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Progressive Architecture

A Penton Publication May 1994

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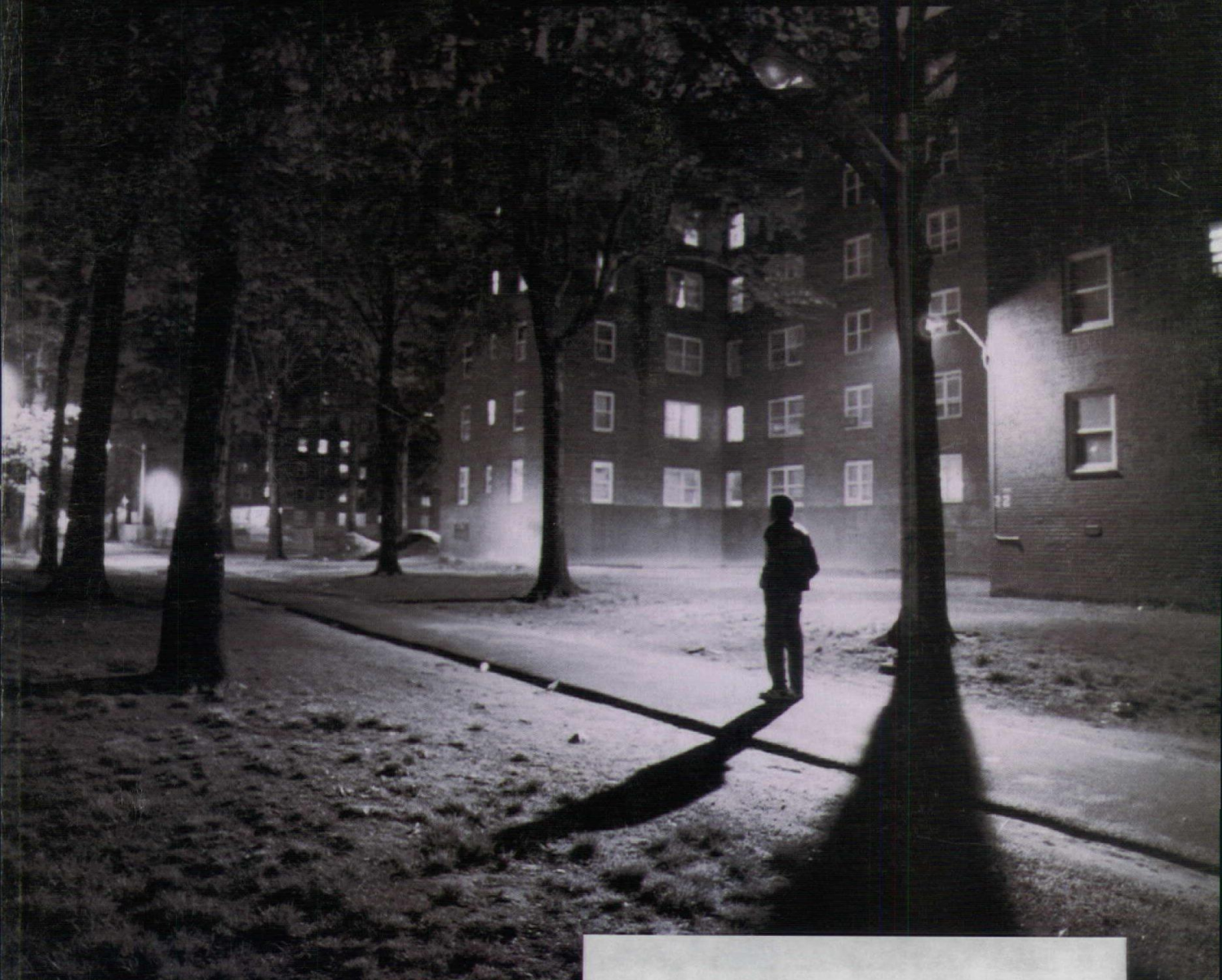
The AIA Responds

Juan Navarro Baldeweg

Jonathan Levi's Wood Detailing

Computers in Design

Critique: Battery Park City



Low-Income Housing

Avoiding Our Past Failures

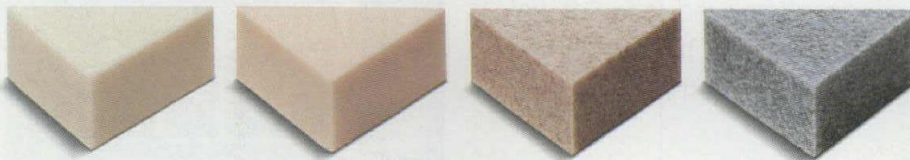


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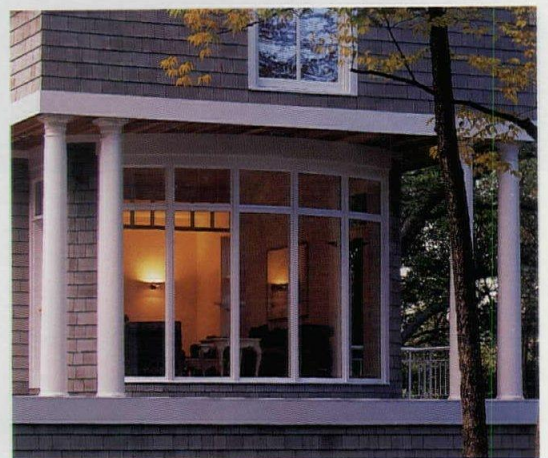
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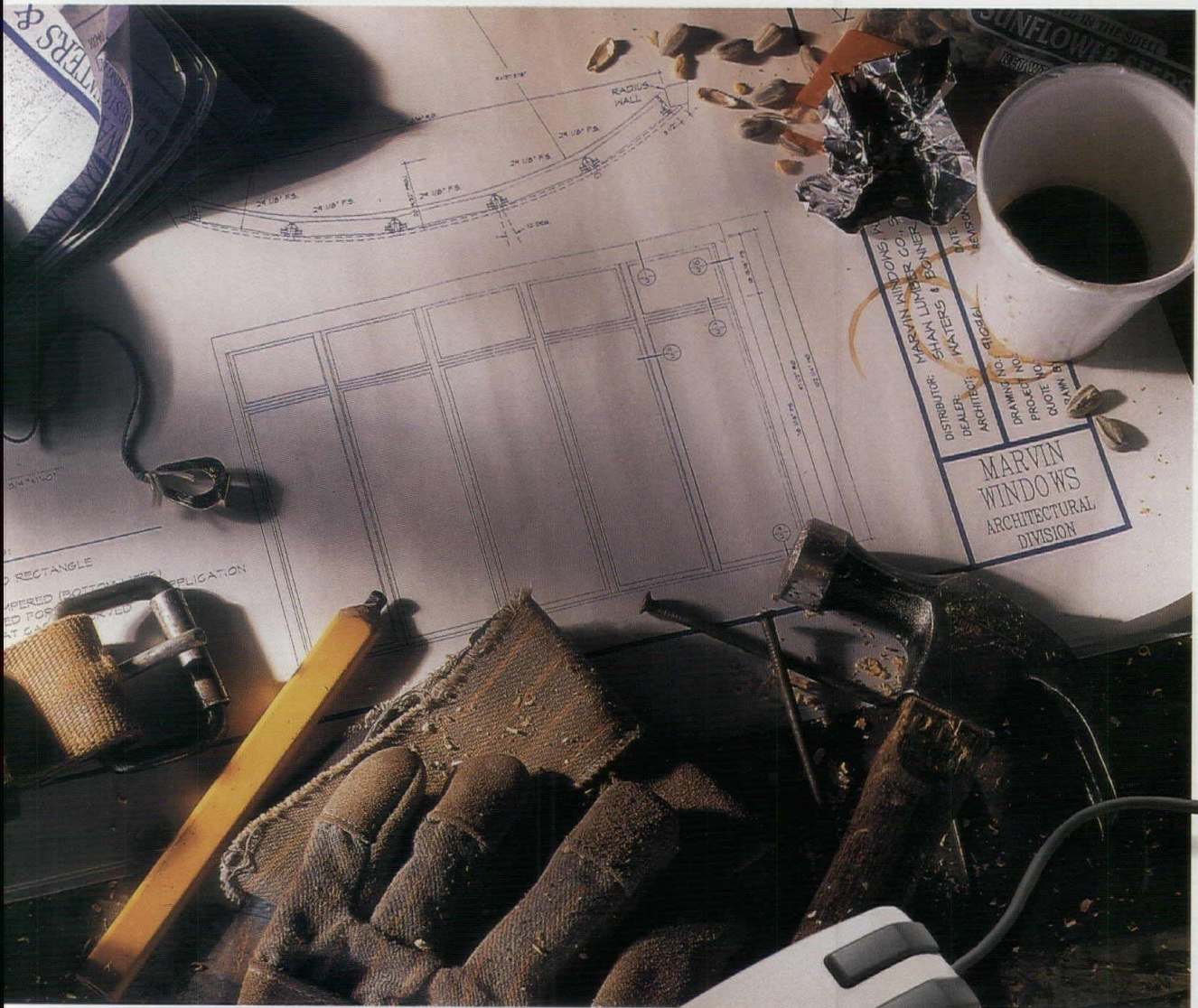
His biggest challenge was the focal point of the home: a unit made up of five 8 ft. x 2 ft. transom-topped windows, arranged in a curved subsill to form a bow. The fact that Marvin could craft such a window didn't really startle Keith. Past experience had taught him otherwise. But he was surprised when Marvin's Architectural Department offered to draft the CAD drawings for the subsill; a gesture that saved his firm a considerable amount of time and trouble.

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PHOTO THIS PAGE: Photograph of the Jefferson Memorial by Jane Lidz from Water in Architecture, Harry Abrams, 1994.



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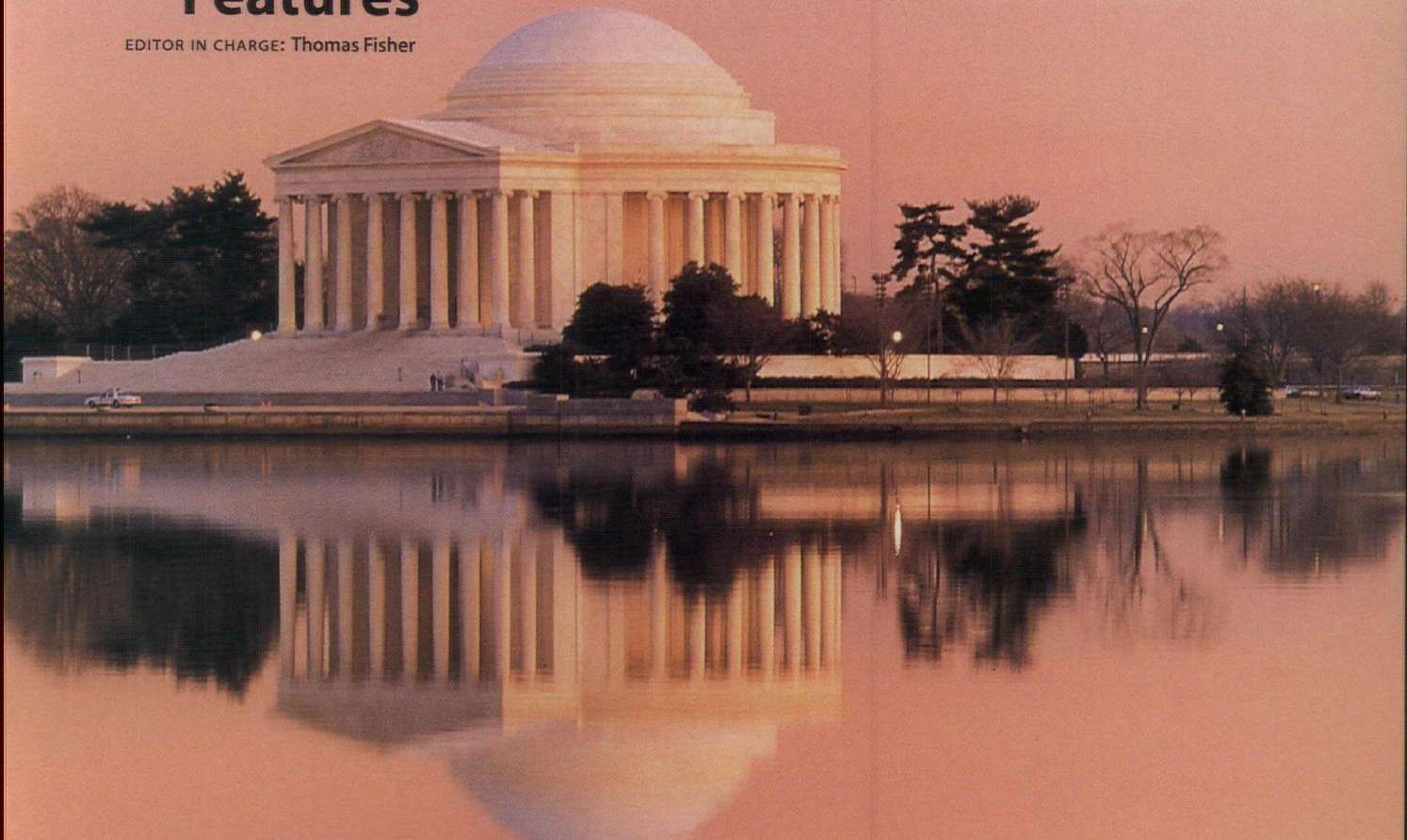
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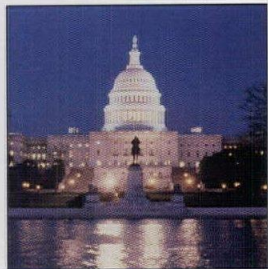
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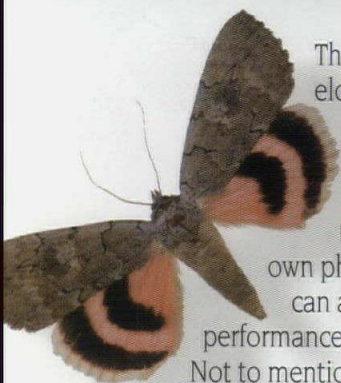
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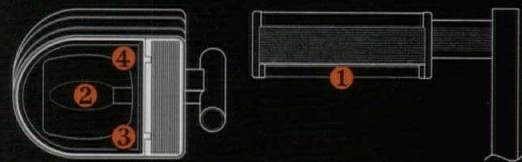


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Victims of Our Own Idealism?

Oscar Newman's book *Defensible Space* was a rude awakening for many in the profession when it was published some 20 years ago. Its importance lay not just in its critique of public housing or even in its condemnation of Modern planning ideas, but in its underlying message: that people can be driven to do harm and to inflict damage, and that they must be restrained if civil society is to function.

That such a thought came as a surprise to many of us revealed a widespread assumption within the architectural community about human behavior – an assumption that has come to be a defining characteristic of this profession and one that affects what we do in many subtle ways. (P/A, incidentally, recognized the importance of Newman's findings in its October 1972 cover article.)

As a basis for its many positive suggestions, *Defensible Space* took a decidedly pessimistic view of behavior. "We are witnessing a breakdown of the social mechanisms that once kept crime in check," wrote Newman on the opening page of the book. "we have become ... more vulnerable to aberrant behavior than we have ever been before." In page after gritty page, Newman depicted life in inner-city public housing as "solitary, poor, nasty, brutish, and short," to use Thomas Hobbes's phrase.

In contrast, the architectural community, at least in this century, has tended to take a more optimistic, even idealized, view of human behavior. Fairly widespread within the profession is the belief that, as Jean-Jacques Rousseau put it, "man is naturally good, loving justice and order." And nowhere is this more evident than in our architecture.

Consider Modern architecture, with its glass walls, open plans, and *pilotis*. These features may have represented freedom and honesty, but they also assumed the existence of a social order in which people would not try to break glass, steal things in the open, or mug passers-by among the *pilotis*. Such an assumption also seems to pervade Post-Modern work: do we anticipate that our decorated sheds will be sprayed with graffiti or our sharp-edged buildings battered with blunt objects?

***Defensible Space*, a book now some 20 years old, is still a litmus test for the architectural community's values and our social role.**

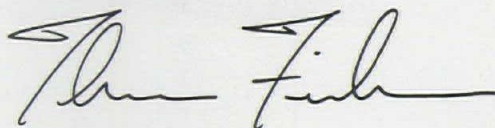
Such behavior may be of more concern for the police than for the architect. And to the extent we are concerned, we have all sorts of ways of discouraging it: safety glass and security lighting, locks and alarms, paint remover and corner guards. But those are technical solutions to something that is more than a technical

problem. However valuable our security methods and materials may be (see cover story, p. 49), we tend to use them like band-aids, applied inconspicuously so as not to mar the image in our buildings of social order and human goodness.

That architects are depended on to maintain a façade of order in an increasingly violent and chaotic world may seem to contradict the widespread feeling that we are being ignored by the larger society. This idea also runs counter to the argument that our work should no longer keep up appearances of order and should instead reflect the chaos of our time. But neither position disproves the point. In many respects, our feelings of neglect are connected to the social role that the architect has come to play: the eternal idealist who will see potential in even the worst situation. And those architects who want to reflect violence and chaos in their work are idealists in another sense of the word, embodying the romantic ideals of freedom and rebellion.

In so disillusioned and generally pessimistic a society as ours, the role of the idealist is an important one. Yet it has become increasingly difficult to play the part in a world of unscrupulous clients, hostile community groups, and predatory lawyers, just as it has become harder to sustain the appearance of openness and civility in our architecture, as Oscar Newman showed, in the face of rising crime and abusive building users.

Newman's work drew the reaction that it did because it was not just about security in low-income housing, but about the gap between our ideals and reality, between society as it likes to see itself and as it actually is. Architecture exists in that gap, perhaps inevitably. But because of books like *Defensible Space*, we are also more aware of the vulnerability of the space we occupy as a profession. □



Thomas Fisher

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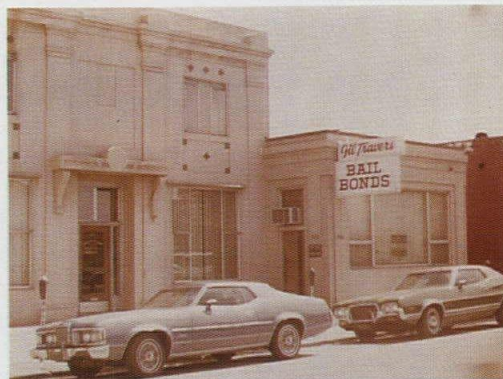


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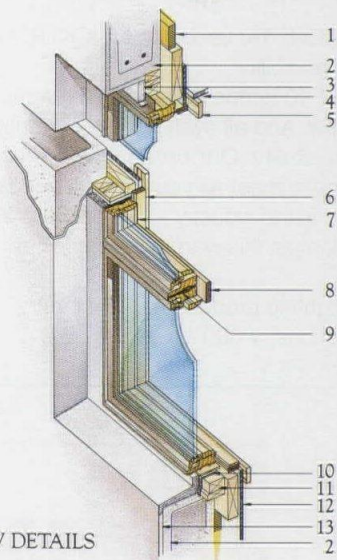
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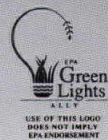
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The AIA Responds

This may come as a surprise to you, but in all candor, I would have to say I agree with much of what your reporter, Michael Crosbie, reported in his article on the AIA. The Institute has not been very successful at improving the public's understanding and appreciation of the profession, and while the national lobbying effort has been very effective in some areas, it needs significant bolstering in support of statehouse activities around the country. The dues structure is out of balance, and supplemental dues are a concept whose time has passed. The Board is too big and expensive, and there has been a lot of mistrust between the Board and national staff due to confusion of roles and expectations on both sides. This has no doubt contributed to misdirected efforts from Washington. The Institute "product" has sometimes missed the mark, and there are obvious examples of process having been confused with performance.

At the same time, your reporter completely missed the boat in suggesting that the AIA is just sitting by, "fat and happy" in a state of denial or inaction about all of these concerns and indifferent about solutions. The truth is that when the Board became aware of these growing concerns two years ago, they commissioned a first-time-ever, top-to-bottom study of the AIA with a mandate to the consultant, Alan Weiss, to be brutally candid. Then the Board presented the findings, warts and all, to the membership at Grassroots and immediately got to work on corrective action. Here's an interim report of what's being done:

1. With the help of John Carver, an expert on boards of directors, the AIA Board in 1993 created a new set of governance policies that clarify for both board and staff who is responsible for what. These policies will eliminate confusion and meddling on both sides, clarify reporting criteria, and facilitate the rebuilding of Board/staff rapport.

2. The Board, after an exhaustive search by a diverse selection committee, just appointed Terry McDermott as our new CEO. The mandate was to find the best person possible to carry out the mission of the Institute. A number of architects were considered, but no one felt we had to use the CEO appointment to confirm what we already knew (and what most architects demonstrate daily in their practices), that

architects are adept at all sorts of nondesign activities. When it came to the CEO post, we simply wanted the best, and I, for one, think that time will bear out the validity of the Board's judgment in selecting Terry at its fall 1993 Board meeting.

3. The Board has officially committed itself to elimination of supplemental dues by 1997.

4. Although we may lose members initially, continuing education will be mandatory by 1996 as a condition of membership. It will not add cost directly to the members, burden them with a record-keeping morass, or add income to the AIA. It will, however, add value to membership and enhance the professionalism, the competitive edge, and undoubtedly the incomes of members.

5. *AIAOnline* is being improved day by day, and in response to members' wishes, Terry plans to announce at the convention that starting in 1995 the service will be free to members.

6. The Board is not really a board at all, but a legislature that represents our members on a pro rata basis. It has grown to its current size as the membership has grown, and the Board is now too big and unwieldy. In response, we have been studying how to maintain representation while reducing the board size to a more manageable level. Half the size means half the cost – and, expectedly, increased effectiveness.

7. The national staff is down 10 percent already from when your reporter got his facts. More importantly, Terry McDermott is restructuring the staff to redirect vastly greater energy toward our two main missions: public awareness and government relations.

There are a number of other initiatives in the works that will make AIA membership a truly good return on dues investment. One of them will be for the AIA and the press to develop much better continuing dialogue so that, as Paul Harvey might say, we all hear "the rest of the story." The expected outcome will be that articles such as Michael Crosbie's will include not only the background, but also the resulting actions. We'll be in touch.

*L. William Chapin, FAIA
President*

The American Institute of Architects

(Views continued on next page)

(continued from previous page)

AIA's Past CEO Responds

While no one appreciates being quoted out of context, and while I am concerned about the accuracy as well as the tone of the story that appeared in your April issue, there is always something to be gained by thinking about how we can do a better job, whether our responsibility is the managing of a professional organization or publishing a magazine.

The profession of architecture is changing. That fact poses a challenge as well as an opportunity for each of us: we need to use the gifts we have to see that the change taking place leads to a better future for the profession and the society the profession is uniquely equipped to serve. Over the years of my association with the AIA, there is no doubt in my mind that this organization is committed to a vision that will no longer allow "the profession's heroes [to die] broke."

When I was given the privilege of leading the Institute's talented staff, we articulated five fundamental management principles: that the AIA be a model of service

to the members; be the best managed organization of its kind; be highly responsive to changing member needs and markets; be innovative and entrepreneurial; and advocate and practice design excellence. Have we succeeded on all fronts? No, but we have made significant progress on what I believe is the right journey.

My experience at the AIA began in 1978 as the Executive Vice President of the Minnesota Society of Architects. After four years, I became the President of the AIA Service Corporation, and later President of the American Architectural Foundation, publisher of *Architecture* and *Architectural Technology*, Deputy CEO and, in 1988, was named the AIA's Executive Vice President/CEO. From this privileged perspective, I've seen many dreams – my own and those of the AIA's members – become realities. I would have a better appreciation of your criticism if you had also included the facts on growth, new services, legislative accomplishments, and improvements to the balance sheet. You could have used Summit Consulting Group's own list, for example.

But that is another story. What is most important is that architects must get

involved, speak up, and lead. The ultimate value of the AIA is that this organization gives architects both a platform and a forum to create a better future for themselves. We are poised to do just that.

James P. Cramer, Hon. AIA
Washington, D.C.

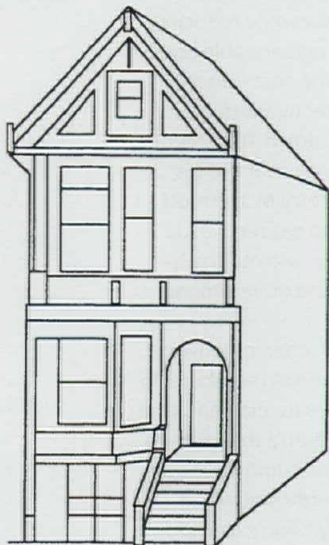
AIA's Research Consultant Responds

May I ask the courtesy of commenting on your recent article on the AIA, which was based significantly on my firm's research and which quoted me extensively.

The data and conclusions you attribute directly to me and/or the study were all factually correct. However, I believe that the accuracy and interpretation of them are best served by acknowledging the following:

- The AIA Board commissioned this study publicly and openly, with the charge to me to "pull no punches!" The membership was intimately involved in both the research and communication of conclusions.
- The senior management of the AIA was unfailingly supportive and accessible, and, under Jim Cramer's and Fred Deluca's leadership, unhesi- (continued on page 16)

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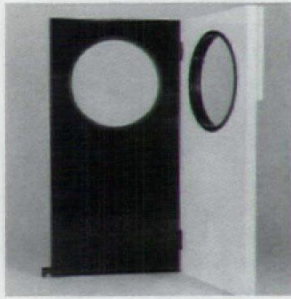
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Views

(continued from page 14)

tantly revealed all of the information volunteered.

- The AIA took the lead in communicating the results of my work to their own membership through presentations I delivered and dissemination of my report. That communication included providing all of my findings to your magazine, and requesting that I accept an interview with you with the encouragement to be "totally candid."
- There was **no** "package deal" to bring Terry McDermott and a former associate on board collectively. I know that because I was an advisor to the selection committee and negotiated for the Board when Mr. McDermott's package was finalized.

As a 20-year veteran in consulting who has worked with the top management of some of the largest firms on the planet, three final comments:

- I do believe the Board should be reduced in size and tried to convince the leadership. I respect their intent to sacrifice the speed of a small board in favor of the representation of a larger one.
- There is no strong reason for the chief executive to be an architect. Mr. McDermott was chosen by a search committee of architects because of his business acumen, leadership attributes, passion for architecture, and long track record of success. The AIA has chosen a strong leader, which is exactly what is needed to better meet member needs into the next century.
- You failed to include the long list of AIA's strengths identified in my analysis.

Alan Weiss, Ph.D., President

Summit Consulting Group

East Greenwich, Rhode Island

CLARIFICATIONS AND CORRECTIONS

No Native American Evocations

I appreciate the mention of the American Heritage Center and Art Museum in Wyoming in the March P/A (p. 25), but where did the writer get the impression that the building was intended to evoke teepees and was inspired by Pueblo architecture? Although any such Native American precedent is greatly revered in my life, it had nothing to do with the form of this building. Such a literal response would be trivializing and inappropriate.

Antoine Predock, FAIA

Architect

Albuquerque, New Mexico

Question of Image

Apologies to Jim Leftwich of Orbit Interaction, whose computer graphic of a "virtual officeworker" was used for the March cover on "Hype vs. Reality: The Changing Workplace." Though juxtaposed to the word "hype," this illustration was used as an iconic image. No slur was intended on the substance of Leftwich's research, which focuses on methods of interacting with information in a three-dimensional virtual environment.

Philip G. Schreiner, AIA Appointee

In our April Editorial, (p. 7) we misspelled the name of Philip G. Schreiner, newly appointed vice president for member communication at AIA headquarters. □

Performance That Dominates The Skyline.

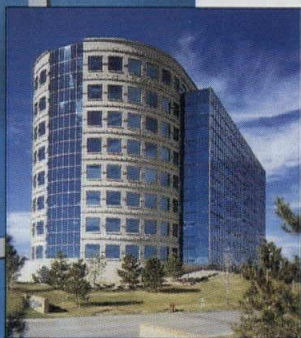
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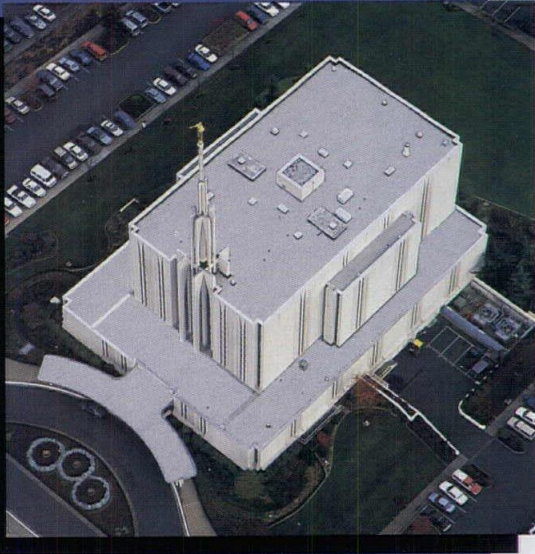
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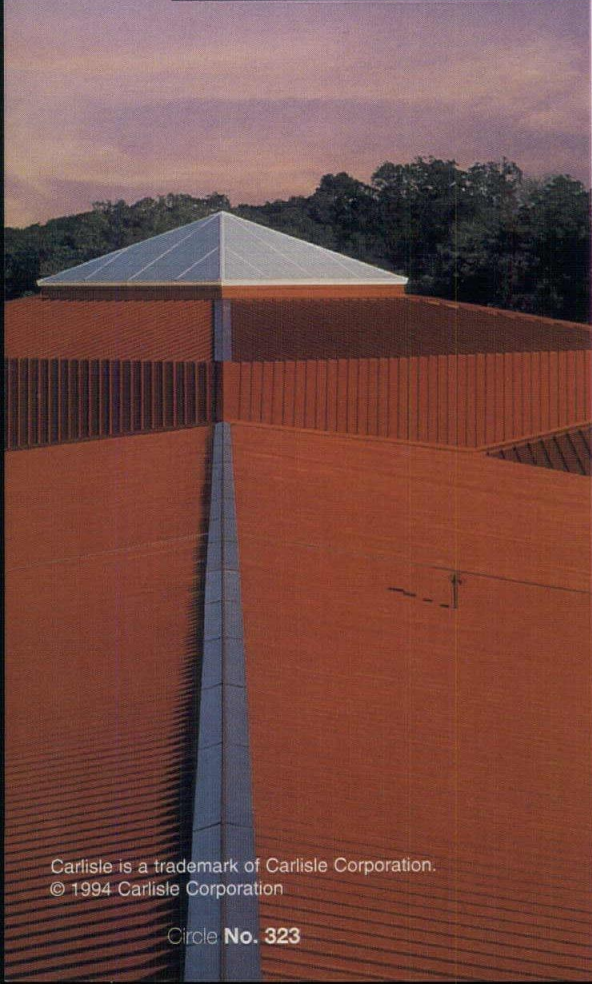
And now, we'd like to introduce you to Carlisle Engineered Metals, which offers a complete line of architectural metal roofing, fascia, soffits, building components, insulated panels and retrofit framing.



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Below: Passmore Elementary School,
Alvin, TX
Carlisle Engineered Metals system

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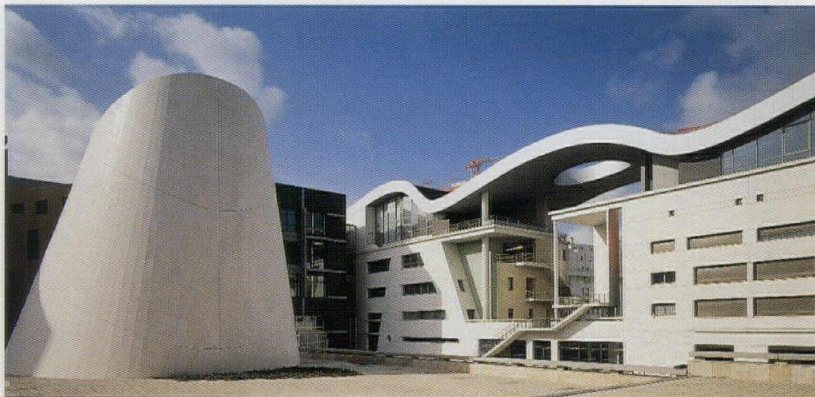
Circle No. 323

Retractable Dome Displayed at MoMA

New York inventor Chuck Hoberman displayed his patented "Iris Dome," a motorized, retractable dome structure, at the Museum of Modern Art early this spring. The exhibit included a domed model stadium with a transparent roof measuring four feet in diameter and an operable section of a 60-foot dome. Both structures were built of aluminum members, elegantly and almost noiselessly folding and unfolding. Hoberman's dome, which is structurally stable in any position, was developed in collaboration with Guy Nordenson and the late Peter Rice of Ove Arup & Partners. □



Photos: Steven Barker



Jean Marie Monthiers

A Pritzker for Portzamparc

French architect Christian de Portzamparc, best known for his City of Music (above) at La Villette in Paris, will receive the 1994 Pritzker Architecture Prize at a ceremony in Columbus, Indiana, on June 14. Portzamparc is the 17th winner of the \$100,000 prize, established by the Hyatt Foundation as an architectural counterpart to the Nobel Prizes.

The Pritzker jury cited the 50-year-old architect as "a powerful poet of forms and creator of eloquent spaces." They described Portzamparc, the first Frenchman to win the prize, as "part of a new

generation of French architects who have incorporated the lessons of the Beaux Arts into an exuberant collage of contemporary architectural idioms, at once bold, colorful, and original."

Besides the City of Music, one of François Mitterrand's *grands projets*, Portzamparc's works include a vine-covered water tower at Marne-La-Vallée (his first commission in 1971), the Erik Satie Conservatory and Elderly Housing in Paris (P/A, July 1987, p. 69), the Café Beaubourg in Paris (P/A, July 1987, p. 88), and an apartment building in Fukuoka, Japan (P/A, Aug. 1991, p. 72). □

GSD Tops U.S. News Poll

Harvard's Graduate School of Design topped *U.S. News & World Report's* 1994 survey on graduate schools of architecture. The magazine asked deans and senior faculty at accredited schools to

rank schools by reputation. Three other Ivy League schools followed: Princeton, ranked second, and Columbia and Yale, tied for third. The rest of the top ten, in order, are M.I.T., Rice, U. of California at Berkeley and U. of Pennsylvania (tied), Texas at Austin and Virginia (tied). □

World's Largest Firms

Japanese and American firms dominated *World Architecture* magazine's list of the world's 100 largest architectural practices. The Japanese giant Nikken Sekkei is the largest firm, with 831 architects. Among the U.S. firms listed, Hellmuth, Obata & Kassabaum ranked third (285 architects), Skidmore,

Owings & Merrill fourth (280), RTKL fifth (265), Pei Cobb Freed seventh (194), and Henningson, Durham & Richardson eighth (182). The list was based on information supplied by the firms who responded to a questionnaire sent by the London magazine. For a copy of the survey, contact Peter Gilbert at 44-71-383 5757 (FAX 383-3181). □



Wayne Cozolino

Puryear Pavilion in Philadelphia

A structure by sculptor Martin Puryear was recently installed in Philadelphia's Fairmount Park as part of an ongoing program that has brought site-specific works to the park by

Rafael Ferrer, Siah Armajani, and Jody Pinto. Puryear's work, called "Pavilion in the Trees," is an open structure supported by four large posts with a curved lattice canopy. Philadelphia architects Kieran, Timberlake & Harris were architects of record for the project. □

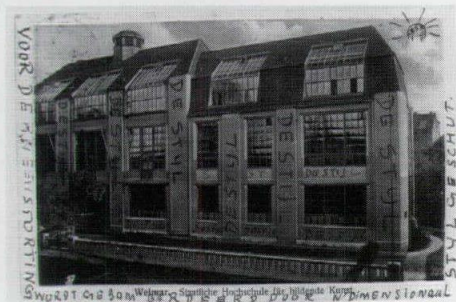


Innovations In Housing Winners

Boulder, Colorado, architect David A. Brown won the Grand Award in the 17th Innovations in Housing design competition. His winning house design (top) will be built in Nashville, Tennessee. Three other archi-

itects were awarded Citations of Merit: Laura DuCharme Conboy of La Jolla, California, Norman L. Bechtold of Newport, Oregon, and Serge Nalbantian of Philadelphia (above). The competition is sponsored by the American Plywood Association, *Better Homes & Gardens, Builder*, and P/A. □

Books



The Bauhaus: Masters and Students by Themselves edited by Frank Whitford, Overlook Press, New York, 1994, \$85.

This oversized volume tells the story of the Bauhaus through the letters and writings of its teachers, students, and other players. The contemporary accounts of the school's political squabbles and philosophical evolution are as compelling as the illustrations of work (more painting and design than architecture) by students and teachers. Shown above: Postcard of the Weimar Bauhaus.

Buildings and Power: Freedom and Control in the Origin of Modern Building Types by Thomas A. Markus, Routledge, New York, 1994, \$75, cloth, \$29.95, paper.

In this remarkable study of the development of utilitarian building types – schools, prisons, lecture halls, factories, markets – in the 18th and 19th Centuries, Thomas Markus shows how their programs and spatial organizations reflected conflicts within the culture over personal freedom versus social control. One comes away from this book with a heightened sense of architecture's complex meanings.

Berlin-New York: Like and Unlike, Essays on Architecture and Art from 1870 to the Present edited by Joseph Paul Kleihues and Christina Rathgeber, Rizzoli, New York, 1994, \$85.

Based on ideas explored at "The City of the 21st Century," a 1987 conference held in Berlin, this volume of essays is divided into three time periods, 1870 to 1918, 1918 to 1945, and 1945 to the present. The editors invited 34 art and architecture scholars to compare and contrast the political, social, economic, and cultural waves that influenced and were influenced by the physical development of Berlin and New York.

Audubon House: Building the Environmentally Responsible, Energy-Efficient Office by National Audubon Society and Croxton Collaborative, Architects, Wiley, New York, 1994, \$24.95.

With the National Audubon Society's new headquarters, Croxton Collaborative demonstrated that sustainable, "green" architecture could be achieved in, of all places, Manhattan (P/A March 1993, p. 19). The owners and architects have teamed up to share their experiences and the knowledge gained in this ground-breaking project, concentrating on five areas: electricity, heating and cooling energy, air pollution, indoor air pollution, and recycling. Drawings, photos, details, and product descriptions are included.

Briefly Noted:

Architects House Themselves by Michael Webb, Preservation Press, Washington, D.C., 1994, \$39.95. Brief look at 47 architects' houses.

Plečnik: The Complete Works by Peter Krečič, Whitney Library of Design, New York, 1993, \$65.

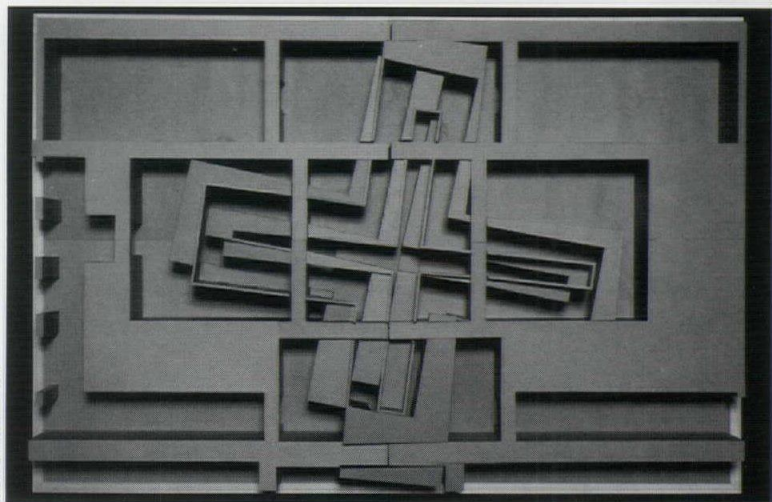
Comprehensive monograph on the Slovenian architect's meshing of historical and modern forms (P/A, Oct. 1985, p. 96).

The Supreme Court Building, Jerusalem by Yosef Sharon, Peter Halban Publishers, London, 1993, \$60, cloth, \$36 paper.

Thorough documentation of Ram and Ada Karmi-Melamede's building (P/A, Apr. 1993, p. 66).

Digging With Eisenman at the CCA

Peter Eisenman's "artificial excavations" prove baffling in the Canadian Centre for Architecture's first major show of contemporary work.



Model (left) and installation view (right) of Eisenman's CCA show.

by Odile Hénault

In *The Human Condition*, Hannah Arendt speaks of "the strange pathos of novelty, the almost violent insistence of nearly all the great authors, scientists, and philosophers since the 17th Century that they saw things never seen before, thought thoughts never thought before." This obsession with unexplored territories is at the heart of "Cities of Artificial Excavation, The Work of Peter Eisenman, 1978-1988," an exhibition on view through June 19 at the Canadian Centre for Architecture in Montreal.

The show is one of the CCA's most ambitious projects to date, and its first attempt to tackle a contemporary topic on such a scale. The choice of Peter Eisenman is a strange one for the CCA, an institution that has until now kept itself within very safe bounds as far as exhibitions are concerned.

Exploring the "Idea of Site"

The approach taken by curator Jean-François Bédard was to show Eisenman's analytical process through sketches, presentation drawings, and models related to projects from a decade during which Eisenman explored "the idea of site." Of the 11 chosen projects, 4 are shown in

greater detail: the submission to the Cannaregio Seminar in Venice (1978), the submission to the South Friedrichstadt Housing Competition in Berlin (1980-1981), the Chora L Works, a garden for the Parc de la Villette in Paris (1985-1986), and the project for the University Art Museum for California State University in Long Beach (1986).

The curatorial decision was to emphasize Eisenman the draftsman, Eisenman the modelmaker, and not Eisenman the writer. As a result, far too little room was given to text. Whoever wants to understand the projects, and not just admire the models, is referred to an elaborate catalog (Rizzoli, 1994).

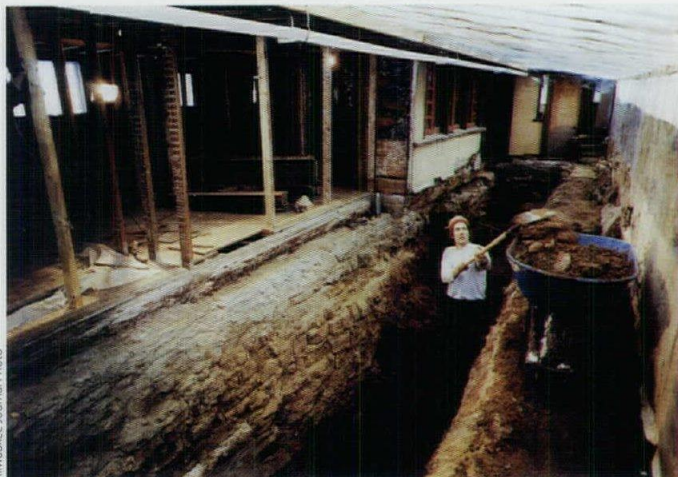
The "digging techniques," the mapping, the scaling, the overlapping of different topographies – all of which are at the heart of Eisenman's preoccupations – are practically impossible to grasp from the exhibition alone. What is obvious, however, is the difficulty for the architect in arriving at form through these techniques. The design of the California State University Museum at Long Beach is not easily born through the architect's "superpositioning" past and future archeological findings on the site. In the catalog, Eisenman himself admits that "there is no

'z' dimension. . . . I felt that these projects had reached a dead end, the dead end of extrusion. I did not know how to activate the third dimension."

A Piece of His Psychotherapy

The tremendous gap between what is asked of the architect and what he delivers is one of the reasons Eisenman's work is so difficult to fathom. In Venice, for example, where all of this digging began, in 1978, the seminar organizers meant to "discuss new urban solutions for historic centres." Eisenman gave them a piece of his psychotherapy: "It is all linked to my psychoanalysis which has to do with the fact that I realized that life did not begin at ground zero and work up but that it went down into the unconscious. When the unconscious became part of my work, I began to lose the centrism of rationalism and origins, clarity and purity, etc. The hole digging is a metaphor of my own unconscious."

All of this does not take away from a certain seductiveness on the intellectual level, best exemplified perhaps in the Verona project "Moving Arrows, Eros, and Other Errors." Otherwise known as the Romeo and Juliet project, the proposal was developed for the 1985 Venice Biennale and was (*continued on page 30*)



Milwaukee Journal Photo

Federal Role at Taliesin Debated

While a major restoration of Taliesin, Frank Lloyd Wright's house and studio in Spring Green, Wisconsin, has already begun, Federal assistance for the \$24-million plan is still uncertain. Using private funds, the Taliesin Preservation Commission has completed the restoration of Wright's bedroom terrace and urgent foundation

repairs in the house's Hill Wing. The Taliesin Preservation Act would provide \$8 million in Federal funds, to be matched by equal amounts of state funds (already committed) and private donations. Senator Herb Kohl (D-Wis.) sponsored the bill, which was in committee at press time, while his colleague Republican Representative F. James Sensenbrenner (R-Wis.) denounced it as an example of pork-barrel spending. □

AIA Lobbies for "Smoke-Free" Bill

The AIA has endorsed in principle the "Smoke-Free Environment Act," a House bill that bans smoking in public and commercial buildings except in separately ventilated areas. Albert C. Eisenberg, the Institute's senior

director for Federal legislative affairs, told a House subcommittee hearing that architects have an "intimate relationship with all aspects of the built environment" and emphasized the profession's efforts to alleviate indoor air pollution. The bill was still pending as this issue went to press. □

New Architectural Engineering Journal

The American Society of Civil Engineers will be publishing a new journal on architectural engineering. A debut issue of the quarterly journal is sched-

uled for March 1995. This technical, refereed journal is now soliciting papers for publication. Drafts submitted for consideration should be between 2,500 and 10,000 words and should be sent to: *Journal of Architectural Engineering*, ASCE, 345 East 47th St., New York, NY, 10017-2398. □

Calendar

COMPETITIONS

Ideas for Central Park Reservoir

Deadlines: registration-May 25; submission-August 10
Architects, urban designers, and interior designers under the age of 35 as of September 1 may submit ideas for the reuse of New York's Central Park Reservoir. Contact Ron Rubin, New Jersey Institute of Technology, Continuing Education, University Heights, Newark, NJ 07102 (800) 624-9850, FAX (201) 596-3288.

Yokohama Port

Deadlines: registration-June 30; submission-December 12
The City of Yokohama, Japan, invites entries to an international competition to design a new port terminal. Contact Yokohama International Port Terminal Competition, The Port & Harbor Bureau, City of Yokohama, Sangyoboeki Center-Bldg., 2 Yamashita-cho, Naka ku, Yokohama 231, Japan 45-671-7359, FAX 45-671-7369.

Visionary Landscapes

Deadline: submission-July 11
Landscape Architecture magazine invites visionary proposals for cities, suburbs, and towns. Contact Bill Thompson, *Landscape Architecture*, Dept. LC, 4401 Connecticut Ave., NW, 5th fl., Washington, DC 20008 (202) 686-2752.

EXHIBITIONS

Bernard Tschumi

Museum of Modern Art, New York. Through July 5
Six projects are documented.

Urban Revisions

Museum of Contemporary Art, Los Angeles. May 15 - July 24
Urban design and planning projects developed over the past five years are in "Urban Revisions: Current Projects for the Public Realm."

Pritzker Prize Winners

Indianapolis Museum of Art, Columbus, Indiana. May 21 - July 24
On view is the traveling show "The Art of Architecture: Works by Laureates of the Pritzker Architecture Prize" (P/A, July 1992, p. 18).

CONFERENCES

AIA National Convention

Los Angeles. May 13 - 16
"Edges: Succeeding Through Change" is the theme of this year's AIA convention. Contact LA94 Hotline (202) 626-7395, FAX (202) 626-7518.

Aspen Design Conference

Aspen, Colorado. June 12 - 17
"Design and Human Bodies" is this year's theme. Contact IDCA, PO Box 664, Aspen, CO 81612 (303) 925-2257, FAX (303) 925-8495.

NeoCon® '94

Chicago. June 13 - 15
The contract furniture fair is to be held again in conjunction with the National Commercial Buildings Show™. Contact NeoCon 94 (800) 680-4636 ext. 300.

Reclaiming Women's History

Bryn Mawr, Pennsylvania. June 17-19
This national conference will examine the relationship between women's history and the built environment. Contact Gayle Samuels, Reclaiming Women's History Through Historic Preservation, PO Box 53454, Philadelphia, PA 19105-3454

A/E/C Systems® '94

Washington, DC. June 20 - 23
This year's automation show will include the "first virtual reality exposition specifically for the design professions." Contact Sharon Price, A/E/C Systems '94, PO Box 310318, Newington, CT 06131-0318 (800) 342-5718, FAX (203) 666-4782.

Bosnia in America?

In letting the violence and depopulation of America's inner cities continue, are we engaged in our own form of ethnic cleansing? A Yale symposium raises the question.

by Thomas Fisher

As I sat in Yale's law school auditorium at the end of February listening to a symposium on the future of the American city, I thought that this must be what negotiations in Bosnia are like: well-dressed men and women sitting around tables, unable to agree over what to do with their cities, while outside, heavily armed thugs fight over turf. The analogy is a bit of a stretch, I realize, but not by much. Less than a mile from Yale's law school, for example, there are snipers' alleys and burned-out buildings that any resident of Sarajevo would recognize.

Truly Bosnian, however, were some of the comments made by economists and policy analysts at the symposium, which was sponsored by New Haven's Alliance for Architecture and The Arts Council. Anthony Downs of the Brookings Institution, for instance, offered decentralization strategies, such as moving poor families or transporting inner-city workers out of the cities, as solutions to our urban problems. This reminded me of the Serbians' "solution": regaining control of cities by deporting the undesirable residents. Other speakers, such as Timothy Bartik of the Upjohn Institute for Employment Research, talked about regions within the U.S. forming into rival economic blocks, competing for jobs. The Bosnian term for such regional rivalries is Balkanization.

Designers vs. Economists

What emerged from the day-long symposium was a real and fundamentally important difference between the economists and policy analysts on one hand, and the architects and urban designers on the other. The design professionals portrayed



This vacant lot on Manhattan's Lower East Side was once occupied by homeless people; their self-built shanties, collectively known as Bushville (P/A, Sept. 1993, p. 90), were demolished by the city last year.

cities as physical artifacts used to create and sustain culture, a task that demands a fairly high concentration of diverse people in close proximity. In contrast, most of the economists and policy analysts saw cities as places of economic exchange or social conflict. If the global economy no longer needs dense cities, then so be it. And if keeping the peace means separating or dispersing people, then let's do it.

There have been efforts recently to reconcile these diametrically opposed positions. The so-called "new urbanists," for example, have tried to create concentrated physical settings and to sustain some social and economic diversity within suburban sprawl – outposts of urban culture along the information highway (see P/A, Dec. 1993, p. 36). But all too often, these two views of the city have worked at cross purposes. Consider our urban poli-

cies in the 1950s and 1960s. We poured massive amounts of money into downtown redevelopment and inner-city renewal, while at the same time building highways and providing tax incentives for people to move out. And look what we are doing now. We talk as if we want to save our cities, and yet, as Yale political scientist Douglas Rae noted at the symposium, we ensure their destruction with "price supports for illegal drugs, a free-market distribution of hand guns, and a maintenance policy toward poverty."

An Ecological Approach to Cities

Several of the architects and urban designers at the symposium spoke in favor of the "values of propinquity," as Harvard's Alex Krieger put it. They were not being nostalgic. If anything, they brought to the table a needed (continued on page 32)

Obituaries

Elissa Aalto, an architect who was the partner and wife of the late Alvar Aalto, died on April 12 in Helsinki at the age of 72. Born Elsa Kaisa Makiniemi, she began working in Aalto's office in 1949, and married the widowed master in 1952. After his death in 1976, she completed the firm's numerous projects in several countries, including the opera house in Essen, Germany, which was not completed until 1988. Recently, she had overseen restoration of Aalto's Paimio Sanatorium and worked to ensure that his Finlandia Hall in Helsinki would be reclad in white marble, as it was originally, rather than in the gray granite specified by technical experts.

Lawrence B. Anderson, architect and former dean of architecture and planning at M.I.T., died in Concord, Massachusetts, on April 6 at the age of 87. Anderson was a graduate of the University of Minnesota and of M.I.T., where he became an assistant professor in 1933. He was named architecture department chairman in 1947 and dean in 1965. "Andy" was a kindly father figure to generations of students, including I.M. Pei, Gordon Bunshaft, and Walter Netsch. In 1939, his firm, Anderson Beckwith & Haible, designed M.I.T.'s Alumni Pool, one of America's first Modern campus buildings, which was followed by several other M.I.T. structures.

Alexander Girard, an architect best known for his design of interiors and fabrics, died at his Santa Fe home on December 31, at the age of 86, from the effects of Alzheimer's Disease. Educated at the RIBA, Girard was associated on several commissions with Eero Saarinen. During the 1960s, he designed the renowned Fonda del Sol restaurant in New York and developed a boldly colored renovation scheme for the main street storefronts of Columbus, Indiana, along with the offices of the town's famous design patron, Irwin Miller. Girard was also noted for his Op-effect fabrics and other furnishings for Herman Miller, which were showcased in a New York store he created.

William J. Levitt, developer of the prototypical postwar suburb, Levittown, Long Island, died on January 29 at the age of 86. Levitt adapted (*continued on page 32*)

Practice Notes

Construction Activity On the Way

There was a 7 percent increase in construction activity in 1993, according to Clark Associates, publishers of the Clark Reports, but a significant 28 percent increase in committed dollars for future work. The commercial/institutional market saw a 10 percent increase over 1992 levels. For more information, call 800-222-0255 (fax 800-322-0255).

What about Facility Management?

A recent survey of members of the International Facility Management Association shows that their average salary is \$58,800, that their average responsibility is for 500,000 square feet of mostly office space, and that 28 percent are women and 26 percent have architecture or engineering backgrounds. Call 800-359-4362 for more information.

The Implications of Globalization

Marketing consultant Brian Lewis reports in a recent issue of the Society for Marketing Professional Services newsletter that the last decade brought a rise in global market share by large design-build firms at the expense of architectural firms. He also sees mid-sized firms increasingly squeezed by regional firms with global liaisons, and he predicts that small firms will survive only if they have a global niche specialization or a local practice. Call 910-799-2367 for more.

Technics Notes

Cavity Wall CAD

The Brick Institute of America has released computer programs to assist in the design of masonry cavity walls. CavWal provides structural design for cavity walls, including tie information, expansion and control joint size and location, bond patterns and relative construction costs, fire resistance ratings, sound transmission class, and heat transmission coefficients. Another program, CavWal Adjunct, includes information on water permeance, durability, sound absorption coefficients for selected units, and vapor and air retarders. Contact the Brick Institute of America, 11490 Commerce Park Drive, Reston, VA, 22091, 703-620-0010.

Hospital Guidelines Revisions

The AIA is now revising its Guidelines for Construction and Equipment of Hospital and Medical facilities, and is soliciting revisions from those involved in the design of such buildings. Revisions must be received no later than June 17, 1994. For more information, contact Todd Phillips at the AIA at 202-626-7366 (fax 626-7518).

Steel Joist Design Program

The Steel Joist Institute has just released a computer vibration program that simplifies the calculation of frequency and amplitude resulting from transient vibration caused in buildings from occupants, the values for which will allow proper specification of joists, girders, and beams. According to the Institute, this program is user-friendly and "can accomplish in seconds calculations that previously required several hours." To order call the institute at 803-449-0487.

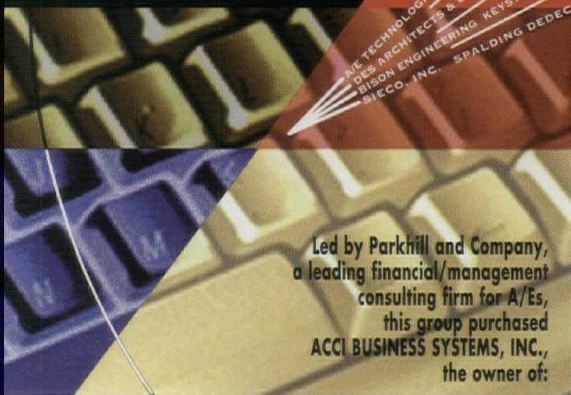
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SHAW, WEISS & DENAPLES JOHN T. WARREN ASSOCIATES
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When specifying materials for the Portland Museum of Art for I. M. Pei & Partners, project manager Preston Moore researched many types of flooring.

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Obituaries

(continued from page 26)

assembly line methods to build the 17,000 houses of Levittown and subsequent developments: the houses were assembled of prefabricated elements by crews moving down the streets. While the development's repetitive rows of 800-square-foot houses struck many architects and social critics as dehumanizing, they also made suburbia (and home ownership) affordable for returning veterans and young families. Levitt lost much of his fortune in business setbacks after selling his development company in 1968.

Raul Rosas, a New York architect whose "Community Media Center" proposal was cited in P/A's New Public Realm competition (P/A, Oct. 1992, p. 86), died on February 8 at the age of 39. Born in Cuba, Rosas was a graduate of the Pratt Institute. His practice consisted mainly of residential work. Rosas's "New Public Realm" proposal was a critique of electronic-age democracy; he suggested that by continuing to bring people together physically, we can avoid the dangers of citizens' isolation and passivity.

Manfredo Tafuri, the Italian architectural historian and critic who helped define post-structuralist theory, died on February 23 at age 59. Trained as an architect at the University of Rome, Tafuri headed the architectural history department at the Istituto Universitario di Architettura in Venice from 1968 until his death. His writings focused both on Renaissance humanism and on the contemporary relationship between theory and practice, The Institute for Architecture and Urban Studies in New York brought his ideas to the United States by publishing his writings in its journal, *Oppositions*.

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Michell Legendre/CCA

Eisenman's exhibit design is the first to "violate" the CCA's architecture.

Eisenman at CCA *(continued from page 23)*

meant from the start as an intellectual game. Here, the architect did as he was asked and delivered fantasy. Unfortunately, although the project is of far greater interest than, for example, the La Villette gardens, it comes and goes almost unnoticed in the show.

Cotton Candy

The exhibition, designed by Eisenman himself, is an exploration, both in plan and in section, of the Greek cross motif used in his Friedrichstadt project in Berlin. Sketches, presentation drawings, and exquisitely executed models are placed throughout according to a sophisticated spatial hierarchy. However, the strength implied by the motif is lost within this strange pastel world. The more than 15 green, pink, blue, and gold hues chosen for the exhibition walls prompted Toronto *Globe and Mail* critic Adele Freedman to describe her feeling of "being trapped inside a cloud of cotton candy."

Somehow, the magic is not there, despite commendable efforts on the part of the CCA and Bédard. Looking at "Cities of Artificial Excavation," one gets a sense of futility rather than novelty. Roads are opened that lead nowhere; music is written that cannot be played. □

The author is an architect, publisher, and architectural critic in Montreal.

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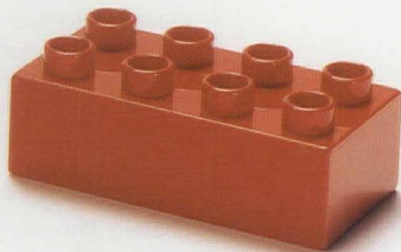


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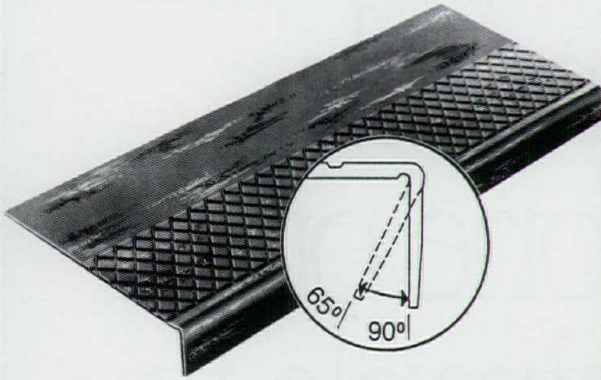
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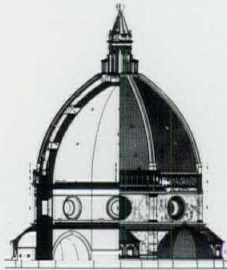
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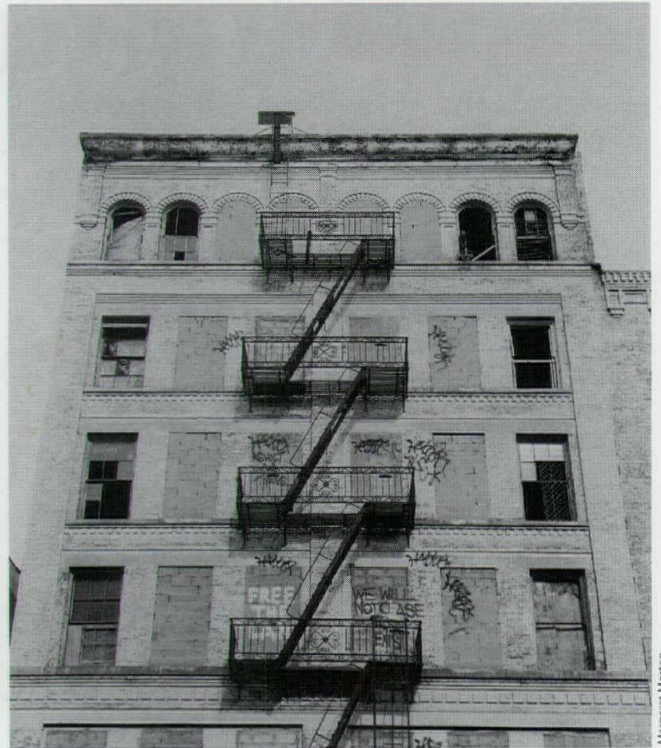
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News

Bosnia in America? (continued from page 25)



The Glass House on Manhattan's Lower East Side was a squatter's settlement until the police displaced the occupants, 30 to 40 young homeless people.

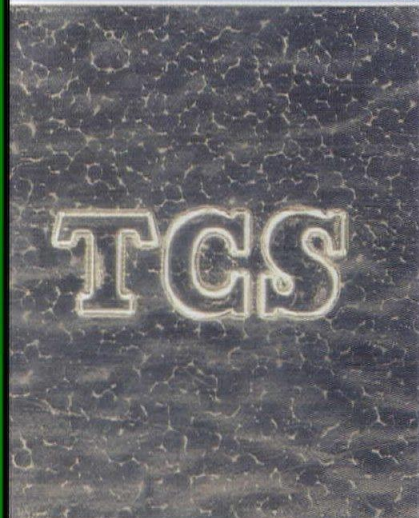
skepticism about big initiatives and sweeping programs, such as those mentioned by HUD's Mark Weiss. After reviewing the disastrous effect large-scale urban renewal had on New Haven, for example, architect Alan Plattus of Yale argued for an ecological approach to our cities: we should take no action until we understand the complex interactions within our urban areas, and then intervene only in small-scale and appropriate ways.

Clearly the various disciplines seeking solutions to urban problems need to sit down together more often to resolve our real differences before any meaningful change is going to happen. Otherwise, we will continue to negate each other's efforts, with architects and urban designers envisioning cities as dense, diverse places, and economists and policy people envisioning them as disaggregated networks of regional markets. What's at stake here is not just our cities, but our very survival. □

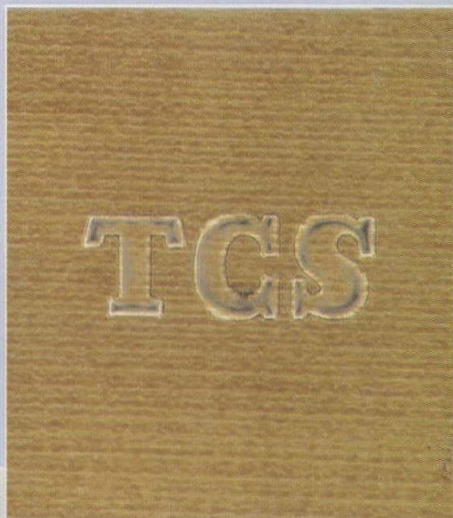
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Hinsdale High School, Hinsdale, Illinois
Architects: Cone & Dornbusch



AFTER 3 MONTHS

Pittsburgh International Airport
Architect: Tasso Katselas

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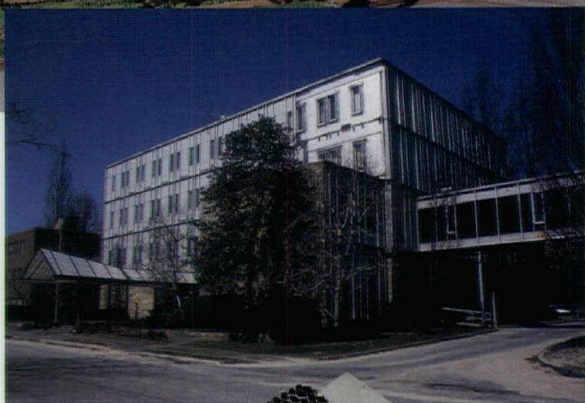


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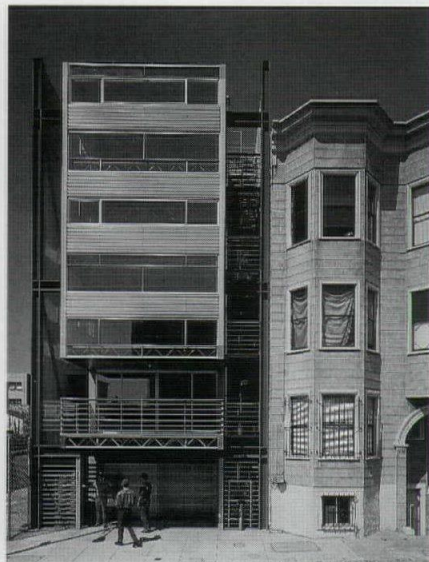
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Richard Barnes

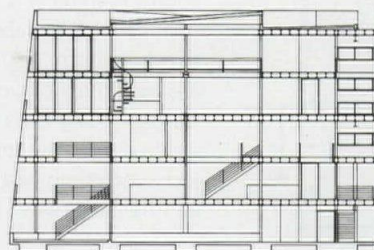


Richard Barnes

Saitowitz Live/Work Building in San Francisco

The architecture office of Stanley Saitowitz now occupies the top two floors of a new live/work building constructed by the architect in San Francisco's South of Market district. Sited on a typically narrow 25' x 80' lot, the project was conceived as an infill prototype to be built as inexpensively as possible. Five-foot-wide service zones run the length of the blind party walls, housing stairs, kitchens, bathrooms,

and storage. The free zone in the center is supported by a basilica frame made of parallam wood members, which act as a scaffold; floor space can be added or subtracted using truss joists. A main stair connects the lower three units and the roof. The front reinterprets the San Francisco bay window with aluminum spandrels, and the rear wall slopes to increase daylight penetration.



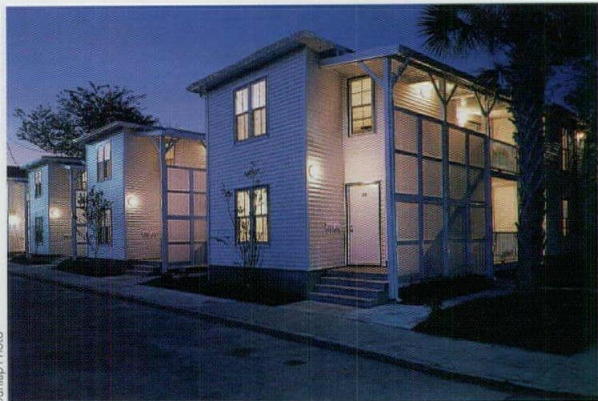
LONGITUDINAL SECTION 20'/6m



Brian Gasset/TVS & A

Philadelphia Train Shed Reopens

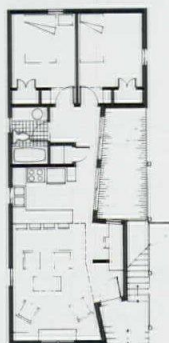
The 101-year-old Reading Terminal Train Shed in Philadelphia began a new life in March, having undergone a \$65-million renovation as part of the city's new Pennsylvania Convention Center (P/A, Sep. 1993, p. 29). The south end of the train shed, which has a 260-foot single-span roof, houses a 47,000-square-foot Great Hall (left); the north end has been divided into meeting and conference rooms and a ballroom. The ground floor has been continuously in use as a public market since the terminal's opening. The project is a joint venture of Thompson, Ventulett, Stainback & Associates, Atlanta, and the Vitetta Group, Philadelphia.



Dunlap Photo

An Affordable Row in Charleston

Charleston, South Carolina, has been working to provide 1,800 units of affordable housing ever since Hurricane Hugo destroyed a great deal of available housing in 1989. A row of four two-family houses demonstrating the potential quality and historical sensitivity of such housing was recently completed by a joint venture of Mark Aln Rawlings and Studio A (whose principal, Whitney Powers, was featured in P/A's 1990 Young Architects issue). Developed by Charleston Affordable Housing, Inc., the two-bedroom, 780-square-foot units are manipulations of the city's historic "single house," a narrow structure with a side porch. The total cost for the project – including two additional units on another site – was \$570,000.



FIRST FLOOR PLAN

10/3m

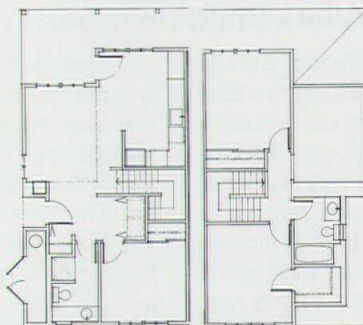


Alexander Seidel

California Housing in the Countryside

Since its completion, a 39-unit affordable housing project in Soquel, California, called The Farm has received a number of awards. Located on a semirural site near Santa Cruz, the project's two- and six-unit buildings are oriented toward shared green space. Architects Seidel/Holzman of San Francisco say that the subsidized-rental apartments were

designed to blend in with the market-rate single-family houses now under way on the site. The project, developed by the Mid-Peninsula Housing Coalition, cost \$70 per square foot to build, including extensive site work.

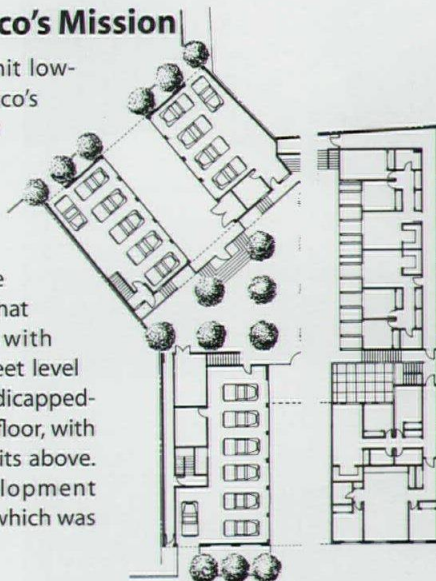


FIRST FLOOR (LEFT) AND SECOND FLOOR PLANS, TWO-UNIT BUILDING

10/3m

A Courtyard in San Francisco's Mission

In describing Del Carlo Court, a 25-unit low-income apartment project in San Francisco's Mission district, architect Daniel Solomon of Solomon, Inc., points out that, in contrast to nearby public housing projects, this one is "indistinguishable as housing for the poor." Occupying an irregular mid-block site, the apartments are distributed in three rectangular buildings that form the sides of a courtyard planted with sycamore trees. Parking is provided at street level under the two street-facing buildings. Handicapped-accessible units occupy the rest of the first floor, with flats on the second floor and two-story units above. The non-profit Mission Housing Development Corporation was the client for the project, which was built for \$84 per square foot.

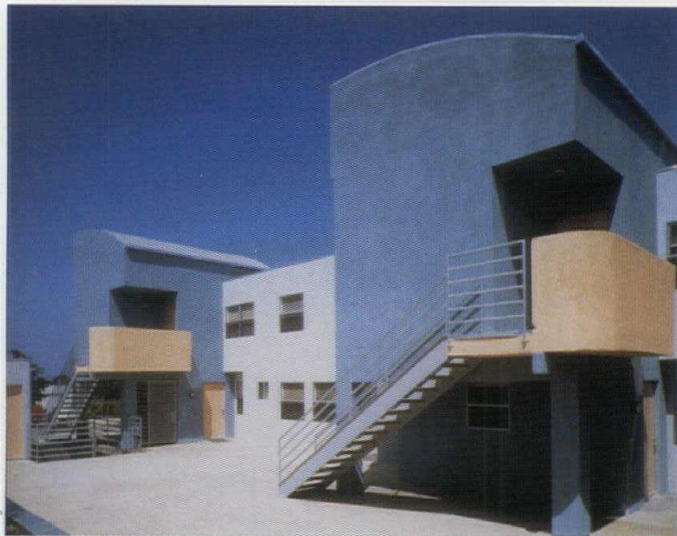


PARTIAL FIRST FLOOR (LEFT) AND SECOND FLOOR PLAN



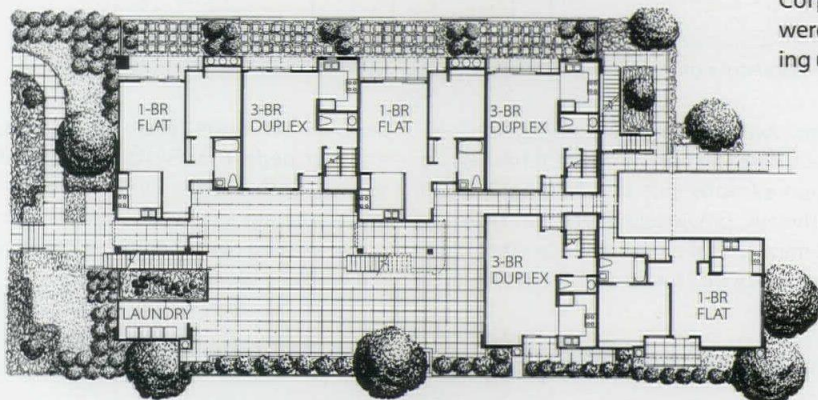
Christopher Iliou

N ↑ 40/12m



Apartments on Four Santa Monica Sites

The 30 units of the Garcia Apartments in Santa Monica, California, designed by William Adams Architects of Santa Monica, are distributed on four separate sites. (Shown at left is a site on 15th Street.) Each group of apartments is built around a central courtyard with laundry facilities and access to underground parking. In addition to using a few "special design features" (roof forms, awnings, stairs) to create character, the architects raised ceiling heights in some interiors to make them feel larger. The client was the Community Corporation of Santa Monica; the units were built for \$66 per square foot, including underground parking.

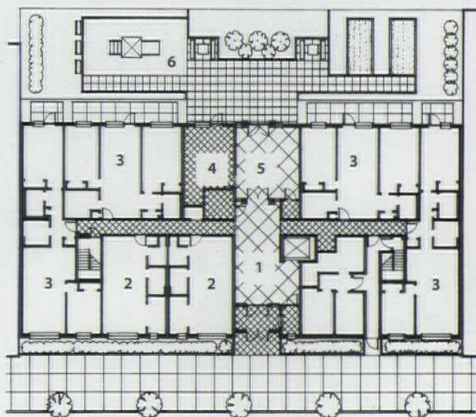


SITE PLAN/FIRST FLOOR PLAN, 15TH STREET APARTMENTS

N 20'/6m

New Building for New Yorkers in Need

A recently completed \$6.5-million apartment building on New York's Lower East Side is a rare example of new construction in the city's affordable housing initiatives. The six-story, 51-unit building was designed by Amie Gross Architect of New York for the State of New York and Community Access, Inc. It houses both homeless families and people recovering from mental illness. Glazed tiles in "soothing" colors and serpentine-patterned grillework provide visual interest at street level, as does the view through the glass doors of the building to a 4,000-square-foot garden in the rear.



FIRST FLOOR PLAN

N 40'/12m



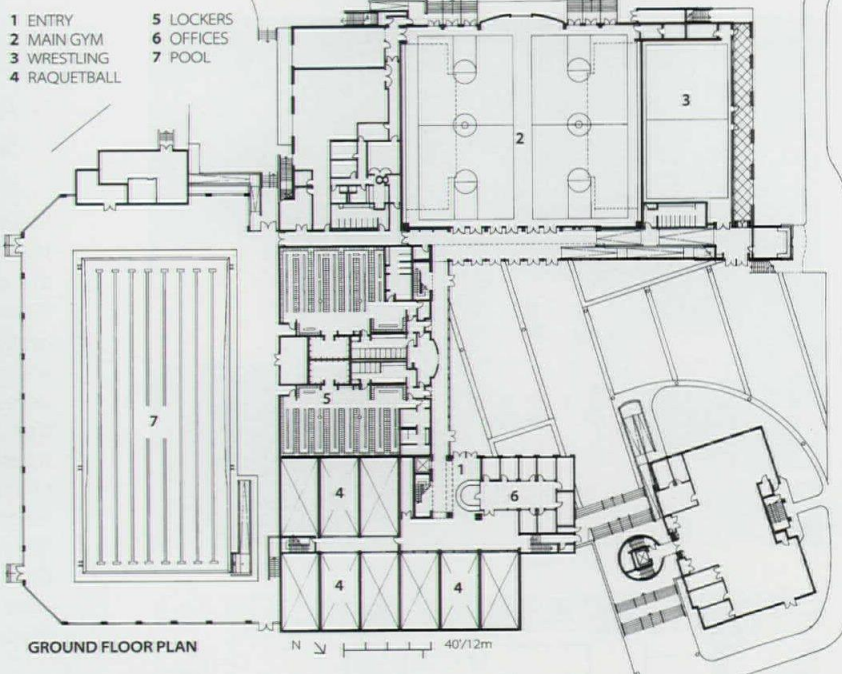
- 1 LOBBY
- 2 STUDIO APARTMENT
- 3 2-BEDROOM APARTMENT
- 4 LAUNDRY
- 5 COMMUNITY ROOM
- 6 PLAYGROUND

F. Charles Photography



Recreation Center Defines a Campus Edge

The new Recreation and Events Center of the California Polytechnic University in San Luis Obispo (P/A, Apr. 1990, p. 104) by ELS/Elbasani & Logan Architects, Berkeley, gives definition to the otherwise randomly expanded campus of object buildings loosely organized around two concentric streets. The new center's two vaulted sec-

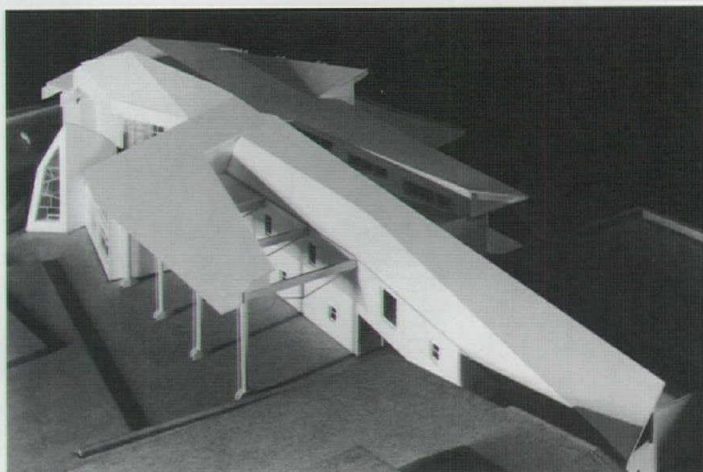
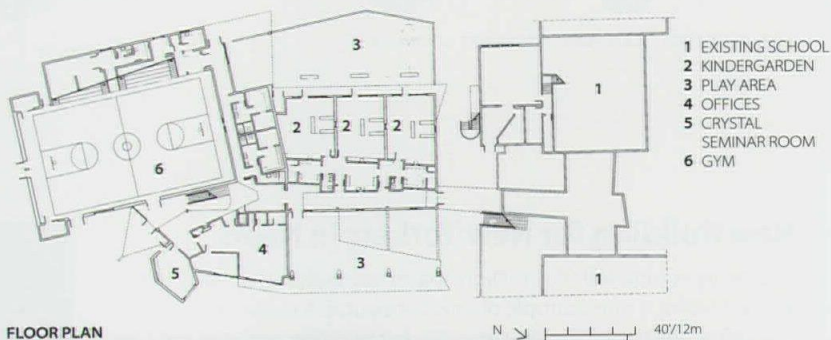


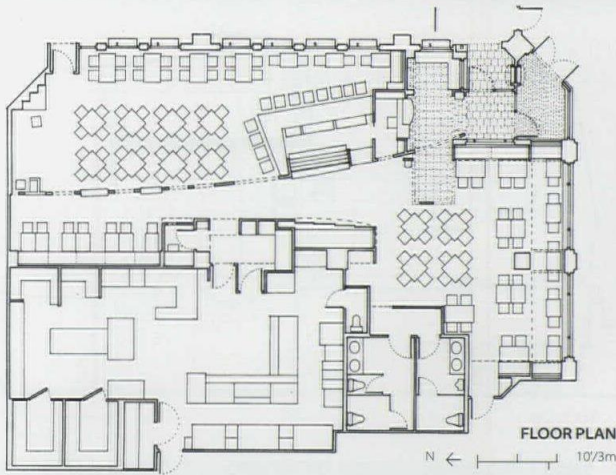
tions, connected by a two-story glazed element, form a courtyard that terminates a major campus axis and two pedestrian pathways; previously, there had been no attempt to make figural space. Anchoring the courtyard is a new office building, a

separate structure rotated to align with another pedestrian system. The vaulted spaces, both broken by translucent skylights running lengthwise, recall the form of the existing gym building and neighboring barns.

School Revives Tradition and Looks to the Future

Invited to extend and link two existing school buildings on the Bella Bella Band Reserve, the main settlement of the Heiltsuk people on an island off British Columbia, 325 kilometers northwest of Vancouver, Henriquez • Partners sought to combine indigenous traditions with a modern school program. The building, accommodating kindergarten through 12th grade, will be clad with horizontal cedar siding and cedar roof shingles; the "Longhouse" façade will be clad with large vertical cedar planks in traditional Heiltsuk fashion; local workers will be trained on site and materials will be milled locally, except for the long-span trusswork. The entry canopy, in the form of a mythological eagle mother, is oriented toward a landscaped knoll where a rock representing an egg acts as a symbolic reminder that the school is to protect and prepare its students "for the challenges that lie ahead."





Restaurant Emulates its Urban Context

Architect Lawrence Man's Tai Pan restaurant in Cambridge, Massachusetts, has won a number of awards including an Award for Excellence from the National Organization of Minority Architects (P/A, Dec. 1993, p. 14), a New England Regional AIA Award, and a Boston Society of Architects AIA Honor Award. Located in an urban mall, Tai Pan, is organized by a freestanding curved wall that divides the dining room into three zones; a corridor running along the wall (where patrons can have drinks while waiting for a table), a dining area outside the wall (facing a city street and park), and a dining area, bar, and Karaoke lounge enclosed by the wall (looking onto the mall). The corridor created by the wall acts as a "street" connecting the two dining areas.

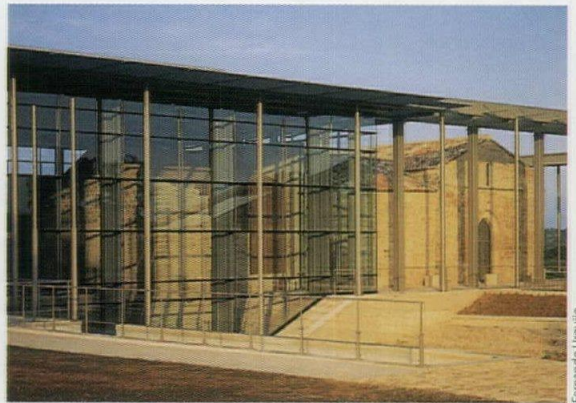


Lucy Chen



New York Hospital Expands Over FDR Drive

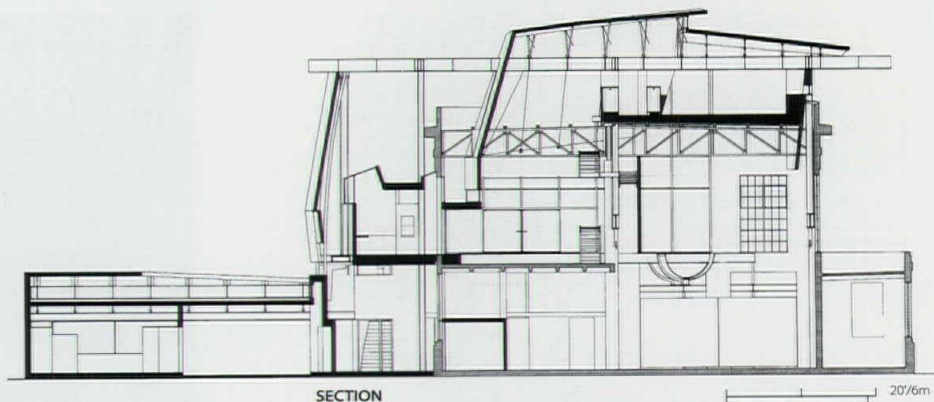
A \$1-billion modernization program for New York Hospital, a major-league teaching hospital on Manhattan's Upper East Side, is moving ahead after four years of facility assessment, planning, and design work by Hellmuth, Obata & Kassabaum in association with Taylor Clark Architects, New York. Construction of a massive concrete platform over the FDR Drive, now under way, is the first substantial piece of the modernization plan. The 90-foot wide, 460-foot-long platform will support a 12-story look-alike addition to the existing hospital buildings, originally built in the 1930s. HOK's program also includes the construction of a nine-story wing on the site of an existing hospital building slated for demolition, a reorganization of the congested urban campus to ease patient access, and several renovation projects.



Fernando Urquijo

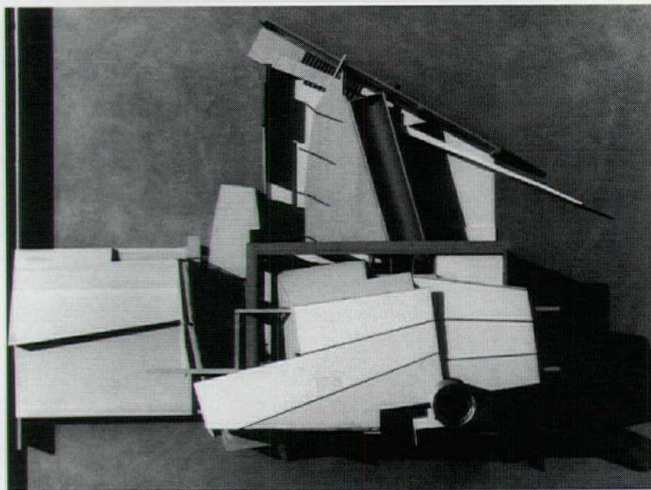
Museum for Historic Architecture, Neolithic Artifacts in France

The Tumulus Museum in Bougon, a small village on the west coast of France, encloses the ruins of a chapel built by Cistercian monks in the 12th Century and a permanent exhibition of Neolithic artifacts excavated from the site. The competition-winning design by Studio Milou, Paris, recalls the work done to uncover and preserve the historically significant site: the museum's partially sunken foundation of concrete walls (made from rubble excavated from the site) with horizontal mahogany strips suggests the work of the geologist, and the grid of the metal and glass structure and metal roofing, the work of the archeologist.



House /Gallery Springs from Industrial Structure

The Carlson/Reges residence and gallery, currently under construction in an industrial neighborhood north of downtown Los Angeles, is the result of an unusual collaboration between the architect, ROTOnDi (winner of two P/A Award citations, Jan. 1992, p. 70; Jan. 1993, p. 62), and the client, an industrial builder and art collector. The client and his family have lived on the site in a converted electric company cabling structure for some time and invited the architect to use the steel and concrete structure and a stockpile of materials (building materials and industrial artifacts collected from renovation projects) to design the project, which the client is building himself. Fuel oil tanks from the client's stockpile, for example, were modified to make a lap pool and a tower that acts as a light monitor, viewing instrument, and a hot air exhaust route.



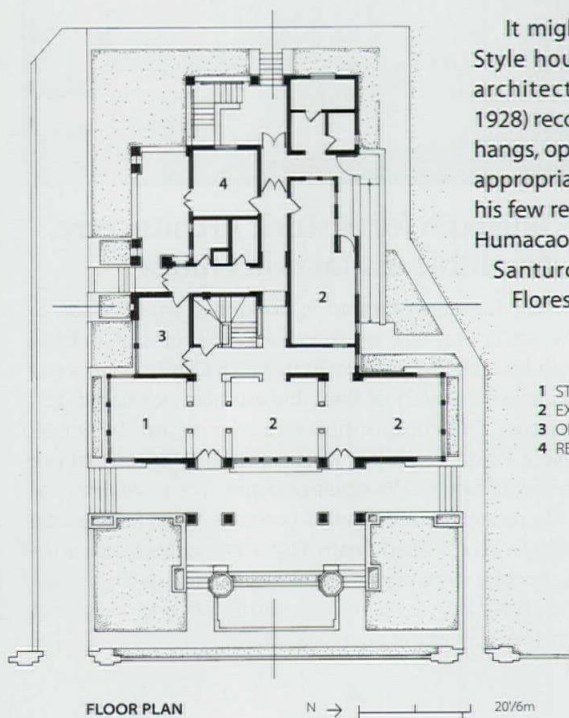
Yusuke Obuchi

Puerto Rican Prairie Style House Restored

It might be surprising to find a Prairie Style house in Puerto Rico, but the late architect Antonin Nechodoma (1877-1928) recognized that the style's deep overhangs, open plans, and porches were quite appropriate for a tropical climate. One of his few remaining houses, the Casa Roig in Humacao (1919), has been restored by the Santurce, Puerto Rico, firm of Marvel Flores Cobian & Asociados. (A biogra-

phy of Nechodoma by firm principal Thomas Marvel was published last month by the University Press of Florida.)

In adapting the Wrightian vocabulary, Nechodoma eschewed the style's characteristic asymmetry and contributed a local touch in the use of colorful mosaic tile. The University of Puerto Rico owns the house, which is used as a museum and community center.

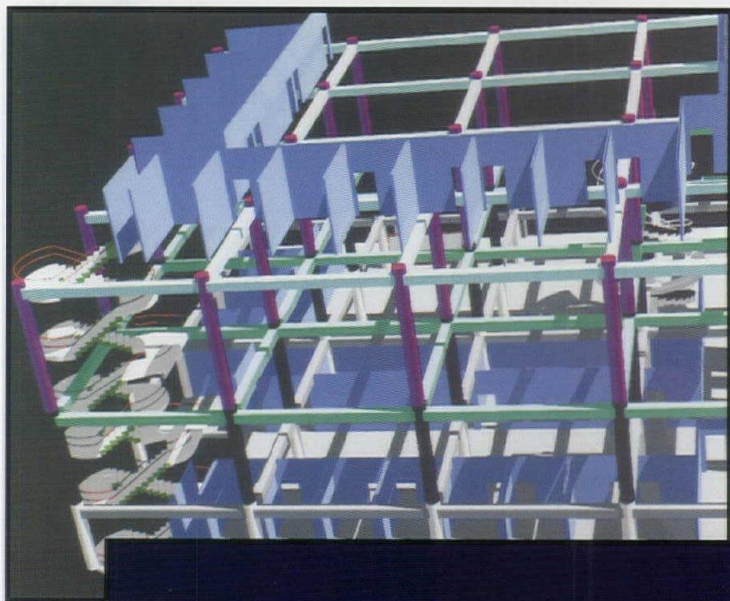


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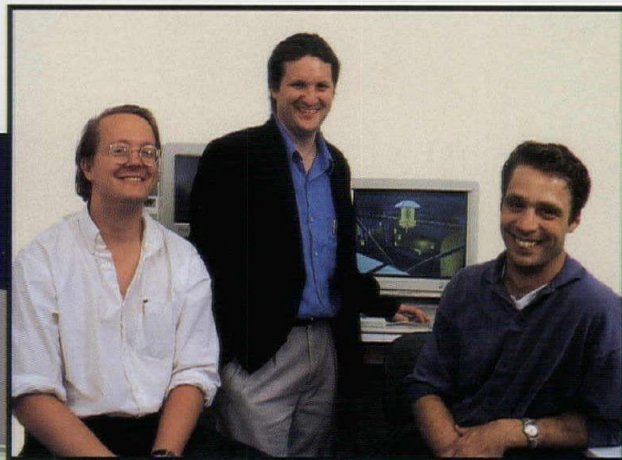
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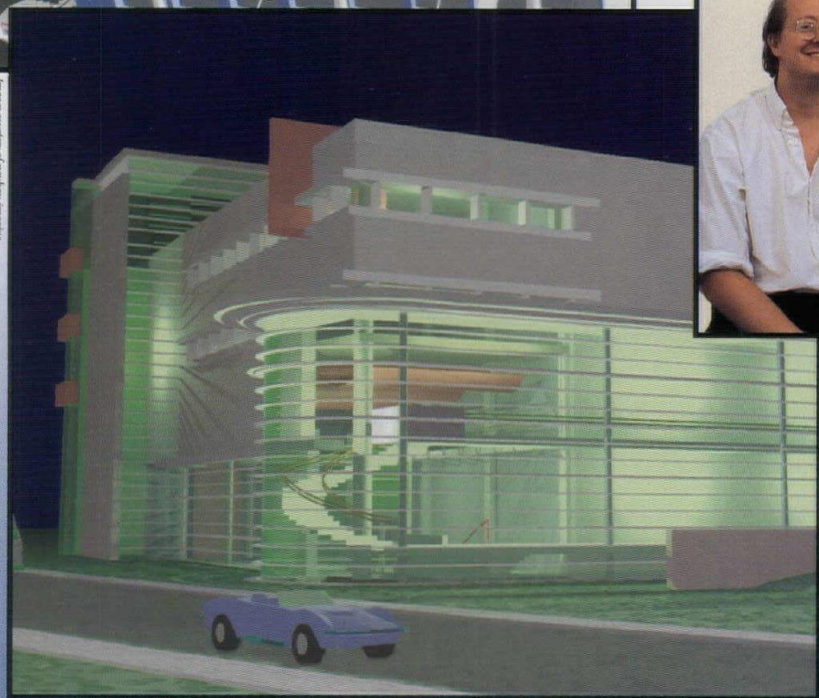
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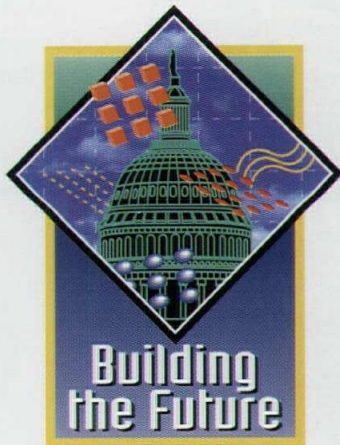


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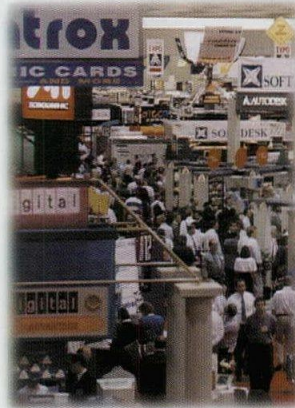


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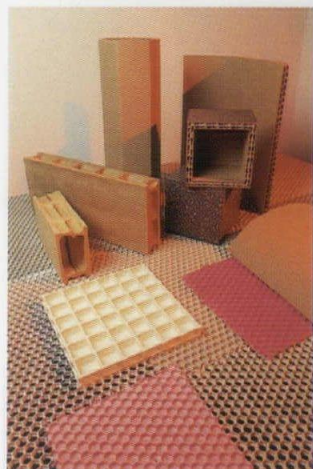
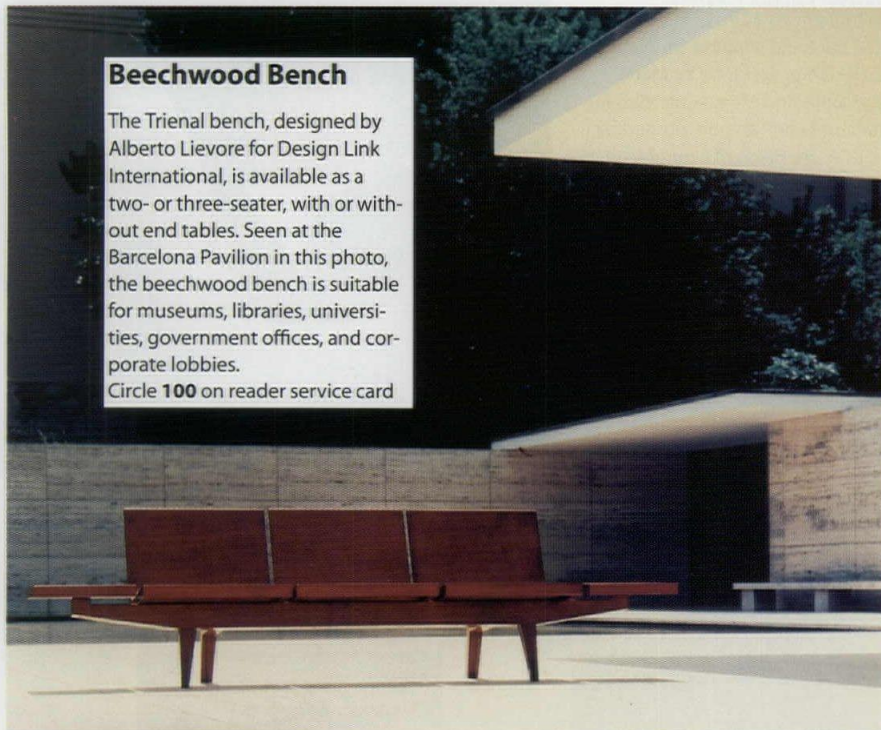


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Beechwood Bench

The Trienal bench, designed by Alberto Lievore for Design Link International, is available as a two- or three-seater, with or without end tables. Seen at the Barcelona Pavilion in this photo, the beechwood bench is suitable for museums, libraries, universities, government offices, and corporate lobbies.

Circle 100 on reader service card



Recycled Fiber Panels

Produced from recycled wood, old corrugated containers, office waste paper, textiles, and some agricultural fibers, these panels, manufactured by Gridcore Systems International (GSI), are currently being used in furniture, cabinetry, stage sets, and exhibition displays. The long-term goal of architect and president Robert Noble is to use the panels in low-cost and emergency housing. Pressure molded into three-dimensional structural panels of different shapes, thicknesses, and ribbed configurations, the product is considerably lighter than plywood and particleboard, and roughly equal in strength to fiberboard and medium-density particleboard, according to Noble. Produced through a process developed by the U.S. Department of Agriculture's Forest Products Laboratory, the panels are nontoxic and are available in sheets up to 4' x 8' with a variety of finishes (paint, paper, fabrics, low- and high-pressure laminates, embossing, and veneers). Circle 101 on reader service card



Acoustical Panels

Formed into rigid panels, Peer's Almute®, a sound-absorbing material made of sintered aluminum particles, can be adhered to walls and ceilings. It is nonflammable, noncorrosive, and does not emit airborne particles. In its natural state, Almute is an iridescent gray, but it can be altered to match a variety of colors. It is suitable for commercial, institutional, industrial, and public facilities.

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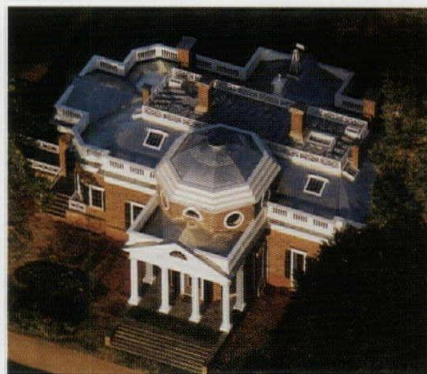


Photo by Jim Carpenter/Monticello. Courtesy of Vincent P. Rubera.

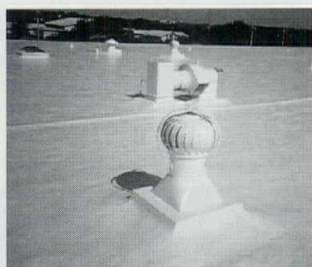
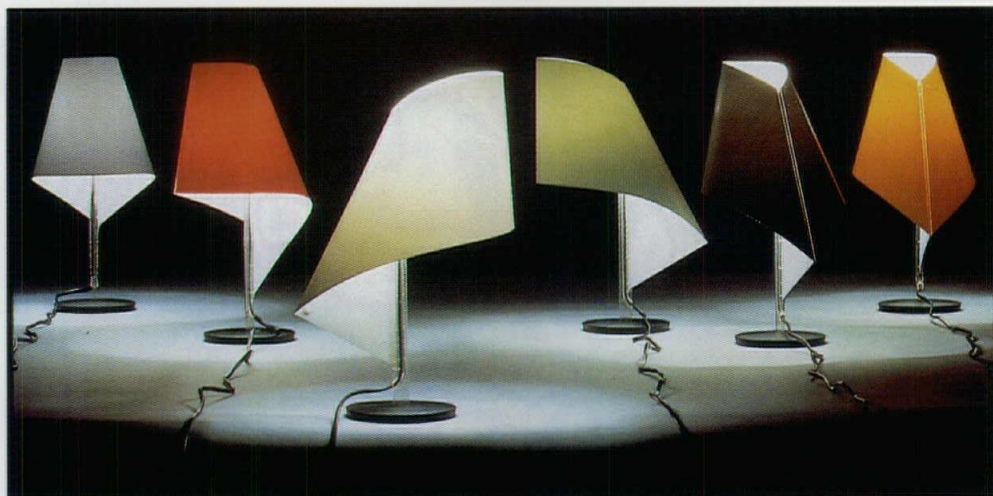
Lead Sheet Roofing Brochure

According to the Lead Industries Association, the use of lead sheet roofing on historical structures is growing. This brochure, *Modern Uses of Lead in the Industrial and Architectural Construction Industry*, provides detailed information about the uses and performance characteristics of lead. The photo above shows the recently restored lead roof of Jefferson's Monticello.

Circle 200 on reader service card

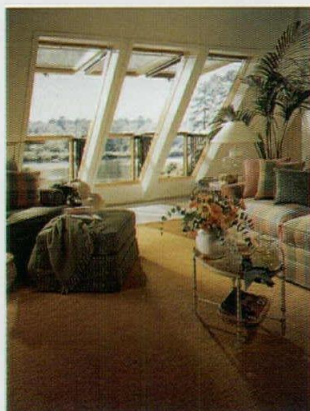
New Table Lamp

The base and shade of the Nautilus table lamp, designed by Mario Barbaglia and Marco Colombo for Italiana Luce® and distributed by IL USA, are made of a durable technopolymer. The asymmetrical shade is available in white, red, yellow, blue, green, and gray. The lamp is 15 inches high and 5 inches wide at the base. Circle **103** on reader service card



Foam Roof Coating

Neogard, a division of the Jones-Blair Company, offers seamless, energy-efficient elastomeric coating systems of polyurethane foam for new and reroofing projects. The fluid-applied coatings form a watertight system that can adapt to any shape and bond to almost any substrate. At less than one pound per square foot, the systems can generally be installed over existing roofs without extensive tear-off and removal. They have a UL Class A 790 fire rating. Circle **104** on reader service card



Balcony Roof Windows

VELUX® has introduced the Cabrio Balcony Roof Window with duo-sash operation. The top sash section opens to provide ventilation, and the bottom sash section opens outward, creating a step-out roof balcony. When the unit is closed, a ventilation flap provides air circulation. Cabrio has laminated, Low-E argon-filled glazing and is designed for installation in roofs with pitches of 35 to 53 degrees. Using a broad selection of flashings, many types of roofing material can accommodate the Cabrio units. The Combi-flashing® System allows multiple units to be installed close together. Circle **105** on reader service card

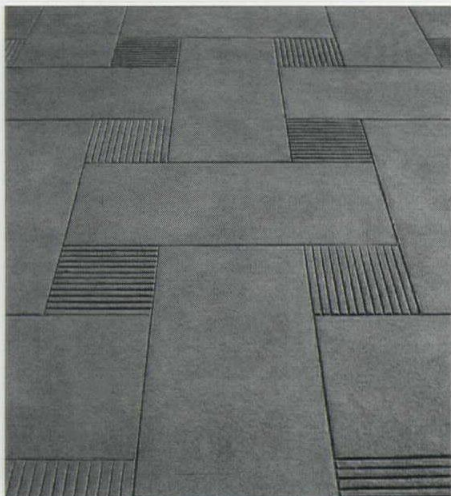


Textiles from Children's Drawings

Last summer, Jack Lenor Larsen's textile design studio teamed up with children who attend the National Dance Institute (NDI) in New York to design a new collection of cotton and wool textiles. Called Rhythm & Line, the collection was developed from drawings the children did while listening to music. A royalty from the textile sales will be donated to the NDI. Circle **106** on reader service card

Concrete Paving Pattern

A new concrete paving pattern now available from Bomanite called Pershing Square Graphics was designed specifically for the renovation of Pershing Square in downtown Los Angeles (P/A, Dec. 1991, p. 20) as re-designed by Mexican architect Ricardo Legorreta and Philadelphia landscape architect Laurie Olin. Appropriate for large residential, commercial, and municipal projects, Pershing Square is a large-scale weave that uses a 12-inch square graphic tile with straight score lines to achieve a basketweave appearance. The score lines in alternating directions capture light, creating the illusion of two different colors. Circle 107 on reader service card

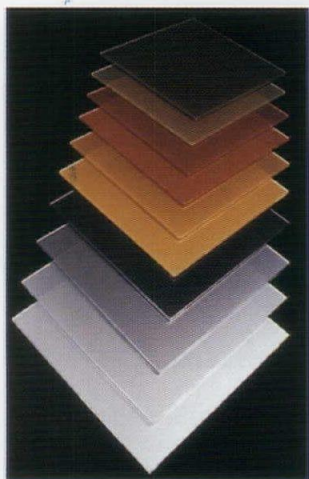


Mechanical Support, Spacing

A system for thin masonry, EZ-Wall™ from EZ-Wall, Inc., a division of American Metal & Plastics, is a mechanical support and spacing panel system for thin masonry. Brick, marble, tile, and granite veneers can be applied to the stucco-covered, hot-dipped galvanized architectural-grade steel panels. Suitable for interior and exterior commercial, industrial, and residential applications, EZ-WALL can be specified for any wall configuration including curved radius corners. The system can carry loads up to 154 pounds per square foot. Circle 110 on reader service card

Quarter-Inch Roof Overlayment

With its noncombustible core and inorganic surface, the new 1/4"-thick Dens-Deck® Overlayment is suitable for commercial roof applications. The UL Class A listed product, available in 4' x 8' sheets, has a patented silicone-treated core and glass mats front and back; it is water-resistant and dimensionally stable. Its applications include overlayment for polyisocyanurate and polystyrene insulation, and combustible decks for single-ply, built-up, modified asphalt, metal, and wood shingles; it can also be used as recover board. Circle 111 on reader service card



Metallic Glass Laminate

Cesar Colors has announced an addition to its line of Chroma-Fusion® architectural glass. Metallica is based on technology that permits imprinting the manufacturer's patented laminate inter-layer material with a proprietary metallic colorant developed with Du Pont. Signage, graphics, photographic images, and solid color fields can be produced using any of 20 different semitransparent and opaque hues. The metallic colors are available in standard sheets up to 58" x 133"; different types of glass (clear, tinted, annealed, etc.) and sheet thicknesses can be ordered. Circle 108 on reader service card



Roof Deck Insulation

AFM Corporation's new Perform® Protect™ EPS roof insulation can be applied directly to a metal deck, allowing normal roofing construction to proceed for both flat stock roofing material and slope-to-drain systems. It can be used with any commercially available membrane system and it meets UL 1256 Fire Test of Roof Deck Construction. The EPS material is recyclable and does not contain CFCs, HCFCs, HFCs, or formaldehyde. Circle 109 on reader service card

Thermoplastic Roofing System

Versiweld™ is the newest addition to Versico's line of commercial roofing products. It is a lightweight, thermoplastic, heat-weldable membrane that can be installed as a mechanically attached, ballasted, or fully adhered system; it is also suitable for below-grade installations, including vertical wall waterproofing. Versiweld is said to have a minimal environmental impact; the polymers used in its manufacturing process, for example, consume minimal energy, are pollution-free during production, and do not emit harmful fumes when the sheets are hot-air welded. Circle 112 on reader service card

Metric Conversion Software

AutoMetric, a new metric conversion software from Hillcrest Software Products, is designed to automatically convert angular and linear dimensions in AUTOCAD drawings. Based on factors derived from standards such as ASTM and ANSI/IEEE, the software program performs conversion calculations, changes text entities, and scales drawings based on "convert to" or "convert from" selections. Other features include user selection of the number of decimal places and text handling options. The program uses standard AutoCAD commands and terminology. Circle **113** on reader service card

Case Studies Brochure

Intergraph's *Building the Future* brochure spotlights 38 projects from around the world that were designed using the company's CAD software. It includes office, commercial, retail, and urban development projects and education, public, medical, and research facilities. Brief project descriptions, computer drawings, and some photographs of completed works are included. Circle **201** on reader service card

Financial Management Software

Harper and Shuman have announced the release of MICRO/CFMS Version 11 financial management software for architectural, engineering, and environmental consulting firms. The new features of Version 11 include an accounts payable module, cash-basis reporting, automated revenue recognition, timesheet comment line, billing enhancements, label generator, windows compliance, and on-screen paged reports. Circle **114** on reader service card

Modeling Software

DesignWorkshop™ 1.0 from Artifice, Inc. is a new modeling program for Macintosh with three-dimensional direct manipulation. The click-and-drag Macintosh-style drawing interface can now be used to create intuitively in 3D. In this 3D environment, objects are created, moved, resized, and reshaped graphically with a 3D crosshair. DesignWorkshop's direct modeling capability is enhanced by perceptual cues for accurately aligning objects in space and by the SpaceJump™ function, which instantly transforms rough 2D positioning into 3D alignment. Circle **115** on reader service card



Laptop for Designers

The new Tri-CAD DesignBook laptop computer from Tri-Star is capable of running high-performance software from CAD/CAM to electronic publishing and multimedia programs. The DesignBook comes with an Intel® 486SX, 486DX, or 486DX2 processor and 4, 16, or 20 MB RAM; its screen resolution starts at 640 x 480 with a choice of a MONO, Passive Color, or Active Color Matrix 10-inch display and incorporates a 512K Cirrus Logic VESA Local Bus Video. A battery provides 2 1/2-3 1/2 hours of operation. Circle **116** on reader service card



Software Accelerator

Panacea Inc. has introduced Version 2 of its TurboDLD family of Software-Only AutoCAD Accelerators. Version 2 products are twice as fast as Version 1 and are designed to accelerate AutoCAD pans, zooms, and redraws. In addition, the new version offers many productivity enhancements such as Tablet-on-the-Screen pop-up graphical icon menus; MicroScope, a dynamically zoomable, real-time spy glass that stays on the screen; Pop-Up Text Window; and The Big Picture™, a bird's-eye view on a pop-up screen. All TurboDLD products support AutoCAD Release 12 DOS, 3D Studio Release 3, AutoShade 2.0 with RenderMan and older software versions. Circle **117** on reader service card



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Two developments on opposite coasts represent the current state of low-income housing and indicate the scope of the problems we face. *by Thomas Fisher*

Low-Income Housing Avoiding Our Past Failures



Architects have taken a bad rap for the past failures of low-income housing. It's true that, up through the early 1970s, low-income housing was often too concentrated, too monotonous, and too alienating. But fueling its problems were several nonarchitectural issues, such as poor management, inadequate maintenance, a paucity of social services, and an increasingly poor pool of tenants.

Whatever the cause of our past failures, however, what matters is that we not repeat them, especially now that the construction of such housing, after the lull of the 1980s, appears to be on the rise, spurred by federal tax credits and federal and state mandates on municipalities and lending institutions. The two low-income housing developments discussed on these pages are exemplary in what they attempt to do, demonstrating how far we have come in rectifying the mistakes of past efforts. At the same time, these projects show the extreme range of what is now being built.

One of the projects, called Highbridge Heights Unity Apartments, is in the Bronx, New York. It was developed by the Housing Development Institute of the Archdiocese of New York and was designed by the Castro-Blanco, Piscioneri & Associates of New York. One of the largest projects of its kind in New York, Highbridge Heights consists of 23 buildings, with 723 apartments: a \$64 million project financed by the city. *(continued on next page)*

Daybreak Grove in Escondido, California (left), designed by Davids Killory, San Diego. Highbridge Heights housing in the Bronx (right), rehabilitated by Castro-Blanco Piscioneri & Associates, New York.

The other development involves two projects, containing 21 units, on sites about a mile apart in Escondido, California. Called Sunrise Place and Daybreak Grove, they were developed by the North County Housing Foundation and were designed by the San Diego firm of Davids Killory. More typical of nonprofit housing, their roughly \$2.5 million cost was financed by public and private groups, including banks, foundations, and the city, state, and federal governments.

The Necessary Diversity of Housing

At first glance, these two projects hardly seem comparable. One is urban, the other suburban; one has mid-rise corridor buildings, the other low-rise townhouses; one involved rehabilitation, the other new construction.

But that is precisely why these projects are worth studying. Both quite successful, they show that low-income housing can operate in a variety of settings, with various means. That is important for two reasons. First, previous efforts at low-income housing failed, in part, because of our uniform approach: providing standard units, in repetitive large-scale buildings arranged rigidly on their sites. The diversity of these projects suggests that, just as low-income populations differ, so should their housing.

Second, although a consensus has grown within the research community as to how best to design low-income housing, that can lead to an equally standardized approach, with research findings overly determining housing design. The Escondido projects, in particular, show the design latitude still possible within the limits defined by researchers.

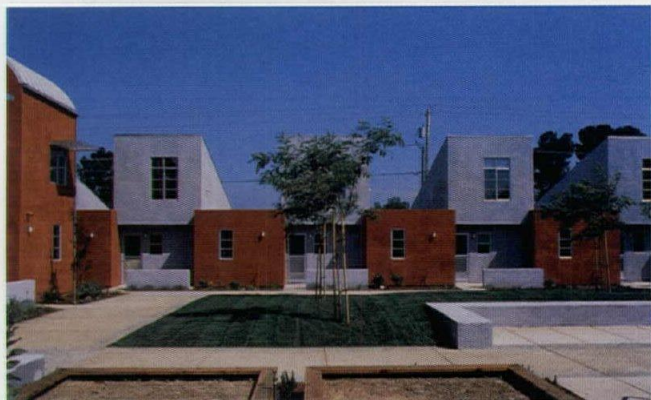
The following are some of the issues raised by this work, issues that anyone designing such housing should address if the past failures of low-income housing are to be avoided.

The Provision of Social Services

One of the biggest problems with such housing in the past was the isolation of poor people's need for shelter from other needs, such as health care, employment, or family counseling. (This was mirrored in the well-meaning, but unconnected efforts of federal agencies such as HUD and HEW). Unless people's needs are met in a coordinated way, even the best-designed housing may eventually fail.

At Highbridge, Catholic Charities provides an impressive array of social services exclusively for tenants, including career counseling, job placement services, day care, adult education facilities, and a medical clinic. "This was the first time the city had allowed a line in the operating budget for social services," says Carol Watson of Catholic Charities, "but the size of the project justified it." Half supported by rents, and half by fundraising, these services are heavily used by single parents and young people, adds Watson.

The smaller size of the Escondido projects prevented such services from being provided in-house. However, the North County Housing Foundation guides tenants to social services in the larger community, a level of involvement, says Amy Rowland of NCHF, that is possible because of the intimate scale of the 21-unit development.



Strong Management

The decline of much public housing in the 1960s often coincided with an increasingly lax management of it, where owners no longer screened tenants or enforced rules of behavior. Accordingly, many low-income projects became breeding grounds for crime and drug dealing.

In both of these projects, management is very proactive in dealing with tenant problems. At Highbridge, there is an extensive security force, and maintenance personnel live in each building. There is also a tenant screening procedure regulated by the city, says Watson, with things such as poor credit or evidence of criminal activity as grounds for refusal.

In Escondido, a resident manager lives at Daybreak Grove to handle tenant problems in both projects. Tenants are screened there too: "It's probably the single most important thing management can do," says Rowland.

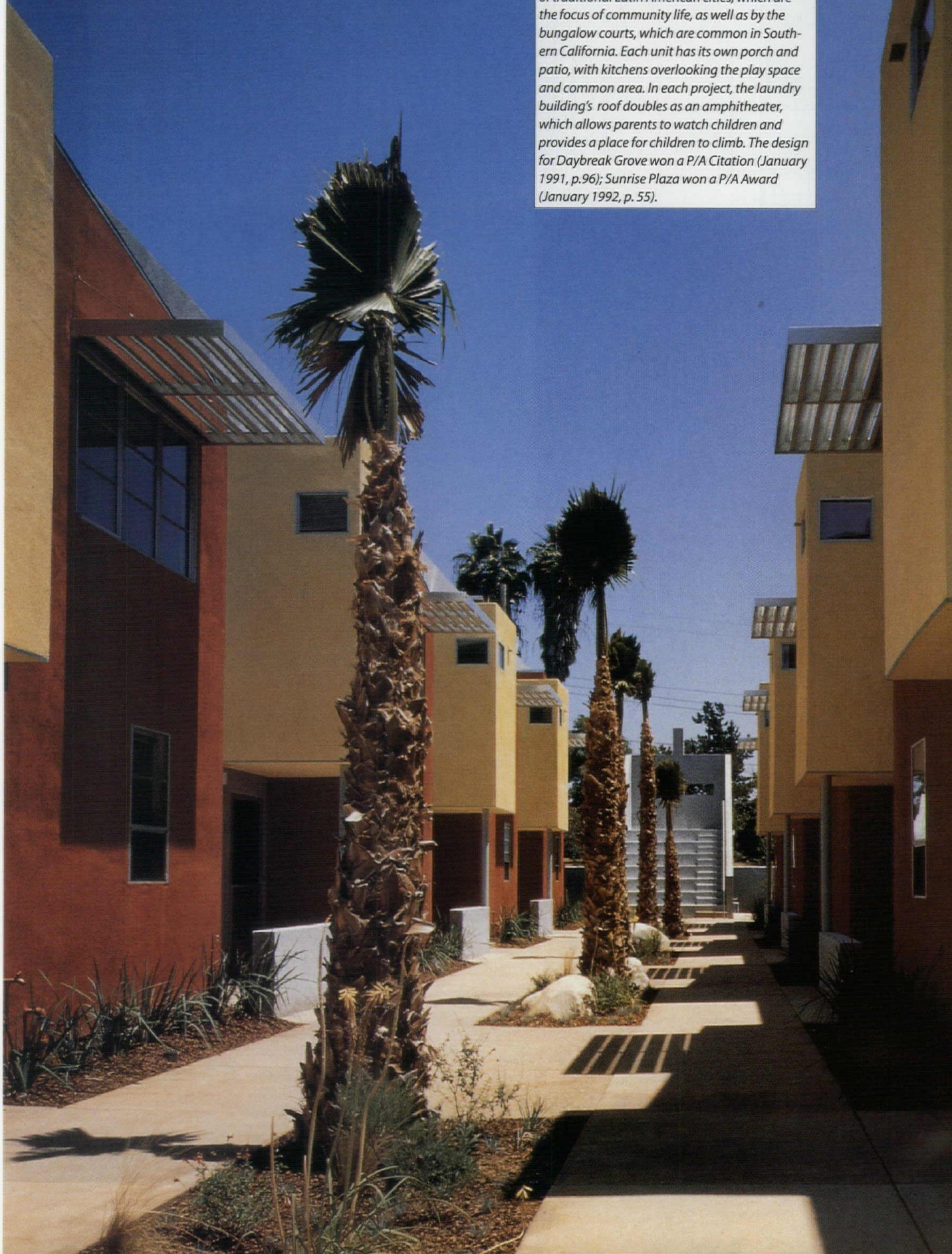
Creation of Community

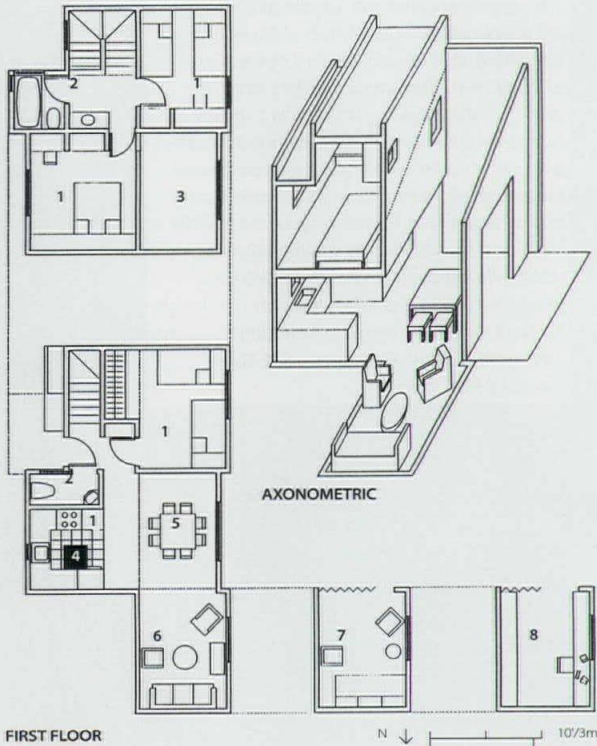
Poor communities may look monolithic from the outside, but they are in fact highly fragmented, with broken families and ruptured neighborhoods. This makes the creation of a community within a development all the more important.

Space for tenant meetings (usually near the laundry room and mailboxes) is provided in each building at Highbridge, and an active tenant association exists. The relative smallness of each building, typically 25 to 35 units, also encourages the creation of community among residents, as does the presence of six fenced private outdoor spaces used as play areas, community gardens, and picnic grounds.

In the Escondido projects, community occurs in more informal ways. Both sites have central courts, lined by porchlike spaces that are favorite places for residents to sit. The courts culminate in play yards and laundry structures whose roofs double as amphitheater seating. "We wanted to make a virtue of the laundry building," says architect Christine Killory, "creating a place for kids to climb and for people to watch the 'urban theater' of the courtyard spaces." (The lenders were nervous about the stepped seating, reports Rowland, for liability reasons. "We've had no problems with it," she says, "but we had to put on more railings than we planned.") Evidence of the community that has formed, adds Rowland, are the many informal daycare arrangements among residents. "The design, with its shared backyards, supports this," she says. *(continued on page 53)*

The central spaces at both Daybreak Grove (facing page) and Sunrise Place (below) were influenced, says Christine Killory, by the plazas of traditional Latin American cities, which are the focus of community life, as well as by the bungalow courts, which are common in Southern California. Each unit has its own porch and patio, with kitchens overlooking the play space and common area. In each project, the laundry building's roof doubles as an amphitheater, which allows parents to watch children and provides a place for children to climb. The design for Daybreak Grove won a P/A Citation (January 1991, p.96); Sunrise Plaza won a P/A Award (January 1992, p. 55).

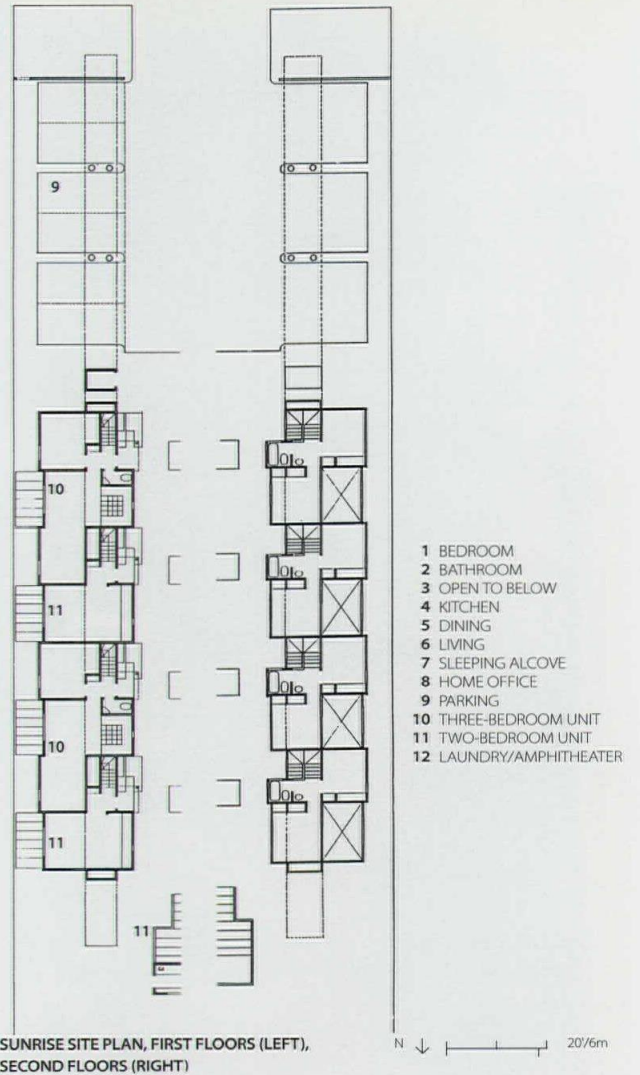




FIRST FLOOR

N ↓ 10/3m

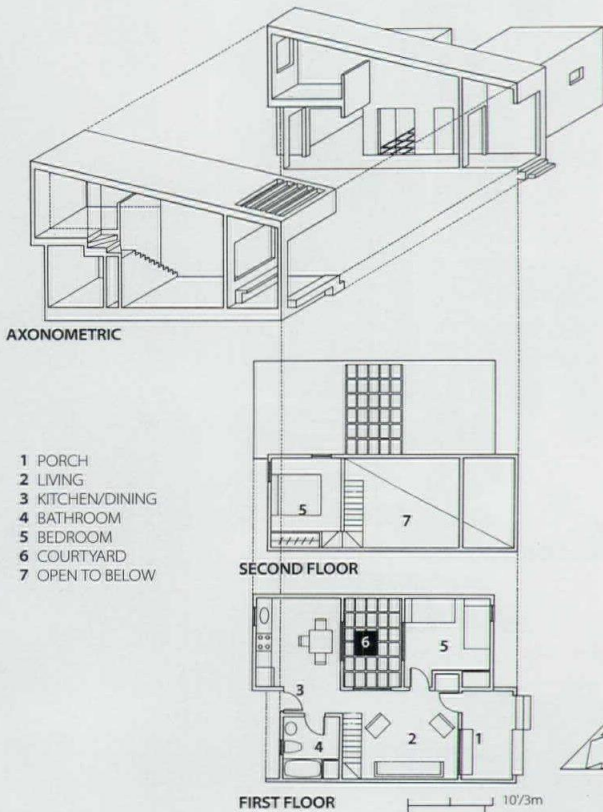
The units at Sunrise Place (above) face a narrow entry court, with parking at the front of the site and laundry and play space at the back. Some of the units have an extra space on the first floor that can be converted into another bedroom, more living space, or a home-office. At Daybreak Grove (below), the parking is at the back, with U-shaped housing enclosing a play space. The units feature a small open-air courtyard off the living room and kitchen for children to play in.



SUNRISE SITE PLAN, FIRST FLOORS (LEFT), SECOND FLOORS (RIGHT)

N ↓ 20/6m

- 1 BEDROOM
- 2 BATHROOM
- 3 OPEN TO BELOW
- 4 KITCHEN
- 5 DINING
- 6 LIVING
- 7 SLEEPING ALCOVE
- 8 HOME OFFICE
- 9 PARKING
- 10 THREE-BEDROOM UNIT
- 11 TWO-BEDROOM UNIT
- 12 LAUNDRY/AMPHITHEATER



AXONOMETRIC

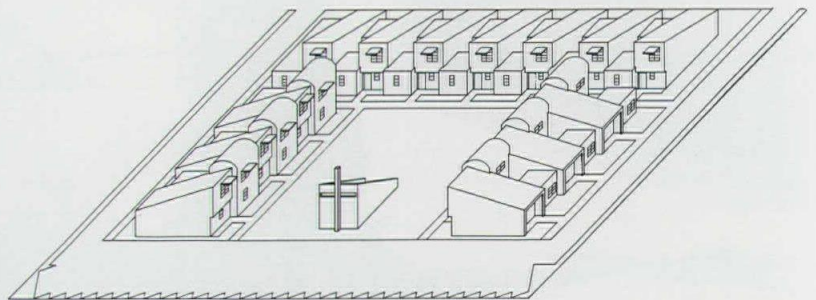
SECOND FLOOR

FIRST FLOOR

10/3m

- 1 PORCH
- 2 LIVING
- 3 KITCHEN/DINING
- 4 BATHROOM
- 5 BEDROOM
- 6 COURTYARD
- 7 OPEN TO BELOW

Project: Daybreak Grove and Sunrise Place, Escondido, California.
Architect: Davids Killory, San Diego.
Associated Architect: Studio E Architects, San Diego.
Client: The North County Housing Foundation.
Consultants: VTN Southwest, civil; Design Southwest, mechanical/electrical; ICG, soils; Leslie Ryan, landscape; David Pettigrew, construction manager.
Contractor: Hidden Valley Construction.



DAYBREAK GROVE, AXONOMETRIC



The rehabilitated Highbridge Heights buildings are dispersed among residential and retail properties owned by others.

Defensible Space

In *Defensible Space*, Oscar Newman made a distinction between creating “perceived zones of territorial influence” and providing “surveillance opportunities for residents.” (see Editorial, p. 9) Fences and gates, on one hand, and tenant surveillance, on the other, are not mutually exclusive, but they tend to characterize different ways of making defensible space in high- and low-density housing.

In high-density housing, such as Highbridge, tenants cannot survey entrances or corridors. Accordingly, guards, fences, locked gates, and intercoms become an essential part of the security of these buildings and obvious warning signs to potential intruders. The playgrounds, despite their gates and fences, are too far from most units to be observed and so require volunteer guards.

In lower-density projects, such as Daybreak Grove and Sunrise Place, direct surveillance is a primary means of security. Instead of fences and gates, there are low walls separating semiprivate porches from the semipublic courts and parking areas. The walls demarcate the layers of community space that must be crossed to arrive at an individual unit and, at the same time, allow residents to view their children and cars from their kitchens and porches.

The Advantage of Small Scale

Low-income housing developments are often seen as undesirable, lowering the value of adjacent properties and leading to the decline of neighborhoods. But that is not necessarily so. There is evidence that it is not the income level of the residents that matters so much as the concentration of people that makes some projects unmanageable.

The Highbridge project shows how to accommodate a lot of apartments without concentration: rather than clearing blocks of land and building new housing blocks, as might have been done in the 1950s and 1960s, the architects rehabilitated existing structures scattered over a several-block area of the Bronx. This avoided the stigma often associated with low-income projects and prevented too many families from being in any one place, even though, says Elizabeth Muskat of Castro-Blanco, Piscioneri & Associates, “the number of units, because of the rehabilitation, was about 30 percent higher than would have been allowed with new construction.” The development, adds Watson, “has helped turn the neighborhood around; there has been an infusion of people into the community, helping the retail owners and encouraging the upgrading of privately owned housing in the area.”

Being low-keyed was a plus in the Escondido projects for different reasons. “We had the usual community opposition,” says Rowland, “with 100 neighbors signing a petition against it.” In overcoming that opposition, she adds, the projects’ small scale “was the best thing going for them.” Where small scale doesn’t help is in the red tape. “It takes the same amount of time, and is just as complicated, to do 20 or 200 units of housing,” observes Rowland, “which, when you consider that projects with fewer units generally work better, reveals a real conflict in our public policy.”

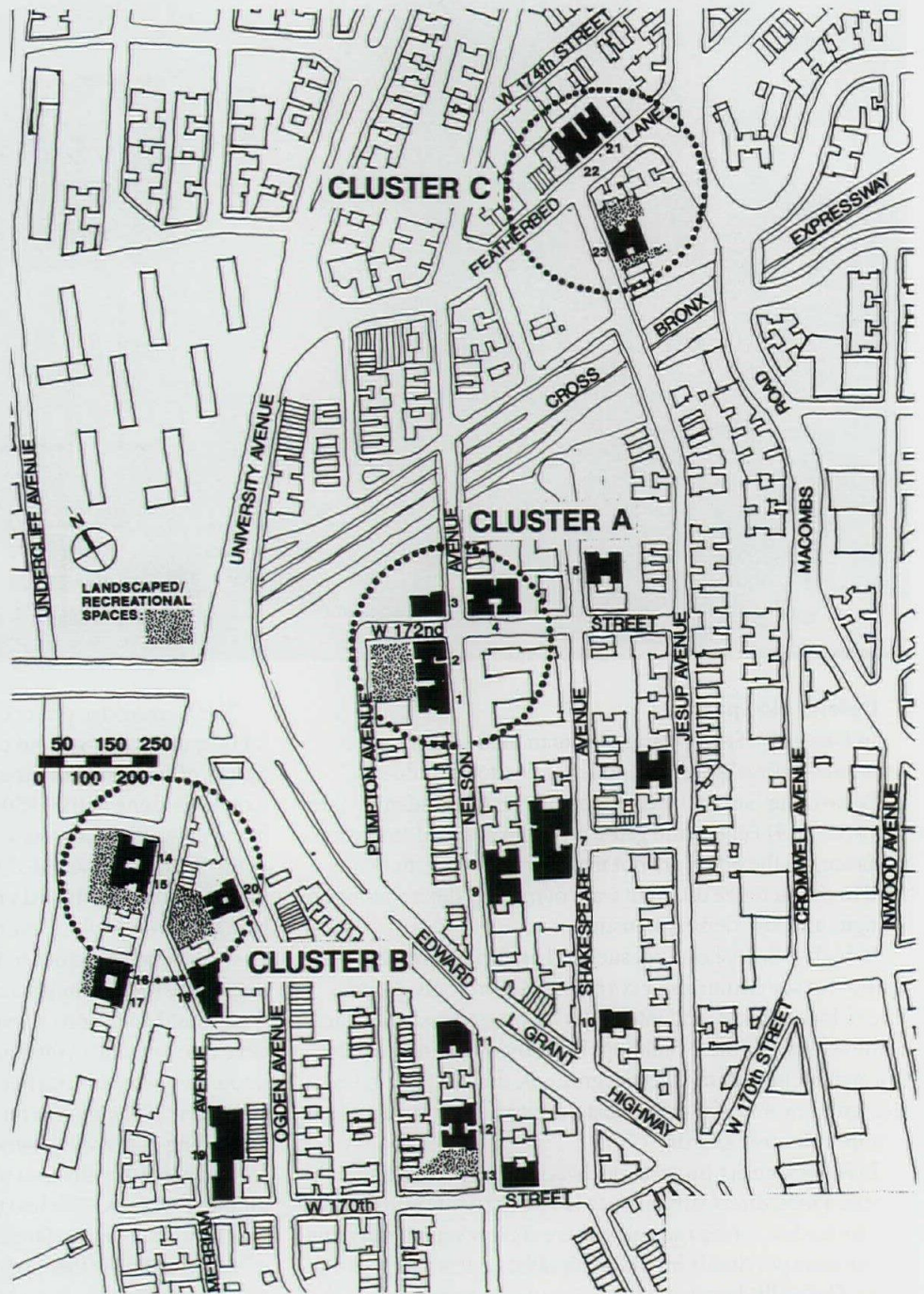
Diversity and Flexibility of Units

A characteristic of impoverished families is their great variety, with children, parents, grandparents, friends, and other relatives sometimes inhabiting the same housing unit in different combinations at different times. That demands

Putting Together These Projects

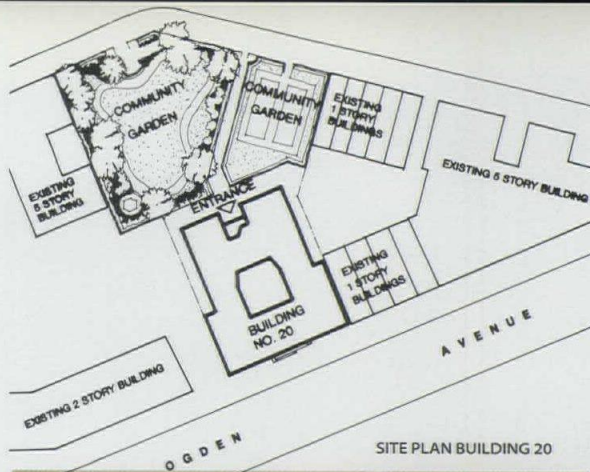
Every affordable housing project is different, and yet almost every one offers some lessons. Such is the case in these two projects. The 23 buildings at Highbridge were abandoned and acquired by New York City through foreclosure in the 1970s and 1980s. The city developed several programs to rehabilitate these buildings, including a vacant cluster program. In the mid-1980s, the city put out a Request for Proposals (RFP) to non profits to develop these 23 structures under its cluster program, and Catholic Charities was granted the development rights. The Housing Development Institute of the Archdiocese of New York developed the project with city funding, using a traditional design/bid process after a construction management process used by the city in previous housing rehabilitation had been problematic. (To keep costs down, the architects broke the project into separate bid packages so that smaller contractors could go after the job.) Upon completion, the 23 buildings were transferred to the Highbridge Community Housing Development Fund Corporation, a separate corporation set up by the Archdiocese to own and manage the project.

The Escondido projects followed a similarly complicated path. One of the projects stands on a site that was owned by the city's former mayor, who was involved in social service work and who made the land available for use as non-profit affordable housing. The North County Housing Foundation became the developer and, needing drawings and models to help sell the project to the financial backers and the community, turned to Davids Killory, who provided schematic design services *pro bono*. It took NCHF nearly four years to put together the financing and approvals for the project – unfortunately a fairly typical time frame for such housing, since no one group has enough money anymore. When design development finally began, Davids Killory entered into a standard contract for the remaining work on both Daybreak Grove and Sunrise Place. A management company now operates both developments.

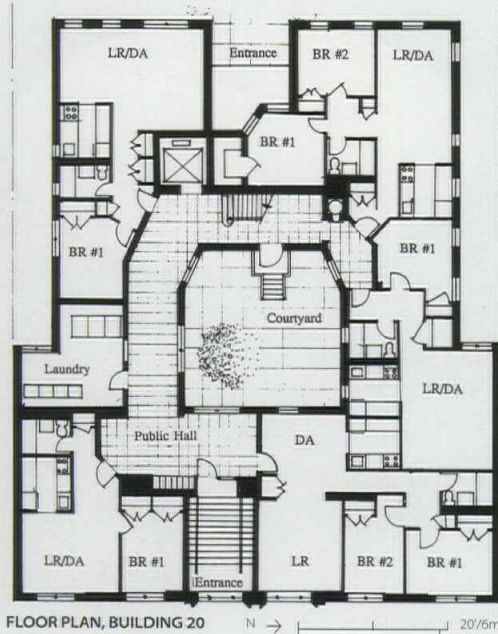


Highbridge Heights' 23 buildings, although scattered over an area of several blocks, are in three clusters that contain fenced open space and social services for tenants. The rehabilitation of these structures has encouraged neighboring landlords to do the same with their properties.

Project: Highbridge Heights Unity Apartments.
Architect: Castro-Blanco, Piscioneri & Associates, New York (Robert Piscioneri, principal-in-charge; Elizabeth Muskat, project manager; Karl Smith, project architect; Vito Mutolo, senior associate; Joe Castro, job captain).
Client: Catholic Charities, Archdiocese of New York.
Consultants: Robert Silman, structural; Abraham Joselow, MEP; Miceli, Kulick, Williams, landscape.
Contractors: Galaxy/United General; Voodoo Contracting; Harwin Group; Zollo Concrete.



Fenced-in community gardens and playgrounds (site plan, left) were inserted into vacant lots next to the rehabilitated buildings. Laundry rooms and mailboxes were located near entrances to encourage tenant interaction (plan, below). The quality of interior finishes (below left) is quite high.



apartments that are large and flexible, which can work against making the units affordable.

At Highbridge, the size of units was the major problem, since city guidelines, according to Muskat, called for 30 percent to be studios and one-bedrooms and only 10 percent to be three-bedrooms. "A study was done to convince the city that we could house more people by increasing the number of three-bedroom units and decreasing the studios," says Muskat. "The city eventually came around to our view." The flexibility of units stems mainly from their varied plans, responding to the diverse conditions of the project's 23 buildings. Also, about 70 percent of the units are accessible, and 30 percent are reserved for homeless families.

At Sunrise Place, flexibility in the units is achieved with a downstairs living room that can be used as a bedroom, or even as a home office. "The innovation in this housing," notes René Davids, "is in how the space is used, not in how it is built."

The Livability of Units

For all the attention that has been paid to the problems of low-income housing, much of it has focused on urban design and public space issues, and relatively little on the units themselves. And yet it is the livability of their apartments that affects residents most directly.

At Highbridge, the emphasis was on the quality of interior finishes, which is unusually high for housing such as this: oak flooring, solid oak kitchen cabinets, ceramic tile bathrooms. "We did life-cycle costing to show that these finishes are less expensive in the long run," says Muskat, "because they are easier to maintain." If Muskat has qualms about the units, it is

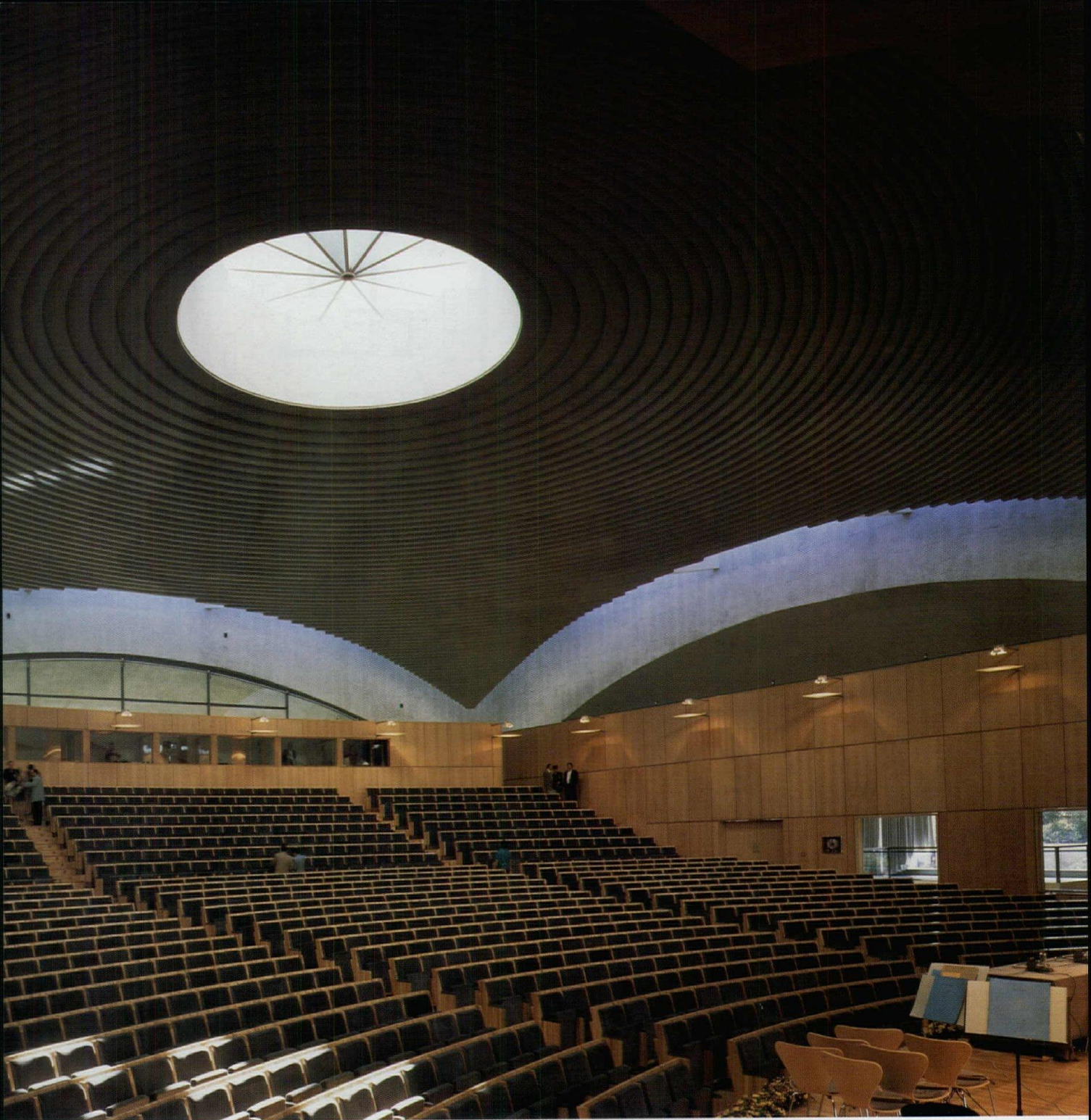
the small size of many of the bedrooms and closets, the former having to follow the city's guidelines. Still, says Carol Watson, "many tenants are coming from much more crowded conditions, so I haven't heard them complain about bedroom sizes. What they talk about are the kitchens and bathrooms," she adds, "which they seem to love."

Storage space, both interior and exterior, is also an issue in the Escondido projects. "We could have used more," admits Rowland, "although it has the advantage of discouraging residents from keeping too much stuff." The real innovation in the livability of the apartments occurs at Daybreak Grove, where a small interior courtyard, is accessible via sliding doors from both the kitchen and living room. It provides a safe place for small children to play and brings light and air to the center of the unit. "People love that feature," says Rowland. "It is heavily used by children and it makes the units seem bigger."

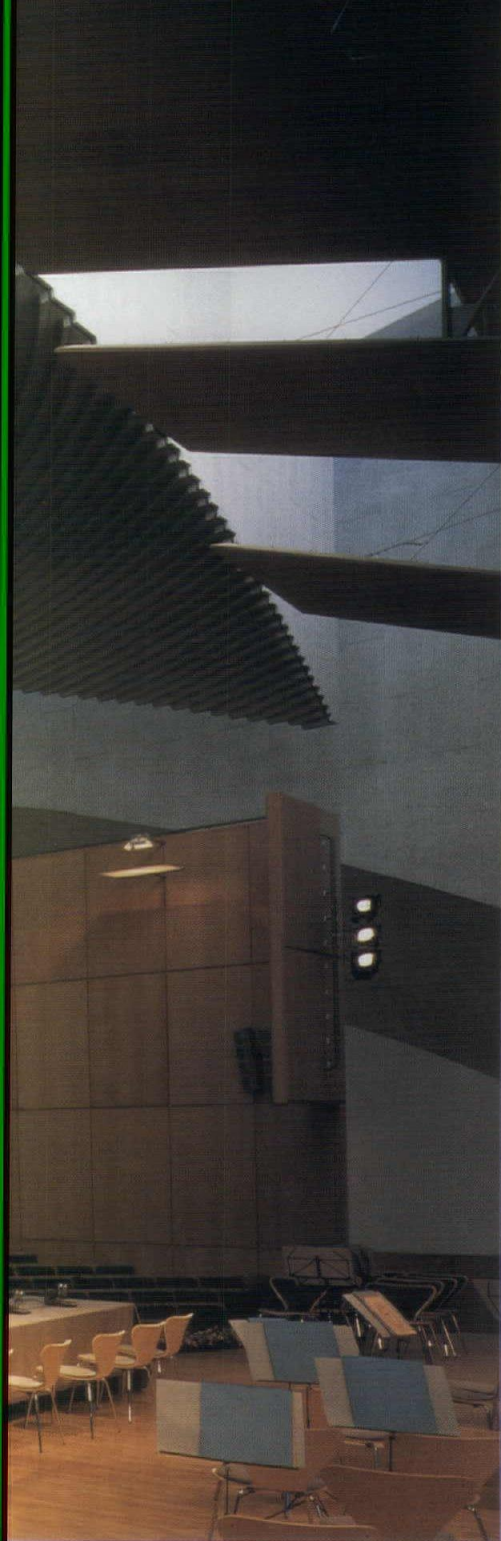
Successes and Failures

These two developments succeed where many in previous decades have failed, providing comfort and security for people who have had little of either. And because of the way these and many other similar projects have been designed and are being managed, there is hope that such housing in the future may not end up abused, burned out, and abandoned.

But it is hard to take too much comfort in this work because of the conditions that demand it in the first place – the existence of a permanent underclass, of homeless families and crime-ridden neighborhoods. Until that is addressed, no amount of successful housing can compensate for our larger failures. □



THE SUBSTANCE OF



Hideo Suzuki

In two recent buildings Juan Navarro Baldeweg, a Madrid architect, shows how luminosity can create the essential civic space. by Philip Arcidi

“A building ought to be like a sponge.” Juan Navarro Baldeweg’s simile seems at odds with the buildings he designs – stark Platonic forms, their detailing as simple as their geometry. But form is merely a device for this Spanish architect. He continues, “The sponge is important because it can hold water; the sponge itself is secondary. The importance of a building is the way it channels light and indicates the force of gravity, rather than the building itself.” Navarro Baldeweg doesn’t want his buildings to call attention to themselves; his focus is on something more elusive. He wrote: “We devote ourselves to the manufacture of things. But my attention is directed above all to the complementary space that surrounds them, enfolds them, supports them, and serves as their foundation.” (Lotus #73, p. 111)

It’s an ambitious agenda, one you’d never suspect when you see Navarro Baldeweg’s buildings from the outside. The two featured here, a Municipal Public Library in Madrid and the Convention Hall in Salamanca, are abstract masonry masses, sited, it seems, to distinguish themselves from the old urban fabric nearby. But when you go inside and stand beneath the suspended domes that crown each building, his intentions become clear. Each structure is a backdrop for daylight filtered through a skylighted roof. To stand in them is to be enclosed, yet connected to something larger than the space you occupy.

The reading room of the library, for instance, is spanned by a copper cone – an abstract dome – silhouetted by an umbra of daylight. This space is the essence of the building, a toplighted chamber nested in concentric cylinders. One reaches this sanctuary by outdoor stairs incised into the granite plinth or by interior stairs along the peripheral walls. (A lending library and a children’s room occupy the lower floors.) When you enter the reading room, you come upon a place with a preternatural luminosity, at once immaterial and substantial. It’s a compelling space, one I left with great reluctance. *(continued on next page)*

Juan Navarro Baldeweg’s Convention Hall in Salamanca (1) is spanned by a cast-in-place concrete vault, surrounded by a halo of daylight. The architect (2) is shown in his painting studio.



Juana de Azpuru Galería de arte

LIGHT

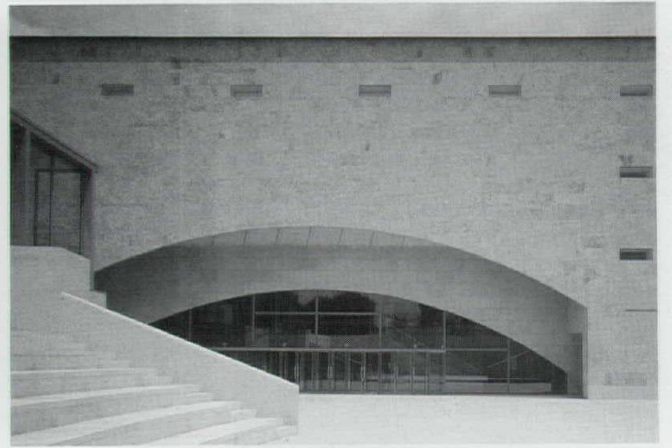


Photo: this page: Duccio Malagamba

3



4



5

The library's relation to its 19th-Century neighborhood is equally subtle. Clad in white marble, it complements a social services center across the street by Navarro Baldeweg, a commission awarded in a design competition eight years ago. He built the ensemble on twin granite plinths, implying that they are a backdrop for the Toledo Gate, which is now an island in a traffic rotary. To enhance the civic stature of the library and social services center, while evoking the walls that once flanked the Gate, Navarro Baldeweg positioned his trio of buildings as if the city walls had been rebuilt beneath them.

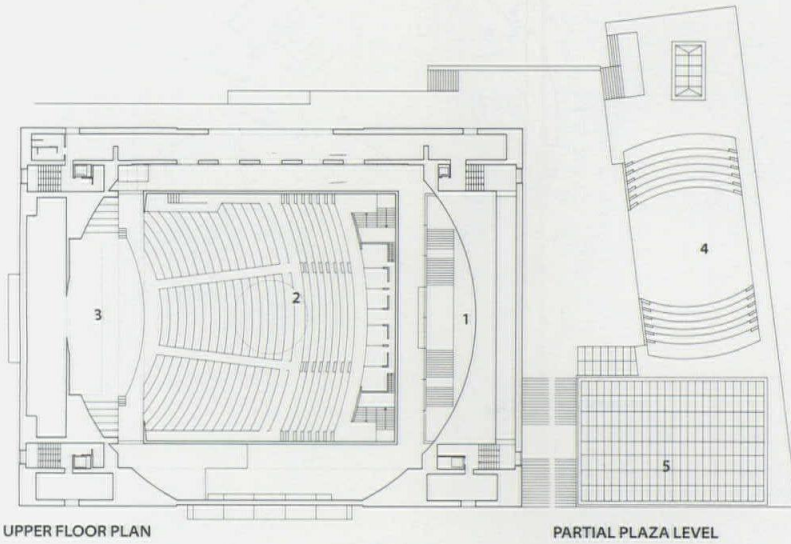
The Convention Hall, clad in Salamanca stone, is itself a plinth for the old city, a modern counterpart to the site's ancient defensive walls. The primary approach is a stairway between the Convention Hall and its smaller partner, an Exhibition Hall crowned by a fully glazed top floor. Navarro Baldeweg describes the procession to the auditorium as a passage through a Chinese box of nested buildings. As you cross the threshold, you go under a narrow skylight, a cue that the façade of dressed stone is a masonry skin. In the foyer, you see

the edge of the suspended dome beyond, as if the building were sliced open to reveal its section. The concave profile of the foyer ceiling extends that of the dome: a broad, curved section spans the paneled walls and glazing – a hybrid of a figurative floor plan and Modern ideas of universal space.

From Research to Building

Navarro Baldeweg began both buildings in the mid-1980s; they follow his Hydraulics Museum in Murcia Spain (P/A, May, 1990, p. 106) and years of work focused on painting and art installations. He studied engraving before architecture, earning his professional degree from the School of Architecture in Madrid in 1965. After receiving a doctorate there in 1969 and a grant for study abroad the following year, he served as a visiting professor at MIT's Center for Advanced Visual Studies from 1971 to 1975. During these years, he explored the ways we frame, and are framed by, our environment. His architectural practice picked up in the mid-1980s, when he submitted a variety of proposals for suspended

Commenting on the Salamanca Convention Hall and its adjacent exhibition hall, Navarro Baldeweg has written: "The new building ... extends the mass of the old city and provides it with a new path and gate in the form of a propylaeum (3). On one side of this pedestrian path we placed the grand rooms of the convention center (5), which we counterbalanced on the other side with a small trabeated construction that caps a gallery (4). The path is thus animated by archetypes that unfold as one moves along it." Arched openings in the larger volume allow glimpses of the vast baldachino hovering above the hall inside (from *Perspecta 27: The Yale Architectural Journal*, Rizzoli, 1992).



UPPER FLOOR PLAN

PARTIAL PLAZA LEVEL

Project: Castile and León Convention and Exhibition Center, Salamanca, Spain.

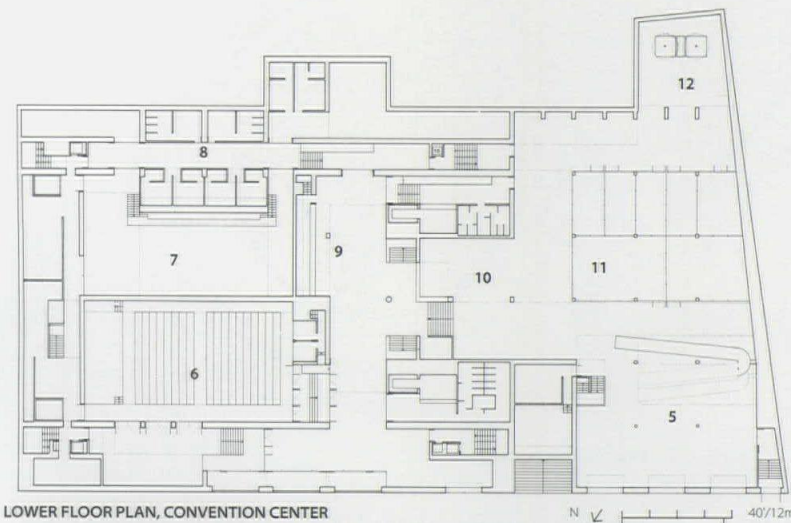
Architects: Juan Navarro Baldeweg (Fernando Antón Cabornero, J. Serna Garrido, Pau Soler Serratos, J.M. Mercé Hospital, Franz Bucher, L. Enseñat Benlliure, C. Barreiro Sorrivas, design team).

Client: Ayuntamiento de Salamanca.

Structural Engineer: Junio Martines Calzón.

General Contractor: Teconsa. Construction

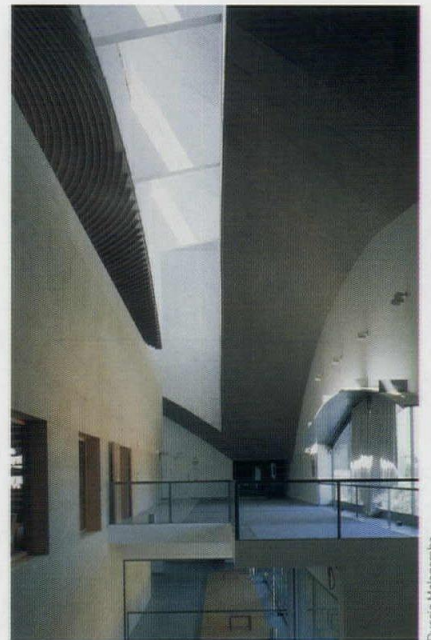
Schedule: competition, 1985; completion, 1992.



LOWER FLOOR PLAN, CONVENTION CENTER

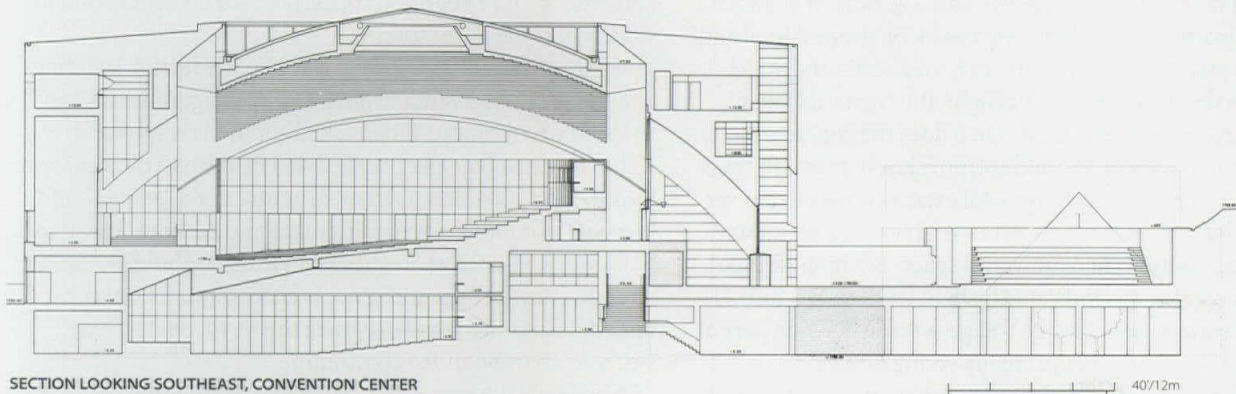
N 40/12m

- | | |
|----------------------|------------------|
| 1 LOBBY | 7 REHEARSAL ROOM |
| 2 MAIN HALL | 8 DRESSING ROOMS |
| 3 STAGE | 9 CAFETERIA |
| 4 OUTDOOR AUDITORIUM | 10 LOUNGE |
| 5 EXHIBITION HALL | 11 CLASSROOMS |
| 6 400-SEAT HALL | 12 ATRIUM |



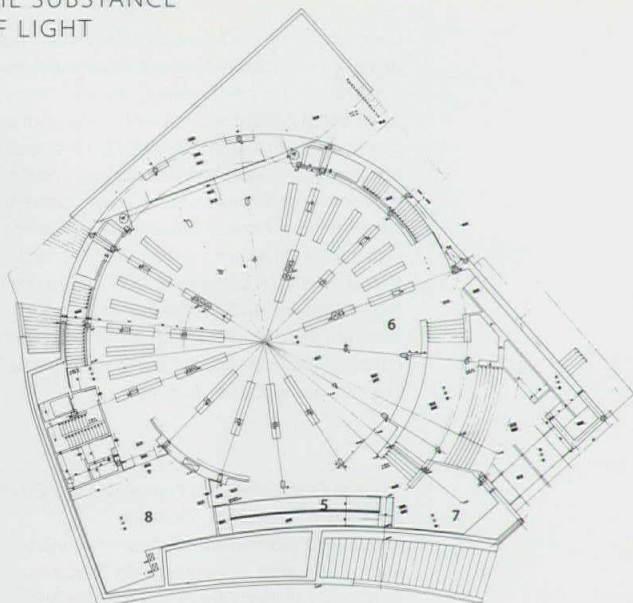
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Duccio Malagamba

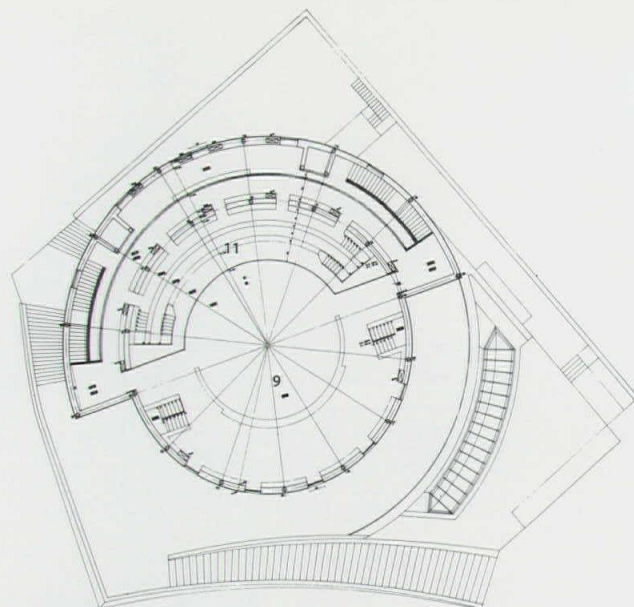


SECTION LOOKING SOUTHEAST, CONVENTION CENTER

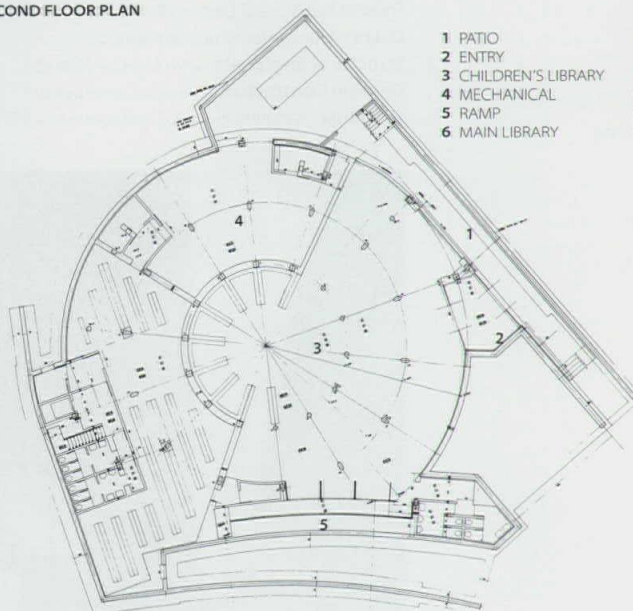
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SECOND FLOOR PLAN



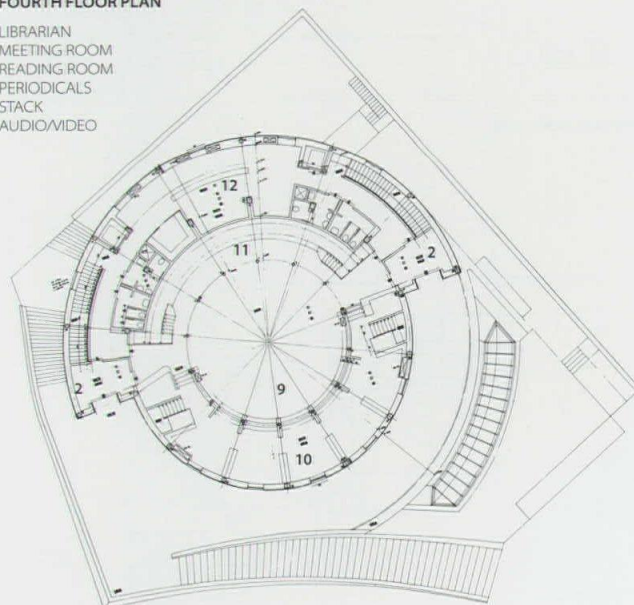
FOURTH FLOOR PLAN



LIBRARY, FIRST FLOOR PLAN

- 1 PATIO
- 2 ENTRY
- 3 CHILDREN'S LIBRARY
- 4 MECHANICAL
- 5 RAMP
- 6 MAIN LIBRARY

- 7 LIBRARIAN
- 8 MEETING ROOM
- 9 READING ROOM
- 10 PERIODICALS
- 11 STACK
- 12 AUDIO/VIDEO



THIRD FLOOR PLAN

N ↖ | 20/6m

domes to Spanish design competitions. When he won the commission for the Salamanca Convention Hall in 1985, Navarro Baldeweg finally had a chance to translate his ideas about perception into a monumental building.

The breadth of the dome makes it exhilarating and unsettling at once, a 90-foot-wide mass of concrete that seems suspended in midair. (The dome, two shells separated by radial concrete fins, was poured into formwork on ground level and lifted into place.) It is a structure of heroic scale, and at the same time simply a baffle for daylight, the "material" that spans the room more sublimely than does the concrete shell. Navarro Baldeweg says the auditorium's layered section translates Mies van der Rohe's horizontal expansiveness to the vertical axis. Like Mies, Navarro Baldeweg sees the interior and exterior as a continuum of universal space. But in these buildings, this continuity is indicated by light from above, not through dematerialized walls. You get a sense of being part of something beyond without actually seeing beyond.

I asked Navarro Baldeweg if he compares his domes to

any precursors among our 2,000-year lineage of domed public buildings. He doesn't intend any direct connections, but abstracts the dome to its essentials, hoping we will find the space compelling in itself, without any traditional references. But no matter how abstract Navarro Baldeweg's domes appear to be, people will compare them with traditional antecedents. He needn't be concerned; the distinctions in his work will come to the fore.

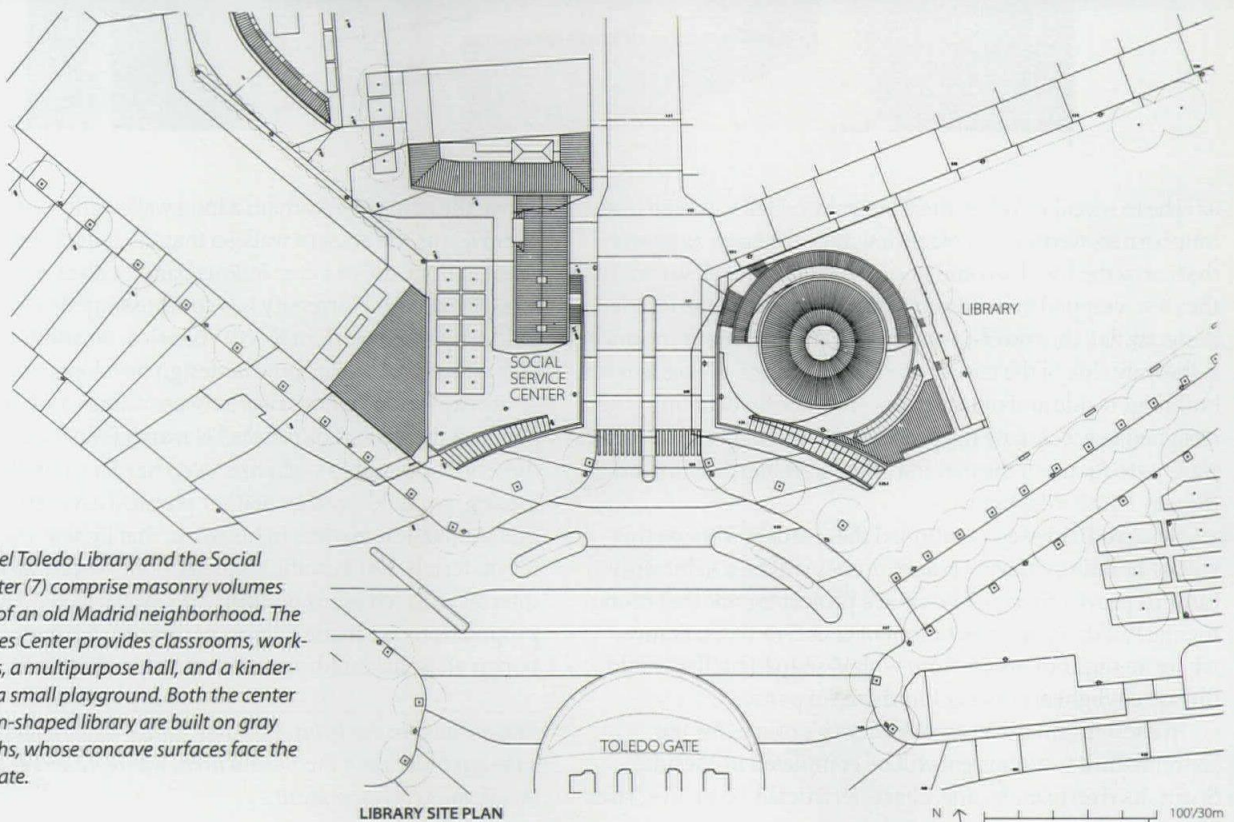
There are affinities between Navarro Baldeweg's buildings and those of Louis Kahn, who introduced figurative spaces to the Modern canon. When asked about his response to Kahn, Navarro Baldeweg replied that he relates volumes more loosely than did Kahn; neither structure nor a "served" and "service" paradigm governs his plans and sections. Navarro Baldeweg's Miesian analogues seem as strong as his Kahnian ones: the flow of light and space is channeled, yet not contained. When you stand in, you're sheltered, but feel that you're in an unbounded continuum.

Navarro Baldeweg is as likely to repress building structure



Hisako Suzuki

7



The Puerta del Toledo Library and the Social Services Center (7) comprise masonry volumes on the edge of an old Madrid neighborhood. The Social Services Center provides classrooms, workshops, clinics, a multipurpose hall, and a kindergarten with a small playground. Both the center and the drum-shaped library are built on gray granite plinths, whose concave surfaces face the old Toledo Gate.

LIBRARY SITE PLAN

N ↑ 100/30m



Hisao Suzuki

as is he to reveal it. When the Convention Hall was built, the four corners were cast in place first; they function as towers that carry the roof load and house the stairs and elevators. But they are wrapped in a masonry skin that renders the façade perfectly flat; the tower-to-tower arch over the main entrance is the only clue of the corner piers' significance. He flattens his buildings inside and out: surfaces are smooth; detailing is not designed to accentuate the process of construction. He doesn't want us to focus on the making of the building, but instead on the way it filters daylight.

Navarro Baldeweg mentioned that readers who see this pair of buildings may wonder if domes will be a habit with him. To prove otherwise he cited a project for another monumental building: an entertainment center in Blois, France, where an outdoor auditorium with V-shaped baffles would diffuse daylight across a column-free expanse.

In a few months, Navarro Baldeweg's offices for the Extremadura Government will be completed in Mérida, Spain. Its riverfront façade, characteristically reductive, rises

above the ruins of a Roman; a long wall reinforced concrete beam spans the ancient wall, so that the four-floor façade will seem to float above a continuous band of glass at ground level. Princeton University has commissioned Navarro Baldeweg's first work in North America, an addition to the Department of Music, now in design development.

By exploring "what exists between things and what exists between things and ourselves," Navarro Baldeweg is taking a direction difficult to verbalize, even harder to predict. In theory, we could say that neither physical execution nor formal innovation matters in his work, that light and space are his materials. But I doubt his ideas alone would sustain our interest as much as his buildings do. Navarro Baldeweg's propositions are made to be experienced, not just discussed. Fortunately, his buildings are as strong as his ideas. □

The author, formerly an Associate Editor at P/A, has started a design practice in the Boston area, where he serves as the magazine's correspondent.



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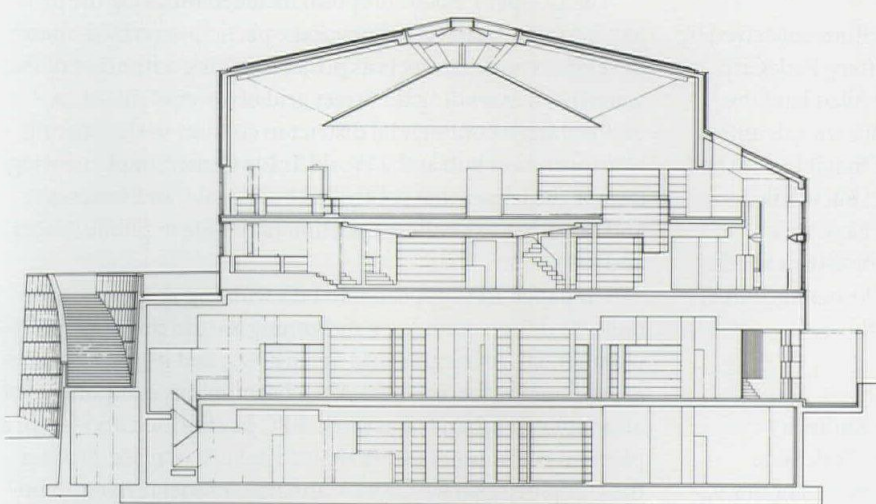
The library entrance (8) leads to a skylighted foyer on the edge of the four-story drum. The street-level lending room is set above a lower-level children's room, with its own entrance. To reach the double-height reading room upstairs, one climbs twin staircases along the drum edge (10). At the top, reference stacks and offices insulate the circular reading room and its copper crown (9). This space feels like a sanctuary: the circular enclosing walls seems massive, yet dematerialized by an umbra of sunlight.



10

Project: Puerta de Toledo Library, Madrid
Architects: Juan Navarro Baldeweg (Fernando Antón Caronero, Joaquin Lizasoain Urcola, Franz Bucher, José M. Gutierrez de Churtichaga, Enrique Pujana Bambó, Pau Soler Serratosa, Lucrecia Enseñat Benlliure, Rolf Brülisauer, Eduardo Gonzalez Velayos, Pablo Diaz Bucero, design team).
Client: Community of Madrid.
Structural Engineer: Julio Martinez Calzón.
General Contractor: Fersa, Orive S.A.
Construction Schedule: Design competition, 1982; Social Services Center completed 1987; Library completed 1992.

Photos this page: Hisao Suzuki



SECTION THROUGH LIBRARY, LOOKING WEST



Critique **Simulated City**

Praised as a landmark of new urbanism in the 1980s, Battery Park City turns out to be a sterile imitation of its New York model. by Abby Bussel

I've lived in Manhattan for ten years. It can be a hellish place, but its vitality never fails to inspire. The passage of time, the accretions of use are tangible everywhere you look, though some of the patina is actually just an accumulation of dirt and soot.

At Battery Park City, the buildings and grounds are alarmingly clean. With the exception of the undeveloped parcels of land that sit behind chain link fencing waiting for the real estate market to revive, nothing unsightly exists here. It's all so perfect, it doesn't seem real. The shiny Post-Modern architecture is antiseptic; the regimented zoning of its parks, commercial, retail, and residential areas discourages a free-flowing street life.

Based on a master plan and design guidelines conceived by Alexander Cooper and Stanton Eckstut, Battery Park City (BPC) was designed to reproduce on newly filled land the look and feel of established New York neighborhoods and to reorient a piece of the city to the waterfront that it had turned its back on decades ago. The idea was noble, but it failed to keep in mind the great diversity that makes New York a dynamic, sometimes chaotic city, where people turn streets and parking lots into shopping bazaars, buildings and street light stanchions into billboards, parks into theaters.

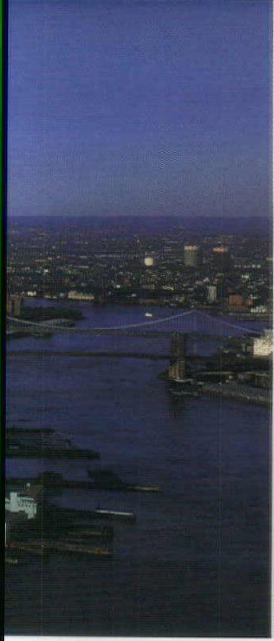
The New Urbanism, Circa 1979

Commissioned by the Battery Park City Authority (BPCA), a public agency created by the New York State Legislature in 1968 to administer the development of this 92-

acre landfill site, Cooper Eckstut's 1979 master plan and guidelines for a mixed-use "neighborhood" on the edge of lower Manhattan marked a return to traditional urbanism. Based on the street and the square, the BPC plan was hailed as a pivotal juncture in American city planning, receiving extensive media coverage and in 1984 a P/A Award citation (P/A, Jan. 1984, p. 136). Reversing the tide of superblock urbanism and reviving faith in publicly sponsored projects, BPC stood as an international example of good city making, arriving nearly 20 years after Jane Jacobs's condemnation of inhumanly scaled Utopian visions in *The Death and Life of Great American Cities*.

The Cooper Eckstut proposal included breaking the project into small parcels to encourage participation by as many developers and architects as possible; taking advantage of the waterfront; extending the street grid of lower Manhattan; establishing a commercial district to connect to the existing transportation hub at the World Trade Center; implementing design guidelines that controlled bulk, scale, and materials; and devoting a significant portion of the site to public spaces and parks.

On paper, BPC appeared to be a winning proposition. As built, its design guidelines and zoning are too prescriptive. Its commercial, residential, and retail areas, and its public spaces are competing forces, rather than harmonious components of an adaptable urban framework. BPC has the look and feel of a planned community rather than a vital urban place, lacking the complexity on which its Manhattan model thrives. In ret-



Stan Reis

Battery Park City sits on a landfill extension of lower Manhattan's Hudson River waterfront. The World Trade Center towers no longer rise sheer from the waterfront. Instead, Cesar Pelli's four-tower, 7-million-square-foot World Financial Center, developed by Olympia & York, visually reduces the twin behemoths to a more manageable size.



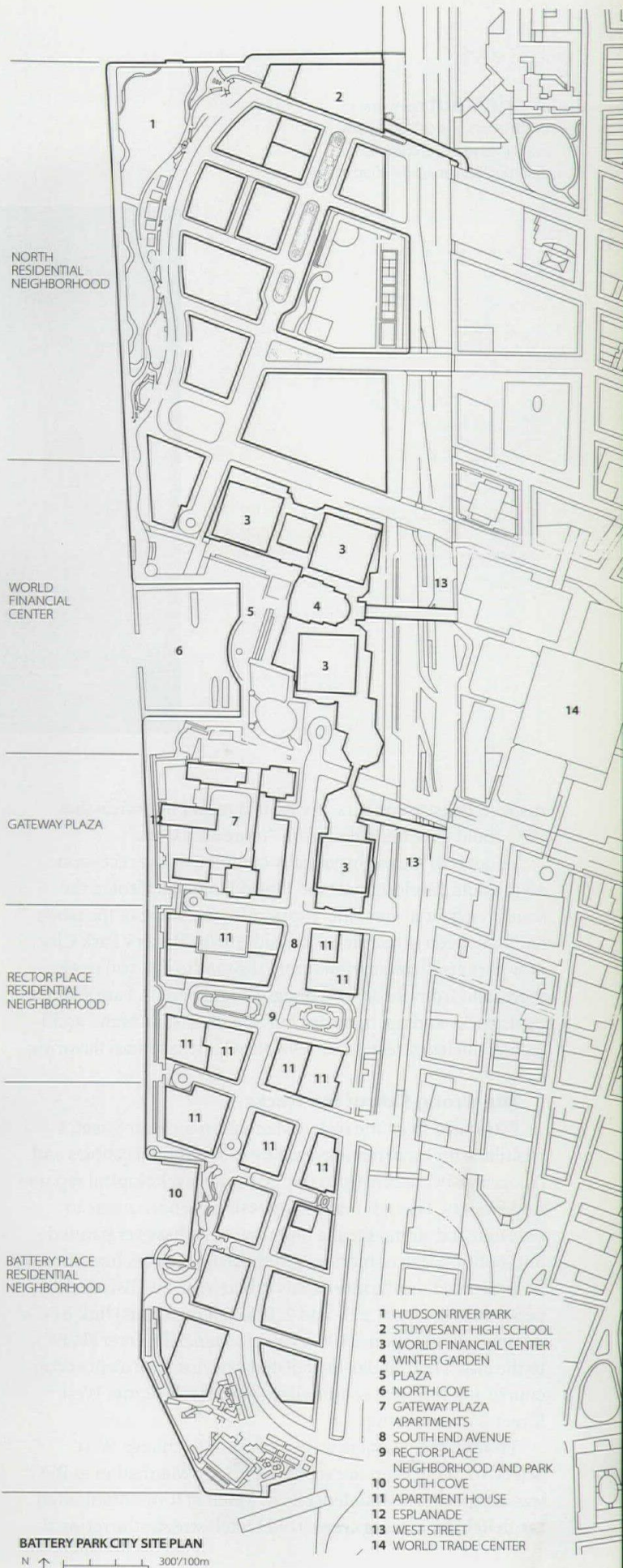
Abby Bussel

Isolated from the rest of Manhattan by West Street, an eight-lane highway, Battery Park City can be reached by foot (ignore the "Walk" signs, run) or through either of two enclosed bridges.



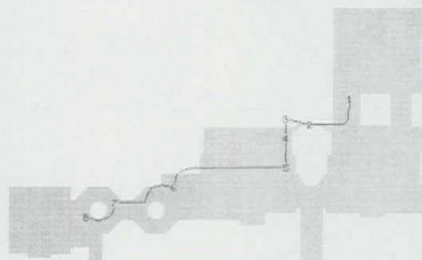
Abby Bussel

South Bridge connects World Financial Center tower one, occupied by Dow Jones Oppenheimer, to Liberty Street on the east side of West Street. The materials used for this bridge and its companion, North Bridge, just up the road, are industrial-strength to withstand heavy foot traffic, offering an inauspicious welcome into the high-polish WFC interiors.

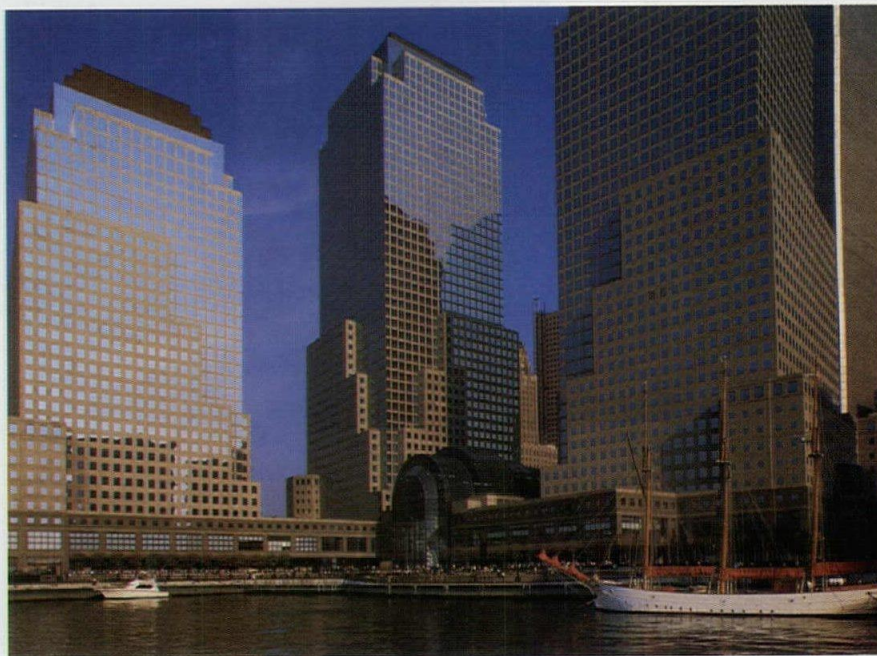


A print-out from one of the Winter Garden's Siteguide machines provides detailed directions on an undetailed map.

Directions to
1 World Financial Center



1. Follow the hallway to the Winter Garden.
2. Cross the Winter Garden and go up the escalator to the upper level.
3. Turn left and follow the Winter Garden balcony.
4. Follow the curve of the balcony past the Merrill Lynch entrance.
5. Turn right and go all the way to the end of the hall.
6. Go across the bridge to 1 World Financial Center.
7. Continue around the balcony toward the escalators.
8. You are in Gatehouse 1 of 1 World Financial Center.



© Peter Aaron/Esto

respect, Eckstut concurs, saying in a recent interview that BPC could have benefited from “more accidents.”

Though BPC is only partially completed (the recession stymied its development) the World Financial Center, the south residential area, the Esplanade, and some of the parks and have been in use since the mid-1980s. Battery Park City now garners mixed reviews from those who live and work there, and from those who designed and built it. I am enticed by its parks and open spaces, but appalled by its bland architecture, lifeless streets, and “Old New York” artificial flavoring.

The Wrong Side of the Tracks

Estranged from the rest of Manhattan by West Street, a multilane highway maneuvered by heavy-footed cabbies and truckers, BPC suffers from physical and psychological separation anxiety. Though many proposals have been made to redesign and submerge the highway, none has ever panned out; politics, lack of money, and shortsightedness have thus far prevented the closure of this urban incision. Two enclosed pedestrian bridges (200- and 220-foot-long spans) link BPC's commercial component, the World Financial Center (WFC), to the city. Their under-articulated exteriors and airport concourse interiors are as uninviting as the walk across West Street is intimidating.

Though the planners were powerless to change West Street, their decision to extend the grid of Manhattan to BPC was a logical, if misguided, effort. Much of lower Manhattan is a delightful mess of cranky old Dutch streets; the rational

Clad in reflective glass and thin granite, the wide-body towers of the World Financial Center, each with a series of setbacks to recall the style of an

earlier era, are oppressive bulks on this narrow site. North Cove is an exclusive harbor, restricted to use by private yachts.

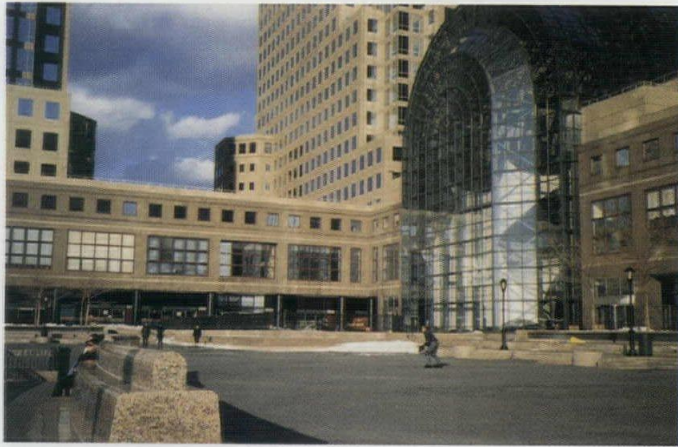
street grid of BPC's residential neighborhood, for example, could have benefited from some irregularity, more curved or cranked streets.

BPC's physical separation from the rest of Manhattan is heightened by its reputation as a haven for the high-profile tenants of the World Financial Center (American Express and Merrill Lynch, for example) and the high-paid Wall Streeter residents, who can afford the pricey housing stock (rents start at \$1,500 for a one-bedroom apartment and at \$2,000 for a two-bedroom; one-bedrooms can be bought from a starting point of \$180,000 and two-bedrooms from \$250,000). I saw only one homeless person walking the streets of BPC during frequent visits over a three-week period; in contrast, a well-staffed private security force seems to be omnipresent.

BPC's reputation is accurate to a degree. Yet, it is not without precedent in other parts of the city, where economic segregation is blatant. To redress this publicly sponsored private development, BPCA is required to redirect millions of dollars from its rental revenues to finance low and moderate income housing elsewhere in the city; to date, 1,557 residential units and related facilities have been constructed or rehabilitated in Manhattan and the Bronx. Some subsidized, moderate-income housing does exist “on site,” though it is not discussed in any of the come-live-here literature.

It's Not the Crystal Palace

One of the few public spaces in BPC that has managed to generate vitality is Cesar Pelli's Winter Garden, a 120-foot-tall



The plaza, a two-level public space formed by North Cove and the World Financial Center complex, was a collaborative effort by Cesar Pelli, artists Siah Armajani and Scott Burton, and landscape architect M. Paul Friedberg. The plaza's wrought iron fence (incorporating quotations from Walt Whitman and Frank O'Hara), curved marble benches, and integrated art furniture are part of a BPC-wide public art program.



The Winter Garden, with its shiny marble floor and enormous palm trees (in New York?), is the hub of an urban shopping mall at the World Financial Center. The long, thin tree trunks accentuate both the height of this airy interior and the hefty profile of its black, double-barrel columns.



Restaurants and bars, separated by nothing more than a series of Post-Modern brass-tube canopies, line **the Food Court**. Exhibitions are often mounted in the mezzanine-level balcony.



Unightly spaces are rare at Battery Park City, but the street that leads from North Cove to Hudson River Park is currently a no-man's land. This type of unrefined interstitial space adds a bit of scruffiness to the polished veneer of BPC.

Photos: Abby Bussell

South Cove is the least formal and most playful of BPC's parks. Its rocky landscaping, simple wood fence, blue lanterns, bridges, and observation tower (an ode to the Statue of Liberty, visible in the harbor) are the result of a collaboration between Stanton Eckstut, artist Mary Miss, and landscape architect Susan Child.



© Peter Mauers/Esto

The Esplanade, a 1.2-mile tree-lined pedestrian street along the Hudson River runs nearly without interruption from South Cove through Hudson River Park. The granite sea wall, the hexagonal pavers, the Victorian-style lamp-posts, and the benches of wood and cast iron are modeled after those of New York's great parks and waterfront promenades. James Stewart Polshek & Partners' Liberty house, forms one gatepost to the Rector Place neighborhood.



© Peter Mauers/Esto

interior public plaza off which streets of shops and restaurants flow around the WFC's corporate lobbies. Set into the mid-section of the WFC's four glass-and-granite-clad towers (P/A, July 1985, p. 79) and oriented to the plaza around the North Cove, the Winter Garden is refreshingly light and airy, if architecturally rather crude. The barrel vault's metalwork is heavy, its double-barrel columns massive and unadorned; the squeaky-clean marble floors and stairs are as ostentatious as they come.

It has become a favorite spot for wedding parties to take pictures, to people-watch from its tiered grand stair, and to attend a well-organized array of free public events. Everything from classical music to calypso concerts, from squash tournaments to orchid festivals has been held here. And people love it, though it is seemingly visited by more tourists than New Yorkers; everyone's got a camera. The Winter Garden is basically a shopping mall; it is lined with shops and restaurants that dribble into the corridors leading to the corporate lobbies. There is also a food court located in a double-height lobby space between two of the towers.

Circulation here is problematic. The interplay between corporate lobbies is uncomfortable, as security guards peer out at Winter Garden visitors. Bathrooms are hidden in odd locations. To alleviate disorientation, signs and maps are everywhere; in case that isn't enough, Siteguide touch-screen monitors, enclosed in horsey, freestanding cabinets, are placed throughout the complex; they provide shop and restaurant listings, a brief tour by Cesar Pelli, and a print-out

mechanism that offers hard-copy directions to destinations in the WFC and BPC at-large.

When asked if they enjoy working in the WFC, a couple of office workers I spoke with discussed the enormous advantage of public spaces on the water's edge; one American Express employee told of lunch meetings and conferences in the park, while the other, who is unimpressed with the WFC's high-powered image, had a more escapist attraction to the river view: "If you squint," he said looking toward New Jersey, "it looks like Venice."

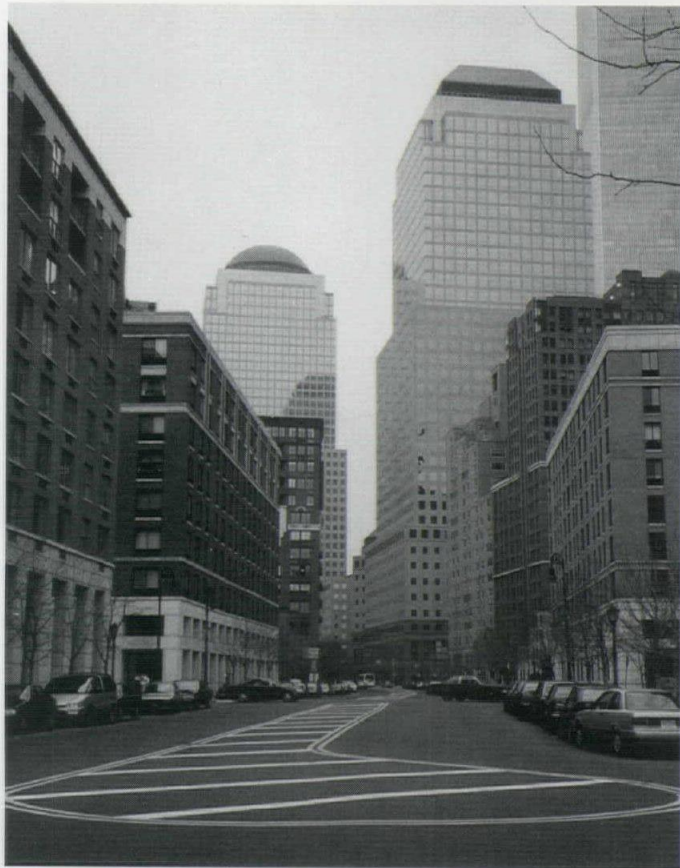
Living on the Edge of Town

The guidelines for the south residential area called for background buildings with masonry bases, brick cladding, beltcourses, and articulated tops; *(continued on page 90)*

Project: Battery Park City, New York.

Masterplan and Design Guidelines: Alexander Cooper (Cooper, Robertson & Partners, New York) and Stanton Eckstut (Ehrenkrantz & Eckstut Associates, New York).

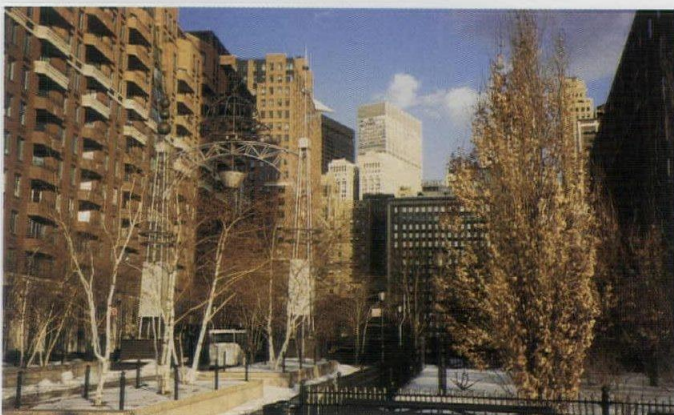
Participating Architects: Cesar Pelli & Associates; Adamson Associates; Haines Lundberg Waehler; Charles Moore with Rothzeit, Kaiserman Thomson & Bee; Davis, Brody & Associates; James Stewart Polshek & Partners; Conklin Rossant; Mitchell/Giurgola; Gruzen Samton Steinglass; Bond Ryder James; Ulrich Franzen/The Vilkas Group; Alexander Cooper & Associates; Ehrenkrantz, Eckstut & Whitelaw and Costas Kondylis.



The WFC towers loom over **BPC's residential neighborhood.** The main artery through the residential area, South End Avenue (left), is empty much of the time. Its characterless face is due, in part, to its nearly invisible retail component. Hidden under arcades (above) along the west side of South End Avenue, a grocery store, a video shop, a dry cleaner, a beauty salon, and a daycare center are among the establishments you can't see in these photos.

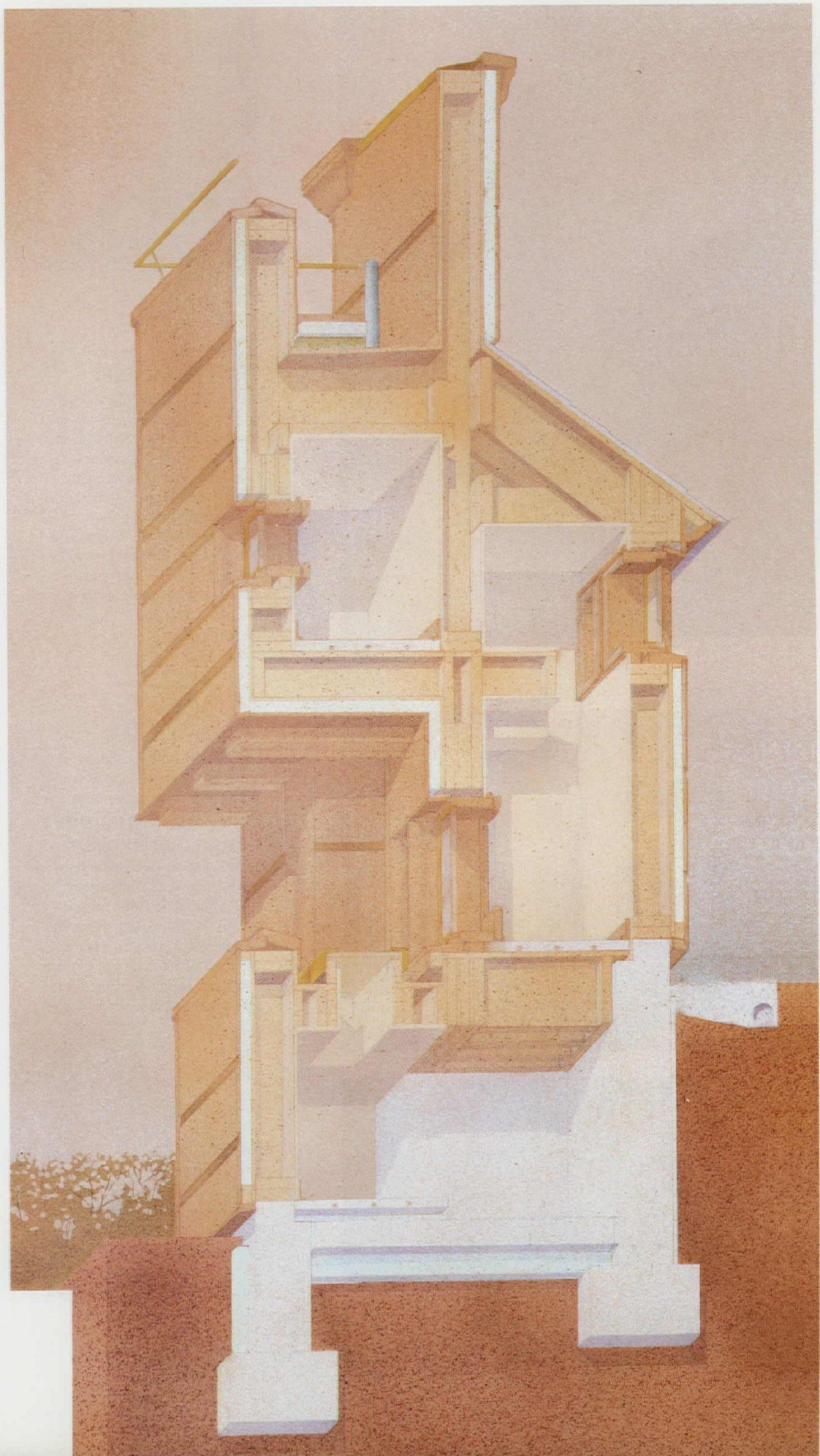


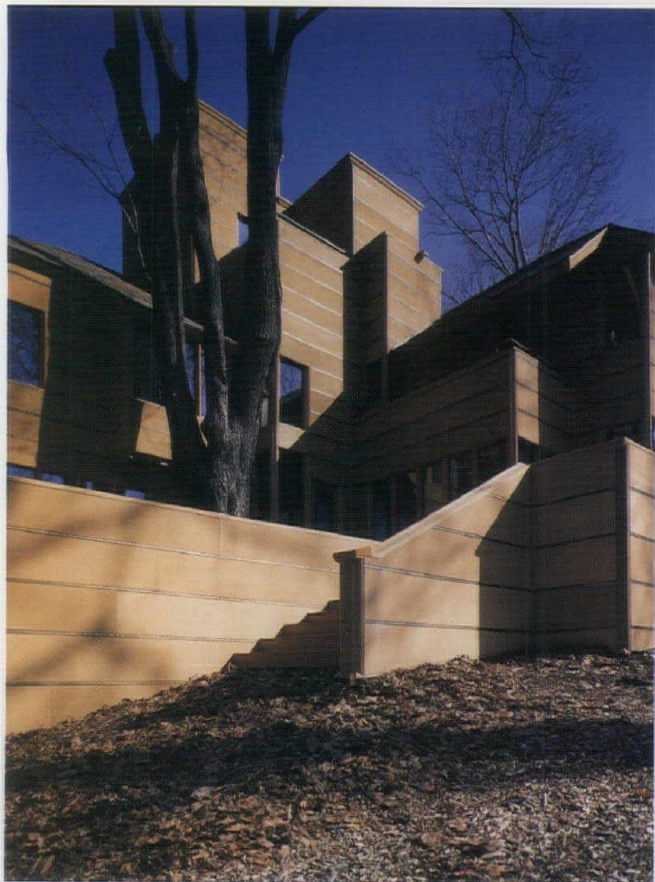
Cheesy, appliqué detailing and under-articulated windows are remarkably common here, an unfortunate result of **prescriptive design guidelines.** The pair of benches (seen behind the metal fence) is a permanent art installation titled "Sitting/Stance" by artist Richard Artschwager; the oversized, awkwardly proportioned benches, refreshingly spare in form and material, do not, attempt to replicate the past.



Photos: Abby Bussel

Rector Place holds the most coherent assemblage of residential buildings. Its focal point, Rector Park, is lovely, but too nice to walk on. The quirky elements of artist R.M. Fischer's Rector Gate arch add a bit of levity to this otherwise serious site. BPC's golf-cart-armed security patrol is omnipresent.





A conversation with architect Jonathan Levi can move from the specifics of a window detail to a sweeping vision of urbanism in seconds, with no lapses in logic. Levi, who practices in Brookline, Massachusetts, and teaches a housing studio at Harvard, has spent the past three years designing two houses that have both shaped and reflected his interest in an urban, domestic architecture of wood. Along the way, he has developed a window and a cladding system that he hopes will become new manufactured products.

Levi celebrates the role of wood in America's architectural history, calling it "the primeval forest, the ship, the log cabin with which we recognize ourselves." Yet he also finds conventional wood construction to be at odds with the goal of making an architecture that connotes durability and permanence.

"Wood is an inherently ephemeral material," he says. "It suggests rusticity, encampment, a certain ad hoc occupation of place. The nail holes, seams, and joints never go away and remind us of the fragility of attachment. But a wood city could be built which would be hard and durable."

The Advantages of Going Higher

Levi's prescriptions for such a city begin with the shape of the house. He maintains that adding a third story to the American house would result in "a huge revolution in planning," allowing greater density. It would also reduce the house's footprint, reduce roofing and foundation costs, and provide better privacy for family members. He can speak firsthand

Rethinking the Wood House

Jonathan Levi is developing his own products, methods, and details in his attempt to refine our domestic architecture of wood.

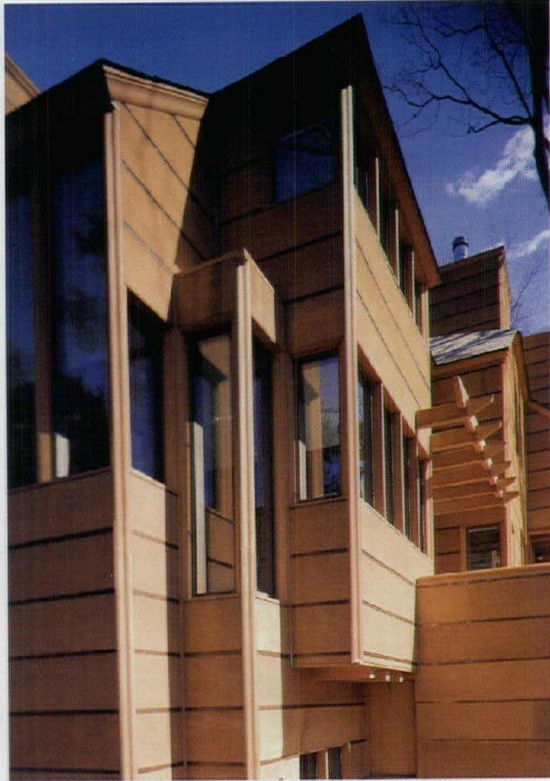
by Mark Alden Branch

about these benefits, having moved his four children into a six-level house he designed on a steeply sloping lot in Brookline.

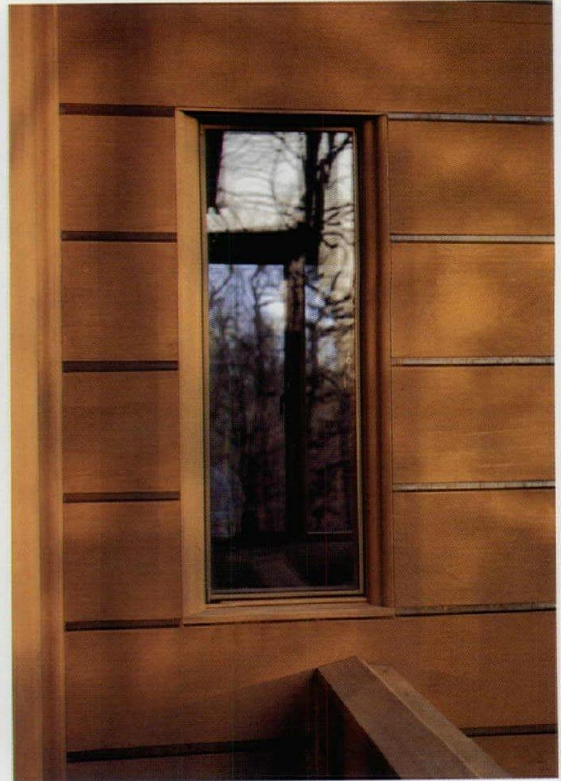
Such houses would not be for everyone – they would be inappropriate for even the mildly disabled – but Levi maintains that solutions can be found to the other problems traditionally associated with tall houses. Levi managed to get his own house approved by building officials by including sprinklers and sheathing the house with $\frac{5}{8}$ -inch gypsum board. Each of these provisions gained him an extra floor over the three otherwise permitted. (His bottom floor is considered a basement.) Levi says that sprinklers added only 2 percent to the cost of the house, and that the cost could be lower still if codes for residential sprinklers were loosened slightly.

Levi addressed two other problems of tall houses, the hollowness of floors and the lack of acoustical privacy, by laying a $1\frac{1}{2}$ -inch concrete slab – with radiant heating pipes in it – over the plywood floor decking. These solid, warm floors, with just a wax finish over the concrete, do much to make his own house feel comfortable and permanent. "The house mothers us," Levi says. "The kids are on the floor all the time." The cost of the slab – \$2 per square foot – is less than linoleum.

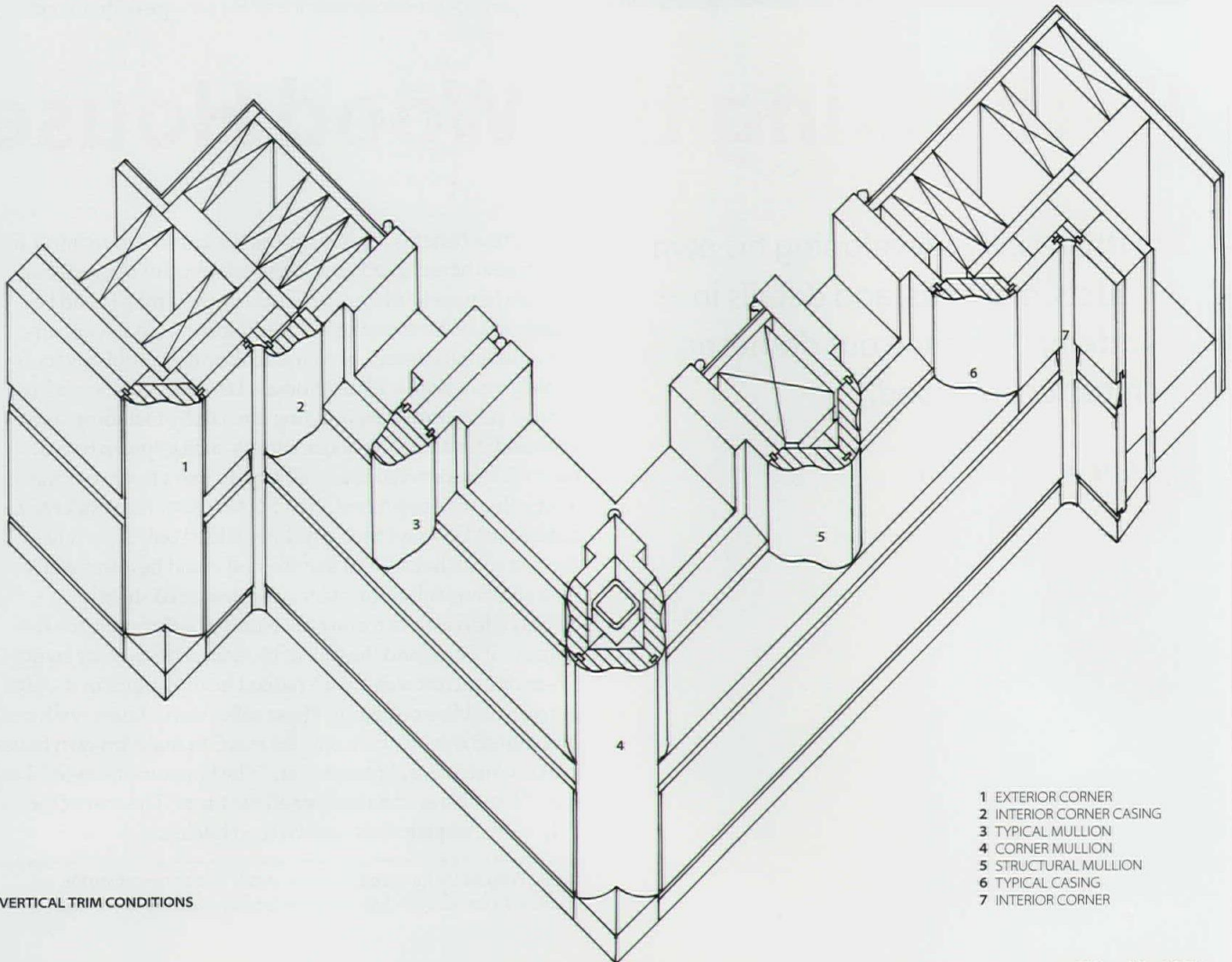
The drawing on the facing page is a composite section describing the construction of both the Gadick House (above) and Levi's own house.



CORNER DETAILS, GADICKE HOUSE



WINDOW, GADICKE HOUSE

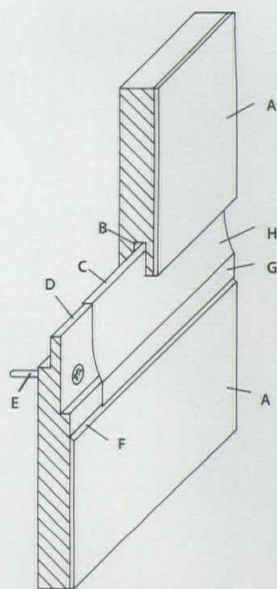


VERTICAL TRIM CONDITIONS

A "City of Wood"

Aside from making houses more vertical, much of Levi's attention is drawn to refining wood construction. Like many architects, he is frustrated with the quality of products and materials available. In describing the architecture of his "city of wood," he reveals both what he wants and what he is fighting: "Its uniform surfaces would suggest a concrete permanence, a potential order rather than a longing for isolation and reunion with the chaos of nature. Its masses would be carved in concept, not papery surfaces with 'piping' to cover the corners, but solid forms wrapped at the edges and capable of group formation into walls and streets. Close up, such walls, instead of dissolving into a riot of imperfections, would seem the same as from a distance - massive, quiet, dense."

Levi met with partial success in implementing these ideas in two previous residential projects (P/A, March 1992, p. 74). But he came to feel that he could not achieve his ends fully with conventional construction. "Modern architects foresaw techniques of industry as a new empowerment - a liberation," he says. "Instead they have become an imprisonment." Rather than retreating into expensive custom details, though, Levi would have architects demanding more of manufacturers and developing their own components for mass production.



PROTOTYPE SIDING

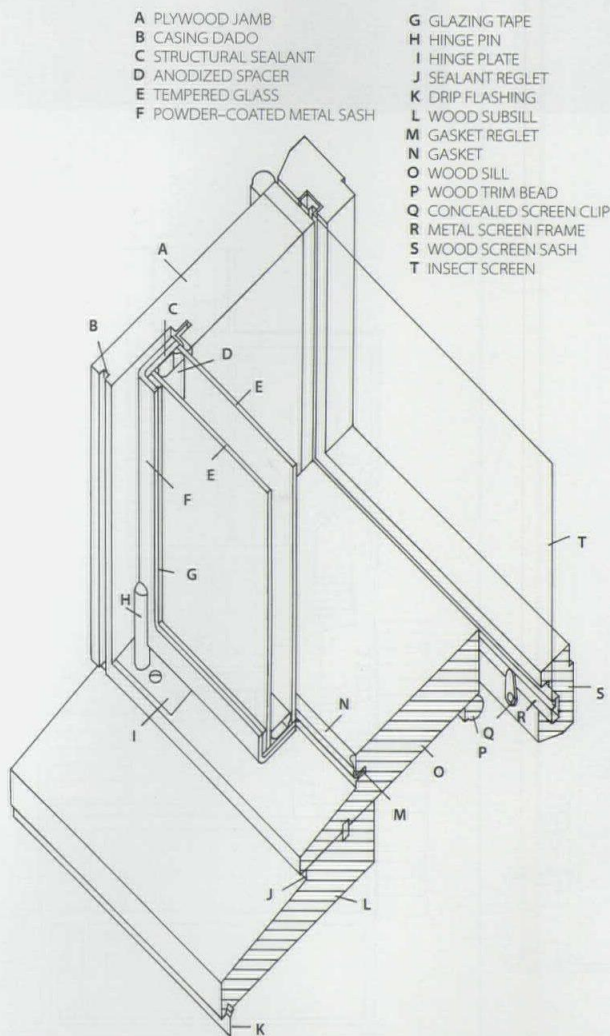
- A VENEER PLYWOOD BOARD
- B GROOVE
- C RESTRAINING LIP
- D TONGUE
- E CONCEALED SCREW FASTENER
- F BEVELED VENEER EDGE
- G FLASHING APRON
- H COMPRESSED BRONZE FLASHING

Two Innovative Details

When he received the commission to design a 3,300-square-foot Gadick House in suburban Chestnut Hill, Massachusetts, Levi convinced his client to invest in the development of a cladding system and a window design that he would also use on his own house. Both designs have worked well enough for Levi to pursue patents on them.

Levi's windows are a critique of the conventional sash, which he says was "originally needed to frame a single fragile pane and now made redundant by the stand-alone rigidity of the insulated glass panel." His solution takes advantage of that rigidity to create an elegantly simple, uncluttered opening: two panes of glass - with a simple steel edge to carry the hinge - coming into direct contact with a gasket applied to the wall (detail, left). The window, which swings open like a casement, is easily detachable from its hinges for cleaning. The jamb is a simple piece of plywood that, with a small bead, forms the finish trim. The windows - a total of 190 for the two houses - were built in Levi's garage by Harvard interns. Even as prototypes, the windows cost significantly less than conventional wood windows.

The 16-inch-wide plywood siding that Levi developed for the houses (detail, top left) deals with another problem that has vexed him: the search for a cleanly detailed wood cladding. In his earlier projects, he rejected clapboard, opting for cedar board siding nailed up horizontally, with corners either mitered or trimmed with a piece of quarter-round molding. Even there, though, he was frustrated by the visibility of nails and vertical joints. Plywood siding in 4 x 8 sheets seemed little better, requiring joints that result in the "piping" he deplors. His siding is "a kind of compromise between a board and a panel," with a width that strikes a balance between efficiency (of manufacture and installation) and aesthetics. The tongue-

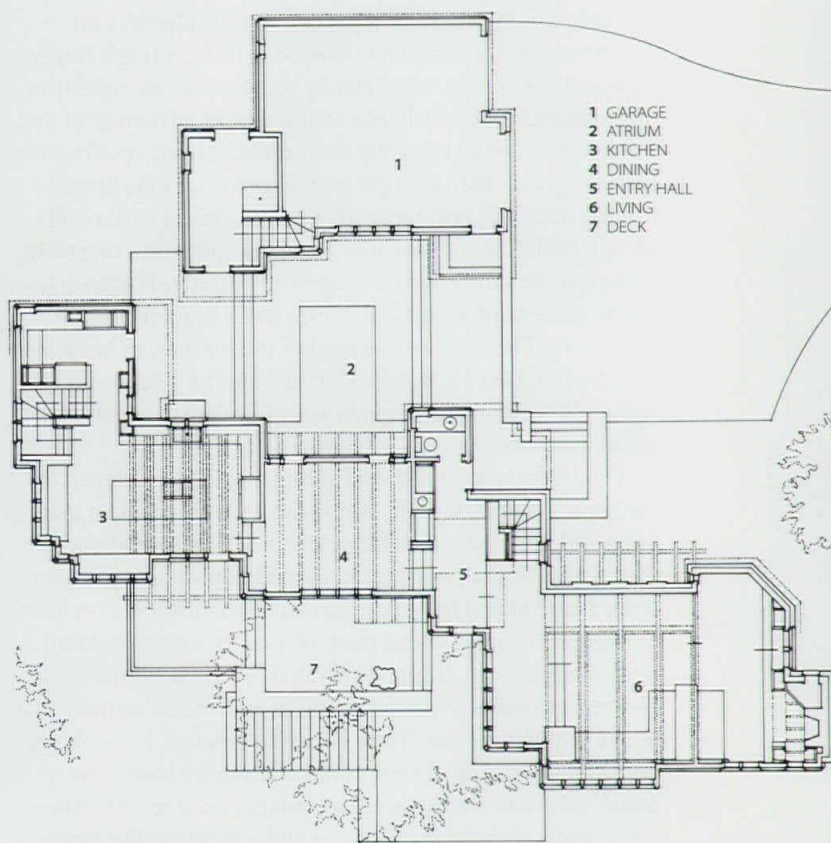
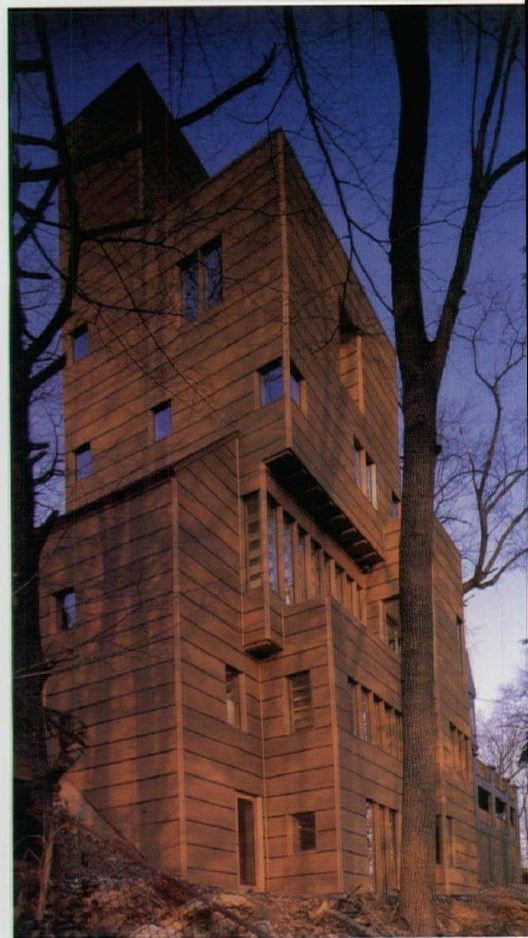
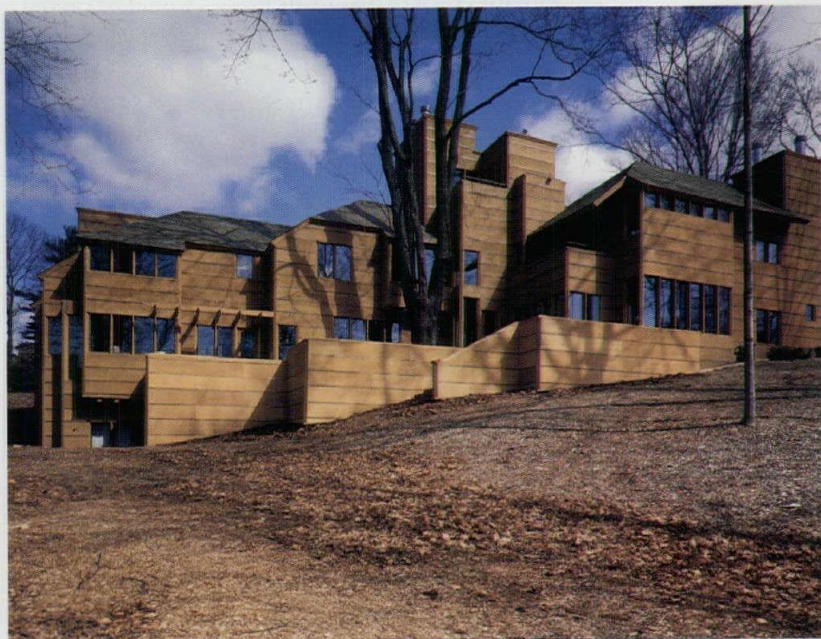


PROTOTYPE WINDOW

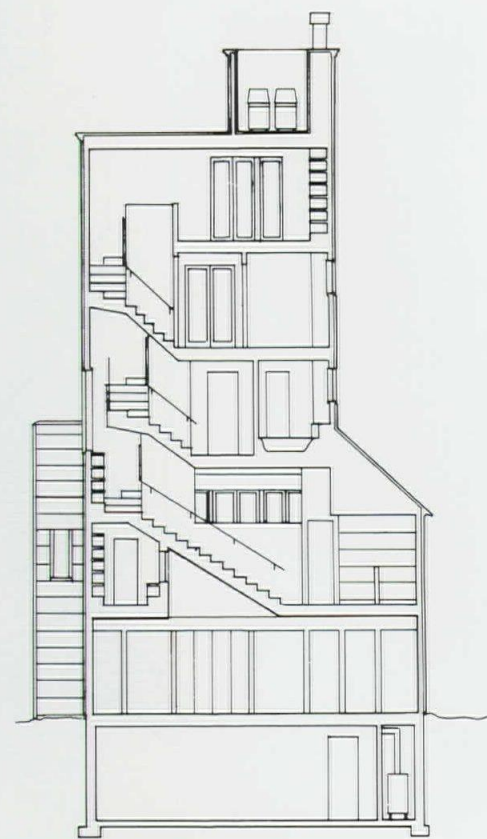
- A PLYWOOD JAMB
- B CASING DADO
- C STRUCTURAL SEALANT
- D ANODIZED SPACER
- E TEMPERED GLASS
- F POWDER-COATED METAL SASH
- G GLAZING TAPE
- H HINGE PIN
- I HINGE PLATE
- J SEALANT REGLET
- K DRIP FLASHING
- L WOOD SILL
- M GASKET REGLET
- N GASKET
- O WOOD SILL
- P WOOD TRIM BEAD
- Q CONCEALED SCREEN CLIP
- R METAL SCREEN FRAME
- S WOOD SCREEN SASH
- T INSECT SCREEN

RETHINKING THE WOOD HOUSE

Although the Gadick House in Chestnut Hill (below, seen from the southwest) shares many details and techniques with Levi's own house, its horizontal massing is vastly different (though it has a towerlike mass in the center). The open plan is connected by a single interior vista from the living room to the kitchen. The siding on the deck walls in the foreground is in 8-foot lengths rather than the 25-foot lengths Levi used elsewhere; vertical joints are thus visible.



- 1 GARAGE
- 2 ATRIUM
- 3 KITCHEN
- 4 DINING
- 5 ENTRY HALL
- 6 LIVING
- 7 DECK



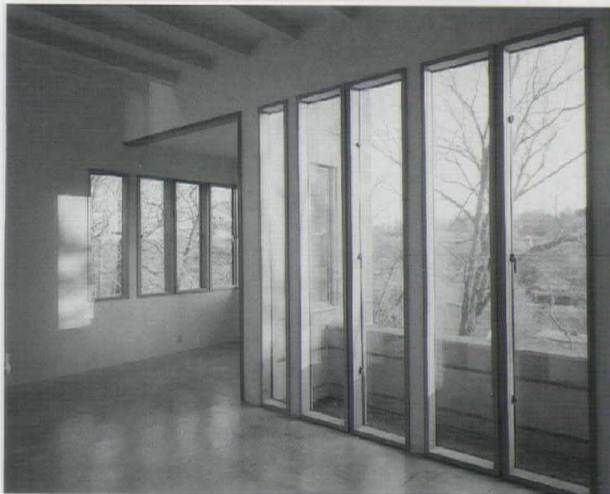
FIRST FLOOR PLAN, GADICK HOUSE

N ↑ 10/3m

SECTION A-A, LEVI HOUSE

10/3m

Levi's own house in Brookline (facing page right, seen from the west) is a remarkable six-story tower on a steeply sloping site. In addition to the floors shown below, the lowest level contains a guest suite, the highest a yet unfinished retreat. Inside (below), ganged windows capture sweeping views.



and-groove plywood boards are separated by a continuous bronze foil flashing. Levi found a manufacturer who could make the boards in 25-foot lengths, long enough to reach across an entire wall in either of the houses – thus eliminating vertical joints. Levi thought that the boards' length would be a labor-saving feature, but the opposite was true: it took three men to wrestle them into place. (He has also decided that the bronze flashing was troublesome and is not necessary.)

Making the Volume More Visible

Combined with the simple windows and with a corner molding detail (seen in various configurations, p. 72) that helps emphasize volume over plane, the siding makes for an ambiguous surface, one that Levi says "conceals its origins and therefore confounds its apparent future, becoming permanent in effect, like stone." This goal of permanence leads us back to Levi's attempt to reconcile the use of wood – and all its rustic associations – with an urban environment where masonry connotes durability. As Levi sees it, wood itself can suggest that permanence if it can acquire the "institutional persistence" of masonry – that is, if it is allowed to describe the building's form rather than the way it is put together.

Levi's pursuit of this goal doesn't stop with the details described thus far. In the Gadick house, which has pitched slate roofs in accordance with a neighborhood covenant, he instructed the roofers to line up the courses of slates well enough that no trim pieces were necessary to hide the joint between roof planes. The roof meets the wall in a surprisingly clean fashion, with a nearly invisible continuous quarter-inch gap for ventilation. (Rain drips off the roof into drains below grade.) The coursing of the siding, which determines the heights of openings, is meticulously lined up throughout each house. And the plumbing and mechanical stacks that can mar a roofscape are ganged in chimneylike masses.

Such niceties might seem merely fussy to some. Is Levi solving problems that no one else thinks are problems? He says that that argument is "like saying a 1972 Chevy wagon runs nicely. Twenty years ago, people didn't think anything was wrong with the cars we made, or they said you couldn't change the way they're made. Now we've got commercials with little chrome balls rolling down the joints of the car." Does an eighth of an inch tolerance matter much on a new car? Perhaps not in itself, but like Levi's details, it reflects an attitude about building that serves every design profession well: the idea that affordability and mass production can coexist with a demand for quality. □

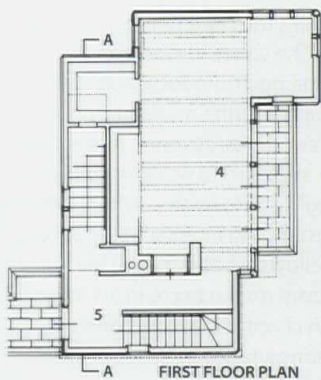
Projects: Levi House, Brookline, Massachusetts; Gadick House, Chestnut Hill, Massachusetts.

Architect: Jonathan Levi Architect, Brookline, Massachusetts (P. Davies, D. Kyle, staff).

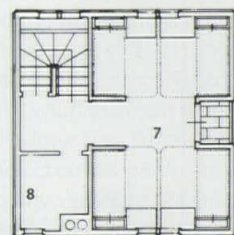
Consultants: Foley & Buhl Engineers, wind load design and beam calculations; Gregorian Engineers, beam calculations.

Construction Management: M. Awad, B. Voight.

Construction Research Assistance: R. Barnstone, L. Catlin.

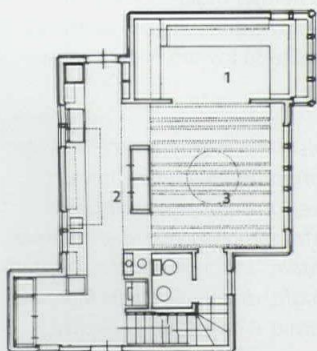


FIRST FLOOR PLAN

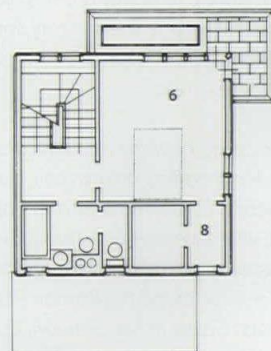


THIRD FLOOR PLAN

- | | |
|----------------|------------------|
| 1 SITTING ROOM | 5 ENTRY |
| 2 KITCHEN | 6 MASTER BEDROOM |
| 3 DINING | 7 DORMITORY |
| 4 LIVING | 8 DRESSING |



UPPER GROUND FLOOR PLAN, LEVI HOUSE



SECOND FLOOR PLAN



Water and Architecture

A stunning new book, published shortly after Charles Moore's death, embodies his fascination with water in the built environment.

The uses of water and the "rich history of meaning and tradition" it can invest in architecture were themes of lifelong interest to the late Charles Moore. "When the fusion of architecture and water is treated carefully and creatively, the potential for meaningful expression is practically limitless," he wrote in *Water and Architecture*, a lavishly illustrated tome posthumously published last month by Harry N. Abrams. Moore's erudite essays describe works ranging from antiquity to recent times, covering a wealth of myth, literature, art, and symbolism attached to water in cultures spanning the globe. His text is brought to life by the vivid photography of Jane Lidz, whose own longstanding interest in the subject (furthered in the course of a Loeb Fellowship at Harvard) led her to initiate the collaboration with Moore on the book. In addition to the resplendent color plates, each chapter is accompanied by black-and-white illustrations, renderings, reproductions of artworks, and plans. Though generally the narrative flows gently, now and then an admonition surfaces: addressing Western culture Moore notes, "If water is being used neither much nor well in our own architecture, then surely some of the difficulty can be traced to our confusion over what sort of attitude toward nature we are trying to express."

In discussing how the ancients grappled with the mystery of the water cycle, Moore offers an atavistic contemporary illustration: Isamu Noguchi's "California Scenario" (above), an outdoor work in Costa Mesa, where water flows through a "strange landscape" and vanishes into a secret portal carved in a "mountain." In contrast to the sculptor's stark environment, the Roman Pool (right) designed by Julia Morgan at Hearst Castle in San Simeon, California, is an instance of water completely enclosed, tamed in a container of exquisite cultivation.

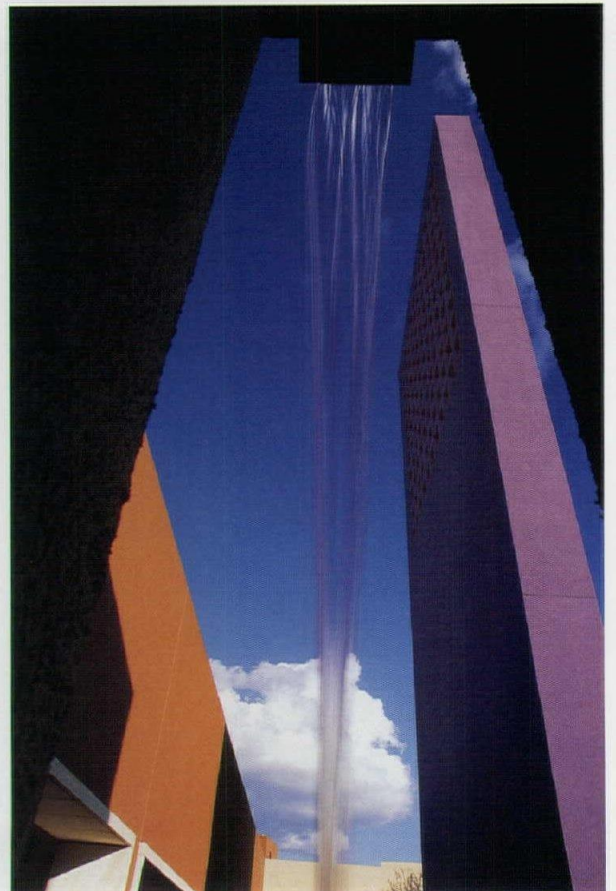


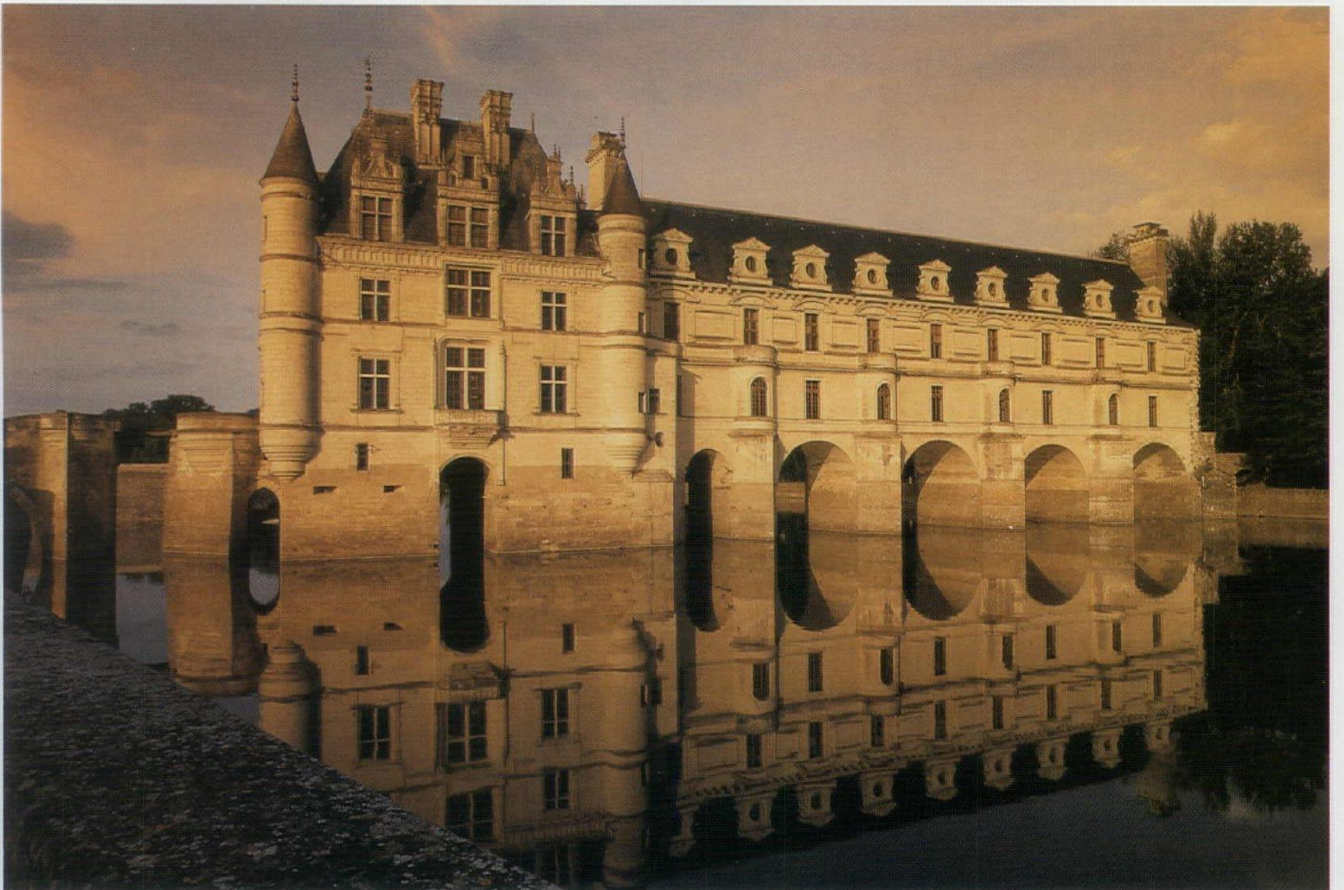


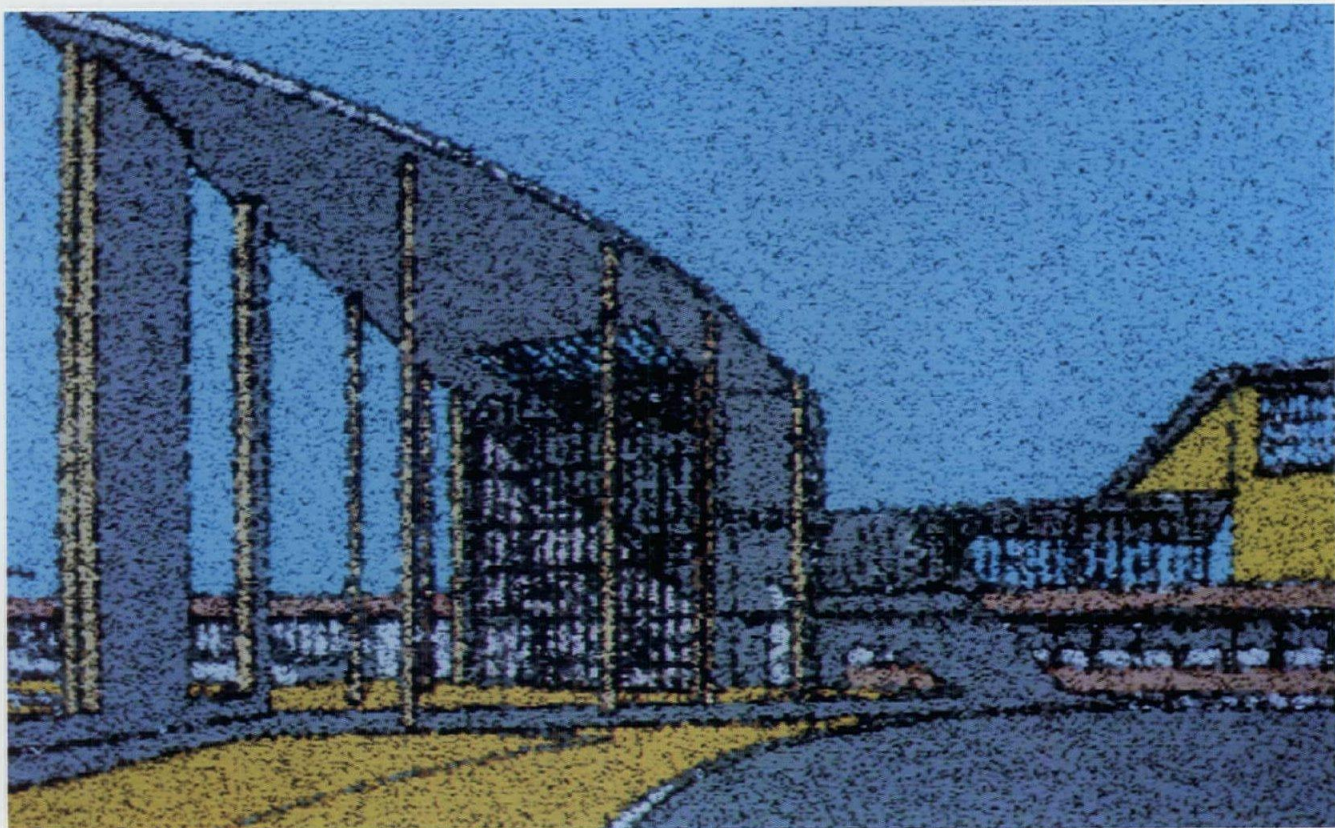
In one chapter, a set of diagrams, extracted by Moore from the 18th-Century Architecture *Hydraulique* by Bernard Forest de Belidor, illustrates the principal ways architects can shape water – in jets, parabolic streams, thin sheets, cascades, etc. Many of these are evident in the latterday waterworks by Ricardo Legorreta at the Solana development in Westlake/Southlake, Texas (near right).

Still water, as much as its turbulent counterparts, is a powerful accompaniment to architecture. “There is something about reflection that stirs the heart,” writes Moore. The *Château de Chenonceaux* on the river Cher in France (facing page, bottom) is the “magical” example that first inspired photographer Jane Lidz. Her subsequent travels to record water and architecture yielded the views of the Precious Belt Bridge in Suzhou, China (above), and the Water Temples on Lake Bratan in Ulu Danu, Bali (facing page, top).

Jane Lidz will give a slide presentation at the AIA San Francisco, 130 Sutter Street, on May 19 at 5:30 p.m. A print show of her work is on display through May.







1

Like Pencils, Only Better

Computers with the versatility of pencils are becoming, at Perkins & Will, a powerful design tool.

by Hans-Christian Lischewski

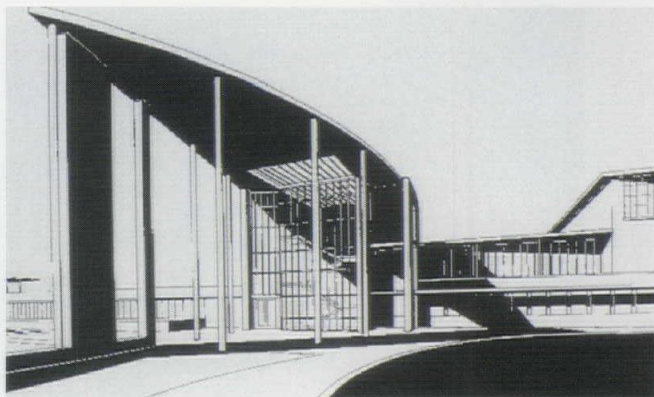
Abstract

Compatible CAD software and rendering techniques are making it possible to merge the architectural quality of hand-made drawings with computer generated images and photographs. A variety of technologies and hybrid software is reviewed.

Computers have changed the production of contract documents in architectural offices, but they have not had much impact on architectural design. The biggest reason for this, perhaps, is that CAD drawings are perceived as cold and technical, while quick design studies in pencil draw much of their power from their "sketchy" quality. It's a way of drawing that most architects hone to a fine art in school, and they are loathe to lose its familiar, fuzzy quality at the hands of a computer.

At Perkins & Will, we have made full use of various software features to carry graphics and modeling data generated for a design through all phases of the

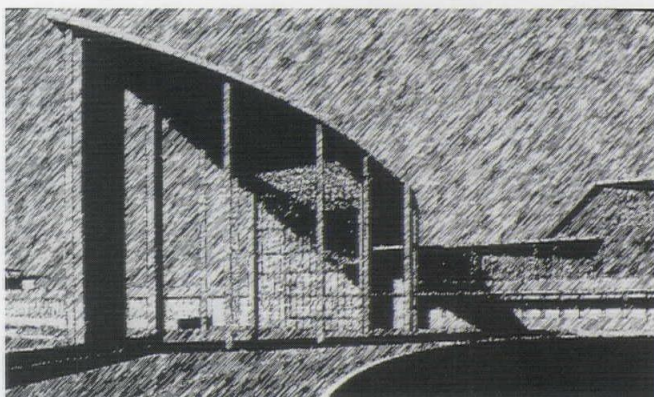
The author, an architect, is director of information technologies at Perkins & Will in New York and an associate professor at Pratt Institute's School of Architecture.



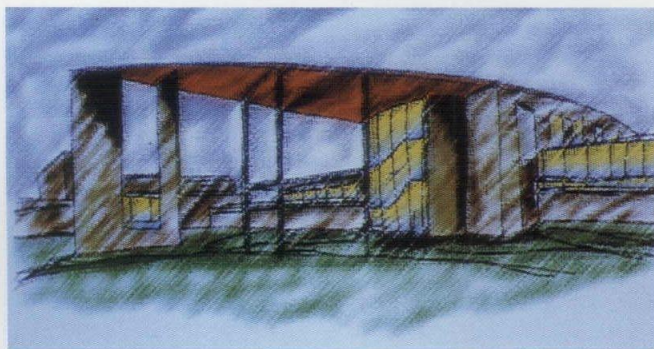
2



3



4



5

Computer renderings of a design for a high school in Woodlands, Texas, generated from a single ink drawing (2) through Micrografx Picture Publisher. Colors are applied (3), then the image is imported into Aldus Gallery Effects and a standard filter "Graphic Pen" is applied (4). Image 3 was run through Aldus and Micrografx to apply "Grain" and "Spray Strokes" (1). Image 5 is an electronic sketch with Fractal Design Painter. Then the images was filtered generated through Aldus using a "Rough Pastel" filter.

project delivery process, not just the working drawings. We found that the integrated use of application programs not only increases productivity but also provides higher flexibility when exploring and visualizing various design scenarios, without losing the "fuzziness" designers love.

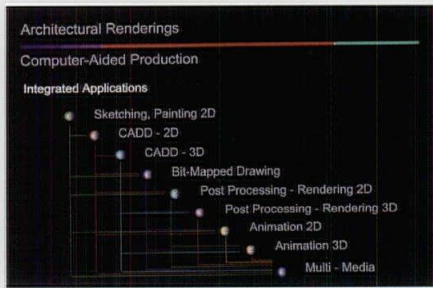
Today all of our projects are developed on CAD from the very early design phases, and it has become essential to provide ways to reuse, revise, and enhance specific computer data. This involves 3D massing models represented as perspective views, all types of plans and diagrams, and presentation images.

Recently our efforts have focused on using the computer in new ways to generate images that are informative and visually sophisticated. We do this by carrying files from a CAD program into a 3D rendering application and enhancing it through image-processing techniques.

Such a step is possible because today's CAD and imaging software are fully compatible, thanks to the development of standards. Any type of graphics representation can easily be moved from one application program into another (6), serving a broad range of purposes. As a result we can not only operate more efficiently, but we can also generate images that represent the design appropriately.

Sketching on the Computer

The biggest challenge has been to use the computer as an initial sketch and design tool. Until just recently a workstation to accomplish this task was not affordable for most architects. Today a full-function sketching workstation, supported with a tablet and a pressure-sensitive stylus, fits into the budget of most firms. By working with a painting program, like Fractal Design Painter, which simulates standard drawing and painting techniques, the designer is able to sketch initial concepts electronically. Features like overlays, tracing paper, and grids are included. By cloning sketches and using overlays the designer can follow a process that closely resembles the traditional sketching approach. The difference is that the tool supports a large number of techniques and materials. Besides sketching with the system, scanned images can be imported for further manipulation. Although this meth-



6

od is new and the interface will need improvements, more designers who are already working with computers will easily adapt to this technology.

CAD With Personality

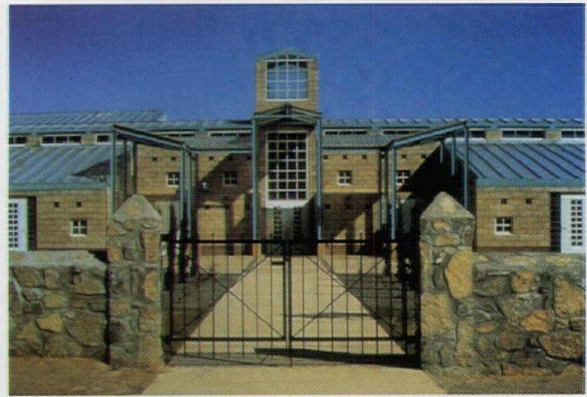
The most innovative approach to designing on the computer links CAD modeling/rendering with image processing applications. The programs we use to automate rendering are vector-based CAD and illustration software, as well as a variety of bit-mapped painting and image-processing packages. The current applications we use all run on the DOS and Windows platform. The same can be done in other hardware environments like MAC or UNIX.

The quickest method to manipulate electronic image files is through the use of "filters." Programs like Aldus Gallery Effects and Kai's Power Tools can be applied to generate any rendering effect desired. By using these plug-in filters separately or in a sequence, a scanned image or a computer-generated rendering can be manipulated. And by linking different filter operations together through a macro-program, different image files can be processed for identical visual appearance.

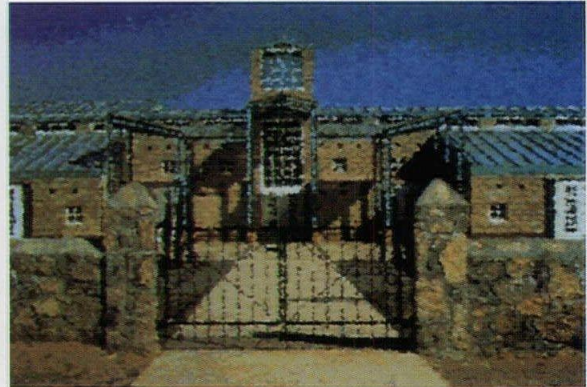
This can be applied on CAD data representing elevations or plans. Such files can be exported into a graphics program like CorelDraw for colorization using the standard Pantone color palette. The program also allows the enhancement of images with textures and text. This method has proven very efficient. This approach permits a number of people to work simultaneously on different components of an image and later combine the individual files for printing.

Pencils and Photos

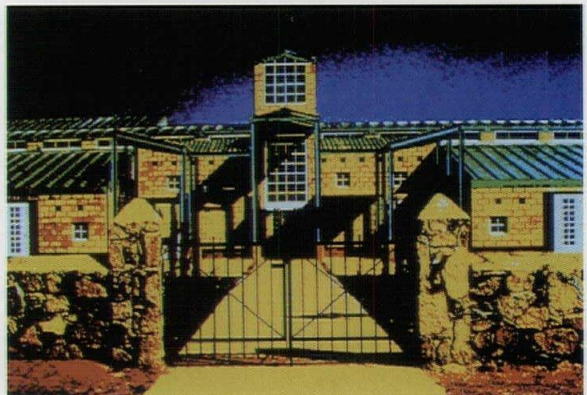
Most of the projects at Perkins & Will are generated in AutoCAD and Inter-



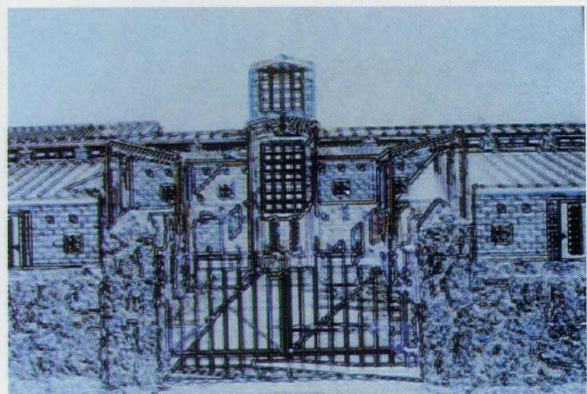
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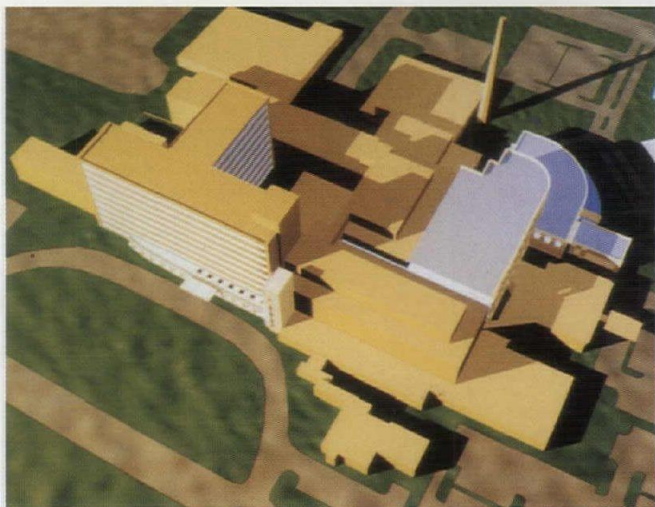


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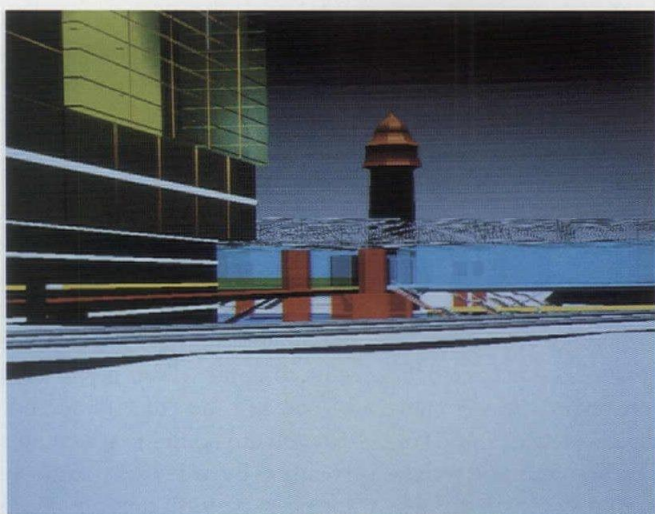
The original image (7) was a chrome on a Kodak CD-ROM disk, which was imported into Micrografx Picture Publisher and "cleaned" electronically. Features from Aldus Gallery Effects and Fractal Design Painter were applied (8). Brightness and contrast are manipulated (9) and Micrografx filters were applied. Watercolor filters (10) give the image a painted quality.



11



12



13

Renderings from model images of St. Joseph's Hospital, Joliet, Indiana, were generated by first creating a massing model in AutoCAD, which was then imported into 3D studio (11); surface materials, light sources, and the camera view was then determined. This image was then processed through Micrografx Picture Publisher (12) using "Watercolors" and "Splatter" filters. A design for a German railway terminal (13) was generated on Intergraph, using the Interpro platform.

graph. The files are then exported into 3D Studio. After materials, light sources, and camera views have been applied, perspective views are rendered. Such views can be exported into a photograph of the surrounding environment by applying electronic photomontage. By employing image processing software like Micrografx Picture Publisher or Adobe Photoshop, scale objects like people can be added. Such images can be derived from scanned slides or photographs. The features of the "electronic darkroom" are more than sufficient to match scale, brightness, and contrast of the image components.

While displaying electronic images on a monitor or via projection devices is the fastest and most economical way to show them, it is often necessary to print images of electronic files. Although costs have come down for letter-size color prints (a high resolution dye-transfer print is about four dollars) E-sized hardcopies can cost \$200 or more. A color plotter pays off only if more than ten prints are done per week. Most firms are thus using service bureaus for printing.

Before working with a service, it is important to develop in-house standards for this type of production and to run a number of tests with the bureau. Different printer technologies produce colors that are not identical with what you see on the screen. A WYSIWYG (what-you-see-is-what-you-get) approach is recommended by working with a standardized color palette and having sample plots in different media done.

The approach to carrying data through different applications is not limited to material generated on the computer. Hardcopies from slides, prints, and even video stills can be electronically scanned and digitally manipulated. This technique is replacing what has been done with traditional tools in the past, and the images are very much what architects are used to seeing.

Over the next few years designers will become more familiar with the capabilities of electronic modeling and rendering. As architects improve their skills in working with the medium and better understand the value of electronic representation, new forms of innovative architectural visualization will emerge. □

Rx for CAD

An architect who was once computer illiterate suggests a middle ground between those who embrace CAD and those who disdain it.

by Rudolph Horowitz

Editor's note: This article is in response to two opposing views on CAD published in a previous issue (P/A, April 1993, pp. 59-63). James Franklin presented the case for embracing CAD with a grain of salt: what may work for one firm may not be appropriate for another. Reid Neubert wrote about the diversity of software and what it can offer.

The views presented by architects James Franklin and Reid Neubert illustrate vividly the growing chasm between proponents and opponents of CAD. On one side of the argument there is the older generation of architects who either shun CAD altogether or, like Franklin, try it, become disillusioned, and give up. On the other side there is a vanguard of younger architects who grew up with video games and computers and who would like to change the practice of architecture by adapting it to the computer. I believe that the way to implement CAD effectively is somewhere between these opposing views.

Although I, too, was totally computer illiterate only a few short years ago, I successfully developed an architectural application to AutoCAD, initially for use in our own practice and subsequently a marketable product currently used by architects here and abroad. I learned the most valuable lessons about CAD from an expensive system I was about to lease some ten years ago. While waiting for the delivery of the system, I asked the salesman to let me review the user manuals. He obliged me with two bound volumes, each five inches thick and weighing over twenty pounds. I spent the next several evenings and a whole weekend studying the volumes. The following Monday I called the salesman and canceled the order for the system.

While studying the user manuals, I realized that the initial investment in hardware and software would be merely a fraction of the potential cost of train-

ing the staff to use the system. This led me to establish some basic criteria for a system I would consider acceptable by our office. I believe these rules can be used as a guide both by firms who have avoided CAD and by firms who already own a system but have not succeeded in making it productive.

Rule 1: Keep it Simple

The first lesson of those monstrous manuals was that the system must be simple and easy to master. Staff training should be measured in hours and days, rather than in weeks and months. In order to achieve this objective the CAD program must closely emulate the way you currently do things in your office. A program that utilizes the hard-won skills of well-trained architects and draftsmen will be easier to master than a program that does things differently. For example, if you have always done your drawings by way of orthographic projections, i.e., plans and elevations, do not attempt to build a 3-D model with your computer. Even if you succeed, it will be so time-consuming and costly that you are bound to give it up sooner or later. Be wary of programs that appear to perform miracles during sales demonstrations but cannot accomplish simple tasks such as you are used to doing daily in your practice.

Rule 2: No CAD Operators

It is easier to train an architect to do CAD drawings than to train a CAD operator to do architecture - provided,

of course, that you select a system with Rule 1 in mind. In my own practice, CAD operators never made any more sense than "T-square operators" would have before the introduction of CAD. If your CAD system is as powerful as the sales brochures claim, why not put it in the hands of your most knowledgeable "old timers" so they can maximize the use of their valuable time? Why have them feed information to a CAD operator who is presumably less experienced as an architectural professional? If your answer is that it is too complicated and it would take too long to get your top people trained to do it directly, I suggest that you recall Rule 1.

Rule 3: Everyone Gets Involved

Set your sights at a reasonable level. Understand your own and your staff's limitations before you commit your efforts to CAD. If you learn to regard the computer at the outset as a sophisticated drawing board, and acquire software to emulate it, you will have no difficulty in training your entire staff to use it. Most important, it is essential that principals get involved, committed, and familiar with the technology. Computer illiteracy is no excuse. If you can drive a car, if you can understand mechanical and electrical systems of buildings, do not allow yourself to be intimidated by the computer. Try to implement the system up to the level of your own proficiency and understanding.

It is no accident that single practitioners are the ones who are succeeding with CAD. I know of many who started as single practitioners, and have since added both staff and computers to their expanding practice. The reason for their success is not that they are single practitioners, but that they have not abdicated the prerogative of personally utilizing the most productive tool in their office.

Conversely, if you start with a highly sophisticated system, capable of 3-D visualization, database links, schedule generation, and other goodies, you will be forced to hire an expert to operate it. You will be subject to economic fluctuations resulting in alternate expansion and contraction of your staff and, like so many other firms before you, may soon find yourself with an expert system in search of experts.

Rule 4: Avoid Gimmickry

When I first started practice I went to the local lumber yard, bought two sawhorses and a solid core wood door onto which I mounted my straight edge, and I was in business. The computer changed all that. Not only does it require a substantial initial investment, but the investment can become chronic. Of course the computer industry would have us upgrade hardware and software continuously. This is not only because of rapidly evolving technology, but also because the industry's agenda is vastly different from ours. Never in the history of our profession were we so pressured to constantly improve, upgrade, and

It is no accident that single practitioners are the ones who are succeeding with CAD.

invest in the tools of our trade. Frequently we lose sight of the impact of this ongoing investment on our output, i.e., the architectural product. First it was "automate or die," next it was "network or perish," now it is "windows or else." Regrettably, many firms succumb to these pressures and invest in every new gimmick, expecting miracles.

I know of one firm with two computers, one of them devoted to CAD, that was sold a network system by an aggressive salesman-consultant and has become a virtual hostage to his indispensable consulting services. Someone from the firm called me in desperation asking me to find them another consultant. My advice was to get rid of the consultant and the network. If you cannot maintain the network effortlessly with your own staff, it is most likely costing you more than it is worth, and you are losing your professional autonomy to an outsider.

With the growing popularity of Windows as the GUI (Graphic User Interface) of choice, there are new features that will increasingly dominate the design of architectural software. I am referring to the myriad pull-down menus, overlapping and cascading menus, icon menus, tool-boxes, etc. The result is that you lose sight of your drawing both figuratively and literally. I have heard many architects complain about

these features that obscure the drawing and break their concentration each time a command is executed. Some readers may remember when the clear plastic triangle replaced the cherrywood triangle and a plastic edge was added to the T-square. Though we have taken these features for granted for the past several decades, consider the impact of these improvements when first introduced; the drawing was clearly visible even as you were drafting. Now, thanks to the gimmickry of windows we are going back to the wooden triangle.

The single biggest problem with most architectural software is that it is written by programmers who have little

understanding of what architects do and how they do it. They are occasionally assisted by a vanguard of young architects, some of whom have had little, if any, solid office experience and no true appreciation of how an average office functions, or what it takes to make it profitable and efficient.

Evolution vs. Revolution

There is no doubt in my mind that computers in general, and CAD in particular, will change the practice of architecture. I think it is wrong, however, for the proponents of this change to bring it about at the same revolutionary pace that affects the computer industry. To accomplish that, the burden of training architects in the new methodology falls on the office instead of on the architecture schools. That is unacceptable to most offices in today's economy. In my view the best way to implement CAD successfully is at an evolutionary rather than a revolutionary pace, by adapting it to the way we work, by getting the entire office involved, and by proceeding from there in small and cautious steps. □

The author is principal of Rudolph Horowitz Associates in Pound Ridge, New York, and developer of GEOCAD, an architectural application to AutoCAD.

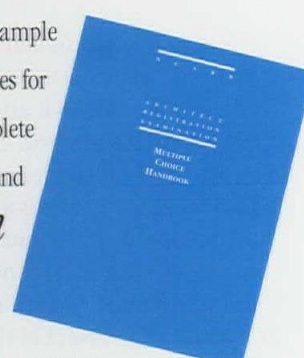
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Tips from the pros on vapor barriers for concrete slabs and detailing of hurricane-resistant glazing.

Q: For the renovation of an older home in Los Angeles, we are removing part of the basement's existing slab-on-grade and pouring a new slab. The old slab has no vapor barrier. Is it possible to use a vapor barrier in the new construction and add one to the portions of the existing slab to remain? If so, how should the barrier be detailed?

*John Smith
Lise Matthews Architects
Los Angeles, California*

A: We don't know of any way to install a vapor barrier under an existing slab. For new construction, place two to three inches of limestone or other coarse aggregate over the plastic sheeting. Then place a thin layer of sand over the stones to fill the voids between them. Placing the stone and sand over the vapor barrier reduces the potential for the slab to curl up at the corner edges.

If water is the cause of the slab's replacement (such as subgrade wash-out) there's probably a good chance that the same problems will occur on the rest of the slab. Pouring a new slab on top of the existing slab is not a good idea for a number of reasons. If you place a vapor barrier between the old and the new concrete you will create an unbonded overlay. In this case, the old concrete be-

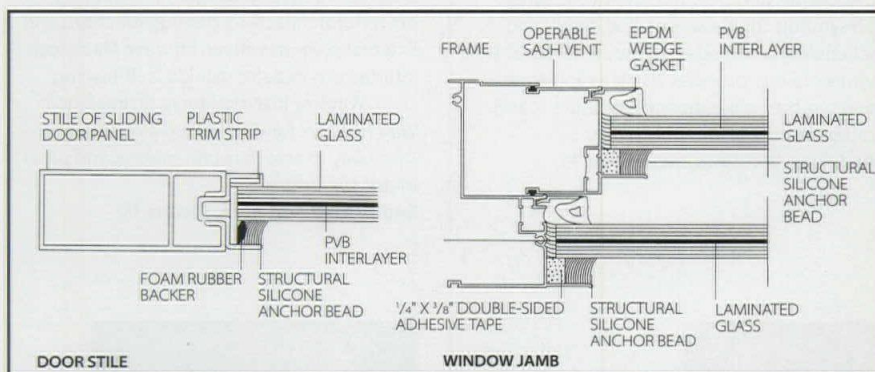
comes essentially the subbase. Because the overlay will move independently, it will need to be as thick as a slab for new construction. An isolation joint would be needed between the overlaid slab and the new slab because of the different thicknesses. Besides raising the floor elevation, this solution probably creates more problems than it solves.

If the basement has water problems, installing a new drain tile system or repairing the existing one may be the most practical solution. *The Wet Basement Manual* by A.E. Maurice discusses French drains in detail. The book is available from the Aberdeen Group for \$14.95.

*Martin McGovern
Engineering Editor
Aberdeen's Concrete Repair Digest
Addison, Illinois*

Q: I am designing a residence in a hurricane-prone area. While the protection of storm shutters is needed for windows and sliding glass doors, I find them obtrusive and they will affect the appearance of my design. Further, the clients are elderly and not able to operate shutters without assistance. Are there any other options?

*G.T. Bascomb
Charleston, South Carolina*



A: Properly specified and installed laminated glass in windows and doors can provide protection equal to or better than storm shutters. However, simply specifying laminated glass is not usually sufficient. The entire window and door assembly, including glass, must be specially designed to resist impacts from windborne debris without penetration, and then remain in the frame and survive the subsequent high winds. Dade and Broward Counties in south Florida have developed and adopted test standards that replicate hurricane conditions to measure the

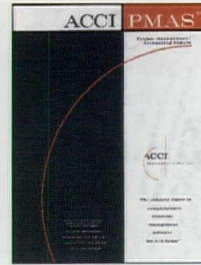
performance of windows, doors, and shutters (P/A, Sept. '93, pp. 76-78).

Heat-strengthened laminated glass with an .090 interlayer has been successfully tested with missile impacts and pressure cycling. This is accomplished by anchoring the glass to the frame with a silicone anchor bead so it cannot disengage, even when fractured. Drawings (above) show two examples of glazing details similar to those that have passed the test.

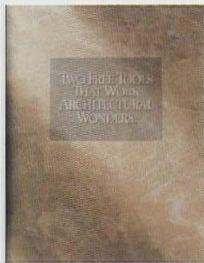
*Paul Beers
Glazing Consultants, Inc.
Palm Beach Gardens, Florida* □

Readers are invited to submit questions regarding technical issues. You can mail, phone, or fax your questions to the attention of Michael J. Crosbie, Senior Editor, Technics. The answers are presented in good faith, but P/A does not warrant, and assumes no liability for, their accuracy, completeness, or fitness for any particular purpose.

Computers & Related Products Literature Digest

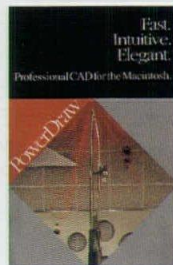


ACCI's integrated Project Management/Accounting System Version 10.1 offers two unique features: Consultant Reimbursable Tracking (CRT) and Staff Scheduling. The CRT Module is the only known software capable of tracking consultant and reimbursable expenses for project accruals and general ledger entries; and during cash receipt entry, the software also "tells you" that a portion of the receipt is owed to a consultant or vendor. **ACCI Business Systems, Inc.** Circle No. 350



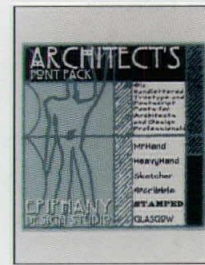
Andersen Windows, Inc., offers Andersen CADD-I for AutoCAD. The software creates 3D symbols, 2D elevations, and details and schedules for all Andersen products. The DXF symbol library provides 2D plans and elevation symbols in addition to a product specification disk in CSI format.

Andersen Windows, Inc. Circle No. 351



PowerDraw, part of the PowerCADD™ Series, is an intelligent CAD program, combining powerful architectural drafting functions and External plug-ins with an intuitive Macintosh interface. Its benefits include "self-healing" Door/Window Insertion tools, an intelligent Wall Trim tool for cleaning up intersections; the ability to associate dimensions; and parametric symbols.

Engineered Software. Circle No. 352



Bridge the gap between computers and the fine art of hand lettering. The Architect's Font Pack offers designers and building professionals six typefaces for Windows or Macintosh systems. The pack contains both TrueType and Postscript versions and is compatible with most software supporting these formats. The pack is \$49 plus shipping and handling.

Epiphany Design Studio. Circle No. 353



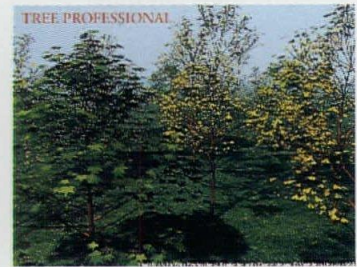
Graphic Controls has produced an updated version of its *Computer Graphics Supplies* catalog. The catalog includes the widest range of supplies and media for electrostatic, ink jet, direct imaging, laser plotter, pen plotter, thermal transfer, and impact plotter technologies. Also included is a convenient cross reference for manufacturers and performance criteria.

Graphic Controls. Circle No. 354



The Marvin Design System (MDS) is a comprehensive software package that helps architects and designers to streamline the CAD design/specification process. MDS works with Windows and AutoCAD, and allows both small and large firms to take advantage of several unique and time-saving on-line features not available with any other design software.

Marvin Windows & Doors. Circle No. 355

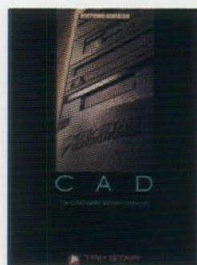


TREE PROFESSIONAL is the leading tree generation system based on tree anatomy and growth patterns. The program allows the user to model virtually any broadleaf or conifer tree accurately and in detail. The detail and resolution of the 3D tree model are adjustable. The program exports 3D DXF and PICT files and runs on Macintosh computers.

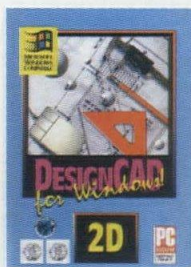
Onyx Computing, Inc. Circle No. 356.



The United States Gypsum Company's new electronic product information/specification software system is a time and money saving resource for architects, specifiers, and construction professionals. USG ACTION Version 2.0 is the most sophisticated system of its kind in the building materials industry. It runs in Microsoft Windows™ and contains specification libraries, fire and sound test data bases, and other product information.
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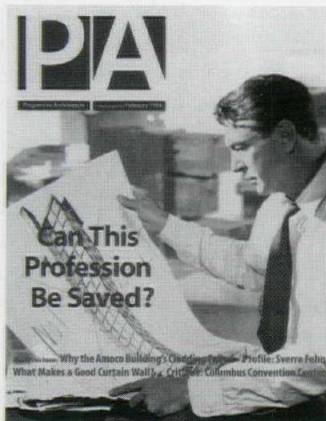


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The newest version of DesignCAD 2D for Windows makes the design process easier than ever. DesignCAD lists for only \$349 and has all the elements of an expensive CAD system including extensive drafting tools; point and click editing; full clipboard support; complete dimensioning options; calculations; customizable toolboxes; programming language; file conversion; and 500 symbols.
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Critique Simulated City

(continued from page 68) en masse, the results are unremarkable, though a few commendable designs can be found. "When I walk along the Esplanade with nonarchitect friends," says James Stewart Polshek, architect of Liberty House (1986), one of the more animated towers, "they are struck by the general mediocrity of the architecture." He argues that the construction of buildings based on old, uptown models of New York housing is "intellectually fallacious."

What is most frustrating about the residential "neighborhood" is its odd desire to ignore the street's role as an essential urban element. The retail component is hidden under dismal arcades (mandated by the guidelines) that run along the west side of South End Avenue, the area's main artery. The arcade's sidewalks are narrow and the

square columns heavy. This could have been a mechanism to activate some semblance of street life, pulling in a more diverse clientele from the river-front Esplanade; as it is, the residential neighborhood is eerily quiet.

Residents I talked to cited security, cleanliness, and the waterfront as the primary reasons for moving to BPC. When asked about the sense of community at BPC, I heard about the opportunities for outdoor activities like rollerblading and soccer games; I was also told that most residents, particularly corporate types, rarely linger about or stroll down the streets. Two said it felt very suburban; "I almost feel like I don't live in Manhattan" said one Rector Place resident. Drawbacks included isolation from the city, an inadequate retail sector, and poorly stocked, overpriced groceries; the need to "import" fresh

fruits and vegetables was mentioned.

The North Residential Area, also a P/A Award citation winner (P/A, Jan. 1990, p. 120), is unbuilt; market forces have stymied its construction, although a report in *Crain's New York* in late March stated that construction would begin next year; it may even include housing subsidies for middle-income families and a public elementary school (Stuyesant High School, an elite public school, recently opened at the northernmost tip of BPC).

Parks, Esplanade, and Plaza

The most urbanistically successful and the most actively used elements of Battery Park City are the public spaces. Totalling some 30 percent of its acreage, BPC's parks, Esplanade, and Plaza are its greatest gifts to the city. Once you've managed to (continued on page 93)

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Want To Shoot An Eagle or Two?

By Mike Hensen

MERIDEN, CT — A small golf company in Connecticut has created a new, super ball that flies like a U-2, putts with the steady roll of a cue ball and bites the green on approach shots like a dropped cat. But don't look for it on weekend TV. Long-hitting pros could make a joke out of some of golf's finest courses with it. One pro who tested the ball drove it 400 yards, reaching the green on all but the longest par-fours. Scientific tests by an independent lab using a hitting machine prove the ball out-distances major brands dramatically.

The ball's extraordinary distance comes partly from a revolutionary new dimple design that keeps the ball aloft longer. But there's also a secret change in the core that makes it rise faster off the clubhead. Another change reduces air drag. The result is a ball that gains altitude quickly, then sails like a glider. None of the changes is noticeable in the ball itself.

Despite this extraordinary performance the company has a problem. A spokesman put it this way: "In golf you need endorsements and TV publicity. This is what gets you in the pro shops and stores where 95% of all golf products are sold. Unless the pros use your ball on TV, you're virtually locked out

of these outlets. TV advertising is too expensive to buy on your own, at least for us.

"Now, you've seen how far this ball can fly. Can you imagine a pro using it on TV and eagle-ing par-fours? He would turn the course into a par-three, and real men don't play par-three's. This new fly-power forces us to sell it without relying on pros or pro-shops. One way is to sell it direct from our plant. That way we can keep the name printed on the ball a secret that only a buyer would know. There's more to golf than tournaments, you know."

The company guarantees a golfer a prompt refund if the new ball doesn't cut five to ten strokes off his or her average score. Simply return the balls—new or used—to the address below. "No one else would dare do that," boasted the company's director.

If you would like an eagle or two, here's your best chance yet. Write your name and address and "Code Name S" (the ball's R&D name) on a piece of paper and send it along with a check (or your credit card number and expiration date) to National Golf Center (Dept. S-606), 500 S. Broad St., Meriden, CT 06450. Or phone 800-285-3900 anytime. No P.O. boxes. One dozen "S" balls cost \$24.95, two to five dozen are only \$22.00 each, six dozen are only \$109.00. You save \$40.70 ordering six. Shipping and handling is only \$3.50 no matter how large your order. Specify white or Hi-Vision yellow.

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Participate in the planning of P/A!

Fax us your opinions!

This issue of P/A is a very different kind of magazine from those you received last year. In planning for future issues, it is crucial for us to gather reactions from a large number of readers. So after you have perused this issue – reading whatever captures your interest – please take a few minutes to answer the questions below and FAX your opinions to us at (203) 348-4023. The editors of P/A will be very grateful for your help!

Circle the appropriate number on the scale below:

How would you rate this issue for accessibility/ease of reading?

Very easy to read 5 4 3 2 1 Very hard to read

In this issue, how adequate was the information on subjects covered?

Very adequate 5 4 3 2 1 Very inadequate

What is your opinion of the changes represented in this issue, as compared with last year's P/A?

Very positive 5 4 3 2 1 Very negative

What part(s) of this issue did you particularly like?

What part(s), if any, did you dislike?

Are there any features of past P/As, not found in this issue, that you would like to see continued?

Any other comments you would like to share with us?

If you have additional suggestions, a letter on the subject would be very much appreciated.

Please fax to (203) 348-4023 or mail to Progressive Architecture, 600 Summer Street, P.O. Box 1361, Stamford, CT 06904

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P/A May 1994

Critique

Simulated City

(continued from page 90) clear West Street, there are remarkable waterfront views from Hudson River Park (located just north of the WFC, it was completed in 1992), from the Plaza in front of the WFC (a well-populated hang-out during lunch hour), and from South Cove (a quirky, Modern abstraction of a harbor just south of the residential area).

With the exception of South Cove (currently closed for repairs, but scheduled to reopen this summer), the parks and plazas are "Old New York." Hudson River Park and the 1.2-mile Esplanade that connects BPC's districts are characterized by Victorian lampposts, hexagonal pavers, and benches of cast iron and wood. The parks are unabashedly nostalgic, but wonderful nonetheless. But Rector Park, a Gramercy Park replica that acts as the focal point for the Rector Place neighborhood, is too pretty and well-mannered for its own good.

Public Land, Private Dreams

Many of the articles published about BPC in the 1980s talked about the passage of time as a panacea for the project's newness. But I'm not so sure that time heals all wounds. While the planners of Battery Park City deserve credit for reactivating and redirecting traditional urban planning ideas, it is ironic that this promise of a new street-level urbanism, spearheaded by a public agency, has turned out to be a ghetto for the rich. Battery Park City is an uptight imitation of the city it was designed to extend. □



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Correspondence should be addressed to: **Search Committee for the Dean of the School of Architecture and Environmental Studies, Administration Building, Rm 232**



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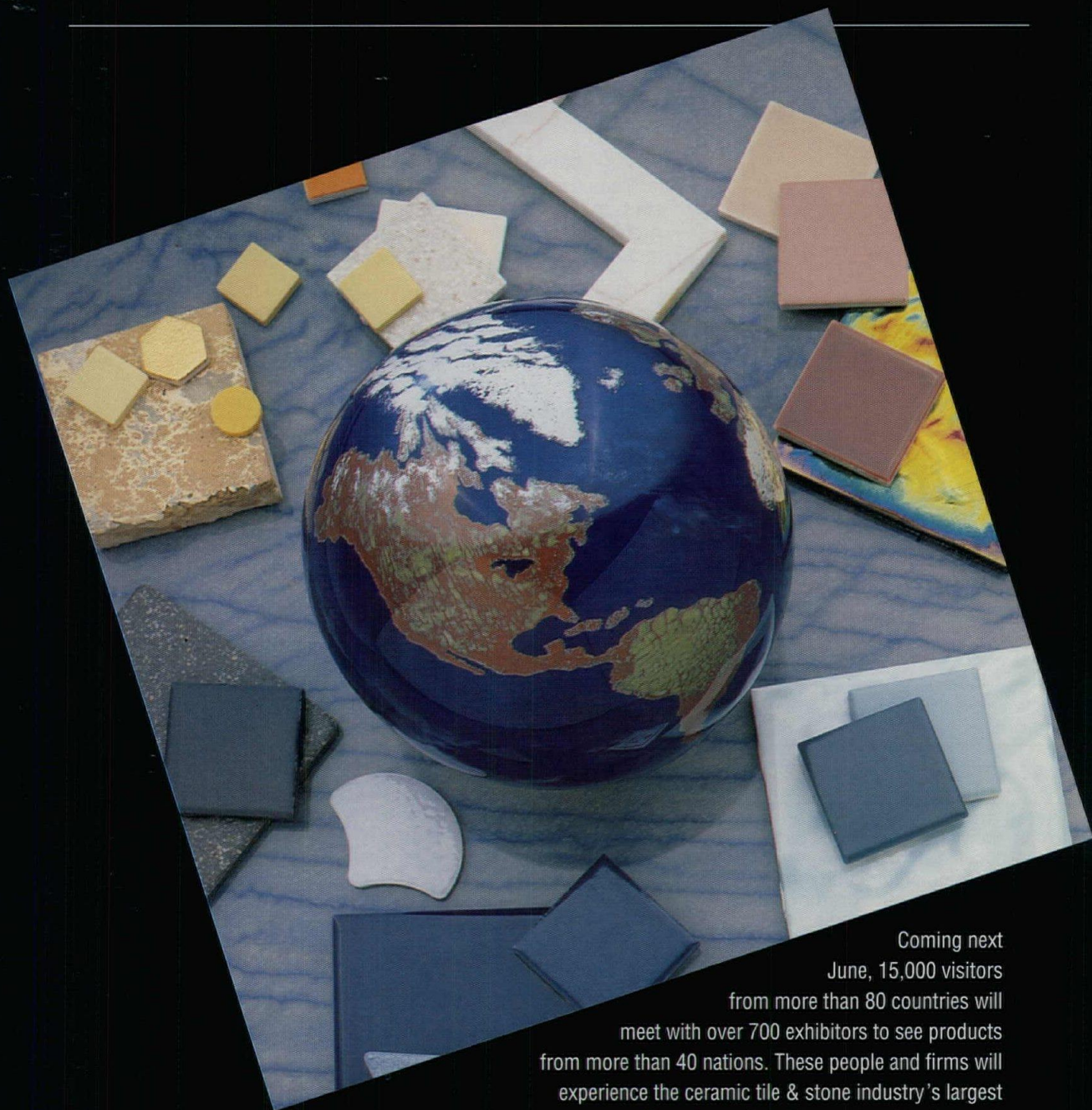
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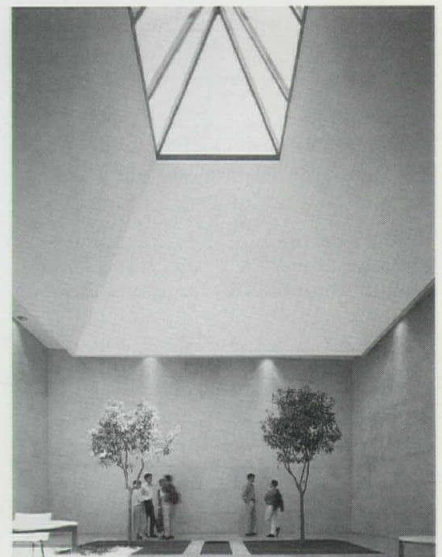
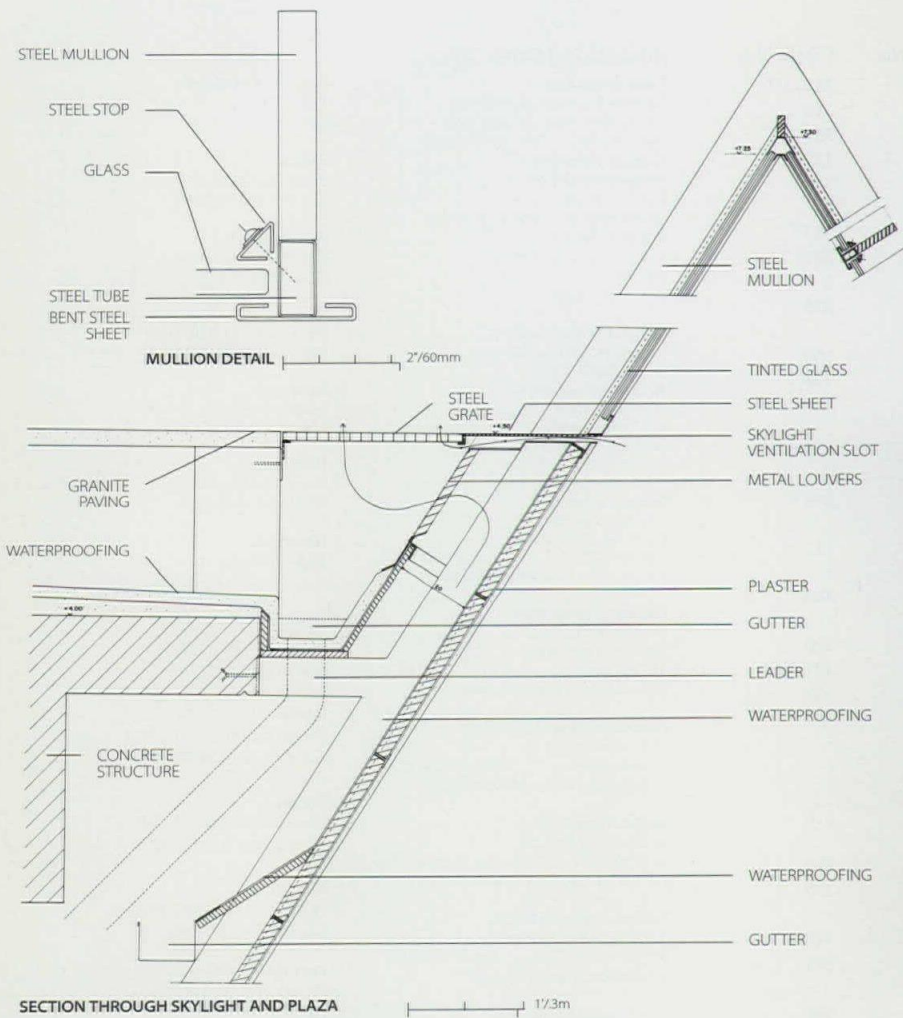
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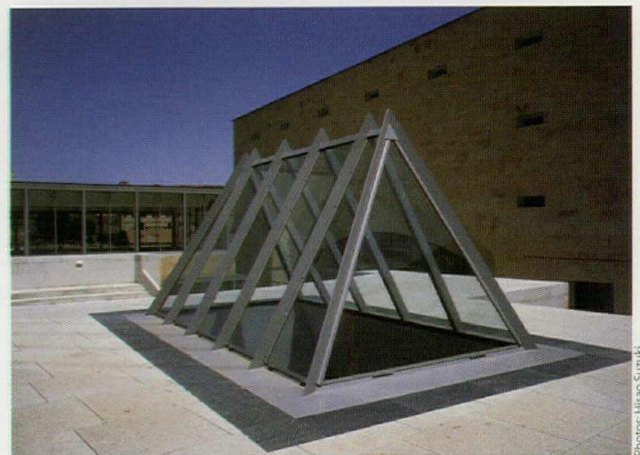
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UNDERSIDE OF SKYLIGHT

Naturally ventilating a below-grade space and draining an at-grade plaza through the same opening is a tricky problem that has been cleverly solved by Juan Navarro Baldeweg at the Congress Hall in Salamanca (see p. 56). The below-grade space is a skylighted public gathering area outside a series of glass-walled meeting rooms. Its plaster ceiling slopes up to a steel-framed, tinted-glass, gabled skylight that pierces the granite-clad plaza above. At the juncture of the skylight and the ceiling, air is exhausted through a thin slot. The air moves beneath sheet-steel panning and out a painted-steel grate set flush with the plaza paving. The plenum space above the meeting rooms is also ventilated through that grate, with air exhausted through sloped metal louvers configured in such a way as to minimize water infiltration.

Water, draining off the plaza and skylight, enters the grate and drops to a continuous gutter supported by brackets welded to the steel frame of the skylight. The gutter is lined with a waterproofing membrane that covers the concrete structure below. Interior leaders carry runoff to the storm sewers. If wind-driven water is blown past the metal louvers into the plenum space, a waterproof membrane on the upper side of the sloped ceiling drains to a second interior gutter, with its own leaders.



SKYLIGHT FROM GRANITE PLAZA

This might not work as well where wind-driven rain is common. But it shows the complexity that can underlie a minimal, but elegant, detail. Thomas Fisher □