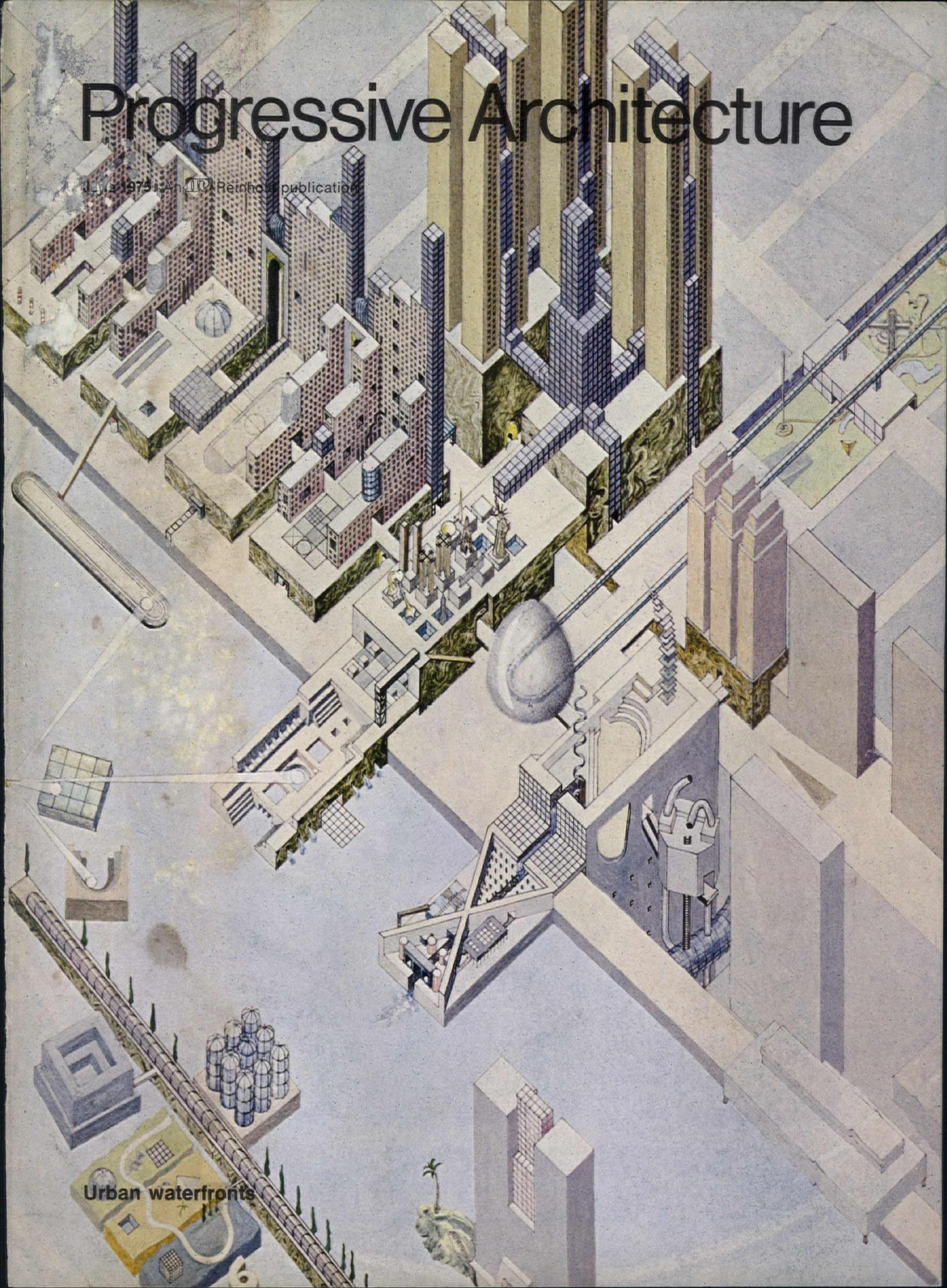


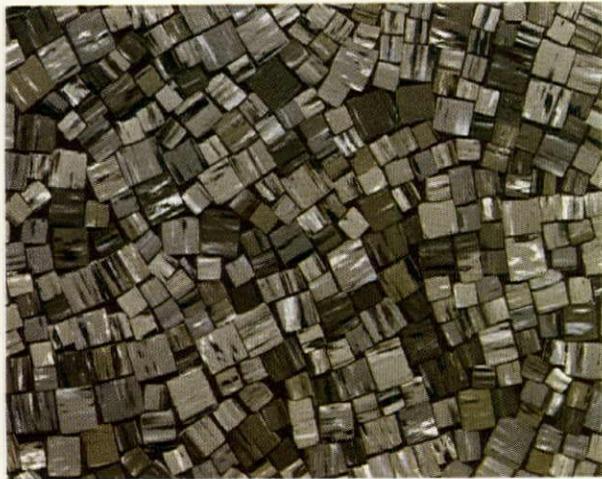
# Progressive Architecture

July 1975 - An AIAA Reinhold publication



Urban waterfronts

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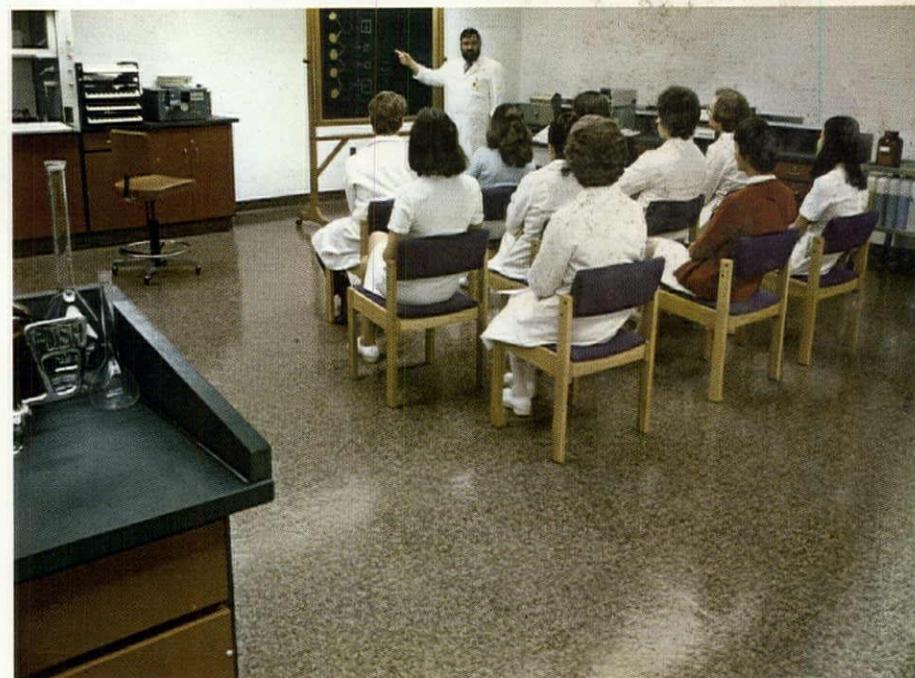
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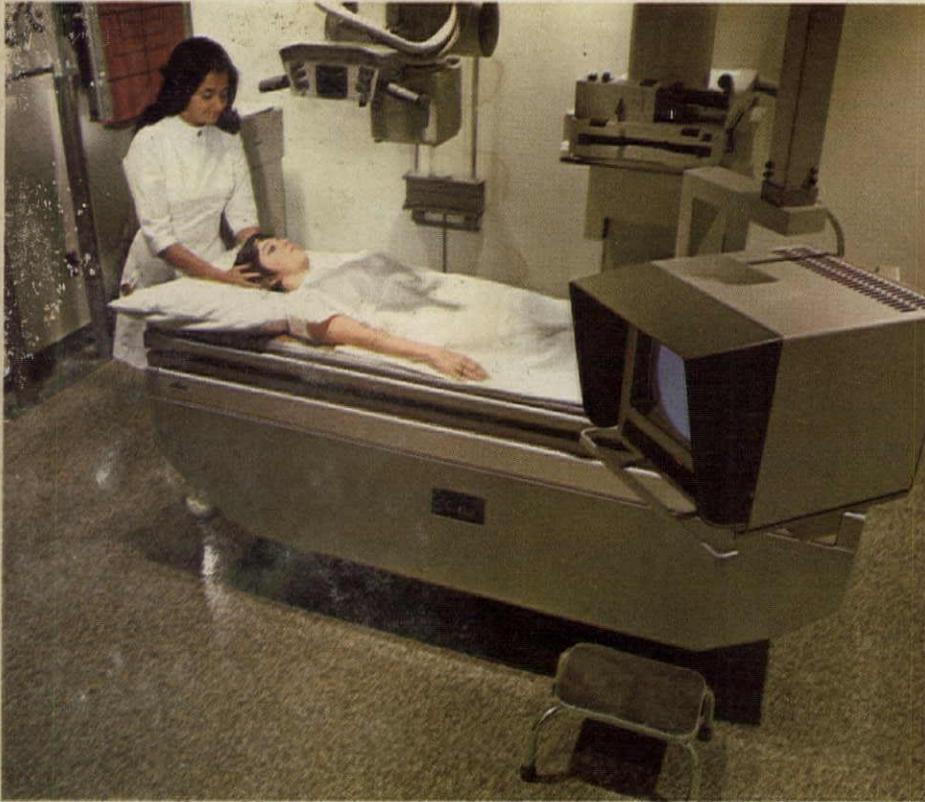
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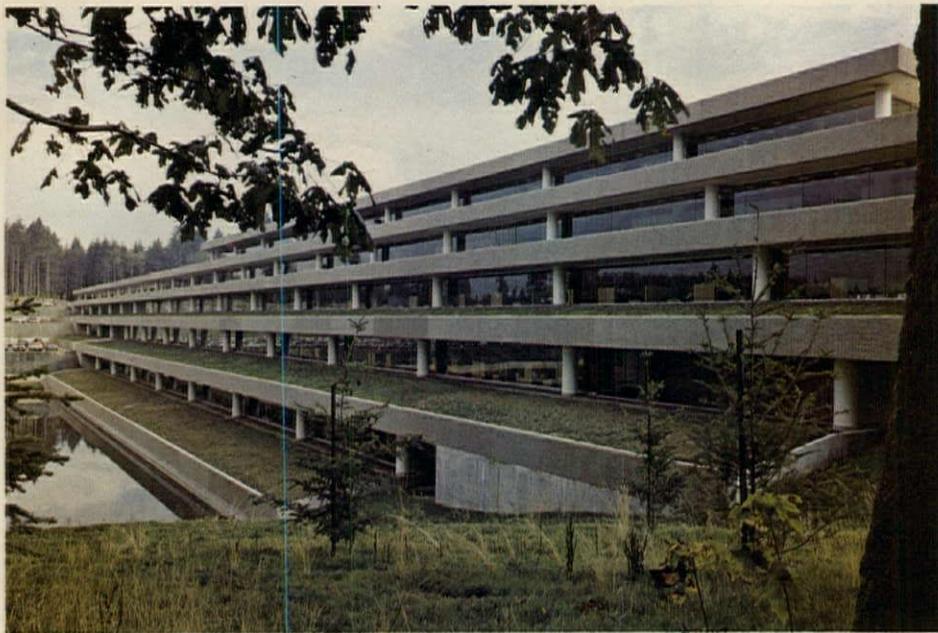


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June 1975

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**Urban waterfronts**

**Design and planning**

**Editorial: Recovery architecture**

**Introduction**

A sampling of waterfronts which are under construction or in the design stages and a few suggestions concerning waterfront planning.

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**A fear of filling?**

Filling and decking Manhattan's waterfront creates new land. Planners meet development pressures by using special district zoning.

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Citizens and developers are at cross-purposes over Georgetown's waterfront. Which side is winning depends on your perspective.

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**Two by four**

Two offices by different architects seem to have many similarities when, in fact, they are quite dissimilar in spatial conception.

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**The immersion of Venice**

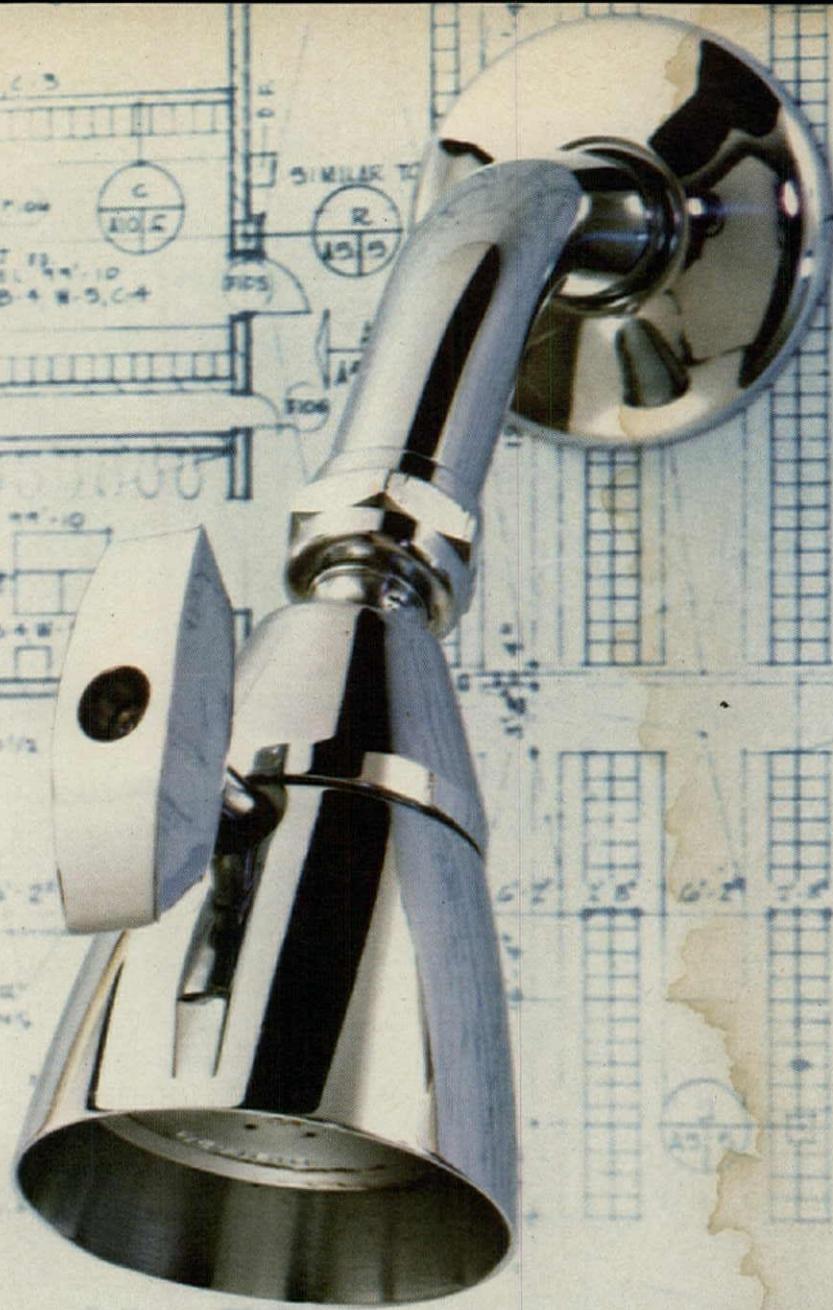
The history of Venice is a chronology of man's battle with the sea, his defeats and his triumphs over it through his inventiveness.

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**Cover:** "Columbus Egg Center" conceptual drawing for New York's rehabilitation of metropolitan life by Zoe and Elia Zenghli for Office for Metropolitan Architecture (New York-London-Berlin).



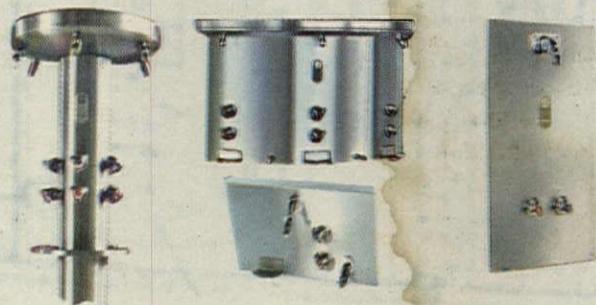
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# Recovery architecture

June 1975

With luck, you will be reading this at the bottom of the Great Recession. Economic recovery has been forecast for the third quarter of 1975—or maybe it will come in the fourth quarter.

But what will recovery mean for architects? It will not mean a return of the confident clients and the abundant resources of the 1960s.

Over the past quarter century, most of us had come to regard prosperity as virtually inevitable. (It seems no coincidence that those who entered the professional work force before 1929 had reached retirement age by 1973.) The meaning of the word "recession," which came into common use during that period, embodies the outlook of the period: "a moderate and temporary decline in economic activity that occurs during a period of otherwise increasing prosperity, often in a recovery period following a depression" (American Heritage Dictionary). That last phrase in the definition could be overlooked, since depressions could no longer happen.

The recessions of the 1950s and 1960s touched us all in one way or another, but they never undermined the faith of the client world in the efficacy of building. Ambitious new construction was taken as an indicator of economic vitality; highly personal architectural expressions were signs of cultural grace.

We are going to come out of this current so-called recession facing a different set of values. Clients are going to be cautious, more intent on proving their prudence than their daring. In the area of building, this economic caution will coincide with widespread doubts about what building can accomplish.

We are going to be suffering from the backlash of a 25-year period when physical development was over-rated as a cure-all. Rebuilding the cities was supposed to make them attractive and safe; building suburban developments

and the highways to serve them was to provide a better life for the majority; building subsidized housing was to uplift the minority that stayed behind. All of this effort fell sadly short of expectations: in the cities, we did little more than borrow time; in the suburbs, we created the next round of social and environmental headaches.

These outlays for construction can be all too easily viewed now as part of a broader pattern of reckless consumption—of vast resources squandered on automobiles, munitions, appliances, excess packaging, etc., most of which disappointed us or actually made matters worse. Today the real benefits of programs such as urban renewal are underestimated, even among architects. And the public has as little faith in its architects and planners as in its generals and politicians.

Architects will have to reconsider how they serve society's needs. For the moment, naturally, many are seeking alternative sources of commissions—in planning, in research, in launch-it-yourself rehabilitation programs, in building a new Middle East. But this is also a time to reconsider how buildings are designed and how their success is measured.

Some clients may continue to want the familiar solutions of the 1960s, but more of them are going to be skeptical. They're going to want convincing evidence that what they build will satisfy the occupants, that it will be economical both to build and to maintain. They're going to know that minimal aesthetics has little popular appeal, that precast tracery and structural gymnastics have lost some of their charisma.

We can by no means dismiss the positive lessons of the past 25 years, but the need is apparent for trying out plausible alternatives. Architects who are willing to re-examine their preconceptions can regain—or retain—the confidence of their public.

*John Morris Dittus*



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# Views

## Revival of historical controversy

Can it be that 1/2 of all the world's noteworthy architecture in 1975 can be crowned by some eclectic villas, a couple of convoluted kitchens, and a kinky bedroom as your April number would indicate? Or is the recession intellectual as well as economic? C'mon P/A; you can do better than that.

*Ralph Bennett, Architect  
Jamaica Plain, Mass.*

My reaction to the work of Moore, etc. is my house (see photo). My admiration for these people runs deep, but not as deep as the real tinsel. It's interesting, but not as interesting as five minutes of Marilyn Monroe. May I recall the words of Robert Venturi in *Learning from Las Vegas*, "It is too architectural."

*Julian Weiss, Architect  
Boalsburg, Pa.*

Charlie Moore's article in the April P/A is the most absurdly entertaining, fun thing I've read in a long time. Gosh, if they only published snap shots, he could write for *The New Yorker*.

*Charles S. Sink, AIA  
Charles S. Sink & Assoc., Architects  
Denver, Colo.*

The April issue on historical allusions was interesting, but its concern with an environmental quality, no matter how correct, palls beside ecological imperatives associated with the continued survival of today's society. The sublime qualities of a space can never be apparent to an occupant who must be concerned with staying warm in his

cold house or to the occupant who can't see it because he can't afford the electricity.

As an architecture student having just completed five years of undergraduate education, I find little emphasis on ecological design in architectural education and even less in architectural publications. With nobody promising a decrease in utility rates and with the price of fossil fuel energy going up in the next decade as its scarcity increases, I feel the thrust must be on ways to make it possible for design to take advantage of natural on-site energy systems.

You are an architectural publication concerned with the progressive viewpoint. I feel you should take a position of leadership in educating this profession to new and advanced technologies which will make it possible for the owner to afford to live in his pragmatic, syntactic, semantic space.

*David L. May Jr.*

*Richmond, Va.*

[See May P/A and this issue—Editors]

The creation of symbols representative of a meaning to existence is the great task of the arts in any culture, including our own. The distance that modern architecture is from accepting this task is demonstrated in your issue, Historical allusions. With such a wealth of symbolic imagery before us in the works of Jung, Nietzsche, Borges, Ernst, Joyce, Lawrence, Kafka, Kazantzakis, and others, the most celebrated architects chatter about "styles" as though this wealth did not exist to build upon, as though historical prototypes (Spanish Colonial, Shingle Style, Folly Farm, Sant'Ivo, Gore House) or modern stereotypes (Hollywood Fantasy, North Penn Visiting Nurses Association, Grant House, Radio City Music Hall) could possibly be worthy symbols of the modern individual or his struggle to reach a new plane of existence.

Jung defines symbol as "a word or image that implies something more than its obvious and immediate meaning" and which has "a wider, unconscious aspect that is never precisely defined or explained . . . as the mind explores the symbol, it is led to ideas that lie beyond the grasp of reason." In this sense, Moore's Burns house has nothing to do with symbols, any more than it does with Proust—the mere

dropping of names does not make it so. It is a survey of stylish, fashionable objects whose juxtapositions fail to evoke a world view worthy of the age, an utterly inconsequential work, cozily bourgeois in mentality, devoid of imaginative power or vision.

The Lang house, however, does have a cautious lyricism, even if it fails to achieve a sense of dramatic ritual that only the highest art can lend to "place." In both houses, the allusions come to nothing, since the architects did not perceive the material elements of their art as the ritual metaphors—the symbols of a deeper existence—that they are. The evocation of this existence, the potential of matter to transcend itself and suggest a unity of the spiritual and material aspects of being could have been achieved through dramatic contrasts that were overlooked or ignored.

Are these houses really "places that contain the diverse and contradictory experiences which we, as human beings, embody" (Stern), and an "absorbing and enjoying [of] the influences available to us" (Moore)? I think not. To look at these tidy, well-thought-out and arranged places—in which each object is selected with uniform care—one would think that their inhabitants were innocuously one-dimensional beings, with completely predictable interests and concerns (according to their stations in society), persons "cultivated" by travel, literature, music, a genteel leisure, and, of course, architecture—individuals warm in heart, humane and humanistic, yet firm enough in their relations with others, disciplined enough in relation to themselves to acquire and hold their rank and privilege (all of which may or may not be true)—but individuals lacking in anger and anxiety, in torment and hatred, fear and puzzlement, in desire and passions of the blood, in questings, failures, doubt, loneliness, and despair—in short, all of the dark, Dionysian aspects of the soul that complete the truly whole person and give meaning to those aspects illuminated by the Apollonian qualities of reason and moderation, contemplation and control.

Where, in these polished reflections, are symbols of these darker, more savage and primordial aspects of human existence that are the concerns of the [continued on page 10]

Views continued from page 9

artist-architect as much as those of the light? Do their owners lack them, or did the architects fail to perceive them, in their striving to create polite, flattering, and acceptable imagery? Did these honorable men turn from the sight of the fully revealed modern countenance which—half savage, half civilized—is mirrored (and abundantly “available to us”) in other works of art and science, confronting them at every turn, in cities, in their universities, in their clients, and lastly, most inescapably, in themselves?

If they must allude to architectural history, then why to works of Borromini, Luytens, and Bulfinch, whose symbols represent meanings lost to us now, created to uphold (and to flatter) fixed and absolute concepts of the individual and the world that have long since been stripped away and discarded by modern self-knowledge? Why not “absorb the influences” of the Cretan, Hellenistic and Etruscan prototypes, the pale temples, palaces, and tombs embellished with graffiti

and passionate, deeply hued image-symbols that reflect an unrepressed awareness of the conflicts and contradictions of self that so closely resembles our own? And beyond the derivative, when will architecture come into its own as a potent instrument of exploring the modern soul and formulating symbols of its struggle to achieve what Kazantzakis called “a new balance—a new Classical Age—on a higher plane”?

In earlier epochs, architecture has stood on equal terms with seminal works in music, literature, painting, and sculpture. How do the projects presented in your issue—particularly the two houses claimed by their authors to be aesthetically and historically important—stand up to *Ulysses*, *The Odysseys: A Modern Sequel*, *The Stranger* as symbols of modern existence? This is a question that will surely be asked by the future historians to which Mr. Moore refers.

Lebbeus Woods  
*Urbana, III.*

[The purpose of our April features on historical allusions, alluded to in my

April Editorial, can be rephrased more succinctly as follows:

1 We wanted to bury for good the notion that modern architecture can or should banish symbolism, and the notion that *abstract* space and form ought to satisfy man's needs.

2 We wanted to question whether historical models such as Italian Baroque or Victorian Gothic were any less appropriate to contemporary needs than the widely accepted Early Corbu and Late Corbu.

We expected outrage letters, and we got them. We could not have anticipated an essay as perceptive as Mr. Woods's, and we are grateful for it. I hinted at the issue he takes up in the April Editorial, stating my belief “that symbolic content must evolve out of our own times and needs; it cannot be borrowed arbitrarily.” Mr. Woods has pursued this point with an authority and an eloquence that few could equal.—JMD]

#### Credit due

The photo of the Seagram Building (P/A, Apr. 1975, p 108) was taken by Alexandre Georges, not Ezra Stoller.

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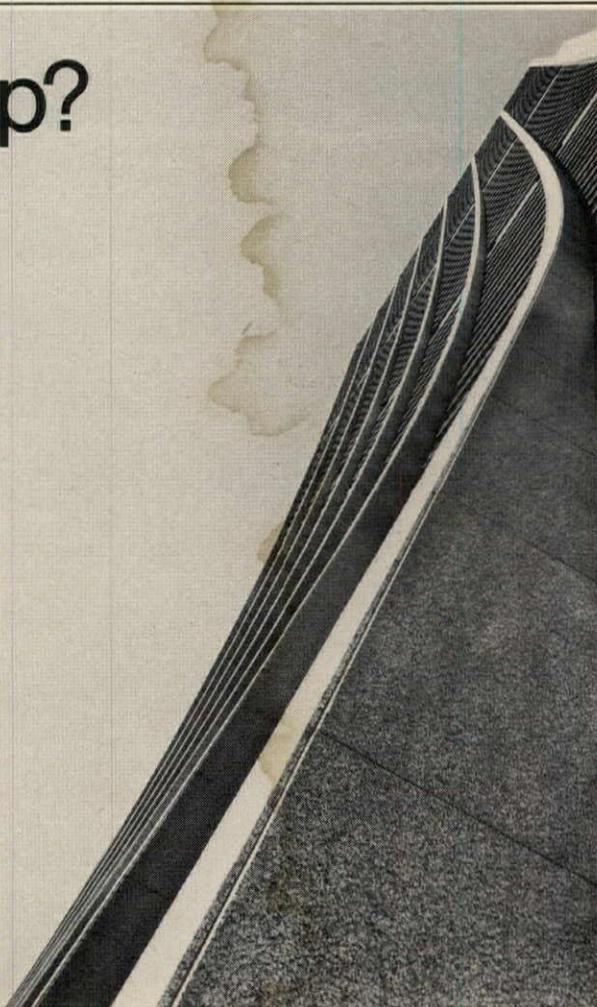
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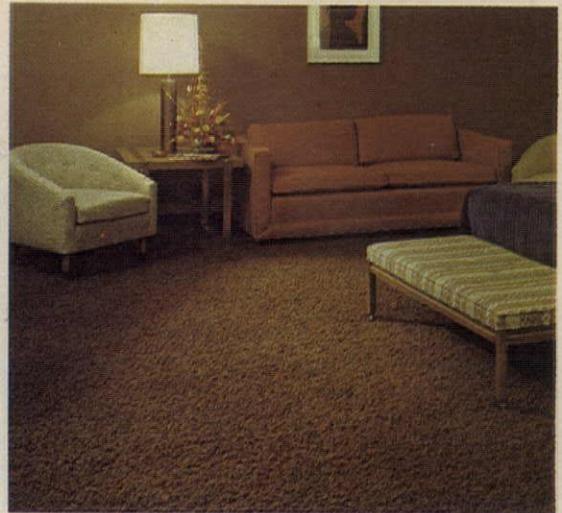
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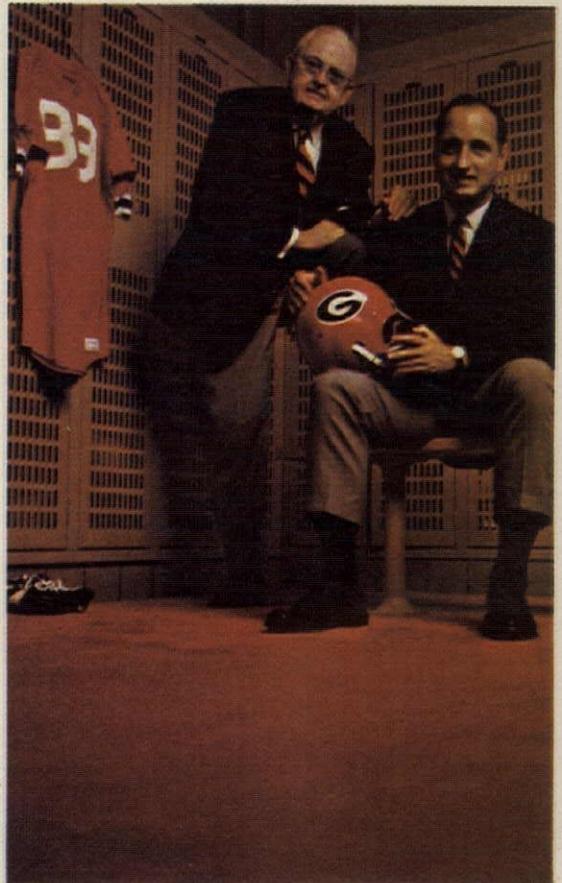
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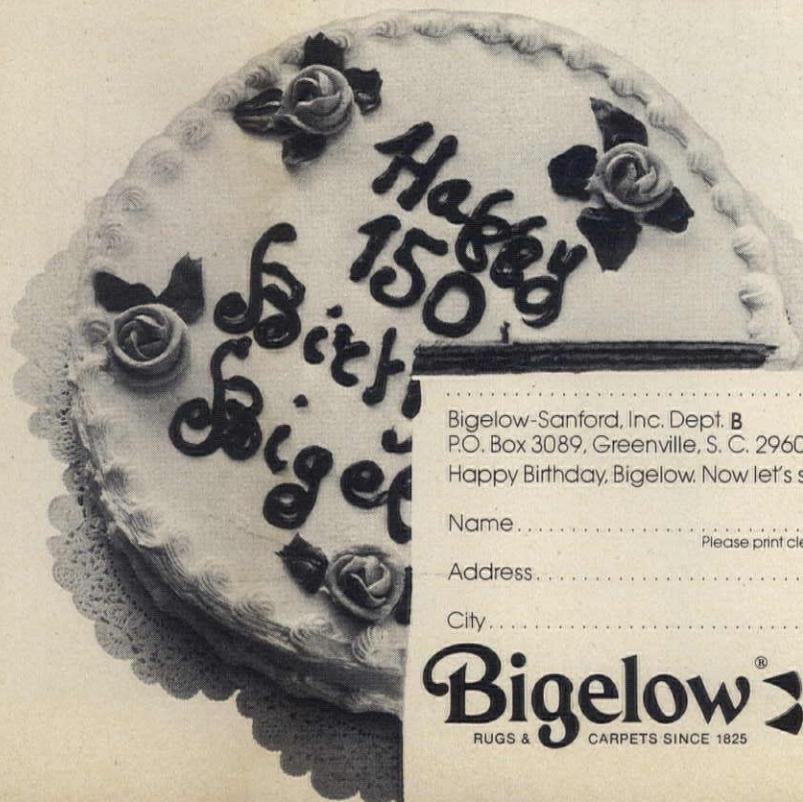
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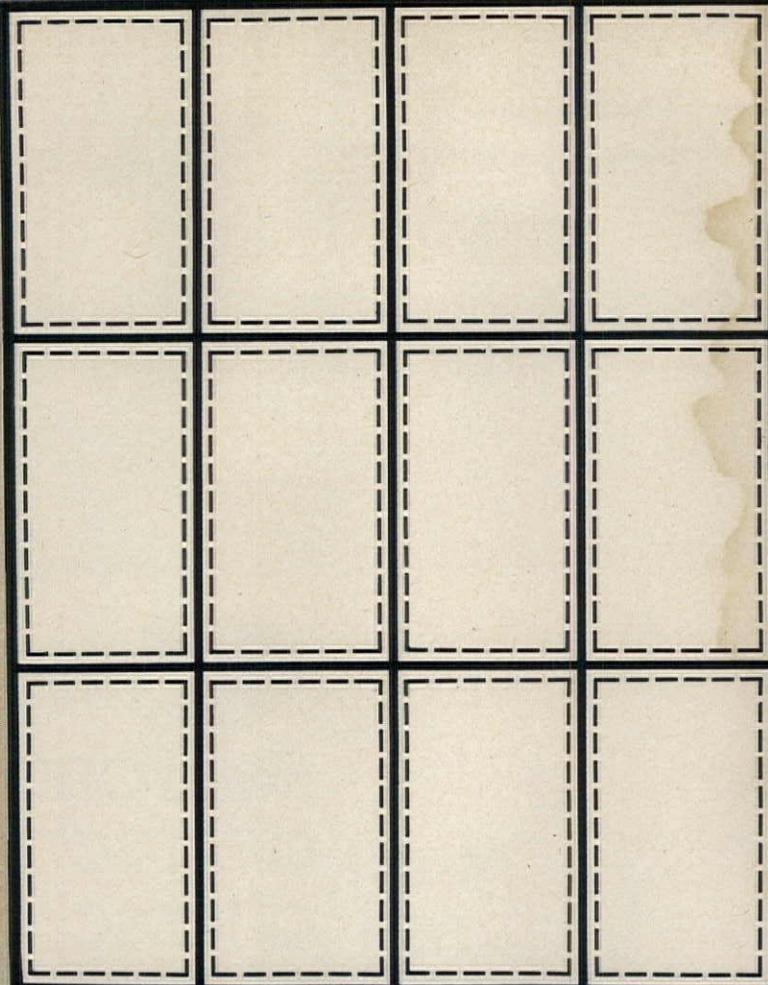
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## News report

### Awareness, hard times AIA convention themes

To an assembly of 3407 architects—slightly fewer than last year—William (Chick) Marshall of Norfolk, Va., president of the American Institute of Architects, announced that the sub-theme of the convention would be the Institute's response to economic conditions. The main theme was "Spaces for the Species" to which biophysicist Heinz von Foerster contributed provocative remarks on perception and ethics.

At one of the early business meetings, first vice president and president-elect Louis de Moll of Philadelphia stressed the strengthening of "components" or local chapters. In looking ahead to a grave economic year, de Moll said that by limiting the growth of AIA's national office, strength would be channeled into the component groups.

The convention was unable to resolve differences on two vital subjects: employer-employee relationships and control of the national Institute budget. A by-law change on architect responsibilities to employees, drawn up and introduced on the instruction of last year's convention, was defeated.

Several resolutions on the programs and budget at national level (vs. local and state) indicated wide-spread controversy. Demands in three resolutions for cuts in headquarters' staff, reduction in dues, chapter approval of national programs, etc., were eventually condensed into one substitute resolution, approved by the delegates, establishing a task force on the subject.

Welcoming the AIA, Atlanta Mayor Maynard Jackson, in a speech



L to r: Atlanta Mayor Jackson, AIA Pres. Marshall, keynote speaker Heinz von Foerster.

threaded with philosophical observations, said, "You are here because you are about the business of keeping our lives from becoming absurd." In a similar philosophical vein, von Foerster, professor emeritus at the University of Illinois, talked about perception as an integral element of the creative process. "The world as we perceive it is our invention," he declared, showing slides of cells and diagrams to document his thesis.

Architects need beware of subjectivity. Objectivity, von Foerster said, is nonsense, since every one evaluates outside data in terms of what's inside himself. But, the opposite of objectivity isn't subjectivity. It's ethics. And that's what architects must develop as a creative resource. Ethics to von Foerster is dialogue—a connotative language

(as distinguished from denotative), a commitment.

Architecture is a "metalanguage," a form of "talking about talking." Bees, for instance, communicate facts to each other but can't convey concepts, such as whether or not to stop building honeycombs hexagonally. Architects, with their connotative language, can.

Physiologically, the archtypical creative process, "Let there be light," would be interpreted "Let there be electromagnetic waves." But ethically, it would be "Let there be vision, and there was light."

### ACSA debates by-law changes

At its annual meeting, chaired by President Donald Schlegel of Albuquerque,



Showcase of design ideas.

N.M., the Association of Collegiate Schools of Architecture voted that possession of a professional degree in architecture should not be the only route to registration, as required by some states and advocated by many members of the National Council of Architectural Registration Boards. The ACSA also resolved not to approve the proposed new by-laws submitted by the National Architectural Accrediting Board which, in the words of the resolution, were "to remove from the individual schools the right to define what constitutes appropriate academic development." Later the ACSA board approved the by-laws with modifications. [Ralph Warburton]

## Reynolds awards

Gustav Peichl, the second consecutive winner from Vienna, Austria, received the \$25,000 Reynolds Metals Company Memorial Award for using aluminum in architecture. Peichl won for the Austrian Broadcasting Corporation's radio and television center in Salzburg. He also received an original aluminum sculpture by Beverly Pepper.

Winners of the student award were six from the University of Tennessee who collaborated on a tensile structure using aluminum screen wire. A prototype of this concept, a pavilion, is under construction in Managua, Nicaragua, where the students also have organized a university-sponsored program of architectural help for the earthquake-troubled city. Recipients are

Laurance Dickie, Peter Nielsen, Harold Ruck, Eric Stein, Joseph Barker, and David Wilson, who worked under direction of Dr. Joseph Kersavage.

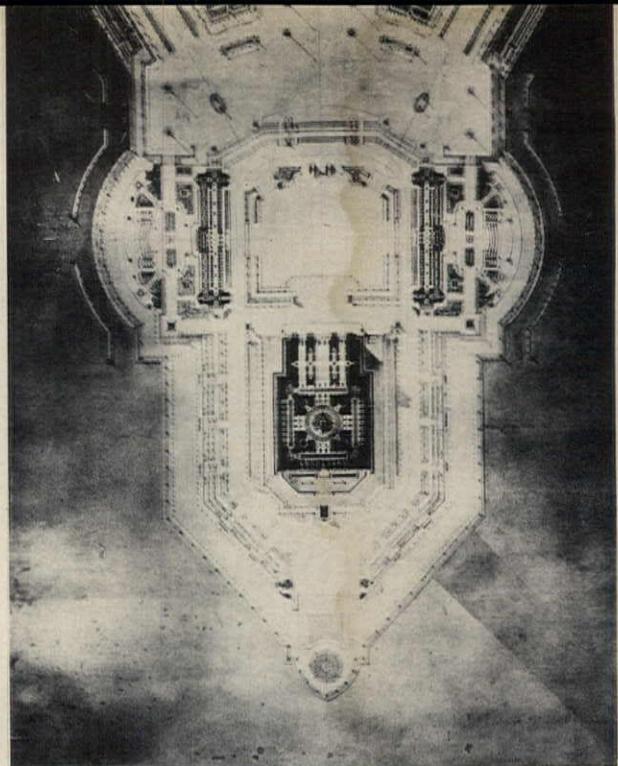
## Beaux-Arts show opens in Atlanta

A collection of 40 drawings from the Paris Prize competition of 1906-1947, the first major exhibition in the United States of Beaux-Arts architecture, opened at the High Museum of Art in honor of the AIA convention in Atlanta. In it are works submitted by the young Louis Skidmore and Gordon Bunshaft for the prize: two years of study in Paris. The drawings, some 10 ft long, were furnished by the National Institute of Architectural Education, New York.

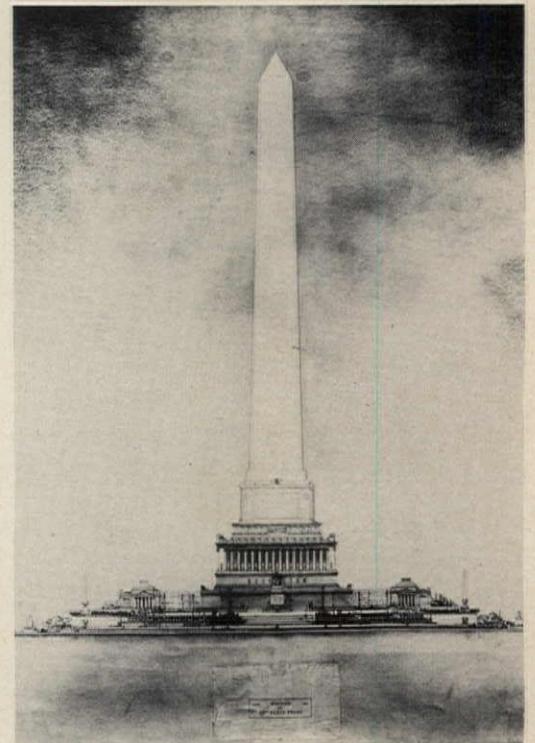
Tim Bookout, an associate professor of interior design at Georgia State University, organized the show together with Richard Moore, an art historian at the university, who wrote the introduction and a 28-page discussion of the Beaux-Arts method. Dennis Darling photographed the works for a limited edition of 100 portfolios.

The Paris Prize was an American Competition to award a scholarship for study at the Ecole des Beaux-Arts. The Beaux-Arts method, which may supplant Art Deco as current popular nostalgia, was a discipline of analysis revolving around a geometric plan conceived as pure design also rendered in elevation without perspective and in section.

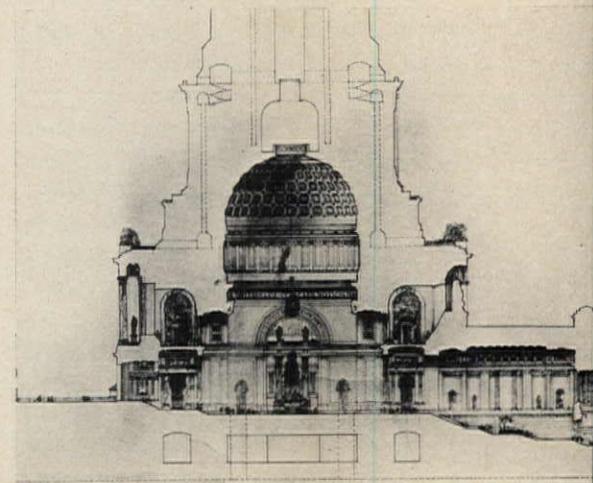
The show will remain at the High Museum through June 18.



Monumental treatment of End of Manhattan Island (plan) by G. M. Simon, Phila. Atelier 1913, 10th Paris Prize.

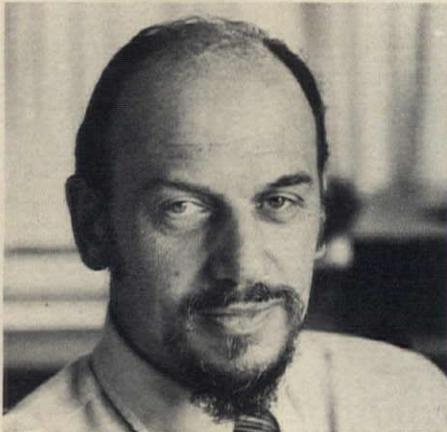


In elevation (above) and section (below). Photos: Dennis Darling





Lewis Davis



Samuel Brody

## Davis, Brody receive Brunner Prize

Lewis Davis and Samuel Brody of the firm Davis, Brody & Associates, New York, are the 1975 recipients of the Brunner Prize, awarded by the National Institute of Arts & Letters. Earlier this year their firm was selected by the American Institute of Architects for the annual Architectural Firm Award.

The prestigious Brunner Prize, not often conferred on more than one individual at a time, was presented to the two men "for their successful efforts to improve low income housing—this being the most important contribution that can be made in the field of architecture today."

The Institute committee which selects the recipient is composed of architects, who remain anonymous. The first to receive the prize, instituted in 1955, was Gordon Bunshaft. Last year's recipients were the three principals of the firm Hardy, Holzman, Pfeiffer, New York City.

An exhibition of Institute prize winners' work, including that of Davis and Brody, will be on view at the Institute through June 15, Audubon Terrace, New York, between 155 and 156 sts.

## A tie among four in UDC competition

For a while the possibility of going ahead with its planned housing competition for Roosevelt Island was clouded by financial troubles, but at last the New York State Urban Development Corporation, with some change of the ground rules, held the judging of 250 entries. Four winners without rank were selected as the seven judges resolved their "considerable divergencies of opinion" by submitting to majority vote.

The four winners, who share equally \$22,500 in prize money, are the firm of Stern & Hagmann, New York; Kyu Sung Woo, also of New York; Robert L. Amico and Robert Brandon of Champaign, Ill.; and Sam Davis and the ELS Design Group of Berkeley, Calif.

Jury chairman José Luis Sert of Cambridge, one of several architects who designed housing for the Island's first development stage recently completed, said the entries represented "remarkable quality of work and care . . . and a great number had solved the many problems such as views, exposure, and climate conditions." The "livability" of a project was strongly considered as well as its relationship to the site. Sert said a number of good projects didn't fit the site and were overscaled. He urged *Progressive Architecture* to report more fully on some of the designs, which in fact P/A plans to do in its July issue.

In selecting four equal first prizes, the jury departed from the stated structure of the competition which called for three ranked winners (\$10,000 first; \$5000 and \$2500) and five honorable mentions of \$1000 each, in accordance with AIA-approved standards. The jury's action posed "a source of concern to the American Institute of Architects," the AIA said in a statement, adding that Theodore Liebman, who organized the competition for the UDC, was most conscientious in making decisions in a "most difficult position." Led by Sert, the jury members were Franklin Becker, Cornell Univer-

sity; Alexander Cooper, New York City Planning Commission, Frederick Rose, New York builder, Paul Rudolph, architect, Sharon Lee Ryder, associate editor of *Progressive Architecture*, and Joseph Wasserman, architect.



Gordon Bunshaft

## Gordon Bunshaft named MOMA trustee

Gordon Bunshaft, partner in Skidmore, Owings & Merrill, New York, has been named a trustee of the Museum of Modern Art. Bunshaft became a member of the museum's International Council in 1962. From 1963 to 1972 he served on the Fine Arts Commission, Washington, D.C. As design partner he has been in charge of always prominent and sometimes controversial buildings: The Lever House (1952), Manufacturers Hanover Trust (1954), the Beinecke Rare Book Library at Yale University (1963), the LBJ Library, Austin, Texas (1971), and the Hirshhorn Museum, (1974).

## Fox Theatre still fighting for life

The Atlanta Landmarks Inc.—whipped into shape since November because of the threatened wipe out of the 1930s heyday Fox Theatre—has won a three-year delay on the demolition of the Fox. May 1 was to have been the day for the wrecking to commence, but ALI, led by Georgia Tech architecture professor Arnall T. Connell, has managed to secure enough options on land parcels in the same block as the Fox to convince Southern Bell Telephone Co., which wants to build a headquarters there, to delay tearing



Closing scene from "Buildings, Blazes, and Box Office."

## News report

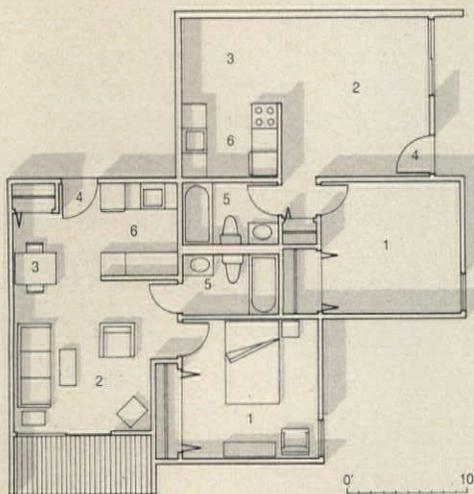
down the 4400-seat theater.

The hoped-for plan is for ALI to trade its parcels in exchange for the Fox, which then could be operated as a commercial and entertainment center. ALI now needs to raise \$2 million to repay a short term loan which was secured last month to start buying the land parcels.

## No Oscar for The Tower revisited

"Buildings, Blazes, and Box Office," a new public relations program by the American Institute of Architects didn't exactly set the audience on fire at a preview showing in Boston. With this attempt to vindicate the profession's honor from negative innuendo in "The Towering Inferno" the sponsors apparently hoped to succeed by just projecting 62 slides on a screen and giving people a wordy script to read—in the dark! In fairness, the text obviously is to be read by the one conducting the program, but members of the Boston Society of Architects evidently are too modest to be Paul Newman standins.

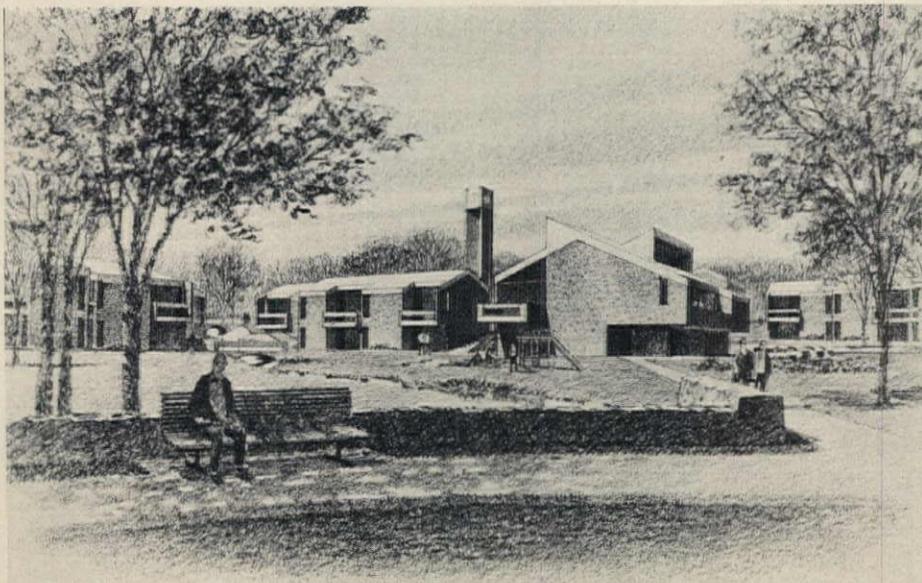
The program consists of scenes from "Inferno" interspersed with shots of architects over the drawing boards, a code book, blocked fire lanes, and sprinkler systems. The text explains that often standards are the minimum, and that architects' recommendations for better materials and equipment, as in "The Inferno," go unheeded. "We aren't always as influential as we'd like to be," states the commentary.



### Legend

- 1 Bedroom
- 2 Living
- 3 Dining
- 4 Entry
- 5 Bath
- 6 Kitchen

Winning scheme by the Lowe/Interface Partnership of Newton, Mass., in third, and possibly last, state competition for elderly housing.



## Boston uproar over housing competitions

The recently instituted and successful competitions for elderly housing in Massachusetts may be nipped in the bud. A politically powerful but comparatively unknown group of architects has attempted to halt the competitions charging they are unfair. Those who brought suit—since dropped—were ones who previously did most architectural work for the state. They withdrew their suit after the state official responsible for organizing the competitions was fired—ostensibly by a change of administration. [continued on page 30]

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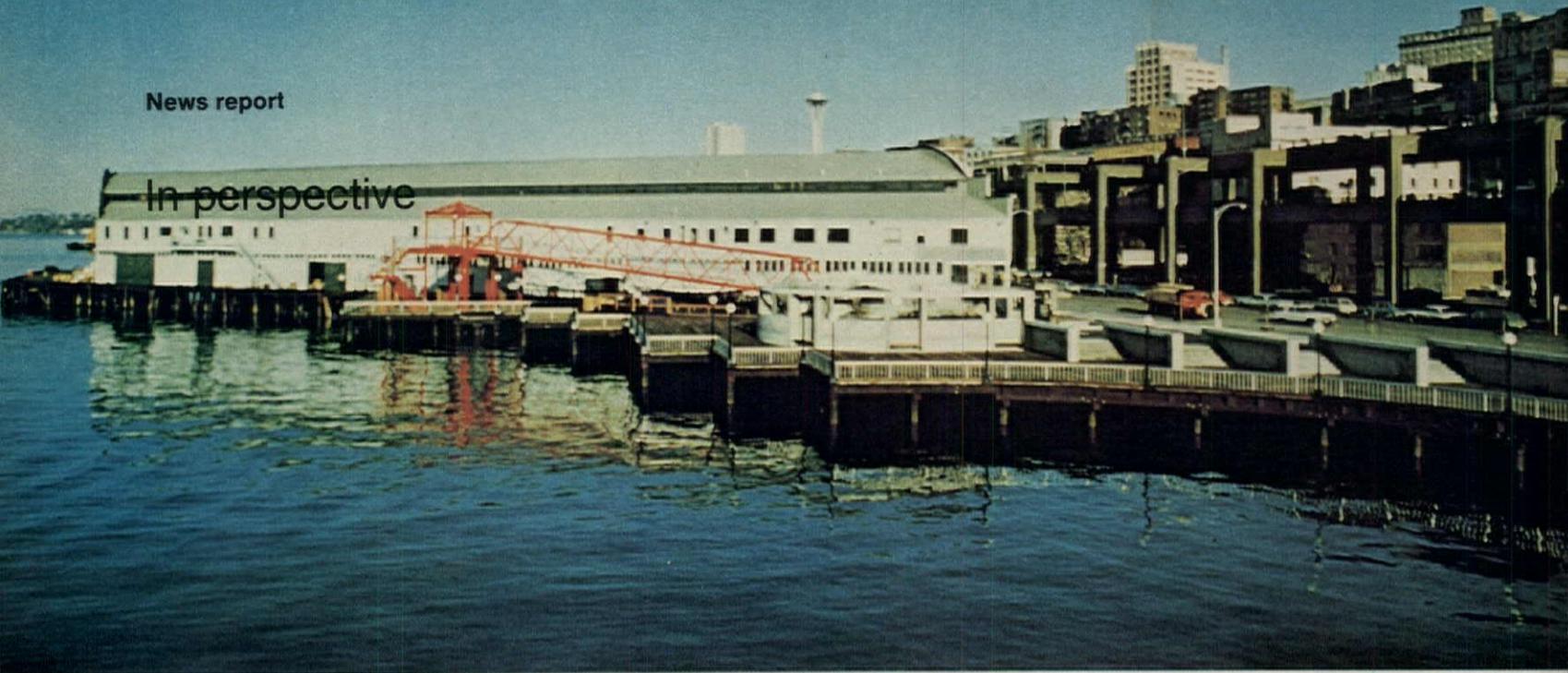
Owner: Sears, Roebuck and Co.  
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Engineers: Abbott, Merkt & Co., Inc., Engineers

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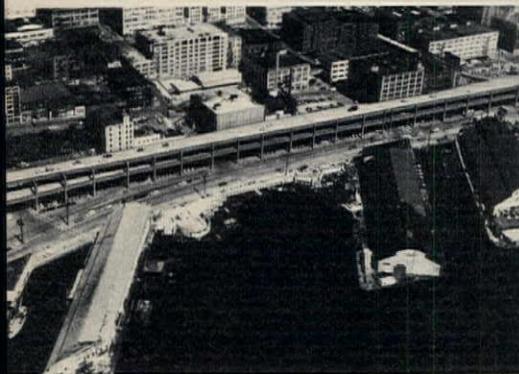
In perspective



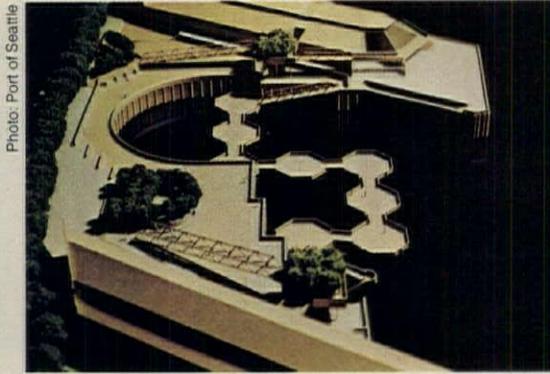
South side of The Waterfront Park looking north to Pier 59.



North elevated platform in caterpillar orange.



Construction of Phase 1.



Phase 1 model includes floating modules.

**Seattle's quest for urban park**

This summer for the first time citizens of Seattle may stroll along a downtown city waterfront park 64 years in the "planning," the first major open space there since the Alaska Gold Rush. The actual start for Waterfront Park was in 1968, when voters approved \$5 million in bonds. Most of Phase 1 of the 16-acre bayfront plan by the A.O. Bum-

gardner Partnership/Architects of Seattle has been completed, and parts of Phase 2 already have begun.

During the planning, discussion of what kind of park to build sometimes raised strong feelings. Several consultants had the job prior to the city's acceptance of Bumgardner's plan (which itself required more than 47 public presentations). Now that the park is in

use, it still is controversial, reports the West Coast's *Sunset* magazine. "With its extensive use of unadorned concrete and creosote-soaked planks, it does not meet the traditional park prescription for grass, woods, and gardens," stated a writer, who nevertheless was favorably inclined toward the project.

In designing a "working" park, and ever mindful of high land costs, intense land uses, and the overlap of governmental authority, the architects proposed not an architectural artifact, but a container. Already constructed between piers 57 and 59 is a concrete and brick promenade, extending into a split-level terrace of the same materials at one level, with a wooden deck below. Ramps connect the terrace with the piers and with a not-yet-completed system of floating concrete modules, each 45 ft in diameter.

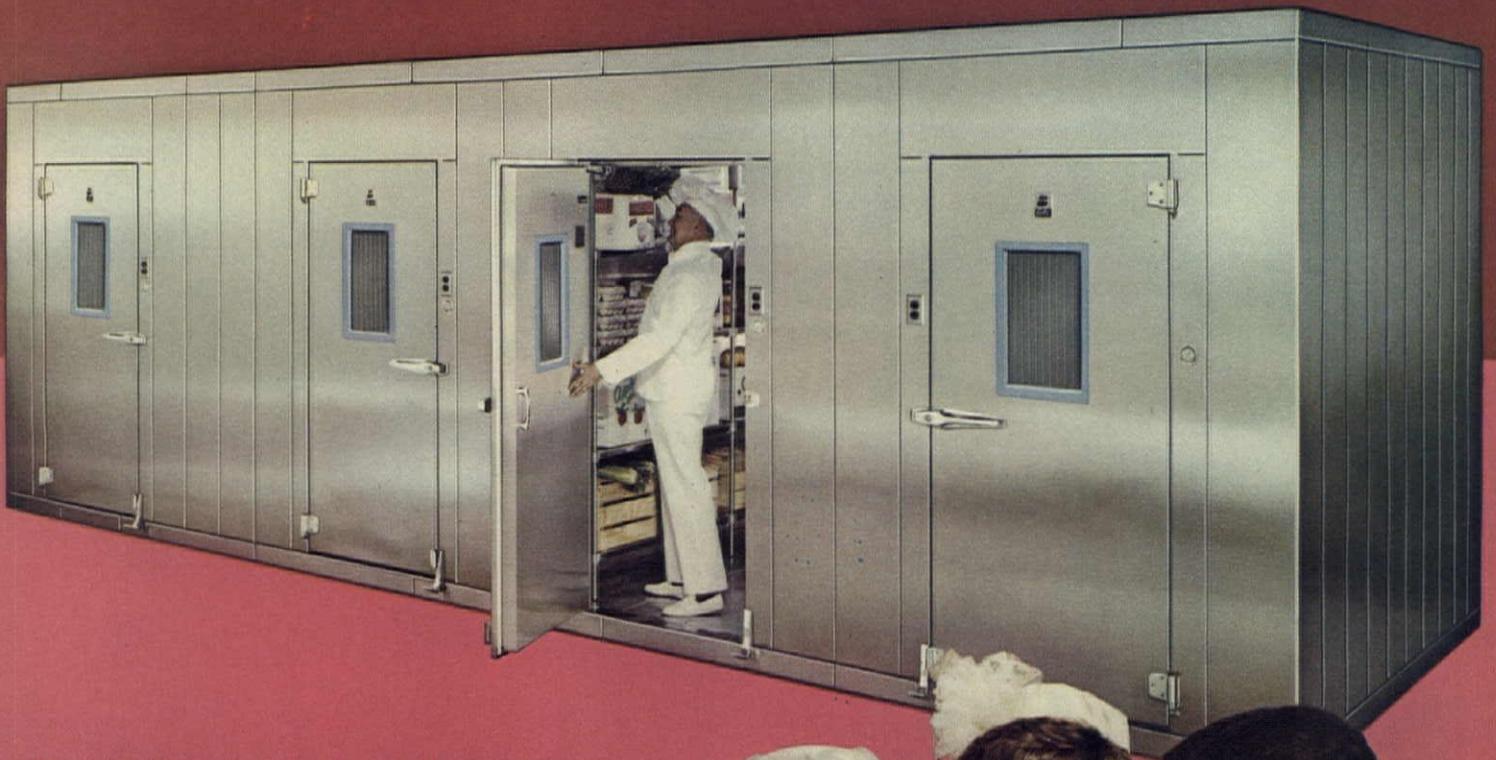
Sheds on the piers will be returned to their original simple forms, the one on pier 57 being shortened to provide extra outdoor space. The pier 57 shed remodeling, to be completed this fall and opening as a public gallery, will include interior balconies and mezzanines and will have a two-story faceted glass front.

For the dedication, a bronze fountain by sculptors James FitzGerald and Margaret Tomkins was donated and the site encircled with crabapple trees.

Phase 2 development, already begun, includes an aquarium for piers 60 and 61. Pier 59 will be renovated next year into a restaurant and spaces for other commercial uses.

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Architect Tadhg Sweeney, the ex-deputy secretary of the Massachusetts Department of Community Affairs, which oversees \$47 million a year in elderly housing, said the present status of the competitions is that the new secretary of the department, William Flynn, is studying the matter. Neither Flynn nor his special assistant were available for comment as of this writing. Meanwhile the third competition, after a 3-week delay, was rescheduled for May. The Massachusetts State Association of Architects, a chapter of the AIA, submitted its recommendation that the competitions be held four times a year, but with a modification: that an additional channel be provided for architects to obtain state work.

Prior to the first competition in June 1974, a dozen firms did 90 percent of the elderly housing for the Commonwealth of Massachusetts. The selection process involved little design review

and fees were below normal.

Fifty firms entered the first competition, designed to correct these inadequacies. Goody & Clancy of Boston was selected by the town of Winthrop from the top three recommended by the jury (P/A April 1975, p. 50). The next competition, held six months later, drew 150 entries. Again the town for which the housing was planned made the final selection, the Lowe/Interface Partnership of Newton, Mass. As with the first competition, names of runners-up and those with honorable mention were placed on a resource list and made available to the 211 state housing authorities.

It was against this list that the "establishment" architects rebelled, feeling that they would never get on it and that the list would become the sole means of obtaining government work.

## Venturi & Rauch hum Galveston's tune

What have ducks, decorated sheds, Las Vegas, and Levittown to do with a

sleepy provincial Gulf Coast port city sorely in need of a plan to deal with its



Photo: Sue Brink

Houses on Galveston's historic Strand

[continued on page 31]

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unique environmental heritage? Absolutely nothing—and yet, maybe everything. Beyond polemics, the philosophy of the office of Venturi & Rauch, Philadelphia, has served the firm well at long last. Its approach of recognizing an existing context (whatever the form) has won the enthusiasm of Galveston's city fathers.

The setting: Galveston, Tex. The context: the historic Strand, port side of the city and site of numerous cast iron façade buildings of considerable charm. The issue: how to deal with a heritage yet bring it up to tempo with developments of an evolving city.

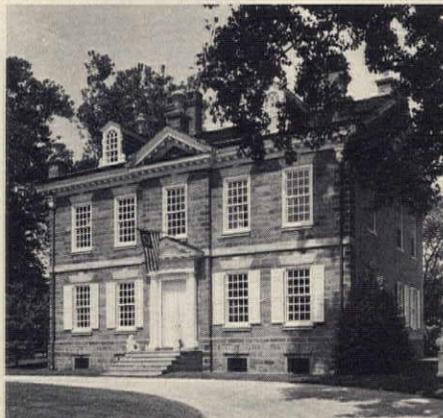
With a grant from the City Options program of the National Endowment for the Arts, the Galveston Historical Foundation through its Planning Committee interviewed a collection of regional and national firms to undertake a study. Each office submitted specific proposals.

Results were, to quote Foundation director Peter Brink, that "The Planning Committee was strongly impressed by the Venturis' sophisticated

visual sense, their sensitivity to planning in the context of an existing community, their economic pragmatism, and their experience in restoration work." The Strand instead of a strip? . . . watch out, Las Vegas! [Peter Papademetriou]

## Philadelphia's 200-year-old Chew House

"Restoration is often more destructive than necessary," Raymond Shepherd,



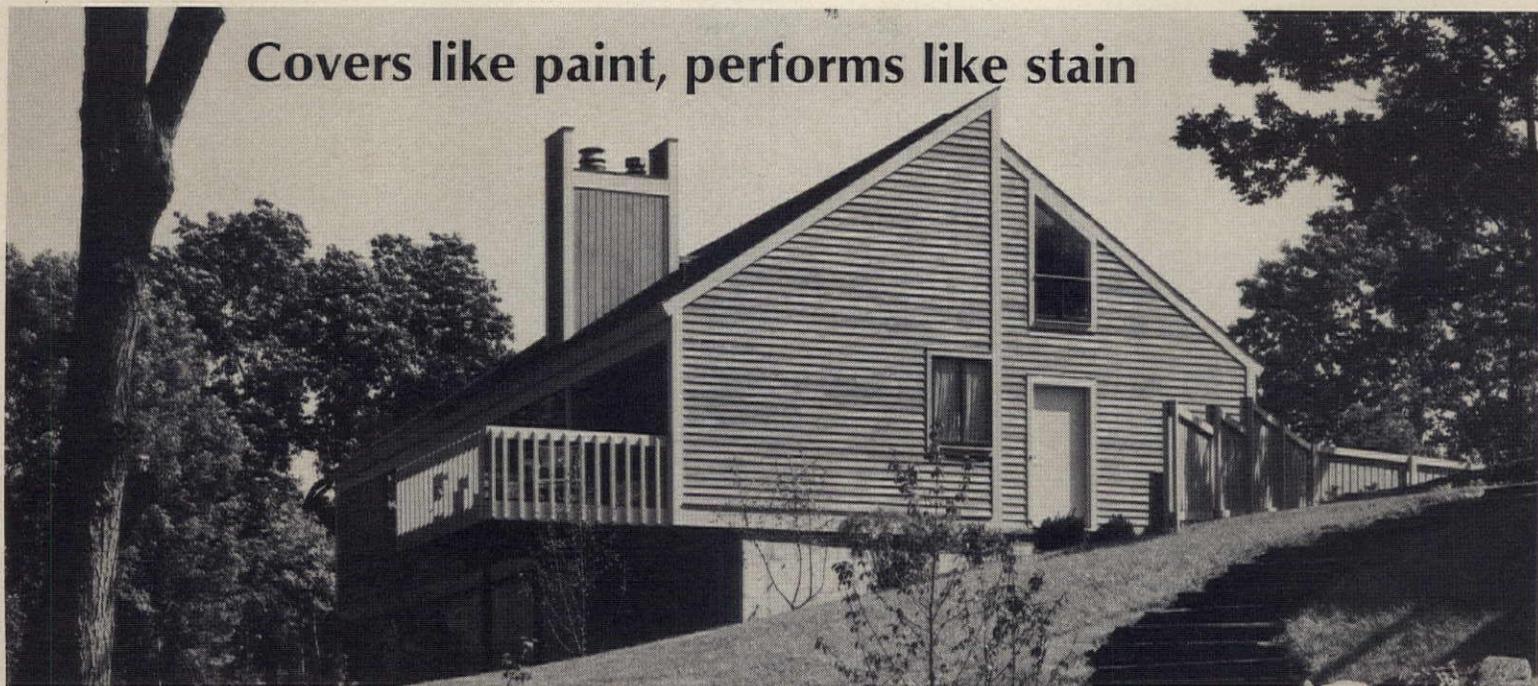
Cliveden: a model for restoration.

of the National Trust for Historic Preservation, warned a packed audience at the Society of Architectural Historians convention in Boston. Then he described what good restoration entails. Rule number one is "Don't do anything which can't be undone." Beyond that, the advice was predictable: make drawings and take photographs, prepare a masterplan, document each step and give reasons. He also advised leaving elements of the building unrestored—for comparison.

As a demonstration of these principles, the National Trust next year will complete the first restoration phase of *Cliveden*, north of Philadelphia in Germantown. It was designed by Benjamin Chew in 1763 for his residence and completed in 1767. Chew's descendants lived in the Palladian-style home until 1971. After that, it was donated, with assistance from the National Parks Service, to the National Trust, which keeps it open to the public on a daily basis. The Trust of present has 13 historic estates.

[News continued on page 33]

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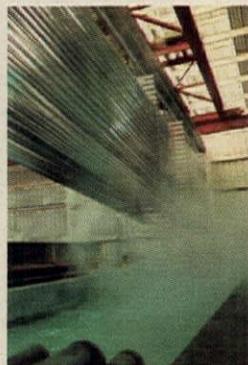


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News report continued from page 31

## Personalities

Peter L. Inniss, AIP has been appointed chief planner and director of planning for the Department of Housing and Community Development, Cheyenne, Wyo.

Donald E. Marlowe has been named executive director of the American Society for Engineering Education, Washington, D.C.

Bertram Berenson has been appointed dean of the College of Design, Architecture, and Art of the University of Cincinnati.

## Calendar

Through Oct. 19. "Art for Architecture: Washington, D.C. 1895-1925" exhibit, Renwick Gallery, Washington, D.C.

June 15-20. International Design Conference in Aspen, Colo.

June 18-20. Seventh annual congress on interior environment (NEOCON), Merchandise Mart, Chicago.

June 23-25. Nineteenth annual convention and exhibit of The Construction Specifications Institute, the Rivegate, New Orleans.

June 23-July 4. Workshop on theory, history and practice of public celebration, MIT.

June 28-July 4. Sixtieth annual conference of Building Officials & Code Administrators International, Portland.

July 7-9. Third International Conference of the Design Methods Group, Berkeley, Calif.

July 13-18. Annual Illuminating Engineering Society conference, San Francisco. An International Lighting Exposition will take place July 15-16.

Aug. 1-4. National conference of the American Society of Interior Designers, Century Plaza and Beverly Hilton Hotels, Los Angeles. The 1975 Exposition of Designer Sources will be held Aug. 1-3 at the Century Plaza.

Sept. 15-18. Second International Conference on Space Structures, University of Surrey, Guildford, England.

Oct. 9-12. International Building Exhibition, Industry Building, Exhibition Park, Toronto, Canada.

Oct. 21-23. Annual conference of The Producers' Council, Inc., Sonesta Beach Hotel, Key Biscayne, Fla.

[News continued on page 36]

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Use exposed fasteners or ones that puncture the membrane, and in comes trouble.

Alternating expansion and contraction often causes exposed nails to pop, nail holes to enlarge and leaks to begin. Thermal changes and ice pressure all pull on exposed fasteners, making the problem even worse.

If you use fasteners that puncture the roof membrane, water can leak in. The insulation can get wet and become ineffective. That's just the beginning of trouble and the beginning of the end of the roof.

The Tremline system uses no exposed fasteners or ones that puncture the membrane. So you have two less problems to worry about.

◀ Don't isolate the roof membrane from wall movement, and you'll have headaches.

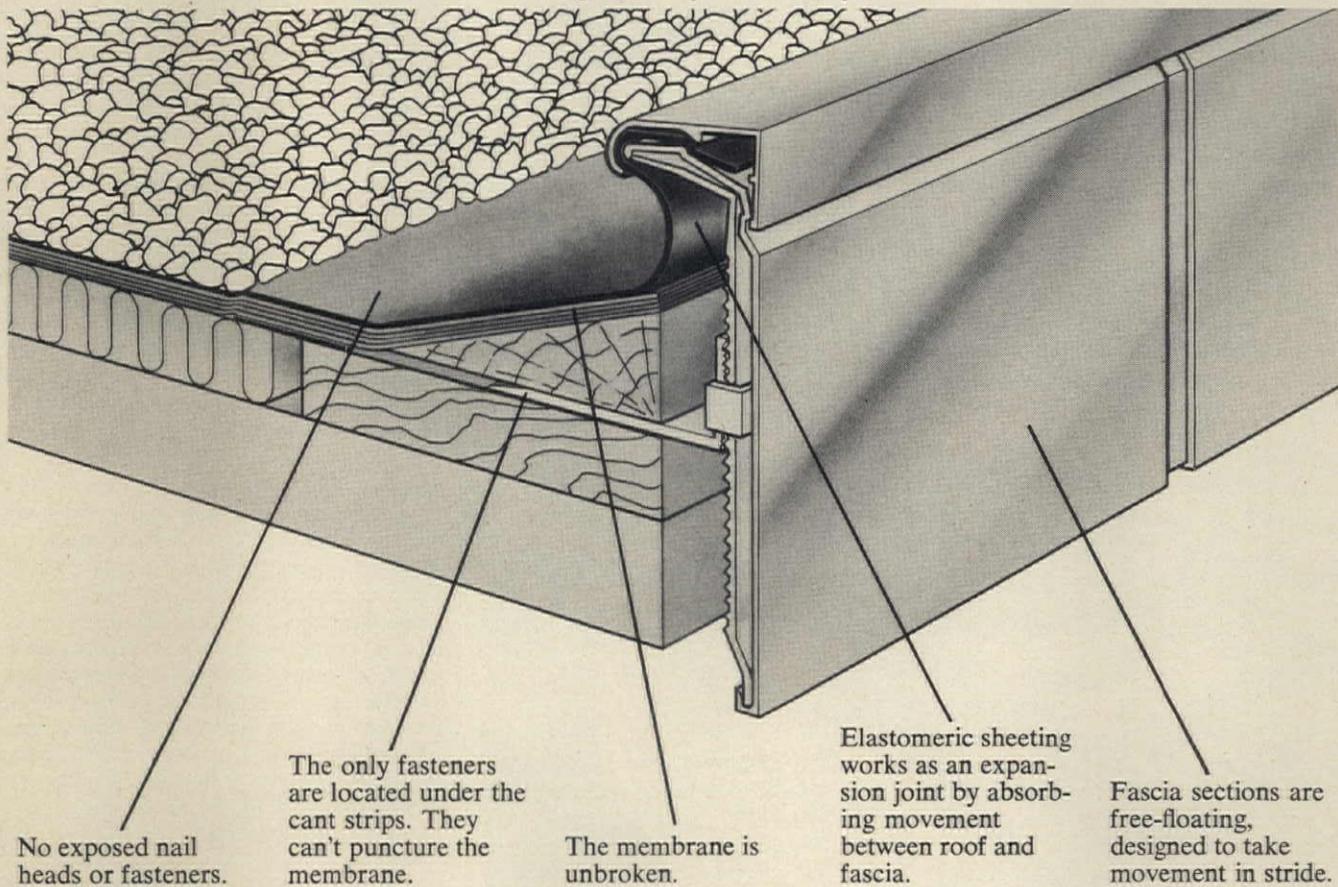
Movement between the vertical and horizontal surfaces of your edging is one of the most difficult movements to live with. The best way to do it is to isolate the roof membrane from wall movement.

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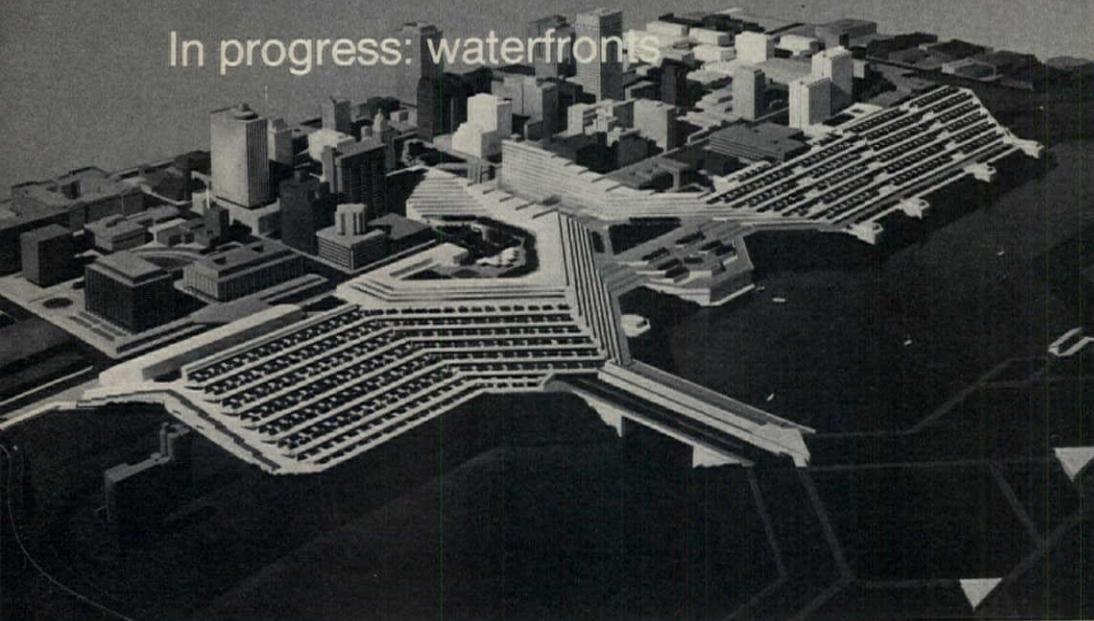
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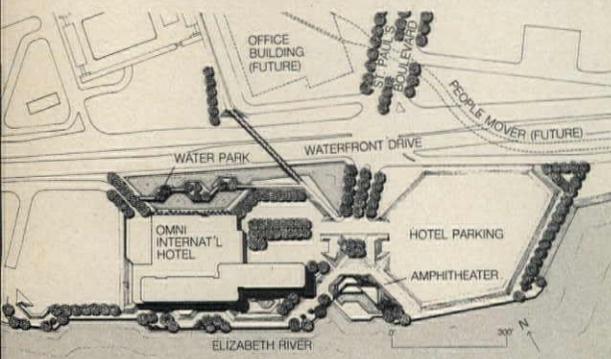
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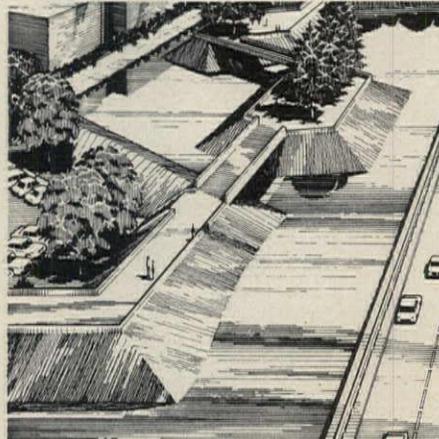
In progress: waterfronts



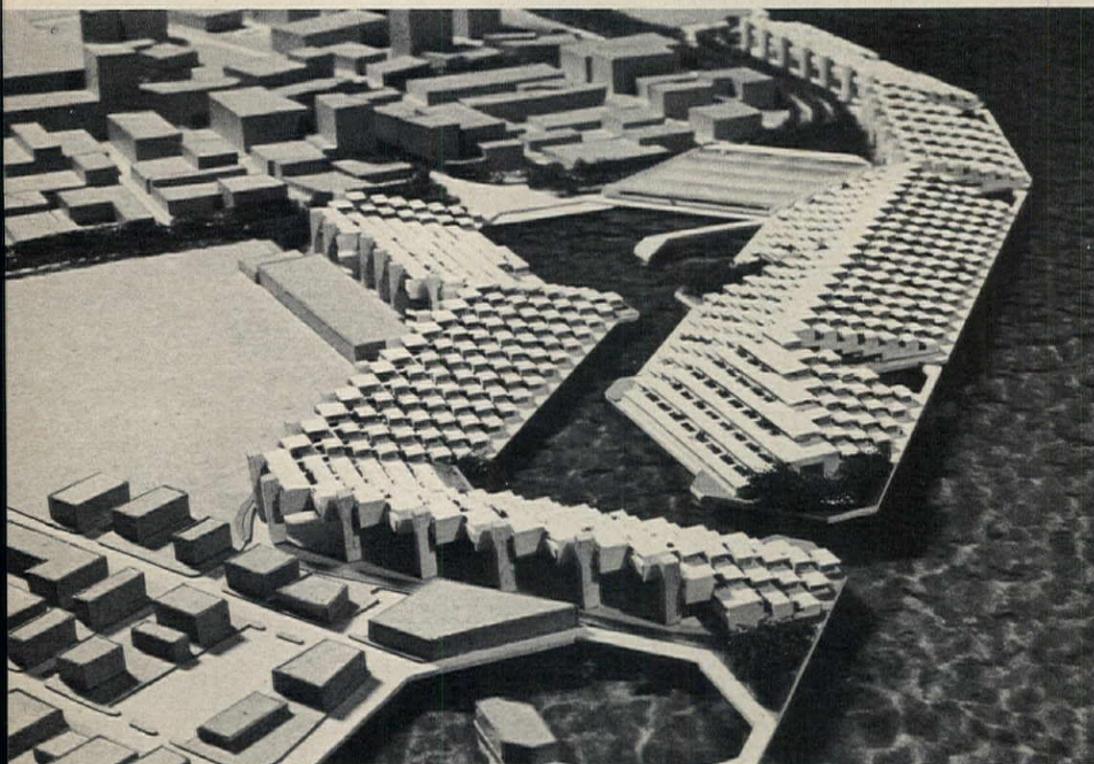
1 Memphis gateway on the Mississippi River.



1A Earth berm esplanade and water park under construction in downtown Norfolk. The two-block beginning will be expanded to Townpoint.



Detail of earth berms surrounded by water park.



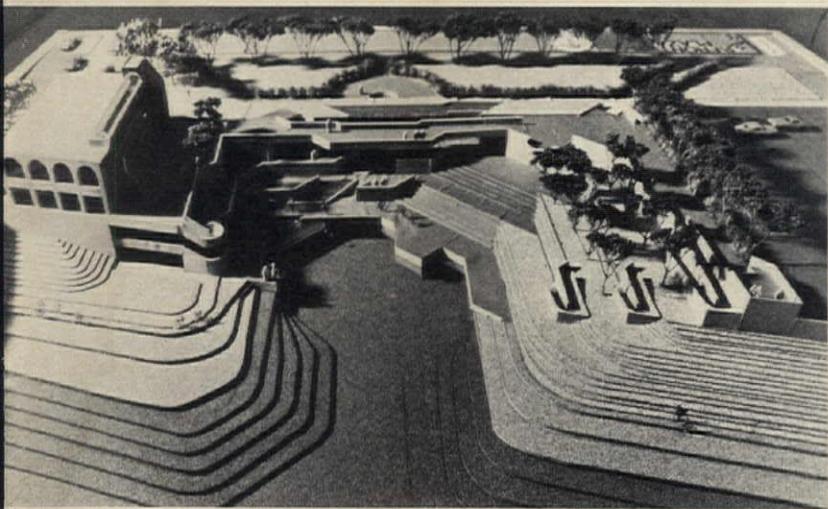
1B Townpoint, a proposed upper income residential development with sports clubs.

**1 William Morgan Architects**—The Jacksonville, Fla., and Washington, D.C. offices of the Morgan firm have designed three waterfront projects: two for the Elizabeth River in Norfolk, Va., and one for the Mississippi and Wolf rivers in Memphis. The first Norfolk, phase (1A)—a landscaped earth berm esplanade for a two-block stretch along the downtown waterfront—has been under construction for a year. Eventually the esplanade will extend to Townpoint (1B) where Morgan has designed a joint public-private leisure living complex of 1600 residences, shops, tennis and yacht clubs. The Memphis 15-year development proposal, done under the direction of Washington planners Marcou, O'Leary, & Associates, would include a city gateway promenade of shops and office towers and a riverfront terrace of luxury housing, parks, and fountains with an esplanade across the river to a new park.

**2 Riverfront Plaza**—Dayton, Ohio, city officials and officials in county government are favorably eyeing a plan by architects Lorenz Williams Lively Likens & Partners of Dayton that will link the downtown with the Miami River. As the bank forms a steep slope to the river from the street level above, a terraced plaza has been designed by the architects to gently move pedestrians towards the water's edge. Overhangs provide protection from sudden showers and hot sun. The numerous level changes offer a maximum of edges which, the architects have observed, people seem to prefer for sitting and viewing.

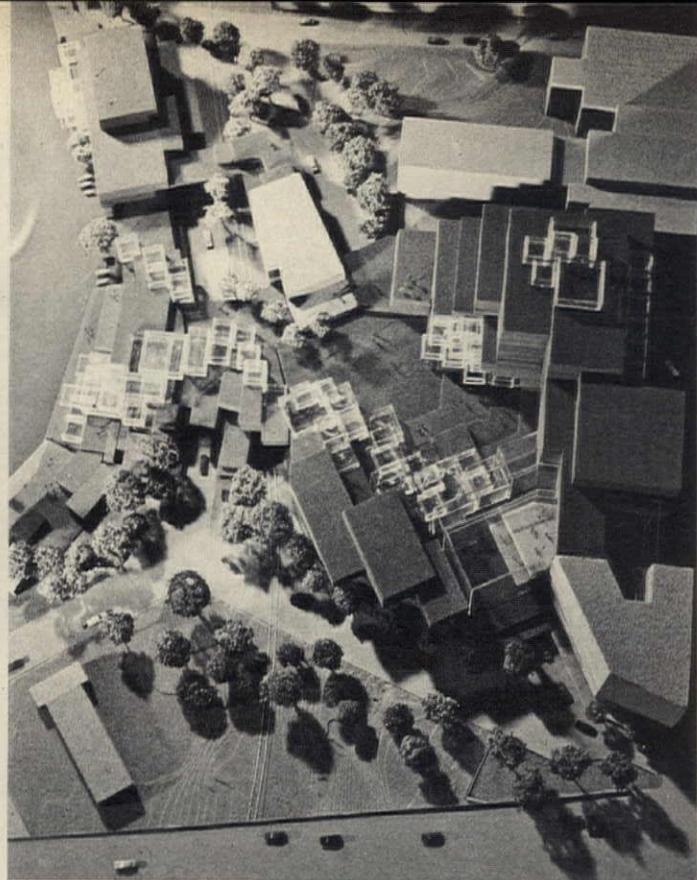
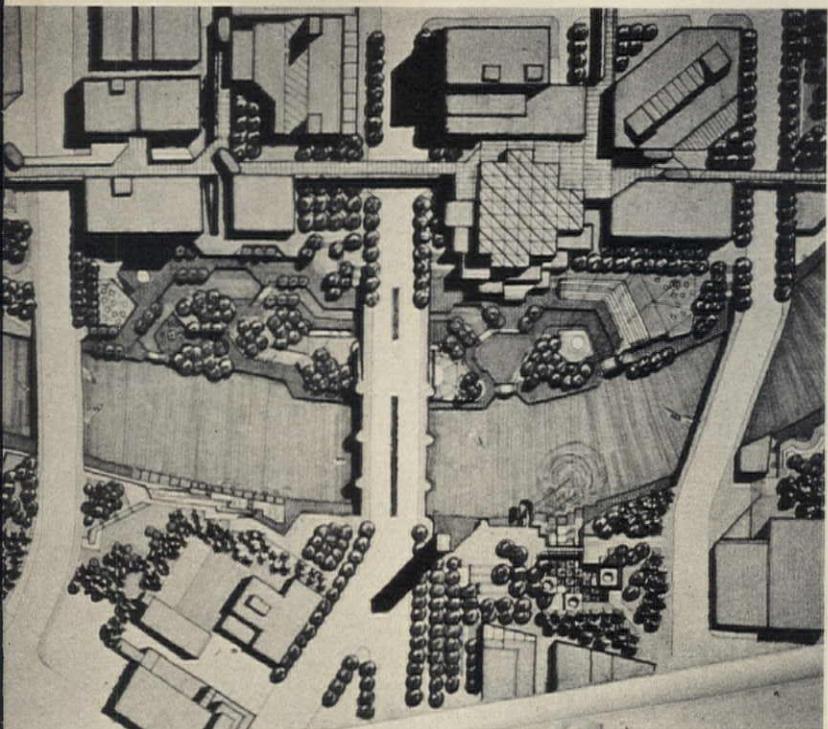
**3 Lawrence Halprin & Associates**—Two projects—one in Michigan the other in Ohio—by Halprin's office are carrying forward the reclamation concepts begun with San Francisco's Ghirardelli Square. Settlers' Landing in Cleveland includes adaptive reuse of office buildings and warehouses recycled into the usual mix of waterfront amenities including a museum of Salvador Dali's work. Laced among the existing structure will be a crystalline galleria cascading from a hotel situated on high ground three blocks back from the waterfront. The six-block-long Flint project encompassing both the north and south banks of the Flint River, is an endeavor to upgrade the deteriorating north area and to improve the south portion, which embraces the central business district. Community input has helped evolve such ideas as asking a railroad to donate a retired engine and caboose for a play sculpture and harmonizing new structures with the warm brick and other natural materials indigenous to the area. A planned multi-level water environment may be enjoyed both in the summer and during the winter, when it becomes a frozen sculpture.

**4 Gateway Center**—Extension of Minneapolis' famed Nicollet Mall to the Mississippi River at the north boundary of the town and beyond to Nicollet Island is a highlight of a 15-year plan to develop the riverfront. The property along the banks belongs to the Burlington Northern railroad, and the proposal calls for construction over the tracks and yards. The plan was developed by a team led by The Hodne/Stageberg Partners of Minneapolis at the request of the railroad. A developer has been located, and a prime office user is being sought. Depending on economic conditions, the first stage could begin as early as 1977, said a Burlington spokesman.

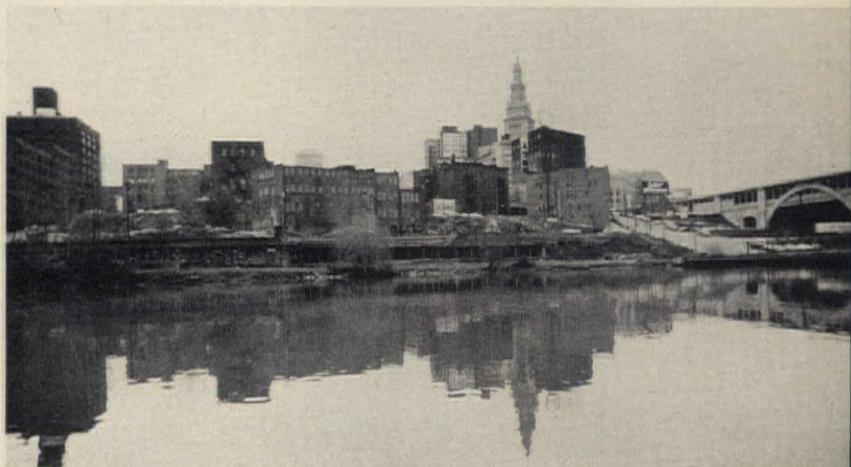


2 Miami River plaza conceived as terminus of a pedestrian concourse in Dayton.

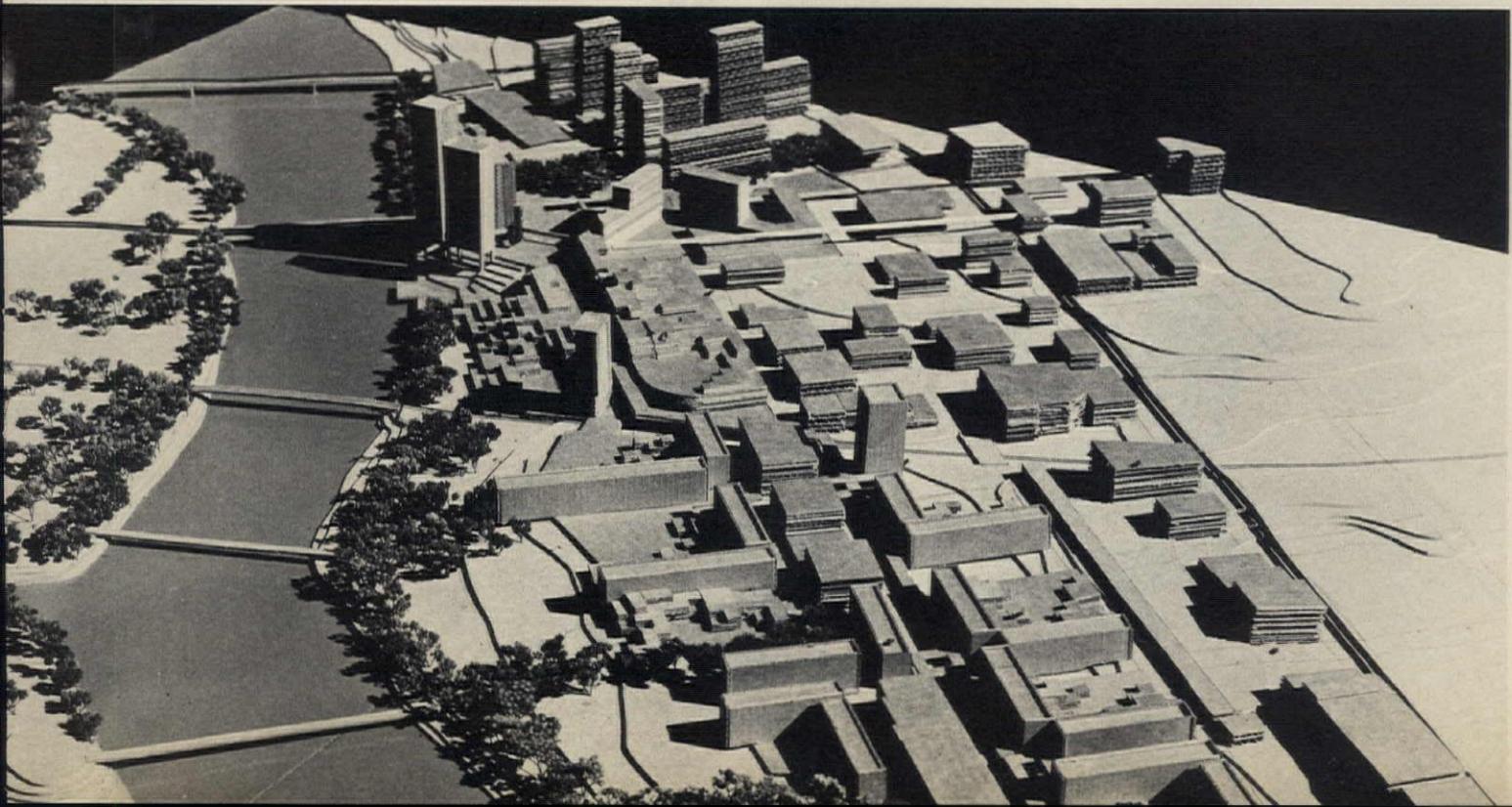
3 Plan for Flint, Mich., to upgrade and strengthen north and south river banks.



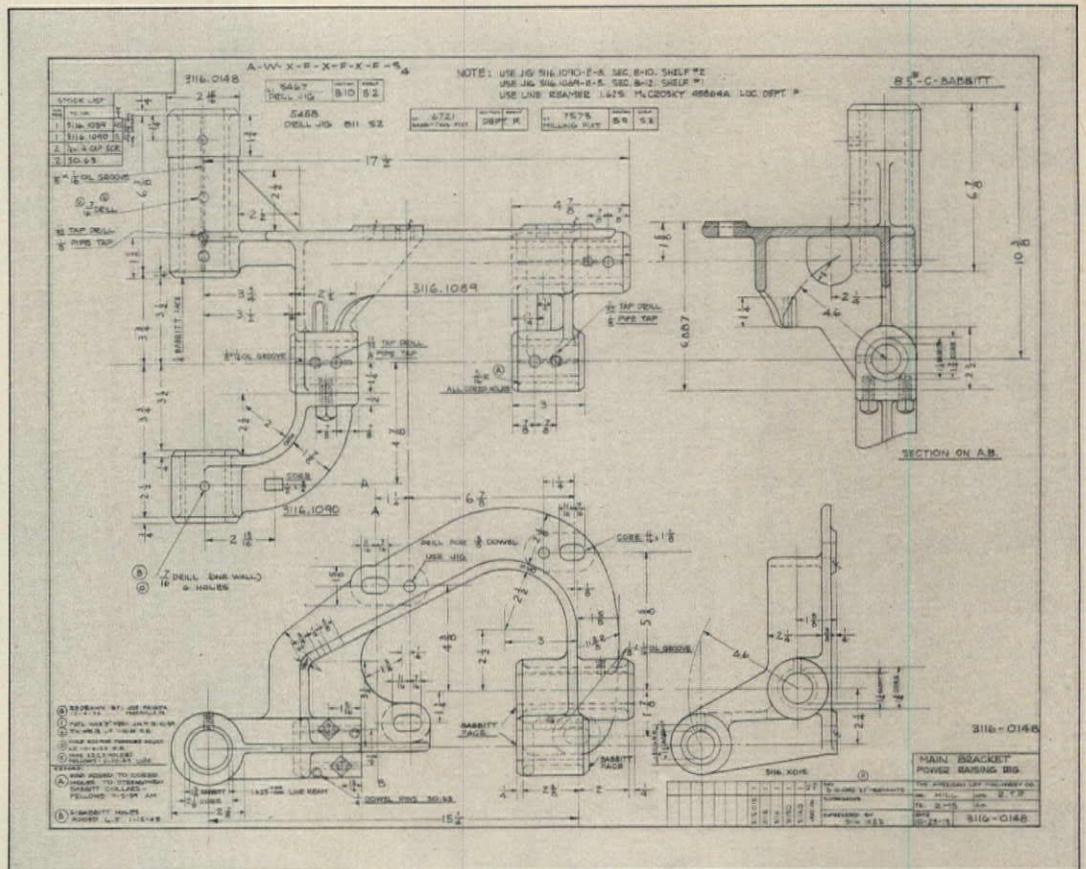
Settler's Landing with proposed galleria (above) recalls a Cleveland tradition of lofty enclosed arcades. Existing conditions on the north-east bank of the Cuyahoga River are shown below.



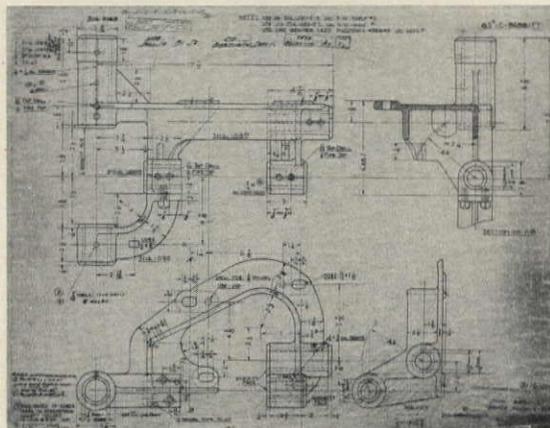
4 Development (below) over Minneapolis rail yards would extend Nicollet Mall to the Mississippi.



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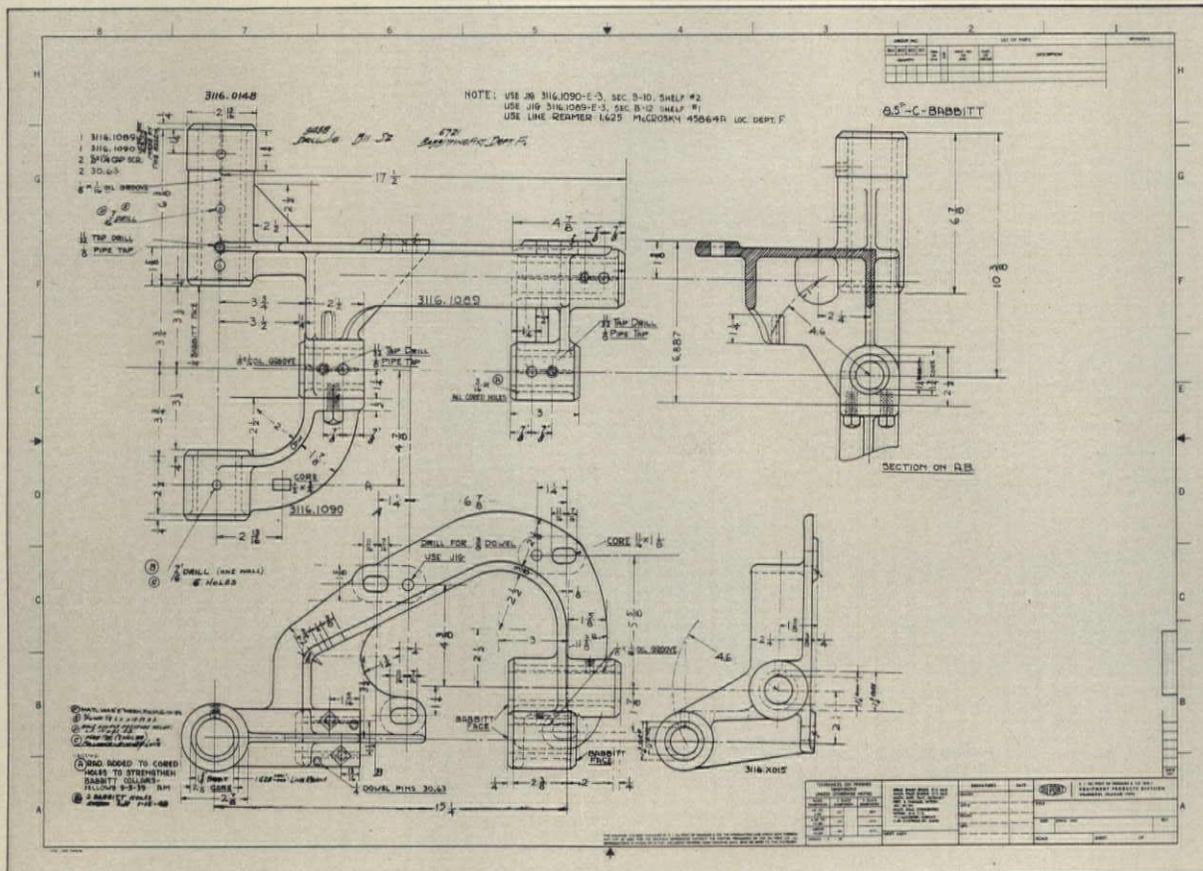
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Congregation Beth El, New London, Conn.; Architect: Paul Rudolph, FAIA, New York, N.Y.; Roofer: H. R. Hillery Company, Groton, Conn.

## THE ARCHITECT, METALS AND IMAGINATION

Many critics regard Paul Rudolph as one of the logical heirs to the late Frank Lloyd Wright's professional mantle, and his major projects have clearly influenced the whole range and dynamics of contemporary architecture. As Sibyl Moholy-Nagy once wrote, he has "great courage, comprehensiveness of talent, profound faith in the integrity of the architect's mission."

In conceptual felicity and strength of execution, Congregation Beth El is a notable example of Mr. Rudolph's recent work, and we are indeed gratified that in selecting a metal to sheathe and roof this distinguished building, he chose Follansbee Terne.

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# Urban waterfronts

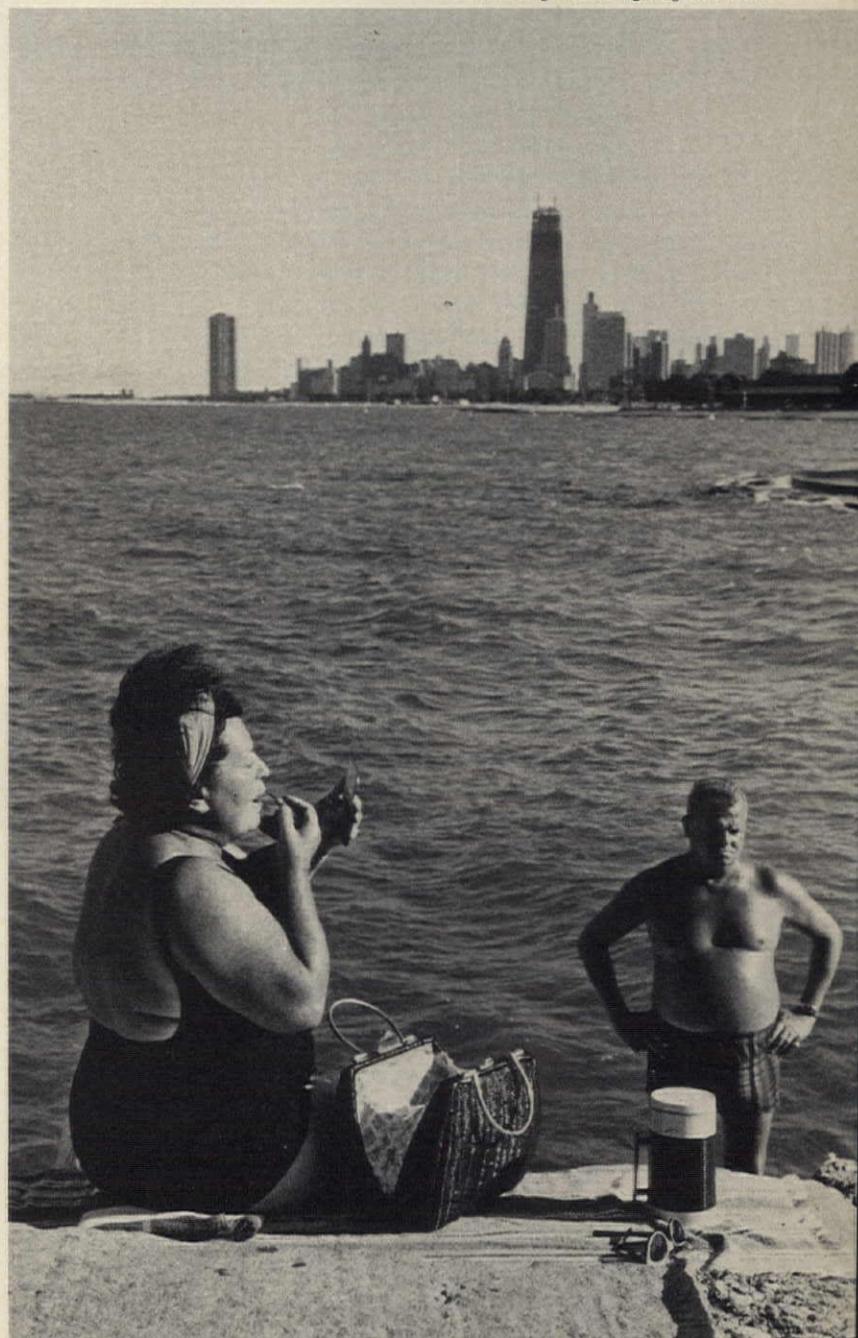
**A sample of waterfronts under construction or in the design stages highlights some problems, issues and suggests a few answers to waterfront planning.**

Ten years ago it seemed that waterfront recycling had a long way to go. Piers and industrial areas were being abandoned as shipping and industrial concerns expanded to areas beyond the central business district. Yet the waterfront was left to rot, either ignored or jealously guarded by city officials afraid to release forever the potential shipping and docking facilities. City governments, developers, and sometimes the public had to be convinced of the range of possibilities this "new" land afforded for urban areas—recreation, housing, or areas for commercial and retail uses—needed to revitalize a decaying downtown. And then suddenly there was a plethora of plans. Now waterfront renaissance is a long-established fact—at least on drawing boards. Schemes for cities across the U.S.—from San Francisco, Spokane, and Seattle to St. Louis, Chicago, Omaha, and Detroit—all recognize inherent possibilities.

Although few cities need to be sold on the idea of reclaiming the waterfront, some should take a hard look at the kind of development they would like to plot there. Careful scrutiny is required to determine if development of waterfront land will reflect the interests of the entire community. The waterfront can accommodate an assortment of activities, but some obviously conflict in terms of social and economic functions. Many planners believe that the waterfront is big enough for everyone—housing, parks, playgrounds, docks and piers, industries, hotels, offices—with a little planning. (The best way to see if they are right, of course, is to wait until the waterfront is entirely built up.) For obvious reasons, cities should carefully analyze now those grand schemes that boast ample open space and simultaneously threaten to seal off the waterfront physically and psychologically from the rest of the downtown.

In this issue, P/A explores the urban design efforts and approaches that are currently proposed by city planners. Citizen participation, conflicting (or coinciding) uses for waterfront, balance between private sector development and public sector interests, each represent significant aspects of the whole planning and implementation process.

Photo: Roger Malloch © Magnum Photos



Enjoying Chicago's waterfront

## Urban Waterfront

P/A has selected only a small portion of the many waterfront schemes to discuss. Projects were selected because they clearly exemplify certain basic issues and questions revolving around the waterfront, as seen in the presentation of "case studies," (p. 48). New York City, for example, is not only reclaiming under-used land, but is actually creating new land through filling or decking. Because of its complex geographical, social, and economic characteristics, its conflicts are more intensely felt, its solutions more complex. One of its powerful tools, special district zoning, could be applied by other cities. In fact a special zoning district is already being proposed in a plan for Miami by architects/planners Wallace, McHarg, Roberts & Todd, and their zoning consultants, architects Haines Lundberg & Waehler.

Georgetown, a historic residential area of Washington D.C., wants to preserve itself from economic pressures resulting from a mixed-use development planned for the waterfront. Responsible and talented architects for the developers find themselves cast in the role of "bad guys." Yet because of the citizens' efforts, perhaps the plans for the waterfront will even more sensitively reflect the small scale quality of the Georgetown neighborhood.

In the case of San Antonio, the history of river-consciousness goes back to the 1930s and 1940s. Citizens' efforts from that time have created one of the truly remarkable urban settings in the U.S. And this, they say, is only the beginning.

Other urban waterfronts have been selected for attention in the next few pages, again because they highlight certain considerations. Within this entire range, however, no predictions can really be made about the quality of life, or the public amenities accruing in these unrealized plans. All the schemes presented recognize implicitly the same set of values regarding waterfront planning (although some may end up violating them anyway). The need for open waterfront space and parks in highly populated areas, and the importance of visual and physical access to the water for the public certainly are two major factors. If development must take place (and can, within a well-thought-out framework), it should serve the community as a whole (e.g., middle- or moderate-income housing), and relate to the scale of the buildings nearby. The ideal building configuration has yet to be found: low-rise terrace structures, though uneconomical, maintain the scale of a nearby low-rise neighborhood, and allow easy view of the water to high-rise districts behind. But a continuous block or podium of terrace structures could seal off view and access to the waterfronts as dramatically as any elevated highway. Tall towers achieve an economically viable density, don't provide too much visual obstruction in themselves—as long as they are slim enough—but too many will create a Chinese wall. On the other hand, one or two looming up usually appear monstrously out of scale with the existing context. Another configuration, more talked about than designed, is a medium-rise wall-like building with large openings pierced into it for visual and physical access to the water.

Yet another value implicit in only a few schemes, calls for the retention of the fishy, briny waterfront character we have so long taken for granted. This quality, that "irre-



Photo: Bruce Davidson © Magnum Photos

San Francisco's mix of uses and densities.

placeable salty patina" noted in Arthur Cotton Moore & Associates' study for the National Endowment for the Arts "city edges" program, is a significant part of the waterfront's history and charm. Cleaning up may turn into overkill.

Speaking of overkill, environmental factors must be confronted. While containerized cargo handling releases much needed urban waterfront land for other uses, it often requires 5 to 10 times as much marsh and flatlands elsewhere. And new uses for urban waterfront add other problems. When cities encroach on their riverbanks and flood plains, for example, they pave land needed for excess floodwater. Even landscaped parks, bulkheads or rip-rap, or bank realignments can affect the natural (healthy) state of the river, ecologists assert.

But then again the economic situation may slow down waterfront development considerably (long enough for responsible environmental impact studies to be undertaken). In the next few years, the depressed economy may cause planning to be very piecemeal. In some cases the waterfront will benefit, where piers can be easily renovated for recreational uses, or old warehouses converted to offices and apartments. But in other cases, where a large-scale upgrading of the environment is needed, or where landfill must be undertaken, the effect of the economy could lead to stagnation. Much of the preliminary financing of the projects presented on the following pages depended on urban renewal grants. Since the program was suspended in June 1973, old commitments have been honored, but new waterfront projects now have to become part of an inclusive city plan, to qualify for the block grant program.

But most critical in these financial considerations is the dependence on the developer—in other words, the extensive participation of the private sector. This participation clearly has been jeopardized by downward economic trends. If cities want any development at all on the waterfront they might have a hard time convincing developers to agree to provide many of the high-priority, low-revenue, socially desirable activities and amenities. Worse yet, they might have to give away more to the private sector than they should, in the hopes of getting any projects underway. More than ever, caution, skepticism, and idealism are needed. [Suzanne Stephens]

Boston

## Maintaining the historic patina



Photo: Randolph Langenbach

Boston's Chart House restaurant on Long Wharf (above); overall view (below).



Photo: Huxley Adams Associates

In the 1960s Boston's once-famous waterfront staged a come-back because of its gradual reclamation for recreational, residential, and commercial (office) use. The interesting thing about Boston's efforts has been the strong emphasis on retaining more than just traces of its historic past. The stress in recent years has been directed even more toward conversion and rehabilitation of wharf buildings, than to ambitious landfill projects with development.

While the New England Aquarium on Central Wharf by architects Cambridge Seven (P/A Dec. 1970, pp. 96) and Harbor Towers on India Wharf by I.M. Pei Associates (P/A Aug. 1967 p. 41) are admittedly new "landmarks," the tendency now is to recycle. Boston actually discovered adaptive re-use long before the economic situation made it fashionable. Already completed are rehabilitation projects on Long Wharf, Lewis Wharf, Commercial Wharf, and Commercial Wharf West. On Long Wharf, architects Anderson Notter transformed the Gardiner building (photo, p. 43) into the Chart House Restaurant last year. Next door, in the Custom House block (comprising nine buildings), they have completed a rehabilitation for 312 apartments and offices. Carl Koch & Associates rehabilitated the Lewis Wharf Building and Pilot house for 95 condominiums and office and restaurant space (photo, p. 44). Halasz & Halasz have just completed similar work on Commercial Wharf, and Anderson Notter has finished some apartments and offices in Commercial Wharf West. Mercantile Wharf, a building rehab by John Sharratt & Associates is beginning construction, as are other chunks and parcels in the vicinity. Not to be forgotten, of course, is the Faneuil Hall Market restoration, being conducted by Stahl Bennett (architects for restoration) and Benjamin Thompson Associates (architects for reuse, and winners of a P/A citation, Jan. 1975, p. 61). Meanwhile, the Galleria, on Sargeants' Wharf begins construction soon, a commercial venture designed by Howard Rockstrom to be run by Italian businessmen from the nearby North End.

The Boston waterfront was declared an urban renewal area back in the days when urban renewal meant bulldozers razing everything in sight. A study in 1960 led to the formation of the Downtown Waterfront Corporation, and a plan funded by the federal government. The plan ba-

## Historic patina

sically sought to strengthen the tax base while maintaining the area's historic character, as well as to provide housing downtown. The 104-acre site was given \$28 million (50 percent from the local government). Eventually the corporation became part of the Boston Redevelopment Authority under the direction of Ed Logue, who was credited with knowing how to stretch the urban renewal dollars for an amazing variety of uses.

While the plan did stress renovation of existing buildings by including historic buildings in the urban renewal area so that the renewal agency could acquire land, set standards and uses for the property and then sell to developers at a fair market price, there have been problems. New construction called for high-rises, with only limited open space. Lower income residents nearby have rightfully feared that only young, affluent people could live in this new housing; there was no room for the elderly. When the BRA tore down a row of warehouses several years ago, near the north end, waterfront residents ganged together to sue the BRA. The judge ordered a re-study. Since then the heights and densities have been scaled downward, a good proportion of new units, whether new or renovated, will be reserved for the low-income and elderly, and the road has been realigned away from the water to permit a 4½-acre park. An office tower originally designated for a waterfront site will be re-designed to include apartments in a building under 15 stories. And while the elevated Central Artery still severs the waterfront from the rest of Boston, short term pedestrian improvements will be undertaken, with the hope that the expressway will come down by the end of the decade.

Yet a Power Station on Sargeant's Wharf was demolished for the new Galleria, when many thought it could have been salvaged. Other warehouses remain untouched, and subject to fires and vandalism. Residents remain on guard.



Lewis Wharf renovation by Carl Koch & Assoc. Inc. (above).



Long Wharf's Customs House block and Chart House by Anderson Notter, (above).  
Site plan (below).

### Legend

- 1 Harbor Towers (India Wharf)
- 2 Parking Garage
- 3 New England Aquarium
- 4 Charthouse (Long Wharf)
- 5 Customs House Block
- 6 Commercial Wharf
- 7 Lewis Wharf
- 8 The Galleria (Sargeants Wharf)
- 9 Commercial Wharf West
- 10 Mercantile Wharf
- 11 Faneuil Hall and Quincy Market
- 12 Rehabilitation
- 13 Union Wharf
- 14 Proposed Office Building
- 15 Existing Building
- 16 Proposed Motel
- 17 Proposed New Housing
- 18 Waterfront Park
- 19 Atlantic Ave.
- 20 Proposed Elderly Housing

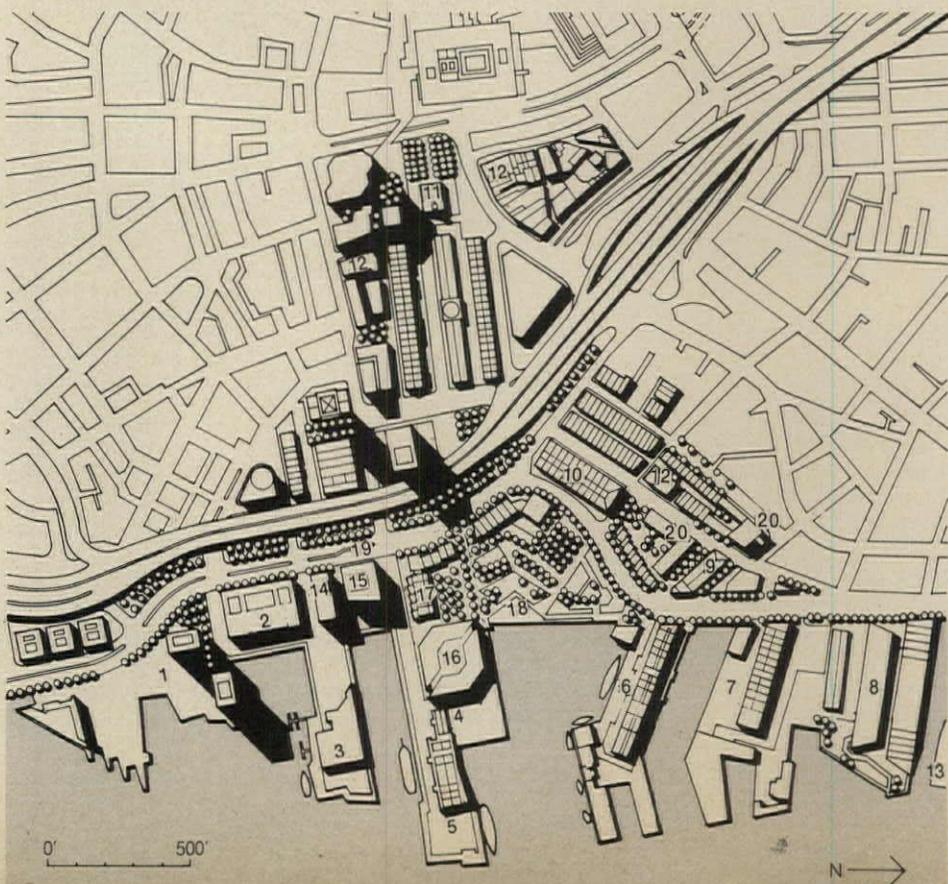
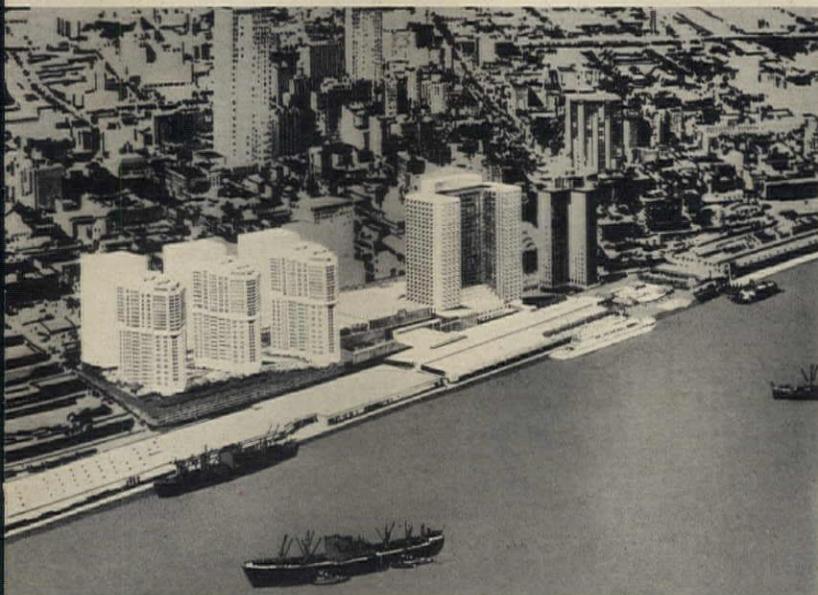


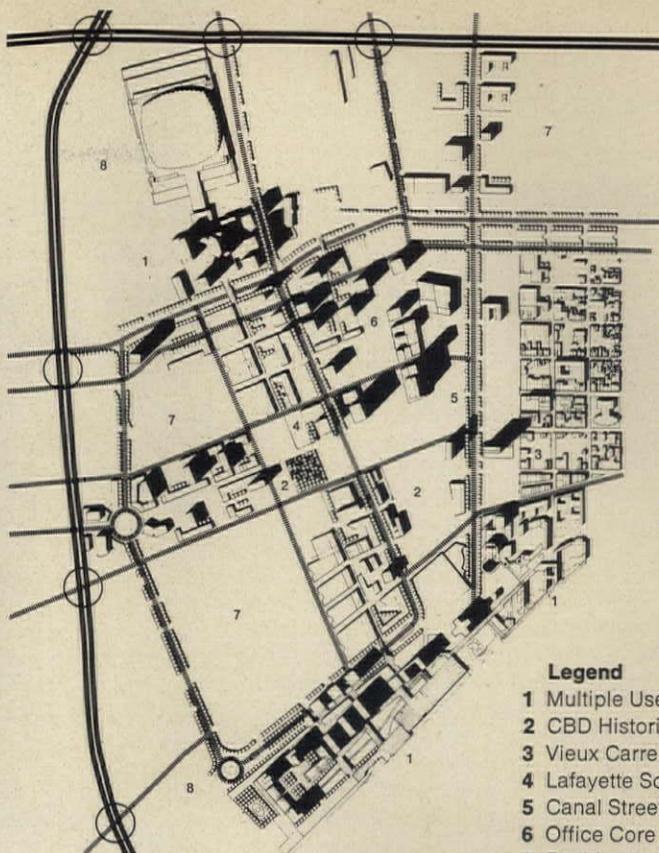
Photo: Jan Corash

## New Orleans

# Zoning new life at the levee



Riverfront Center project by Hellmuth, Obata & Kassabaum with Neuhaus & Taylor.



Urban design framework concept.

### Legend

- 1 Multiple Use
- 2 CBD Historic District
- 3 Vieux Carre
- 4 Lafayette Square
- 5 Canal Street
- 6 Office Core
- 7 Residential
- 8 Peripheral Parking

The New Orleans waterfront presents a problem: first, both the Mississippi River and the levees that separate it from New Orleans are actually higher than the street level. Normally it should be strangely easy to see water as one strolls around, say, the Vieux Carre. But the 14-ft-high levees block the view. (Nevertheless ships can sometimes be seen to float above street level.) Besides a rather intricate system of drainage and levees, New Orleans has another point to consider: its port is the second largest in North America. Marine trade is the city's main economic source of income, even ahead of tourism. Nevertheless, the shift to containerized shipping could make many of the current wharfs and piers obsolete. The Dock Board is studying the possibility of moving many of the cargo facilities to a nearby channel.

Despite these inherent obstacles to bringing back the riverfront to New Orleans' residents, numerous architecture and planning proposals have addressed these opportunities. Some in the past would have effectively sealed off the river from the downtown for good.

A Riverfront Expressway between the Vieux Carre and the waterfront would have imposed a formidable barrier had not citizen protest led to its defeat in 1971. Yet this land, where railroad tracks and warehouses once sprawled, is still up for grabs. Already the Trade Mart complex—a 33-story office tower built in 1969—has established a certain precedent for development, especially high-rises. The projected Riverfront Center by Hellmuth, Obata & Kassabaum and Neuhaus & Taylor, a 23.3-acre complex of hotels, condominiums, and offices, is, judging from plans presented last year, another "slab city."

And yet New Orleans has responded to its "Houstonization," following the construction of the Superdome there in 1973. In 1974, the City Council voted to stop destruction of buildings

downtown (many of them historic) until it could arrive at a rational and responsible development plan. Now they have extended it through 1975, and have hired the firm of Wallace, McHarg, Roberts & Todd (with Haines, Lundberg & Waehler as planning consultants) to develop a growth management program.

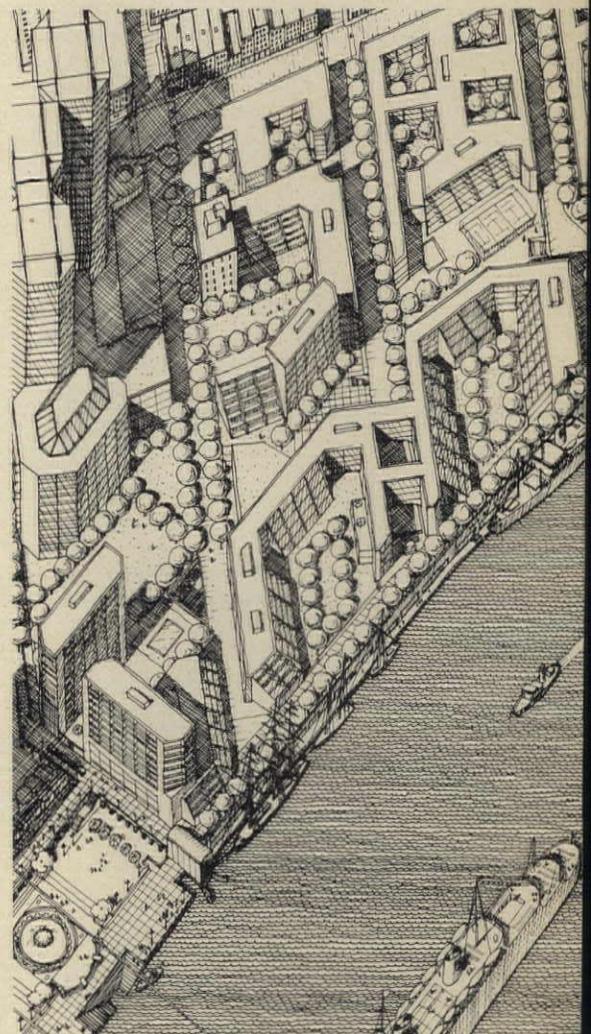
In a report now in progress, WMRT are proposing a general downgrading of the floor area ratio in the central business district and near the waterfront, which now climbs as high as 20—or 24 including parking. The new ratio is being discussed now—originally it was a maximum of 14.

So far as the waterfront amenities are concerned they have suggested arcades, build-to lines (see New York's zoning, p. 48), and "visual corridors" or sight lines to the waterfront. A 50-ft esplanade would stretch along the river, at grade when possible, and crossing the roofs of port facilities when necessary, if conflicts with the Dock Board can be resolved.

A "river boulevard" to move vehicular traffic locally is also being studied: A shuttle bus system would connect the riverfront with perimeter parking lots to supplement the road. Open space along the water would link to a system of open spaces, parks, and pedestrian paths in the downtown areas.

To finance the entire plan, the city might create a special tax district, using the added revenues to issue bonds to pay for public works or buy façade easements in historic districts. WMRT urges the creation of a nonprofit development corporation to coordinate the public and private efforts.

Unfortunately, however, if the plan takes effect it will not happen in time to regulate height development along the waterfront west of the Trade Mart. The Rivercenter was a "given" before any zoning plans were underway, and a 30-story hotel is in construction now.



Planners' schematic proposal for area in front of Vieux Carre.

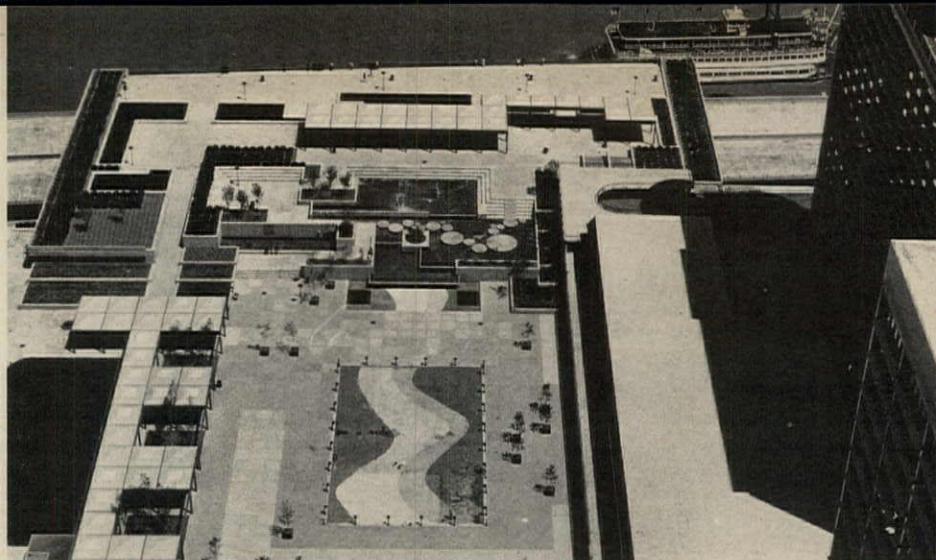
## Louisville

### Decking over

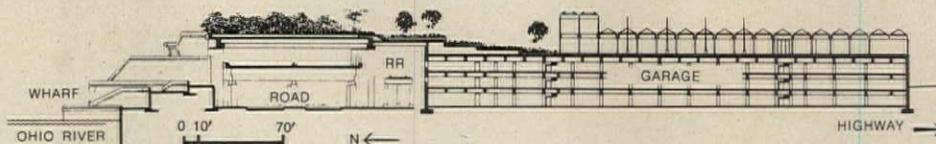
Louisville had problems of wanting to keep its railroad lines operating by the water's edge, placing an interstate there, while still opening the waterfront to recreational use. So the city decided to deck over these transportation routes with a plaza and belvedere on top of a 1600-car garage. Called the Riverfront Square, the plaza itself is small (6.3 acres), yet it is a good start for an effort that should extend up and down the river. The plaza itself forms one-fifth of the River Front Redevelopment Project, a 40-acre urban renewal area aimed at revitalizing the downtown core. In the immediate vicinity of the plaza, three major new structures—a hotel, a 40-story office building (by Harrison & Abramovitz), and a 6-story office building (by The Office of Mies van der Rohe)—have been built. High-rise apartments are projected for the southwest part.

When the project was conceived, then-current thinking led to tearing down under-used buildings. Today however, old warehouses westward along the waterfront are being saved and renovated as part of the West Main Street Historic District (just added to the National Register).

The basic architectural concept for the Riverfront Plaza was developed by Louisville architects Lawrence Melillo & Jasper Ward for the city of Louisville's Riverfront Commission with Doxiadis Associates as consultants. Engineers



Section of plaza and belvedere over garage and transit lines.



Riverfront Plaza showing hotel and office building on right.

Senler, Campbell & Associates solved the problems of building the poured concrete municipal parking garage to incorporate a new floodwall within the garage structure, realign the rail line, bury the transmission lines overhead, and build the platform for the belvedere to contain a pool/ice skating rink.

The Riverfront Commission was established in 1966 to administer the financing, and the now quite successful development and operation of

the project. The garage and plaza were paid for by mortgage bonds secured by parking meter revenues, the hotel lease, and garage income. Office building owners bought the land from the Urban Renewal agency, the hotel leased land. Still, economics prevented the full conclusion of the project: the physical tie-in of the platform with the wharf below, originally conceived (section) in the form of an outside stair. Now pedestrians go through the garage.

## Portland

### An esplanade instead

Photo: Ed and Carol Hershberger



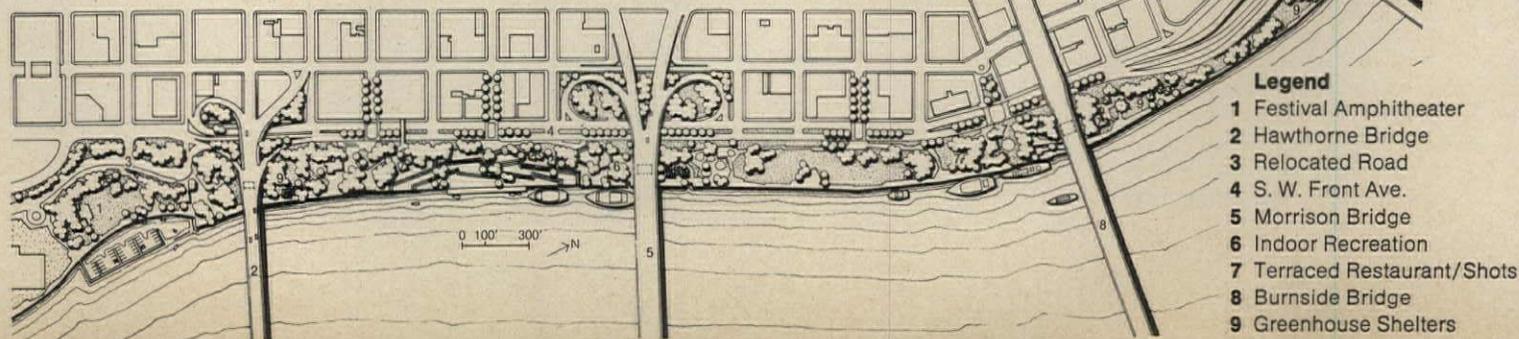
Willamette River's waterfront, soon to be an esplanade.

Not too long ago, (last year in fact) Portland had a four-lane highway separating its waterfront from downtown. No longer. In May 1974, the city of Portland (in concert with the state of Oregon) closed Harbor Drive, a transportation route along Willamette River. Wolff, Zimmer, Gunsul, Frasca Partnership has spent the last year designing and planning a waterfront esplanade; final plans are expected to be ready this month. With the aid of fast-tracking techniques, certain key elements could go into construction shortly.

Closing this expressway represents only one step (a significant one to be sure) in bringing the waterfront back to the people. Land around the waterfront is also being analyzed for its development potential in revitalizing the downtown. The Portland City Planning Commission issued a Downtown Waterfront plan in 1968, and last year the Downtown Waterfront Urban Renewal District was created. The 284-acre district seeks not only to get rid of blight, and redevelop run-down properties, but also to conserve and rehabilitate where possible, and establish land uses appropriate to the waterfront. The plan for the district still to be adopted by City Council, does not seek to acquire properties on a larger scale,

but will upgrade and provide public improvements to attract new development. Incentives, such as tax increment financing will be implemented—a plan in which taxes on the difference between assessed value of original property and new value go to the urban renewal agency.

The waterfront proposal contains planning guidelines as well as urban design elements (pedestrian/vehicular separation and arcades for rainy weather. Furthermore, "development regulations" are now being drawn up by city planners Lingston & Bleyney, Skidmore, Owings & Merrill's Environmental Study Group of Portland, and Allen, McMath, Hawkins, architects. They call for establishing floor area ratios (the lowest being 4 FAR nearest the waterfront), with bonuses for amenities or air rights transfers from historic sites. Height limits and sight lines are also proposed. Currently citizens groups are reviewing the proposal. Public interest in the waterfront has spurred three other waterfront developments, including conversion of warehouses into offices and shops, and the creation of new housing.



#### Legend

- 1 Festival Amphitheater
- 2 Hawthorne Bridge
- 3 Relocated Road
- 4 S. W. Front Ave.
- 5 Morrison Bridge
- 6 Indoor Recreation
- 7 Terraced Restaurant/Shots
- 8 Burnside Bridge
- 9 Greenhouse Shelters

## Design and conquer

In contrast to Boston, Baltimore's Inner Harbor takes a more aggressive approach to the waterfront. While it retained several old wharf structures, Baltimore's form of urban renewal in the 1960s basically involved taking an abandoned harbor, clearing land, and starting its planned development almost from scratch.

Inner Harbor's history goes back to 1959 when the now famous Charles Center urban renewal project began in Baltimore's downtown area. The apartment, office, residential, and cultural complex (now almost complete) turned attention to the historic harbor basin where the city of Baltimore began. The 20-year redevelopment program for 240 acres around the harbor was announced in 1964, and Wallace, McHarg, Roberts & Todd of Philadelphia was hired to execute the master plan. By now, the first stage, Project I on 95 acres of land, is taking definite shape. Charles Center-Inner Harbor Management Corp., a nonprofit private firm administers the development for the city's Department of Housing and Community Development. Essentially the corporation negotiates and selects developers, supervises design and construction,

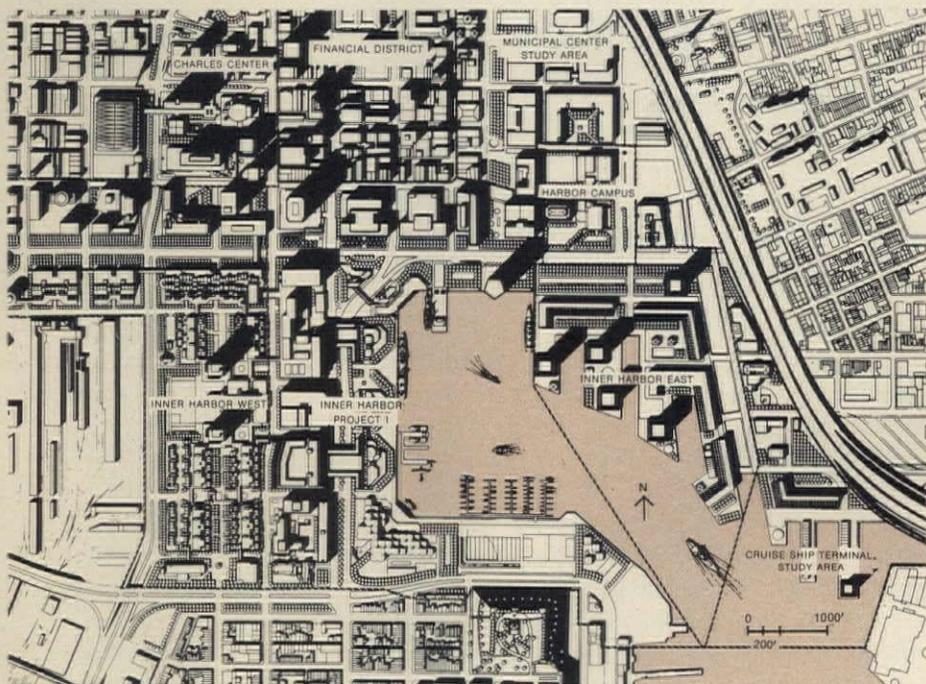
and coordinates agency/developer interaction.

While four existing buildings remain—the News American building, McCormick and Co. spice plant, Christ Lutheran Church, and the Baltimore Copper Paint Co.—the rest are buildings by an array of architects including I.M. Pei, Edward Durell Stone & Associates, Vlastimil Koubec, Pietro Belluschi, Emery Roth & Sons, Don Hisaka, and Hellmuth, Obata & Kassabaum. The late Louis Kahn had been commissioned to execute a large hotel-office complex for this first phase, but now a new developer has been selected who has just arranged for RTKL to take over design in place of the late Kahn. Meanwhile, Cambridge Seven is designing an aquarium along the southern edge of this harbor.

The second phase of Inner Harbor, now in early construction stage, will be located on 68 acres south of Charles Center and west of Project I. The project team is composed of Shelter Development Corp. of Minneapolis, the Foundation for Cooperative Housing of Washington, D.C., Kenzo Tange, and Urtec with Parker Klein & Associates of Minneapolis and architects Cochran Stephenson & Donkervoet of Baltimore

along with landscape architects Dan Kiley & Partners. The project calls for a 1500-2000 unit apartment complex, although financial problems need to be resolved. Preliminary studies are being conducted for a convention center by Naramore, Bain, Brady & Johanson of Seattle.

Wallace McHarg Roberts & Todd—master planner for the area—is in charge of open space, plazas, pedestrian paths, and parks on top of bulkheads at Inner Harbor. A continuous walkway system, elevated above the street will tie Charles Center to the Inner Harbor projects. WMRT designed the plan so that the new buildings will frame the views to the inland, allow visibility to the water. Most of the office space is concentrated on the north part of Inner Harbor I, rather than being dispersed throughout. Their plan has been followed fairly closely in the first phases as far as placement of the buildings, basic uses, framing the harbor, and bulkheading is concerned. Some of the plan could easily be violated with regard to visual access to the water—not a mandatory part of the plan. Yet, the architectural execution of some projects might do more to thwart original intentions.



Site plan (left), aerial view of Inner Harbor Project (below). Elderly housing (Christ Church Harbor apartments) by Don Hisaka (above).



# A Fear of filling?

**A number of urban design schemes call for filling and decking waterfront edges to create new land. City planners are dealing with the anticipated development pressures through the use of special district zoning.**

In New York City—especially Manhattan—all the tensions and conflicts roiling around waterfront development uses converge. Manhattan as microcosm. For here at the edges of the island, after shipping and industrial activities have moved elsewhere, opportunity for new uses sails in. On an island where scarcity of land continually forces prices, density, and physical form upward, new land can be created from landfill or decks between the bulkhead and pierhead lines. Here at last people can have open space for promenading, picnicking, bicycling, and boating. Here the city can build housing to attract the middle classes—and their taxes—back to New York. Here city planners can introduce a round-the-clock vitality to commercial districts. And here developers see additional means of making money. But wait a minute. Can you do it all, down by the riverside?

The city can't afford to convert land under water and piers to parks, and needs dollars from the developer. The developer can't make money from open space, or even housing. Yet open space and housing are greatest in demand. If the city makes a deal with the developers, they then must allow high-density-, high-income-producing (often low social value) ventures such as office buildings on cheap land. It's the old vicious circle with a new twist: office buildings, formerly desirable because of their revenues, now are in great supply.

New York's response to the waterfront situation has been to lease underwater land to the developers on the condition that they build decks or fill in land. Although the developers foot the bill, they nevertheless obtain land for only about \$40 per sq ft (the cost of constructing the deck or fill) plus paying rent to the city. Compare this figure with the usual \$100 to \$250 per sq ft inland. Some argue this low price is still about \$35 per sq ft too high for low-, moderate-, or even middle-income housing.

Rather than formulating a comprehensive plan legislating priority of uses, densities, and amenities that should occur

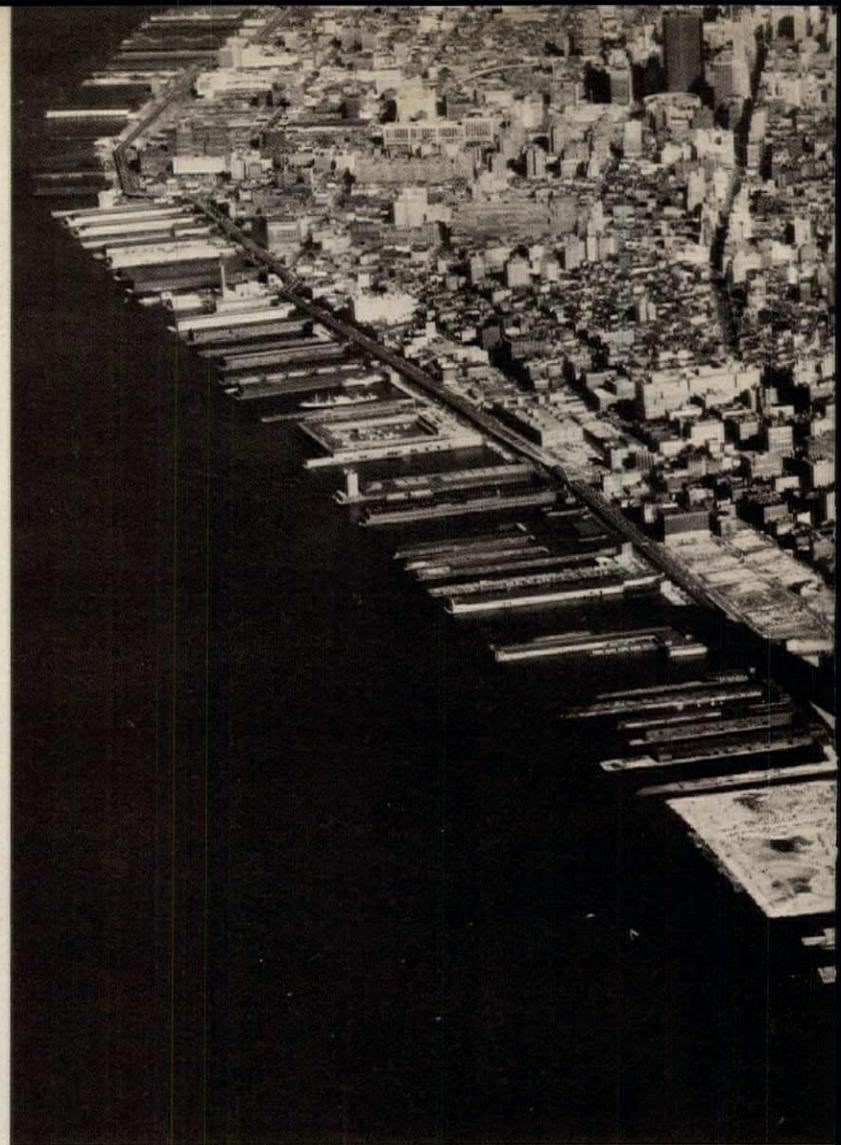


Photo: Skyview

on all of the 578 miles of waterfront in New York City's domain, or Manhattan's 28 miles, New York has opted for special district zoning. Special zoning districts have evolved to accomplish certain planning and design objectives within a limited area. City planners see special district zoning as the most workable method available for dealing with new large-scale multi-use developments in an area that may total 100 acres in size. Through this kind of zoning, land uses, building size, and population densities will not only be regulated, but other goals important for waterfront development will be achieved: continuity with the existing city, efficient land use, contact with the waterfront, improved pedestrian and vehicular circulation, sufficient retail and services, new housing. Since landfill or decked waterfront sites lack mapped streets, the basis for normal height and setback regulations, performance standards have been substituted. Therefore by leaving the streets unmapped, planners hope to give the developers some flexibility while still requiring that they meet the city's criteria for waterfront amenities.

A heavily publicized legacy of Mayor Lindsay's years (1965–1973), the first special zoning district was created in 1967 to bolster Manhattan's theater area. Under Lindsay's newly created Mayor's Office of Lower Manhattan Development (OLMD) and Office of Midtown Planning and Development (OMPD), zoning "bonus" incentives were stretched to include a whole array of pedestrian-oriented amenities and uses that reinforced the special character of the designated district. Higher floor area ratio or greater



Aerial view taken from lower Manhattan shows Hudson River waterfront on the left, and East River waterfront on the right.

bulk on the site were used as bait (a situation P/A will cover in a forthcoming issue).

At this time not enough has been built of the early special districts to ascertain if they can really accomplish their stated intentions. (Incentive zoning works best in times of economic prosperity.) The few isolated examples of incentive zoning that do exist (office buildings with theaters, through-block connections, and shopping arcades) indicate the often unexpected gap between a dazzling concept and its disappointing application. When it comes down to it, a sense of place depends on more than legislated space and use allocations and dimensions. They can only guarantee the minimum ingredients. It's often hard to make sure that the rest—architectural design quality, lighting, landscaping, and way they are all put together—achieves the image planners had in mind when the developer leaves.

The special zoning districts for the waterfront could reveal similar pitfalls. Some districts have a lot of teeth, with the zoning "incentives" made mandatory; others give the developers too many bites out of the big apple. The question remains to be answered: *is* special district zoning the best way of dealing with the waterfront—of fitting in all desired uses, of satisfying social needs, of meeting economic (and political) demands? While it is too soon to tell, it is best *not* to blithely assume that special zoning districts will guarantee paradise. While this kind of strategy allows planning and development to proceed realistically, incrementally, accommodating change and new needs as they happen, it also has more subtle dangers. The special district can eas-

ily become a small battleground where priorities are shifted around and good intentions chipped away, with the hope that the next special district will accomplish what was lost in this one. Each district (its own "microcosm") could turn into a series of "lost victories."

The following discussion of four special districts highlights the complexities these methods embrace and the various factors that influence forms such zoning takes. In one case, Battery Park City, the city was pitted against the state in attempting to assure the waterfront's welfare, so to speak. In another case, Convention Center and Clinton, the city was caught between two interest groups, one clearly out for economic gain (which could benefit the city); the other, preserving the community. The city wants both, and has used special zoning districts for a combination of the two. In another case, Manhattan Landing, the city has developed special district zoning to tie together a number of variegated projects into a cohesive whole. In this case, they more or less call the shots, but it may take much longer for these clearly desirable ends to be achieved through interaction between public and private sectors. Finally, in the fourth example, with a highway proposal that may turn into a special district, the city again is attempting to mediate between numerous groups—trying to get a little something for everyone (most of all an interstate).

In each case, advantages of special zoning will not be visible soon. Meanwhile landfill is assumed as desirable—as it always had been in New York. Whether it will remain this way depends on that planning. [Suzanne Stephens]

## New York: Battery Park City

### Visions of Venezia

In order to see the waterfront situation in its proper perspective, it might be useful to retrace a few soggy steps. Almost 10 years ago, New York received its first major infusion of waterfront *weltanschauung* with the publication of the Lower Manhattan Plan (P/A Aug. 1966, p 128). As cargo activities changed from breakbulk to containerized shipping, they began moving off Manhattan. Meanwhile, certain moves had already been made to grab waterfront locations (Waterside Plaza—Manhattan's first waterfront residential project—and the U.N. School alongside were in the design stages).

The Downtown Lower Manhattan Association under the guidance of David Rockefeller, spurred the city to come forth with the 1966 Lower Manhattan Plan. Basically it was designed to encourage business development, create 40,000 units of new housing, and inject lower Manhattan with round-the-clock life.

The plan, drawn up by Wallace, McHarg Roberts & Todd, Whittlesey, Conklin & Rossant and Alan M. Voorhees, integrated the waterfront into this scheme in a vision worthy of Venice. Small coves and marinas were surrounded by spacious plazas, which in turn were ringed by low-rise terrace housing. The highway, so long severing Manhattan from its shoreline was to be buried underground; pedestrian paths linked the business core with the waterfront—allowing both physical and visual access. Plazas for residents and public abounded, with parking and road connections below.

Coincidentally (or more than coincidentally for those who believe in sibling rivalry) Nelson Rockefeller, then Governor of New York, appeared on the scene with a plan of his own for one part of Lower Manhattan, Battery Park City. A 98-acre landfill project on the Hudson, Battery Park City was designed by Rocky's own *architectes du roi*, Harrison & Abramovitz—also architects for Albany Mall. While Battery Park City contained the right kind of pedestrian uses, vehicular separation, housing, and offices, it bore no resemblance to the Lower Manhattan Plan. The project was definitely slab city—comprising 16 medium-rise slab à la the famous corrupted

Corbu formula.

It was hard for the city to resist Governor Rockefeller's proposal. He reportedly threatened to block certain legislative and budgetary programs New York needed if the City Planning Commission didn't approve Battery Park City.

The city saw Rocky's point. In 1968, the Battery Park City Authority, a public benefit corporation empowered to float its own bonds, was created by the New York State legislature. In 1969 a compromise scheme was released by city and state, drawn up by the offices of Harrison & Abramovitz, Conklin & Rossant and Philip Johnson, & John Burgees Associates. Calling for a cluster of three office towers (40, 50, and 60 stories) totaling 5 million sq ft to anchor the south part of the site, the plan also projected 15,000 dwellings to be snugly fit into low- and high-rise towers in a tight geometrical grid.

While the plan still retained some of the low-rise terrace housing of the 1966 Conklin & Rossant plan, along with plazas, coves, esplanades, a depressed highway, and vehicular/pedestrian separation (even a monorail), certain other things were lost. Towers now dotting the landfill area blocked views of the water from inland—even down the streets that had previously offered visual access to the waterfront. As one of the planning commissioners, Walter McQuade pointed out, the base on which residential and commercial buildings would be built would be three stories high—a more formidable barrier than the West Side Highway. Gone too was actual air rights construction over the highway.

### Will the real Battery Park City rise?

In an innovative move, the 1969 master plan for Battery Park City was actually written into the lease between New York City and Battery Park City Authority. The master plan included site maps, charts, density controls, traffic patterns, just about everything except architectural specifics. Instead, an architectural review board would pass recommendations on the individual developer projects.

Because the plan was too rigid and too risky for a developer to want to touch it, BPCA had to have the lease rewritten in 1973 after it had sold the bonds and lined up developers. Some planners now confide that OLMD had wanted it that way—hoping that when the Authority came back

to rewrite the lease OLMD would be in a better bargaining position.

### Trade-off time

By 1973, OLMD was in the midst of designing a special district—Manhattan Landing—on the East River. In rewriting the lease and plan for Battery Park City, OLMD suggested that the city would also create a special zoning district for Battery Park City. It would include many of the same controls as Manhattan Landing: pedestrian/vehicular separation, an enclosed shopping mall, a certain allotment of public open space, a riverfront esplanade.

A key element of the special district plan was the introduction of visual and physical access to the waterfront as a mandatory condition. Visual corridors—volumes of open space—would extend from Broadway to the water. Pedestrian connections over lower Manhattan's elevated highways would tie the waterfront projects (somewhat) to the existing development behind. While the pedestrian connections occur on the second level, city planners point out that the zoning inland now encourages the gradual development of a second-level pedestrian system extending from Broadway to the waterfront. Broadway itself is about 32 ft above sea level and thus was used as the reference elevation for height obstructions in the visual corridors. In addition, build-to lines, defining planes created by the buildings' bulk, were also written into the program.

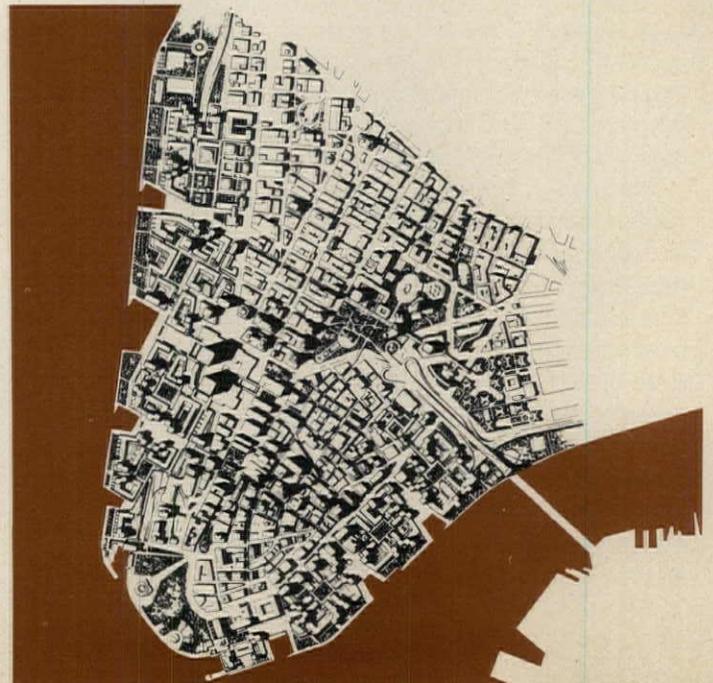
The deal was that if the Battery Park City Authority would accept all these urban design controls, the planning commission and the Board of Estimate in return would suspend its review and authorization procedures over changes made in the master plan. By then the Planning Commission had evolved a certification procedure based on performance standards: as long as Battery Park City would stay within a checklist, drawn up by OLMD and consultants Haines Lundberg and Waehler, BPCA need not chance delays by review.

When the lease was rewritten, the rough part was getting the Authority to accept *all* the zoning district provisions of Manhattan Landing. The BPCA led by Charles Urstadt, apparently wanted Battery Park City to be able to compete with Manhattan Landing for the housing market. But

Drawings: OLMD

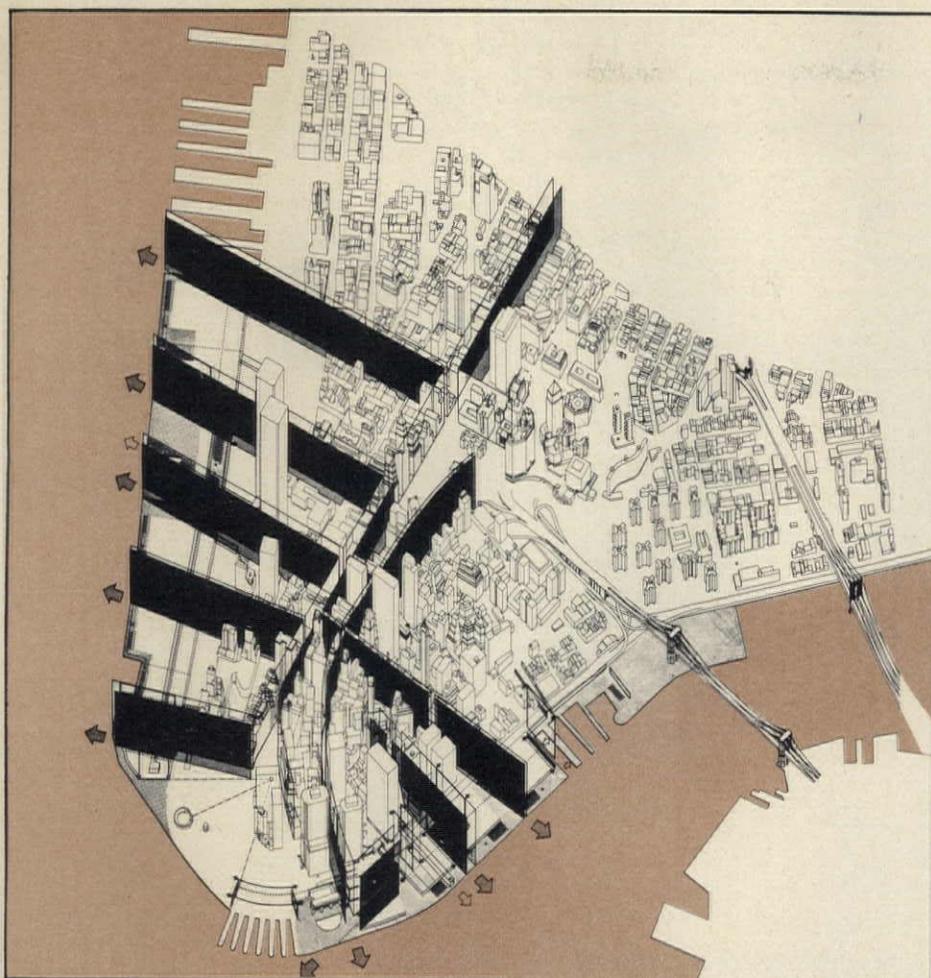


Manhattan, especially its lower half has a long history of landfill.



The 1966 plan for lower Manhattan established an ideal image.

Drawings: OLMD



Special district zoning calls for visual corridors to extend inland to water.

Urstadt was not willing to restrict parking to 25 percent of the dwelling units as the Landing required; he insisted on 45 percent for Battery Park City. The esplanade at Battery Park City averages 70 ft wide, instead of Manhattan Landing's 75-100 ft. (Yet Battery Park City's landfill is deeper; 1000 ft between bulkhead and pierhead lines compared to Manhattan Landing's 500 ft.) Public open space is 17 acres at Battery Park City; at Manhattan Landing, there will be 30 acres.

### Mae West knew

Dimensions and placement of amenities may have been built into the Battery Park City, but there is still the problem of execution. As Mae West must have put it—it doesn't matter what you do, it matters how you do it. Small wonder New Yorkers expressed concern when Lefrak Organization, Inc. and Fisher Brothers agreed last year to jointly develop the first 5800 apartments out of a possible 16,000, plus hotel and retail facilities at Battery Park City. Lefrak, after

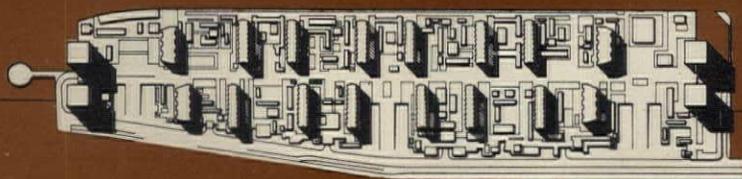
all, with house architect Jack Brown, had designed and built lugubrious Lefrak City. Then Harrison & Abramovitz again came on the scene: They were hired to act as master planners and design consultants for the architecture. This addition hardly set any one's mind at rest who had recently paid a visit to Albany Mall. Early BPC schemes hardly looked better: showing 10 towers 30-some stories high to be built in the first phase alone. Finally the Authority hired Lawrence Halprin to come in and execute the landscaping. This decision didn't bother architectural watchdogs. As one comments "physicians bury their mistakes; architects hire Larry Halprin to plant vines over theirs."

### Battery Park City today

**General programs:** 92 acres along the Hudson River from Battery Park to Reade St.; 6 million sq ft of office space and related retail space, 15,000 dwelling units; a 750,000 sq ft shopping center. Seventeen acres in the project will be devoted to open space for the public; 30 acres for the residents. Up to 30 percent of the housing may be luxury units; of the remaining 70 percent, financed under the Mitchell-Lama limited-dividend middle-income program, one-fifth must be low income (14 percent of the total).

**Status now:** 70 acres of landfill have been put in place, of which 24 acres were supplied by the World Trade Center excavation; the rest by dredging operations in New York harbor. The office towers, to be developed by Helmsley Spear, have been delayed, but Battery Park City Authority states that piles are being sunk for the first 1600 units of Mitchell-Lama housing in Pod 3 (see site plan). Despite Fisher Brothers' and Lefrak Organization's letter of intent to build the first 5800 units, at this point they are acting only as construction managers. (The first pod is middle income, the remaining 4200, luxury.) For the first three 34-story towers and three low-rise units being built, only 8 acres of public space and 3¼ acres of private residential space will be developed. The 750,000-sq-ft shopping mall and two of the pedestrian bridges over the West Side Highway are being planned, although the shopping mall awaits satisfactory developer arrangements.

Pedestrians will go up stairs on the inland side of the highway (the second level system there



Governor Nelson Rockefeller's plan of 1966 for Battery Park City.



Battery Park City plan of 1974 showing First Phase (left) Second Phase (right).

- 1 Office towers
- 2 Residential buildings
- 3 Public open space and esplanade
- 4 Shopping center
- 5 Cultural/recreational
- 6 Marina
- 7 Helipad
- 8 Hotel
- 9 Schools
- 10 Foot bridge (typical)

## New York: Battery Park City

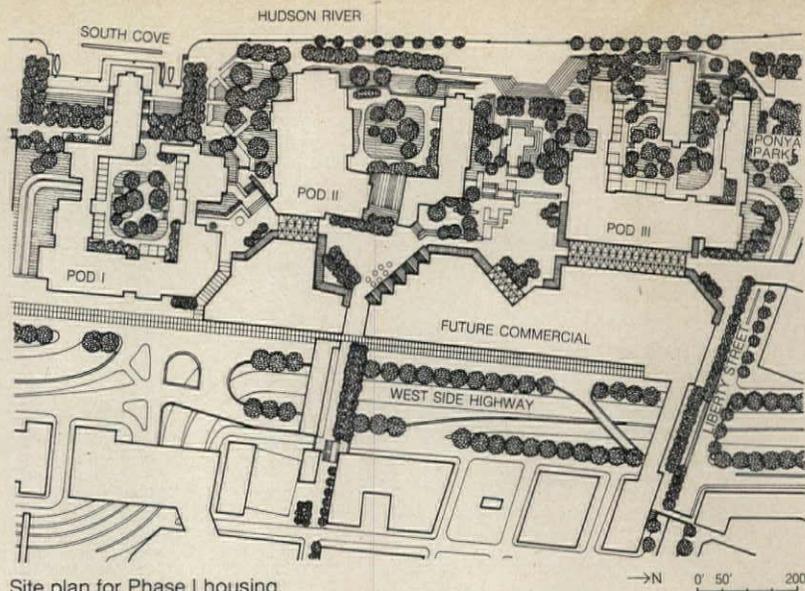


Current design for public plaza, Pod III.

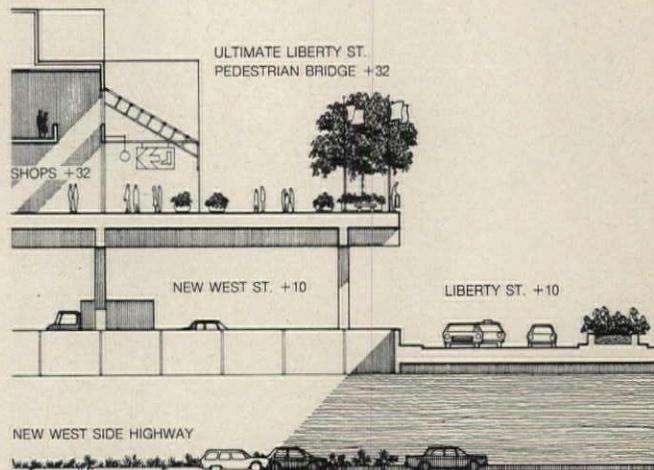
hasn't been built yet) then will arrive at Battery Park City on a level 32 ft above grade, and from there descend gradually to the water's-edge esplanade 7 ft above the Hudson (model photo, top). Underneath will be parking at drop-off level, 14 ft above grade, where the residential parks will also be located open to the sky (right). Other gardens for low-rise townhouses will occur at the plus 32-ft level. The enclosed shopping mall crosses through the visual corridor at Liberty St., although it is required to have a transparent roof to permit visibility. (All of this assumes, of course, that the West Side Highway will be depressed when rebuilt; if not, that too obstructs sightlines). Harrison & Abramovitz, with Jack Brown and Irving Gershon are designing the first group of buildings. The buildings (below) show a more concerted effort towards interesting massing, façade articulation, etc. To cut costs, the buildings will be erected by a concrete shear wall and tunnel form of construction.

**Financing:** The Battery Park City Authority was empowered by the New York State legislature to lease the site from the city for 99 years, then float up to \$300 million in bonds to pay for pier removal, landfill operations, public infrastructure. Then they can sublet the land to developers, charging them ground rent and a tax equivalency rate. This money is used to pay debt service on bonds; whatever is leftover is paid to the city. By the time that BPC goes into full swing, the city is supposed to receive a minimum of \$12 million yearly in lieu of taxes.

Meanwhile, the state legislature has authorized \$400 million in bonding capacity for the Authority to sell bonds and loan developers up to 95 percent of the mortgage for the Mitchell-Lama units. But since the BPCA basically has the same kind of state backed "moral obligation" bonds as the New York State Urban Development Corporation (P/A, Apr., 1975 p. 32), its financial powers remain in doubt. The Authority runs the risk that the state will pass the currently proposed legislation prohibiting the sale of these bonds (even though BPCA's are tied to specific revenue projects, unlike the UDC's). While BPCA claims it has the money in its construction fund to build the first cluster of housing, it also asserts that if the legislation is passed, it won't be able to pay back the purchasers of the first \$200 million worth of bonds. Then the BPCA still needs \$100 million in bonding to continue landfill operations and seeks \$80 million for construction. So the financial (as well as architectural and landscape) picture, in the last analysis, remains a little fuzzy.



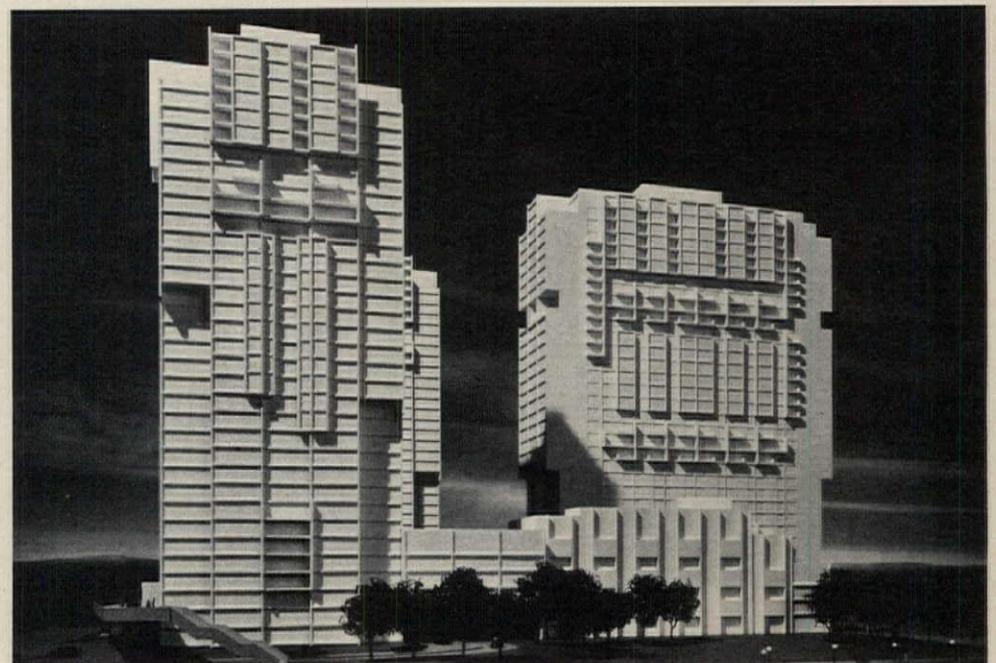
Site plan for Phase I housing.



Section at Liberty Street and (proposed depressed) highway.



Section showing relation of interior park and internal road.



Harrison & Abramovitz's evolving design for Pod III.

Drawings: Lawrence Halprin Assoc.

Photo: Louis Checkman

## New York: Manhattan Landing

### Another version of the vision

One of the most promising (if ever completed) waterfront schemes is undoubtedly Manhattan Landing, a 110-acre deck and restored land development in Lower Manhattan's East River. The multi-use project, stretching from the Ferry Terminal to Manhattan Bridge, resulted from several plans for the area being announced after the Lower Manhattan Plan of 1966. First the New York Stock Exchange leased land under water from the city at the end of Wall St. Then the historic South Street Seaport area was designated as a museum in 1967; next the nearby Brooklyn Bridge Urban Renewal area was adopted the same year. The New York Telephone Company and the Education Construction Fund then worked out a package with the city for a shared school/telephone building site near Manhattan Landing: The telephone company would receive height and setback variances if it paid \$5.5 million for the school's park—to be constructed in the East River.

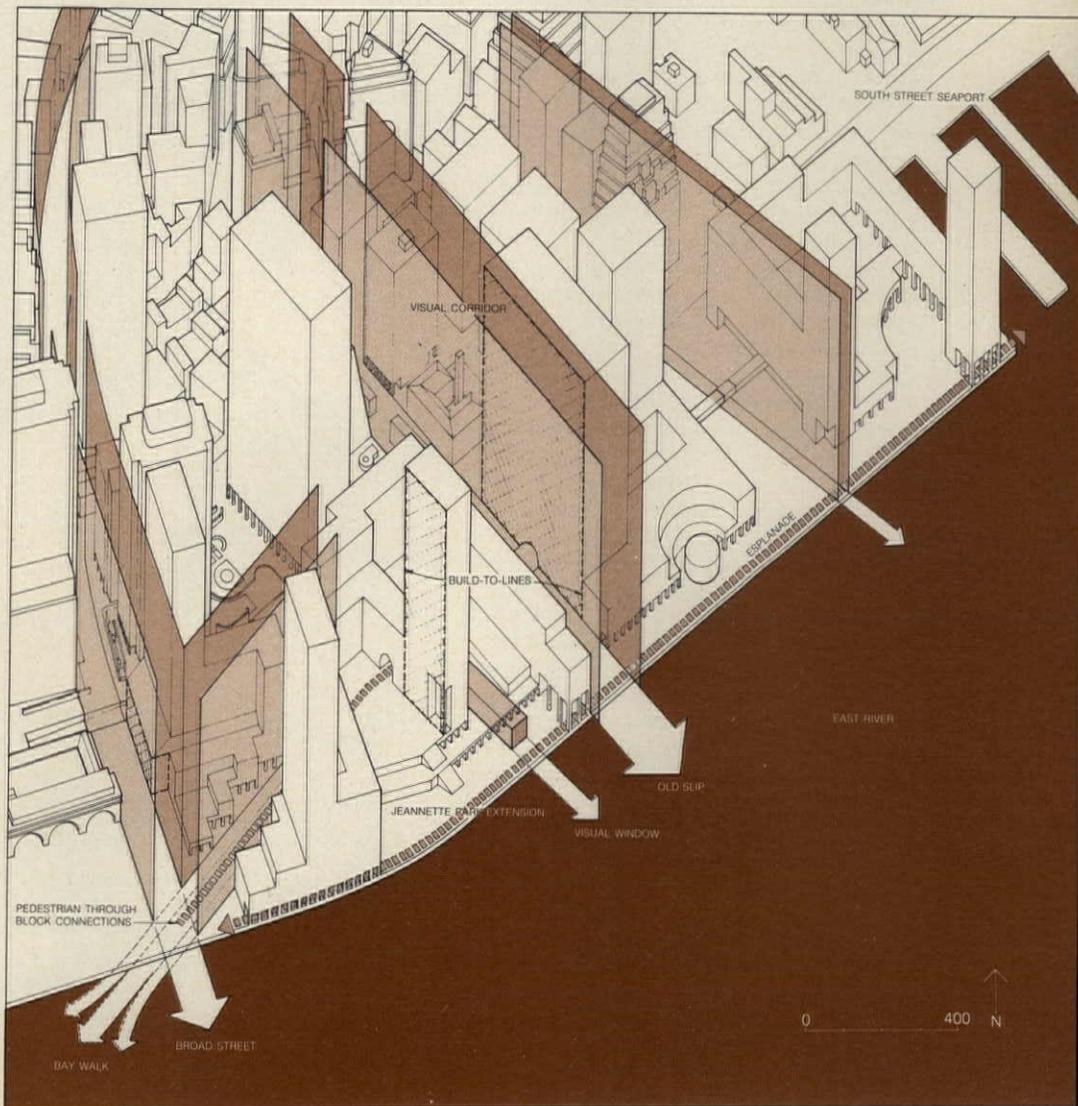
The Office of Lower Manhattan Development could see the value in pulling these projects together into a special district and launching more extensive housing, park, and commercial development there. The city approved the plan in 1972. At the same time it allowed the Special South Street Seaport District to transfer development rights to nearby sites to encourage preservation of the historic low-rise buildings.

Basically Manhattan Landing will differ from Battery Park City, not only in its inclusion of a historic seaport within its confines, but also in the range of urban design controls. Thirty acres of public open space are required, for example, and the minimum width for the esplanade is 75 ft. Arcades and loggias with and without shops will be included. (Manhattan Landing doesn't mandate an enclosed shopping mall.) As in Battery Park, office space will be kept to a floor area ratio (FAR) of 15 except for the air rights transfer parcels for the Seaport (21.6). Residential densities have the high R-10 allowances. (Battery Park City also allows R-10 for luxury; the R-8 or R-9 densities for the middle-income units, along with low-rise units).



Photo: Thomas Airviews

Manhattan Landing will extend along the East River (above) from the tip of the island (left in photo) to north of the Brooklyn Bridge (middle in photo). The controls in the special district could generate the configuration of buildings (below). P/A's composite drawing schematically represents some of OLMD's controls and preliminary design images. Not shown are actual proposed schemes now in the design state.



Drawing: Compiled by P/A from OLMD examples.

Drawing: OLMD



Development parcels in this special district.

## New York: Manhattan Landing

### Manhattan Landing today

*Program:* Six to nine million sq ft of office and related retail space, 6400 upper-middle income units, cultural and recreational facilities, renovated ferry terminal building, and new ferry terminal facilities; renovated piers, vessels, and landmark buildings at South Street Seaport; a new park north of the Brooklyn Bridge for the Downtown Commercial High School project.

Four visual corridors and four visual windows have been required at Manhattan Landing, plus eleven elevated pedestrian connections over the highway. Included is the Jeanette Park extension over the East River Drive. The city has also planned to create pedestrian connections under the highway.

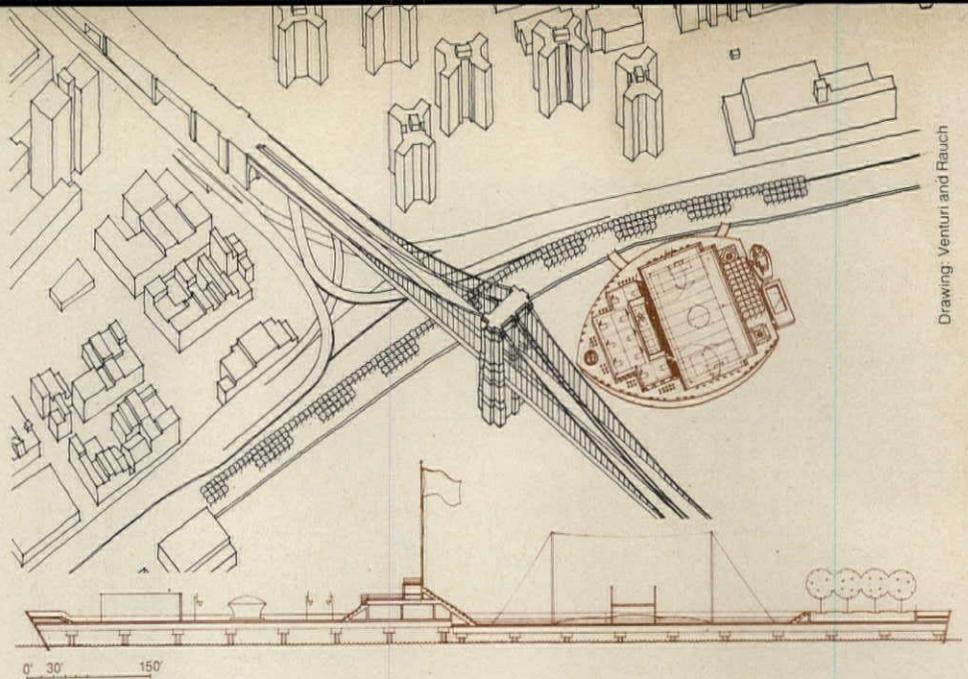
*Financing:* The city, through a development corporation, may lease land under water to developers who will pay for the cost of the deck. Then the city would charge a rent (high for offices, low for housing) and tax accordingly. No state involvement was sought on this side of the island; even the housing for upper middle-income families was to be built without the help of the Mitchell-Lama program. Thus to keep the rents to \$120 per room instead of the \$180 per room now common for conventionally financed apartments, OLMD established some intricate private financing plans—when the economy was healthier.

However, the economy is forcing a more incremental approach toward the Manhattan Landing's development than originally intended. The 4800 dwelling units that Davis Brody Associates were designing last year are in abeyance. Horowitz & Chun were designing 1400 apartments on a 7.6-acre platform over a 1200-car municipal garage. Now they are looking for ways to make the building cheaper.

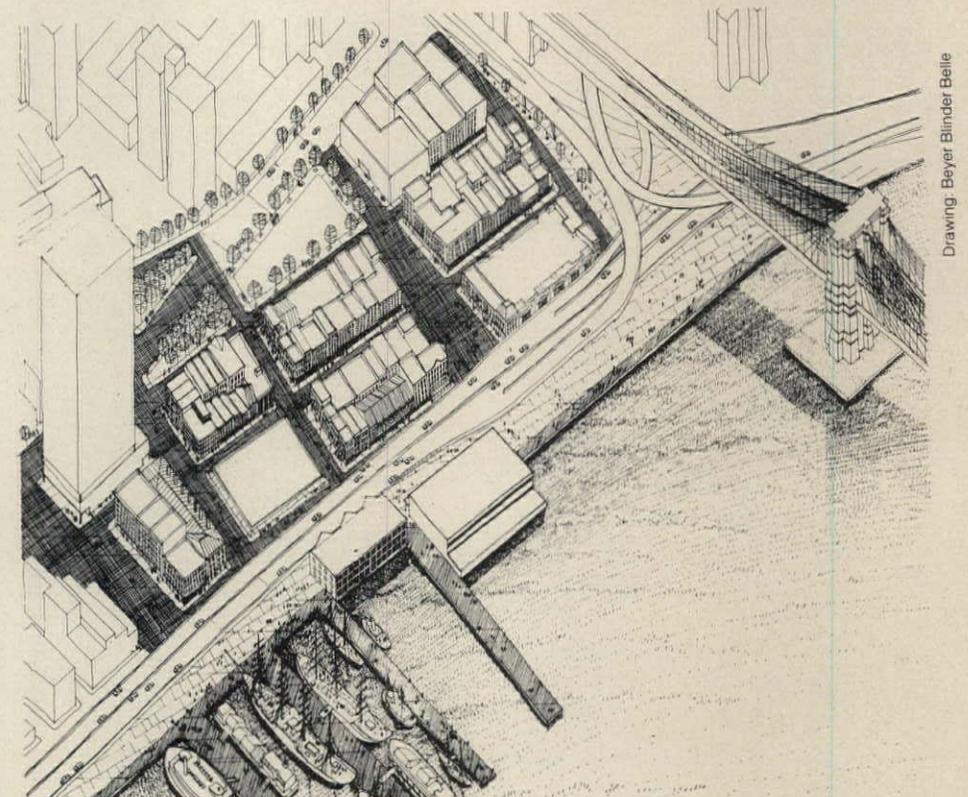
The South Street Seaport has continued its joint development projects with private developers on land leased by the Seaport from the city. Plans have been announced by the Seaport for architects Beyer Blinder & Belle to renovate the block of historic buildings and build a new four-story building there. The seaport area encompasses 11 blocks: the state owns one; a couple are "receptor" areas where the air rights transfer allows up to 21.6 floor area ratio. But right now no one is buying air rights.

The Education Construction Fund park, designed by Philadelphia architects Venturi & Rauch in conjunction with Coffey, Levine & Blumberg should go into construction this fall, since the school and telephone building are near completion. But the 4½-acre park has been reduced in size to 2.6 acres because of a fixed budget. Supported on piles in the water north of Brooklyn Bridge, it will tie to a pedestrian promenade 80 ft wide extending down the river's edge to South Street Seaport.

ECF park/deck north of Brooklyn Bridge plan (top, right) and elevation (below it) shown in its originally larger size. Proposed renovation/construction of parcels in South Street Seaport area south of Brooklyn Bridge (right middle) and Seaport as it looks now (right).



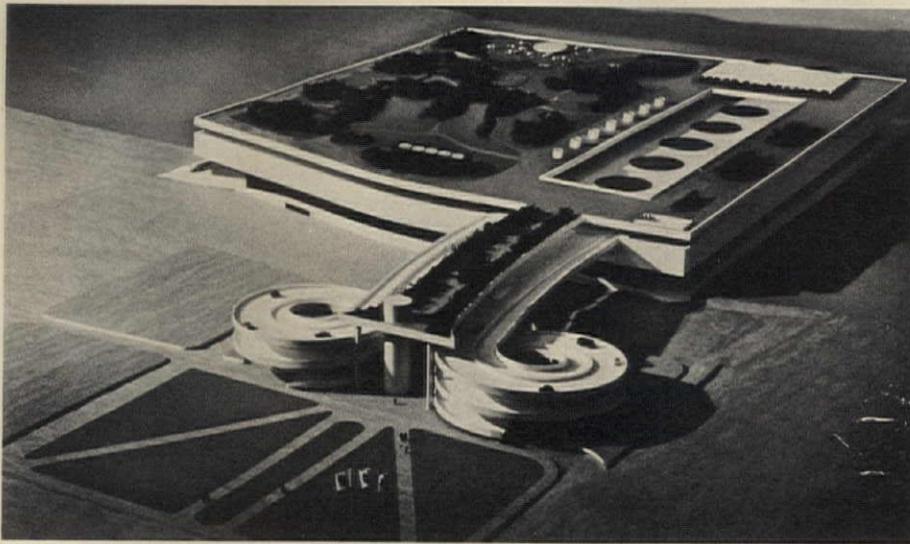
Drawing: Venturi and Rauch



Drawing: Beyer Blinder Belle



## New York: Convention Center/Clinton



Model of New York Convention and Exhibition Center.

### Sold up the river

Although not a multi-use project, and concentrated on only 40 acres of waterfront, the New York Convention and Exhibition Center generated more controversy per sq in. last year than all the other waterfront developments put together. And it deserved it. At that point, the Center, clearly a device to attract tourism to New York's hotels and restaurants, was to be paid for by public money—the city's. To make it more controversial, the Center was planned in an "undeveloped" section of town—west Midtown along the Hudson between 44 and 47 Sts (from the River to Eleventh and Twelfth Aves).

While it seemed as if just about everyone would benefit from added business revenues and taxes, city planners had overlooked one important thing early in the game. The west Midtown plan, of which the Convention Center was just one incremental part, was to slice through the very solid community of Clinton, composed of third and fourth generation Italian, Irish, and Puerto Rican families. Clinton only outwardly seemed to be crumbling (at least some of the buildings there). Inwardly, it proved cohesive. These residents felt that the Convention Center—even in its waterfront location—would bring crowds, traffic pollution, and worse, land speculation to their neighborhood. After all, the biggest land assemblers in the city hadn't bought up 35 percent of the land in their low-scale neighborhood for nothing. A steering committee soon formed. Their U.S. Representative Bella Abzug persuaded Congress not to give the project a waiver of navigability (an assurance given a project built past the bulkhead that the Federal government won't someday claim those waters for its own transport purposes.)

The city agreed to make the community of Clinton a special zoning district, if it would support the Convention Center. A Special Neighborhood zoning district drawn up by Warren Gran Associates was approved by the Board of Estimate last November. The plan (given a P/A Urban Design Award, January 1975, p. 68), calls for preserving the heart of the low-scale residential district by allowing zoning bonuses of up to 2 FAR on the boundaries of the area. This up-zoning on the periphery would allow an esti-

mated 60 percent increase in bulk over existing regulations if developers would renovate existing low-rise buildings or create and maintain small parks in the heart of Clinton.

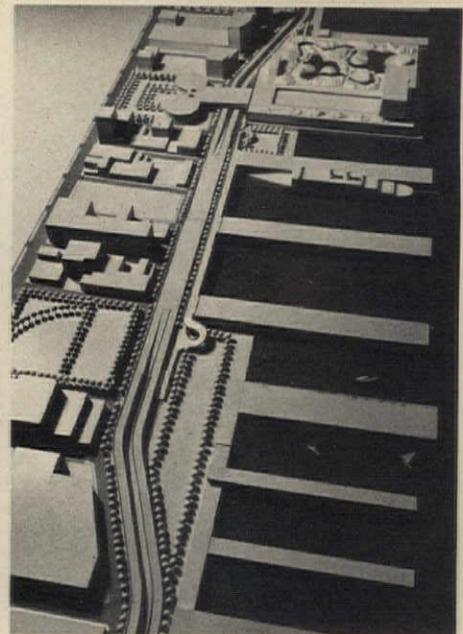
While the special district is now in effect, some day when the heat is on to build again, Clinton may face an advancing phalanx of real estate people eager to challenge its zoning restrictions in court. It should be noted, too, that the 9-block stretch of land along the water west of Eleventh has not been designated for new zoning uses, densities, and bulks in the Clinton plan. The area has retained its manufacturing designation, and could easily be rezoned for high-rise hotels, housing, even offices. Should that happen, Clinton could still be sealed off from the waterfront by a wall of high-rise buildings, as well as be completely surrounded by collars (or ever tightening nooses) of low- to high-density construction. Warren Gran and OMPD hope a riverfront park and promenade can be created along the waterfront. The promenade would tie into two green swaths crossing Clinton at 53 and 46 Sts. Right now, however, any action awaits the resolution of West Side Highway's future.

### The give away

The area in which the Convention Center sits was made a special district too, with some rather interesting zoning provisos. In front of the spiral ramps that take cars to the Convention Center are two full blocks of land (model, top). The corporation has title to this 8-to-10 acres of non-taxable land, and can sublet it to developers. In addition, the Convention Center Special District allows the air rights of unused FAR over the Center to be transferred to these two blocks. The floor area ratio is 6, of which the Center will use about .3 percent. Furthermore, an FAR of 18 (12 if residential) is permitted at a 10 FAR average and subject to public hearings.

### The Convention Center today

*Program:* Slated to be the nation's largest convention and exhibition structure, the building provides a gargantuan 560,000-sq-ft exhibition space. Parking will be contained on the lowest (street) level, while the exhibition space will occupy the second level girdled by a truck ramp so



OMPD's proposed walkway north of Center.

that trucks can drive right onto the floor. A mezzanine level above accommodates meeting rooms and service functions. The drop-off entrance for vehicles will be on the fourth level, connected to west Midtown by a bridge over the West Side Highway and spiral ramps on the other side. The roof will carry an 18-acre park, being designed by landscape architects Zion & Breen (above left) in a "looser" fashion than originally conceived.

*Financing:* With the economic situation affecting both private and public sectors, the city has doubts about whether it can finance the Convention Center's construction. It has already given the Center \$50 million dollars so that it could proceed with pier demolition, sinking piles, architectural design, etc. Mayor Beame has suggested that the Convention Center Corporation consider floating a bond issue (permitted by the state) in the event the city is unable to provide more funds.

*Status of Project:* While piers are now being demolished, Congress has not yet given its waiver of navigability, nor has the Army Corps of Engineers yet approved the project on environmental grounds. In fact, a private consultant has charged that the Center's officials pressured him to write favorably about the Center's impact.

As of this date, Bella Abzug, who helped thwart the granting of a declaration of nonnavigability has yet to decide to endorse the project, even though the city passed the Clinton special district legislation.

Meanwhile, the design has shifted around somewhat. The meeting rooms originally contained in a separate roof-top structure are inserted into the fourth floor of the Center (making the building slightly higher). To make the rooftop park on the Center more accessible to the surrounding community, pedestrian access will be provided not only by elevators in two places but by escalators. Previously pedestrian park users had to actually enter the building then take a ramp to the roof. Now all pedestrians going to the Center will enter by the roof. The waterfront sidewalk bordering the West Side Highway is planned to extend through the district linking 42 to 48 St. and beyond to the newly completed passenger terminal on the north.

## New York: Westway

### The Son of West Side Highway

The solution to the West Side Highway has plagued city planners and community residents for at least three years, since the time the highway south of 46 St. had to be closed to traffic after part of it caved in. Meanwhile, the specter of an Interstate designation for the highway has both intrigued city planners and upset communities. The city understandably would love the Feds and the State to pay for the Interstate (on a 90-10 percent basis). Those who would have to live with it justifiably fear that more trucks (those on the way to somewhere else) would be attracted to Manhattan. So the West Side Highway Project was created, guided by a committee representing city and state and six community planning boards. The project came up with a handful of alternatives including the now famous Outboard alternative. In that scheme the highway would be contained in a tube hovering over the water at the pierhead line. A slightly inclined deck covering could serve as an esplanade. Landfill extending between the tube and the existing edge could contain parks, housing, and other kinds of development.

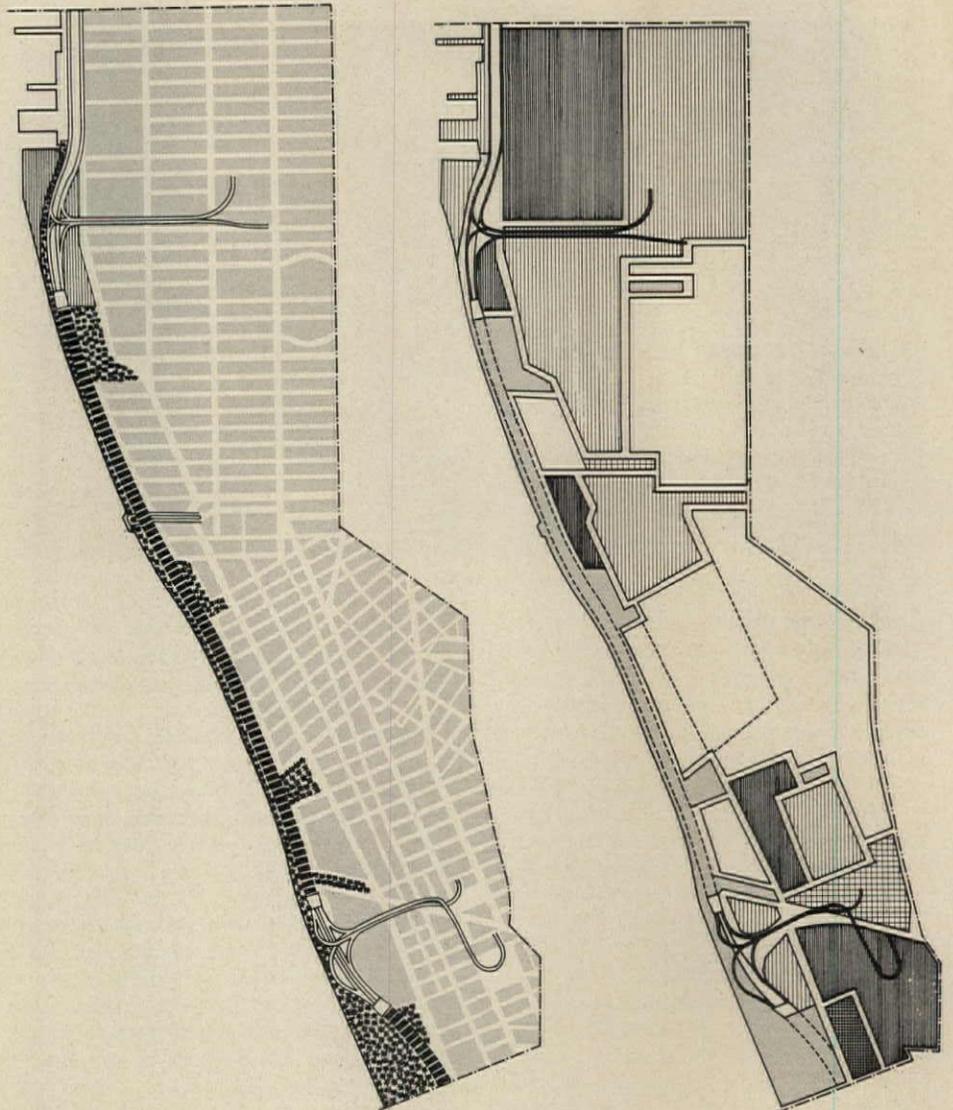
None of the various alternatives ranging from this adventurous deck and fill proposal to simple reconstruction of the old highway are to be adopted however. The city demanded unanimity among the members of the Steering Committee, and sure enough, no one could agree on which alternative they desired. The interstate always proved to be too volatile an issue to resolve. Thus by previous agreement, the decision on which highway plan will be adopted reverts to the city and the state.

So last fall the Beame administration came up with another idea, the "Westway" proposal, a six-lane interstate that burrows through landfill. The new path for this modified outboard is not placed at the pierhead line but half-way out—about 400 to 500 ft off the bulkhead line. The highway will be depressed and covered only to 28 St. (map right.). The proposed land use plan calls for a continuous shoreline walkway and bike path 190 ft wide between Battery Park City and 35 St. In addition, four parks are envisioned. Three residential housing developments totaling 7100 apartments and zoned at medium-rise density will provide housing in scale with nearby communities.

The ideas are nice, but as one planner put it, it has a little of everything—too much like a political pie that may later go stale. Others are more suspicious; doubting the Feds will ever pay for all this expense, they prefer New York to make a new arrangement whereby it could trade in the highway for \$500 million for mass transit. The city and state also plan to seek an Interstate designation all the way from 42 to 72 St. (Beyond that lies legally inviolate Henry Hudson Parkway and Riverside Park.) Between 42 and 72 St., the city wants to elevate the highway, for assorted reasons: expense, for one; and probably because the Clinton Community has agreed to back the Interstate anyway. The highway above 57 St. may go the same way.

### Highways never were a bed of roses

All is not completely settled: A coalition of 37 environmental and civil groups called Action for



Drawings: Westside Highway Project

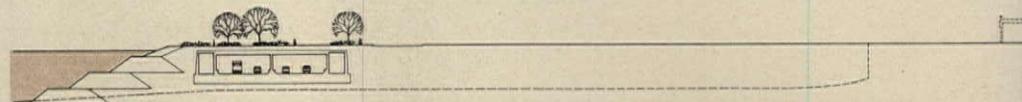
#### WESTWAY

- COVERED HIGHWAY
- OPEN HIGHWAY AND RAMPS

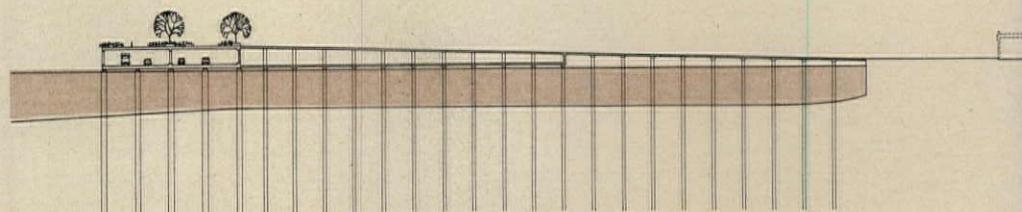
#### LAND USE-PROPOSED

- RESIDENTIAL
- INDUSTRIAL
- INDUSTRIAL-RESIDENTIAL
- INDUSTRIAL-COMMERCIAL
- COMMERCIAL-RESIDENTIAL
- INSTITUTIONAL-COMMERCIAL
- PARK

Current Westway proposal (modified outboard proposal).



Section showing current placement of highway tube within landfill.



Section of original outboard proposal with highway over water.

Rational Transit has filed a suit in the U.S. District Court on grounds that federal environmental and public-participation regulations are being violated. Furthermore they contend, the proposal to extend the highway only a third of the way towards the George Washington Bridge is contrary to regulations against segmented transportation planning. Most of the complainants foresee the day when the rest of the drive—the tree-lined Henry Hudson Parkway—is taken to court for Interstate designation. Just recently, even the Regional Plan Association urged that the Westway proposal be scaled down, both in lanes (four) and in size of interchanges.

### Westway proposal today

*Program:* 178 acres of landfill with 48 percent (82 acres) for parks and recreation; 31 percent (53 acres) for manufacturing uses; and 21 percent (35 acres) for residential uses. The highway buried for the most part in landfill would have six lanes with two reserved for express buses and car pools. On top would be a 190-ft-wide promenade and four parks extending from Battery Park City to 35 St.

*Financing:* The federal government would pay for 90 percent of the highway and the deck promenade from Battery Park to 42 St., while the state would chip in 10 percent. They would also pay for basic landfill between bulkhead and new highway. The investment would amount to over \$1 billion. The city would then sell or lease land to developers.

*Status:* The governor of New York State and the Mayor of New York City have agreed to conduct the amount of investigation needed to bring the Westway proposal to the required level of detail for approval. They must make a formal notification of intent by this month to receive interstate monies. Then environmental studies will need to be undertaken to examine, for example, ventilation of the buried highway. Chairman of City Planning Commission John Zuccotti plans to meet with the communities to hammer out a special district zoning plan, to assure them of waterfront amenities. This zoning process including official city adoption should take a while. The esplanade, however could be designed as soon as Interstate designation is obtained, since costs are covered by the federal government. A problem arises however: who pays for landscaping and maintenance of the parks?

### Future waterfront amenities

The Office of Midtown Planning would like to see a promenade stretch all the way up to 72 St.; from Battery Park City and Westway's own esplanade on up. Two railroad freight yards owned by Penn Central are being developed by Trump Enterprises south and north of the Center. One falls between 30 and 39 Sts from Tenth and Eleventh Aves to the river; the other between 59 and 72 St. from West End Ave. to the river. At this point Trump plans not to build even out to the bulkhead lines. The 30 St. yards will retain some train lines and thus the development—probably commercial/industrial—will be built on platforms. The 60 St. yards, planned for luxury- and middle-income housing will be built at grade. Gruzen & Partners have been selected as architects for the 60 St. development, and are currently preparing a proposal to present to the City Planning Commission for the requisite zoning approval.

## New York: What next?

### Waterfront watchdogs

Following the announcement of these waterfront proposals in the last two years, watchful citizenry has begun to show concern. When the first residential waterfront housing in Manhattan, Waterside Plaza, neared completion last year, the local planning board expressed dismay. The Mitchell-Lama and low- and moderate-income housing is contained in three 37-story towers and one 31-story building on a six-acre concrete deck in the East River at 26 St.

Even though the project design allowed 75 percent open space, most of which is public, and included a five-block long esplanade, nearby residents still complained. First they pointed to the absence of ample planting, despite the breathtaking views the expansive plaza afforded. But most of all they were concerned that the plaza, elevated two levels above the street was scarcely accessible, much less visible, to surrounding community residents. Not only was Waterside's plaza sealed off from the rest of the world by a highway, then by Waterside's garage and townhouses, but one could only get to it on foot via a narrow pedestrian bridge. (While the high-rise configuration blocks the views down cross streets the medium-rise Bellevue Hospital had long ago sealed up possible visual corridors there anyway.) The architects, faced with the problem of locating a plaza too near the noise and dirt of the highway, feel their decision was appropriate and contend the nearby community will eventually learn how to find the open space. The residents of Waterside, while agreeing that the plaza needs more trees and benches, enjoy the isolated quiet that the project's parti and location afford them.

All these recent events spurred the formation last year of the Committee on City Waterfronts

and waterways sponsored by the Parks Council, the Municipal Arts Society, and the South Street Seaport Museum. Its major goal is to develop minimum standards for the waterfront development (including visual, physical access, and high priority on recreation and parks). The committee also wants to encourage analysis of conflicting uses, how they may be accommodated, ecological impact of developments, etc. New York's department of Ports and Terminals, once resisting encroachments on Manhattan's piers and docks for uses other than shipping, has recently been actively supporting recreational development for old piers. The department maintains jurisdiction over any land between the first marginal street and the pierhead line that is used for economic development. In the last five years, however, they have encouraged the creation of containerport facilities in Brooklyn and Staten Island. As for Manhattan, they are currently backing a proposal to transform three west village piers into public and private recreational facilities. They also may support a proposed container-port in the west 30s.

An outgrowth of the Committee on City Waterfronts and Waterways efforts, and the support of the department of Ports and Terminals was a workshop on waterfront planning that took place last September. Sponsored by the City Planning Department, the workshop was attended by community representatives, city planners, and business interests. Since then, the city has prepared a report and is rumored to be recommending the establishment of a waterfront task force to coordinate agency efforts. Thus, it is hoped that soon the question of a comprehensive waterfront plan will be confronted. A close analysis of special zoning districts needs to be made before too much is at stake, before economic pressures on the waterfront mount any further, and before the "new" waterfront land is washed away from under New Yorkers' noses.



Aerial view of Waterside Plaza.

Photo: Robert Gray

# The battle for Georgetown

**A battle is being fought by citizens and developers for the waterfront of historic Georgetown in Washington, D.C. Which side is winning depends upon your own perspective of the anguished situation.**

Generally, we have treated our waterfronts in the same way we tend to treat everything else, as something to use, abuse, and then let fall into decay. But this attitude is beginning to change as we start to realize that our waterfronts, and especially those in the older urban areas, are potentially invaluable assets that could immeasurably enrich the lives of those who live around them. Along with this realization we are beginning to face a host of new questions and problems about how these natural gifts can be reclaimed for the benefit of everyone. We don't, however, always agree on the answers. A good case in point is the controversy surrounding historic Georgetown's waterfront in Washington, D.C.

"The problem with Georgetown," says a vice president of the powerful Georgetown Citizens' Association, "is the developers who want to put up high-rise buildings; the traffic and the tourists who come here now, so you can't park your own car on your own street; and the architects who design those awful modern buildings." "The problem with Georgetown," say some local, responsible architects, "is the traffic congestion and the Georgetown Citizen's Association." There are only two areas the two groups agree on: that traffic is a serious problem, and that something does have to be done about the waterfront.

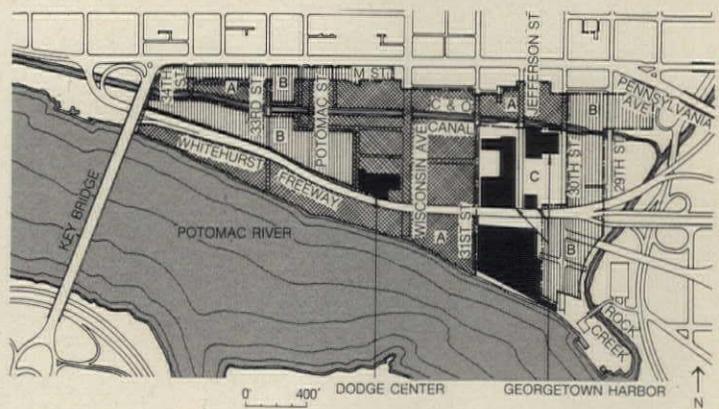
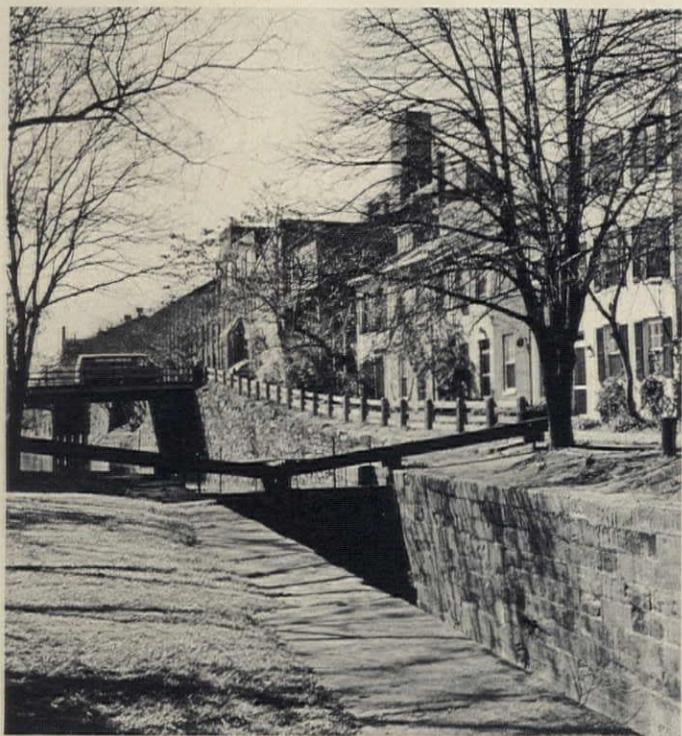
Georgetown, which was designated a national Historic District in 1967, grew mostly during the 18th and 19th centuries. Its waterfront (everything south of M Street to the Potomac) was originally a seaport and the reason for the town's early growth. The town suffered an economic decline in the 20th Century, but became heavily populated in the '40s because of the large population of wartime Washington. After the war, more affluent people began to move to "the hill" (the bulk of Georgetown, which is everything north of M Street) and began restoring the houses, even if they were of Victorian origin, back to the Federal style. In

the late '40s and early '50s, the elevated Whitehurst Freeway was erected over K Street across the town's entire Potomac waterfront, which by this time had largely become a dismal industrial slum. Today, few vestiges of the seaport remain, but the era of industrial expansion is marked by the intact, and quaint, Chesapeake & Ohio Railroad canal, with the towpaths and charming houses that line it, and with some appealing 19th Century warehouses.

Georgetown is a unique case because it challenges our idealistic beliefs, and perhaps defeats them. In another situation comparable to this, one's natural tendency would probably be to champion the "concerned citizens" who are being done in by the "evil" developers and their architects. But in Georgetown it's not so easy. Basically, the citizens argue that any development on the waterfront can only amplify the problems of a traffic system that is already taxed to capacity. The developers argue that Washington can no longer afford the luxury of so much prime, in-town land sitting idle and disheveled, that the pressure for development is much too strong, and that responsible development, which could actually remove cars from the streets, is not only possible but is economically feasible.

Today, after years of court cases, wasted money, and continuing hostility, two new developments are rising on the Georgetown waterfront. Maloney Concrete's Dodge Center, designed by Georgetown architects Hartman-Cox, is a \$10-million, nine-story, red brick sloping structure facing the elevated freeway. It sits on one acre and provides 180,000 sq ft of space for offices and shops, and 120,000 sq ft for parking. The first phase of Inland Steel's Georgetown Harbor complex, designed by the ELS Design Group, Arthur Cotton Moore & Associates, Sasaki, Dawson, DeMay, and Vlastimil Koubek, is a six-story, red brick structure facing the canal on part of a seven-acre site that extends from the canal to the waterfront. It includes an impeccably restored 19th-Century foundry, along with 160,000 sq ft of new office and retail space. When completed, the entire \$80-million complex will contain 1 million sq ft of office, retail, and hotel space, plus parking for an additional 2000 automobiles.

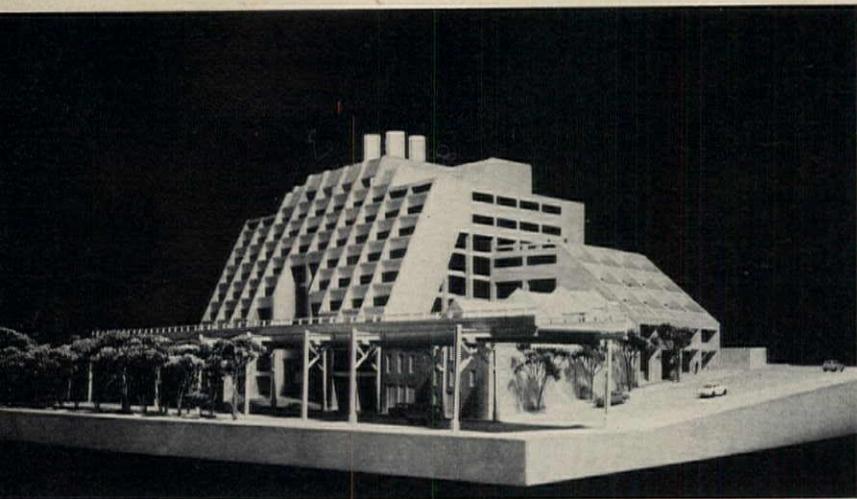
Until this year, building height limitations were distributed



The Georgetown Waterfront in Washington, D.C. (top) officially includes everything from M St. (map, above) to the water. Until this year, zoning prohibited residential use in the area, which is largely an industrial slum. Over the years, citizens have fought new development, hoping to obtain building-height reductions in order to maintain the low, residential quality typical of Georgetown, and seen in some places on the waterfront, such as along the C & O Canal (photograph, left). The developers, on the other hand, have argued that commercial, retail, and residential should all be allowed (as they recently have been). In the new zoning, Category A is for low-density building limited to 40 ft in height, B is for medium-density buildings limited to 60 ft, and C is for high-density limited to 90 ft. For new developments, see following pages.

in a somewhat parallel fashion along the waterfront, which rises about 80 ft from the Potomac to M Street. Generally, there was a 90-ft limit from the Potomac to the far side of a strip along the north side of the elevated freeway, and everything else up to M Street was limited to 60 ft. It was in accordance with this zoning that the new developments were begun, and, consequently, were vigorously fought by the citizens who hoped to obtain a zoning change from commercial to residential, and from 90 ft to 40 ft. However, because of land values, only luxury housing could approach economic feasibility under such zoning, and there was serious question even about that. In addition, this would not be the kind of housing most needed, and it would cut off public access to the water edge, where permitted. In the meantime, in 1971 President Nixon had asked the District government, the National Capital Plan-

ning Commission, and the Departments of HUD, Transportation, and Interior to join with private citizens to move ahead in developing an overall plan for the Georgetown waterfront "to insure the preservation of historic buildings, to provide for the harmonious development of public, commercial, and residential facilities." Consequently, the Georgetown Planning Group, headed by Wallace McHarg Roberts & Todd, was formed. Their final report, released in February, recommends no new development without major movement-system changes; these include several schemes, up to demolishing the existing elevated freeway and tunneling a new one under it, with a tree-lined K Street local boulevard above it. The report also recommends that the majority of new development be limited to 40 ft, with 60 ft allowed "for predesignated parcels where a greater height has been determined acceptable." In all areas zoned 40 ft,



Maloney Concrete's Dodge Center (above) by Hartman-Cox is a nine-story commercial/office building facing the Whitehurst Freeway. It carefully preserves old structures such as the Dodge Warehouse seen in the southeast (near) corner of the model. From the west (below) the new building rises only two stories above the old houses that formerly abutted the factory (above right) that stood on the site for many years.



With the old factory (above) demolished and the new Dodge Center rising on its site, the east side of Wisconsin Ave. now has a gracious termination at the intersection of the elevated freeway (below). From this side, the building steps back to provide a wide vista to the river, and to maintain the roofline of the residential structures nearby. The new building includes 300,000 sq ft of office, shops, and parking.



the report recommends extending the "townhouse" character of Georgetown, whether residential development is suggested or not.

The city of Washington, however, did not wait for the Planning Group's final report, but very recently decided to rezone the area themselves. Now, about half the area, including a strip on both sides of the C&O canal, is limited to 40 ft. The remainder is restricted to 60 ft, and a smaller parcel that includes Inland Steel's Georgetown Harbor is limited to 90 ft. Residential is allowed in all zones.

The new zoning accepts the waterfront in its present condition, with its problems, as "given." It realistically acknowledges that years may pass before anything is done about the elevated freeway or the other arteries that lead through Georgetown, which together compose a major

westbound exit from Washington. Georgetown Harbor recognizes this problem also, and one scheme for the development's completion calls for a pedestrian terrace, over K Street and under the freeway, that would provide a valuable link to the water's edge, and to the shops, restaurants, and hotels that may finally be there. The architects generally agree that Washington is not in desperate need of more waterfront parkland; "there is already enough," says Arthur Cotton Moore, "for the entire population of the East coast to picnic there at once." What the waterfront does need, they say, is a rich mixture of uses that could once again attract people to it; and now that residences, hotels, theaters, shops, and restaurants are allowed, maintain that attraction on a 24-hour basis.

There is no denying the fact, though—as City Council



The first phase of Inland Steel's Georgetown Harbor (above, left, right) by the ELS Design Group, Arthur Cotton Moore & Assocs., Sasaki, Dawson, DeMay, and Vlastimil Koubek faces the C & O Canal. The six-story project includes 160,000 sq ft of office and retail space, plus a restored 19th-Century foundry that will be used for a museum or for offices. In addition to this phase (seen as Site A, below) the complex will include more office and retail space in Sites B and C, retail space, restaurants, and a hotel in the west wing of Site D, and offices and apartments in the east wing of Site D. The hotel, apartment, and offices are given views of the Potomac (model photo, left). When completed, Georgetown Harbor, which replaces an old industrial complex (photo, below left), will include 1 million sq ft of new mixed-use space on the waterfront.

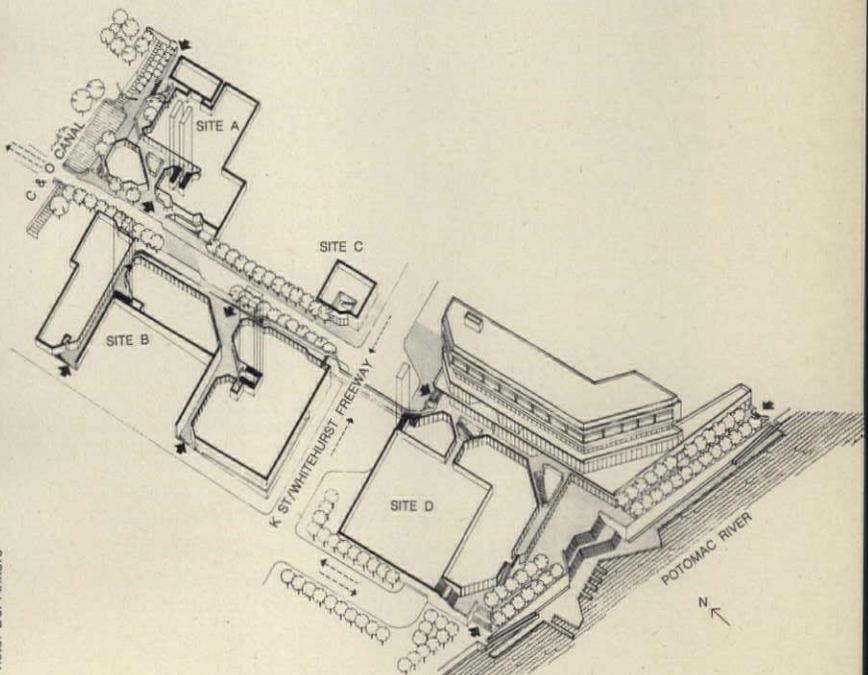


Photo: Del Ankers

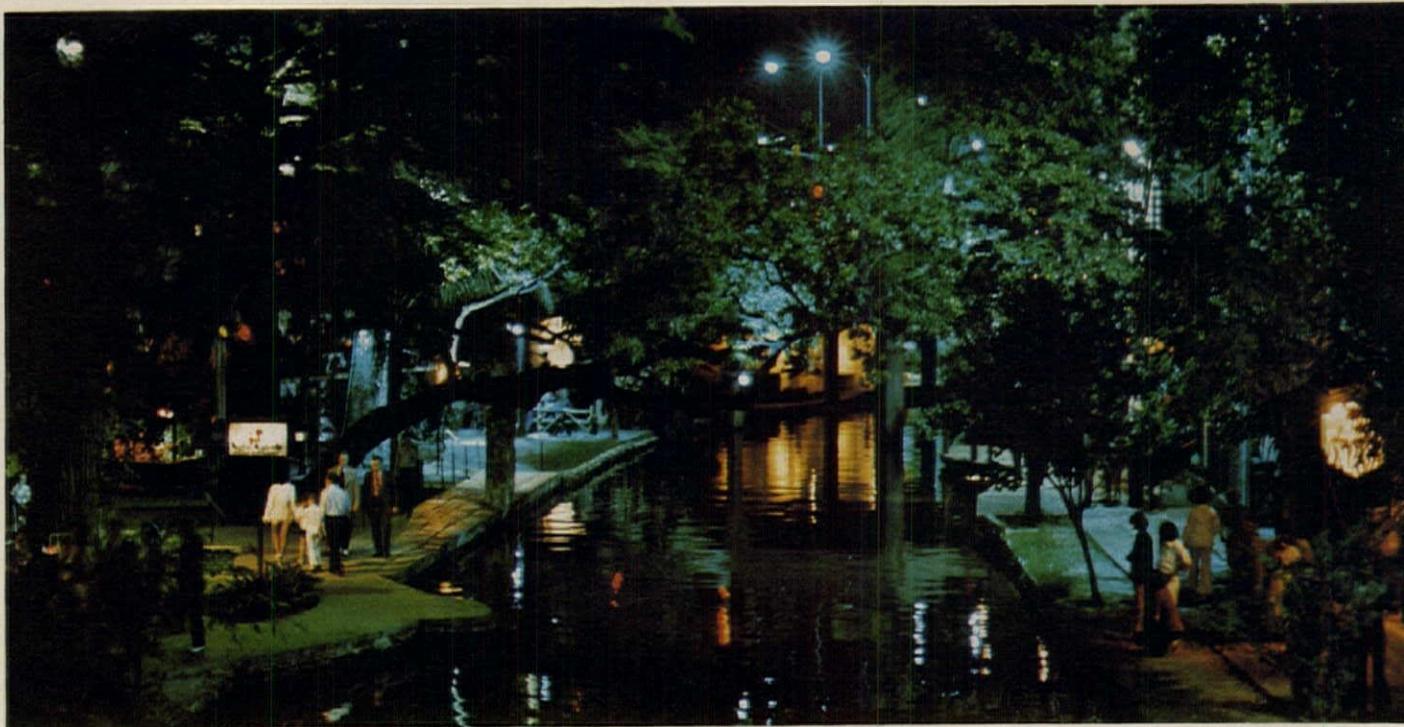
Vice Chairman Sterling Tucker said in the *Washington Post*—"It is clear to all of us by now that there is no waterfront zoning that will please everybody." But especially, it will not please Georgetown citizens, who desperately want to maintain the special historic quality and charm of their town. This is certainly a desire one can easily, and honestly, sympathize with; after all, who wouldn't want to live in a lovely, early American town? But it must be remembered that on this waterfront it is not the historic houses and other valuable buildings that will gradually be replaced, but an unsightly industrial slum. And this is not being replaced by high-rises, as the citizens claim. (Is 90 ft, the maximum height that was, and still is allowed only in certain areas, really high-rise?) It is being replaced by buildings that will maintain and in some instances enhance vistas to the wa-

terfront. The major problem new development could bring about would be an increased traffic flow, but responsible architects say this could, and should, be remedied with sufficient on-site parking.

As much as you can sympathize with the citizens, and even recognize that perhaps the overall effect of their efforts has been positive in helping to prevent the kind of undisciplined development common elsewhere, you finally realize that the real problem with Georgetown is that it is in a major population center. It is not a small town in the north woods of Maine. But the reality of life today is that even if it were, it might count itself fortunate to have the kinds of limitations that still carefully restrict what can and cannot be done in Georgetown. In some ways, we should all be so lucky. [David Morton]

# Stream of consciousness

Photo: Peter Papademetriou



Paseo del Rio by night.

**The river has given this Texas city not only a point of orientation but a new psychological lease on urban life that can operate on several basic levels.**

Somewhere, as you walk along the length of the riverside on the Paseo del Rio in San Antonio, the thought inevitably sinks in: it's all real. Relationships between this stream and the urban fabric above and around it finally come into focus: the river exists, is used, and those uses are real. The Paseo del Rio, a 2½-mile-long stretch of esplanades, shops, cafes, or just plain parks along the San Antonio River is unique to the U.S. Like the Parisian quais, it is located down a level from the city's street grid. But the Paseo offers even more cafes and activities than its Parisian counterpart: It seems even more European. Naturally, this lower level ambience contrasts remarkably with the busy, often dusty, streets of San Antonio above. Perhaps the disparity between the two levels of urban experience makes the Paseo even more special, more unforgettable.

The river's psychological hold on San Antonians as an embodiment of the city itself is proof that such a sensibility

can be created. The Paseo also provides a constant frame of reference to which a diverse range of social groups, public agencies, private developers, etc. respond. This "urban psyche" results from a complex history involving the standard tale of how the river was ignored in the past. Its problems were compounded by continual devastating floods, but the river was recognized by active groups as being potentially unique. For over five decades, the trend has been reversed, leading to the creation of the Paseo del Rio, one of the great urban settings in the United States. And now efforts are being undertaken to examine the entire fabric of San Antonio as an integral part of the river corridor. The River Corridor Study (P/A Design Awards issue, Jan. 1974 p. 76), was possible only after 50 years of changing, but always concerted, effort to bring the river's existence into the lives of an entire urban population.

## Roots on the river

The river is basic to San Antonio's existence. A plateau formation gathers headwaters from the river into a series of springs, allowing easy use for irrigation and cultivation.

Intigued by the abundance of water and the possibilities

for irrigation, Friar Antonio de San Buenaventura Olivares built Mission San Antonio de Valero in 1718. Mission San José followed two years later. Within a decade, three more missions had moved from East Texas. This particular heritage excels in architectural quality; 225 years later, the future of these missions is being defined by a plan evolved from, and related to, the River Corridor Study.

By the post-Civil War period, San Antonio was a developing city of regional significance: the river supplied both power and a resource to new industries. The prevailing attitude during the Anglo period was one of exploitation of the river on one hand and neglect of its amenity potential on the other. By the turn of the century there were only occasional exceptions such as the King William Street houses (p. 64 right top) where large, landscaped lawns rolled down to the river. The general pattern of San Antonio's higher density development turned its back on it. Where earlier Hispanic residents had a sympathetic regard for the river, the Anglos ignored it.

This disagreeable relationship was furthered by extensive and repeated flooding of the central business district: The river's small cross-section in the city and the absence of a natural buffer above help aggravate the effects of heavy rains without proper technological devices.

A 100-year flood that hit San Antonio in 1920 raised the level of the river about 35 ft above normal. Belatedly, the city adopted a report, calling for flood control measures. One feature of the report recommended filling in the Horse-shoe Bend in the heart of the city to straighten the channel. Talk also began to circulate about covering the river, making it a sewer, and converting the space to a north-south thoroughfare. A controversy ensued, and the San Antonio Conservation Society was formed in 1924 to save the Bend. Ideas were proposed to develop the river into a landscaped inner-city parkway. Elimination of the Bend was prevented, and the Depression killed the parkway plan.

In the mid-1930s, a hotel manager instigated the formation of the San Antonio River Improvement District after the city had earlier refused to match funds collected by property owners. On their own, this group voted to impose a district tax and then applied for a WPA grant; through this effort, the initial concept of the River Walk was fleshed out by 1941. Two restaurants opened: the first Casa Rio, in 1946, nearly washed away in the flood of the same year.

### And its fruition

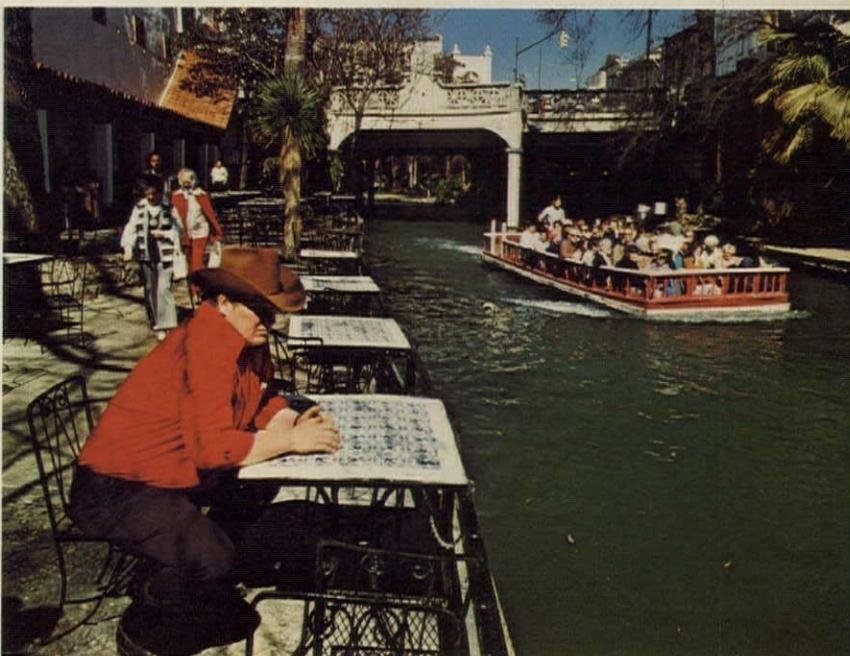
In the next few pages the fruits of these early efforts become clear. The development of the Paseo del Rio, and later the River Corridor Study, represent a growing consciousness of the amenities and potentials riverfront planning should have. Because of the unique river setting (now social as well as environmental), the lessons to be learned from San Antonio are difficult to extract. The city's small size probably helped generate the community response to the river, and pressures for development on it are fairly low-key, ensuring its maintenance, survival, and growth. The resultant community consciousness has been built upon this image. The town can now look to the future when multivalent decisions achieve a dimension for the area as permanent, but changing, as immediate, but flowing, as varied as the river which is San Antonio.

[Peter C. Papademetriou]



San Antonio at street level.

Photo: John Dixon



San Antonio's river walk below street level (above and below).

Photo: Peter Papademetriou



## San Antonio

### Planning for the Paseo

In 1961 the Marco Engineering Company of California proposed a year-round fiesta attraction; access to the river would involve admission charges. Clearly, there had to be a middle ground. In 1962, the City Council passed an ordinance establishing a River Walk Commission, with the San Antonio Chapter of the AIA preparing a master plan for development. At last, the potential to extend the urban fabric down to the riverside was to be recognized. Part of the Horseshoe & Wagner produced a land use plan, a recommendation for planning districts, a capital improvement plan for both private and public sector investment, as well as back-up research, documentation, and a model.

This Paseo del Rio (River Walk) master plan determined the zoning occupancy according to noise or activity levels. A progression of activities keyed to the existing development of walks, structures, and landscaping was established, linking relating similar activities but allowing for a change of pace along the walk. Adaptive and sympathetic treatment was to be given to existing structures, all of which had been inventoried. In 1964 San Antonians approved a \$300,000 bond to make further municipal improvement along the Paseo. Hemisfair '68 provided further incentive for improvements and a \$2 million River Extension Project was undertaken by the Urban Renewal Agency. The net result since the study of 1962 has been some \$20 million invested in river walk property and business development, with some 30 businesses actually on the river itself.

The river walk extends beyond the limits of the commercial area of the Bend; as a city park it is patrolled and well-lighted. Relatively limited in real life, the developed area nonetheless has established a new credibility for the river in overall terms. A by-pass channel and control gates at both ends allow intensive development there without danger of flooding.

A recent user survey conducted by Texas A&M University (April 1973 *Landscape Architecture Quarterly*) indicates the development is extremely successful with its users. Such a response was consistent over a wide range of ages, incomes, and occupations. Even the controlling agencies, who are not bound officially, revealed a unanimity of policy and believed the present arrangement, dependent on a high degree of collaboration and cooperation, was working well. The Paseo del Rio and its extensions now have high identity. The variety of links and connections to the street system above—through buildings, at street bridges, down spiral stairs—must partly be for the Paseo's excessive use. It is perceived as safe, easy to find, unique, urbane, restful, and affording possibilities for solitude or excitement and gregariousness.

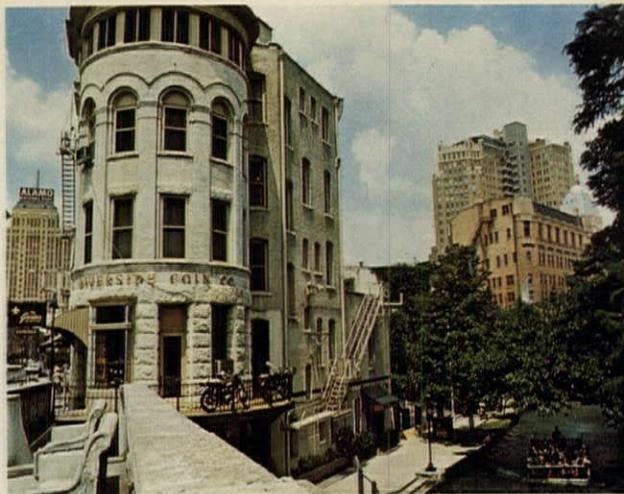


Photo: John Dixon  
Photo: Peter Papademetriou

The architectural character of the historic buildings next to the river or in the nearby King William section below reinforces its European aspect.



Photo: John Dixon



A noncommercial parklike setting along the Paseo (above) supplements the more urban activity oriented section (below).



Photo: Peter Papademetriou

## Planning for growth

It was the recognition of the river's potential as a catalyst for community support, and a continuing need both for comprehensive flood control and revitalization of San Antonio's traditional center, that brought circumstances together to create the River Corridor Study.

As conceived, the study was a combination of federal funding to undertake planning and flood control, available from HUD through the creation of a joint River Corridor Committee representing 5 separate government entities. Primary consultants chosen by the committee were Skidmore, Owings & Merrill, and planners Marshall Kaplan, Gans & Kahn, both of San Francisco.

The River Corridor Study is essentially based on the consciousness of the river as a psychological point of orientation and connection to the physical world. It begins with an in-depth proposal for water management, to bring about both comprehensive water quality and safety in flood control, and to undertake community-wide revitalization as a result. This aspect proposes that recreational and visual amenities be planned and funded beyond basic Corps of Engineers standards since "the benefits measured in terms of the enhancement of the environment and development potential of the Corridor more than offset these costs."

In a concern for CBD revitalization, the study identified traffic access and congestion as being prime problems for the spotty decline of the downtown core. Rerouting of through traffic, and an intercept parking with miscellaneous access improvements, are proposed to encourage reuse of the center city. Having achieved this, a viable pedestrian network could be established, linking five functional "districts" already existing, but whose identity would be sharpened.

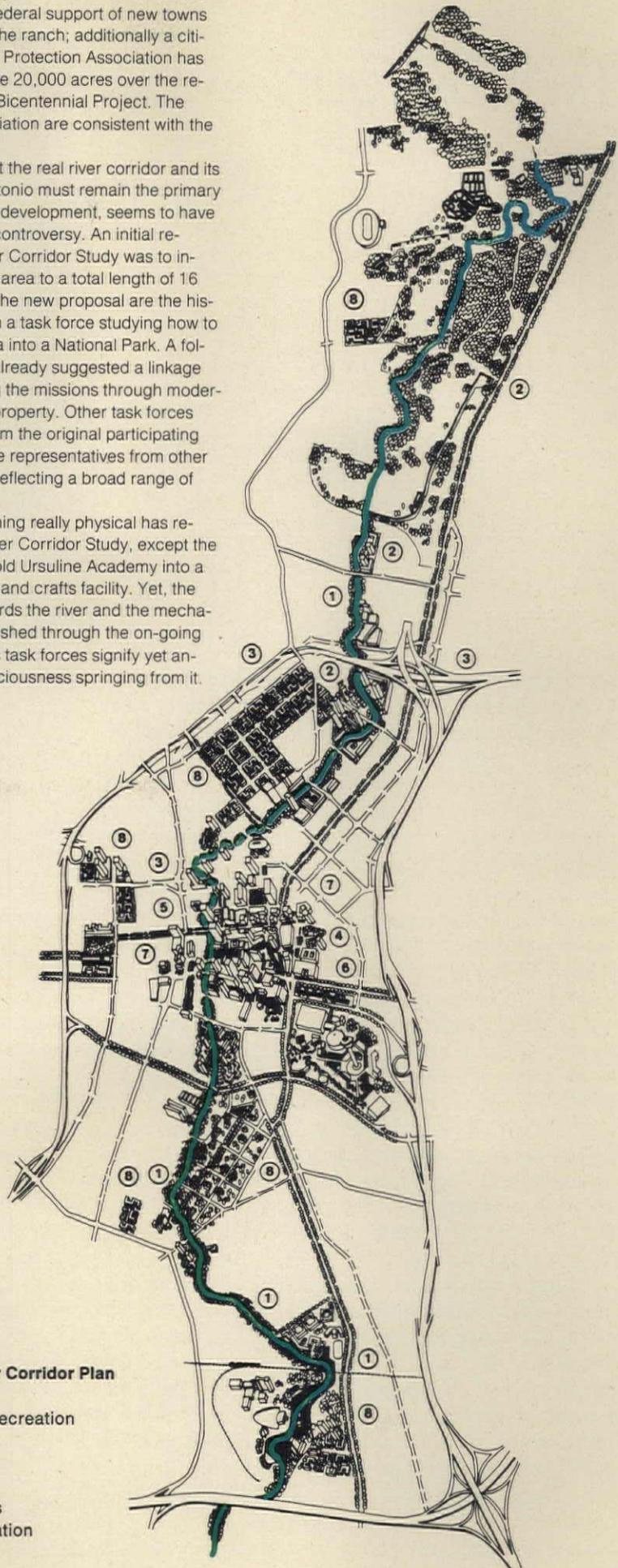
Center city represents one aspect of the study. Given equal emphasis is a strategy for generating a string of viable, mixed neighborhoods along the 7½-mile corridor. Central to this strategy is housing, most of which is in questionable condition. Proposals create a mix of densities and dwelling types, along with necessary health and social services, education and public safety measures. The study concludes not with a plan but with a *management* strategy—coordination of existing agencies to maintain credibility in the community.

While the study was in progress, a turmoil of sorts was brewing, since plans had been announced for the "Ranch Town New Town" to be located 25 miles from central San Antonio, ultimately housing 85,000 people. This development would clearly sap energies from a limited urban population base, and also potentially would endanger the city's water supply by being situated directly over the Edwards Aquifer. A cry from various environmentalists and agencies got enmeshed in politics "wired all the way to the White House," according to the *Texas Observer*. Another "new town in town," also announced by the promoters of Ranch Town, was expected to appease San Antonio planners. Yet the second proposal north of the core was bound to jeopardize the Corridor Study's intentions. Further, planners preferred to direct new growth and change to the south end of San Antonio. Fortunately, in the end the measure was defeated in a scenario so complex the *Observer*

devoted the better part of three issues to cover it. The demise of federal support of new towns has also stopped the ranch; additionally a citizen-based Aquifer Protection Association has formed to purchase 20,000 acres over the recharge zone as a Bicentennial Project. The goals of the Association are consistent with the Corridor Study.

A realization that the real river corridor and its role within San Antonio must remain the primary concern for viable development, seems to have resulted from the controversy. An initial response to the River Corridor Study was to increase the project area to a total length of 16 miles. Included in the new proposal are the historic missions, with a task force studying how to implement the area into a National Park. A follow-up study has already suggested a linkage system connecting the missions through moderate acquisition of property. Other task forces have expanded from the original participating agencies to include representatives from other advocacy groups reflecting a broad range of community issues.

At this point nothing really physical has resulted from the River Corridor Study, except the conversion of the old Ursuline Academy into a neighborhood arts and crafts facility. Yet, the new attitudes towards the river and the mechanisms being established through the on-going activities of various task forces signify yet another level of consciousness springing from it.



### Proposed River Corridor Plan

- 1 Flood Control
- 2 Open Space/Recreation
- 3 Access
- 4 CBD Retail
- 5 CBD Office
- 6 Visitor Services
- 7 Internal Circulation
- 8 Housing

## Two by four

**Although stylistic similarities abound in these two offices, an examination reveals that the two architects had very contrasting spatial attitudes.**

To some extent, the predictability of office buildings as architectural types has spread to the interior space as well, as the ritual of office design becomes an ever more specialized task. A pervasive style, often the product of theory, technology, and material, produces a sameness in the consistency of its application that can be misread as sameness of solution. But all too often, on closer examination, there is little to be learned that has not already been revealed.

The two offices shown here—TransAmmonia Inc. by Gwathmey Siegel and Charter Atlantic by Potters/Williams—could, on the surface, be read as similar. They are, in fact, of the same stylistic genre. (The phenomenon of style and its associations are more apparent in the plethora of houses done by these and philosophically related architects where, at times, it is almost impossible to distinguish who designed what.) Yet it is exactly the stylistic similarities that provoke comparison and that reveal, by contrast, the differences in these two offices.

The materials, the details, and some of the forms are nearly identical. Both are medium sized offices (7000–10,000 sq ft) with the core services and circulation located at one side, leaving a full uninterrupted expanse of space for the layout. They house a similar number of people for the same costs/sq ft. In each case, the architects incorporated the elevator space on the floor as part of the office to gain a certain sense of generosity and privacy. Uses were to be the same—both are brokerage houses generating volumes of paper that were accommodated by the design of custom workstations for paper organization and storage, as well as communications equipment. Finally, both clients had definite attitudes about using “art” in their spaces.

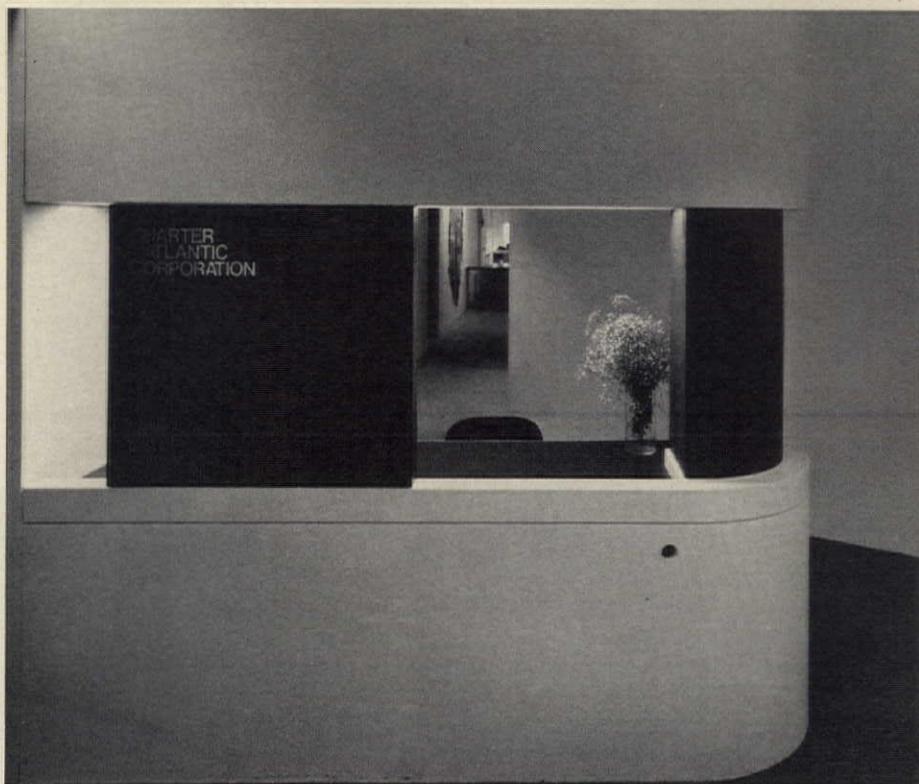
But here the similarities end. Although they are programatically the same, with certain gestures of solution identical, an analysis of the organization and use of space reveals very different attitudes. Spatial conceptions provide the most striking contrast. The Charter Atlantic offices are linear and open, in a progression from public to private; The TransAmmonia offices are centroidal and closed with public/private domains radiating from the center to the periphery. In reading the spaces, one major difference is the attitude toward the existing building structure, particularly the column grid. The grid in the Charter Atlantic space is incorporated into the new organization of walls, thereby diminishing the number of elements and simplifying the space. The TransAmmonia grid is left free of new structure and is used to rhythmically divide the space and articulate the major circulation spaces. In contrast to the fluid space of Charter Atlantic (instead of doors there are “visual locks”), the TransAmmonia space is cellular and reads as a highly organized accumulation of parts. While both offices have custom-designed workstations, they appear as one large aggregate element in the space at Charter Atlantic as opposed to reading as separate elements, reinforcing the cellular qualities of the space at TransAmmonia.

The difference in attitudes concerning the use of art were about as extreme as possible. In TransAmmonia, the art was conceived as an integral and structural part of the design with commissions given out early in the design of the space, while the Charter Atlantic spaces were conceived more as a gallery for a changing panoply of work, with major acquisitions yet to be made.

While the comparison of differences is an interesting exercise, it by no means constitutes everything that is worth discussing about these offices. Each has individual ideas which do not emerge in comparison and these are discussed more fully on the following pages.

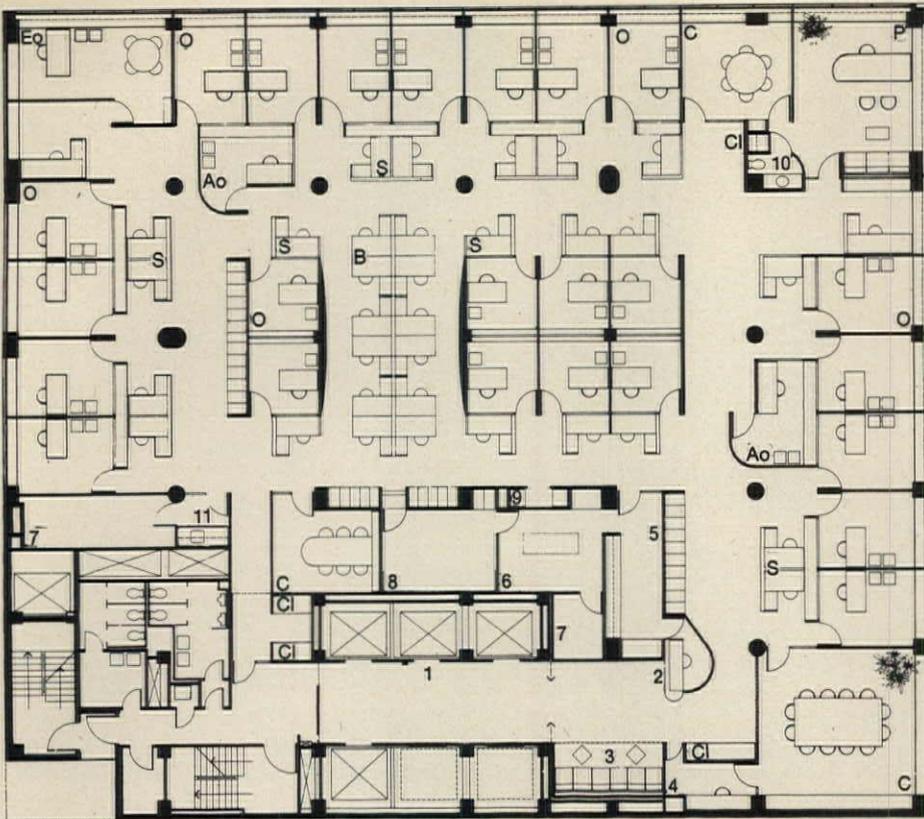
[Sharon Lee Ryder]

The two entrances (Charter Atlantic by Potters/Williams and TransAmmonia by Gwathmey Siegel) borrow space from the elevator lobby as a means of controlling a visitor's initial impression of the offices and of adding a certain generosity in the reception area. In neither office are the working spaces visible from the entry, but slight suggestions are made through translucent glass block (below) and cutout (at right) of areas that lie beyond.



# TransAmmonia

Floor plan shows elevator and service core along south wall and the centroidal organization of the offices from shared services and open work area in the center to the private offices along the periphery. The column grid is deliberately left free to act as an edge to primary and secondary circulation spaces. In the photo (below), one of the major circulation spaces is defined by a hard edge on the left and the column grid on the right.

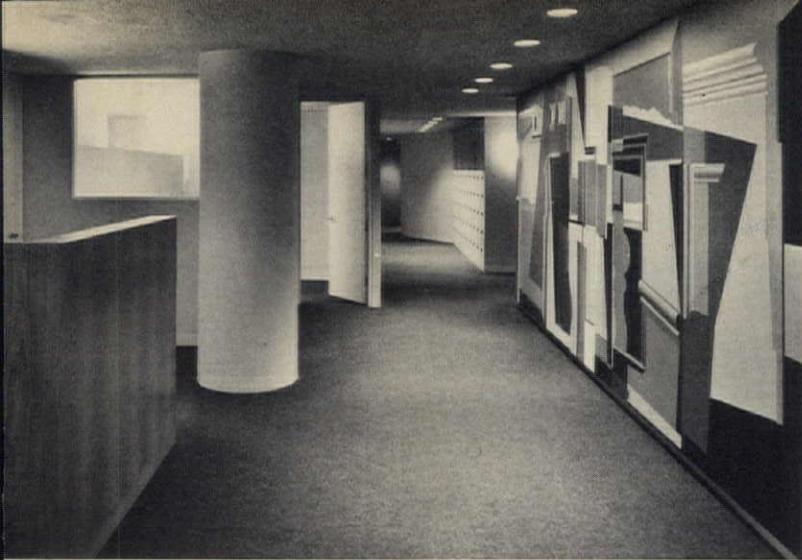


### Legend

- |                   |                     |
|-------------------|---------------------|
| 1 Elevators       | P President         |
| 2 Reception       | Eo Executive office |
| 3 Waiting         | Ao Associate office |
| 4 Private office  | O Office            |
| 5 Mailroom        | S Secretary         |
| 6 Office supplies | B Bullpen           |
| 7 Storage         | C Conference room   |
| 8 Telex room      | Cl Closet           |
| 9 Vault           |                     |
| 10 Washroom       |                     |
| 11 Kitchen        |                     |

Plan





Private offices on the left, mural by Michael Graves on the right.



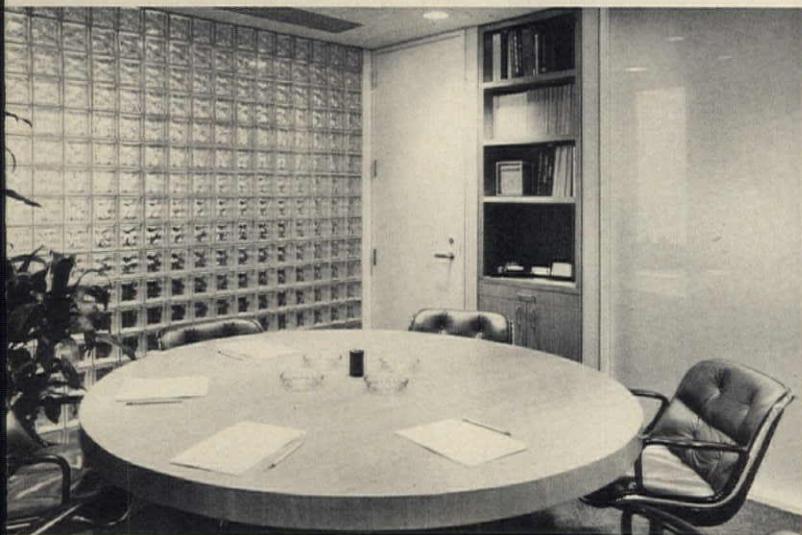
Private offices use glass clerestory as a reference to outside light.



Raking view across secretarial area through column grid.



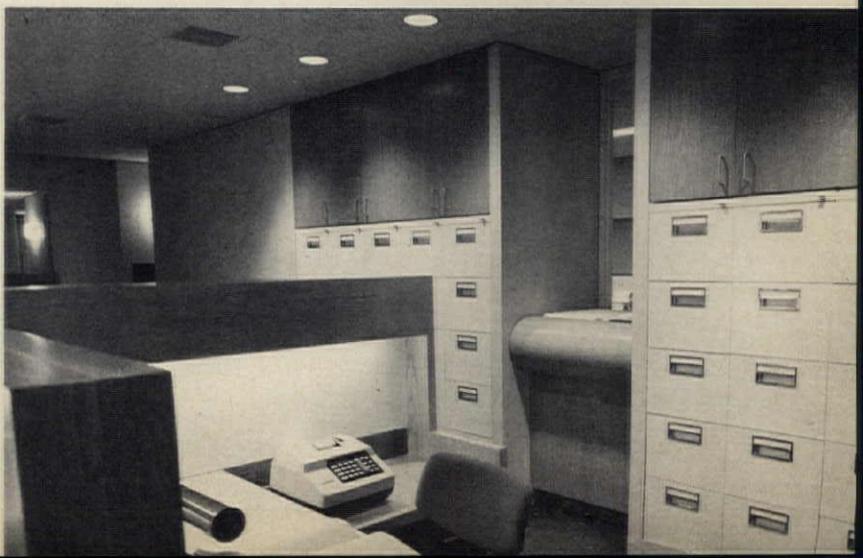
Custom designed workplaces in the open work area.

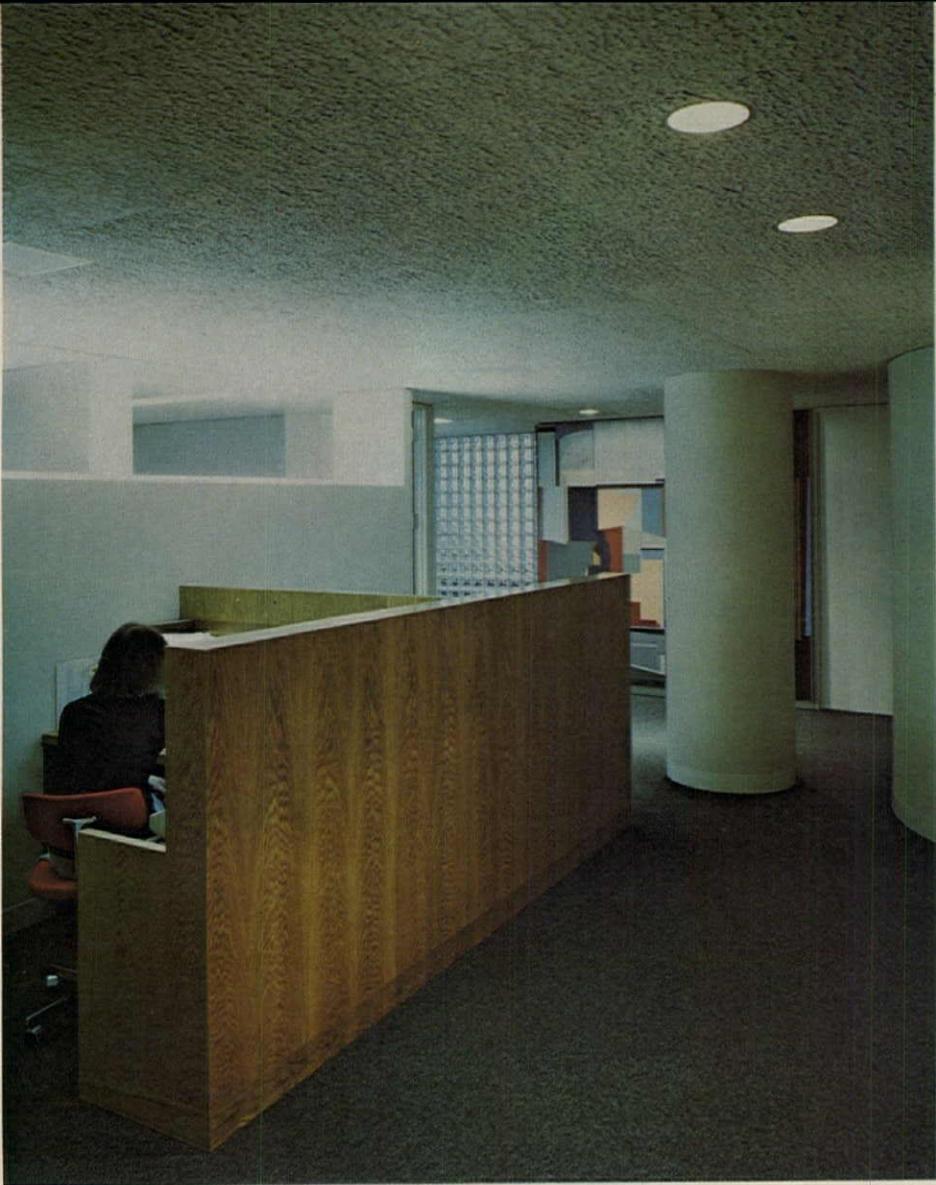


Conference areas (above and below) with wire glass mimicking glass block.



Large conference area above, built in storage and workplace below.





The art for the space was conceived as an integral part of the architectural space and was commissioned early in the design stage. Graves' murals (left, and two others of which one is shown on the previous page) always denote an end condition; a termination of a vista or the edge of a volume. The construction (below) by Hazel Siegel is in the President's office. It's structure is based on elements of the golden section overlaid with a second system of color, resulting in an intended ambiguity of reading.

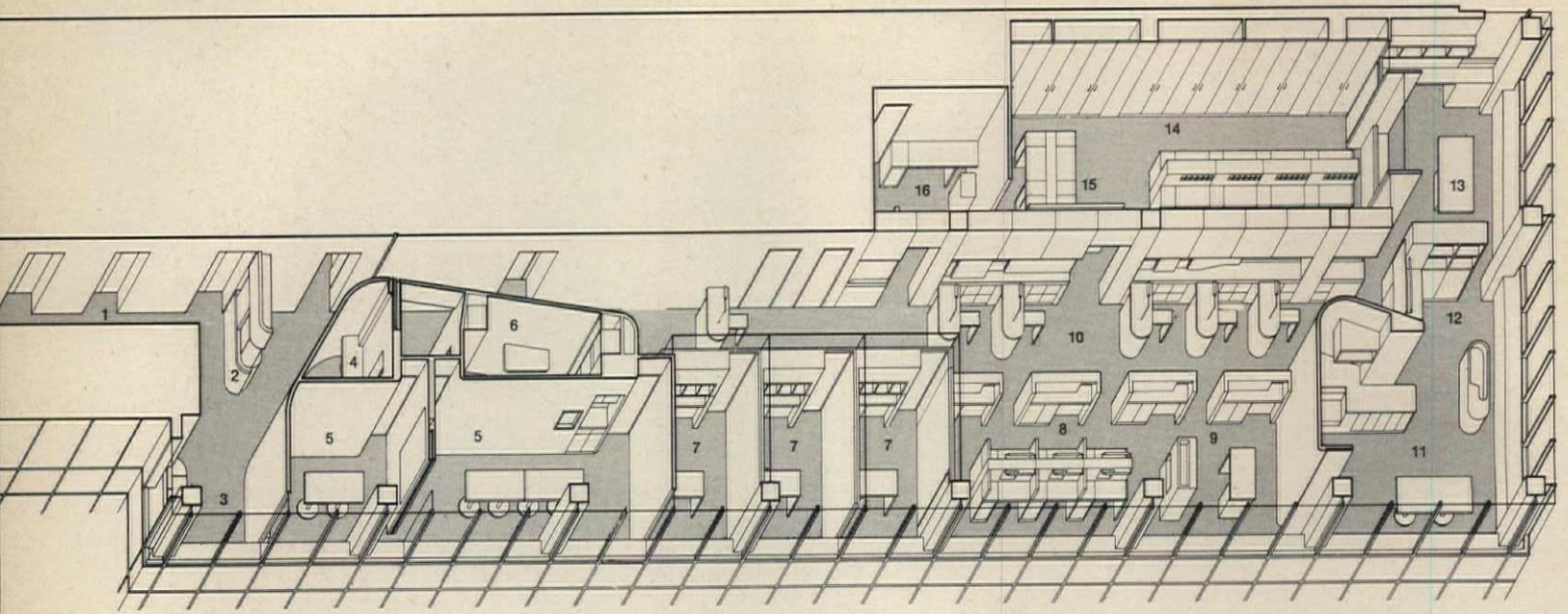


# Charter Atlantic

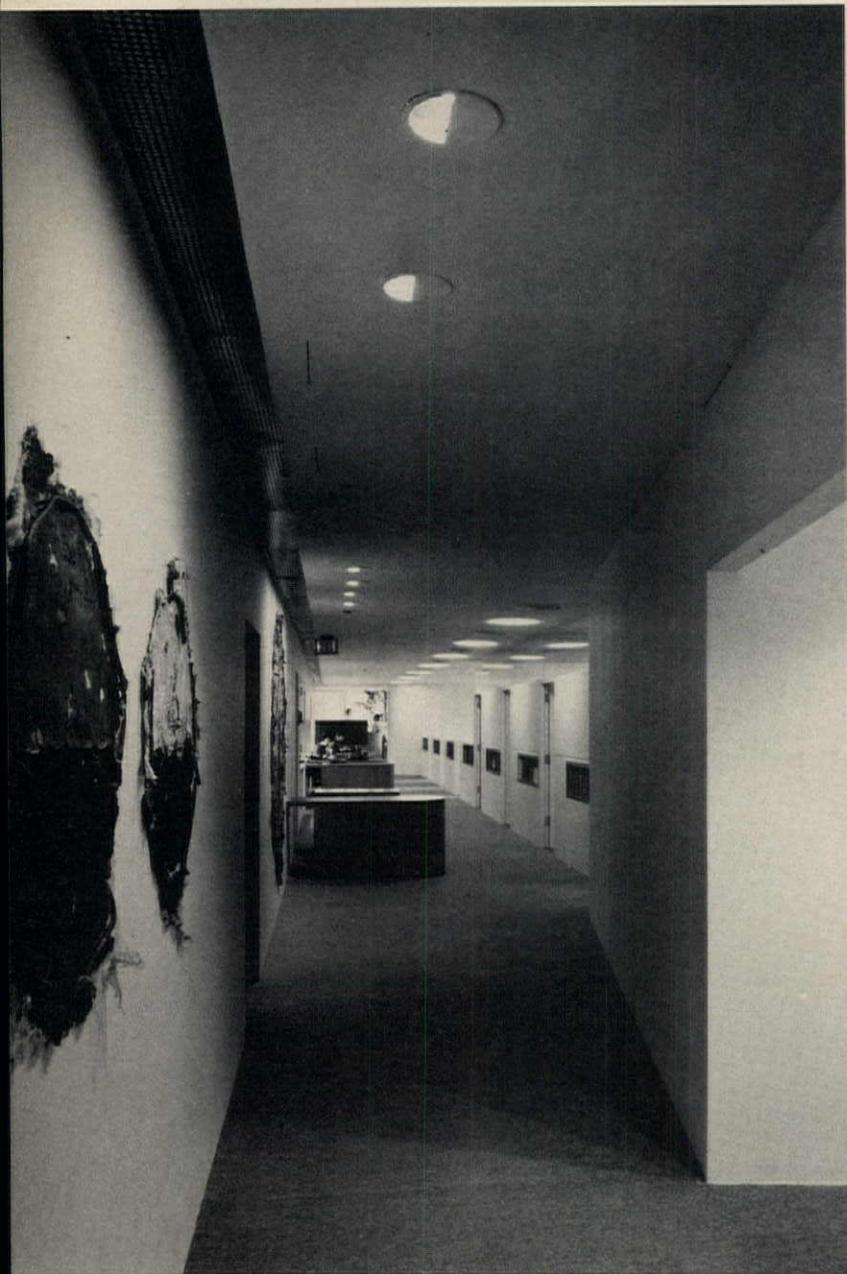


From the partner's office, visual "locks" are used to insure privacy while maintaining openness. The glass enclosed room, an office within an office, is the communications center for the brokerage firm. Along the central circulation spine below, one wall is straight and hard while the other is undulating and soft. The three enclosed offices are demountable when the open work areas need to expand.





Views down the main circulation spine; from reception (left), from partner's office (right).



**Legend**

- 1 Floor lobby
- 2 Receptionist
- 3 Lounge
- 4 Mail & Storage
- 5 Conference
- 6 Pantry
- 7 Office
- 8 Advisors
- 9 Partner's office
- 10 Secretaries
- 11 Partner's office
- 12 Stand Desk
- 13 Partner's office
- 14 Trading room
- 15 Clerks
- 16 Lunch-telex

**Data**

**Project:** TransAmmonia, Inc.

**Architect:** Gwathmey Siegel Architects; Peter Szilagyi, job captain.

**Major materials:** gray vinyl wall covering, natural fissure acoustical tile ceiling, dark gray carpeting, frosted glass, clear glass and glass block, oak cabinets.

**Costs:** withheld at the request of the client.

**Photography:** David Franzen, Marris/Semel.

**Data**

**Project:** Charter Atlantic Corporation.

**Architect:** Potters-Williams Architects; Architect in charge Todd Williams in association with Interior Concepts.

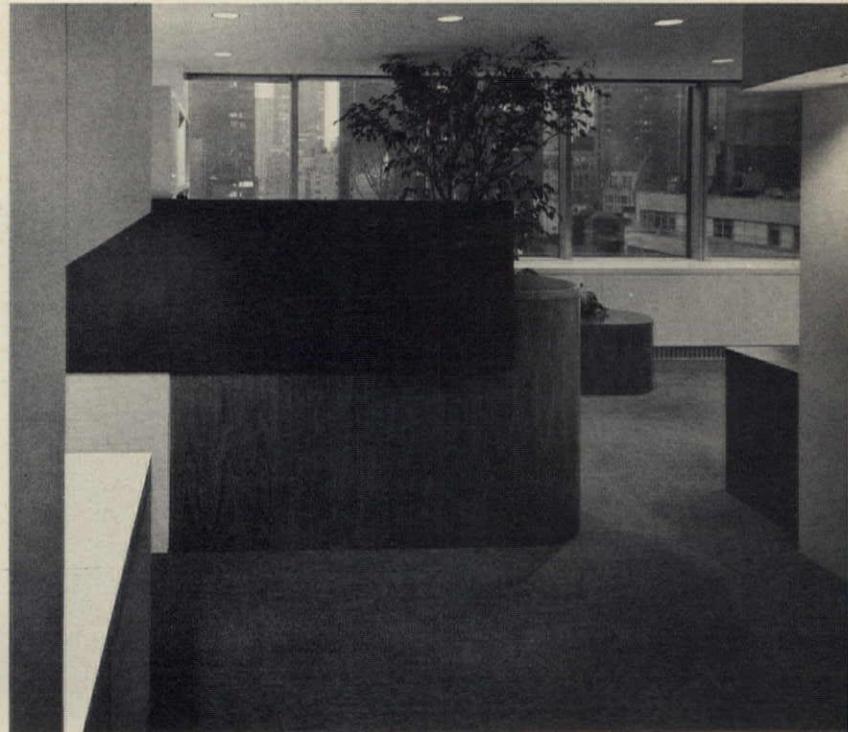
**Major materials:** gypsum board walls, paint, warm beige carpet, white oak veneer plywood.

**Costs:** \$26./sq ft for general construction and cabinet work.

**Photography:** David Franzen

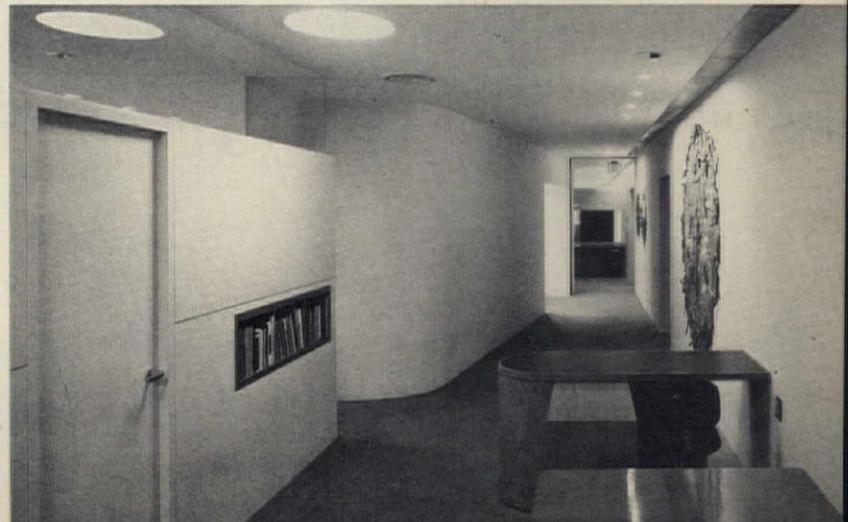
Visual "lock" (below) separating partner's office from open work areas.

Stand up workstation for informal work sessions.



Reception area

Corridor looking toward reception area



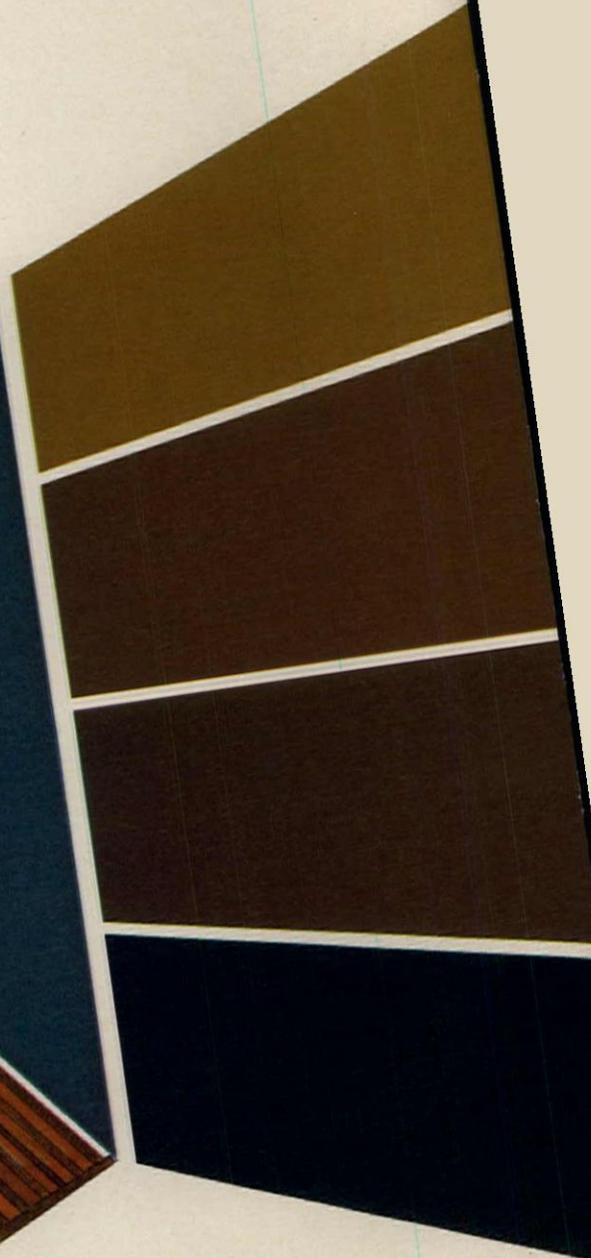
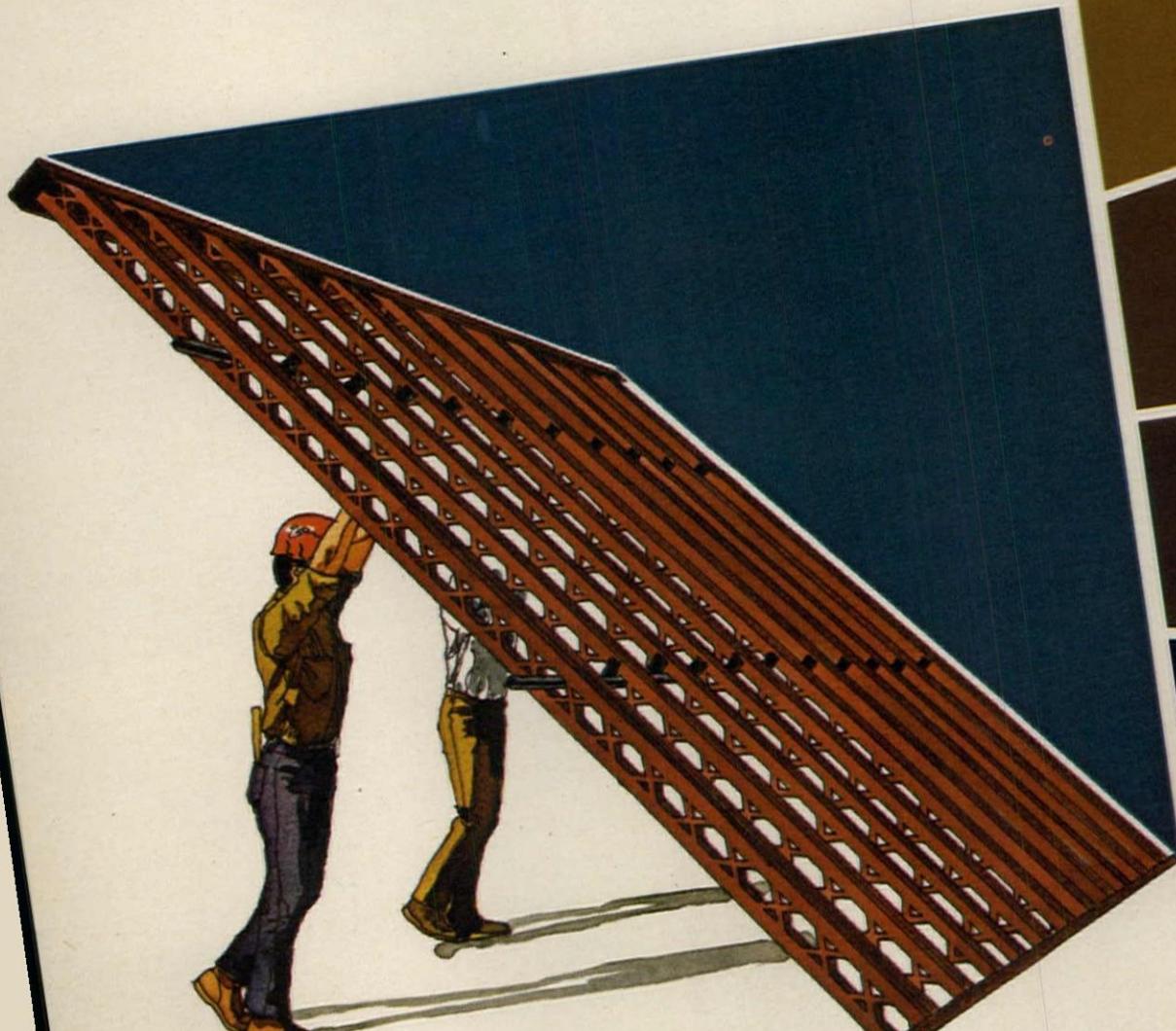
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# Payment for stored materials

Josephine H. Drummond

## **Rapid inflation in material prices obliges architects to reconsider their policies covering payment for materials prior to installation.**

Does your office understand prepurchase and prepayment of materials? It may be time for a refresher. Article 9.3.2 of the General Conditions of the Contract for Construction, AIA Document A-201 reads: "If payments are to be made on account of materials or equipment not incorporated in the work but delivered and suitably stored at the site or at some other location agreed upon in writing, such payments shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner to establish the Owner's title to such materials or equipment, or otherwise protect the Owner's interest including applicable insurance and transportation to the site."

Until recently, prices of materials were relatively stable. Material was delivered to the project site when it was scheduled for installation. So that the provisions of Article 9.3.2 were only occasionally employed.

Today, however, prices of all materials are rapidly escalating. In order to obtain favorable pricing, contractors and subcontractors are purchasing and requesting payment for many categories of materials months in advance of their scheduled installation. It seems that the conditions of payment for stored materials should be specified as part of the Construction Documents under the Supplementary General Conditions.

Several questions arise when we attempt to establish policy for such payment. What items should be paid for, and when? What constitutes suitable storage? What benefits will the owner gain against the risks of agreeing to pay for stored materials? Some advantages and problems will be presented in the hope that readers will freely respond with comments and reports of their experience.

A brief survey of several public agencies did not reveal a consistent official handling of payment for stored materials.

**Author:** Josephine H. Drummond is Specifications Writer and Construction Administrator for Gruen Associates, Architecture/Planning/Engineering, Los Angeles office.

One branch of local California government does not pay for any materials until they are installed. Another pays for them if mutually agreed by itself and the architect. Still another advises that it will "take into consideration" requests for payment for stored materials.

Prepurchasing lowers net project cost to the owner, and it has the effect of getting material and shop drawing submittals to the architect promptly. On the other hand, the project site is not normally a suitable place to store finish materials until the building is closed in and secured. Lighting fixtures, hardware, electrical wiring, building insulation, and similar items are easily damaged by weather—and easily stolen. Also, once the materials are purchased by the contractor and paid for by the owner, adjustments in quantity due to changes or field conditions necessitate substantial penalty for restocking, transportation, and purchasing small quantities.

What of responsibilities? The General Conditions clearly state that title to the materials passes to the owner. Responsibility for insurance remains with the contractor. This is the same whether the material is or is not installed and carries with it the same benefits and risks.

It would appear that the question of suitable storage must be settled individually for each type of material. For example, drums of roofing bitumen might be reasonably safe on the site. Conversely, the roofing insulation and felts would be easily damaged by weather.

Four categories of storage facilities might be considered. 1 On-site without special protection, suitable only for materials not easily lost or subject to weather damage. 2 On-site in a secure, protected space; under good conditions and a project of sufficient size, this would seem to be most suitable. The contractor would provide a ventilated, lighted and heated, weather-tight shed or trailer, possibly with separate lockable enclosures, within a fenced and secured construction site. If such facilities are available for inspection, finish materials could be stored with reasonable safety. But even under the best conditions, fragile materials, finished metal surfaces, loose parts, and warranty documents can be easily damaged or can simply disappear. 3 Bonded warehouses provide safe storage, but they entail additional handling and storage charges which may offset prepurchase savings. 4 Manufacturer's warehouse is a frequently requested type of storage involving no extra storage or handling costs to the contractor. However, if the architect deems it necessary to repeatedly inspect the material to protect the owner's interest, it could substantially increase the architect's costs.

To summarize, payment for stored material should consider: the length of the contract, the probable cost impact to the owner and the architect, and the risks and benefits relative to job contingencies and changes. For administrative purposes, the contractor can be required to submit a form listing stored materials with his payment certificate. He attaches original invoices for the material to the form. This certifies that the cost of the material has been paid and that insurance is maintained on the material. In addition, it is a convenient check list for the architect should he wish to review the material. □

# The immersion of Venice

**Venice is the child of a sea threatening to drown her. A stormy romance with the Adriatic, Italian politics, and technology teach lessons for all marine cities.**

Venice is dying! Venice is dying! While the international press mourns at her watery bedside, the proud and fiery "Queen of the Adriatic" refuses to die. In the city's history are lessons for all man-made marine environments.

The Venetian lagoon, a shallow body of water, fed by rivers and protected from the fury of the open sea by a cordon of islands and peninsulas, is in many respects unremarkable. Its crescent shape runs some 55 km (34 mi) northeast to southwest and varies from about 8 to 14 km (5 to 8- $\frac{3}{4}$  mi) in width. Its sheltering islands are long and flat, built up from glacial and alluvial deposits. The barrier is breached by three openings, or ports.

Geologically, a lagoon is a transitional phenomenon whose typical fate is to strangle in the alluvium of its tributaries. However, the citizens of the Republic of Venice vowed to escape that fate. Rivers were diverted, channels were filled or dredged, and massive sea walls were erected against the sea. Nothing less than eternity was sought for the city in the lagoon.

At first, the lagoon functioned as a conduit and a sanctuary. When the Huns destroyed the neighboring Roman city of Aqualeia in 450, the refugees fled to the lagoon. Venice asserted its autonomy as a successful maritime trader from Byzantium in 814, and by the year 1000 the Republic reigned as a world power. In the 18th Century, the most mature and productive artistic era of Venetian history, the Republic failed to revive her military glory. When the last Doge abdicated in 1797, Venice submitted to Austrian rule and mainland dependence. A railroad bridge closed the historic water gap in the year 1846. When she joined the Kingdom of Italy in 1866, Venice looked to the mainland for salvation.

Redemption took the form of landfill. An industrial district was created on the mainland, an "economic lung" to "bring the ships to the factory doors." Two of the three planned zones now cover large expanses of the tidelands (*barene*) west and southwest of Venice, and lagoon consolidation for the third and by far most ambitious zone was

progressing until its recent suspension for political reasons.

Prosperity did return to the region in the form of factory jobs and residential amenities. But what some mainlanders derisively refer to as the "museum city" lost population and political control to its outskirts. Worse, as Porto Marghera grows as a major port and industrial center, it besets Venice with a host of technological ills.

Equally troubling is the lagoon. The waters the Republic had so strenuously contained may have begun a subtle but insidious transformation with the filling of the *barene*. Certainly the sea behaved with unfamiliar cruelty on November 4, 1966. While Florence was ravaged by the Arno, Venice foundered in the severest high water (*aqua alta*) of its recorded history. The water rose to 1.94 m (about 5'-10") above median sea level. It wreaked awesome havoc on the city's artistic legacy.

During the willful years of the Republic, rivers feeding the lagoon had been diverted into canals and conveyed more directly to the Adriatic, taking along the worrisome mud, rushes, and reeds. These canals rendered a dramatic service in November 1966. As the infamous 38-hour continuous downpour increased its intensity from 4 in./hr to 8 in./hr, a single devastating flood wave formed and thundered down the steep deforested hills to the valleys and plains below. Most of the torrent bypassed Venice. It was admittedly a curious godsend, for the Venetians were already deep in *aqua alta*.

## Apres moi le deluge

As the waters receded, members of the international press searched feverishly for the perpetrators. Almost invariably their trophy was not the sea but the besieged Italian government, which, having more agonizing economic, social, and political problems to solve, was not terribly alarmed about the oft prophesied "last days for Venice."

Let us leave aside culpability for the long years during which the city's sea defenses were allowed to deteriorate and new aggravations were introduced. The labyrinthian problems before Venice and her would-be saviors are neither simple nor entirely within human control. The pattern below may sound familiar.

1 As the Adriatic rages and rises, the city sinks.

2 As salt water, industry, home heating plants, motorboats,

and pigeons pollute Venetian air, water, and pavement, the city crumbles.

3 As Venetian vacancy rates for good housing stock tighten, and as factory jobs and modern housing enhance the mainland, the citizens emigrate.

### An offer she could not refuse

Venice has never trusted the sea. At the same time the Doge symbolically cast a marriage ring into the water, Venice stocked the bridal chest with sea fortifications and navigation aids.

As the infinitely stronger partner, the Adriatic was beyond reproach. On the other hand, the *porti* invited manipulation by engineers. Openings have been protected, enlarged, and deepened, and even closed. Operations like this yielded the lagoon's three present-day openings.

Were such tedious alterations unavoidable? The answer lies partly above and partly below the brackish waters in the incredibly tortured meanders of the shoals. Navigating the Venetian lagoon without being beached has been so difficult that the Republic stymied many a foe by merely pulling up the wood pilings that serve as channel markers. A more rational navigation system was needed. Deep draft shipping lanes now pass around the city.

Even water negotiates the lagoon with care. The three *porti* have actually compartmentalized it into three distinct basins, each receiving and discharging the Adriatic through its own opening. While there is no physical boundary between basins, their waters do not intermingle.

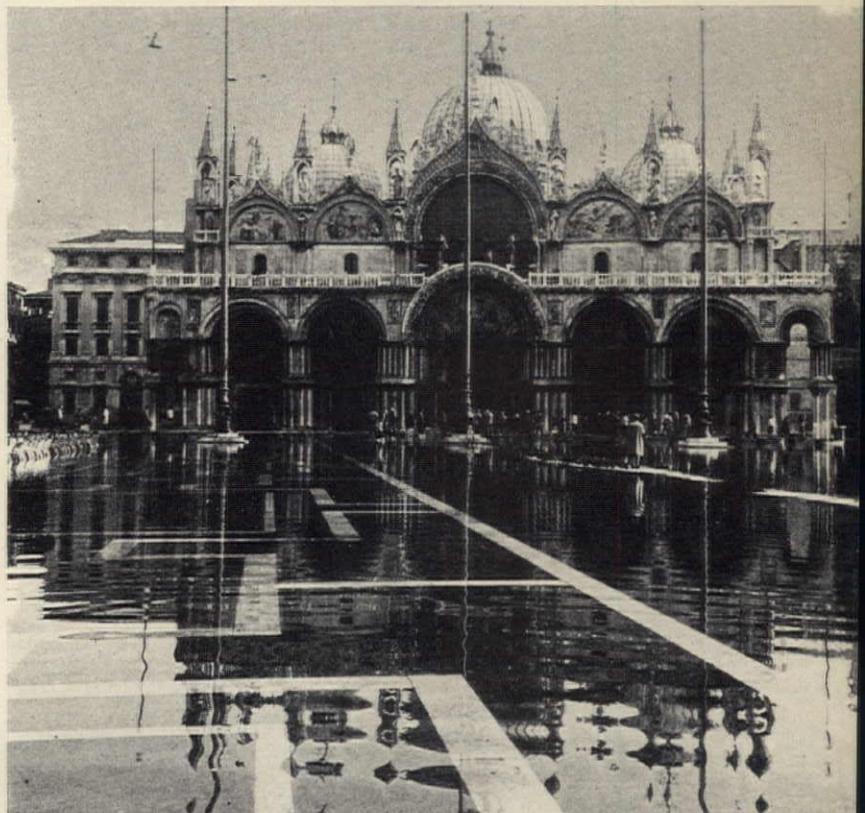
The powerful current might have been contained centuries ago by sealing off the lagoon, were it not that Venice lacks any other sewage disposal. The cycle of six hours high tide and six hours low tide has "swept" the canals clean with acceptable regularity. Inevitably, there were interior canals left untouched by the current to wallow in silt and putrefaction. Venetians have remained rather stoic about this and other shortcomings of lagoon life.

Still, the erosive outbursts of the sea in crossing the barrier islands tear at the city's jugular with a ferocity that commands attention. The historic record suggests that Venice can at best hope for protracted relief after erecting each new defense.

The finest minds of Venice have deliberated on how to appease the sea. Early solutions included earth and stone embankments for endangered shores, palisades to raise terrain, and rocky breakwaters to blunt the waves. More elaborate construction *did* bring longer relief. Long parallel breakwaters were placed at the mouths of the *porti* to guide tides and deter silt. Man-made jetties (*pennelli*) thrust from the beach to buffer the lateral raking action that fed sand to the undertow.

Perhaps the most formidable project to strengthen the barrier shoreline resistance was the *Murazzi*, an elaborate dike of durable Istrian stone from nearby Yugoslavia. It was arranged as a system of levees and walls at the summit of an embankment of massive boulders rising from beneath the sea. The *Murazzi* progressively scaled down the intensity of the sea. Before the waves could pound the upper wall to pieces, they were intercepted by sturdy rubble that disrupted and hence softened their action.

Did all this human commotion impress the sea? Sea walls are bound to fall without constant maintenance. When Ven-



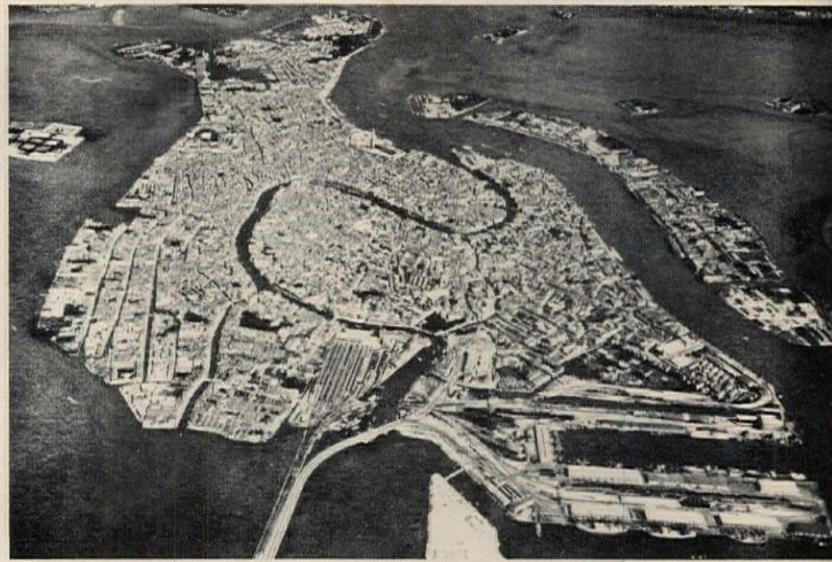
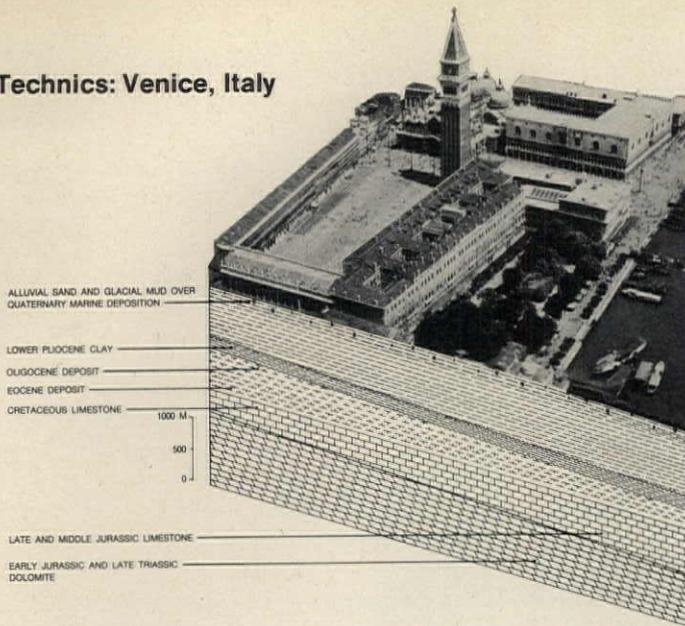
The Queen of the Adriatic is forced to wade. Pedestrians navigate famed but flooded Piazza San Marco (below), only 70 cm (27 1/2 in.) above sea level. *Aqua alta* of Nov. 4, 1966 at the San Marco Canal (above). Photos: Aldo Durazzi, Rome and Camerafoto, Venice.

ice began to neglect herself, at the time of her decline as a maritime power, the walls began tumbling.

Weaker devices are cheaper and easier to maintain. Therefore, the long parallel breakwaters at the *porti*, the *pennelli*, and palisades have been perpetuated. Even here the price can be high. Hotel keepers on the famed Lido barrier island continually replenish expensive beach sand that is only to be swept away. The *pennelli* have never effectively stabilized the beaches.

More grave is the damage inflicted on the *Murazzi*. In the 1966 flood, a good deal of the stone rubble embankment had been lost, and the upper walls collapsed in several places. This time the city has undertaken a thorough recon-

## Technics: Venice, Italy



Venice is largely at the mercy of powerful natural forces. Graphic display of accumulated effects of meteorological and hydraulic elements in Venice, 1921-1960 from 1969 UNESCO report (above). Median sea level has been more or less steadily rising. This is often accompanied by drop in barometric pressure (which may nurture inclement weather), northerly wind direction, and increases in hydraulic volume entering lagoon. Aerial view of lagoon (right). (Courtesy of Italian Government Travel Office, 1ENIT, New York.) Geological section (left). Scale vertical only. Map of Venice (below).

struction. The program will include the placement of massive tetrahedral concrete wave smashers beneath the Adriatic, with stone quietly donated by Marshall Tito.

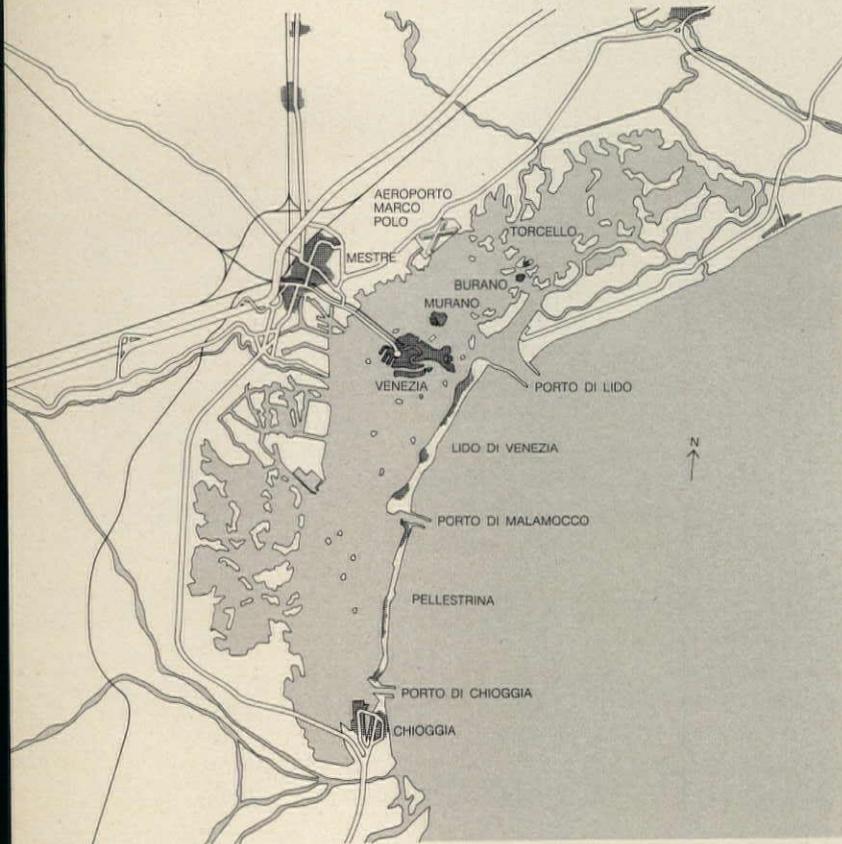
### To drown in Venice

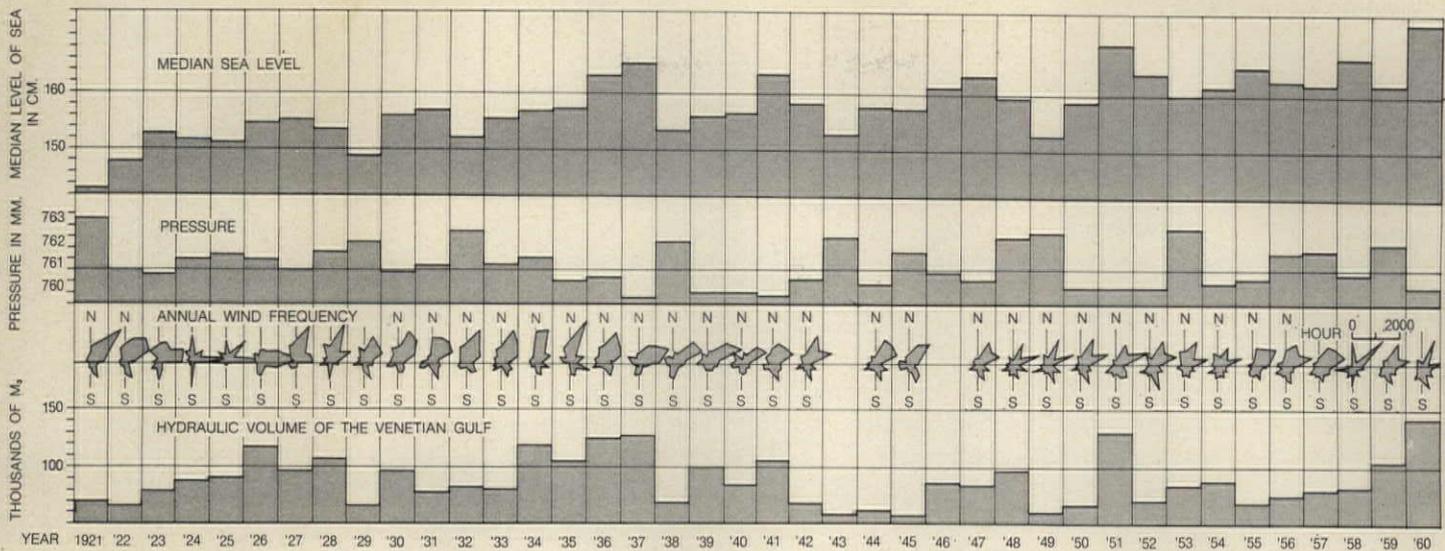
All other quarrels of *aqua alta* and sea pale before the apocalyptic vision of *aqua alta*, an abnormal rise in sea level which comes on top of the normal tidal cycle. The UNESCO *Report on Venice* (1969, Milan) perceives what it calls an "extraordinary increase" in the number of these high water inundations over the past quarter century. The statistics are sobering. Fifty-eight floods in the last 100 years, of which 48 occurred in the last 35 years, and 30 in the last 10 years.

And yet, *aqua alta* is a Venetian way of life. Every century has been visited by it. A sampling of the Venetian chronicle reads thus: 782, "There was so much water that almost all the islands were submerged," 875, "The water flooded the entire city, penetrating the churches and the houses," and 1240, "Water higher than a man's head." Why it recurs and why its frequency is stepping up are not known precisely. Most theoretical explanations of *aqua alta* seem to carry some germ of truth. Until nature's and man's precise roles are understood, antidotes for *aqua alta* may give only partial relief.

The sea is rising everywhere. An increase in earth's temperature of 0.1 C per century is slowly melting the polar icecaps and unlocking their enormous stores of water. However, the Venetian lagoon level is rising faster than readings anywhere else in the world. This is because the ground under the city and the region is subsiding as well. Here man may claim some measure of credit.

Natural causes include deep tectonic phenomena and the settling of alluvial and marine deposits on which Venice immediately rests. Suspected man-made aggravations relate to an ancient practice, drilling the Quaternary marine deposit for aquifer wells, and a newer procedure, tapping under the Jurassic dolomite thousands of feet below the surface to extract methane gas. Traditional demands on the aquifer have been recently overshadowed by development of the *barena*, which has created an enormous industrial appetite for fresh water. As has been observed elsewhere, a dramatic loss of hydrostatic pressure after heavy pump-





ing of an aquifer layer can cause ground subsidence. The same has been noted in a recent and discontinued methane gas operation in the Po Valley.

Other suspected ingredients for *aqua alta* may wait years for final sentencing. Variations in water can of course be produced by normal cyclical phenomena. As Dr. Bruno Borca of Pirelli, the major Italian manufacturer of automobile tires and chemical products, points out, astronomical tides of sun and moon can account for  $\pm 50$  cm (about 19½ in.) in sea level. The *sessia* phenomenon of water oscillation due to normal winds can account for another  $\pm 50$  cm. And the *sirocco*, the powerful wind that flows up from north Africa and the Mediterranean Sea can account for  $\pm 1.0$  m. Harder to pin down is whether filling the *barene* has induced faster filling of the lagoon at high tide. Could this accentuate *aqua alta*? To what extent is landfill offset on the hydrographic scale by channeling for the big oil tankers? Scientists have much to unravel.

One very encouraging development in a long and somewhat fantasy-laden parade of solutions to *aqua alta* has been advanced by Pirelli and recently presented in the U.S. This is the use of inflatable rubber dams at the *porti* to block the entrance of *aqua alta* into the lagoon. Pirelli scientists and technicians are quick to point out that the idea is neither new or untested. Small inflatable rubber dams have been in use in the U.S. and the Netherlands for some time. A caisson using a rubber webbing diaphragm was built for special nautical construction work in England.

The Pirelli concept was tested on the river Po in November 1974, through a joint effort of Pirelli and Furlanis, an Italian construction firm. The "baby dam" assembled for the test is similar to those intended for Venice. Two reinforced rubberized fabric sleeves are placed across the channel, one atop the other. Cables run through the interfacing of the sleeves to be anchored at steel piers on both sides of the sea floor.

When *aqua alta* conditions have been sensed by instrumentation and computer-coordinated with pumping stations at each end of the dam (Venetian stations of the Council of National Research experimental geophysics laboratory give a 6-hr advance alert), the sleeves are pumped full of water. In a half hour the dam is ready to resist the sea, which thrusts the nearer edge low as it lifts the farther

edge high. Considerable tensile stress is passed through the internal cables to the sea floor, thereby giving relief to the rubber sleeves. As water recedes, sleeves deflate.

### What's eating Venice?

Venetian buildings, statuary, and paintings cope with one of the most hostile environments known to human artifacts. The wonder is that so much has not vanished into the corrosive saline waters that pound and spray their way into the streets and squares. For as Dr. Seymour Z. Lewin, Professor of Chemistry, New York University and a specialist in stone conservation notes, water is the main villain of decay.

Through the action of water, salt is deposited in stone pores to crystallize and thereby crack the stone. Water permits materials like lime in mortar to leach and migrate to new unsightly positions (effluorescence). Micro-organisms promoted by water, such as bacteria, lichen, and algae, inflict mechanical and chemical damage through growth and decomposition. Coal, oil, and gas combustion release acidic oxides of sulfur into the air which water can convert to sulfuric acid. Gasoline combustion releases oxides of nitrogen which water can convert to nitric acid. Water abrades. By virtue of its seasonal thaw/freeze phases, it can also penetrate stone pores and crack them open by expanding. Marble thus crumbles with nobody's urging.

It has been politically difficult to rally the general public against the collaborating agents of water. And what a motley lineup this is. Pigeons disfigure monuments with droppings that can ferment into damaging salts, but tourists love to feed the flocks twice a day in the Piazza San Marco. Mainland industrial air and water discharges vary in severity (at least the prevailing winds tend to blow from Venice to the mainland), but pollutants are sweetened by some 40,000 jobs. Motor powered launches burn gasoline or diesel oil and throw stiff wakes against the frail foundations of buildings bordering canals, but are faster and cheaper than the *gondolieri*. Home heating plants have traditionally burned diesel oil (*naphtha* in Italy), and only recently have building owners begun converting to cleaner burning methane gas. There is some debate as to whether *naphtha* from Venetian homes or Marghera factory fumes have done the city greater harm.

Nor is Venice merely shedding its façades. Some of her

## Technics: Venice, Italy

buildings are about to topple over because the soft mud underneath is settling unevenly. Some of its construction is directly on mud, using stone spread footings. Otherwise, builders sank piles deep into the lagoon, and capped them with stone platforms. In either condition, uneven ground subsidence can inflict serious damage by lowering a building's bays at different rates.

What can be done to prevent the 20th Century from devouring what Giorgio Cavaglieri, a New York architect born and raised in Venice, describes as "one of the few cities in the world where 1000 years of human artistic labors are still exactly where they were conceived and placed"?

### From dust to dust

Venice is sick—with marble disease. We can appreciate why its wealthy patrons chose marble for their monuments. Unfortunately, stone containing calcium carbonate, including all varieties of limestone, travertine, and marble, are particularly susceptible to decay.

Despite the tremendous heat and pressure which transformed limestone into marble, interstices persist that water can penetrate and harm. Furthermore, marble reacts with acid, which etches and consumes calcium carbonate. In the Venetian environment is enough water, salts, acidic oxides, and other reagents to reduce marble to dust at the touch of a hand, as surprised tourists have discovered.

There have been three basic approaches to safeguarding marble, Dr. Lewin says. Their purpose is to strengthen marble's resistance to water exposure. He adds that there is no universal panacea for sick marble or any other monumental stone having physical or chemical ills. Treatment must be tailored to the type of stone and its environment.

Present marble conservation techniques include sealing, waterproofing, and reconsolidation. Dr. Lewin strongly believes that sealing stone with silicone resins, a widespread practice for buildings, is only as good as it is thorough. Which is practically impossible.

For statuary that can be completely immersed, sealing with silicone forms an acceptable shield against internal penetration by water. There is no such recourse for architecture. Sealed stone cannot "breathe," and water entering through points inaccessible to technicians is trapped until it "escapes," possibly by spalling off sealed stone.

Silicone-based water-repelling films have been applied to marble surfaces. They tend to be thin, one to two molecules thick by Dr. Lewin's estimate. They give as much as three seasons of protection at premium cost.

Reconsolidation is an effort to rebuild the outermost layers of decaying stone with a more durable chemical substance. Total immersion of stone in silicone resin under pressure assures complete saturation of statuary surfaces. Again, it is not an architectural technique.

Another approach is to place marble in a solution of barium hydroxide with urea to transform the outer crystalline layer of calcium carbonate into barium carbonate, a stable natural mineral of markedly similar properties except that it is much stronger. Like calcium carbonate, barium carbonate reacts with the inevitable air pollutants like oxides of sulfur. However, barium sulfate is one of the most insoluble

substances known, and its adhering protective coat gives marble immunity from further air pollutants. After the stone is moistened with a glycerine solution, the barium hydroxide solution is applied and kept covered for three weeks. The process is neither exotic nor prohibitively expensive, and Dr. Lewin has already supervised its successful application in conservation work in the U.S. and abroad.

### The walls of Jericho

A crack in your wall may only annoy you, but it alarms the Venetian. When faults large and small appear on Venetian façades and pavements, treatment comes swiftly and diligently. A weakening structure brought to the city's attention is surveyed at once, and a glass bar is placed across the fault for regular inspection. If a new foundation is warranted, the windows of the damaged façade are bricked in, a coffer dam is erected, and excavation and repair are carried out. For this, the building owner pays two-thirds of the cost.

As for the problem of capillary action, the upward movement of water from the frequently wet ground floors of Venetian buildings via the walls, a treatment has been borrowed from roofing techniques. A sheet of lead is inserted in a reglet cut into the base line of a building. This prevents further water absorption. However, water already trapped inside a wall may take time to evaporate.

All this bother may inspire readers to ask why anyone would want to live in Venice. The truth seems to be that not every Venetian wants to stay. The Damocles sword above all the good restoration work in Venice is the undecided political fate of the city.

Venice may be the capital of the Venezia region, but its political future is not entirely in its hands. In the industrialization of Marghera, it was decided to consolidate the islands and the mainland as one administration, the Comune of Venice. The mainland has become so populous that the balance of political power has swung to shore. Of a 1971 commune population of 364,003 only 107,811 lived in Venice proper.

Current figures suggest that emigration from Venice proper is slowing down. There is not much more to lose, as Roberto Brambilla of the Italian Art and Landscape Foundation in New York half jokes. The remaining survivors tend to be older and more inactive than those who depart. The young families seek dry, well-lighted living spaces with modern plumbing at prices they can afford. Venice has an overpriced housing stock that it cannot afford to repair despite glaring deficiencies.

With so much economic and political power vested in the mainland, the passage of a Special Law for the Preservation of Venice by the Italian Parliament on April 13, 1973 was an encouraging event. Of course, conservationists pointed out that this was *seven years* after the flood.

Most Italians look favorably on the legislation, reports Prof. Giuseppe Cardillo, Director of the Italian Cultural Institute in New York. Because the Special Law skirts politics, serious questions remain unanswered: the autonomy of the consortium of industrial zone interests, the law's exclusion of local and regional administrations from much financial

responsibility, the control of building speculators during restoration work, the control or transfer of polluting industries, to mention some. What the law intends is summarized here as follows.

- 1 Safeguarding Venice and its lagoon is a problem of national interest.
- 2 The region must prepare a territorial program of the defining sectors under special control, limits of protection, prohibiting new *barene* development, regulating public services, and forbidding settlements potentially dangerous to the nature of the territory.
- 3 A territorial plan must follow and supplant the territorial program.
- 4 A Committee for the Safeguarding of Venice may be formed to approve use of reclaimed land and all work in any other part of the lagoon.
- 5 The State is responsible for maintaining the lagoon, port facilities, coastal defenses, canals, and foundations.
- 6 The National Research Council is to be principal advisor on scientific and technical matters to the State.
- 7 Septic tanks or sewage treatment plants must be ready to receive lagoon refuse water in three years.
- 8 Heating plants must run on electricity or gas fuel in Venice. The State will pay up to 40 percent of the cost of plant conversion.
- 9 Restoration and preservation work for Venice, Chioggia, and other towns on the isles must meet certain professional standards, and must be administered by agencies with "prevalent public participation, evenly shared by the State and the Local Administration."

When the required comprehensive city plan was somewhat hastily unveiled in the same year, it set the very complex wheels of Italian society in furious motion again. There would be two zones: A Zone permits no alterations; B Zone could authorize new construction. Prof. John McAndrew, Chairman of Save Venice, Inc., a society funding restoration of Venetian art and architecture, observes that patches of B designation jeopardized some historically and aesthetically valuable monuments. Superintendent of Monuments Padoan, who with Superintendent of Fine Arts Valconover guards the city's artistic heritage, worked day and night documenting his exceptions to the zoning plan.

On the whole, the Venice designated for urban renewal is not contested at all. Col. James Gray, Executive Director of the International Fund for Monuments/Venice Committee, also involved in funding restoration in Venice, reminds us, entire areas of the city are uninhabitable due to dilapidated conditions and the encroaching sea. And the immediate surroundings of the harbor and railroad station are already an aesthetic disaster.

(It is interesting in this light that three masters of 20th Century architecture left no physical mark on the city despite intentions to do so. Frank Lloyd Wright's scheme for a *Casa Masieri*, 1953-54 respected the scale and texture of Venetian architecture but was refused a building permit. Le Corbusier's Hospital at San Giobbe, 1965 grew too huge and complex for Venetian needs and budgets. Louis Kahn's graceful *Palazzo dei Congressi*, 1969 for the Biennale gardens was never a financial probability.)

What will become of Venice? The world can and has offered financial and professional support to guide the Italians to a decision. But the Italians must decide, for Venice is first and foremost an Italian problem.

Should the city be a center for business and government? A tourist center offering little more than part time work and too few good accommodations in the height of the season? An international community for scholars? No one knows yet, even the Venetians.

Meanwhile, the sea is not conveniently asleep. UNESCO's former Director General Rene Maheu was particularly devoted to the rescue of Venice, and he found the unresolved state of affairs rather exasperating. Since the flood of 1966, UNESCO has coordinated studies, convened international conferences, and expedited conservation work. Its patience would appear to be nearing an end at this time. To quote Maheu, "The big question is whether Venetians want to live in Venice."

As P/A goes to press, there are four acknowledged champions of Venice in the cabinet of Aldo Moro, who may do much to reassure the world that the much maligned "Venice Loan," \$550 million granted to the Italian government in 1973 by an international consortium of nations, will be faithfully applied to Venice. Critics have charged that the Italian Credit Consortium for Public Works is not dedicating the funds to Venetian purposes at all, but there seems to be no real substantiation of the charges. Critics also point out that the longer the money remains in escrow, the less it will buy for Venice.

Many Venetian masterpieces of art and architecture cannot wait much longer for help. And so, private groups around the world, the so-called "International Mafia" for Venice, are spending their own funds on restoration projects. This may be the only way to accomplish the rescue. Perhaps no nation alone could afford to protect all that Italy has given world culture.

Italia Nostra, the voluntary Italian society, finds itself surrounded with allies in Australia, France, United Kingdom, Netherlands, Switzerland, Germany, and the U.S. Americans interested in Venetian restoration projects might contact one of the following groups. Save Venice, Inc., 60 E. 42 St., New York, N.Y. 10017, International Fund for Monuments, Venice Committee, 15 Gramercy Park South, New York, N.Y. 10003, and America-Italy Society, 22 E. 60 St., New York, N.Y. 10022.

Venice has not looked so good in years. Conservators are gradually restoring the Venice of the Republic for the 20th Century. The church of Santa Maria dei Gesuiti, with its astonishing Baroque interior of 1715 to 1728, is being rescued from grave structural danger by Save Venice, Inc. The church of San Pietro di Castello, the cathedral church of Venice from 807 to 1807, has been almost completely restored, thanks to the International Fund for Monuments. There are dozens of other signs of a Venetian renaissance.

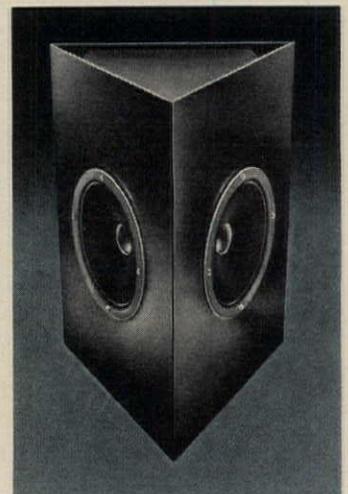
All this good could still come to naught. Beyond the great city is a far older and more awesome sea. By now man should know how to live harmoniously in its presence, Venice will save herself if her citizens, her countrymen, and the world have the conviction to do so. [Roger Yee]

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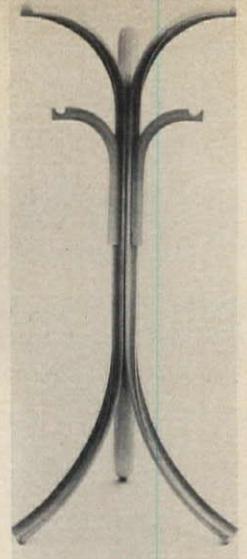
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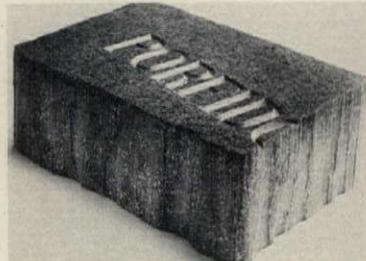
# Products and literature



**Furniture collection.** Imported from Switzerland is a **folding/nesting/linking chair** made of laminated beech. Comes in a choice of opaque or aniline colors. A **cocktail table** that resembles a rough slab of granite is sculpted of solid urethane foam and has washable and alcohol-resistant surface. A **free-form chaise and ottoman** is part of the Jan series which includes a lounge chair. Constructed of polished chrome steel frame with flat inner steel spring suspension covered in molded foam which has a zippered cover. A **costumer** of steam bent ash comes in a natural finish. **Etceetera** consists of three elements—a straight one, an inside corner, and an outside corner permitting many configurations. Lightweight elements can be linked together. Units have zippered covers. **Lambo** system of modular seating consists of two large scaled basic units—the straight armless seat and the corner unit with arms. Can be used single or together in multiples in many configurations. Choice of suedes, leathers, or fabric upholstery is available. Stendig, Inc.

Circle 101 on reader service card

**Metallized acrylic tubing and fittings** can be fitted together to form furniture, lighting fixtures, store displays. Mirron will not oxidize or discolor, tubes and rods can be cut with a saw or drilled and can be bonded with solvent or adhesive to most acrylics. Comes in chrome, gold, brass, and reflective red, green, blue, pink, and smoke. Tubes and rods are available in standard 48 in. lengths. Thermoplastic Processes. Circle 102 on reader service card

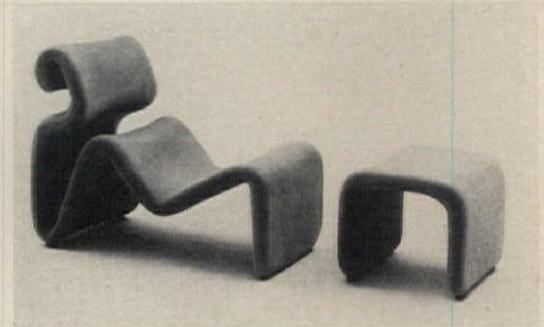
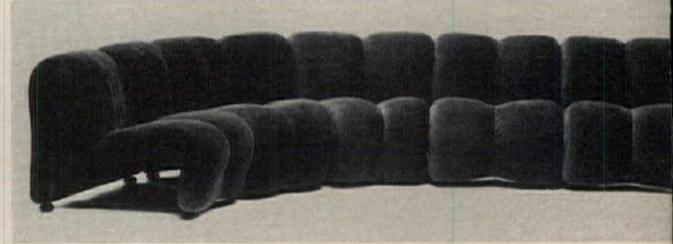


Furniture collection

**Acrylic spheres.** Thermoformed in one piece from virgin cast acrylic sheet, spheres come in a full range of sizes from 12 in. to 24 in. in diameter. Especially for use with High Pressure Sodium, Mercury Vapor, and Metal Halide Lamps. Clear, white translucent, and bronze are standard colors; others available by request. Arrem Plastics, Inc. Circle 103 on reader service card

**Vinyl wallcovering.** Denim pattern creates a free-form plaid from Chino's irregular weave. Each color is actually dual, with weave lines accentuated visually by either a darker shade of the color or by off-white. Vicrwall is 11 oz per sq yd and resists soil, scuffs, and stains and is treated with mildew resistors. L. E. Carpenter & Co. Circle 104 on reader service card

**Sofa** suspended between two frames of chrome plate steel is part of a sofa, loveseat, chair group. Monarch Furniture Corp. Circle 105 on reader service card



**Fireplace shell.** Serving as a built-in structural guide, the Air-Jet double wall circulator fireplace shell is designed on furnace principles. Offered in 36-in. or 42-in. widths, it has all essential fireplace elements. Complete all-fuel chimney system, including pipe sections, offsets, rooftop terminations, and housings are also offered. General Products Co.

Circle 106 on reader service card

**Carrels.** Available in choice of two-color combinations of plastic laminate. One features solid colors—sand sides and back; the other, wood-grained natural barrel oak side and back. Both models have tops and shelves of brown. Chromax-plated and brightly polished legs are of 1-3/4 in. round, 13-gauge steel tubing fitted with adjustable leveling glides. Accessories include a fluorescent lighting fixture, projection modules, and power column. Howe Furniture Corp. Circle 107 on reader service card [continued on page 88]

# The new washroom:

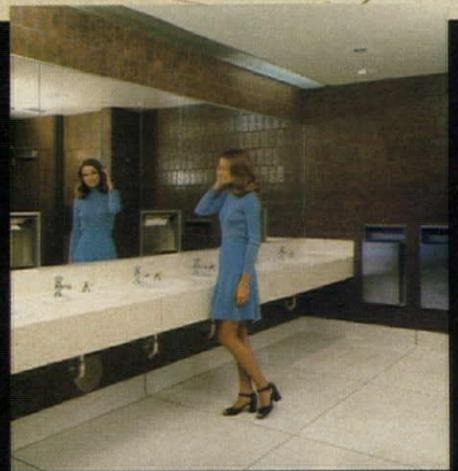


Bobrick laminated plastic toilet compartments add warmth and elegance to new washrooms in the Sacramento, California, Civic Center.

Uniform thickness of doors, stiles and wall posts create a distinctive "flush-front" appearance. "Lifetime" stainless steel hardware is concealed inside the compartment. And for extra strength, steel cores reinforce the stiles; factory-installed threaded steel inserts secure the hardware.

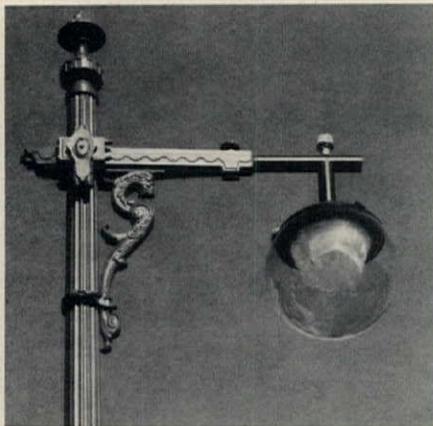
Bobrick coordinated stainless steel wash-room equipment carries out a "total design concept." Shown here are towel dispensers recessed into mirrored walls; waste receptacles recessed in the tiled wall; and soap dispensers mounted on the lavatories.

To help you plan today's new washroom, send for our Planning Guides and Catalogs. Bobrick Architectural Service Dept., 101 Park Ave., New York 10017. Bobrick products are available internationally.



# bobrick

SINCE 1906



Street lighting

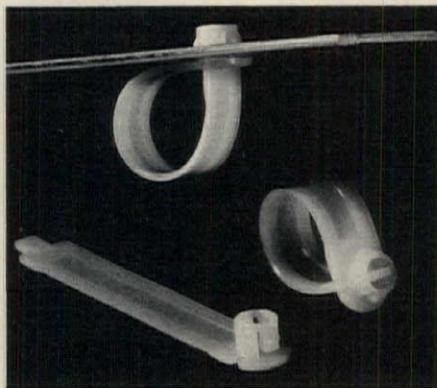


**Commercial ceilings.** Designed for specialized installations such as shops, boutiques, beauty parlors, restaurants, lobbies, and offices, the line includes four new products: Registry, above, extreme left and right combines two patterns creating the effect of real cast plaster; Corkoustic in between is chocolate-colored, having the look of natural cork; Antique Glass, the small tile, bottom right is metalized but printed to give the appearance of antique glass. Gold Leave, behind Antique Glass is a reproduction of a gold leaf ceiling. Armstrong Cork Co.  
*Circle 108 on reader service card*

**Composil.** A silicone-based formula which completely penetrates and seals the fibers in silicone, making carpeting or upholstery impervious to liquid stains, prevents dirt from working its way into the fibers, eliminates need to shampoo or dry clean, states maker, Wfj./ Fabrigard Corp.  
*Circle 109 on reader service card*



Freestanding fireplaces



Cable hangers

**Street lighting.** Combining 1930s street lighting poles with contemporary luminaires which are 24-in. diameter clear spheres with an internal Holograph closed-bottom lens which produces an IES Type III light distribution, and accommodates a single 400 v mercury vapor lamp. Unit has a photo-control for automatic turn-on at dusk and turn-off at dawn. Architectural Area Lighting Co.  
*Circle 110 on reader service card*

**Cable hangers** made of all nylon come in three sizes to encircle cables and tubing in  $\frac{3}{8}$  in.,  $\frac{1}{2}$  in., and  $\frac{5}{8}$  in. diameters. Heyman Manufacturing Co.  
*Circle 111 on reader service card*

**Double-duty wall covering** for architectural and engineering offices is lightweight, porcelain-on-steel material that can be applied to existing walls. Material comes in a wide variety of colors, doubles as a dustfree writing surface when used in conjunction with dry marker pen; can later be erased. Lighter shades also can be used as a projection screen. AllianceWall Corp.  
*Circle 112 on reader service card*

**Freestanding fireplaces** are being offered in any color or custom design as a service to architects and builders who require 100 or more units. Marketed as "The Compatibles™," they are stocked in six House & Garden colors. Heatilator Fireplace, a division of Vega Industries, Inc.  
*Circle 113 on reader service card*

**Security system.** Signac verifies a claimed identity through automated analysis of how a person signs his name. Each person's pressure pattern is unique to the individual, thus a forgery can be identified. To enroll in the system, a person taps out an assigned identification number on a keyboard and signs his name several times. Signature data is transmitted to a central processing computer which develops a signature "standard" data base for the individual, which is stored in the system's memory. Once enrolled, a person seeking access at any remote entry control point makes an identity claim by entering his identification number via keyboard on a coded card, then signs his name on ordinary paper with the Signac access pen. Sentracon Systems.  
*Circle 114 on reader service card*

**Mall/street furniture.** Laminated wood furniture for indoor or outdoor use is weatherized with a clear urethane sealer. Standard items include benches, planters, litter receptacles, and urns. All can be built to buyer's specifications for most any size or shape of space from Douglas Fir or hardwoods, stained or natural. Landscape Structures Inc.  
*Circle 115 on reader service card*

**Revolving doors.** A hinged model features a full-length heavy-duty hinge on one side and an adjustable wheel carrier at the base of the other side for easy roll-out. A steel jamb and snap lock are furnished to secure the door while in operation. Entire cylinder swings open with a 14-lb push in emergency or to move equipment through. Offered as 2-way, 3-way, and 4-way doors, they are designed for use in photographic darkrooms photography studios, X-ray labs, clean rooms, computer data centers, air-inflated buildings. Consolidated International Corp.  
*Circle 116 on reader service card*  
[continued on page 91]

# Knoll International

**Richard Schultz designs for Knoll**

The new Schultz Seating includes a two seater settee and a three seater sofa both elegantly scaled and designed for a well proportioned and aesthetically dramatic extendable seating solution

745 Fifth Avenue, New York 10022

Knoll International designs for the way you work.



# TALKING COMPUTER TELLS HOW YOU COULD GET UP TO TRIPLE YOUR MONEY BACK ON THE ADDED COST OF 2¼" ROOF INSULATION.

NEW OWENS-CORNING COMPUTER TELLS YOU ALL THIS IN 30 SECONDS

1. ANNUAL HEATING SAVINGS	<b>\$2,217</b> <b>+361</b>	<b>\$2,578</b>
2. ANNUAL COOLING SAVINGS		
3. TOTAL ANNUAL FUEL SAVINGS		
4. INITIAL EQUIPMENT SAVING	<b>\$41,640</b> <b>-19,500</b>	<b>\$22,140</b>
5. LESS: COST OF ADDITIONAL INSULATION		
6. NET EQUIPMENT SAVING		

To compute savings for the average life cycle of a building (20 years), multiply annual fuel savings (\$2,578) by 20 and add new equipment saving

(\$22,140). Total, \$73,700, is more than *triple* the cost of additional insulation. (That's not counting increases in fuel costs or the effect of continuing inflation.)

There's never been anything like it!

- Simply feed a few facts to our computer via touch-tone telephone.
- Wait 30 seconds.
- Then listen! The computer's voice will give you the approximate savings in a 6-point answer (see table). If you want a print-out in the mail, just say so.

This valuable service (called "The Energy Management System Line to Savings") doesn't cost you a cent, no matter how often you use it.

#### Saves time and money

We developed it to help architects, engineers, and owners solve a problem. The energy crisis has forced fuel prices up and made 2¼" roof insulation more desirable than ever before.

But the savings on any particular building depend on many variables—and doing the calculations can be tedious and costly.

No longer! Our new system does the job in seconds, makes it easier for you to be a hero to your clients or management.

*Note:* The savings shown above are approximate and are based on the following: Average 1975 fuel and equipment costs. Upgrading roof insulation from 15/16" to 2¼" on a 60,000-sq.-ft. metal deck. Suburban office building. Northern climate. Gas heating and electric cooling.

Your estimated savings on a particular building depend on size, type, location, method of heating and cooling, and other variables. (The figures you'll get from our computer are approximate savings, of course, and can't replace a full analysis.)

#### For more information

Call your Owens-Corning representative. Or write to Y. Z. Meeks, Owens-Corning Fiberglas Corporation, Fiberglas Tower, Toledo, Ohio 43659.

Owens-Corning is Fiberglas

OWENS/CORNING  
**FIBERGLAS**  
TRADEMARK ©

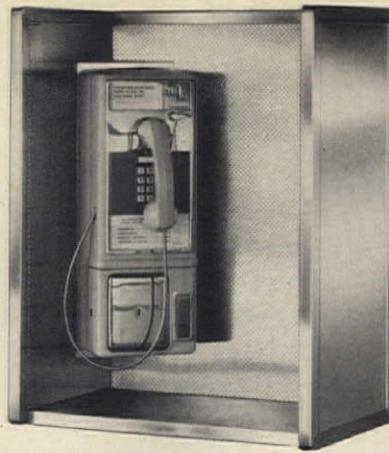
Products continued from page 88

**Awning windows.** Units are double weatherstripped, with vinyl leaf around the sash and soft tubular material on the inside of the frame. A lever lock operator provides a tight, positive closing action against the weatherstripping. Sizes range from 28"x38" to 45"x38". Combination of wood construction, double weatherstripping, and multiple glazing. Marvin Windows.

Circle 117 on reader service card

**Programmable calculator.** Said to provide computational capability for surveying work and structural problems in addition to mechanical and electrical engineering design. Project reports showing the amount of time and money spent in each phase of each project, the completion status of each job, and the amount to be billed to each client can be ready immediately, states maker. Hewlett Packard.

Circle 118 on reader service card



**Acousti-Call** is an indoor acoustical booth that is topless to permit a booth mounted at wheelchair height to be used for regular walkup calls. High intensity acoustical blankets absorb noise through the perforated interior stainless steel walls. Handy shelf can be used for writing, purses, or packages. Tubular frame, shelf, and exterior walls are also of stainless steel. Colored, patterned or woodgrain plastic laminate side panels are available. Can be mounted on a wall, or pedestal. Acoustics Development Corp.

Circle 119 on reader service card

## Literature

**Indoor HID lighting guide** called *Lighting is more than footcandles*, presents a design system based on a master chart which tabulates complete data for various fixture/lamp combinations, including basic photometric performance, lighting comfort ratings, and noise ratings. Included are sections on lamp and luminaire selection, uniform and non-uniform lighting, emergency/auxiliary lighting, mercury dimming, and automatic energy control systems. Wide-Light Corp.

Circle 201 on reader service card

**Lighting fixtures.** Twelve-page catalog describes 14 low-watt, high-pressure sodium lighting fixtures, illustrates fixtures and systems designed for office interiors, commercial, and industrial applications, outdoor wall and area lighting, and parking facility luminaires. Guth Lighting.

Circle 202 on reader service card

[continued on page 92]

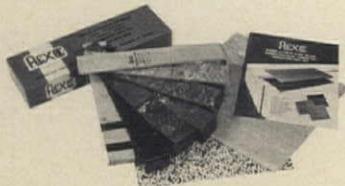
# FLEXCO<sup>TM</sup>

## RUBBER STAIR TREADS HAVE EXCLUSIVE METAL REINFORCED NOSE

Since the nose of stair treads receive the hardest wear and the most strain under heavy traffic, doesn't it make good sense to reinforce this area for added resistance to wear and damage? That's why FLEXCO Rubber Treads have a grid of high tensile strength metal molded into the nose at the point of greatest stress. And this added protection doesn't cost a cent extra!

FLEXCO Rubber Treads are made of tough high grade rubber in 1/4" and 1/8" gauges! Diamond design safety treads, smooth treads and smooth design with Carborundum Safety Strips are made in a full range of sizes up to 72" long. Eight modern color styles.

You should know more about the FLEXCO line of rubber and vinyl stair treads, cove base, stair nosings, rubber tile and conductive vinyl tile. Write us for samples and descriptive catalog.



**S** SEE OUR CATALOG IN SWEET'S

**FLEXCO<sup>TM</sup>** DIVISION OF **TEXTILE RUBBER CO., INC.**

P. O. Box 553 TUSCUMBIA, ALABAMA 35674 (205) 383-7474

Literature continued from page 91

**Commercial furniture.** Full-color 58-page catalog presents company's complete line of furniture from stacking chairs and tables to counter stools, coat racks, and stadium seats. Contains photographs of actual installations, information on furniture planning and design. Catalog is color coded along the edge of each page for quick reference to specific category. Fixtures Manufacturing Corp.

Circle 203 on reader service card

**Watt-Watcher.** An electric load programmer that reduces demand peak charges by allowing you to maintain a constant electric load consumption level rather than peaks and valleys. Prime areas for load savings are in the applications of heaters, refrigerators, and air conditioners. For use in commercial buildings, industrial plants, retail stores, and residential buildings. Request technical application bulletin WW. Datametrics.

Circle 204 on reader service card

**Lighting catalogs.** Company's track lighting line includes downlights, wall washers, fluorescents for general task lighting, space frames and kinetic lighting, as well as an integrated light and space ceiling system. Included in 64-page brochure is a lamp selection guide. Designers Group 2 is a collection of lighting systems that use a variety of modular components to create a wide range of effects in many forms and sizes, states maker. Modular Lytestructures are rings of light using a variety of snap-on lighting elements. Lyteties are modules that create area lighting patterns. Choice of bulbs provides different effects. Lightolier.

Circle 205 on reader service card

**Modular wardrobes.** Catalog describes and depicts single door and double door units for built-in and free-standing use. Wardrobes are surfaced with wood-grained vinyl finish. According to brochure, system is designed to produce custom-made cabinet work to precise specifications. Hausmann Industries, Inc.

Circle 206 on reader service card

**Office furniture.** Executive and secretarial desks, credenzas, tables, chairs, and lounge seating in contemporary as well as traditional styles in walnut, teak, rosewood, oak, and mozambique are illustrated in eight different brochures available from Alma Desk Co.

Circle 207 on reader service card

**Custom walls.** Literature gives detailed architectural specifications, renderings of various standard patterns of coordinated wall, floor, and ceiling treatments for home, office, and contract settings. Of Ponderosa Pine, in natural blue and wormy finish; other wood on request. Surface Concepts.

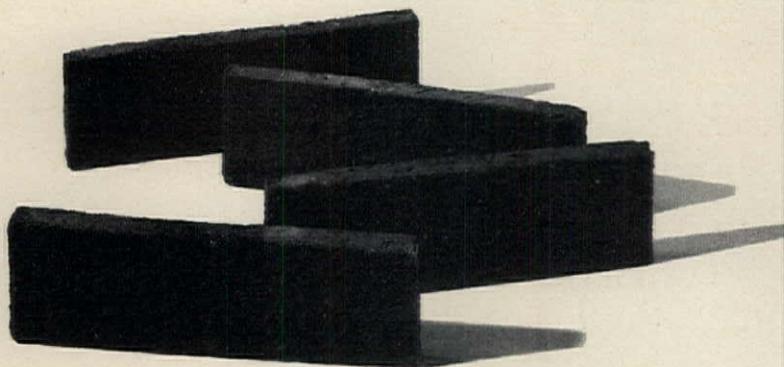
Circle 208 on reader service card

**Aluminum.** A guide to 64 publications and 135 reprints covering all aspects of aluminum is available from the Aluminum Association.

Circle 209 on reader service card

**Closers and exit devices.** Illustrated brochures give features of devices and show installation details. Eaton Corp.

Circle 210 on reader service card



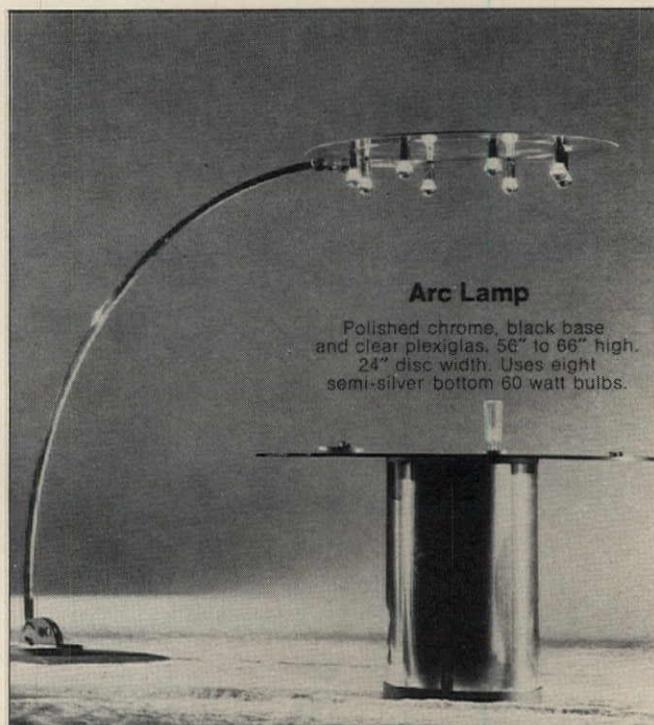
# Brickettes<sup>®</sup>

**Real, half-inch-thick bricks that save up to 5% of floor space.**

When the specs call for real bricks, specify Brickettes or equal. Because kiln-fired Brickettes are thinner than regular-size brick, they provide your clients with more usable floor space. This means Brickettes actually pay for themselves in just a few years.

Brickettes are available in a wide variety of decorator colors and have been used for many commercial installations: Holiday Inn, McDonald's and Zales to name a few.

For more information and the name of your nearest Brickettes supplier, write Modern Methods Inc., Owensboro, Ky. 42301.



## Arc Lamp

Polished chrome, black base and clear plexiglas. 56" to 66" high. 24" disc width. Uses eight semi-silver bottom 60 watt bulbs.

Request New Catalog

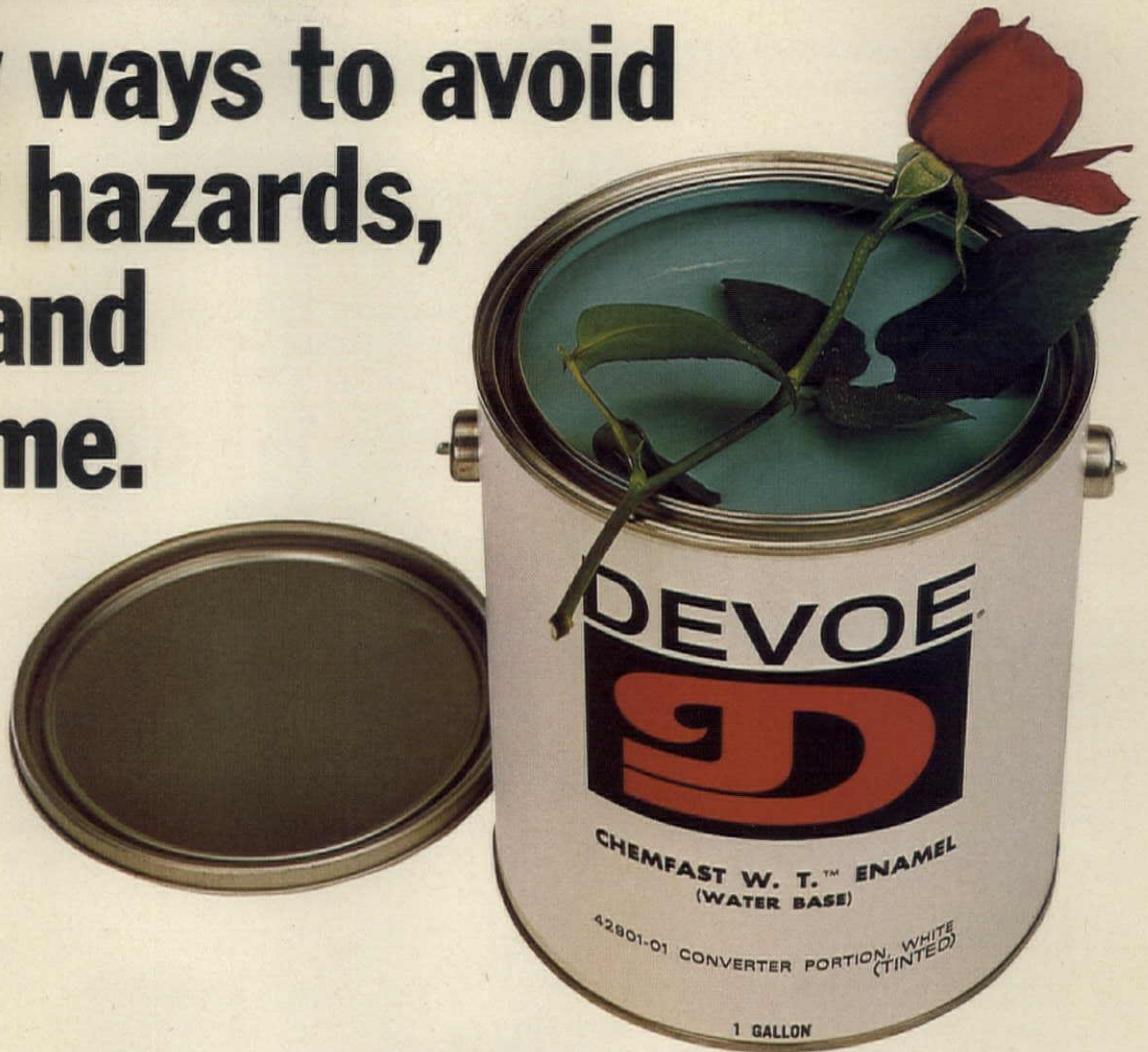
lighting  
associates

305 East 63 Street, New York, New York 10021 (212) 751-0575

Circle No. 335, on Reader Service Card

← Circle No. 338, on Reader Service Card

# Devoe announces six new ways to avoid solvent hazards, fumes and downtime.



**A new line of high-performance water-base paints offering low odor, water clean-up and conforming to all EPA regulations.**

Specially formulated to give the high corrosive protection found in comparable solvent-based paints, these six commercial/industrial coatings are easy-to-apply and clean up with water. And there are no hazardous solvent fumes to worry about, allowing a minimum interruption in production and a much superior painting atmosphere in enclosed areas. Whatever the surface—wood, concrete, metal or galvanized steel—one of these coatings will be just right for the job.



#### Chemfast W. T. Enamel.

- Full epoxy protection with easy, water clean-up.
- Ideal for structural steel, concrete, tanks and machinery in non-immersion service.
- Resistant to splash, spillage and fumes of most types.
- Upgrade to epoxy without special primers.
- Usable over sound previously painted surfaces.
- Available in ready-mixed colors.



#### Chemfast W. T. Metal Primer.

- Water-base epoxy metal primer.
- Excellent adhesion.
- Convenience of water clean-up.



#### Epihydro Glazed Wall Coating.

- Epoxy, tile-like coating with easy, water clean-up.
- Better protection against bacteria growth and dirt build-up than tile.
- Accepted by APHIS (MID-USDA). A HIPAC coating.
- Especially adaptable for schools, hospitals, and food processing areas.



#### Mill White Spray Paint.

- Increases light reflection.
- Ideal for walls and ceilings in warehouses and other non-chemical industrial environments.
- Economical, single-coat cleanup with good hiding qualities.
- Available in flat, eggshell or semi-gloss finishes.



#### Acrylic Maintenance Coating.

- Improved gloss, color retention, durability over alkyds.
- Wide choice of colors.
- Accepted by APHIS (MID-USDA).
- Good resistance to mild chemicals.

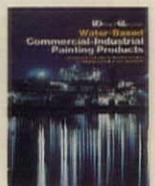


#### Metal Primer, Red.

- Penetrates tight rust residue with good adhesion to steel, galvanized steel and aluminum.
- Excellent corrosion resistance under latex, oil or alkyd topcoats.

#### Write for brochure.

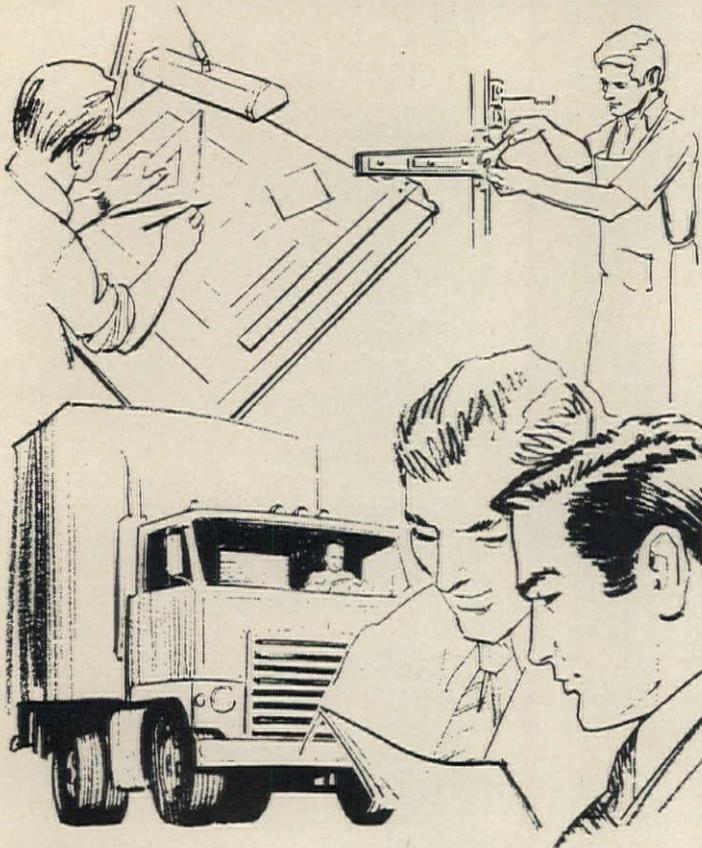
For a copy of our new brochure that tells the full story, write Devoe Paint, P.O. Box 1863, Louisville, Kentucky 40201.



**DEVOE PAINT SINCE 1754...IMAGINATION FROM ELANESE.**

# YOU GET MORE FROM JAMISON

(the cold storage door people)



## More people to help solve your problems.

It takes a lot of experienced people, applying their specialized knowledge, to assure you the best selection of a door to meet your cold storage requirements.

That's why it pays to look to Jamison for the cooler and freezer doors you need. Jamison has more than 300 people to give you problem-solving help. They include highly experienced research and engineering personnel, production and quality control specialists, and many others. All are eager to help you save time and money in selection, specification, and installation.

Jamison has more people than anyone else . . . more cooler and freezer doors, too. The result—traditional Jamison quality, durability, and service in every price range. Call or write now for full details.

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Look into **LP**  
**Replacement WINDOWS**

**Immediately CUT COSTS!**  
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LP windows mean savings . . . top quality plus custom fit for any building . . . without disturbing wall finishes. LP windows never need painting or maintenance, sash tilting in for easy glass cleaning from inside — more savings!

The added economy of insulating glass is available for every style window . . . reduces heating and cooling costs and deadens outside noise.

See Sweet's File 8.15/Lo or Write today for all the facts

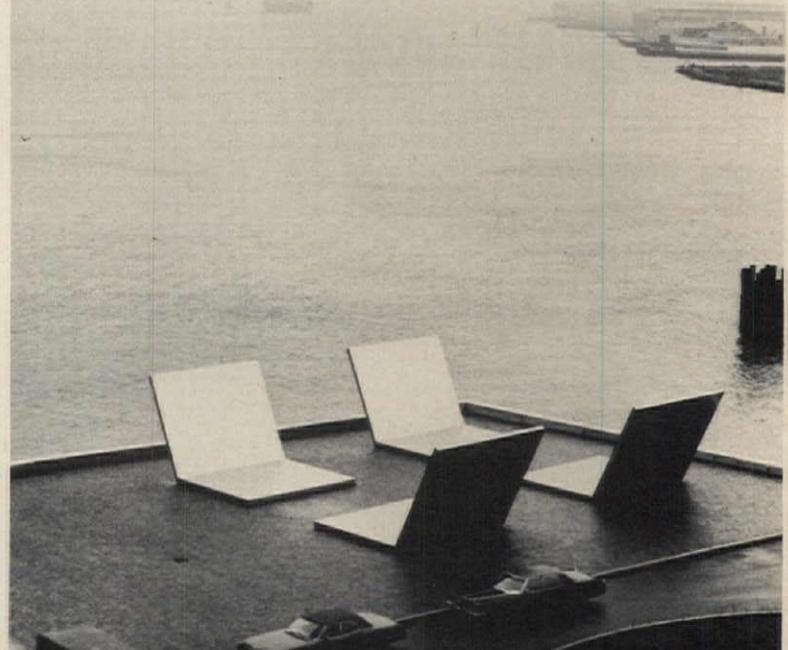
Send for free color brochure complete with specifications

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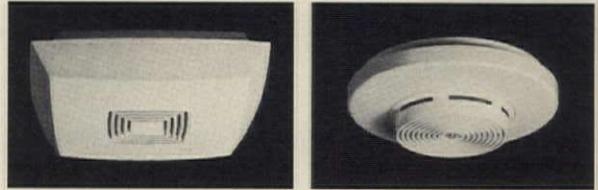
DAVID VON SCHLEGEL, INDIAN WHARF PROJECT, BOSTON



**PACE**  
 GALLERY & EDITIONS  
 32 EAST 57 ST., NEW YORK

Circle No. 352, on Reader Service Card

# Unique answer to multi-family fire detection.



BRK's new MCP741 Master Control Panel and advanced ionization detectors solve many of the special problems of apartment house fire detection.

Basically, a BRK system consists of at least one ionization detector in each apartment, and a centrally located Master Control Panel, to which the ionization units are connected by a simple 2-wire circuit. The ionization detectors will sound an alarm in the affected apartment, as well as a general alarm at the Panel and throughout the building.

Each ionization detector has terminal strips to which heat sensors and rate-of-rise detectors can be connected. There's a *battery conversion* feature, too, allowing the ionization detector to be cut out of the building's system and operated on battery power alone. If an apartment has too many nuisance alarms that disturb the whole building, its detector can be placed on battery operation, confining alarms to that apartment only.

To insure each apartment's privacy, while allowing tests of its detector, BRK has key-operated test stations for hallway location. The key not only tests for "power on", but also checks the unit's circuits and sensitivity. Hallway pull boxes are also part of the BRK system, and are connected to the MCP741 Control Panel. This advanced solid-state panel accommodates up to 8 zone modules, each capable of handling up to 60 detectors. Overall, the system can accommodate hundreds of ionization detectors, plus an almost infinite number of heat and rate-of-rise detectors and pull boxes.

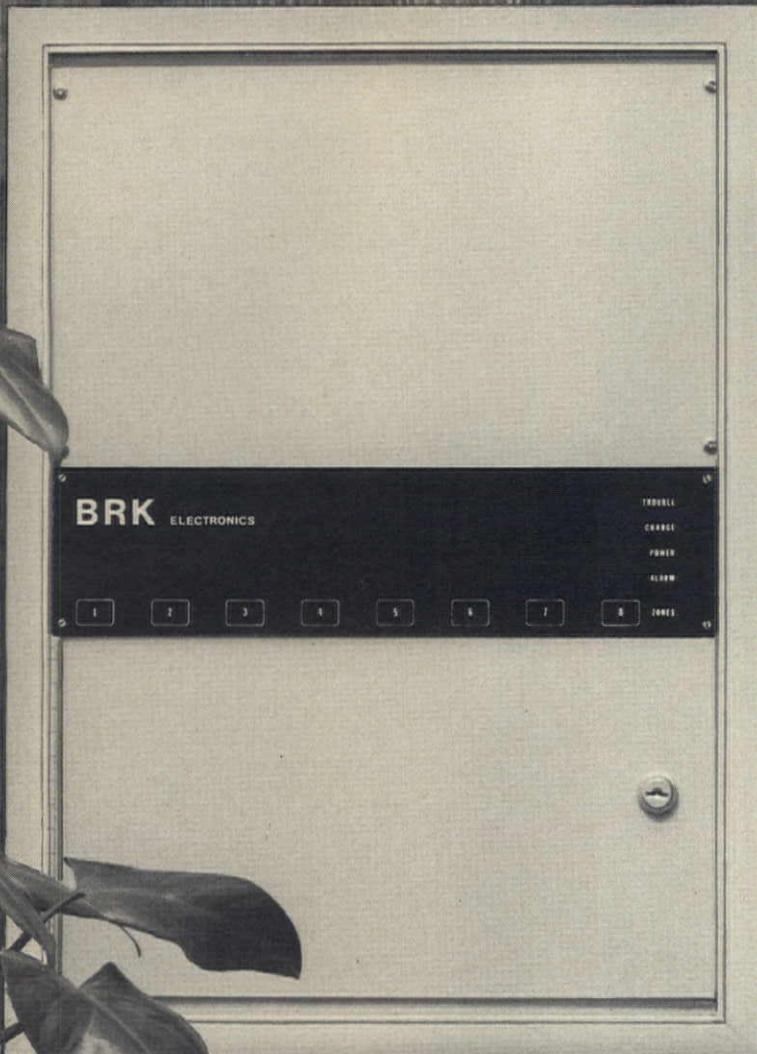
Other features include remote annunciation, battery backup power and float recharge system in the control panel, UL listing of detectors and panel, easy installation, and reliable operation. For more facts write or phone BRK Electronics, Div. of Pittway Corp., 525 Rathbone Ave., Aurora, Ill. 60538. Phone: (312) 892-8721.



**BRK**  
**ELECTRONICS**

*First in Fire Warning*

Circle No. 319, on Reader Service Card



The difference between  
energy conservation  
and loss  
is wafer thin...



Architects:  
The Grad Partnership . . .  
Builder: Turner  
Construction Company . . .  
Roofing Contractor:  
Mueller Roofing Service, Inc.,  
Alpha, N. J.

## the Lime Crest Roofing Spar\* on Nabisco's new World Headquarters!

\*Sweet's Architectural Catalog File: 4.1/LI

Like all building owners today, Nabisco, Inc. is concerned about energy — the energy it takes to heat and air condition their new World Headquarters set on a breezy Knoll in East Hanover, New Jersey. That's why Lime Crest Roofing Spar was specified for their built-up roof. For this unusual roofing aggregate reflects twice as much solar heat as gravel or slag\*\*! It also resists weather and corrosion, defies dirt and smoke, and washes clean to stay bright indefinitely. What's more, Lime Crest Roofing Spar often costs less than other white aggregates — in some areas even less than slag!

Is it any wonder that our product is so often specified not only for new construction, but for roofing maintenance, too? The saving in energy is just too good! Let us send you a sample of Lime Crest Roofing Spar, so you can see for yourself.

\*\*Based on findings of the American Society  
of Heating and Ventilating Engineers.



### Lime Crest Roofing Spar

Limestone Products Corporation, Newton, New Jersey 07860

## Progressive Architecture

# Notices

### Appointments

Robert Stedman Betts is a new associate of The Hall & Goodhue Community Design Group, San Francisco and Monterey, Calif.

The Architects Collaborative Inc., Cambridge, Mass., has announced the following appointments: Basil Hassan, Richard Sabin, and David Sheffield, senior associates; Robert Barnes, Sergio Berrizzi, Richard Puffer and Gail Haviaras, associates.

Hugh A. Stubbins, III and Howard E. Goldstein are newly appointed associates of Hugh Stubbins & Associates, Inc., Cambridge, Mass.

Denis Hackett has been named an associate of Kenneth Balk & Associates, Inc., Saint Louis, Mo.

Anshen & Allen, San Francisco, has announced the following appointments: Fani D. Hansen, AIA, Richard C. Hein, AIA and Ivan Tzvetin, BNTS, partners; Behzad Afsari, MA, Robert H. Chan, AIA, Margaret Gillespie, ASID, Ronald P. Mentgen, AIA and Arthur S. Tam, BA, associates.

### New addresses

Milstein, Wittek, Davis & Associates, 300 Delaware Ave., Buffalo, N.Y. 14202.

Barton-Aschman Associates, Inc., 820 Davis St., Evanston, Ill. 60201.

Rossetti Associates, 601 Washington Blvd., Detroit, Mich. 48226.

The Smith, Korach, Hayet, Haynie Partnership, 175 Fontainebleau Blvd., Miami, Fla.

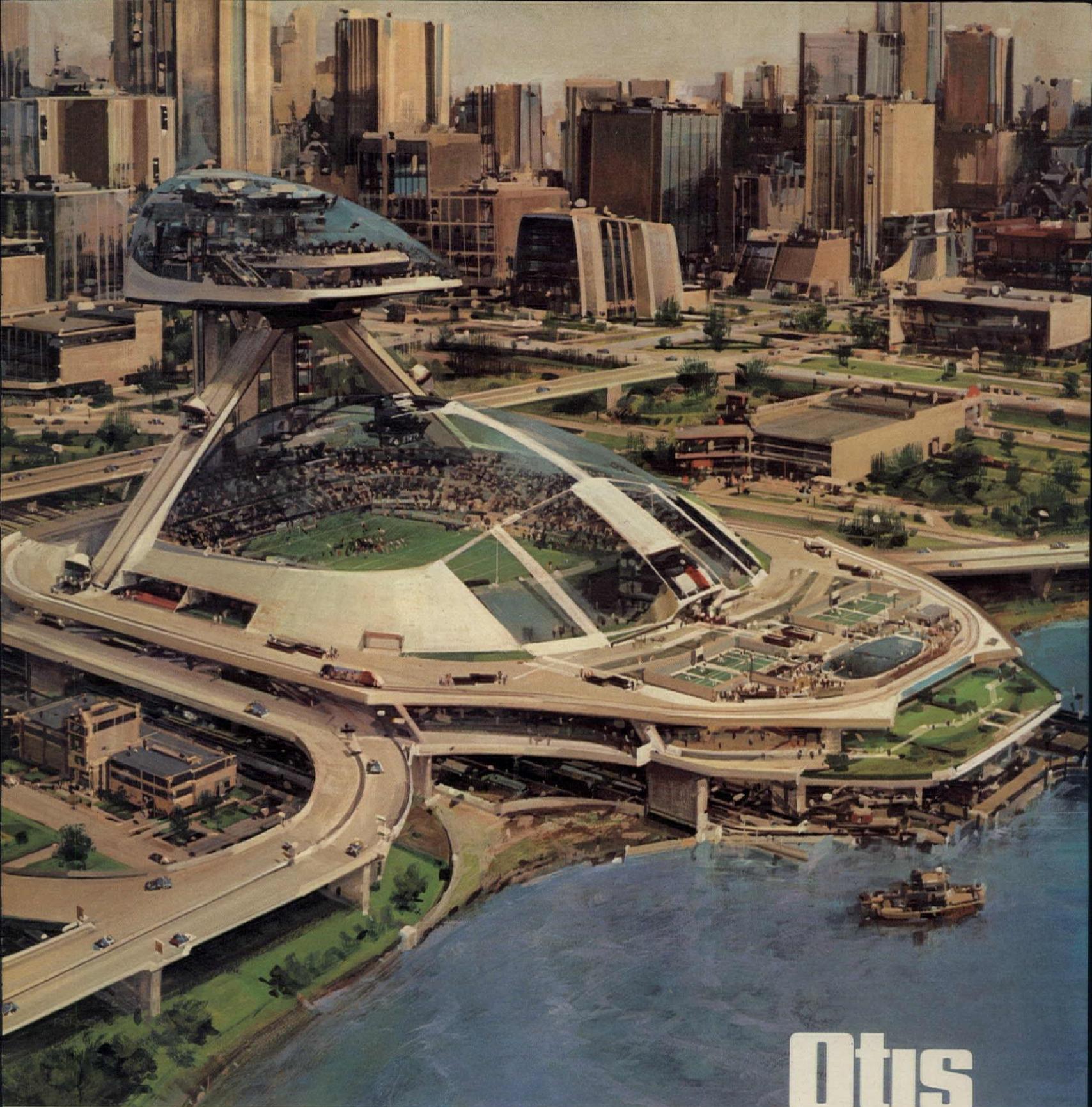
Roe Associates, PC has opened offices in Los Angeles at 9800 S. Sepulveda Blvd.

### Organizational changes

The Wold Association is the new corporate name for Wold Associates, St. Paul, Minn.

Harper & Kemp Architects and Iconoplex, Inc. have merged to form Harper, Kemp, Clutts & Parker, Architecture/Planning, Houston, Tex.

The Eggers Partnership, Architects and Planners have opened a Wash. D.C. office under the direction of Charles L. Cogswell.



**Otis**  
Elevator Company

## Our future is an elevated "people center"

It's a future multi-recreational facility with the thrill and color of competition and the convenience of an inner city location. An athletic center for you to use or to cheer on your favorites. It's elevated over an existing rail terminal so that our limited supply of urban land can be used to better serve people's needs.

And because Otis has more experience than anyone else in the world in moving people safely and automatically, we know how to avoid people jams and traffic congestion.

When it's built, we will combine conventional escalators, elevators and moving walks with automated transit and vehicle systems to handle the cheering crowds. And move them quickly to the game from outlying transportation facilities.

Because we're concerned with urban living and the revitalization of the world's cities, Otis research is hard at work on ideas for the next generation. So we can enjoy our future leisure time.

**Otis, a company in motion.**

# Job mart

## Situations open

**Architecture Faculty:** CUNY Community College has possible part time position starting Sept. 1 to teach architectural graphics and/or fundamentals of design. Professional degree necessary; teaching experience desired. Rank and salary depending on qualifications. An affirmative action employer. Women and minorities are encouraged to apply. Write Box EWPA 390; 18 E 48 st., NYC 10017.

**Department Chairperson:** Dept. of Architecture, Architectural Engineering, and Planning School of Engineering and Environmental Design, University of Miami, Coral Gables, Florida. Qualifications: qualifications of full professor; earned doctorate preferred with exceptions possible for significant professional achievement. Academic experience required. Large, new rapidly growing program in private, independent, international university. Duties: Departmental administration and some teaching. Salary: Competitive and commensurate with qualifications. Appointment: Twelve month basis with one month vacation. Nominations and applications should be sent to: Dr. Anthony J. Catanese, Associate Dean for Architecture and Planning, School of Engineering and Environmental Design P.O. Box 248294, University of Miami, Coral Gables, Florida 33124 and should arrive no later than 1 Sept. 1975.

**Director of Redevelopment:** Pleasant Hill, Ca. pop 28,250, salary open, B.A. in public or business admin., five years experience in redevelopment or closely related field, minimum 3 years in admin. or supervisory capacity. Send resume to City Manager, 3300 N. Main St., Pleasant Hill, Ca. 94523.

**Mechanical Engineer—HVAC:** An unusual opportunity for professional practice. Responsible, senior position in established A/E firm with expanding practice throughout eastern U. S. Required: Solid background in HVAC design, project management.

**Mechanical Engineer:** We are a leading Architectural-Engineering firm specializing in design-build medical buildings and schools for the past 27 years. Our professional reputation and financial stability is of the highest. Our continued growth provides an excellent professional career and management opportunity for a mechanical engineer who can handle electrical design work and some knowledge of plumbing. Must have at least 5 years experience. Excellent salary, benefits and employment stability for the individual who is ambitious, can solve problems and enjoys hard work and challenges. Also opportunity for an experienced structural engineer. Marshall Erdman & Associates, Inc., 5117 University Ave., Madison Wisconsin 53705, 608-238-0211.

**Nigeria:** Architects and architect planners with minimum four years post graduate working experience or specialization in hospitals, factories and hotels design are needed by a Nigerian firm of architects. Salary: negotiable but not less than ten thousand naira minimum. Contract period: three years. Accommodations: reasonably furnished 2 bedroom apartment. Car: Company car available for use. Medical expenses; Subsidised to a maximum of N480 p. a. Leave allowances: 28 days per annum. Apply to Niger Consultants, P.O. Box 4371, Lagos, Nigeria giving full details: Age, marital status, experience, contact telephone, etc.

**Volunteer Peace Corps/VISTA:** Architects/planners needed for Peace Corps projects in Latin America, Africa, Asia; VISTA projects in 25 U.S. cities. Housing projects, design of hospitals, community centers, rehab, university teaching, regional planning, etc. Expenses paid, travel, medical, vacation and living. Information: Lynn Rotenberg, ACTION, ORC Box A-2, Washington, D.C. 20525.

## Situations wanted

**Architect:** A.I.A., NCARB, 18 years experience, strong in administration and project coordination. Seeks affiliation or position with architect, engineer, or developer. Reply to Box #1361-813, *Progressive Architecture*.

**HVAC Engineer:** P.E. seeks to affiliate or represent architect, engineer, contractor or manufacturer. Will relocate. Reply to Box #1361-810, *Progressive Architecture*.

**Architect:** 39, married. B. Arch., Calif., New York registration, NCARB Pending. Five years principal own firm; previous partner in large A/E firm. Experience in educational, medical, commercial, civic, residential, urban design. Previous assistant professor of design. Partnership potential. Design oriented. Will relocate. Reply to Box #1361-816, *Progressive Architecture*.

**Architect:** AIA, B. Arch., NCARB, multiple registrations, over 10 years diversified experience in design, specifications, administration of construction, project management, and cost control for residential, commercial, educational, and health care facilities. Seeking responsible position with architectural firm or governmental body. Resume available upon request. Reply to: Robert T. Beach, 5281 N. E. 20th Avenue, Fort Lauderdale, Florida 33308.

**Computer Programmer:** 29, seeking a position with an architectural firm. Background includes one year of architectural studies (Pratt), BSEE (Electrical Engineering) and MSCS (Computer Science) and seven years as a systems programmer with the IBM Corp. Intend to resume architectural studies part-time. Reply to Box #1361-825, *Progressive Architecture*.

**Landscape Architect:** Masters degree, licensed in a number of states, diversified experience including management, 11 years professional practice, seeks partnership level

position with a firm in New England or upstate New York. Reply Box #1361-826, *Progressive Architecture*.

**Architect:** 28, M. Arch. Design, seeking responsible position in design orientated firm. Extremely interested in the total design process. Excellent presentation methods. Three years experience in diverse projects. Competent, energetic, registered Fla. Write to: P.O. Box 1051, Pensacola, Fla. 32501.

**Architect:** A.I.A., 48 years old, 25 years broad experience in many type projects including medical, educational and public institutions. Capable and efficient in all phases of professional practice. Open-minded with regard to location, office size and position. Resume on request. Reply to Box #1361-827, *Progressive Architecture*.

**Architect:** Registered NCARB, 13 years diversified experience design, design and construction management. Strong production and coordination, construction administration, site and building inspections, analyses and design (including rehabilitation) wide range requirements, variety of clients. Seeks responsible position corporate architect, consulting firm, or government. Resume on request. Reply to Box #1361-828, *Progressive Architecture*.

**Architect:** B. A. Arch. 1970 K.S.U., 5 years experience St. Louis building div. review-construction drawings, specs. and calcs. for all types of projects under BOAC Code, etc., seeks employment with architectural firm. Location open prefer Midwest. David Kasl, 7001 Weil, Apt. 113, St. Louis, 63119.

**Architect:** A.I.A., M. Arch., NCARB, Calif. Licensed. Twenty years diversified U. S. experience in Arch., planning covering design, production, project management. Nat. citizen, family. Two years in Jordan. Seeks suitable position. Prefers West Coast. Considers other U. S. location and Middle East. Write before Aug. Erfan Hashem, P.O. Box 5127, Amman, Jordan.

**Architect:** 32, family, Illinois graduate, registered, NCARB certificate, 8 years diversified experience. Seeking position as project architect and/or project manager. Resume on request. Orlando Orraca-Yon, Laguna Gardens 4, Apt. 12-H, Isla Verde, P. R. 00913.

**Designer of Environmental Interiors:** Class of '73, B.S., Interior Design, U. of Minn.; minor, landscape design; semi-experienced. Looking for greener pastures, will relocate almost anywhere a creative challenge is available, wife included. Interested in building renovation, architectural design, environmental planning all phases of designing. Brian Gustafson, 6459 Pierce St., N. E., Minneapolis, Minn. 55432. (612) 571-0062

**Architect:** B. Arch.: 8 years diversified experience, 5½ international design-build co., 2½ manager of architectural dept.; registered Ohio, Calif; Desire job captain position, preliminaries thru field inspection with design oriented architectural firm; Partner-

ship potential desirable; Desire location in Ohio or surrounding state. Reply to Box #1361-829, *Progressive Architecture*.

**Architect/Administrator:** M. Arch. Harvard, reg. N.Y., Mass., NCARB. Eighteen years experience in broad range bldg. types, directed billion dollars in development programs, including health facilities. Desires new staff challenge Boston or N.Y. Reply to Box #1361-830, *Progressive Architecture*.

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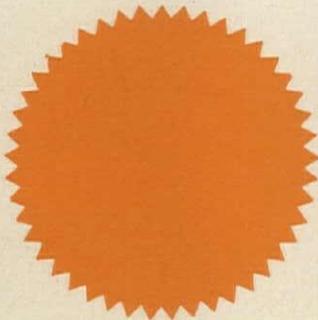
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**Submissions** will be accepted in **three major categories:** architecture, urban design, and applied research. **Jurors** for this year's program and detailed **entry requirements** will be published in the **July P/A**.

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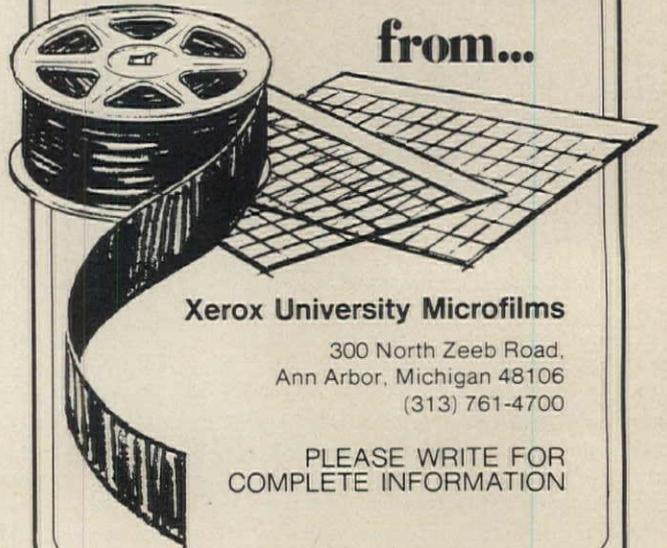
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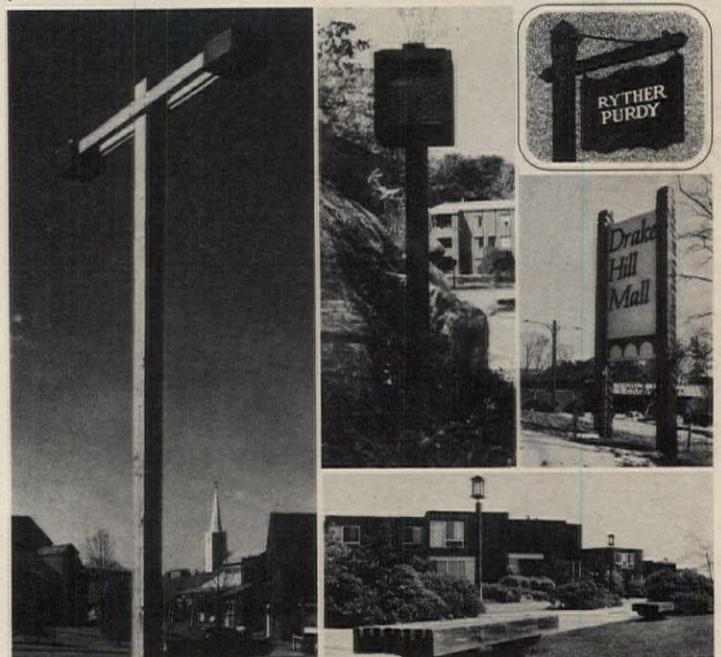
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