption by governmental authorities and that this effort be completed and provided to members and components prior to the national convention following a progress report to be presented to the membership at grassroots 1976."

AIA has long been opposed to the prescriptive standards approach to energy conservation. Energy budget standards would set limits to the amount of energy consumed by a building but would not stipulate how this should be achieved, thus allowing for innovative design.

The delegates also passed a resolution which urges "the President, every member of Congress and state and local government officials" to act at once to:

- Release impounded federal funds for construction.
- Revive and strengthen the housing industry "to provide decent homes for families with low and moderate incomes."
- Initiate public works programs in local communities.
- Use general revenue-sharing funds and community development block grants for direct construction activities in local communities.
- Revise federal monetary policies to "increase the availability of revolving credits for construction."
- Provide tax incentives "to owners of new and existing buildings to design and redesign their structures to make them more energy efficient."

- Provide similar incentives "for the renovation and remodeling of existing unused or underused buildings, to enable their adaptation for new and additional purposes, thus conserving energy and resources."

Another resolution which passed reaffirms the Institute's national housing policy adopted by the board in September 1974. The resolution concerns housing policy in five areas: 1) provision of federal financial assistance, including subsidy funding, as "essential to the maintenance of a healthy housing market"; 2) conservation of the existing housing stock; 3) recognition of the "acute and unique" problems of housing for the poor and the elderly; 4) maintenance of an open housing market, and 5) elimination of "unnecessary and wasteful elements in our housing models and standards whether imposed by law, custom or the marketplace."

The delegates also passed a resolution on minority affairs which directs AIA to:

- Give support to the minority/disadvantaged scholarship program and that "some of the funds for its implementation be included as a line item in the budget for 1976."
- Commend the establishment of a community development committee "as a means of supporting and assisting community design/development centers throughout the country whose survival is threatened by the present economic recession."
- Strive to involve minorities and women in all levels of AIA in order to "enhance the sensitivities of the profession to the future needs of a society that is both multi-racial and heterogeneous."
- Make a special effort to assist minority firms "so that they remain a viable asset to the minority communities that they serve, by making available to them literature and continuing education themes focusing on minority concerns."
- Encourage "government and business efforts to utilize, where appropriate, joint ventures between majority owned and minority owned architectural firms toward achievement of their affirmative action goals."

Some other resolutions passed pertained to: the development of programs to actively encourage associate members and to "extend the privileges of associate members so that they may serve on chapter, state and Institute committees and boards of directors"; improvement of information distribution to components; development of a document sales program to assure component distributors a "reasonable" profit; implementation of recommendations in the report of the task force on the status of women in the profession; procedural changes for submission of convention resolutions; recognition of the "professional contributions of the archi-

continued on page 60



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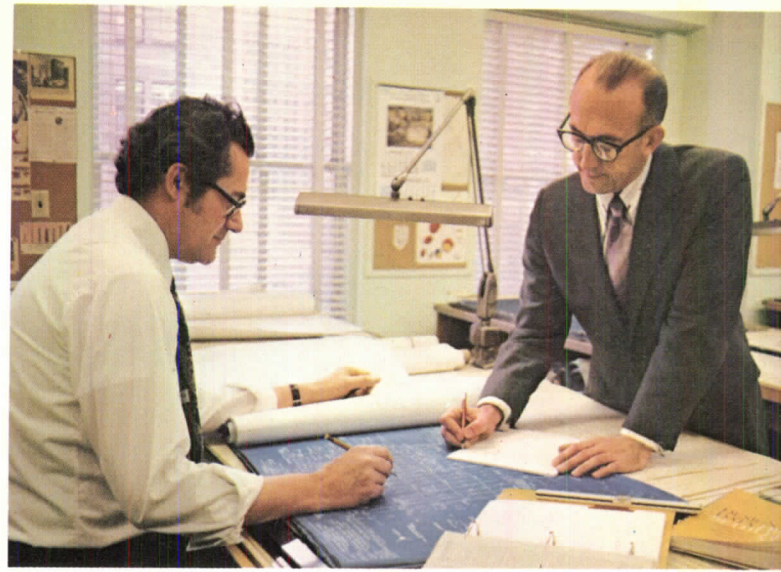
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LETTERS

More on Sullivan: The article by George E. Pettengill titled "The Biography of a Book: Correspondence Between Sullivan and the Journal" in the June issue is absolutely the most interesting article to appear in the magazine in decades!

Besides being delightfully written, it provides insights into the life and thought of one of the world's greatest architects. Sullivan was a man of such greatness that his thinking has and will influence architecture and architects for centuries to come. He is the very foundation of modern American architecture. Let's have more on Sullivan! *Benjamin H. Evans, AIA
Washington, D.C.*

The article on Sullivan was well done. It was good to see this aspect of the work of such a creative genius.

Having attempted to do some research on an older architect, whom I did not know, I can appreciate the problem Pettengill had with Sullivan, whom he could not have ever met personally. I enjoyed his interpretation and now have a better insight into Sullivan the man.

I can also understand Sullivan's difficulty in getting his manuscript finished.

I hope that the magazine will be able to have more articles of this nature forthcoming from AIA's librarian emeritus.

*Leslie N. Boney Jr., FAIA
Wilmington, N.C.*

Pennsylvania Avenue: As a staff member of the President's Council on Pennsylvania Avenue which issued the 1964 report "Pennsylvania Avenue," I am somewhat disturbed by the tone and content of the article in the March issue titled "A New Approach to Pennsylvania Avenue's Renewal." The report was developed in the days when we welcomed a challenge of the magnitude of a revitalized Pennsylvania Avenue, when we dared to think, consider and conceive in the large concepts that the street requires. Those were the days before "think small" became a fashionable ideology.

The council, appointed by President Kennedy, gladly heeded his advice to plan an avenue that would be "lively, friendly and inviting, as well as dignified and impressive." Consequently, its plan advised and encouraged a mixture of government, commerce and pleasure; a commingling of workers, visitors and in-town residents.

The article by Beth Dunlop in the March issue says that "the older plans called for a monolithic series of new buildings along the north side of the avenue." Not so. The report unequivocally denounced the sharp separation of government buildings on the avenue's south side

from the shops, theaters and buildings on the other. "Such a major concentration of people without the necessary supporting services sow seeds of urban decay," says Dunlop. Rather, the report recommended an area on the north side "busy with clusters of new shops, showrooms and exhibition spaces, besides a sprinkling of theaters and similar facilities that remain alive and alight at nighttime."

Dunlop also castigates the council with responsibility for the latest exhibit in the city's chamber of horrors, the FBI headquarters. No way, no way! The council bitterly opposed the structure since it was entirely out of conformity with the Pennsylvania Avenue plan as it was developing. As we knew then, however, and as others are now just discovering, J.E.H. was unopposable. "There's no way to change the old gentleman's opinions, and we'll just have to build around them," a council member said to me at the time.

"Save the good, old buildings and bring new life to the avenue," writes Dunlop. A fair question is, what good old buildings are going to be saved under this newest of Pennsylvania Avenue plans? The Willard Hotel, which we knew to be an economic disaster 11 years ago? The Washington Hotel, whose marvelous rooftop encloses one of the worst restaurants in Washington? The Evening Star Building whose original occupants fled for another location years ago? The tawdry little shops and cheap bars that have survived subway construction and the flight of business and commerce to the area west of Connecticut Avenue? There isn't much else on the avenue, as a round trip between the White House and the Capitol by bus or on foot will reveal.

Dunlop says that the plan of the new Pennsylvania Avenue Development Corporation reinforces the symbolic link between White House and Capitol, making a bridge between the city's monuments, museums and federal buildings and the downtown's commercial area, turning the avenue into a pleasant place to stroll and shop, and providing a mixture of commercial and cultural activities to bring people back. This is exactly what the 1964 report recommends, in almost the same language as she uses. Where is the difference?

As the one responsible for naming the "National Square," I am amused by architects and planners who visit Europe and come back declaiming the glories of the great squares of Florence, Rome, Paris, Venice, Moscow and other cities, but shrink in horror at the idea of some open space in the nation's capital which would be devoted to human pleasures rather than more houses, stores and factories. What's wrong with people watching parades and each other, or stopping at a kiosk for a coffee or a newspaper?

As for other changes in the plan, such as the inclusion of a housing element, the

1964 report anticipated new needs and desires, saying that such proposals should remain flexible and should not be viewed "as a set of frozen formulas."

One final note: Minoru Yamasaki was a member of the council during its first year. He resigned when his proposal for the cultural center (now the Kennedy Center) to be located on Pennsylvania Avenue was rejected by other council members, primarily because it was evident that Congress would not approve the cost of buying and clearing the necessary land. Had the nation heeded his advice, there would be no need for a Pennsylvania Avenue plan. The center would have engendered enough traffic, development, stimulation of old businesses and creation of new enterprises to regenerate Pennsylvania Avenue many times over.

*Sydney H. Kasper
Silver Spring, Md.*

EVENTS

Sept. 5-7: Conference on construction management, Arizona Biltmore Hotel, Phoenix, Ariz. Contact: Milan Srnka, AIA, 3122 N. Third Ave., Phoenix, Ariz. 85013.

Sept. 15: Postmark deadline, abstracts, call for papers, conference on Productivity in the Spirit of '76, to be held in St. Louis, May 18-21, 1976. Contact: American Institute of Industrial Engineers, 25 Technology Park/Atlanta, Norcross, Ga. 30071.

Sept. 16-19: International Conference on Personal Rapid Transit, Regency Hotel, Denver. Contact: G. J. Amundson, 207 Nolte Center for Continuing Education, University of Minnesota, Minneapolis, Minn. 55455.

Sept. 17: Seminar on design, construction, maintenance and repair of concrete floors on grade, Red Carpet Inn, Milwaukee. (Repeat seminars on Oct. 8, Indianapolis Airport, Indianapolis, and on Oct. 22, Lincolnwood Hyatt House, Chicago.) Contact: Portland Cement Association, Old Orchard Road, Skokie, Ill. 60076.

Sept. 18-20: Seminar on the planning and legal issues of growth management, Philadelphia. (Repeat seminar on Oct. 2-4, Minneapolis.) Contact: Gerald Mylroie, American Institute of Planners, 1776 Massachusetts Ave. N.W., Washington, D.C. 20036.

Sept. 18-21: New Jersey Society of Architects annual convention, Hyatt House, Cherry Hill, N.J.

Sept. 22-26: Seminar on use of reinforced plastics, New York City. Contact: Applied Plastics Institute, 150 Sullivan St., Brooklyn, N.Y. 11231.

Sept. 24-26: Conference on Neighborhood

continued on page 60



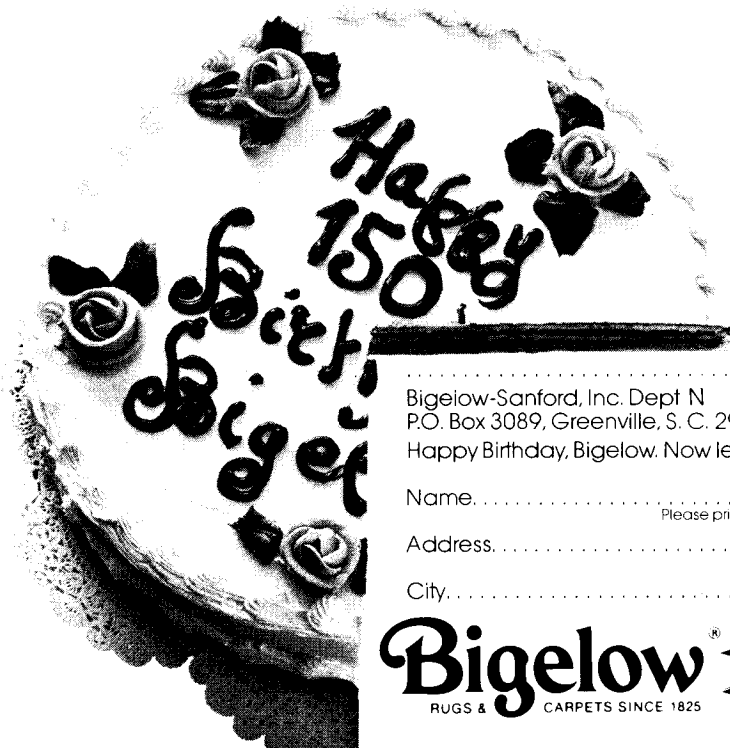
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Four Places Where Urban Design and Planning Are Paying Dividends

Louis B. Schlivek

Like other prophets with an alternative vision for the future, planners are most likely to be heeded when the *status quo* is perceived by large numbers of people to be less than satisfactory. Fifteen years ago and earlier, many planners recognized that the nation's metropolitan areas, spreading ever more thinly away from depleted cities, were headed for trouble.

But few were in a mood to listen. The previous dozen years had dealt kindly with the citizens of metropolis. In 1960, most of them were living more comfortably than ever before, thanks in part to the very dispersion that concerned planners.

By the mid-1950s, in fact, the age-old dream of a home of one's own with a bit of green around it was in reach of more than half of the nation's nonfarm families, blue-collar and white-collar alike. In the previous high point of the economy, the

Mr. Schlivek is a writer, photographer and filmmaker who has specialized in urban planning for the past 15 years. He is author of the book "Man in Metropolis" and is currently serving as field studies consultant to the Regional Plan Association of New York. The text and photos on these 36 pages are drawn from a project which he undertook last year for the association, recording and analyzing planning and urban design accomplishments in cities across the nation. Materials from the project comprised the United States entry for the 1975 United Nations conference on national and regional planning in Helsinki. The results will be published in book form by the MIT Press.

The association has dedicated the project to the memory of the late Robert C. Weinberg, FAIA, of New York City, "whose vision led to the funding of the project by the Vinmont Foundation." As chairman of the joint AIA-AIP committee on design control, Mr. Weinberg co-edited the book, "Planning and Community Appearance."

1920s, only one family in five could afford a move to the suburbs.

Today, of course, the face of metropolis looks very much as the planner-prophets predicted. All of the problems they foresaw—and a few they did not—are upon us. Chief among these problem are:



Spread-out housing for fewer families.

As houses have fanned out loosely across the countryside, far beyond the range of the traditional downtowns, the proportion of American families able to afford a new home has dropped precipitously. High interest rates and construction costs added on to zoning ordinances and building codes that permit only the most expensive kinds of building have squeezed middle-income families out of the housing market. With this group, the main beneficiaries of the 1950s housing boom, eliminated, we have returned full circle to our position in the 1920s: Less than one family in five can any longer afford a new privately built home.



Scattered activities. Urban facilities of all sorts are being atomized. Corporate headquarters are exchanging downtown towers for park-like campuses, and

smaller rental offices are following suit, deserting Main Street for strategic spots on the highway network. Educational and cultural institutions—community colleges, art centers, music centers—dot the landscape, often enticed to far-out locations more by a donation of free land than by any consideration of convenience other than easy highway access. The department stores that were building shopping centers in the inner suburbs 20 years ago are now building equally large ones much farther out—for example, in the New York region, more than 60 miles from Manhattan. With each of these facilities on its own site and reachable only by car, the traditional links between them have been snapped.



Decline of the old cities. The words “city” and “problems” have become interchangeable in most people’s minds. The larger centers, buoyed by a marked shift in employment trends from blue-collar to white-collar jobs, managed to put on a brave face well into the 1960s with a substantial office building boom. But today, with millions of square feet of vacant office space, in prize-winning towers as well as in their more pedestrian counterparts, the office boom in most of these centers has turned into a debacle. In smaller cities built at preauto age scale, clogged traffic and boarded-up stores along Main Street announced the debacle much earlier. To adapt themselves to car-borne customers demanded more effort and greater funds than most of them could muster, even with urban renewal aid from the federal government. Despite sporadic attempts at revitalization, they continue to slide downhill, drawing their trade increasingly from the least advantaged segment of the population—the elderly and minority poor who congregate in the cities. Slums proliferate throughout

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the residential neighborhoods of cities large and small, and most of them, faced with mounting costs and dwindling resources, have had to cut back sharply on the public services they have traditionally provided.



American apartheid. Outside of the cities, the expanding metropolis has so far provided little space for families at the lower end of the income scale. While some obsolete buildings have been torn down and replaced by new subsidized housing projects, the new apartments have fallen far short of meeting the need for decent housing, and almost all of them have been built in the same neighborhoods where the problems of poverty and race are already concentrated. The ghetto is perpetuated, and the projects intended to replace slums have often themselves become slums. With each municipality retaining the final say over what it will accept within its borders, very little subsidized housing has actually been built in the suburbs. The zoning ordinances which many towns drew up initially as a defense against spiralling taxes have gained new significance as a tool for keeping people with “different” backgrounds out—except during working hours, when they are needed to man the production lines and to fill maintenance jobs in the tax-profitable facilities that outlying municipalities have welcomed. On the grounds that they are discriminatory against lower-income families in general, and members of minority groups in particular, zoning ordinances of this sort are now being challenged in the courts of several states.

Less public transportation and more cars. Even with subsidies, public transportation is economically feasible only under conditions where densities are relatively high at



both ends of the trip. In the more central areas of metropolis where such conditions prevail, long-established transit systems have tended to slide downhill along with everything else. Farther out where scatter-and-spread is the rule, virtually every trip must be by car. In the more recently developed sectors, homes typically have been built with two-car garages, and three-car families are no longer uncommon.



Environmental deterioration. While many of the homes and facilities in spread city may be individually handsome, the overall pattern of loose scatter invites a lot of ugliness, inconvenience and waste. Even the best-designed facade is diminished when it is viewed across a sea of cars. Traffic clogs up around the interchanges of limited-access highways that have attracted large installations; and along highways where access is unlimited smaller merchants competing for the fleeting eye of the motorist have little choice but to scream their wares at the top of their voices. The ever-increasing number of miles traveled for whatever purpose along no matter what kind of road adds up to the major source of the present energy crisis and no small part of the air pollution problem. Open land that is needed for ecological balance, or that might have

been saved for parks and recreation, is being eaten up at an unprecedented rate; and more often than not, municipalities that have welcomed urban-scale development have thought only later about the wastes such development would generate. The result: pollution of air, ground and water—the whole natural environment—that has proved no respecter of political boundary lines.

A jumble of governments. The land use maps of the nation's various metropolitan regions are a mosaic reflecting the decisions of anywhere from a few dozen to several hundred local jurisdictions, most of them established long before the dawn of the metropolitan era. Though the federal government now requires that every metropolitan area of 50,000 or more people institute a regional planning process under an official planning agency with area-wide power to review all federal grants in the region for sewers, highways and a hundred other items, most of these agencies have been extremely cautious about challenging ingrained local prerogatives, and few of them invite public participation in their decisions. (One striking exception, which demonstrates the potential of the "A 95 review process," is the Miami Valley Regional Planning Commission in Dayton, Ohio.)

Planners' Prescription For a More Efficient And Esthetically Satisfying Metropolis

To counter the problems spawned by chaotic development in urban regions, professional planners and designers are now almost unanimous in offering this prescription: Build more compactly under a comprehensive plan that takes careful account of the many strands in the urban fabric and works to weave them into a tighter and more harmonious metropolitan pattern, one that will provide greater variety, a wider range of choice and heightened amenity for all. The main features of a metropolis built to the planners' specifications would be:

Urban activities clustered in a fashion that reinforces their natural linkages—in revitalized downtowns of older cities, large and small; in new towns in freshly developing areas, and throughout the fabric of entire urban regions.

Housing of varied types and prices clustered in good relationship to each other and to activities. The means of achieving this goal would include:

- Preservation, rehabilitation or renewal in older neighborhoods convenient to the center to forestall or reverse the spread of slums and to foster variety and a stronger sense of traditional identity through continued utilization of the historic buildings found in many of these neighborhoods;
- Planned unit developments built on vacant land at strategic points on the transportation network or combined along with activities into new towns;
- New subsidized housing built in all parts of a region, outside of the city as well as within it, to break down the present pattern of "apartheid" and bring low- and moderate-income families within easy access of a broader choice of jobs and other activities.

Public transportation in all parts of the metropolitan area. Depending upon the densities in its various sectors, this might range in scale from minibus service used principally to increase the mobility of those who do not drive—mostly the young and the elderly—to metropolitan rail and bus systems capable of wooing drivers off the roads.

Open space utilized for defining and humanizing the pattern of what is built, with oases of green in each developed area, from residential block to business district; bands of green separating major clusters, and natural areas of special ecological or scenic value carefully protected against development.

Waste management programs at a scale large enough to make efficient use of the latest technology and integrated with the over-all metropolitan planning program to help foster its land use goals for an entire watershed or region.

A governmental structure which coordinates planning at all levels within a metropolitan framework, and which allocates final powers of decision on broad region-

shaping policies at a level consonant with their scope.

Feeling the pinch of the problems themselves now, more and more people in the suburbs as well as in the cities recognize that the alternatives planners offer speak directly to the quality of their own lives. As a result, the planners are receiving a wider hearing, and there is growing support for the kinds of changes they recommend. But with so few results to be seen on the ground in most areas, there is as yet little confidence that these proposals can actually be translated into reality—and this skeptical attitude seriously inhibits the will to try. Before committing their time, effort and hard cash to a program for action, even those most concerned about the problems and best equipped to lead the fight against them tend to draw back and demand: "Show me!"

In this issue of the JOURNAL we respond to that demand. Despite mounting chaos in most of our nation's urban areas, and despite all the hesitation about taking the steps necessary to counter it, each of the elements in the planners' vision of the future can now be found successfully translated into reality in the U.S. and Canada. Some of these elements, such as sizable planned unit developments, can be seen on the ground in many dozens and perhaps even hundreds of places; and across the continent there are also dozens of cities large and small which are making impressive progress toward strengthening their downtowns. On the other hand, some of the other recommended features can be found in only a handful of places—e.g., broader distribution of subsidized housing, or effective regionwide coordination of governmental functions.

In the pages that follow, we will examine four urban localities which are well on their way to carrying out long-range comprehensive plans, and which, taken together, illustrate all of the elements outlined above: Kalamazoo, Michigan, a city with less than 100,000 people; Cincinnati, a major-league city with half a million people; and two metropolitan areas, the Twin Cities of Minnesota and Toronto, whose plans extend beyond traditional boundaries to cover entire regions of two million people each.

Kalamazoo

In the 1930s, the small city of Kalamazoo, Mich., gained a measure of national fame out of all proportion to its size or achievements. The Glenn Miller band used the lilt of its Indian name in a song which the entire country was soon singing. Today, Kalamazoo, with 85,000 people, is still a small city. But since 1959, when it opened the first permanent outdoor pedestrian downtown mall in the country, its claims to national recognition have become more solidly founded.

The word *permanent* is significant here. In other, earlier experiments with malls, such as one in Toledo, Ohio, plantings were simply superimposed on the pavement so they could be easily removed. In Kalamazoo, the pavement was cleared away to make beds for grass, flowers and trees.

Kalamazoo's mall was an innovative response to a sequence of events quite typi-

cal of the 1950s: The prime stores downtown lined up along a narrow main street which was experiencing more difficulty each year in handling the traffic that clogged it; new stores were proliferating along the highways outside the city, between it and the expanding suburban population; and, gradually, boarded-up storefronts started to pockmark downtown as more and more customers sacrificed the greater variety there for easier access and ample parking in suburbia.

By the mid-1950s, downtown merchants faced this choice: either continue as they had been, each trying to swim against the tide on his own, or join together in a concerted effort to turn the situation around. Recognizing that as investments downtown became increasingly risky the first course could lead only to ever-worsening frowziness, the merchants chose the second. In 1957, they assessed themselves \$45,000 to commission Victor Gruen Associates to draw up a long-range plan which they hoped would point the way toward revitalizing the city.

A year later they received an ambitious "Kalamazoo—1980" plan which strongly reflected Gruen's philosophy and foreshadowed much of his later work. The first phase of this plan called for a one-way peripheral auto loop around downtown, parking lots strategically spotted beside the loop within a five-minute walk-

ing radius of the city's center, and the conversion of all the streets inside the loop into pedestrians-only malls. Later phases prescribed that the perimeter and entire circulation system be expanded outward with new building in the areas thus opened up.

Strapped for both funds and time in their fight against decay, the merchants and the Kalamazoo Planning Commission had no choice but to approach this feast of ideas with extreme selectivity. The city chose two steps for immediate implementation. First, it decided to bar traffic from three blocks of the main shopping street and assign the parks department to convert them into a landscaped mall. This, it was felt, would provide the quickest possible face-lift for the city's sagging image. Second, the traffic flow on the city's existing streets was redesigned to provide easier access to the mall. Specifically, parking was banned on a few streets, several others were widened and a one-way system was instigated through the downtown.

At the same time, the merchants formed a nonprofit downtown development corporation which was empowered by the state to "buy, sell and manage



property in the center of the city in the interests of downtown redevelopment." Top priority was given to assembling depreciated land near the proposed mall for parking. The development corporation installed and maintained its own parking lots with the understanding that if the volume of business signaled a demand for parking structures, the corporation would sell the lots to the city for the same bargain price it had paid, and the city would put up the structures.

The city and the merchant group each paid roughly half of the \$83,000 price tag

for the mall. In addition, each merchant took responsibility for refurbishing his own storefront, and the city permitted the use of park department equipment without charge. (In one year between 1958 and 1959, the value of nonresidential building permits jumped from under half a million dollars to almost \$1.5 million. By 1966, it had reached \$5 million.) Other indirect costs to the city were \$100,000 for widening streets and rearranging utility lines, and the floating of a \$625,000 revenue bond issue to cover long-range parking needs.

The dividends from these minimal expenditures have been great. As a safe and pleasant place to shop and to meet, the mall has attracted people of all ages and backgrounds. Had the mall not been built,

it is hard to believe that Kalamazoo would still be the vital business and political hub of the 600-square-mile county bearing its name and the metropolitan center for an even wider area of southwestern Michigan.

Statistics gathered by the Downtown Kalamazoo Association over the first decade of the mall's existence show an average increase in retail sales of 10 percent a year for the city as a whole; for merchants on the mall the average increase was 19 percent, and for those farthest from it, 6 percent.

Just as striking as the success of the mall itself is the amount of activity it has sparked in the blocks surrounding it. Within a five-minute walk of the mall and each other are a new library and historical museum; a new art center; two new office buildings and several older ones completely renovated; an addition to the city's old auditorium, and a 250-bed addition to the hospital.



This page, the Kalamazoo Mall's original design. The 16-year-old mall includes outdoor cafes and places to sit and stroll. In 1971, the mall was refurbished (opposite page) in more subdued earth colors.



Kalamazoo: Beyond the Mall

But well as the city was apparently doing in its struggle against suburban pressures, it was clear in the early 1970s that it could not afford to rest on its laurels. With two fully enclosed all-weather malls joining seven other sizable shopping centers in the suburbs, there were indications that sales downtown were once again beginning to slip. Also, after 10 years of constant use, the mall was beginning to show wear and tear beyond the point where patch-up jobs could easily restore it. Therefore the merchants and the city decided to rebuild it completely. Once again the costs were shared. This time, with inflated prices, they totaled \$300,000 for entirely new paving with

inlaid tiles, landscaping, lighting, shade structures, playground equipment and pools and fountains.

Simultaneously, work got under way on an even more ambitious undertaking between the city and private enterprise: the \$18 million multipurpose Kalamazoo Center building, designed by Michael Severin, AIA, of Elbasani, Logan & Severin.

When fully completed this fall, the center will have 95,000 square feet of interior shopping space on three levels with an entrance from the mall. There will also be office space, a hotel with 288 rooms, three restaurants, a discotheque, a swimming pool and a health club, all managed by the Inland Steel Development Corporation, which invested \$15 million in the building. In addition, the city will own and manage a 45,000-square-foot convention and activities center, with a ballroom providing table service for 1,000 people and several other rooms for

smaller meetings. Of the \$3 million required for the city's share of the project, \$600,000 was provided through revenue-sharing funds; the rest was raised by private subscription, with the business community contributing \$1,350,000 and donations from individual citizens (ranging from one dollar to \$5,000) adding another \$1 million.

In April 1975, with the city's section and the hotel ready for business, Kalamazoo Center was officially opened. Work is now nearing completion on its other facilities, and also on the refurbishing of the mall in the block adjacent to the center and the extension of the mall one block further to the north.

At the same time the Upjohn Company, the city's largest employer and also the most generous contributor to its various civic improvements (including the center), is completing a major new building in its downtown headquarters complex.

The increased density throughout downtown which Kalamazoo has now achieved satisfies one half of the equation for bus service. The other half is met by the relatively high density of the housing surrounding downtown. Though many of the single-family homes within the city's 25 square mile area have distinctly suburban flavor, few of them occupy lots



New downtown construction stimulated by the mall has included office buildings, an art center and a library.



larger than one-fifth of an acre; and two new planned unit developments at the edge of the city are being built at even higher densities. Today, virtually all of the city's residential neighborhoods and large outlying facilities, including three college campuses and two hospitals, are tied to downtown—and the mall—by the 14 bus routes of the municipal transit system, all of which start at the new center building and loop through the city on a regular half-hourly schedule.

At the end of one line—15 minutes east of downtown—is New Horizon Village, a planned unit development with 245 dwelling units on a 34-acre site. The most distinctive feature of New Horizon Village is that all of its units were industrially produced in factories far from the site under HUD's "Operation Breakthrough" program. But this is not apparent to the eye. What is apparent is a variety of housing: town houses and low rise apartments, with both modern and traditional facades; a larger apartment building; and a few dozen single family homes, with everything compactly grouped around lawns, playgrounds and a community

Above, and right, two views of Kalamazoo Center, the city's new multipurpose showpiece.

Including interior shopping, a hotel and convention space, Kalamazoo Center feeds directly into the mall and has a parking garage and a sky-walk. Beneath the angled skylights is an atrium, below, a public gathering place which the architects termed a "city room."



Kalamazoo: Planned Unit Developments

center. Open space has been used to define different areas and to provide play space for each group of homes.

New Horizon Village is a cooperative in which residents purchase rather than rent their units. To assure the widest possible mix of families, charges are geared to incomes. About a fifth of the families now living there pay full market value for their homes (for example, \$271 a month carrying charges after a standard \$460 down payment for a three-bedroom town house of the kind shown here). The rest are aided by varying degrees of subsidy up to one-third of the carrying charges; and for a small percentage the government pays the difference between the full-subsidy price and 25 percent of their homes.

Also 15 minutes by bus from downtown, on the western border of the city, is Parkview Hills, a larger, privately

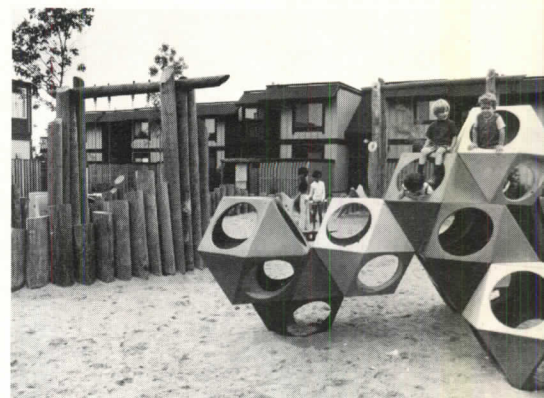
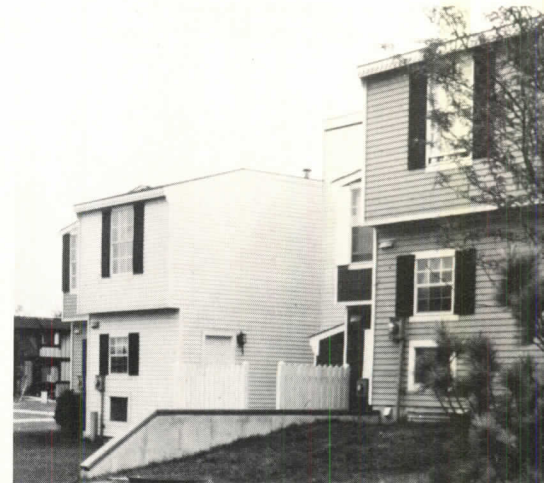
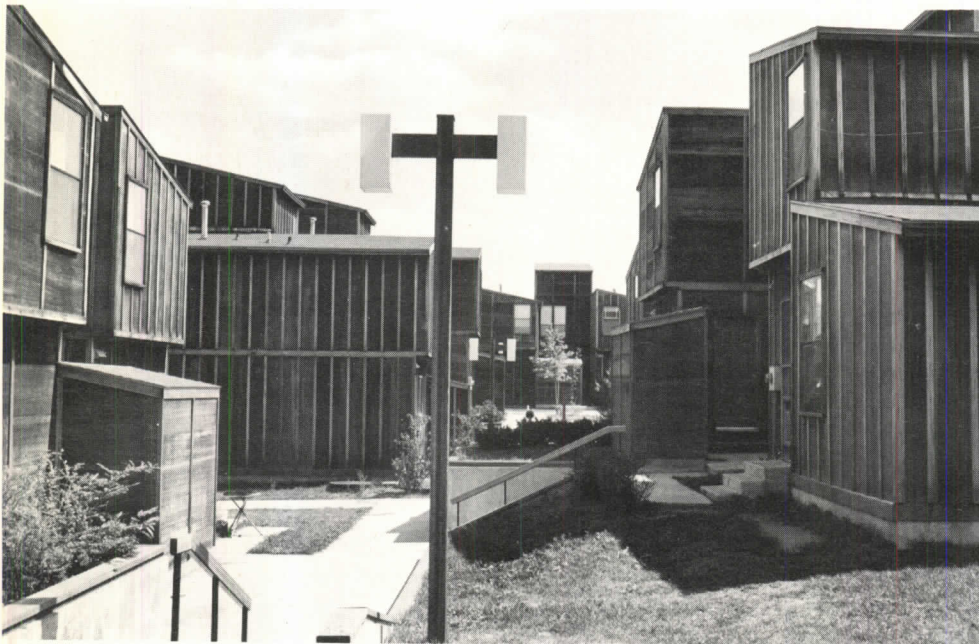
financed planned unit development designed by the chairman of the biology department at Kalamazoo College. Here the stress is on environmental protection: All development, including 846 housing units (400 are now completed and occupied), a large clubhouse and a local office and shopping center, will be restricted to 150 acres of the 280-acre site. The rest will be set aside for nature trails and a wildlife conservation area.

Even in the developed section, the curvycombed lawns around the homes merge quickly with natural growth. Here prices are geared to middle and upper middle incomes. Rental units start at \$175 a month for an efficiency apartment; a five-room unit in a quadruplex house with its own outside patio rents for \$275. Town houses with three and four bedrooms start at \$45,000, and luxury town houses enclosing a landscaped courtyard patio sell for more than \$100,000.

The fact that 14 of these top-bracket town houses have been sold, along with several luxury apartments in a similar price range, provides a clear indication that even the wealthy can now be attracted to cluster housing in planned communities.

One attraction of Parkview Hills is its plethora of recreational and social facilities. There are four lakes for swimming-boating, stocked streams for fishing and canoeing, a large clubhouse with indoor and outdoor swimming pools, a gourmet restaurant, courts for tennis and platform tennis, nature trails and a number of professionally-directed programs for nature lovers.

The developer has attached considerable importance to the accessibility of Parkview Hills. In his advertising he stresses the attractions of the mall and downtown Kalamazoo, a quarter-hour away by regular half-hourly bus. In line with its proenvironmental, drive-as-little-as-possible bias, Parkview Hills provides free bus tokens for all its residents.

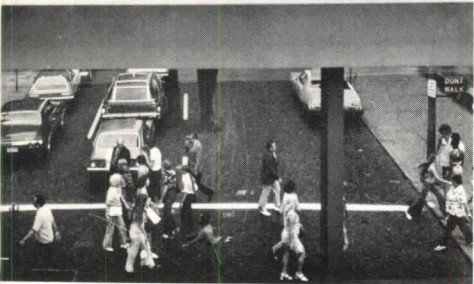


A short bus ride from downtown is New Horizon Village, a federally-subsidized housing development which offers residents a variety of home styles.



Parkview Hills is another planned unit development 15 minutes from downtown Kalamazoo, aimed at a higher-income sector of the population.

Cincinnati



After 20 years of "drowning in its own obsolescence," Cincinnati is once again rising as the Queen City of the Ohio Valley. Under a plan drawn up in 1964, Cincinnati has strengthened its compact downtown and is now linking it tightly to revived residential neighborhoods. With the city's strategic location on the Ohio River, its planners felt that Cincinnati could be as magnetic as ever and regain its appeal to industrial management if only it could "overcome its most serious single debit, the physical appearance of its downtown."

The first step toward the creation of a new downtown image was the clearing away of a block and a half of deteriorated stores and run-down theaters beside the historic Tyler-Davidson Fountain, the traditional centerpiece of the city since it was donated in 1871. The space around the fountain, enlarged 20 times to four acres, was transformed into a handsome plaza with greenery and water, set down

as a focal point in the midst of the city's largest stores, office buildings and hotels.

Fountain Square (architects RTKL Associates) with its swirling pattern of paving, its low marble walls that define its pathways and serve also as benches, is not only an attraction for shoppers and visitors but a welcome haven for the city's workers. Beneath the square is a garage for 600 cars, and overhead a skywalk allows pedestrians to reach most downtown activities under shelter and without interference from vehicular traffic. Covering a somewhat wider area, there is also a downtown

bus loop with service every five minutes for a 10-cent fare.

Less than 15 minutes north of downtown by bus, is Findlay Market, focal point of the large (four square miles) Over-the-Rhine area. (Buses run every five minutes during peak hours, every 10 minutes the rest of the day. City subsidies hold the fare to a quarter for trips to most parts of Cincinnati.)

Until 1940, Over-the-Rhine was the home of Cincinnati's working-class-German population. After the war, the Germans began to leave, and in the 1950s and '60s the area became largely Appalachian and black and began to go through the all-too-familiar cycle of neglect and decay.



Fountain Square Plaza, opposite page and above, has played an important role in the revitalization of Cincinnati's downtown. Connected to most major buildings by a skywalk, the five-and-a-half-acre plaza has become a gathering place for workers, shoppers and visitors.

Cincinnati: Nuclear Neighborhoods

Today, the area has a new lease on life, thanks to the city's nuclear neighborhood program. Under this program, the city's money for redevelopment and rehabilitation is being focused for maximum impact upon small neighborhoods (about four blocks each), beginning with those which possess a facility of proven magnetism. By reinforcing already attractive facilities and adding to them a full mix of local services, the aim is to convert these neighborhoods into town centers that will spark the rehabilitation of housing and other improvements throughout the larger area surrounding them.

The first point of attraction chosen was the city-owned Findlay Market for meat

and produce, housed in an historic cast-iron building, which drew people into the Over-the-Rhine area from throughout the city and from even more distant points in the region. Badly run down, and falling dismally short of the city's own health standards, the market was completely rebuilt on the frame of its old iron columns and trusses.

Diagonally across the street from the market is the brightly painted pilot center for social services and recreational facilities, occupying a whole block in four new buildings around a landscaped court. In one building educational aid, employment services, a credit union, a welfare office,

a post office and a library are clustered together. A second building is devoted to senior citizens, a third to parent-child activities and counseling, and the fourth to recreation, with a new skating rink and indoor swimming pool. Work will begin soon on the patching up of St. John's steeple, the area's traditional landmark, which was preserved as the entry way into the recreation building.

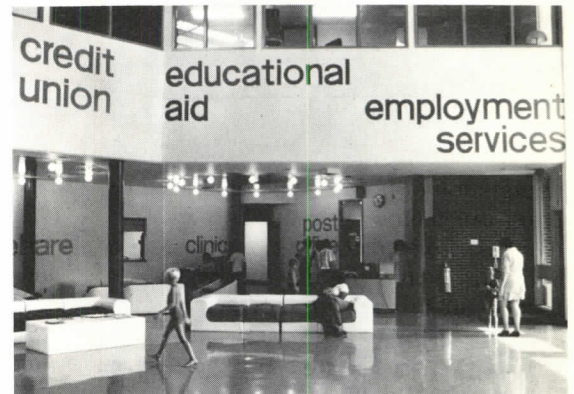
In the neighborhood a new firehouse has been completed, and an innovative police system, known as the community sector team approach, has been introduced. Under this approach the men assigned to the neighborhood are given a course in its history and in the problems of its residents; they walk the beat rather than ride in patrol cars, and they are encouraged to participate fully in community activities—to become a part of the community rather than an intrusive and threatening force.

Private organizations have added to the services available in the neighborhood,



The city-owned Findlay Market, recently rebuilt around its original iron frame, has become the focus of a larger-scale neighborhood renovation.





A pilot center was built around St. John's steeple, preserved as its entryway. The center provides a range of social and recreational services to the Over-the-Rhine area.

Cincinnati: A Second Nucleus

redesigning handsome old buildings for their purposes. Most of the new facilities, public and private, have been acquired with the aid of federal grants under the pilot neighborhood centers program, model cities (Over-the-Rhine comprises about a quarter of Cincinnati's model cities area), and a variety of OEO and HEW programs. The Interior Department's landmarks preservation and open space programs were also used in the neighborhood's restoration and redevelopment. Virtually all the housing rehabilitation was done under HUD's 235 and 236 programs.

A still unsolved problem in Over-the-

Rhine is the poor quality of the schools. But the city planners believe that if these can be improved, the solidity of the housing available in the area and the architectural interest of much of it could attract middle-income families to provide a more even population balance.

Two pluses are the easy access by bus to downtown and the burgeoning of local commerce—there are now more stores and more attractive ones in the "town center." Rehabilitated along with the buildings they occupy, many of the stores now display signs which, conforming to the official "Guidelines for the Rehabilitation of the Findlay Market Historic District," are "formal in design and characterized by dignity of type face; restraint in ornament, color and size, and simplicity of shape."

Already, the turnabout in the compact four-block Findlay Market neighborhood has spurred the rehabilitation of some 1,500 additional houses in the broader Over-the-Rhine area, many of unusual historic or architectural interest. The upgrading of some of these houses was undoubtedly influenced by the prospects of a second nuclear neighborhood adjacent



In Over-the-Rhine, 1,500 houses—many of them 19th-century row dwellings—have been restored. Likewise, stores have been refurbished, and signs conforming to a guideline add a cosmetic touch.



to Over-the-Rhine, which is now under construction behind an even more important indigenous attraction, the Cincinnati Music Hall for symphony, opera and ballet.

Only a few blocks north of city hall, this neighborhood is intended to serve as a cultural hub for the city as a whole, and as a service hub aimed particularly at the needs of the West End, the city's most deteriorated black neighborhood.

Under construction here is the \$10.5 million first phase of the Queensgate II town center initiated by the city and funded by HUD, private foundations and local citizens. Included in this phase are parks and plazas, a community television studio, a vocational education facility, and

a 575-car garage, linked by a glass-canopied system of elevated walkways.

The second phase will include air rights development over the garage and sale of other sites for commercial, industrial and cultural use. There will be extensive housing rehabilitation.

By placing the new facilities of Queensgate II where they will be convenient to all segments of the population, Cincinnati is making a conscious effort to break down the walls that separate rich from poor and black from white.

Built behind the Cincinnati Music Hall, Queensgate II is the second of the city's target "nuclear neighborhoods." It is to be a cultural and educational center amid new and renovated housing.



Minneapolis

In a study of citizen satisfaction conducted in 10 large cities, Minneapolis ranked first. This study, conducted for the National Institute of Mental Health, merely confirms what is apparent to even a casual visitor: residents of the Twin Cities area of Minneapolis and St. Paul have an unusually high degree of civic pride.

Minneapolis does have much to be proud of—impressive accomplishments like the eight-block Nicollet Mall downtown, a growing collection of distinguished architecture—and the Metropolitan Council which provides a new governmental mechanism for attacking regional problems.

There are plenty of problems which still need to be corrected, but the Twin Cities are tackling these aggressively with the frank intent of making the area a national showplace. Even the bitter winters are taken in stride. In fact, the residents' ability to do so engenders confidence and may account in part for the readiness to tackle tough problems.

More fundamental is the fact that, for a variety of reasons, the Twin Cities have been relatively untouched by the syn-

drome of decay and poverty which has crippled other big urban areas. Among the 25 largest cities, the 1970 census showed that Minneapolis had the lowest percentage of families below the poverty level and of nonwhite population.

In Minneapolis, as in Kalamazoo, a mall is the centerpiece of downtown; and up to a point the stories of these two malls are very similar. They start at the same time—in the mid-1950s; the main characters are the same—merchants and city officials; and the predisposing pressures were the same—the proliferation of highways and the building of shopping centers beside them. Also, the first move to counter these pressures was the same in both cities: in Minneapolis the merchants banded together into a downtown council and hired a planning consultant, Barton-Aschman Associates of Chicago.

But from this point on, the stories diverge sharply. By the time the merchants of Kalamazoo made their move, their downtown was pockmarked with vacancies. Faced with a crisis, they had to act very quickly; once they decided that a mall was what they needed, they buckled down to build it themselves with local talent, and completed the job in less than a year.

Minneapolis was not only a much larger city than Kalamazoo, Nicollet Avenue, the main shopping street, with Dayton's and Donaldson's department stores and a number of high-fashion specialty shops, was much more firmly entrenched than its counterpart in Kalamazoo. Though the beginnings of suburban

competition and a sag in sales might impel the merchants to hire a planner, that planner himself has noted that as yet "Nicollet Avenue showed no major, or certainly not dramatic, signs of losing its preeminence as the Upper Midwest's prime shopping district." Thus, he continued, "... it was essentially on a positive note that the Downtown Council ... was formed in 1955—its objectives being not to 'save a declining area' but to expand, enhance, and conserve a strong asset."

Five separate schemes for upgrading Nicollet Avenue were considered, boiling down finally after five years to a choice between a mall for pedestrian use or a "mall and transitway" that would bring customers by bus from every neighborhood of the city right to the doors of the stores on the mall.

Along with the decision to build a "mall and transitway," two caveats insisted



Nicollet Mall, left, has transformed downtown Minneapolis from the ordinary, (above) to a well-used city center with trees, street furniture and a gently serpentine busway.



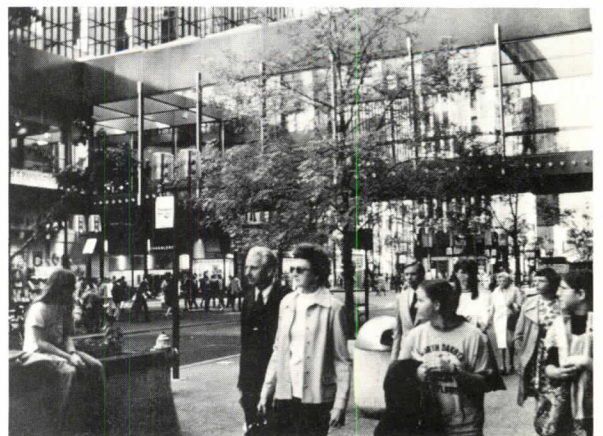
upon by Donald Dayton, the city's leading merchant, were adopted: "first, the mall would be of top quality construction or not come into existence at all; and second, it would have to be designed to the highest possible esthetic standards, be urbane and not patterned after suburban shopping centers."

The conceptual plan for Nicollet mall, with its gently serpentine transitway for buses, was drawn up by Barton Aschman. West Coast designer Lawrence Halprin was brought in to handle landscaping, the paving of the widened pedestrian ways, and sidewalk furniture of all sorts including heated bus shelters, fountains, trees and banks of flowers in large planters.

At the center of the mall, the two big department stores have now been joined by the IDS Center, a 51-story office tower connected to an eight-story office annex and a 19-story hotel, all surrounding the Crystal Court—a soaring, skylit atrium. (The IDS Center was one of AIA's 1975 Honor Award winners. Architects were a joint venture of Philip Johnson & John Burgee and Edward F. Baker Associates, Inc.)

Here pedestrian traffic is heavy, on the sidewalks and also inside the Crystal Court. No small part of the interest is the fascinating play of light on the granite paving and central bank of benches and flowers as the sun slants down through the skylight's intricate boxlike pattern of baffles. It is a sight to be seen but also a place to be used—with stores and restaurants and, at the top of the escalator leading to the mezzanine, a choice of four

The newest building along the mall is the 51-story IDS Center with its spectacular atrium known as the Crystal Court. Four skywalks connect the Crystal Court with downtown department stores and offices.



Minneapolis: Architectural Explosion

skyways over which pedestrians can move above the traffic to 12 of the main blocks downtown; by 1985 plans call for skyways connecting 54 blocks. And in deference to the prevailing weather, all of the skyways are glass-enclosed and carpeted.

The IDS tower provides a striking landmark that can be seen for miles around, completely dwarfing the 35-story Forshay Tower which was long the city's landmark. Its esthetic and functional contribu-

tions have not been without some costs—it introduces a new scale that some residents find uncomfortable, and during most of the year it casts a cold blue shadow across the busiest blocks of the mall during lunch hour.

In the three northern blocks of the mall all of the buildings are new, but their height is more in keeping with Nicollet Avenue's traditional scale. They are, nonetheless, monumental structures, intended to convey unmistakably that Minneapolis has entered the big leagues in architecture as well as sports.

Enclosing the mall at the north is the Northwestern Life Building by Minoru Yamasaki, FAIA, a graceful, temple-like structure with slabs of green marble set off against tall slender columns of white. To its southeast is the Federal Reserve



At the north end of the mall are several buildings of architectural significance, including Gunnar Birkerts' Federal Reserve Bank, left, and Minoru Yamasaki's Northwestern Life building, top. Also at this end are a luxury high rise apartment building (seen through the Yamasaki arches) and a senior citizens' apartment, below right. The south end of Nicollet Mall is much smaller in scale, but will soon be extended three blocks to the new Orchestra Hall, below left.



Bank, by Gunnar Birkerts, FAIA, the world's first suspension building.

Diagonally across from the Federal Reserve Bank, behind a reflecting pool with a large sculpture representing the Dead Sea Scrolls, is a new library and planetarium, and to the south the Florentine palazzo of the Northern States Power Co., designed by Pietro Belluschi, FAIA. In the summer its huge plaza sometimes serves as the site for outdoor concerts by the Minnesota Orchestra. Except for such special occasions the northern end of the mall is relatively empty. Tourists come to take pictures, but only the library contains anything to attract regular mall users off the street.

Also at this end of the mall are two high-density residential developments, the Towers, 500 units of luxury apartments, and a senior citizen's residence with a handsome atrium.

As one goes south from the IDS building the stores grow smaller and pedestrian traffic also begins to dwindle, but just beyond the mall is a bright new addition, Orchestra Hall, which opened last fall (Hammel, Green & Abrahamson, architects). For most of its life, the Minnesota Orchestra (formerly the Minneapolis Symphony) played in a drafty, barn-like hall on the University of Minnesota campus, a mile and a half from downtown. Its relocation to the mall (and the mall will soon be extended another three blocks so the hall will be right on it)

marks the first of two important steps to integrate the city's cultural life with its other activities.

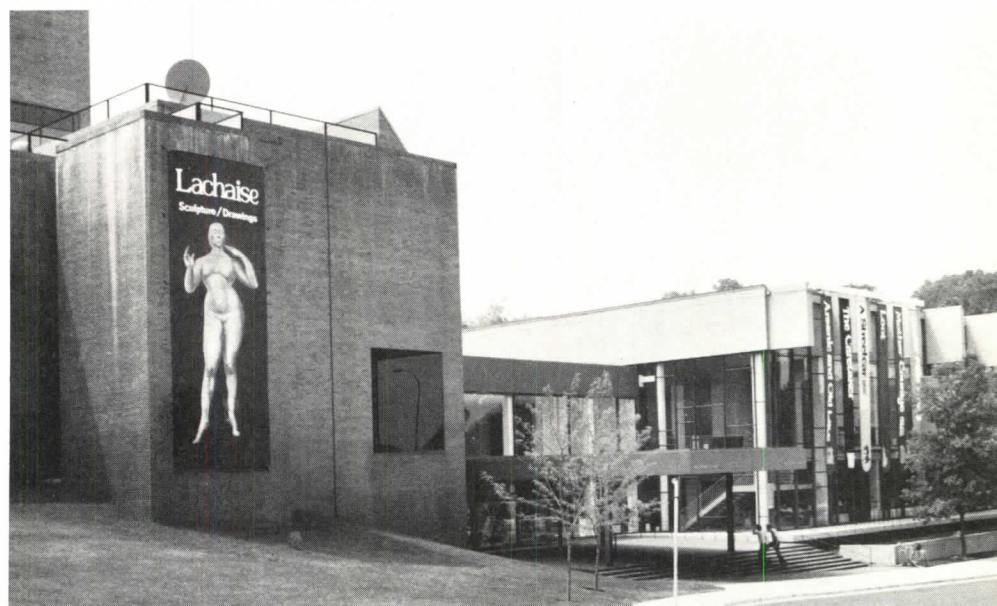
The second step is a pedestrian greenway, just begun, from the mall to Loring Park and then across the park to the Tyrone Guthrie Theater (Ralph Rapson, FAIA, architect) and the adjacent Walker Art Center (Edward Larrabee Barnes, FAIA, architect).

Plans also call for a new development of 2,700 units of apartments and townhouses on the near-downtown side of Lor-

ing Park. The city has sold \$13 million worth of bonds to cover clearance and relocation and four private developers have been selected.

Minneapolis' most ambitious new residential development to date, however, is the new-town, in town of Cedar-Riverside. Although it is a bit over a mile from the mall, all its literature stresses that it is within walking distance of the University of Minnesota with rapid and frequent bus service downtown. At the edge of the Mississippi, the Cedar-Riverside area had been a shanty-town which dropped in population from a high of 20,000 to 4,000 in 1970. Cedar Avenue had become a notorious red light district.

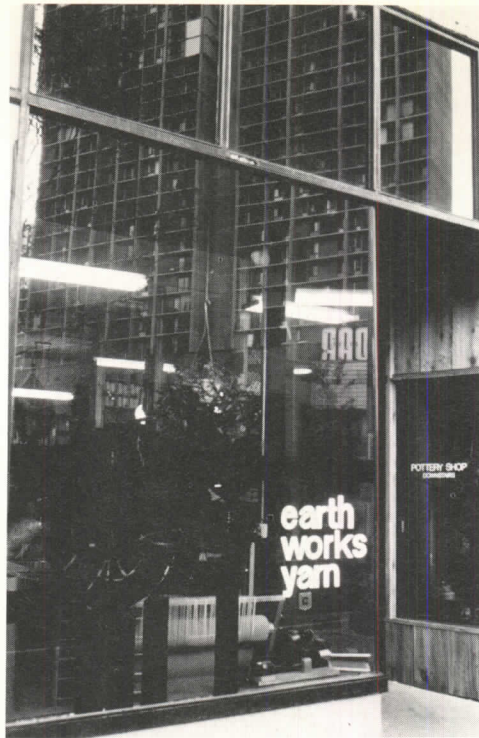
The new town plan calls for 30,000 housing units by 1990, along with a full mix of activities. Cedar Square West, designed by Ralph Rapson & Associates and



The Walker Art Center and Tyrone Guthrie Theater, above, were two important additions to the cultural life of Minneapolis. They will soon be linked to the mall by a pedestrian greenway which cuts through Loring Park, left. Near the park, plans call for the development of 2,700 new apartments and townhouses.

Minneapolis: Contrasting Scales

Gingold Pink Architecture and a 1975 AIA honor award winner, is the first stage of the project, and 90 percent of its 1,299 units have been occupied. It is a mixture of towers and lower-rise buildings on a platform of green plazas above several tiers of underground parking with overhead walkways to separate pedestrian and vehicular traffic. In line with the federal new communities act under which it is being built, housing is provided in Cedar Square West for the full range of people who work in the adjacent facilities, from hospital workers and university maintenance staff to university faculty and married students. More than half (699) of the units are subsidized, and these are interspersed among the non-subsidized units in 10 of the 11 buildings. The



Cedar-Riverside, above, Minneapolis' new-town, in town, is ambitious in scale. It is over a mile from downtown but linked by bus and is within easy reach of the University of Minnesota, below.



eleventh building is reserved for luxury apartments.

What invites criticism is the lack of diversity in the over-all environment which Cedar-Riverside has created for its diverse population. Despite the variations of which it boasts (high, middle, and low-rise apartments plus townhouses), Cedar-Riverside is very much of a piece. No matter what their height, the buildings feel assertive and design details are calculated to appeal only to that segment of the population that shares the taste of university-oriented developers.

That taste is distinctly counter-cultural in flavor and thus calculated by definition to put off a lot less "with it" middle-of-the-road people who might be attracted to Cedar-Riverside by the low rents. As John Fisher said in *Harper's* magazine, "it will not be the sort of environment I would choose, but Jane Jacobs and the Rolling Stones should love it."

Paradoxically, the last thing that many of the people who seek out the hand-crafted merchandise in the shops around Cedar-Riverside want is the urban way of life as symbolized by high-density apartment complexes. So it is on the grounds of high density that Cedar-Riverside is being attacked in the courts by environmentalists. Their challenge, and

the financial crisis afflicting most American new towns, have halted work on further development of Cedar-Riverside.

What has been built of it to date stands in particular contrast to the residential fabric of the city. A predominant characteristic of Minneapolis is its stable neighborhoods made up of immaculately neat single-family homes on small lots (many one-sixth of an acre or smaller) along tree-lined streets.

Many of these neighborhoods are only steps away from parks and lakes, and all of them are within easy reach of downtown by bus—a boon especially to the elderly who ride free except during rush hours. These features, added to the strong sense of community in such neighborhoods, explain why many families have chosen to live in them generation after generation. The attractive alternative to suburbia they offer, within the city, is one reason why most suburban growth in the area has so far been contained within a radius of 15 miles of its twin downtowns.

Although much of the terrain of the

Twin Cities area is flat and uninteresting, as its license plates proudly proclaim, Minnesota is the "Land of 10,000 Lakes." The importance of preserving the lakes in the face of spreading urban growth goes a long way toward explaining the Twin Cities' pioneering steps in the direction of regional government.

The lakes are the focal point for everyday outdoor recreation within the city—and the lakes dotting the suburbs within a 20-mile radius have long been the favorite haunt of city-dwellers on weekends and holidays. In the 1960s, as expressways made many of these lakes more accessible, their shores became prime sites for suburban development. Summer cottages gave way to subdivisions, and what happened next is by now a too-familiar ecological tale—the phosphate level rose along with the detergents poured into the water; algae proliferated out of control, absorbing more and more of the oxygen supply, and, cut off from the oxygen they needed, fish died by the thousands.

Local governments had built a rash of sewer treatment plants along the shores of the more populous lakes—13 of them on Lake Minnetonka, the largest—but these proved sadly inadequate. By the late 1960s the waters of Minnetonka had changed from clear blue to an opaque brown-green and the smell of dead fish was in the air.



In contrast to the scale of Cedar-Riverside, most of the city's residential neighborhoods are characterized by small, immaculate houses on tree-lined streets. Such neighborhoods have an older, but stable population and are within easy reach of downtown by bus.



Minneapolis: The Region

Significantly, after a long history of inter-municipal rivalry, it was an earlier sewer issue that brought the first move toward cooperative action in the Twin Cities area. In 1933, the WPA had built a sewage treatment plant for the common use of Minneapolis and St. Paul, and the two cities set up a joint Minneapolis-St. Paul sanitary district. With the capacity of the plant far in excess of the cities' needs, the joint district had, in turn, sold services to the suburbs—right up until the early 1960s, when its capacity was finally used up and the cities and suburbs began discussions of expanding the system.

The official citizens' guide to the Metropolitan Council notes: "The sewage issue of the 1960s brought regional questions to the forefront. As more discussion took place, it became apparent that other issues such as the location of thoroughfare routes, planning for parks and open space and providing safe disposal for solid wastes were regional issues that required a regional perspective in the decision-making process."

In 1957, the state legislature established a metropolitan planning commission to study the region's growth pattern and devise a comprehensive plan for its development. But as the citizens' guide points out, experience with the MPC had also shown "the need for a decision-making mechanism that would help implement plans rather than merely study problems."

In 1967, the state legislature brought delivery of regional services and planning for regional growth under the single umbrella of the Metropolitan Council, which the state's attorney general described as "a unique governmental unit standing a step above local governmental units (municipal and county) and a step below state agencies, and that is clothed with certain attributes and power of each."

The council is made up of 14 members

appointed by the governor from a combination of state legislative districts in the seven-county area, plus a chairman, also appointed by the governor. All of the members serve on a part-time basis, but each of the broad categories of concern for which they are responsible—community services, human resources, the environment, transportation and comprehensive planning—are monitored by a full-time staff. Between the council members and the staff, a dozen standing advisory committees plus *ad hoc* committees as needed provide for broad citizen participation. Within the departments covering each of the major categories, the staff is further broken down into groups working on specific problems such as sewers, solid waste, air quality, open space and recreation; health, housing, the aging; transit, highways, airports.

The Metropolitan Sewer Board, Transit Commission and Airport Commission function as semi-autonomous bodies within the structure of the Council, and the metropolitan highway experts work in close coordination with the state and federal counterparts.

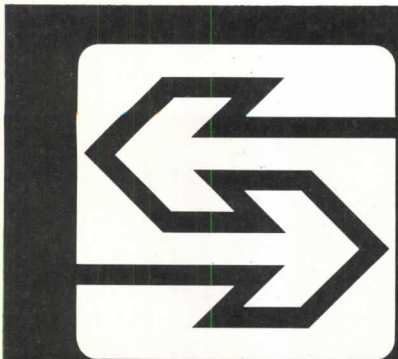
In the council's table of organization, the long-range planning section is on the same line with these other groups. But where their missions are narrowly delimited, its initial charge to formulate a development framework for the entire seven-county area was extremely broad, encompassing to some degree the concerns of all of the other bodies.

It was understood that after the development framework was completed and adopted as council policy all subsequent council actions would be brought into consonance with its principles. But the preparation of the framework was a task bound to take years—it was not, in fact

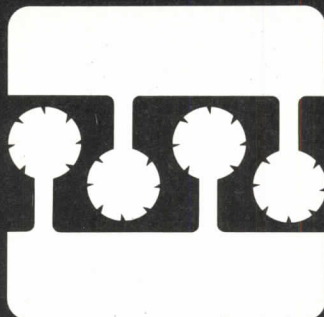
adopted until March of this year. In the interim, each of the line agencies responsible for the delivery of services had the power to formulate and carry out its own plans. This assured that the demand for services which was the main impetus behind the formation of the council would be met, but it also worked to undercut the goals of the long-range planners in ways that are only now beginning to be appreciated.

As an alternative to urban sprawl, the planners felt that first priority should be given to an effort to channel regional-scale shopping and services, entertainment, office buildings, educational and medical facilities, and high-density housing into major subregional centers serving 200,000 people each.

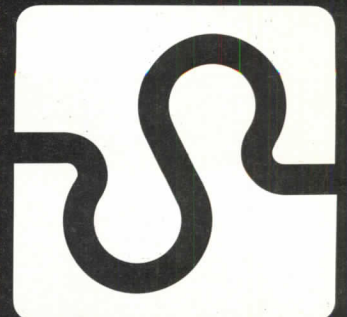
All of these major centers would be located in an "urban services area" within



Transportation



Open Space



Sewers

a radius of 15 miles from downtown Minneapolis and St. Paul. If the centers could be established, it was felt that housing would cluster around them in much the same fashion as iron filings to a magnet. Linkages between homes and activities would be strengthened, and a great deal of valuable open land, especially in the outlying areas, would be saved for agriculture, parks and conservation areas. Only minimal development would be permitted in the rural fringe and this would be clustered around "free standing centers" built on the base of market towns already there.

The planners saw a control of services as their main lever for achieving the kind of pattern they looked forward to—i.e., concentrate roads, sewers, transit in areas recommended for development; bar development in areas not yet provided with services, and selectively withhold urban-scale services from those areas recommended to remain open.

So long as the plan remained in its formative stage, however, it was not the planners who controlled the allocation of services, but rather the various line agencies. In the Twin Cities area, as elsewhere, these agencies tended to be staffed by specialists who viewed their challenge from a much narrower perspective than the planners. Their aim, understandably, was to deliver the services they were responsible for as efficiently as possible; and in this goal they received firm backing from the general public, which strongly desired the services but had little sense of how crucially the manner of allocation could affect the region's future shape.

The lakes of Minneapolis have always been the center of recreation, but in the 1960's they became badly polluted. Despite the construction of sewer plants, region-wide concern for the lakes led to the formation of the Metropolitan Council. The graphic symbols below show some of the council's concerns.

The highway plan, drawn up some years ago by transportation experts seeking to provide maximum mobility, has given rise to a gridiron of expressways and arterial roads which blankets the seven-county area and makes all of its sectors unusually easy to reach, regardless of their present or intended uses. This pattern of roads encourages dispersion rather than the concentration called for by planners, and makes the outlying areas that they have recommended to remain open far more vulnerable to sprawl.

To clean up the area's treasured lakes, the Metropolitan Sewer Board is now well on its way toward eliminating the rash of small inefficient local treatment plants in favor of unobtrusive interceptor stations—they look like houses—which pump the wastes underground to a handful of large and far more efficient consolidated plants, sited on rivers whose flow is strong enough to handle the effluent without difficulty. The job has now been completed on Lake Minnetonka, and the enthusiasm it has evoked is easy to understand. Over the past two years, pollution levels have been cut back by more than 75 percent; the water is blue and clear again.

However, the interceptor lines that carry the wastes from the Lake Minnetonka area to the treatment plant on the Minnesota River run for miles beneath some of the finest countryside in the region—countryside slated in the development framework to remain open until 1990, and after that to be developed chiefly in selective clusters around free-standing centers. But under the present rules governing the area, there is nothing the planners or the council can do to prevent any of the townships along the way from tapping into these lines and putting them to their own use. And the same holds true for the lines running from the Loni Lakes which pass beneath land that has been slated to remain open in perpetuity.

The simplest solution might appear to be the passage of a law barring the town-

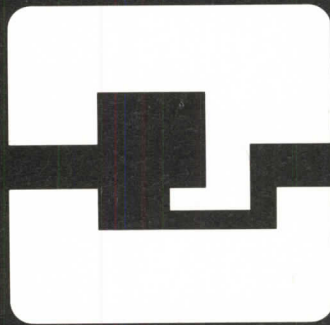
ships from tapping into the lines, but politically such a move seems unfeasible at this time. Not only would the towns in question fight it bitterly as an encroachment on their prerogatives, but there are strong indications that the public in general would be reluctant to see power at this scale moved to a higher level. Significantly, while the council possesses veto power over the acts of its own semi-autonomous agencies, such as the sewer board, it works with the local governments only in an advisory capacity. Meanwhile under the Council's aegis, a significant amount of subsidized housing had been built in the suburbs, and the bus system had been expanded across the region to cover 1,025 miles and carry 62 million riders a year. To encourage ridership buses are given preferential treatment: when traffic reaches a certain point, computer controlled lights hold back cars from entering the highways, but buses continue to move freely.

Now that the development framework has been adopted as the official policy of the council, the planners' position in relation to the council's other branches and agencies is greatly strengthened. Work has begun under their supervision to draw up a new set of functional plans to implement the framework's principles. Also, now that the framework is official policy, the planning department, as an A-95 review agency for all federal grants in the region, can expect to receive firmer support from the federal government in decisions against grants to municipalities which would appear to contravene the long-range plan. But over actions of the local governments that do not involve federal grants neither the council nor its planning department now has any control.

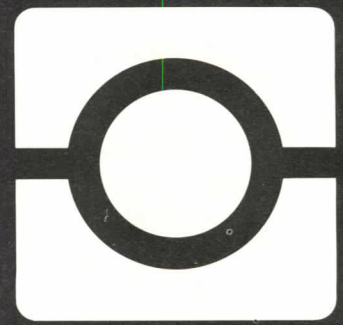
To plug this loophole a bill was introduced in the state legislature in April that would require all local governments, both counties and municipalities, to rework their plans over the next three years to make them consistent with the development framework. While this was labelled a "Mandatory Planning Bill," the Citizens League, an influential areawide group that was instrumental in creation of the Metropolitan Council, has suggested that it



Housing



Centers



Development Framework

might be better called a "partnership in planning bill," because it anticipates that each local plan will be negotiated individually, with the regional planners as well as the local planners expected to make some compromises.

While this two-way street approach stops well short of that red flag word "veto," it should, if adopted, improve both understanding of the council's aims and coordination with them at the grass-roots level. The legislature recently voted 34 to 32 to send the proposal back to committee for further consideration, but its chances of being passed on a second vote are felt to be very good.

Meanwhile, the transformations that have already taken place in the region over the past half dozen years have caused a reassessment, both official and unofficial, of what long-range planning can realistically hope to accomplish in the years ahead, and how best to go about it. For example, in its September 1973, volume "Growth Without Sprawl," the Citizens League concluded that the main emphasis in attempting to guide urban growth should be placed on residential development rather than upon major facilities. Queried on this point, which directly contradicts the planners' original view that major facilities concentrated in centers would be the leading force, a spokesman for the Citizens League noted that the league's position was based not on any theoretical preference but on a practical consideration of the situation as it now exists in the Twin Cities area.

If the centers had actually been built, they might well be playing the role the planners had assigned to them. But at the moment, they are simply a statement of good intentions. And the planners have lost their main levers for making them anything more than that, what with the highway network spread across the entire region and with virtually the entire area within 15 miles of city already sewered—one might even say, "oversewered." The same forces which have eliminated centers as the primary shaping element have also encouraged the disorderly spread of housing, and the only way to combat this now is by indicating clearly where and how housing should be built, the league believes. The league has been particularly

concerned about the housing that has been leapfrogging out to the fringe in search of cheaper land. To block this trend it advocates agricultural zoning, tax incentives for holding land off the market, and a strict curtailment of services in rural areas—policies that are also embodied in the development framework. In "urbanizing areas" the league favors planned unit developments built contiguous to areas already developed and utilizing services already in place. It believes that centers will follow housing concentrated in this fashion, but that they will be more at the scale of Southdale, the region's first suburban center, than of the large multipurpose centers originally envisioned for the development framework.

The original shopping complex, built by the Dayton Co. at Southdale in the mid-1950s, has now attracted a large number of other stores, offices, apartments and a major hospital to the land surrounding it. Individually, many of the structures are handsome, but having grown like Topsy with no overall plans each has its own parking lot too far from the next for comfortable walking, even if the streets were not clogged with traffic that makes them a menace to cross.

Among the new regional goals in the Twin Cities are the preservation of valuable agricultural land and the prevention of future uncontrolled sprawl, exemplified by Southdale, below.



The Dayton-Hudson Co. has just purchased a two-square-mile tract (about the same size as the present-day Southdale complex) in the Elmo Lake area south of St. Paul, one of the sites designated for a center in the development framework. The company plans to build a multipurpose complex here which will contain the same elements to be found in Southdale plus somewhat more housing. But here, unlike at Southdale, it will maintain strict control over the planning and design of the entire project.

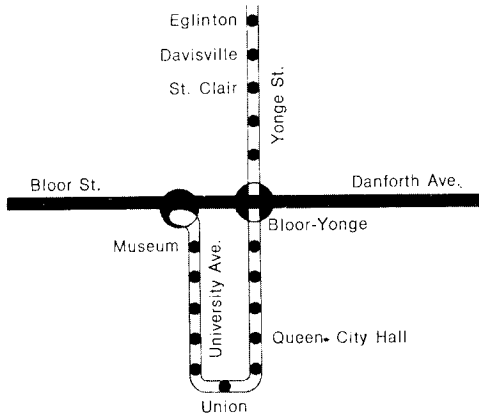
While the Citizens League's position may differ in a number of details from that of the official development framework, the council's director of long-range planning agrees that the kind of future it envisions is a reasonable one. A map in the final version of the framework still shows nine areas as possible sites for major diversified centers, but less emphasis is given to these in the text than in earlier drafts, and as the planning director emphasizes, the number of centers actually achieved and their size is less important than the fact that activities should be concentrated in places where they will relate well to each other and to housing.

While he admits that a number of opportunities have been lost, he feels that the prospects of achieving a reasonably orderly region are far brighter now that the framework has been adopted. The main lesson he feels that other regions might draw from the Twin Cities experience is that if they decide to embark on a region-wide plan, they should seek to hold back as far as possible on major services and other region-shaping installations until at least the broad outlines of that plan and the pattern of development it requires have been worked out and officially accepted.

The executive director of the Citizens League agrees that it is possible, through planning, to achieve a more tightly integrated region than the Twin Cities is likely to get, and cites Toronto as a place which has accomplished this. But he points out that Toronto's regional accomplishments reflect a much greater authority at both the provincial (i.e., state) and metropolitan levels of government than he believes most Americans, with their tradition of local home rule, would be ready to accept. He feels this is especially true of the powers of the province to impose strict land-use controls, and to veto the actions of local governments which it feels work against the plans it initiates. He feels quite certain that the people in the Twin Cities area would not want to give this kind of power to the Metropolitan Council, especially so long as its members are appointed by the governor rather than elected. An elective council was the league's original preference and is still the goal of those who would like to see a stronger brand of regionalism in the Twin Cities area.

Toronto

Twenty years ago, Toronto was a rich but dowdy city, a dull place to visit or to live in. Today, Canada's financial capital is fast becoming recognized as one of the great cities of the world. Less well appreciated is the foresight reflected in this transformation—the imaginative long-range plan that embodied not only a clear vision of the kind of city desired but also a set of regulations and incentives carefully tailored to produce each of its various features. With the same basic plan-



ning principles extended across the five boroughs surrounding the city, Metropolitan Toronto is probably the most cohesive urban area on the North American continent.

The first principle of planning throughout Metropolitan Toronto has been to coordinate land use with transportation. In the city of Toronto this has meant tying development tightly to Canada's first subway system, which opened in 1954.

Technologically there is nothing exceptional about the Toronto subway. Esthetically it falls far short of the subway built later in Montreal; but it is quiet, clean and dependable—rarely does one have to wait as long as five minutes for a train. Its most distinctive feature is the care with which it has been meshed with the rest of the area's transit system: Ninety-six of the 109 bus and trolley routes that span Metropolitan Toronto make 131 connections with the subway.

On a map the subway's main line appears as a large J running north and south through the heart of the city. Until recently, when four new suburban stations were added, it began at Eglinton Avenue at the city's northern border, ran four and a half miles beneath Yonge Street, the city's main commercial drag, to Union Station beside Lake Ontario, and then looped up again under University Avenue to Bloor Street, the northern boundary of the traditional downtown. In this way, it touched base with virtually all of the key facilities that were already in place when it opened.

The East-West line along Bloor and

Danforth Streets provided a link to residential areas already heavily settled within the city and potentially important in the suburbs.

Views from the air give striking evidence of the powerful shaping force provided by the subway as the city has experienced one of the most vibrant building booms on the entire continent over the past decade. Looking south of Bloor Street toward Lake Ontario, the new buildings downtown form a high ridge within the path described by the subway; the drop down to old low buildings on either side is precipitous.

Looking north from Bloor Street, beyond the old downtown, the pattern is significantly different. Here in an area of expansion where they had much greater freedom to implement their principles,

Toronto's skyline looking south from Bloor Street, above, and north, below.

the planners sought to channel all major new development into multipurpose clusters around the main subway stations, with lows preserved between the stations. Some of the tall buildings that can be seen from the air are offices, some are apartments and some are multiuse, including both; blended in with these are such related activities as shops, restaurants and theaters. Thus for the people living in or near these clusters there is a great deal to do right at hand, and from Eglinton Avenue, at the edge of the city, it is only 20 minutes to the downtown business center.

At Eglinton, the transfer from suburban to city travel is handled efficiently. A large office building sits directly atop the subway station; adjacent to it is a garage with reasonable rates for all-day parking; behind it is a major bus terminal, and all of these are tied together by underground concourses brightened by shops and restaurants.



Toronto: Principles and Amenities

Beyond efficiency, the planners were also concerned about amenity, and much of their ingenuity went into devising ways of achieving it.

Thus the lawns and gardens that surround each new apartment building reflect a rule that 50 percent of their site not only remain open but also that it be landscaped. If he chooses to leave even more of his site open, up to 80 percent, the developer receives a bonus permitting him to build higher and gain extra floor space.

Another bonus encourages the mixing of low townhouses in among the high apartments for greater visual variety, and also because it is felt that families with children prefer to live close to the ground. Each new residential development provides 125 percent parking space—one and a quarter spaces for each unit. When this was coupled with the rules about landscaping, it left no choice but to take cars



Toronto's transit system provides easy transfer from subway to bus in many areas, left.



Toronto's development scheme produces developments with landscaped open space, above left, underground parking, below left, low rise dwellings mixed among the highrises, above right, and walkthroughs with shops and gathering spaces, below right.



off the street and keep them out of sight underground.

To make passage easier between Toronto's long blocks, a bonus was offered for public walkways provided through or between buildings. As expected, these walkthroughs have attracted the kind of smaller shops and restaurants that add convenience and variety to any neighborhood, but which cannot easily afford the rents in large new office towers.

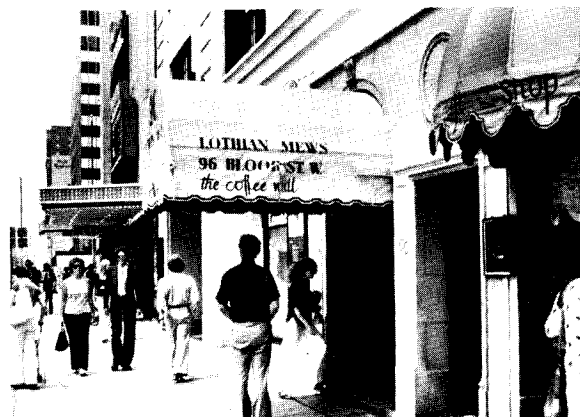
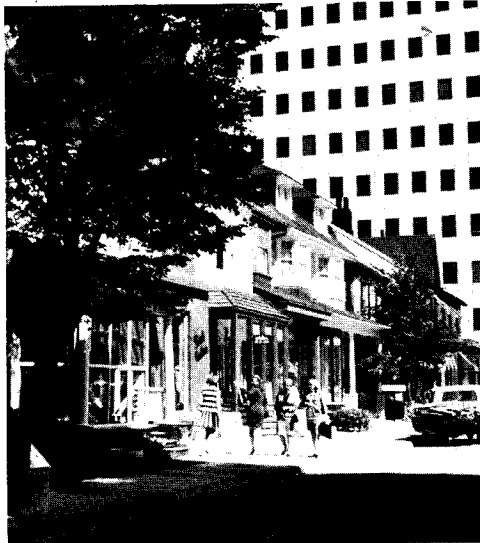
The vest-pocket-scale charm of Lothian Mews, an outdoor walkthrough, only accounts in part for the Mews' popularity. Just as important is the fact that it provides the easiest passageway between the commercial bustle of Bloor Street and Yorkville, Toronto's Greenwich Village, which the planning commission created, first by calling for the preservation of the small old houses that remained in the area to block the march of taller buildings, and then by encouraging the use of these houses for art shops, craft studios, bookstores, boutiques, restaurants, night clubs and the like. Yorkville has not only managed to inject a lot of liveliness and a visual change of pace into a neighborhood whose attraction for large-scale building was threatening to overwhelm it, but it has also found a new use for a great many fine old houses which would otherwise almost certainly have disappeared by now.

People now flock to the Bloor Street area—the place where culture and commerce, highs and lows, the old Toronto and the new have been blended most successfully.

The Colonnades, Toronto's first multi-purpose "centre" building, is across the street from Lothian Mews. Its two lower floors are devoted to commerce—specialty

shops, snack bars and a French restaurant; the next three floors are office space, and above this there are 10 floors of apartments. Now a good many other centres have been built throughout downtown, all of them combining a mixture of shops and offices, and many offering apartments also.

As one moves south of the Bloor Street-University area toward the financial district, there are fewer apartments surrounded by landscaping and fewer lows between the highs. But if most of the older houses have disappeared, a number of larger landmarks have been preserved.



*In Lothian Mews an urban
ambiance is preserved; elsewhere,
as in Manulife Plaza, below
right, this ambiance has been created.*



Toronto: Towers and Spaces

Between the Roman temple of the old law courts and the Victorian castle that long served as City Hall, 12 acres of deteriorating commerce were removed to make way for the new City Hall designed by the Finnish architect Viljo Revell. Completed shortly after his death in 1965, its two curving towers stand in oddly comfortable juxtaposition to these traditional neighbors. The large square in front is heavily used (in the winter its pool is converted to an ice skating rink), and provides a handsome open space at the edge of the financial district, where density reaches its peak.

For the key decision makers in Toronto's financial district, as for those in Wall Street, easy face-to-face communication is a matter of critical importance. To stay abreast of their fast-changing market, they want to be as close to each other and to various services that support them as is physically possible. The kind of architectural response worked out in the booming 1920s is frequently illustrated by the view through the canyons of Wall Street to Trinity Church. Though more modest in scale, the view in Toronto up Bay Street to the old City Hall represents the same

essential approach. With a new boom in the 1950s signaling a need for vastly expanded facilities, it was widely agreed that a new approach would have to be found.

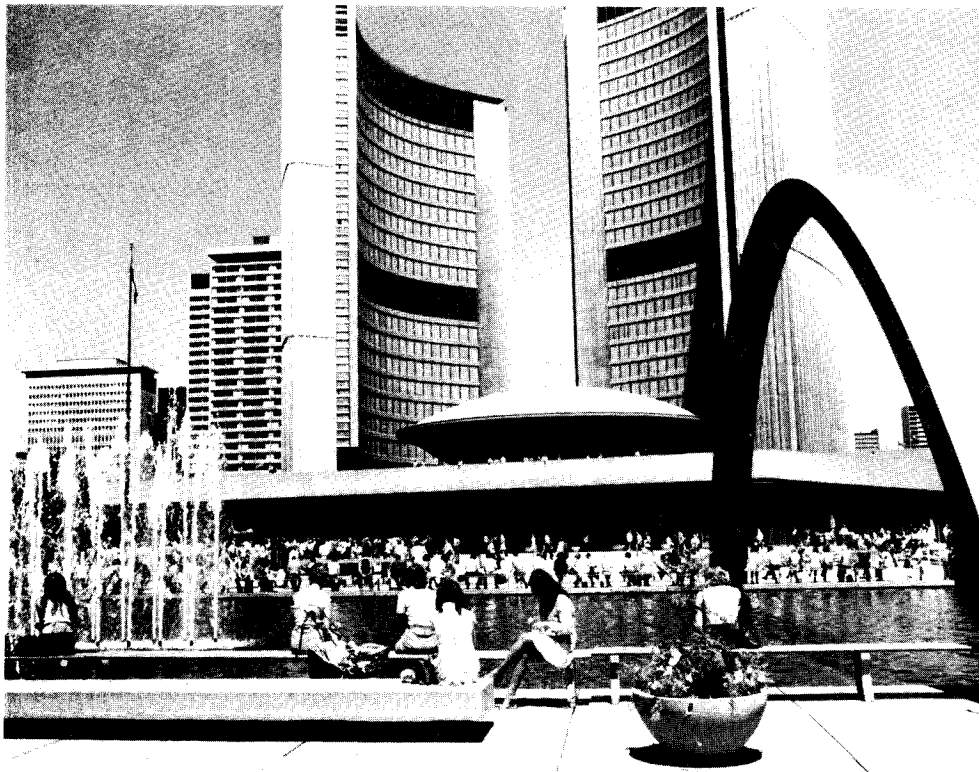
The man in charge of city planning at that time describes the situation this way. "With the blocks in the financial district unusually wide (700 to 900 feet) and solidly covered with buildings, the heaviest pedestrian traffic in the city was limited to streets that were totally inadequate to handle it. On Bay Street, people were literally spilling off the sidewalks. Also, for all their impressively solid facades, those buildings cheek by jowl had no space whatsoever between them. With windows only at the front and rear, they fell dismally short of 1950s standards. The problem then was how to accommodate this kind of density and at the same time open things up—provide more space for pedestrian circulation, and buildings with windows all around."

The solution mutually agreed upon (in the financial district there were no rules other than those setting the density level,

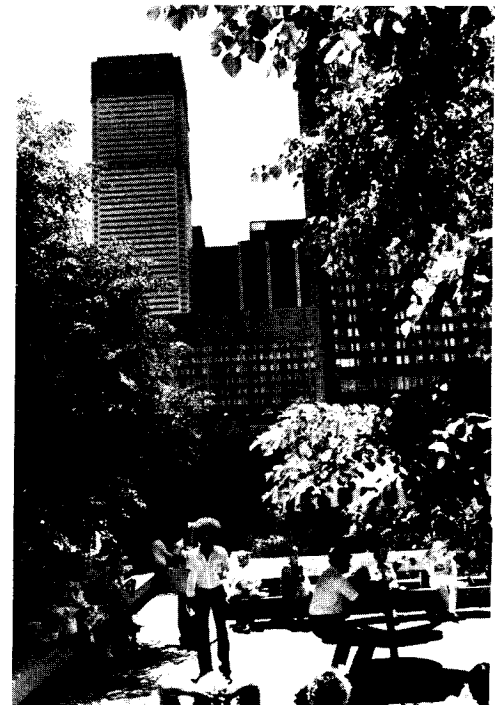
and no bonuses) was to treat the wide blocks in much the same fashion as the super blocks created in other cities. Outmoded buildings were replaced by taller new ones which had a greater density but covered less space on the ground. In most instances, two to four buildings of varying heights were grouped on a block to permit easy passage between them, and (far less common in other cities) the blocks were designed in clear relationship to neighboring blocks from the point of view of circulation. It is now possible to walk through them all the way from City Hall to Union Station on a series of connected plazas and pedestrian lanes. On rainy days and in colder seasons, it will soon be possible to cover the same route via a series of underground shopping concourses.

Also, as in the walkthroughs elsewhere in the city, some of the space opened up in the financial district has become a place for stopping and relaxing as well as for passing through. With outdoor dining and lunch hour concerts added to these, Commerce Court in the Commerce Bank complex has become one of the city's most popular gathering places during the summer months.

In short, Toronto's financial district



Toronto's new City Hall, left, and a landscaped plaza at City Hall.



now possesses many features that set it off from business districts in other cities which have experienced expansion of comparable proportions. But what first catches the eye is the one feature which makes Toronto appear most similar to those cities: its new skyline.

For many years, the old Bank of Commerce building, 350 feet high and well under 40 stories, was Toronto's tallest, with the Royal York Hotel and the Bank of Nova Scotia its two other most prominent landmarks. In the late 1960s, these were far outdistanced by the 55-floor bronze colored tower which Mies van der Rohe designed for the Toronto-Dominion Bank; in 1973, I. M. Pei's new steel-sheathed tower for the Commerce Bank topped the Dominion tower by two stories, and in 1975, the new Bank of Montreal building pushed past the 70 floor mark. Also due to open this year is the CN communications tower, which rises high above all the rest to assure unimpeded radio and TV signals and to afford an unparalleled view from its observation platform.

The new office towers have evoked a mixed reception. Judged by the traditional growth-oriented standards, the city's new skyline is an unmistakable mark of success. But in these environmentally-conscious times, many are having second thoughts about the old standards—enough people in Toronto so that a “pro-environmental” reform administration was voted into office in 1972 after campaign-

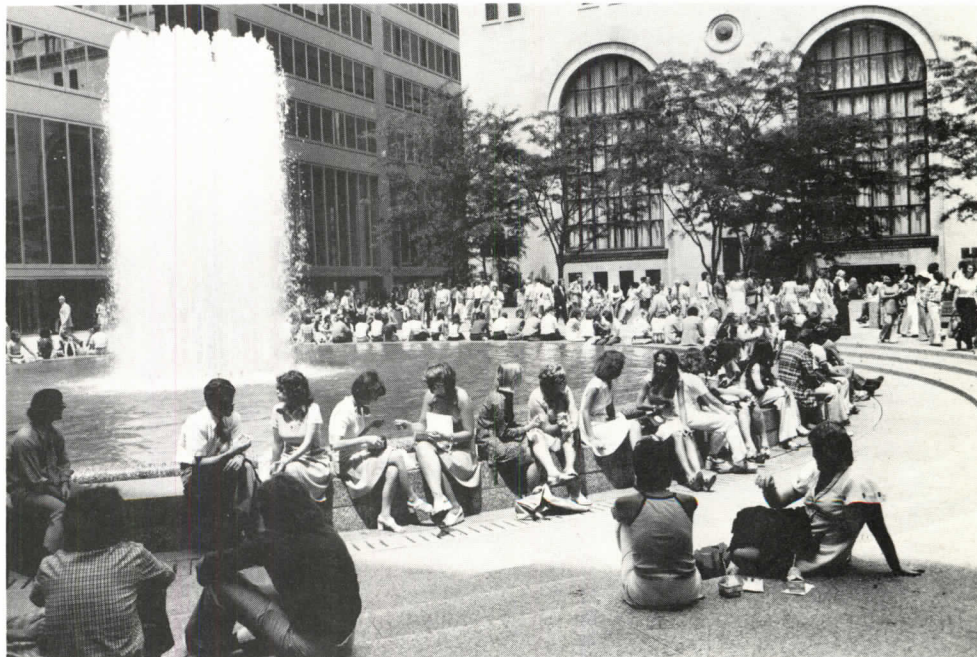
ing vigorously against the proliferation of highrise buildings.

Last year this administration passed an ordinance banning new buildings higher than 45 feet (except where the City Council votes an exemption) pending a study of the environmental effects of tall buildings. The province vetoed the 45-foot height limitation (in Canada it is the province that has the last say in matters pertaining to land use), but the city has now passed another less drastic bill downgrading zoning. Meanwhile, last December, the mayor who has led this fight was reelected by a wide majority.

In its opposition to highrise buildings the city administration appears to be less concerned about their physical size and appearance than about the loss of old buildings, the people they have displaced and, more generally, the kinds of values they represent. Here are some of the key points that the administration has raised:

- To make room for the highrise buildings a large number of small houses occupied by families of comfortable but moderate means were torn down. While the number of new units constructed substantially exceeded the number of units demolished, the new units are mostly studio and one-bedroom apartments, too small for the families they displaced, and their price is completely out of range of such families.
- Most of the small houses that have been

The view down Bay Street to Toronto's old City Hall, right. In the financial district, the impact of towering buildings, below, is offset by public open spaces, below right.



Toronto: Upward and Outward

saved have either been converted to commercial or into luxury townhouses for wealthy families. They may add to the amenity of the city but they provide little help with its basic housing problem.

- The landscaping around the new apartments is certainly an amenity, but the grounds are restricted to the use of their tenants, and they should not be confused with public open space, in which the city is seriously lacking.

- In earlier years, a lot of effort went into channeling the right mix of development into the special districts around the subway stations. But no rules were set to confine the spread of the big buildings as city space became scarcer and the demand for it rose. Now tall buildings are marching

between the stations, not only wiping out the small houses in their path but obliterating the light and air and threatening the lively smaller enterprises which thrive in such buildings.

- The interests of business downtown are certainly important to the city as well as to the businessman. The question is whether they are important enough to warrant pushing out everything else. The city administration feels that room should be provided for families of all incomes to live in all parts of the city, including the financial district.

- The city administration feels that high-rise apartments are unsuitable for family living in general, and especially so for families in public housing. In 1968, when the Regent Park South public housing

project was opened, the city administrators at that time took pride in the fact that it was virtually indistinguishable from private developments which featured a mix of townhouses and highrise buildings. Now Regent Park South is plagued by vandalism, and the present administration places most of the blame for this on the inhuman scale of its high buildings.

A more positive clue to the kind of environment the city administration is seeking to achieve might be found in one of the first acts of its present housing administrator: the purchase of a 260-unit development of attached Tudor-like cottages which was built by a foundation as model housing for working class families in 1913, and had been privately operated for that purpose until 1974. Then when an industrialist who had acquired the property began offering the apartments for sale at \$28,000 to \$40,000—prices far beyond the means of their tenants—the city stepped in with more than \$7 million to maintain the *status quo*.

Though this development is quite high in density, a skillful distribution of the limited open space available has made it unusually attractive. As the housing administrator announced at the time of its purchase, it has the feel, if not necessarily the precise design, which the city hopes to achieve in the 10,000 units of new subsidized housing it plans to build in its St. Lawrence Market project on a site along the waterfront, just east of the financial district, now occupied mostly by obsolete industrial plants.

Some of the region's older planners—the men responsible for its present form—have expressed doubts. The kind of cover-



For years highrise apartments set Toronto's scale. Now planners are aiming at an older, smaller scale typified in this 1913 housing development, right.



age that seems charming in a small development of 260 units would, they feel, be overwhelming multiplied to 10,000 units. Given the limited land available and the number of units desired, they see no choice but to insert at least a few tall buildings.

Unlike American cities, the city of Toronto is a municipality within the framework of a larger municipality, Metropolitan Toronto, an official entity both politically and geographically, with a three-tier government. Broad policies of planning and land use are set by the Province of Ontario; details of implementation are left to the local governments—the city of Toronto and its five neighboring boroughs—whose discretionary powers within their own boundaries are considerable, but whose actions are subject to review by the Ontario Municipal Board, which can veto them if they are judged to contravene broader metropolitan guidelines. Mediating in between is the metropolitan government, which is also responsible for areawide services—roads, transit, water, sewers. No septic tanks or package sewer plants are permitted anywhere in Metropolitan Toronto, and no building is permitted in unserved areas. Thus the metro government, which controls the development of services, determines also to a great extent which areas will be developed and which will not.

Metropolitan Toronto comes to an abrupt end at Steele's Avenue, which runs straight as an arrow across its whole northern border a dozen miles above Lake Ontario. Beyond this point development has been strictly curtailed to provide for some 25 miles of greenbelt. Standing in an open field just beyond the intersection of Steele's Avenue and a major north-south artery that runs up to it, one sees a complex of tall apartment buildings little different from those at the heart of the city.

These apartments, reflecting the frequent bus service along two main arteries, provide a telling clue to the overall strategy for development in Metropolitan Toronto: the trolleys, buses and subways of the Toronto Transit Commission (a metropolitan body) lace the region together, and, except in areas where natural constraints dictate otherwise, densities are geared to the level of service they provide.

In 1973, the Yonge Street line of the subway was extended 5½ miles beyond city limits. Now throughout its stations there are signs urging a visit to "Sheppard Centre: Prestige Apartments, Town Houses, Sports and Recreation Complex, Shopping Mall." The multipurpose cluster rising around the Sheppard Avenue subway station, close to the region's northern border, repeats the pattern already seen around the city's outlying stations. When it is completed, it will also have a number of offices, including a new civic complex for the borough of North York. The residential mix at Sheppard Centre reflects the fact that high densities up to 125 units per acre are permitted on sites any part of which is within 1,500 feet of a subway station.

Around bus stations with frequent (but not the most frequent) service, densities up to 60 dwelling units per acre are permitted. On the ground these translate into townhouses and garden apartments for families surrounding perhaps one or two tall "adult towers." With the rules governing multifamily housing similar throughout the region, all are surrounded by plentiful landscaping atop underground parking space.

The most frequent bus service is found along the arterial routes that parallel the expressways (only the bus that runs non-stop between the city and the airport is allowed on the expressways), and here during peak periods there are often more than 15 buses per hour moving in the same direction. Where service reaches this point, densities comparable to those at the subway stations are permitted around the bus stops. With the stops often spaced at two-block intervals, the result has been strips of tall apartment buildings stretching in unbroken lines on either side of the main intersections. In Etobicoke, toward



High density occurs outside of the city at subway stops, above, and along major bus routes, right.



Toronto: Organizing Growth

the western edge of the region, space was reserved between the apartments for offices and other facilities in the hope of gaining greater variety and balance. But the facilities desired failed to find this linear arrangement attractive, and most of the reserved space has now been filled with apartments.

Despite the landscaping around them, the sheer bulk of the apartments oriented to major bus routes might give pause to visitors from U.S. suburbs.

In response to such situations people such as Metropolitan Toronto's commissioner of planning have been, in his words, "groping" for new kinds of solutions. One such answer may be found in two adjoining new towns to the far west, Erin Mills and Meadowvale, along the western edge of Mississauga, which together will provide homes for almost 150,000 people, along with industrial and office jobs.

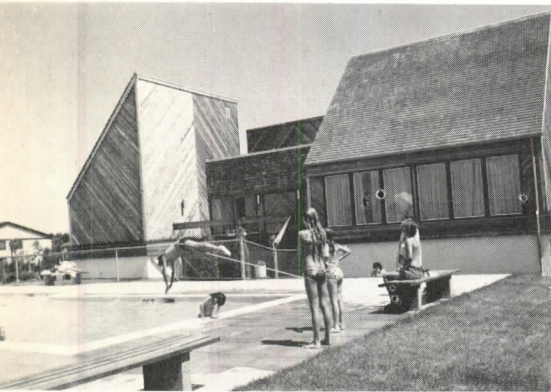
Both new towns are an extension of the planned unit development principle to the scale of a major community, featuring clusters of low attached housing with some high rise apartments. In Meadowvale, the homes are grouped into neighborhoods centered upon such facilities as a recreation center or a day care center. The neighborhoods are separated by green and served by local shopping centers with a "downtown" to serve the whole community.

The Toronto city administration has been pushing strongly for a program of decentralization that would distribute new growth more widely across Metropolitan Toronto. The mayor has noted that, while the city is overwhelmed by development,

the borough of Scarborough at the eastern end of the region "is starving for offices and growth."

According to a former city planning commissioner now a consultant at the metropolitan level, if Scarborough has so far failed to attract many offices or other urban facilities, this is simply because it is farther out and less well linked to the city. But now those other sectors have been pretty well filled up, and Scarborough is virtually certain to become the next target for growth in the kinds of facilities that spell jobs as well as people. The metropolitan planners are now working with the local officials in Scarborough to develop a diversified center there; and he emphasizes that this center will reflect a refinement of policies that the metro government has been developing over a period of 15 years.

It was with a knowledge of Metropoli-



In Meadowvale, townhouses and apartments, designed by a variety of architects, come in a variety of sizes, and try to match a variety of tastes. Some, above, seek a traditional note and combine four units into what looks like a single-family house. Others, left, are grouped around a recreation area and have entries at two levels above and below a deck which runs past all the houses.

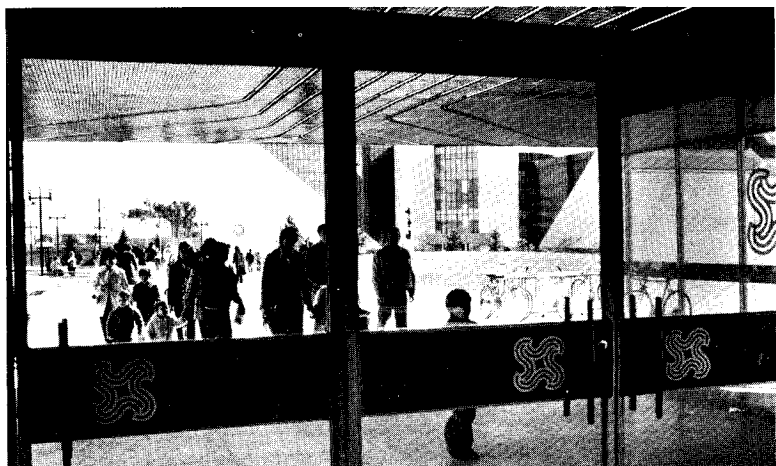
tan Toronto's emerging problems and against this background that the decision was made to seek a stronger focus in Scarborough through the building of a new Scarborough Town Centre. At present Scarborough is not dissimilar to many U.S. suburbs, with scattered single-family homes and few facilities to serve them. Two key magnets have already been set in place on the site chosen for the center: a striking civic centre designed by Raymond

Moriyama and a fully enclosed shopping mall with three department stores. If the detailed plans that have been drawn up are approved and carried out, they will be joined there by: office space with low buildings along the square and higher ones back from it, but none more than 10 stories, so as not to overshadow the civic centre; a new department store and additional services in the shopping mall; a 600-room hotel and convention center conceived much along the lines of the Kalamazoo Center. The offices would be related to the shopping and the civic centre so that shared parking would be fully used at all hours of the day; and cultural facilities—museums, libraries, art galleries,

stages for the performing arts—would be fitted into the overall fabric where people would pass them frequently instead of being shunted off to one side in a complex of their own. The metro government plans to greatly augment the bus service focused on the Town Centre, and to add a new high-efficiency trolley line linking it to downtown Toronto.



The Scarborough Town Centre, designed by Raymond Moriyama.



The former city planning commissioner finds it difficult to take the mayor's call for decentralization seriously. The city, as he sees it, is setting up a straw man in order to take credit for something that will happen in any event, and that in fact has been happening for more than a decade now. Here is his assessment of the situation:

Certain kinds of businesses depend on a downtown location more heavily than others—finance, of course; the headquarters of the largest corporations, and the services related to them especially law and accounting. These can be counted upon to stay in the city, but their great period of physical expansion is already past.

The apartments multiplying not just in the city but everywhere in Metropolitan Toronto reflect a shift to smaller households for whom apartment living makes sense. The wealth of things to do in the city makes it an exceptionally attractive place for the kind of young people on their way up who are the main market for city apartments and who are prepared to pay premium prices for them.

But provided they retain good transportation links back to the center, virtually everything else, he adds, is free to leave the city, and has been doing so at an accelerating pace. Over the past 10 years, office space in the suburbs has been increasing at the rate of about 15 percent a year as compared to 4 percent in the city. In absolute terms the two are about equal now, and in the future the weight will be heavily in favor of the suburbs. And in

Toronto, as elsewhere, factory jobs have been moving out of the city faster than office jobs, and people fastest of all.

Today, 80 percent of the land suitable for development in Metropolitan Toronto has been filled. Before the Scarborough Town Centre is completed, it is expected that all developable land will have disappeared. But between the scarcity of land and the value accruing to it from high quality urban services, housing prices are soaring even by U. S. standards: A small home in the Levittown class anywhere in Metropolitan Toronto sells for \$50,000 or more, and apartment rentals are in a comparable range. While the falling birth rate has mitigated the pressures of growth throughout Canada, the magnetism of one of the world's great cities continues to generate abnormally strong pressures in the Toronto vicinity—far stronger than Metropolitan Toronto can possibly absorb without a shift to much higher densities that would completely change its character. Already strips of apartments identical to those along the major bus routes in Metropolitan Toronto can be seen 20 miles from the city in the municipality of Mississauga which borders metro to the west.

To absorb this pressure in a more orderly fashion, the provincial government in 1970 officially set up a broader Toronto-centered macroregion comprised of five regional municipalities whose area and function will be comparable to Metropolitan Toronto around which they form a half circle. The city of Toronto would be the regional hub—the number one center. Encircling Toronto would be four major subregional or number two centers: two old cities, Hamilton on the west and Oshawa on the east; Mississauga next door to Toronto, and finally the new city of Pickering which is to be built to the northeast.

All other urban places in the region would be linked to the hub or to the nearest subregional center and would be ranked from three to six depending on

their function and the scale of services they require. Scarborough, with its town centre and improved transportation links to the city, would be one kind of third level urban place under this plan. Likewise the new towns of Erin Mills and Meadowvale would be ranked in one of the latter categories. The object in the macroregion is to create a place in which all of the various urban sectors are linked for easy movement but in which there is also leeway for a great deal of variety in form and function from place to place.

For all the places examined in these pages, the effort and the money that went into planning has paid significant dividends. The cities not only look better, they work better, providing more amenities and expanded opportunities for their own residents, and a much stronger magnet at the center for those who live in their broader metropolitan areas. Beyond the cities, a number of old assumptions are being soberly reassessed; more people are coming to recognize that political identity does not necessarily equal true community; that communities in urban regions do not exist unto themselves, and that there may be more to lose than to gain by pushing ever farther out in search of fresh land. In the Twin Cities area, and in the Toronto-centered region, plans for a more cohesive and at the same time more richly varied physical environment have gone hand in hand with the devising of new political forms to help further this end. The effort is still young; there are still a lot of answers to be worked out. But much has already been accomplished, and even from their initial missteps, these areas have learned important lessons that are of value not only to themselves, but to all who share their goals. □

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The Chasm: The Life and Death of a Great Experiment in Ghetto Education.

Robert Campbell, with an introduction by James Baldwin. Boston: Houghton Mifflin, 1974, 251 pp. \$5.95.

This is not a book about architecture. It is, though, a book for architects. At least I hope so, for its central issue is the quality of life and the expectations of our urban poor.

Campbell spent three years on this story. His interest in its subject was sparked by his script writing assignment for the AIA film "A Child Went Forth." The book is a tragic documentary of the brief brilliant life, and wasted death, of an experiment that the author obviously believes was the first real revolution in ghetto education in American history—and yet, but few cared.

The setting is New York City. But the real action is not within the bright lights of midtown Fun City where we like to visit but wouldn't want to live. We are taken on a personal odyssey into those murky outlands of Harlem and Ocean Hill-Brownsville where we never visit, but where trapped millions do, and must, live. "Out here," as the local dwellers refer to it, as opposed to "in there," or "downtown," where the power and the money and the opportunities are.

The antagonists are clearly drawn. Local advocates who demand community control of their schools and the right to select accountable the teachers of their children. The United Federation of Teachers that calls the longest, most acrimonious teachers' strike in New York City over the issue of this threat to its authority. The central Board of Education, burdened with lethargy and bureaucracy, and insensitive to the success of its own great experiment.

Like a Greek tragedy, the outcome, of course, is inevitable.

One of the fascinating side benefits of the accounts is its unintentional revelation of the author's own character as he is gradually enmeshed in the cause he had at first merely intended to report on. As the end becomes imminent, he is obsessed with the need to document, in films and articles, the individual triumphs of the experiment so that a record will be pre-

served to help those who might try again later. His frantic attempts to obtain help from foundations, publishing houses and other august bodies of the power structure are mostly futile.

The book itself is the major legacy to those children who had within their grasps what the author calls "the keys to the kingdom."

James Baldwin has written a moving introduction. He's been there, and he re-



lates to it. He also has never met the author, and yet after reading the full account, he felt that he could end his introduction with these words: "The man who wrote this book is very honest, very loving, and his children are lucky: He must be a beautiful cat."

We also are lucky, for Campbell is at work on the script for a forthcoming AIA film. *Chasm* has been nominated for a national book award. It's a sleeper—but you won't rest easily after reading it. *William L. Ensign, FAIA*

Fundamentals of Construction Estimating and Cost Accounting. Keith Collier. Englewood Cliffs, N.J.: Prentice-Hall, 1974. 296 pp. \$18 hardbound, \$13.50 student edition.

This carefully done work by a Canadian construction cost consultant and teacher is a fine introduction to the subject of cost estimating. While primarily a textbook with the usual quiz at the end of each chapter, the practicing architect's library will benefit by its inclusion.

Early chapters set the stage by relating the role of estimating to the total construction process, exploring in detail the

definitions of the estimate and cost accounting, discussion construction economics and construction costs, and analyzing the precepts of estimating and cost accounting. For readers who want to delve deeper, later chapters (and verses) get into the meat of the art and science of measurement and pricing. Although the emphasis is on capital costs, the subject of life-cycle costs is touched on in various parts of the text.

Several dozen terms are defined in the glossary, some with British flavour. The bibliography, broken down by subject headings, unfortunately includes several outdated references and lacks many references to source data which many architects in the U.S. find useful. It is to be hoped that this situation will be corrected in the next edition of this otherwise excellent book. *Robert Allan Class, AIA Director, AIA Technical Programs*


Solar Heated Buildings: A Brief Survey. 8th ed. W.A. Shurcliff. Cambridge, Mass.: The author, 1975. 102 pp. \$7.

This is a listing, first by state and then by foreign country, of buildings that are partially or fully solar heated. There is a brief description of each structure, with information about climate, type of collector, auxiliary heat, performance, etc. There are 119 buildings noted. The book is reproduced from typewritten copy. It may be bought prepaid from the author, 19 Appleton St., Cambridge, Mass. 02138.

Harnessing the Sun to Heat Your House. 2nd edition. John Keyes. Dobbs Ferry, N.Y.: Morgan & Morgan (145 Palisade St., Dobbs Ferry, N.Y. 10522), 1975. 208 pp. \$2.95.

Keyes, an inventor of a self-contained solar furnace for auxiliary home heating, says that little has changed in the field of solar heating applications since the first edition of his book in 1974, except that the "blue-suede shoe boys are flocking in droves to this field, smelling a 'quick buck' to be made. Hundreds of 'solar energy consultants' have sprung into existence ready for a fee to give you advice about the system you are going to build." Unless such a person is a registered professional

continued on page 55



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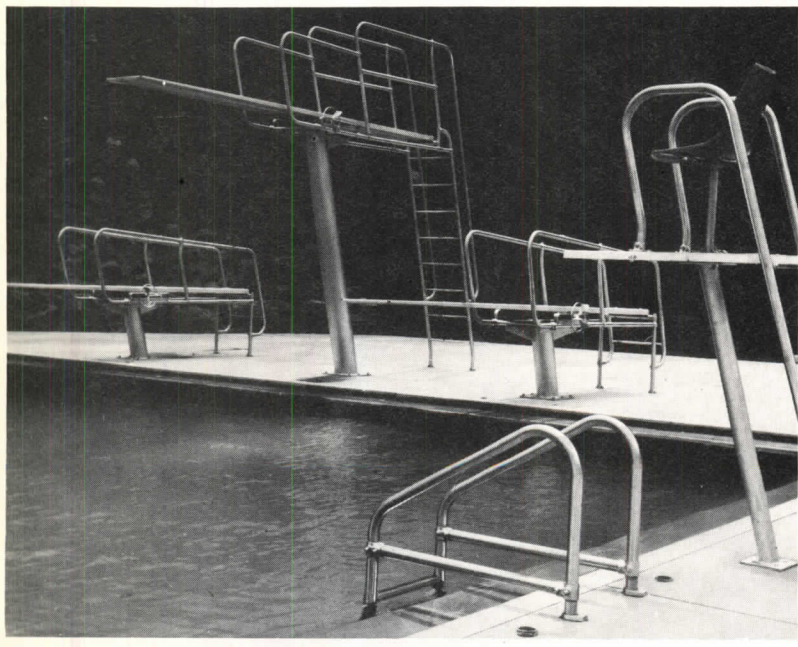
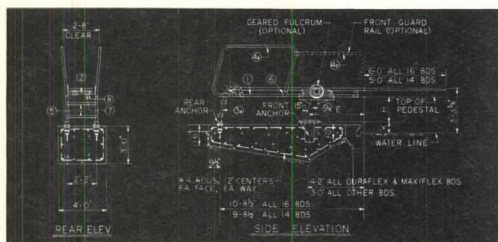
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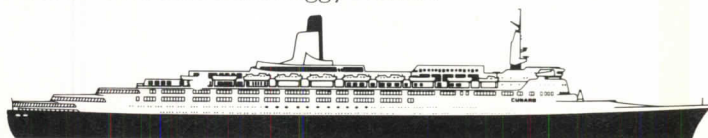
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Books from page 52

licensed engineer, he says, run. And spend your money at the tables in Las Vegas where you have more of a chance.

This book aims to give the general reader a general knowledge of solar energy applications. Keyes discusses the different types of collectors, tells how they function and how to measure their efficiency. He explains types of storage systems and how to prevent heat loss.

Naturally, he describes his backyard solar furnace—a simple A-frame shed that pipes heat to the dwelling through underground ducts. In the use of any solar system, he urges the use of common sense.

“Unless you get adequate sunshine, you are going to be disappointed in the performance of your unit.” He’s of the firm opinion that solar heating is practical right now, and his book contains a great deal of information for the layman.

The appendices, which take up more than half the book, concern climatological data, outside temperature by state for use in designing a heating system, conversion factors and constants, physical property data, and a method for calculating the performance capability of the solar heating furnace using Weather Bureau data. He also outlines points to consider when purchasing solar heating equipment. Among them: Hire an engineer to advise you; have an attorney check the sales contract; check operating and maintenance costs, and include the system in your homeowner’s insurance policy.

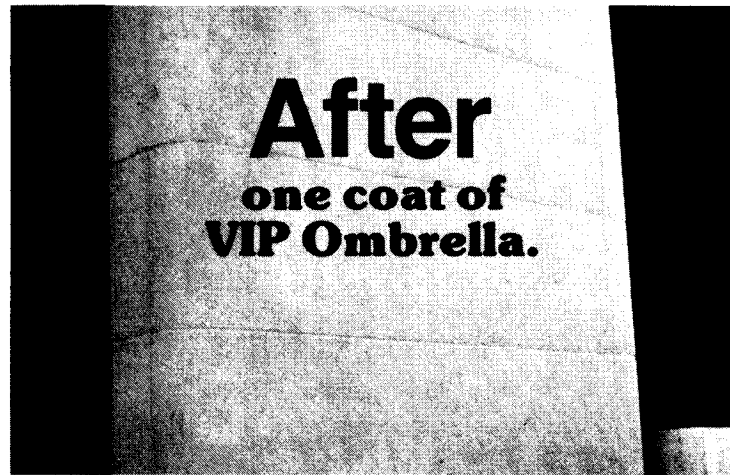
Directory of Architects for Health Facilities. Chicago: American Hospital Association, 1975. 49 pp. \$6.50.

This is an alphabetical list of U.S. architectural firms with “experience or special interest” in health care facilities. The information provided includes the firm’s address, the average size of the firm from 1969 to 1973, the total dollar value of work in design or construction as of mid-1974, percentage of work in health facilities and a list of the firm’s other offices by city and state.

The foreword says that AIA’s board “has authorized its members to be listed in this publication but assumes no responsibility therefor and cannot be responsible for injury, damage or loss occasioned by the use thereof.” Listing is open to any registered architect, and the information in the directory has been supplied by the individual firms. Use of the directory by administrators and governing boards of health care facilities, says AMA, is “only one step in the selection process.”

Maya Cities: Placemaking and Urbanization. George F. Andrews. Norman, Okla.: University of Oklahoma Press, 1975. 468 pp. \$20.

George Andrews, a past contributor to
continued on page 58



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Books from page 55

this magazine, is an architect, teacher, an excellent photographer and a writer who has the skill to hold the attention of the reader. Although he is objective, it is evident that his subject here is dear to his heart. To this he brings scholarship, making the book a special treat for those who admire those highly civilized people, the Mayas, and the evidences remaining of their culture and cities. The book's many maps, drawings and photographs are an added dimension.

It has only been since 1840 when books by the explorer John Lloyd Stephens gained widespread popularity that attention has been paid to the remains of Maya cities in the jungles of Mexico and Guatemala. And yet, as Andrews says, even now only the surface has been scratched. "The largest number of Maya cities still lie buried deep in the jungle, their locations known only to a few *chicleros* who stumble over them in their search for the raw material of chewing gum."

But today hitherto inaccessible sites are being mapped, partially excavated and restored, and it is now possible, Andrews says, to make a comparative study of the cities of the Mayas "in order to project meaningful generalization regarding their basic physical organization and structure."

His book, then, does project meaningfully as he discusses the forms and functions of the Maya city, its basic elements, building types, orientation and basic building groupings, including the special astronomical assemblages.

Against this background, Andrews discusses 20 major settlements in Honduras, Guatemala and the Yucatan, analyzing physical form and spatial organization. Here are described such dazzlers as Tikal, Chichen Itza, Tulum and Labna, as well as lesser known cities.

It's a highly recommended book.

Marinas: A Working Guide to Their Development and Design. Donald W. Adie. Boston: Cahners Publishing Co., 1975. 336 pp. \$39.50.

The author of this book, a British architect who has studied marina design in this country, says that the word "marina" was coined in the U.S., the first nation to develop pleasure boating as a "viable" recreational pursuit. Boating is now a worldwide leisure activity, and there is ever increasing emphasis on marinas, a building type which requires the expertise of architect, engineer, developer, economist and lawyer.

This comprehensive and detailed guide to marina development will help all the professionals involved in the planning and building of marinas. It covers every topic, giving step-by-step guidance on site selection, principles of design, landscaping, pollution control, legal considerations, economics, etc.

Odessa City Hall, Odessa, Texas.
Architects: Peter and Fields

DOORWAY NOTES . . .

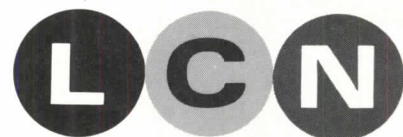
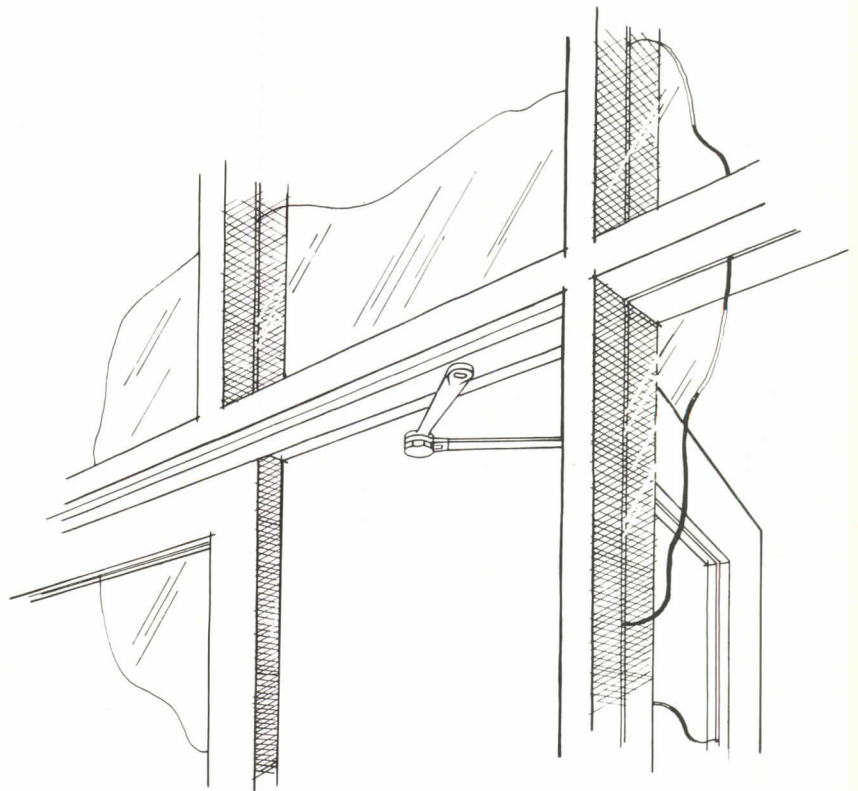
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Events from page 14

Conservation, McGraw-Hill Conference Center, 1221 Avenue of the Americas, New York City. Contact: Eugenie Cowan, 325 E. 72 St., New York, N.Y. 10021.

Sept. 25-26: Virginia chapter/AIA Fall meeting, Rzmada Inn, Alexandria, Va.

Sept. 26-27: Course on Solar Energy Use for Buildings, Houses and Pools, University of California, Berkeley, Calif.

Sept. 26-30: International symposium on the planning of radiological departments, Philadelphia. Contact: Dr. Francis J. Shea, Department of Radiology, Temple University, 3401 N. Broad St., Philadelphia, Pa. 19140.

Sept. 29-30: Institute on Designing the Color, Light and Visual Environment for Human Performance, University of Wisconsin-Madison, Madison, Wis.

Oct. 6-7: Institute on Preventing Building Design and Construction Failures, University of Wisconsin-Madison, Madison, Wis.

Oct. 8-10: Michigan Society of Architects annual convention, Kalamazoo, Mich.

Oct. 8-12: National Trust for Historic Preservation annual meeting, Boston. Contact: NTHP, 740-748 Jackson Place N.W., Washington, D.C. 20006.

Oct. 9-10: Conference on Issues '76: Public Policy and the Built Environment, Gund Hall, Harvard Graduate School of Design, Cambridge, Mass.

Oct. 10-12: Conference/workshop on waterborne transportation, Dutch Inn, Lake Buena Vista, Fla. Contact: MAUDEP, P.O. Box 722, Church St. Station, New York, N.Y. 10008.

Oct. 10-12: New England Regional Council/AIA annual meeting, Newport, R.I.

Oct. 15-17: New York State Association of Architects annual conference, New York Hilton Hotel, New York City.

Oct. 22-24: Central States Regional Council/AIA annual meeting, Stouffers Riverfront Inn, St. Louis.

GOING ON

Going On from page 10

tect's professional and nonprofessional staff" and the necessity for equitable treatment.

In other business, the convention passed the following revision in bylaws:

1. To limit the term of treasurer to two years, with a limit of two terms.

2. To set up new procedures and regulations for the election of honorary members.

3. To revise the Standards of Ethical Practice regarding the notice which an architect who accepts a commission initially held by another must give to the first architect. ("Written or equivalent notice" is now acceptable.)

Tax Incentives Proposed For Energy Conservation

A comprehensive new tax incentive program for conservation of energy in both new and existing buildings has been proposed by AIA. In testimony before the Senate committee on finance, William L. Slayton, Hon. AIA, executive vice president of the Institute, presented the proposal as an alternative to the insulation and solar equipment incentives contained in the Energy Conservation and Conversion Act of 1975 (HR 6860). He said that the AIA tax incentive program is proposed as a short-term initiative to complement a long-range national effort to achieve energy efficiency in the built environment.

Under AIA's proposal, owners of commercial buildings could choose either an investment credit or rapid amortization for a percentage of the costs of design, engineering and construction services and equipment needed to achieve an energy-efficient building. Owners of residential buildings would receive a tax deduction for a percentage of the cost of such services.

Whether commercial or residential, both new and existing buildings would have additional tax credit, equivalent to 30 percent of the value of the nonrenewable energy saved over and above the 30 percent minimum energy savings required to qualify for the first incentive.

Slayton said that the proposal would make possible energy savings of up to 4.65 billion barrels of petroleum equivalent in the first five years and, in the same period, a savings to the public in energy costs of \$75 billion. It would stimulate between two and three million jobs in the construction industry and in industries that supply materials. The increase in corporate and individual taxes would probably exceed the cost to the Treasury of providing the tax relief.

Finally, Slayton said, the incentive program could be put into effect at once for the redesign of existing buildings.

Conference to Link Designers, Officials

A major conference, scheduled to take place at Harvard University Graduate School of Design on Oct. 9-10, will introduce public officials and practicing design professionals to each other as they explore the pressing social problems of housing, land use and energy-efficient design. In order to make effective decisions, the professionals need to know what those who write legislation have in mind and how existing programs are administered and evaluated. On the other hand, public officials should be aware of the views of those whose work is so greatly influenced by

legislation. Consequently, representatives of both camps will meet to discuss current and pending public policy issues that are related to the built environment.

The program will open on the evening of Oct. 8 with the annual Gropius lecture, given this year by Sir Richard Llewelyn-Davies of London, England. The opening address on Oct. 9 will be by Reubin Askew, governor of Florida, who has taken a particular interest in his state's land-use policies. Throughout the two days, there will be panel discussions by design professionals and government representatives and workshops on such topics as federal activity in the promotion of better design; the government as architectural client; energy-efficient design; the state of national housing policy and design, and the future of environmental protection legislation.

More information may be obtained from: Paul L. Fishman, Director, Special Education Programs, Harvard University Graduate School of Design, George Gund Hall, 48 Quincy St., Cambridge, Mass. 02138.

Competition Changes

Changes have been made in the Philadelphia stadia adaptation competition program (see July, p. 15): All U.S. registered architects may compete; the winner, however, must be associated with a Philadelphia firm in order to carry out the contract. Deadline for registration is Sept. 15, for entries, Nov. 1.

Deaths

Leonard Dressel, West Severna Park, Md.

Rowe Kennedy, Portland, Ore.

Leon Ralph Levy, Sanibel, Fla.

Bernard Pepinsky, Cincinnati

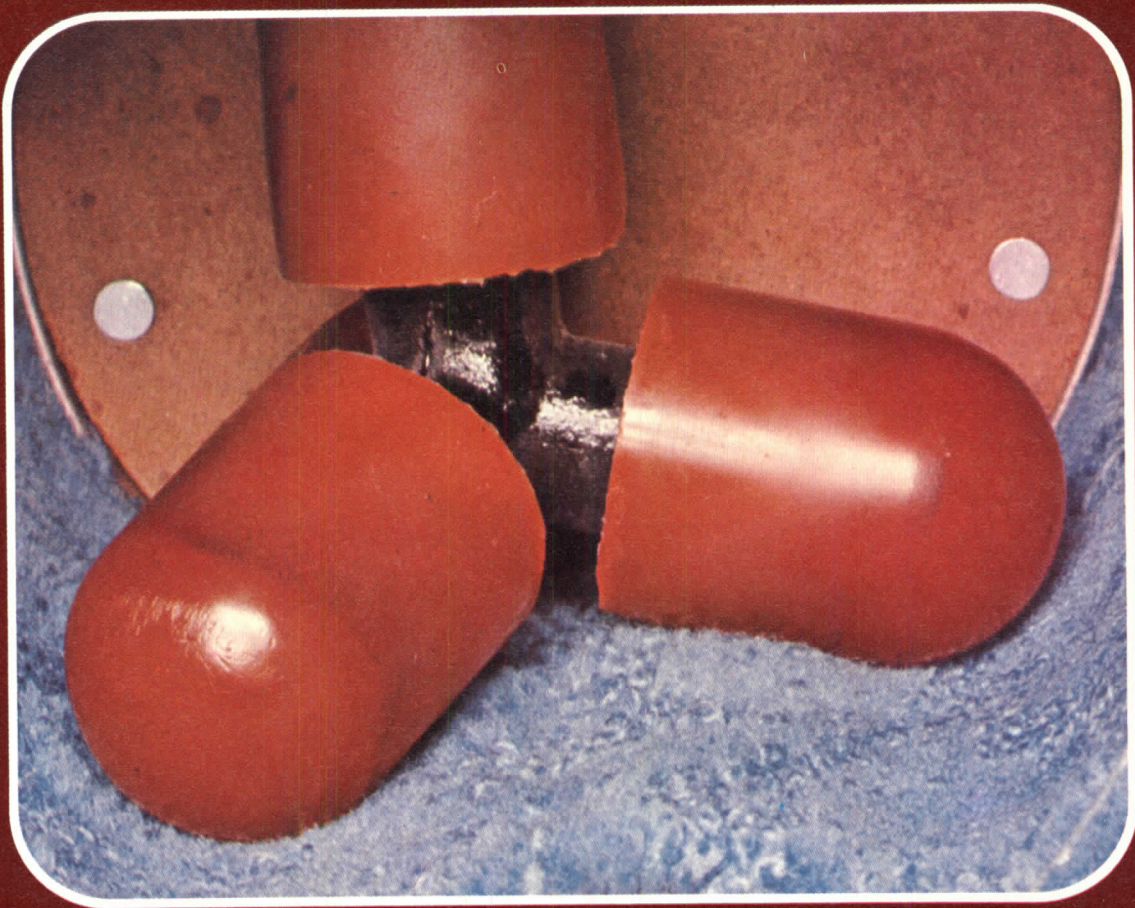
Serge P. Petroff, New York City

Jack C. Quigley, Miami

John Ogden Merrill, FAIA: A partner in the firm of Skidmore, Owings & Merrill from 1939 until his retirement in 1958, Merrill was responsible for the design and construction of Oak Ridge, Tenn.; the U.S. Air Force Academy, Colorado Springs, Colo.; permanent Army and Air Force installations on Okinawa, and the Fort Hamilton Veterans Administration Hospital in Brooklyn, N.Y. In the late 1940s, he directed the revision of the Chicago building code.

Merrill, who died on June 7 at the age of 78, worked with the Chicago firm of Granger & Bollenbacher after graduation from the Massachusetts Institute of Technology in 1921. Before becoming a partner in SOM, he served with the Federal Housing Administration from 1934 to 1939 as chief architect for Midwest states. In 1931-33, he was president of the Chicago chapter/AIA.

continued on page 66



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B. SCHOOL OF NURSING BUILDING, University of California Medical Center, San Francisco, Calif. Architect: George Matsumoto & Associates, San Francisco, Calif. Structural Engineer: Hirsch and Gray, San Francisco, Calif.

C. FREMONT ELEMENTARY SCHOOL, Santa Ana, California. Architect: Allen & Miller Architects, Santa Ana, Calif. Structural Engineer: Martin, Tranbarger & Associates, Newport Beach, Calif.

D. CHRISTIAN SCIENCE CENTER, Boston, Massachusetts. Architect: I.M. Pei & Partners & Araldo Cossutta Associated Architects, New York, N.Y. Structural Engineer: Weiskopf & Pickworth, New York, N.Y.

E. CLINICS EXPANSION & PARKING STRUCTURE, University of California, San Francisco, Calif. Architect and Structural Engineer: Reid & Tarics Associates, San Francisco, Calif.

F. B.L. ENGLAND STATION, SALT WATER NATURAL DRAFT COOLING TOWER, Beesley's Point, New Jersey. Designed & Built by: Hamon Cooling Tower Division, Research-Cottrell, Bound Brook, N.J. Architect/Engineer: United Engineers and Constructors, Philadelphia, Pa.

call for entries

Concrete Reinforcing Steel Institute announces a Call for Entries in the 1975 CRSI Design Awards Program—our second annual Awards event for design professionals.

The Awards will honor creative design achievements utilizing site-cast concrete in which conventional reinforcing bars are the predominant reinforcement.

Categories of Awards—There are no specific categories of eligible structures. All types of site-cast reinforced concrete structures—large and small—will be judged on an equally objective basis.

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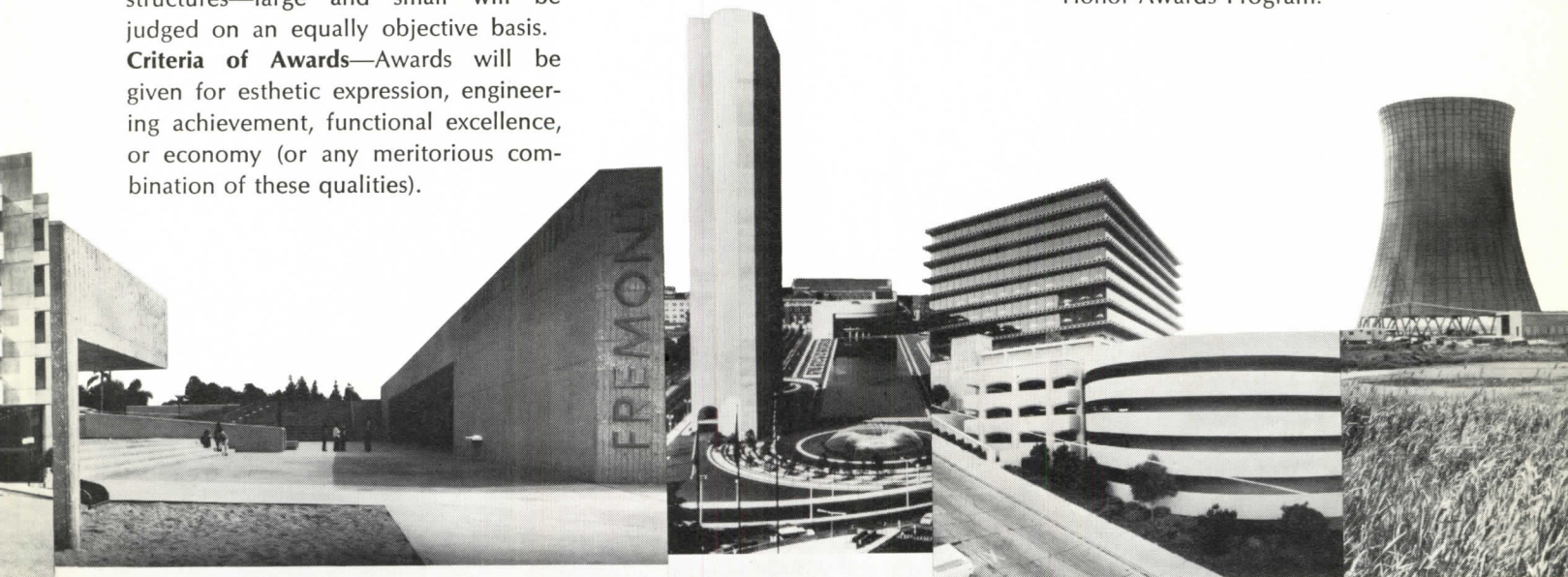
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will be invited to attend the Award presentation ceremony at CRSI's expense.

The Judges—A distinguished panel of recognized professional architects and engineers from throughout the United States has been selected to judge all entries.

Who is Eligible—The 1975 CRSI Design Awards Program is open to all registered architects and engineers (entrants may be individuals or a team). Eligible structures must be located within the continental United States and have been completed since January 1, 1973, or essentially finished by contest deadline date.

AIA Approval—This program has been approved by the American Institute of Architects and is patterned after the AIA Honor Awards Program.



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How to submit entries: Simply mail your entry directly to CRSI. Please follow these specifications in organizing materials for submission:

1. To preserve anonymity during judging, submit the following data typewritten on plain white 8 1/2" x 11" paper.
 - a. Description of type of structure.
 - b. Size of structure in total square footage.
 - c. Brief description of structural framing system. Indicate which portions of system are conventionally reinforced, prestressed or precast concrete.
 - d. Description of any unique design features that deserve special consideration during judging.
 - e. Date structure was completed or scheduled for completion.
2. Include a brief statement of reasons for choosing reinforced concrete.
3. Include at least two 8" x 10" glossy black-and-white photographs and at least two 35mm color slides of completed structure. **Do not** include company or firm identification on photographic material.
4. Give any computations or specifications if they enlarge on design problems and solutions. Include, if considered necessary, copies of plans, perspective drawings, detail drawings, etc.
5. Prepare a **separate** typed sheet (you may use company letterhead) giving proper name of entry; type of structure and location; names, addresses, and phone numbers of architect, engineer, and owner; and date of completion. Seal this sheet in a plain, unmarked envelope and affix to back of entry.
6. Assemble all of the materials in a ring binder (or equivalent) approximately 10" x 12".
7. You may submit more than one entry, but please organize each according to above specifications and submit separately.

Deadline for Entries—All entries must be received no later than **November 15, 1975**, at CRSI headquarters (address below).

Announcement of Winners—To be made as soon after judging as practical.

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Judges' Decision Shall be Final—Upon entering the 1975 CRSI Design Awards Program, each entrant waives his or her right to make a claim against the panel of Judges (or any member thereof), or to make a claim against Concrete Reinforcing Steel Institute (or any member thereof).

CONCRETE REINFORCING STEEL INSTITUTE
180 North LaSalle Street Room 2111-D
Chicago, Illinois 60601
Attention: George F. Leyh

Deadline for entries: November 15, 1975.

mail
entries
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Professional electrical contractors. The electrical energy managers.

One thing you can be sure of in the current energy situation; clients are no longer taking electrical systems for granted. People who pay the bills now are concerned about the potential cost of future operations as well as the cost of installation. That goes for *all* users and specifiers: government, commercial, industrial, and residential. But you probably already know that.

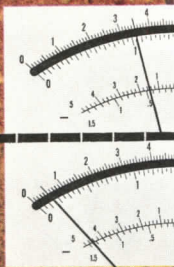
You also know that electrical systems should be designed to operate as efficiently as possible, because when the time comes to install cable, conduit, and fixtures, it might be too late to save energy. That's why it could be helpful to work with a qualified electrical contractor early in the design stages of a project. Planning an efficient electrical system is a lot easier than trouble-shooting a fuel-waster after construction.

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If the surface pile of the carpet wears more than 10% within five years from date of initial installation, Celanese will replace all worn material with equivalent carpeting at absolutely no cost to you.

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Circle 18 on information card

Going On from page 60

Sir Robert Matthew, Hon. FAIA: President of the Royal Institute of British Architects, 1962-64, and of the International Union of Architects, 1961-63, Sir Robert was the recipient of many honors. He was made an honorary fellow of AIA in 1961 and was awarded RIBA's gold medal in 1970 and the Danish Architectural Association's gold medal in 1965. He served as chief architect of the Department of Health, Scotland, and was professor of architecture at the University of Edinburgh. He was architect to the London County Council from 1946-53. At the time of his death on June 21 at the age of 68, he was consultant adviser on building conservation policy to the Secretary of State for Scotland and chairman of the school of the built environment, University of Edinburgh.

Saul Horowitz Jr.: President of the Associated General Contractors of America in 1974, Horowitz was active in the construction industry at all levels. For his leadership in the formation of the National Construction Council, he was named both *Engineering News-Record's* and the Construction Writers Association's "Man-of-the-Year." Horowitz, who was 50 years old on May 5, was killed in the crash of an Eastern Airlines plane near New York City on June 24. He was returning from New Orleans where he had addressed the annual convention of the Construction Specifications Institute. Chairman of the HRH Construction Co., in New York City, he guided the construction of many Manhattan structures, including the Whitney Museum of American Art, the United Nations Plaza, the Waterside housing development on East River and Columbia University's law school building. Former mayor of Scarsdale, N.Y., he held numerous leadership positions in civic, philanthropic, political and business organizations.

Joseph A. D'Amelio, AIA: Vice president of development, Sweet's Division, McGraw-Hill Information Systems Co., D'Amelio was responsible for creating and introducing new Sweet's products and services. Before joining the company in 1965 as manager of product planning, he was assistant professor of architecture at Cooper Union. Earlier, he was an architect in private practice and a designer in the New York City offices of Skidmore, Owings & Merrill; Gruzen & Associates, and Edward Durrell Stone, FAIA. He was the recipient of many design awards and citations and author and illustrator of *Perspective Drawing Handbook*. He was killed, at the age of 43, in the crash of the jetliner approaching Kennedy International Airport in New York on June 24. He was returning from the convention of the Construction Specifications Institute.

Newslines

Jean Labatut, FAIA, emeritus professor of architecture, Princeton University, and architect of Havana's José Martí Monument and Plaza, was awarded an honorary doctorate of humanities degree by Princeton at the university's 1975 commencement ceremonies.

Employment remains good for civil engineers, according to a recent survey conducted by the American Society of Civil Engineers. Collectively, 64 presidents or appointed representatives of ASCE's local units could identify only a total of 29 unemployed ASCE members. Among more than 240 employers polled, at least 71 expect to add experienced civil engineers to their staffs in the next six months. At least 110 of the 240 employers plan to hire at least one civil engineering university graduate from the 1975 class. Numbers of new employees will be small, but one firm expects to hire 27 engineers.

"**Solar Man of the Year**" was the title conferred upon Rep. Mike McCormack (D-Wash.) by the Solar Energy Association recently. The prime author of the National Solar Heating and Cooling Demonstration Act, McCormack was praised for his "legislative leadership in the promotion of solar as an alternate energy source."

Lloyd M. Hendrick, AIA, former president of the Massachusetts State Association of Architects/AIA, was honored recently by the town of Bourne, Mass., for his civic contributions. He was cited for "his many years of voluntary service" to the community.

Philip L. Dangerfield of Brookline, Mass., who has studied architecture at the University of Illinois and the Harvard University Graduate School of Design, has been named winner of the 1975 Rotch Travelling Scholarship. Alternate is Duane Kell, who has studied architecture at the University of Minnesota and Massachusetts Institute of Technology.

Golemon & Rolfe, a Houston-based architectural firm (see Jan., p. 47), won an award in the 1975 worldwide competition of Affiliated Advertising Agencies International for its corporate brochure. The brochure is actually four brochures in one on the firm's various aspects and can be used as a unit or in various combinations to suit a particular situation.

Future condominium growth is forecast by the Department of Housing and Urban Development. Norris Evans, senior economist for HUD's condominium task force, says that condominiums—now about 3 percent of the total housing stock—will continue to grow to about 15 percent of

the inventory. HUD has been conducting a study of condominiums, authorized by the 1974 housing act, to determine if there is any need for legislation to correct any alleged abuses.

The International Union of Architects has elected Jai Rattan Bhalla of India as its president.

The National Association of Women in Construction has introduced a no-charge job placement service for its members. Firms that have current or projected openings or NAWC members who want a new job may obtain information from NAWC, 2800 W. Lancaster Ave., Fort Worth, Tex. 76107.

Hugh A. Stubbins, FAIA, was the recipient of the gold medal of distinction in design awarded by Tau Sigma Delta, national honor fraternity for architecture and the allied arts. The award was presented at the AIA convention in May. One award is made each year by the fraternity to honor an outstanding designer.

William J. Gaffney, a 1974 graduate of Carnegie-Mellon University's department of architecture, has received a 1975 Institute of International Education fellowship. Currently on the staff of Hartman-Cox in Washington, D.C., he will study in Paris.

"**Legal Briefs for Architects, Engineers and Contractors**" is the title of a new twice-monthly newsletter published by McGraw-Hill Publications Co. Edited by Jeanne M. Davern, Hon. AIA, the newsletter's legal editorial adviser is Arthur T. Kornblut, AIA, former AIA administrator for professional practice. The subscription rate is \$72 per year. Contact: McGraw-Hill Publications Co., 1221 Avenue of the Americas, New York, N.Y. 10020.

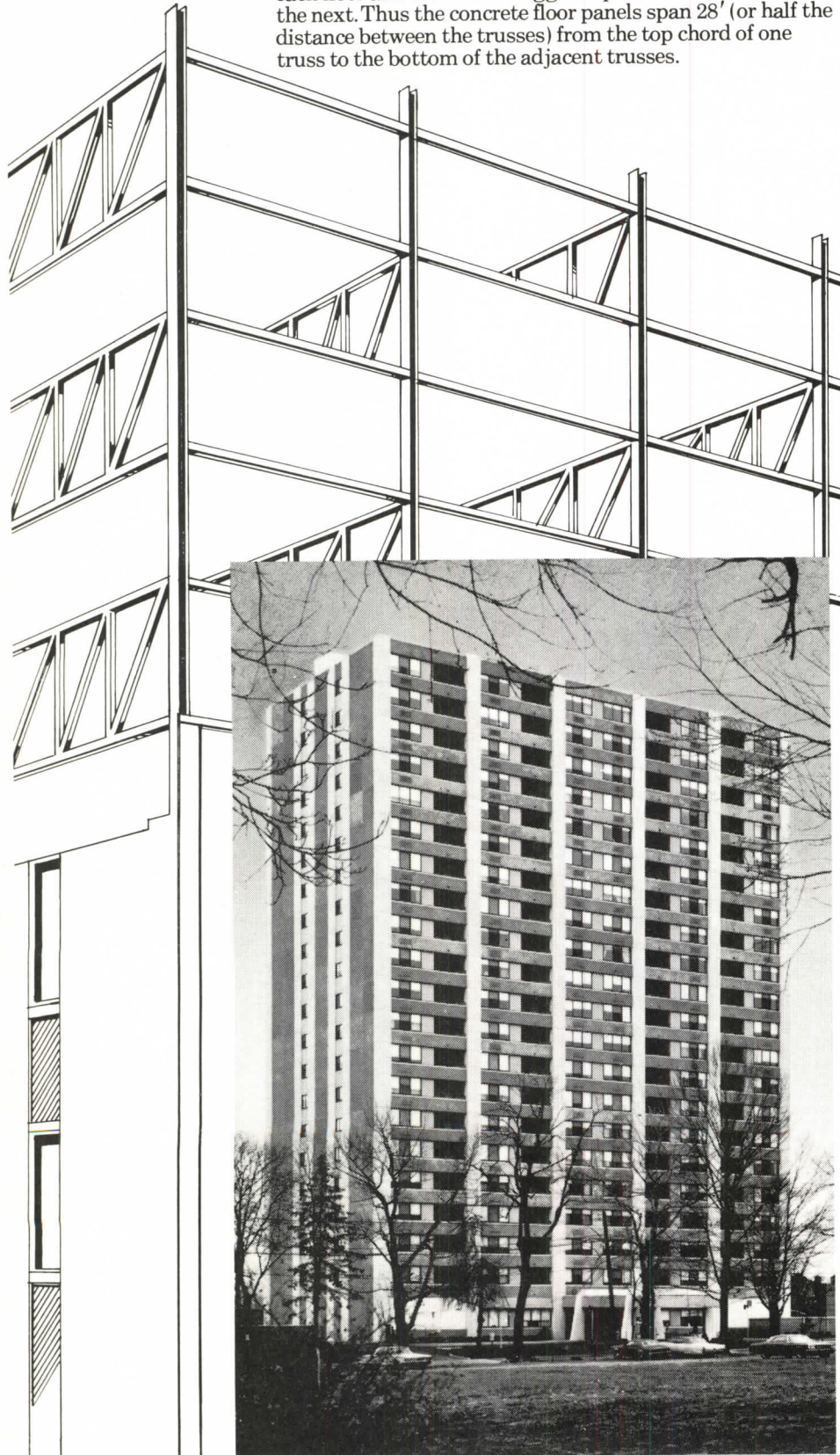
John Lautner Jr., FAIA, of Los Angeles, has been awarded one of the Northern Michigan University's distinguished alumni awards. He has designed hundreds of schools, commercial structures and residences, the most publicized being Bob Hope's home in Palm Springs, Calif.

The Construction Specification Institute has re-elected Larry C. Dean, who is associated with the Atlanta A/E firm of Heery & Heery, as its president. President-elect is Philip J. Todisco of Boston, who will assume the presidency in July 1976.

Two women have won highest honors at the New York City College school of architecture. Misia Leonard has been awarded the Henry Adams medal as first rank student; Ethel Goodstein, as second rank student, won the certificate of AIA. □

This 21-story tower proves it again: Staggered Truss Steel construction costs less than other framing systems.

STEEL TRUSSES, one story high and 68'8" long, span the building transversely. They are spaced 56' apart on each floor and occur in a staggered pattern from one floor to the next. Thus the concrete floor panels span 28' (or half the distance between the trusses) from the top chord of one truss to the bottom of the adjacent trusses.



The Ivanhoe Apartments in Hackensack, N.J. were designed to provide luxury living at comparatively moderate rents.

One reason for the savings is the system of steel trusses that supports this high-rise building — an ingenious adaptation of the system developed by M.I.T. under a U.S. Steel research grant. It actually provided a more economical frame than flat plate concrete. On an overall basis, the designers calculated savings of about \$1.50 per square foot compared with an equivalent concrete building in the same area of Greater New York.

Staggered truss steel construction requires fewer footings than flat plate concrete. There are fewer columns in the 3-story garage beneath the tower — which allow more flexible parking — and no interior columns in the tower itself. Another major saving came from lower on-site labor costs, due to fast erection of the shop-fabricated steel and architectural elements.

We'll be glad to send you a complete structural report (ADUSS 27-6000-01) on the Ivanhoe Apartments, as well as a booklet on staggered truss steel design. Write U.S. Steel, P.O. Box 86 (C437), Pittsburgh, Pa. 15230.



United States Steel

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Architect: Eugene A. DeMartin, Lyndhurst, New Jersey.

Structural Engineers: Jesse Schwartz & Gabriel Senes, Upper Saddle River, New Jersey.

Erectors: Skipcon Building Systems, Inc., an affiliate of Schrenko Steel Corp., Upper Saddle River, New Jersey.

Fabricator: Frank M. Weaver & Co., Inc., Lansdale, Pennsylvania.

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 Manager, Production and Business
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