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Progressive Architecture

A Penton Publication

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AIA

Also in this issue:

The Work of Glenn Murcutt
Industrial Incubators
Acoustical Design with CMU
Critique: Middleton Inn

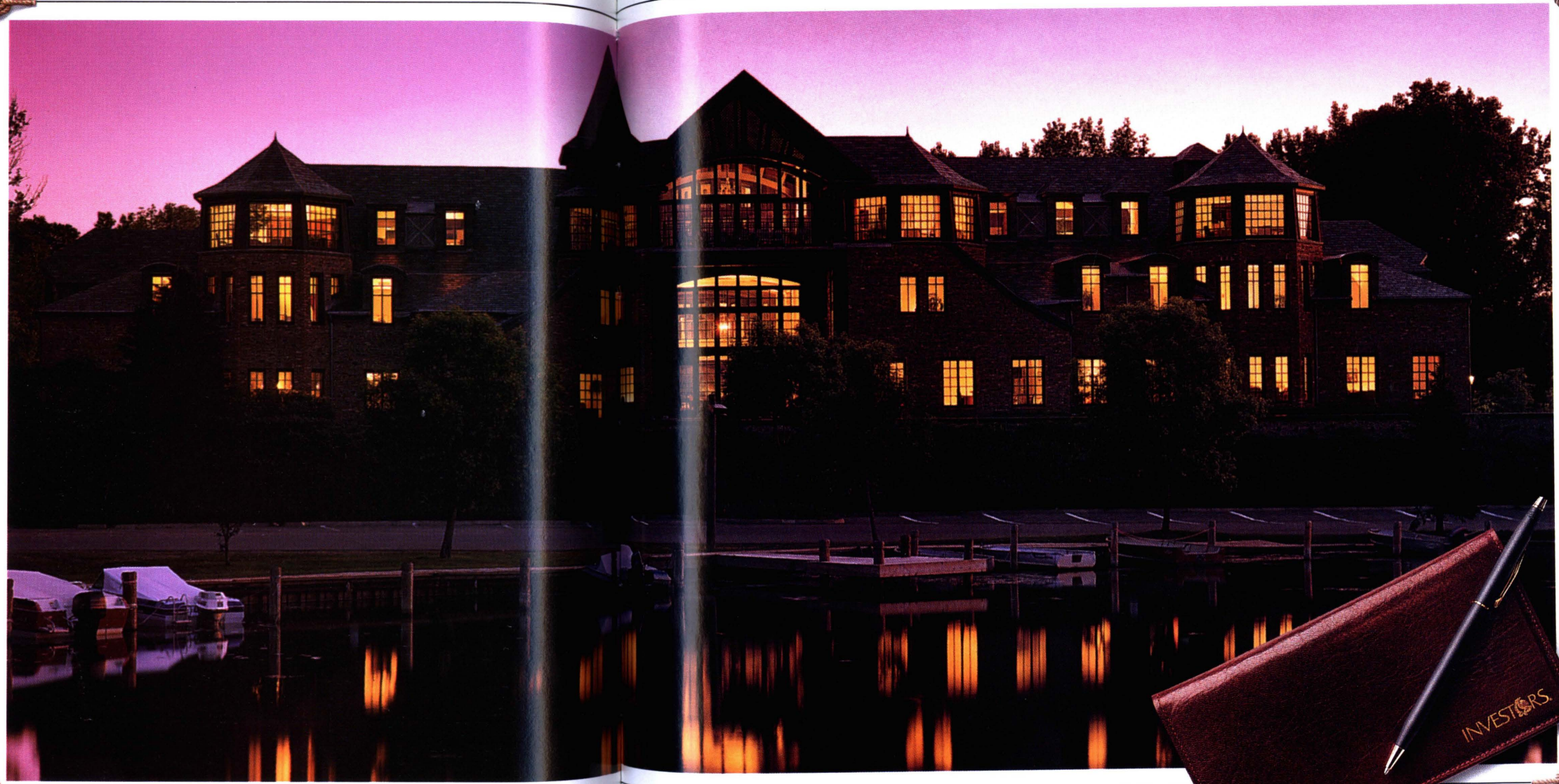
AIA: Worth the Price of Admission?

THIS BANK SELECTED US BECAUSE WE PAID HIGHER INTEREST.

It looks less like a bank and more like an English country manor. But the charm of the Investors Savings Bank belies the challenges its design and construction presented. Particularly to Marvin Windows and Doors.

For one thing, fast-track construction scheduling was necessary due to constantly evolving design constraints. For another, it wasn't until thermal efficiency, condensation resistance and aesthetics were factored in that wood was chosen over aluminum. Consequently, Marvin wasn't selected for the job until construction was underway, making manufacturing and delivery deadlines extremely tight.

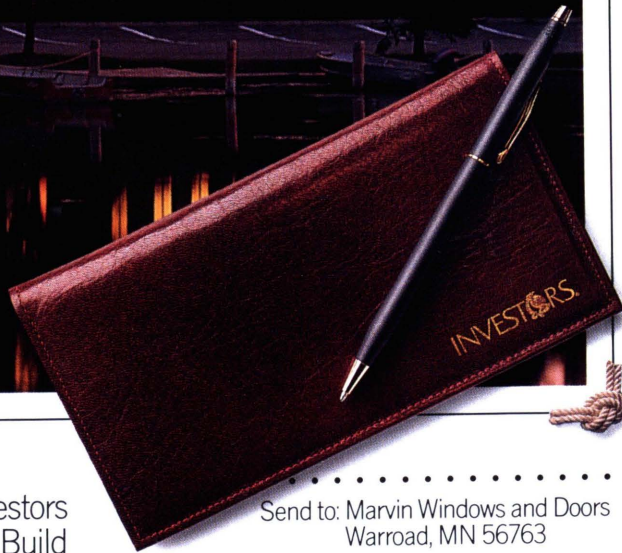
But Marvin's biggest challenge proved to be the building's three massive window and door assemblies, the largest of which measures 28 feet wide by 30 feet high. Using a combination of sturdy Magnum Double-Hungs and French Doors, Marvin not only built them on schedule, but also engineered them prior to delivery to guarantee they would withstand the strong, prevailing winds off the lake. And, like all 177 of the bank's other made-to-fit windows and doors, they were built with features designed specifically for the project. Features such as authentic divided lites, interior windows and doors glazed to match those on the exterior and a durable, factory applied finish in two complementary colors; Midnight Teal for the sash



and Graphite Grey for the frames. Shortly after its completion, Investors Savings Bank was named the NAIOP Build To Suit Building of the Year. Which just goes to show that paying extra interest can result in some handsome dividends.

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COVER: Photo by Michael Hurd.
Cover design by Julie Anne Yee

PHOTO THIS PAGE:
Julius Shulman's 1951 photo of Swedenborg Memorial Chapel (Wayfarer's Chapel) in Palos Verdes, California, designed by Lloyd Wright in 1949. pg.78.



The Apple Report On PowerPC

NUMBER 3 — POWER MACINTOSH FOR TECHNICAL USERS

If you use applications that do floating-point mathematical calculations, your performance levels could be up to ten times faster than those of the same program running on a 68040 machine—and several times faster than the fastest Pentium system-based computers.

The PowerPC chip is the first workstation-level microprocessor ever introduced in a mainstream personal computer. In fact, many workstation developers are now writing applications for Power Macintosh computers.

A Power Macintosh offers unprecedented compatibility between Macintosh, MS-DOS and Windows environments, thanks to an emulation program called SoftWindows, which licenses actual Windows code from Microsoft.

If you buy a 68040-based Macintosh today, can you upgrade it tomorrow? In a word, yes. Just look for the "Ready for PowerPC upgrade" sticker on the box.

For more information about Power Macintosh computers for technical users, give us a call at 1-800-732-3131, ext. 350. In Canada, call 1-800-665-2775, ext. 910.

Power Macintosh computers are here. Apple's new generation of Macintosh computers are powered by the PowerPC microprocessor, a chip developed jointly by Apple, IBM and Motorola.

With these Macintosh computers, you can expect to see speed and functionality increase dramatically, while prices remain the same—or even drop. And if you're an engineer, architect or other power user working with large, complex files, you can also expect to see significant increases in productivity.

For the first time, a personal computer can offer you the kind of power that was previously available only in high-performance, high-cost workstations.

More compatible personal computers.

Of course, a Power Macintosh is still a Mac, so it's compatible with your present Macintosh computers, peripherals, software and files. You can also run most current DOS and Windows programs, thanks to a program called SoftWindows, which licenses Windows code from Microsoft.

The real benefit of Power Macintosh computers, however, will be seen with new applications optimized to take advantage of the chip's advanced capabilities.

Developers move to Power Macintosh.

Applications optimized for the new Power Macintosh computers, often called native applications, will offer two to four times the performance—and in the case of some programs that perform floating-point mathematical calculations, ten times the performance—of programs available for the fastest Macintosh computers today.

Right now, the world's leading developers are updating their most popular programs to take full advantage of Power Macintosh computers

(see box). In fact, Apple has been working closely with more than 200 major third-party developers since 1992 to create new versions of their applications. And hundreds of additional developers have begun the move to PowerPC.

Get more done, faster.

There are immediate benefits to running native applications on a Power Macintosh computer: You spend less time waiting for the computer to complete complex tasks. So you can do more work in less time.

This is especially significant for applications that require a lot of processing power—CAD programs and programs that perform floating-point mathematical calculations, for instance—as well as for larger or more complex files.

Developers will also be exploring new features in areas such as intelligent help, 3-D design, video and animation, speech recognition and text-to-speech conversion. These are functions that simply wouldn't be practical without the superior processing capabilities of the PowerPC chip's RISC-based architecture and innovative Macintosh technology.

Why RISC?

The new generation of Macintosh computers are the first personal computers with RISC (Reduced Instruction Set Computing) chips. RISC chips are smaller and more efficient than comparably powered CISC (Complex Instruction Set Computing) chips, so they cost less to produce.

Which means not only will Power Macintosh computers offer you substantial performance increases, they will do so far more affordably than a CISC-based system can. In other words, they'll provide you with unprecedented power.

The power to be your best.



What about software?

A Power Macintosh will run virtually all of your existing Macintosh system-based programs. The real benefit of a Macintosh with PowerPC technology, however, will be with applications optimized to take advantage of the new chip's advanced capabilities. Here are some of the native applications that are available now or will be out in the next few months.

Abacus	Knowledge
StatView	Revolution
Alias	Working Model
Sketch!	MacroMedia
Asklar	MacroModel
Vellum	Microsoft
auto-desk	Excel
form-Z	Microsoft
Electric Image	Word
ElectricImage	National
Animation System	Instruments
GraphSoft	LabView & HiQ
ArchiCAD	Specular
Graphsoft	Infini-D
MiniCad	Strata
Gryphon	StudioPro
Morph	VIDI
Imagine That!	Presenter
Extend	Professional
Insignia Solutions	Virtus
SoftWindows	WalkThrough
ITEDO	Wolfram Research
IsoDraw	Mathematica



EDITORIAL

8,932 ... and counting

As we went to press with this issue, whose cover story focuses on the waste and mismanagement of the American Institute of Architects, word reached us about the latest developments at the AIA. Has the national AIA been put on a fiscal diet to balance a budget that is about half a million dollars in the red each year?

No. Has there been trimming of AIA executive staff, which, under the former CEO, James Cramer, required the dues of 7,344 members (by our calculations on page 65) just to pay salaries and benefits? Wrong again.

Former publishing executive Terrence McDermott, who replaced Cramer, has been on the job only since March 1 and already there are two more vice presidential positions. This brings the grand total to nine VPs and lays another level of bureaucracy on an already creaking, top-heavy organization. This means that there is now a vice president for every 21 employees. With these new salaries and benefits, the dues of 8,932 members are now required just to support the executive staff.

The two new positions are "vice president for member communications" and "vice president for external communications." The latter has yet to be filled, but the former is now occupied by Philip G. Shreiner, who is not an architect but a former associate of McDermott's from Cahners Publications. Shreiner was editorial director of *Building Design & Construction*, of which McDermott was once the publisher. According to reliable sources within the AIA, McDermott and Shreiner came as a package.

In announcing the new appointment, McDermott described Shreiner as "a champion of architects and architecture," but a survey of Shreiner's editorials in *BD&C* might lead you to a different conclusion. Stamping out the "artistic" impulses of architects is a recurring theme in his editorials. The best architects, Shreiner wrote, "don't let their artistic nature get in the way of their good business sense." Apparently, according to Shreiner, you can't have it both ways. On another occasion, Shreiner coaches architects to "strive more to be business people, and less artists. They can start by replacing in their vocabularies words like historicist, classicist, modernist, and ordered urbanism, with functional, practical, cost effi-

Late-breaking developments at the AIA indicate that the Institute's leaders are still out of touch with the membership. Shouldn't architects take the reins?

cient, and appropriate." Replace? Why not enhance? Architects should also "avoid the avant-garde when it serves no other purpose than to offend the senses and create visual pollution." Who determines that, Jesse Helms? For the firm in the midst of downsizing, Shreiner offers this advice: "Do some internal housekeep-

ing. You may find that your firm is populated by too many artists who have little, if any, good business sense."

It may come as a shock to Shreiner that we don't become architects because of the lucrative business opportunities. Anyone who does ought to have his or her head examined. In fact many of the profession's heroes died broke. Does this mean that they were failures as architects? (As a historical note, remember that the architectural profession and the AIA grew out of a concern that architecture and clients were not best served by the profit motive of the builder, and that it was necessary for the architect to have a greater concern than the bottom line.) Shreiner has shown too little appreciation of what draws architects into the profession, and of what our idea of accomplishment really is. It is not turning a quick buck. How can Shreiner hope to communicate effectively with a professional culture that he seems not to understand fully?

We wish McDermott and his new vice presidents good luck; they will need lots of it to make the AIA vital again. But AIA members should see these latest developments as endemic of the profession's larger problems. For most of its history the AIA has been led by architects, not professional managers. Is it just a coincidence that architects have witnessed a loss of their power in the construction industry as they have handed over the operation of their own professional organization to nonarchitects? It would seem that an architect's education and experience in synthesizing the various demands of a building project would serve one well in running complex organizations and in communicating with fellow professionals. It is time to stop handing over the leadership of our association to those outside of the profession. □

Laura Garvey assisted with the research for this editorial

Michael J. Crosbie

Michael J. Crosbie

Views

P/A'S NEW DIRECTION

Our change in editorial concept and format, commencing with the February issue, has elicited dozens of letters in the first month. Most are enthusiastic, some weigh pros and cons, and a few express disappointment at the new course we have set for ourselves. A sampling of responses follows on these pages.

We are reading all letters with great interest, and we thank all those who have written. — Editors

The New P/A

Unquestionably, you really rang the bell with your February edition of *Progressive Architecture*. The article by Thomas Fisher entitled "Can This Profession Be Saved?" has been probably the most read and controversial bit of architectural criticism in some time. It was a nice touch of irony that *The Fountainhead*, with all its history of stimulating controversy, should be the source for the pictorial accompaniment.

I think we all agree with the two main points of the article, which are that the profession is in a state of change and that it is presently wallowing in a deep professional trough. But, I also think that the profession has been prodded into action; and, as an almost religious believer in the credo that where there is chaos there is opportunity, I believe we will figure out how to save the profession and, more important, how to enhance it. It is critical, however, that if we wish to succeed, the profession and all its parts must have a hard and uncomfortable look at itself and then come together behind common goals and needs. I would predict that this coming together may very well be expedited by Fisher's article, and for that reason I congratulate you and thank you for helping to prod the profession into unified action.

The rest of the magazine was also wonderfully stimulating — particularly the article about Carl Koch, the harsh poetry of Sverre Fehn's work in Norway, and the highly informative good news/bad news articles on curtain wall. It feels like the evolution that John Dixon and Thomas Fisher are imposing on the magazine is poised for success, and I wish you all good fortune.

L. William Chapin II, FAIA
Rochester, New York
1994 President, AIA

Congratulations! At last the United States has a serious and readable professional architectural journal — instead of a fashion magazine. The choices of articles were excellent and balanced. As a second-generation Norwegian, I was glad to see Sverre Fehn recognized outside of Norway, although I would like to have seen more examples of his powerful and timeless architecture. Was the timing with the Olympics deliberate?

Tom Fisher's "Can This Profession be Saved" was thought-provoking. Its quotation "... the implicit guarantee that the school prepares the student for the world of work verges on dishonesty" reflects what every employer has often thought, but not wanted to say out loud.

The Amoco Tower cladding article also discussed the kind of issues that are rarely discussed in architectural journals. We need to know the nature of failures to avoid repeating them.

Henrik Bull, FAIA
San Francisco

(continued on page 10)



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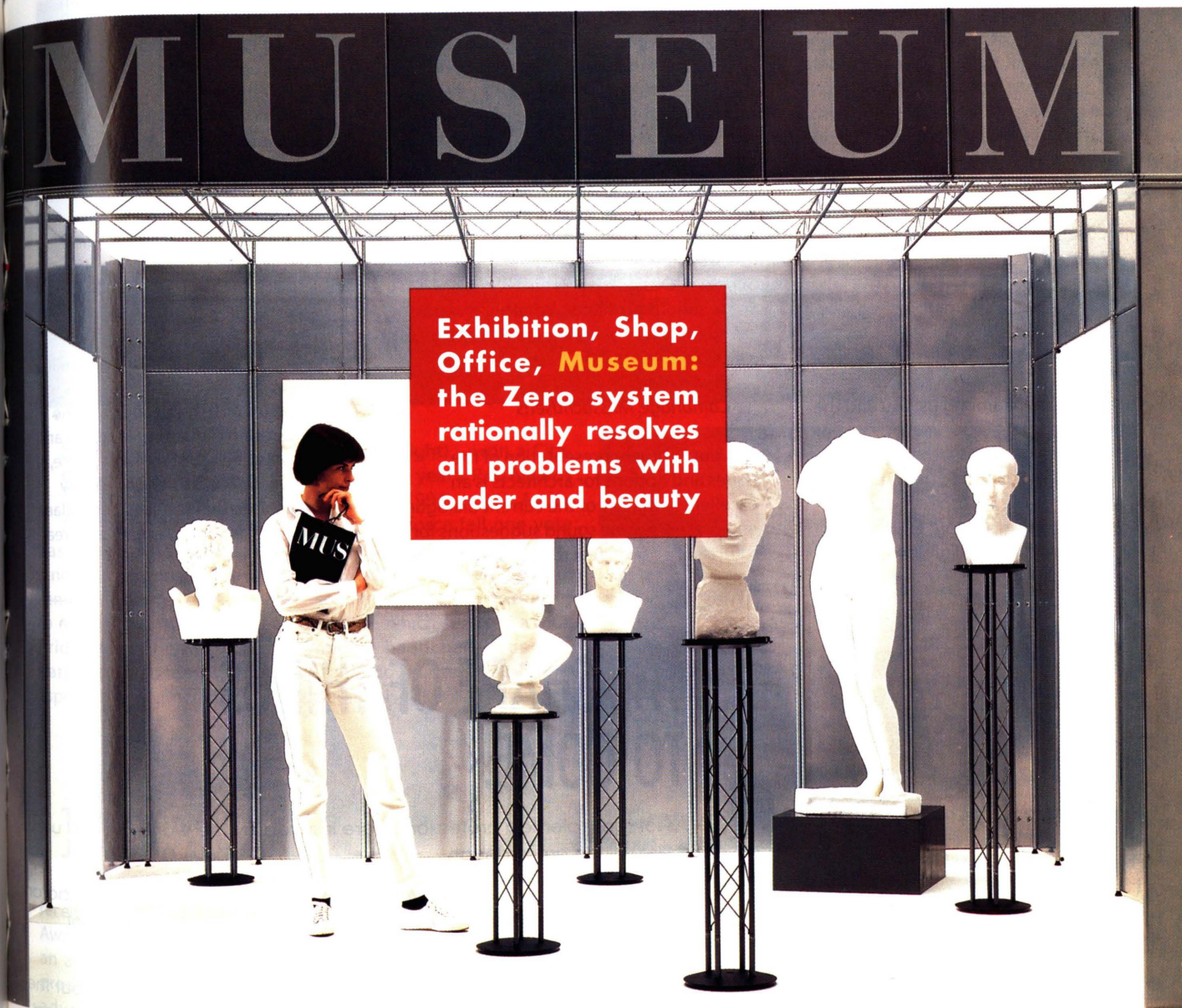
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Views

(continued from page 8)

This is just a note to applaud your decision to change the direction to which P/A is turned. There is a mounting and unappreciated crisis in architecture and an equally serious one in architectural education, and I'm glad you are treating it earnestly and critically. That's what good journalism is all about. The editorial John and Tom wrote hits just the right note.

I like all the other changes in format and content except for the table of contents page which is hard to read and looks like hell.

Jonathan King, Hon. AIA,
College of Architecture,
Texas A&M University

The new direction of P/A has got to be appreciated by everyone who is involved in this wonderful but ridiculous profession! In the face of increasing unrest and unemployment among us, you and the other members of your executive committee are to be congratulated for recognizing the necessity to refocus and redirect your efforts. The introspective and self-critical comments in your February editorial, "P/A Evolves," are right on the mark:

"such journalism also contributed to the public perception of architecture as a kind of fashion – and the architect as a marginal player on the building team." As you turn away from the "beauty-pageant approach to journalism" to focus on the "larger problems facing architects," hopefully you will also recognize that the "star system" promoted by the architectural press perpetuates all that you now claim to be against. Also, the next time an architect designs a teapot or a bird house, let it pass unnoticed on your pages, but continue to write intelligently about the real issues that most of us deal with.

As was very evident at the October 23, 1993, symposium at the Harvard Graduate School of Design, our "profession" has some serious problems. Whether it can be saved or not is, I believe, entirely unclear.
Leland D. Cott, AIA
Bruner/Cott
Cambridge, Massachusetts

Your February presentation of the issues and options for architects is an excellent summary of the current dialogue and presents some sound suggestions for future directions. I feel there is one impor-

tant omission, however: The real position of the society which architects serve.

Why is it that so many of those crying wolf continue to ignore the data that the public (not yet, necessarily, all the clients) wants more of what architects do than ever before? Thus, they cite (as you do) the recent AIA poll showing architects leading other professions as meaning they are "less disliked" than the others, while ignoring previous polls or the overwhelming interest in architectural schools as signs that the glass is half full, not half empty. An optimistic look at all the same data would see the following.

1. The American public, as consumers of consistently more architected housing, offices, public places, etc, and via increasingly strong regulations of aesthetics and land use, is continuing to show an ever growing interest in the quality of its built environment.

2. One result of all this, especially the public's interest in regulating land use and aesthetics, has been to steadily increase, for twenty years, the amount of money spent on architectural services per dollar of construction. No one has gathered real (continued on page 37)



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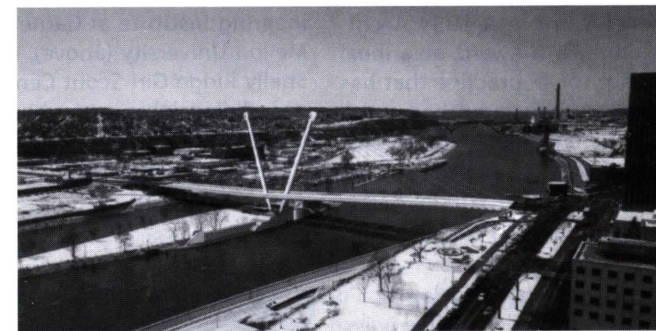
News



St. Paul Selects a Bridge

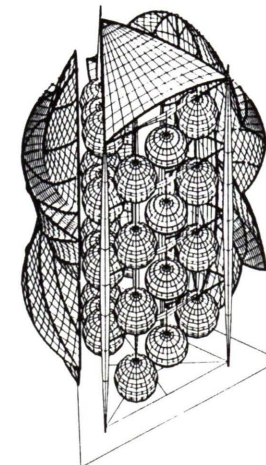
The St. Paul City Council has chosen the least exotic (and least expensive) of artist James Carpenter's proposals to replace the Wabasha Street Bridge over the Mississippi. Carpenter's schemes – most especially a distinctive V-mast

proposal (right) – won a Citation in this year's P/A Awards (P/A, Jan. 1994, p. 44). A citizens' task force fell one vote short of recommending the \$55-million V-mast design, sending the decision to the city council, which selected a \$32-million haunched-girder design (above). Construction will begin this fall. □



Three Win AIA's Jefferson Award

Two architects and a mayor received the Thomas Jefferson Award for Public Architecture, an annual AIA award for the production, management, or advocacy of quality public design. Winners are M.J. Brodie of RTKL Associates, Washington, D.C., an architect who has led the Pennsylvania Avenue Development Corporation; Richard Dattner, a New York architect known for public projects that include Riverbank State Park (P/A, Oct. 1993, p. 24); and Joseph P. Riley, Jr., mayor of Charleston, South Carolina, and cofounder of the Mayor's Institute for City Design. □

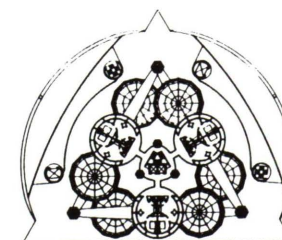


"Grape" Housing Wins Competition

A housing scheme based on the structure of grapevines (axometric, left, plan, below) is the first-place winner in the Eighth MAKMAX Membrane Design Competition, sponsored by the Taiyo Kogyo Corporation of Tokyo. Jose Maria

Baquero and Bruce Danziger of Ove Arup & Partners, New York, won the top prize for a "dwelling of the future" composed of spherical pods that hang from a vertical structure, and contain a mixture of four- and six-unit apartments.

Covering the "grape" dwellings are diaphragms of fabric membrane (the design's "leaves") that shield the units and public areas from direct solar radiation, while capturing energy for heating and cooling the complex. The curved steel frame and two layers of fabric form a network of airways to collect heat from solar radiation trapped between the layers. □





Karl A. Backus

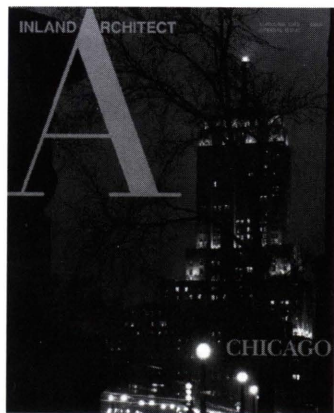
Bohlin Cywinski Jackson Wins Firm Award

The Pennsylvania firm of Bohlin Cywinski Jackson is to receive the AIA 1994 Architecture Firm Award, an annual honor for "a practice that has produced distinguished architecture consistently for at least ten years." The 60-person firm, with offices in Wilkes-Barre,

Philadelphia, Pittsburgh, and Seattle, was cited for its broad range of buildings that "respond with intelligence and humanity" to their environments. Among the firm's well-known projects are the Software Engineering Institute at Carnegie Mellon University (above), the Shelly Ridge Girl Scout Center near Philadelphia, and a house in the Adirondacks inspired by the region's "great camps" (P/A, April 1992, p. 106). □

Inland Architect to Publish Again

Inland Architect, the Chicago-based magazine that shut down last summer for economic reasons, is being bought by Chicago business publisher Steve Polydor, who is planning to resume publication this month. The nonprofit Inland Architect Press had hoped to interest a university in taking over the century-old periodical, but, unlike Polydor, universities were unwilling to assume the magazine's \$160,000 debt. The magazine had for many



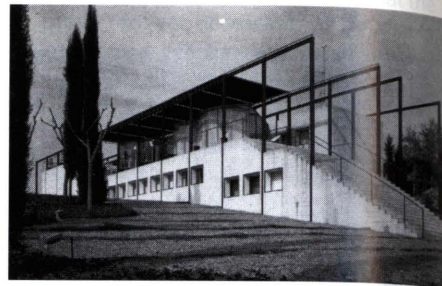
years stayed afloat with the financial help of architect Harry Weese, who stopped subsidizing the magazine in 1990. □

Meier to Design TV and Radio Museum

The Museum of Television and Radio in New York has announced that it will open a second facility in Beverly Hills next

year. Richard Meier has been selected to renovate an existing building to house the museum. John Burgee Architects and Philip Johnson designed the museum's building in Manhattan, which opened in 1991. □

Books



Real Space: The Architecture of Martorell Bohigas Mackay Puigdomenech by Philip Drew, Wasmuth, Tübingen, 1993, \$85.

Australian monographer Philip Drew offers an insightful outsider's viewpoint on the firm that is synonymous with the reawakening of Catalan architecture. The book's introduction does much to place the firm's 40 years of work in its cultural context (above: Casa Canovelles, 1982).

Sweet Disorder and the Carefully Careless, Theory and Criticism in Architecture by Robert Maxwell, Princeton Architectural Press, New York, 1994, \$17.95, paper. This collection of essays by the British architect and critic, Robert Maxwell, condenses 23 years' worth of observations about buildings and architects as well as about broader theories. It is a classic British performance: the writing is clear (often witty), the judgments are even-handed (sometimes to a fault), and the tone is civilized (if a bit mild-mannered). The real disappointment is the paucity of photos and plans.

Boundaries of the City, The Architecture of Western Urbanism by Alan Waterhouse, University of Toronto Press, Toronto, 1993, \$75.

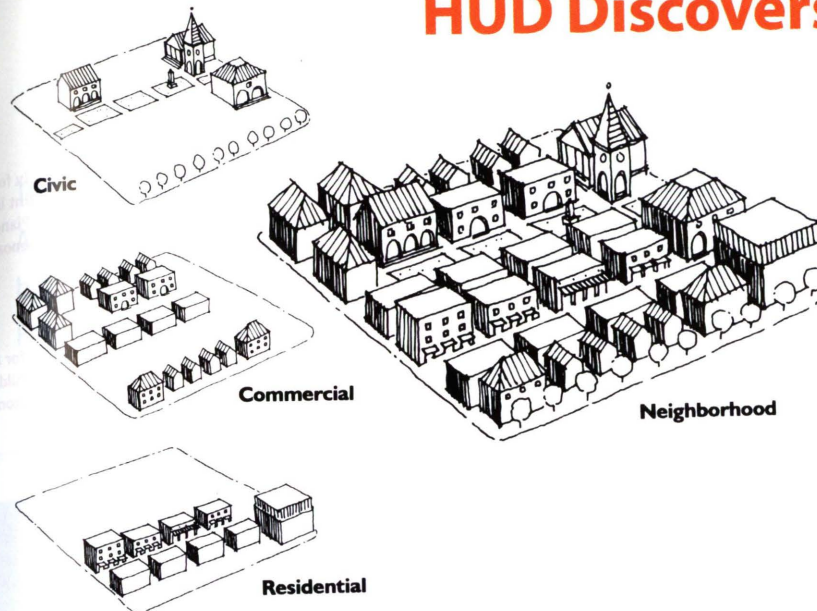
Cities, claims University of Toronto professor Alan Waterhouse, are formed around boundaries, not just physical boundaries (walls, roads, etc.), but cultural and philosophical ones as well (boundaries between rich and poor, individuals and the state, artifice and nature, etc.). This densely written book looks at several cities (Rome, Siena, Paris, Berlin) in the light of this thesis and ends with the question of whether, with the dissolving boundaries of the modern city, we are coming to the "end of the metropolitan cycle in the West."

Photovoltaics in Architecture by Othmar Humm and Peter Toggweiler, Birkhäuser, New York, 1993, \$49, paper. Subtitled "The integration of photovoltaic cells in building envelopes," this book—written in English, German, Italian, and French—holds an intriguing array of built and unbuilt work, demonstrating that aesthetics, technology, and ecology can be smoothly synthesized. In addition to the useful, but frustratingly brief building descriptions and the minimal number of drawings, the book contains information about technical, energy, and engineering issues.

Briefly Noted

Architects on Architecture: New Directions in America by Paul Heyer, Van Nostrand Reinhold, New York, 1994, \$29.95, paper. Revised edition of 1966 publication of interviews with major players in the Modern Movement. **The Frank Lloyd Wright Companion** by William Allin Storrer, University of Chicago Press, Chicago, 1994, \$75. Catalog of all built works, with photos and as-built plans.

HUD Discovers the Vision Thing



A "vision concept" of mixed uses from Building Communities: Together.

A new guidebook from Housing and Urban Development shows an interest in the physical form of communities.

by Thomas Vonier

In the preface to a new urban uplift program guidebook, Housing and Urban Development secretary Henry Cisneros, and his assistant secretary, Andrew Cuomo, say: "First, we must recognize the importance of linking economic, physical, and human development to build viable communities and to create new opportunities for the disadvantaged." And they seem to mean it.

In *Building Communities: Together*, HUD's leadership addresses urban areas seeking federal designation as "empowerment zones and enterprise communities," an enhanced version of ideas initially advanced under former HUD secretary Jack Kemp.

But HUD's new pronouncements and guidelines also urge a strategic planning and "visioning process" laced with views and beliefs taken directly from the fields of urban design and architecture—about the importance of preserving or establishing a sense of place, of creating identity and human scale, of promoting community through design, of making neighborhoods, and of engendering resource consciousness.

New Kind of Talk from HUD

"It is the first time we've heard this kind of language coming out of HUD in many, many years," says Charles Zucker, a long-

time Washington urban design advocate and now the AIA's senior director for community affairs. He refers to the book's emphasis on broad-based, grassroots action, but also to its evident commitment to keeping design issues in the forefront.

This might be expected from Cisneros, whose tenure as mayor of San Antonio gave him a firsthand view of the considerable empowerment provided by design improvements made along that city's river corridor. Cisneros also brought to HUD years of experience on the board of Partners for Livable Places, a Washington-based urban design advocacy group backed by the National Endowment for the Arts.

"He knows you can't focus only on economic development opportunities—that physical character and design also count for a lot," says Zucker. "A new urban vision may be primarily economic, but you have to ask what's needed in the way of physical design to support that vision."

Focus on Neighborhoods is Key

Similar views come from urban designer Peter Calthorpe of San Francisco, whose community planning ideas have helped shape HUD's new thinking. "This stuff isn't just architectural conceit," says Calthorpe. "It's fundamental to real success." He sees focusing on neighborhoods as one key to overcoming urban woes.

"We've learned that warehouse shelters won't work for the homeless and it's the same thing here; it all has to be based on ideas of balance, human scale, restoration."

He and others see the architectural "visioning concepts" being advanced by HUD as having equal applicability to economic development, community service, and social welfare programs. Calthorpe's paradigmatic image of police officers "walking a beat, not riding in helicopters overhead," made it into HUD's latest guidebook.

Six Projects Will Test Ideas

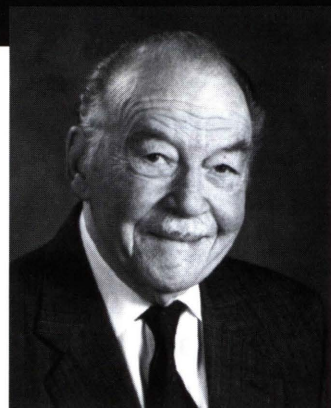
With funding of \$100 million each for the six sites that will eventually be selected, the "empowerment zone/enterprise community" program forms a relatively small element in HUD's collection of responsibilities, but it has high visibility and presages an overall urban strategy being guided by similar principles.

"It's easier to push the envelope with a smaller, competitive program like this," says one veteran observer. "It may be harder to advance these kinds of ideas when you start getting into the major entitlement programs."

But that may be exactly what must happen if HUD wants to make major progress toward national urban healing and growth man- (continued on page 42)

Clemson's McClure Wins Education Award

Harlan Ewart McClure, who was dean of the College of Architecture at Clemson University from 1958 to 1985, has been selected to receive the Topaz Medallion for Excellence in Architectural Education. The award is given annually by the AIA and the Association of Collegiate Schools of Architecture (ACSA). McClure (above) was cited for his work with national organizations, his "service to the citizens and commu-



nities of South Carolina," and his role in "building and sustaining" Clemson's architecture program. McClure, who is now dean emeritus at Clemson, has also written and edited publications about South Carolina architecture. □



Tim Street-Porter

Rehab Work at the Pompidou

French officials have announced a massive, five-year renovation project for Piano & Rogers's Centre Pompidou in Paris (seen above shortly after its 1977 opening). Parts of the

building, which officials say is "seriously degraded and in need of major repairs," will be closed to the public starting late next year for the \$20-million project. The center's outdoor forecourt will also be redesigned. All new work will be done according to plans by Renzo Piano. □

U.S. Wavers on Berlin Embassy Site

While the U.S. has been offered one of Berlin's most important sites – on Pariser Platz next to the Brandenburg Gate – for a new embassy, Ambassador Richard Holbrooke has let it be known that he is considering other sites, perhaps in a less

dense location. *The New York Times* reports that I.M. Pei recently toured the Pariser Platz site and an alternate site with Holbrooke. Pei "advised him to consider the Pariser Platz site favorably" and said he did not want to be considered for the embassy job, according to the *Times*. □

Calendar

COMPETITIONS

Ermanno Piano Scholarship

Deadline: application - May 31
Recent architecture school graduates may apply for this \$10,000 grant that includes a six-month stint in Renzo Piano's workshop in Italy. Contact Renzo Piano Building Workshop, Piazza San Matteo 15, 16123 Genoa, Italy (send a letter and a resume).

Head Start School

Deadline: submission - July 15
This is a national, two-stage design competition for a Head Start facility in New Jersey. Contact Early Childhood Facilities Fund, 65 S. Main St., Bldg. D, Pennington, NJ 08540 (609) 730-1070.

NEA Design Arts Grants

Deadline: application - July 15
The National Endowment for the Arts' Design Arts Program grants support projects that advance design and benefit the public. Contact Design Arts Program, NEA, Nancy Hanks Center, 1100 Pennsylvania Ave., NW, Washington, DC 20506-0001 (202) 272-5427.

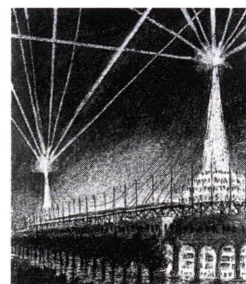
EXHIBITIONS

Portuguese Architecture

Snug Harbor Cultural Center, Staten Island, New York. Through May 22
Work by four practicing architects is displayed.

Eisenman's Sites

Canadian Centre for Architecture, Montreal. Through May 29
"Cities of Artificial Exploration: The Work of Peter Eisenman 1978-1988" is on view.



Baseball Stadium Architecture
Ann Arbor Public Library, Michigan
April 6-May 19
"Field of Dreams: Architecture and Baseball" is a traveling exhibition (an unbuilt proposal for Texas Ranger Ballpark by Hammond, Beeby & Babka is shown at left).

CONFERENCES

Milan Furniture Fair

Milan, Italy. April 11-17
This international fair includes furniture and lighting products. Contact Cosmit, Corso Magenta, 96, I-20123 Milan, Italy (39-2-48008716, FAX 39-2-4813580).

Tall Buildings in Seismic Regions

Los Angeles. May 13-14
This third annual conference will cover the development, planning, design, and construction of tall buildings in seismic regions. Contact Los Angeles Tall Buildings Structural Design Council, 800 Wilshire Blvd., Ste. 510, Los Angeles, CA 90017 (213) 362-0707, FAX (213) 688-3018.

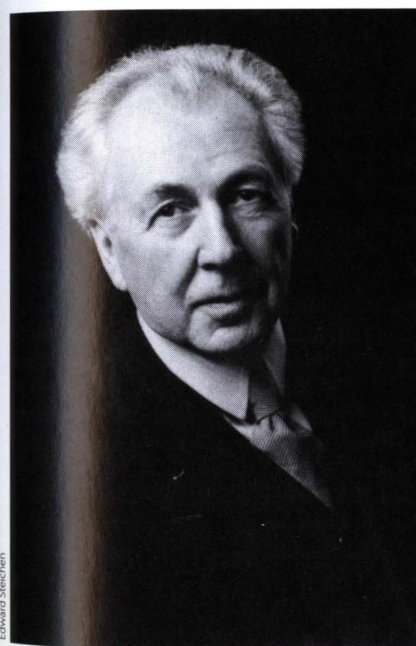
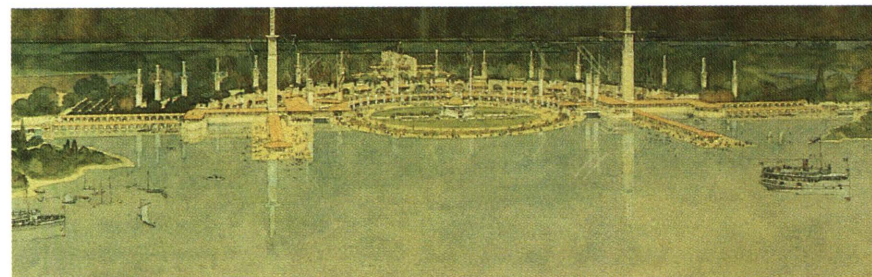
AIA National Convention

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.

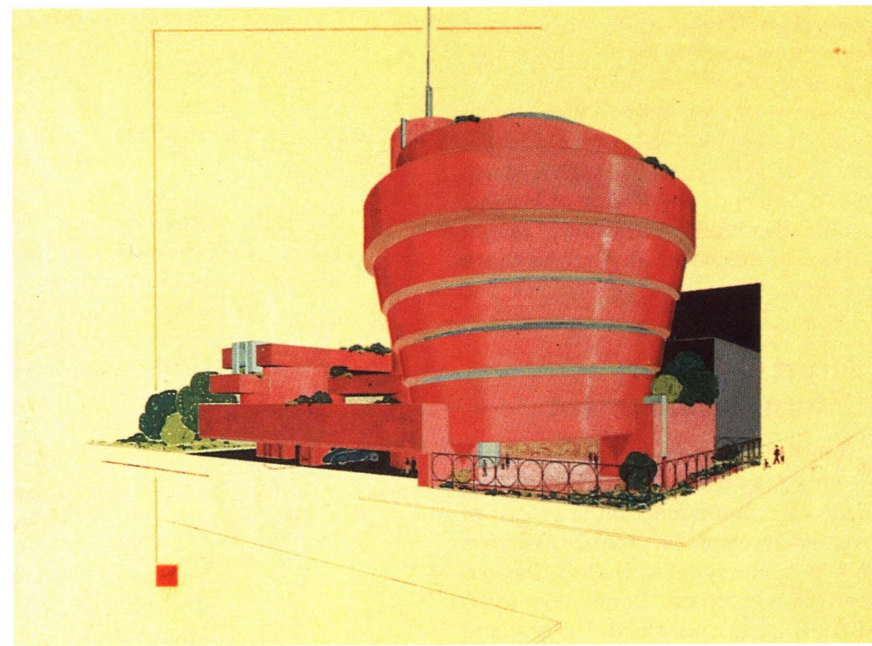
The Modern Meets the Master

The Museum of Modern Art offers an exhibition big enough to hold Frank Lloyd Wright.

by Mark Alden Branch



Top right: Wright's unbuilt Wolf Lake Amusement Park (1895); above right: perspective of Guggenheim Museum; above: Wright in 1945.



One could easily ask "Why Wright now?" about the blockbuster exhibition "Frank Lloyd Wright: Architect," which has taken over both floors of the Museum of Modern Art's temporary exhibit space in New York through May 10. There is no significant anniversary to commemorate, and Wright's rehabilitation – to the extent that he ever needed one – has been observed for the past several years. Further, MoMA's show doesn't offer a Wright buff much in the way of new interpretation or information.

All that said, the exhibit is an inspiring, enjoyable show even for those familiar with Wright's work. But an audience of

architects and historians wouldn't justify a show of this magnitude; this is a show for the general public, documenting the work of perhaps the one architect who could merit this kind of treatment in America. (Even the Museum of Contemporary Art's "Louis I. Kahn: In the Realm of Architecture," a blockbuster by architectural standards, was much smaller than this.) Like the blockbuster art exhibitions of the past few years, this one takes a familiar name likely to draw crowds and then dazzles us with volume, presenting – in roughly chronological order – over 500 pieces: 350 drawings by Wright and his delineators, 126 photographs, 30 models (some origi-

nal, some built for the exhibit), and assorted architectural fragments.

Full-Scale Walls Show Construction

The show's greatest innovation is the inclusion of six full-scale mock-ups of walls from projects throughout Wright's career. We not only get the pleasure of seeing exterior and interior walls of the Herbert Jacobs Usonian House, for example, at full scale; we also see the layers of the walls stripped away – as in a didactic drawing – to demonstrate how they are put together. These mock-ups go a long way toward alleviating the frustrating sense of distance that accom- (continued on page 42)



AIA Education Honors

Three architecture school courses have been cited by the seventh AIA Education Honors jury, which recognizes "innovative and transferable" courses or programs in schools. Winners are "The Poetic Potential of Computers: Design and Architecture with the Macintosh," taught by Bennett Neiman at the University of Colorado at Denver; "Design-Build Studio (above)," taught by Vytenis Gureckas at The Catholic University of America (P/A, March 1994, p. 58); and "The Reality of Making: Collaborative Working Drawings," taught by Max Underwood at Arizona State University. □

Firms Cited For Intern Development

Four firms have been selected to receive the AIA's first IDP Outstanding Firm Awards for "contributing to the success of the intern development program." Winners are Klipp Colussy Jenks DuBois, Denver; Albert Kahn Associates, Detroit; Johnson & Laffen, Grand Forks, North Dakota; and BSW International, Tulsa, Oklahoma (P/A, Sep. 1993, p. 66). Cynthia Easton, a sole practitioner in Sacramento, California, earned a special citation for "exemplary mentorship in a small office." □

CICA Criticism Awards

Two American books were honored in the Triannual International Awards for Architectural Criticism given by the International Committee of Architectural Critics (CICA). *City of Quartz* (Verso, New York, 1990), Mike Davis's account of power relationships shaping the built environment of Los Angeles (P/A, Aug. 1992, p. 77), was named "most relevant book;" *Louis I. Kahn* (Rizzoli, New York, 1991), David DeLong and David Brownlee's catalog for the traveling exhibition, was cited for "its relevant prologue." □

Practice Notes

Modest Growth Shown in 1993

Staffing levels and project backlogs grew by 1 to 2 percent during the last three quarters of 1993, according to the Zweig 100. Firms in the South Central and Southeastern states were most optimistic about future growth, the North Central states the least. For more on the index, call Jerry Guerra at 508-651-1559 (508-653-6522, FAX).

CAD Use Jumps, Despite Recession

The *Professional Services Management Journal* reports that the use of CAD on architectural projects has jumped from 70 percent in 1991 to 90 percent in 1994. Also, 15 percent of the firms surveyed have a computer at every desk. For more information, contact Bill Fanning, PSMJ's Director of Research at 404-971-7586.

Free Housing Accessibility Consulting

For the next several months, North Carolina State University's Center for Accessible Housing will be offering free technical assistance nationally to architects and housing providers faced with accessibility problems. Contact Emil Malizia, program director, at 919-515-3082 (919-515-3023, FAX).

Hello Vietnam

The Hillier Group of Princeton, New Jersey, along with the Gannon Company, have opened an office in Hanoi. Hasbrouck, Peterson, Zimoch & Sirirattumrong of Chicago, meanwhile, have teamed up with the M Group of to develop three hotels and a shopping/office complex in Hanoi and Hue. □

Technics Notes

Low-Slope Roofing Guide

The 1994 edition of *Commercial Low-Slope Roofing Materials Guide* is now available from the national Roofing Contractors Association. The guide is a comprehensive report on commercial, industrial, and institutional low-slope roof membrane, insulation board, and roof fastener products on the market. For more information contact Alan Grayson, NRCA, (708) 229-9070.

Moving to Metric

According to a recent issue of *Metric in Construction*, published by the National Institute of Building Sciences, nearly half of the Federal government's current \$50 billion appropriations for construction is being done in metric measurement. By 1996, all Federal work will be done in the international unit system.

Stick 'Em Up

A recent survey of more than 100 American bankers reveals that most feel that contemporary "open" branch layouts, designed to foster customer contact, ignore security needs and endanger customers and staff. Bank robberies climbed 41 percent between 1988 and 1991, while the overall crime rate for the period rose just 4 percent. Seventy-eight percent surveyed disliked the plate-glass windows commonly found in branch banks, which allow surveillance of bank operations and encourage "smash and grab" robberies. □

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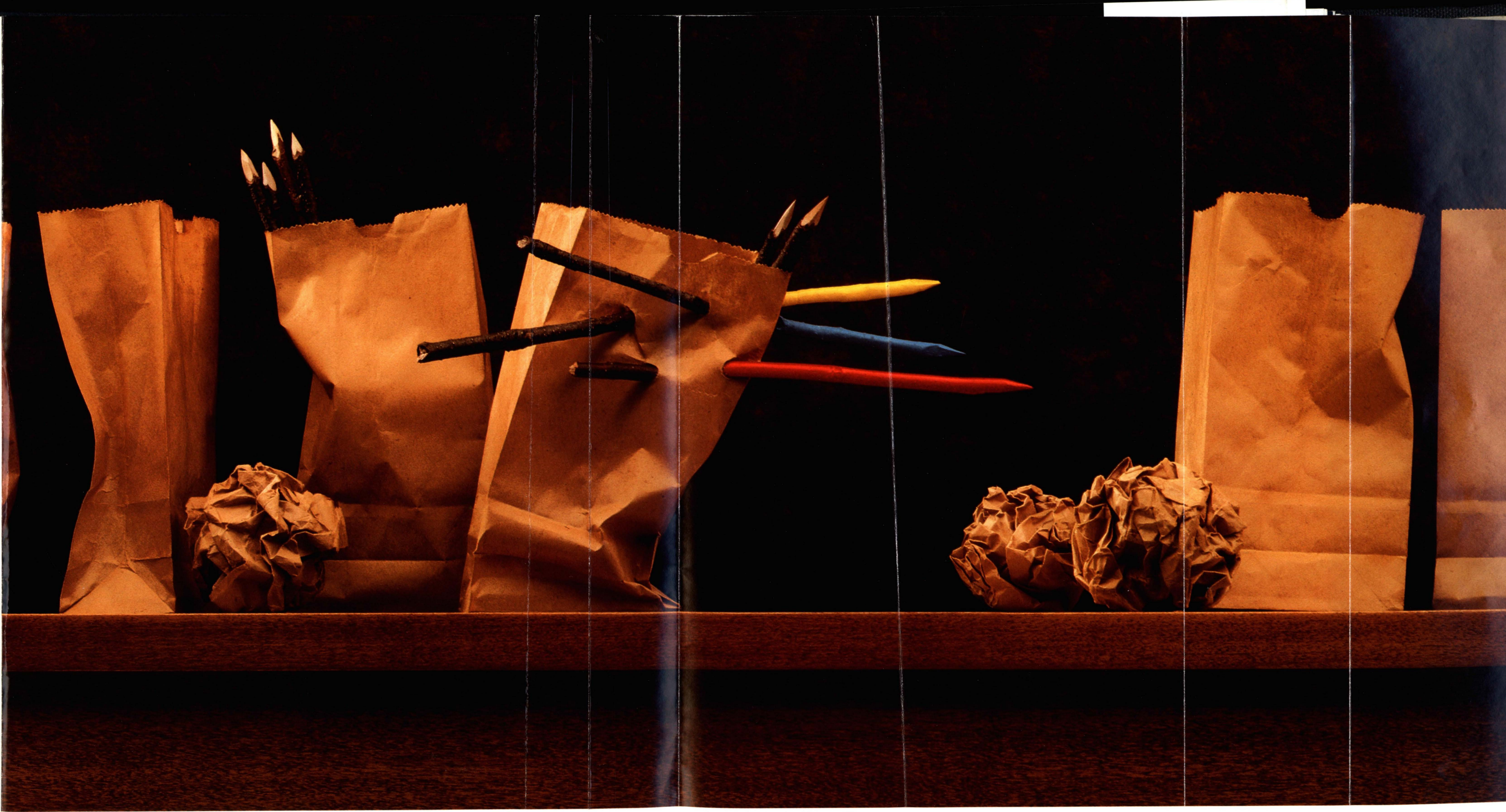


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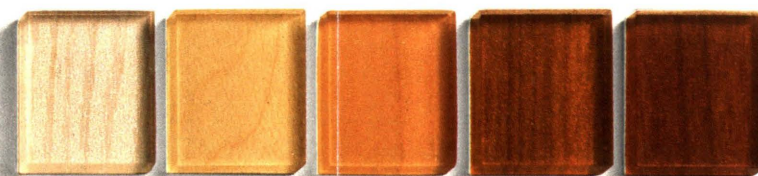


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News Projects

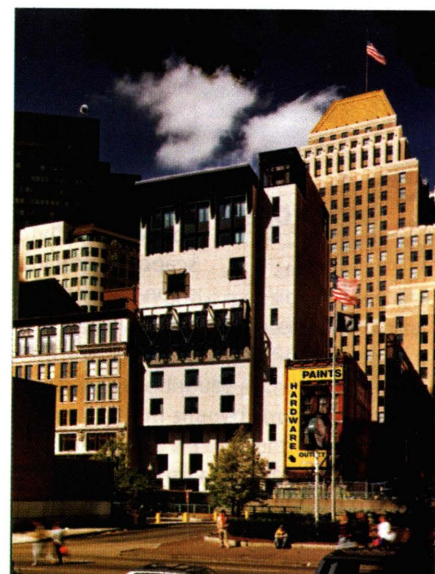


Denver Airport Faces Criticism and Delay

Six months late and \$1.2-billion over initial estimates, the new \$3.1-billion, 53-square-mile Denver airport (P/A, Mar. 1992, p. 105), due to open next month, has been criticized for its poor public transit access and delayed by a faulty baggage handling system. The five-million-square-foot passenger terminal, by C.W. Fentress, J.H. Bradburn & Associates of Denver, is six floors high and intended to handle up to 100,000 visitors a day; it features a 900-foot-long Great Hall capped by a huge fabric roof, whose 34 peaks, each rising 120 feet above the floor, nod to those of the nearby Rocky Mountains.

Boston Transport Center Nears Completion

Leers, Weinzapfel Associate's \$30-million vertical expansion and remodeling of the operation's control center for the Massachusetts Bay Transportation Authority in Boston has a scale that makes it appear much larger than its ten stories. The original five-story building, completed in the early 1970s, was designed to support ten stories. The scheme, which won a citation in last year's P/A Awards (Jan. 1993, p. 76), is unusual for Boston in that its materials and forms transcend its context. The building's most distinctive feature is its steel cornice, which looks out in the direction of the Fort Point Channel; this façade alludes to a grander scale because it can be viewed from across the channel. The opposite façade, overlooking a narrow street, is restrained. The heart of the building is the Operations Control Room, which has yet to be completed; it will have a central console and wall-sized maps of transportation routes for tracking buses and subways.



They Say It'll Be the Tallest Tower in the World

Early next year, a 1,500-foot-tall, glass-and-metal-clad office and hotel tower, billed as the tallest structure in the world, will begin to rise over Chongqing, the capitol of Sichuan Province, China, with a population of 12 million. A major requirement of the 50-year land lease is that the building be a minimum of 100 stories tall; it will be 114 stories. Designed and executed by an international consortium headed by HLW International, New York, the 246,500-square-meter (2,650,000-square-foot) tower, supported by a 48-column steel tube perimeter system, will be built in the center of the city's old Downtown, a major entertainment and shopping area; a rapid transit station is currently under construction on the site's eastern border. The building's faceted façade will be punctuated by an eight-story atrium, framing views of the surrounding landscape.



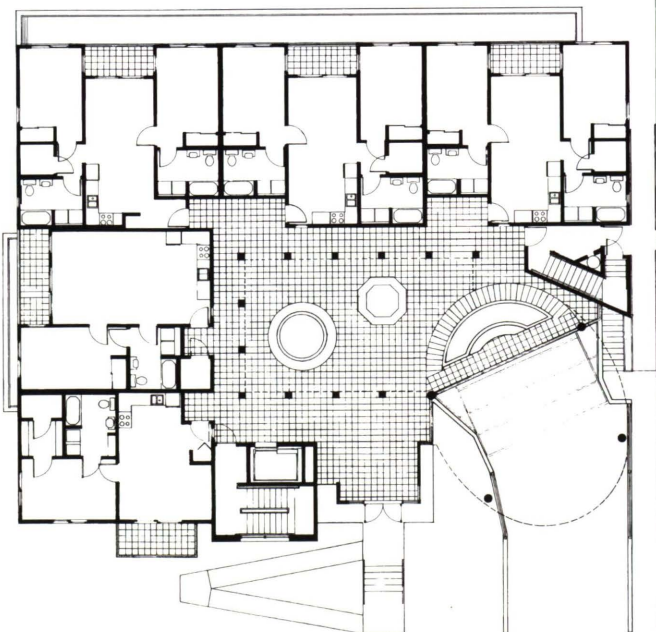
Theater in a Drum in London

A traffic circle on the South bank of the Thames in London will soon house an IMAX movie theater for the British Film Institute. The architects, Avery Associates of London, take advantage of the geometry of the site (four highways converge on the circle) in creating a memorable drum-shaped form with film-related super-graphic images. The building will form part of the South Bank Arts Complex, which includes Avery's 1988 Museum of the Moving Image nearby.



Apartment Living for People With AIDS

Unlike typical, single-room-occupancy AIDS housing, the New Hope Apartments in San Pedro, California, are designed to minimize the institutional qualities often associated with such projects. Designed by Jeffrey Daniels & Associates, Los Angeles, the ten one- and two-bedroom units, configured around an open courtyard, are for people with AIDS who have no means to support themselves. The building also includes a range of public and private spaces – individual balconies, a landscaped courtyard, a community room, and a sun deck above the main entrance. Construction is to begin next month.



FIRST FLOOR PLAN



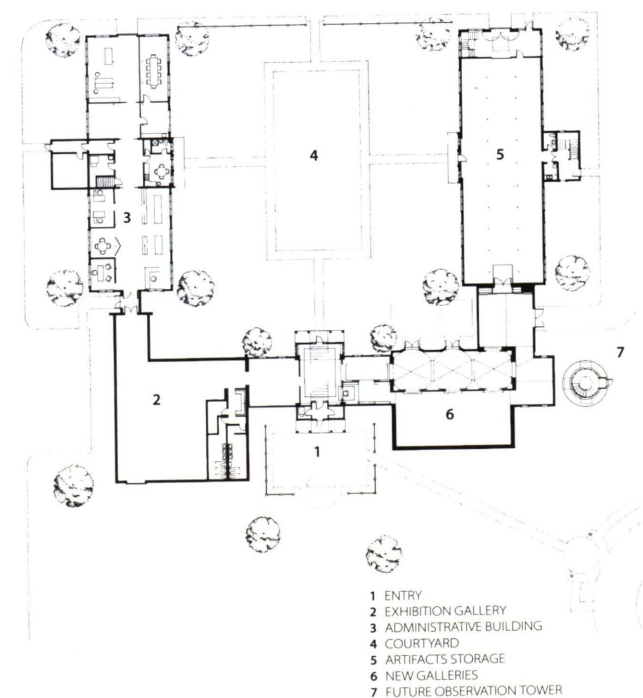
A Historic Rookery Room Restored

Timing suggests that Burnham & Root's study in the Rookery Building was the setting when Daniel Burnham, John Root, Frederick Law Olmsted, Charles McKim, Louis Sullivan, and others met in Chicago to form plans for the World's Columbian Exposition of 1893. The restoration of the room (left) was recently completed by McClier, the Chicago firm that restored the Rookery (P/A, Oct. 1992, p. 90). Two historic photographs, paint analysis, and other on-site clues provided the evidence for recreating everything from carpeting to oak paneling and cabinetry. But much was still in place, simply begging for better care, including the well-known fireplace before which the partners once contemplated each other (inset).



Regional History Museum Renovated and Expanded

The 13,000-square-foot renovation and expansion of the Lake County Museum, a regional history museum located on a natural preserve northwest of Chicago, completes the first phase of a multiphase masterplan by David Woodhouse Architect, Chicago. A new wing of three contiguous drum-shaped structures linking two existing buildings was inspired, as was the entire project, by the museum's existing structures, originally built as barns for prize livestock and race horses. Future plans for the museum complex include a 55-foot-tall "silo-like" observation tower and a 16,000-square-foot wing to house the Curt Teich Postcard Archives.



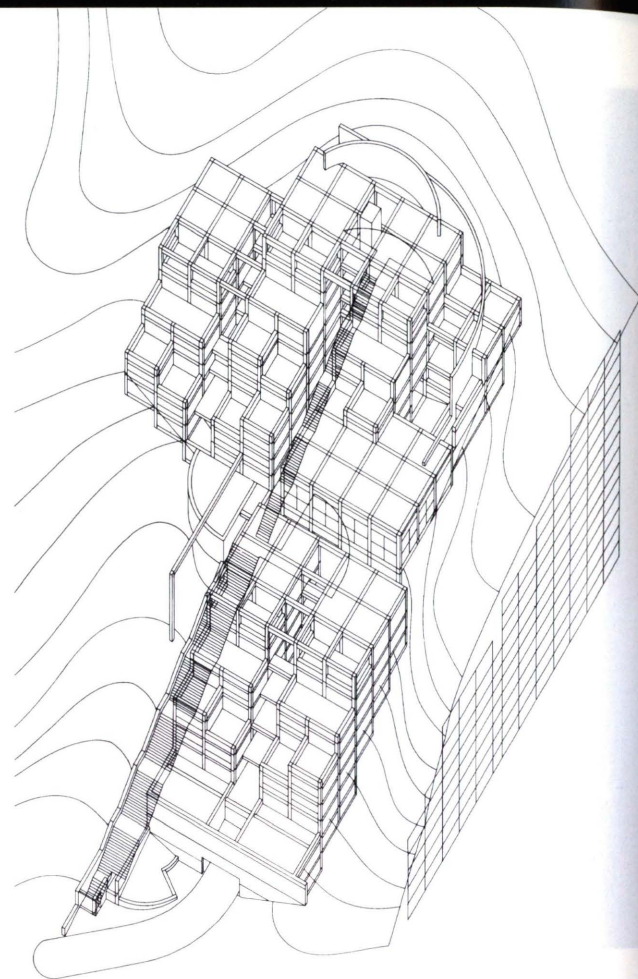
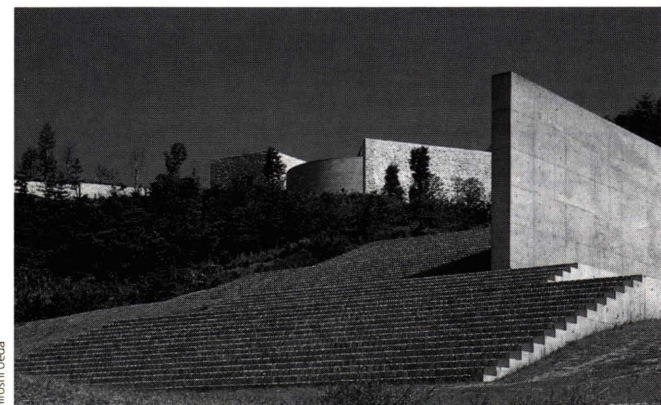
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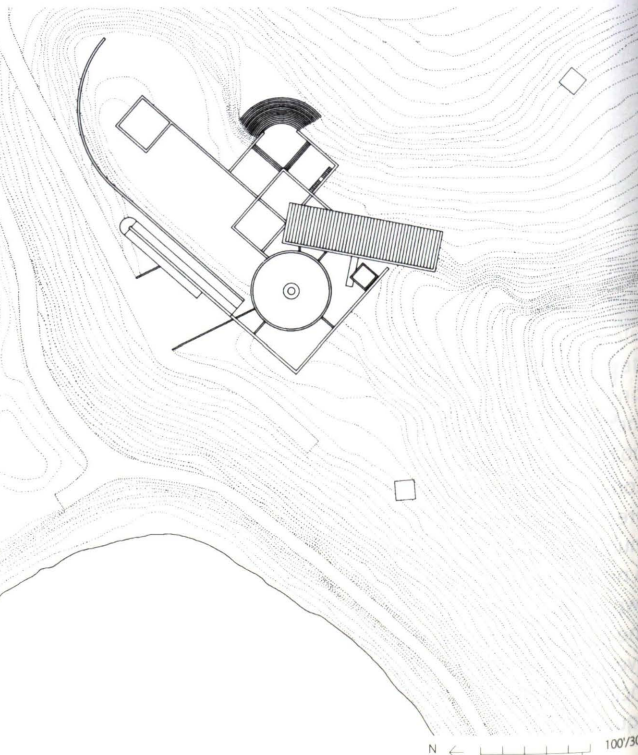
Ando Projects Flirt With Nature

In describing two recent projects, Osaka architect Tadao Ando (P/A, Feb. 1990, p. 83) emphasizes the relationship of his minimal, geometric work with nature. A housing complex in the Rokko section of Kobe (adjacent to an earlier Ando housing project completed in 1983) is built on a rigid 5.2-meter square grid. It is the meeting of the regular grid and the irregular 60-degree slope of the site, Ando says, that "generates asymmetries in plan and section, introducing complexity." While the grid is regular, each of the apartments (below) is unique.

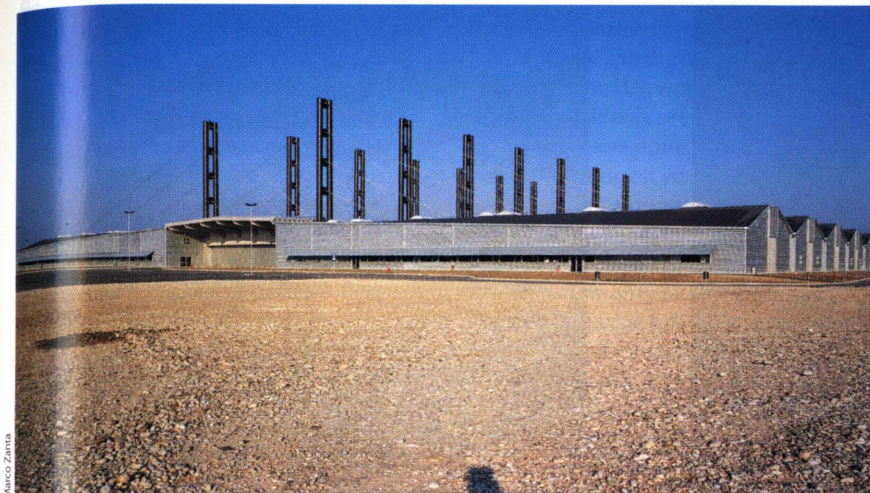
The Naoshima Contemporary Art Museum (bottom right), on the island of Naoshima in the Sea of Japan, is approached by boat. Visitors disembark onto a stepped plaza, from which the museum (partly buried to preserve more of the site's natural beauty) becomes visible. The museum itself, which enjoys a view of the water on three sides, is dominated by a cylindrical lobby and temporary exhibition space.



AXONOMETRIC VIEW, ROKKO HOUSING



SITE PLAN, NAOSHIMA MUSEUM



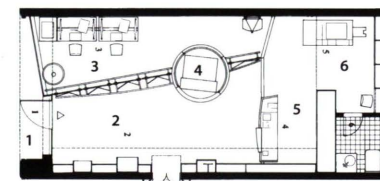
New Factory for Benetton Group

The recently completed Benetton Group factory near Treviso, Italy, designed by Tobia and Afra Scarpa, is the third structure by the architects for the clothing manufacturer at this site. The factory's straightforward industrial image (saw-tooth gable walls of ribbed galvanized steel) is enlivened by a striking cable-stayed structural system that encloses a column-free area of approximately 393,000 square feet. The basic structural module is repeated seven times to form the skeleton: two central double columns of steel, with cables supporting 85-foot-long steel lattice girders on either side, are connected by a central reinforced concrete box beam. The wide bays under the girders are used for manufacturing; the narrower central bay is dedicated to goods handling.



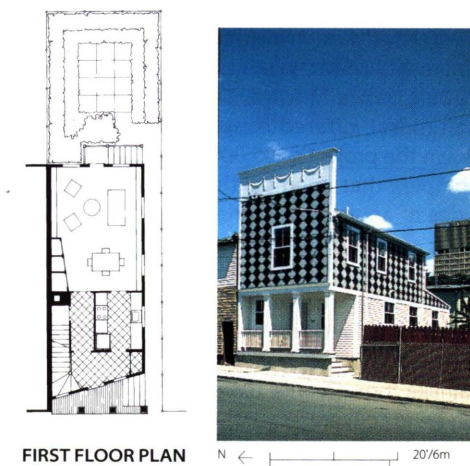
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FLOOR PLAN N ↑



An Interactive Photo Imaging Shop

On Manhattan's Upper West Side, residents can take advantage of state-of-the-art photo CD technology in a new interactive digital imaging store, designed by Harry Uvegi and John Beckmann of New York's Uvegi Associates. Though small (600 square feet), the vaulted interior reflects the high-tech elegance of the equipment: one canted maple-plywood-paneled wall accommodates video monitors and interactive photo CD players; the opposite pearwood-veneered wall holds rolling storage systems that glide along recessed tracks to facilitate order processing. The center of the space is bisected by a glass plane and a 10-foot-high, perforated, anodized aluminum "silo," which encloses the hands-on "create-a-print" machine.

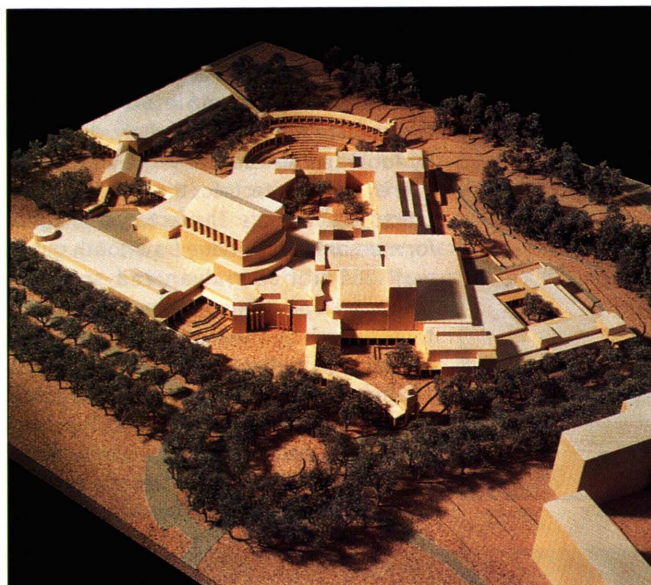


FIRST FLOOR PLAN

Townhouse, Off-the-Shelf and On the Mark

An unorthodox, but graceful, addition to a Greek Revival neighborhood in Cambridge, Massachusetts, Jacob Albert's decorated shed turns notions of historic preservation upside down. Building on the site of a decrepit townhouse, he emulated the street's ad hoc syntax of asphalt shingles and vinyl siding. Instead of alluding to the neighborhood's once-chaste architecture, Albert showed that contextual design can be as liberating as it is responsive: his house is sensible in its massing and plan, yet insouciant in its facade composition. Outside and in, stock items, from double-hung windows to glass sconces, are used idiosyncratically.

Projects News

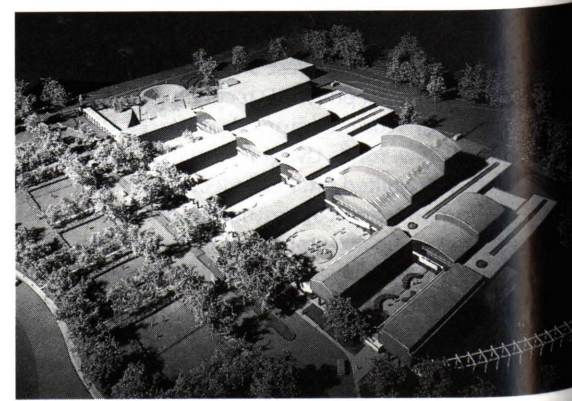
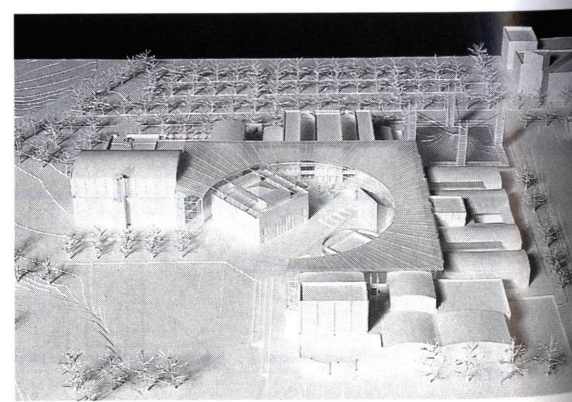
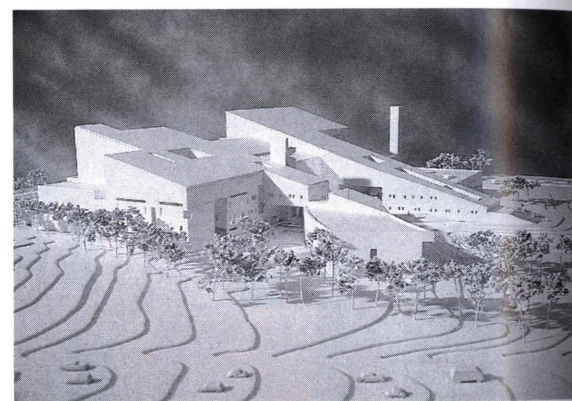
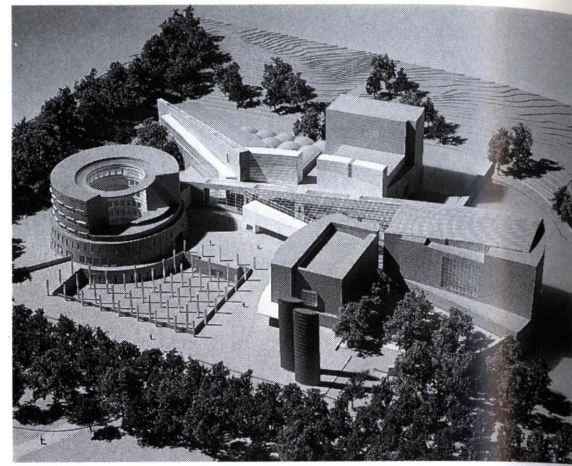


Maryland Arts Center Competition

Five firms were invited to submit designs for the Maryland Center for the Performing Arts, a \$97-million project for the University of Maryland at College Park. Winners Moore Ruble Yudell, Santa Monica, California (with Ayers/Saint/Gross of Baltimore), offered the most contextual design (1), breaking down the project's 295,000 square feet with a brick, gable-roofed complex that lined up the theaters and concert halls on both sides of an arcade. Runners-up Pei Cobb Freed & Partners, New York, also broke the program up into distinct pieces; their star-shaped design (2), which centered on a covered atrium, was faulted by the jury for its "monumental and heroic" stance.

Antoine Predock Architect of Albuquerque proposed the only monolithic object-building of the five, a characteristically mountainlike form (3) that the jury found "visually inspiring" while expressing concern about the design's suitability for the campus and the Maryland climate. Barton Myers Associates (4) of Beverly Hills presented a hard edge to the off-campus streets while opening up to the campus with a novel circle-in-a-square courtyard, partially covered with a glass canopy. The design by Cesar Pelli & Associates, New Haven, and RTKL, Baltimore (5), a rational linear arrangement with courtyards and fingerlike buildings interspersed, was criticized as "repetitive, unhierarchical, too machinelike."

Architects on the seven-person jury were Ralph Johnson, Cynthia Weese, Steven Peterson, and Maryland architecture dean Steven Hurtt. Architect and Maryland professor Roger K. Lewis served as competition advisor.



(continued from page 10)

data, but I estimate the overall amount is up from 4% in the 1960s to somewhere between 6% and 7% today. That is a real demonstration of market demand, and also a reason why so many more architects are employed, even in a recession.

3. The next generation, by its overwhelming rush to architectural schools in spite of the negative publicity, is clearly demonstrating its belief that architecture is the one calling that will most influence their hope for a better world.

4. The great need for architects today is to see the challenges you cite as opportunity, not as gloom. If the architectural profession would focus its members on improving their tools and skills at leadership, the moment can and will be grasped.

Of course it is a cyclical profession, and of course, a 20% falloff in demand hurts. But the number of success stories rising out of the current recession demonstrates that the opportunity continues to exist and the long term trends are positive.

Weld Cox, Hon AIA

The Cox Group

Rocky Hill, New Jersey.

I have been a subscriber to P/A for about 13 years. It has been the best architectural magazine in the world. It has opened up to me the most exciting happenings in the U.S. world of architecture. Now you suddenly seem to be ashamed of all that you have done. You have used words that suggest you have been through a Viet-Cong style of reprogramming or an evangelical rebirth and have realized that all you used to think of as worthy is now dirty rags.

Your magazine has been in the forefront of introducing new formal ideas. That's what made it so great, and such an influence in architectural schools here in the UK. OK, magazines need to change with the times, but what exactly have you given us?

Your editorial says "In design ... rather than showing a series of buildings in splashy (there you go again, insulting yourselves; they weren't splashy they were detailed) presentation, we will discuss bodies of work." I have no problem with that, sounds interesting. What do I get?

A brief article on Sverre Fehn, and short (superficial?) clippings on four of his projects, all of which are too brief, and

have too few photographs to give me any idea of what he has achieved. The Villa Busk looked as if it was a very interesting project, but there just wasn't enough information.

To say that the new photos of Steiner's Goetheanum "offer fresh insight into the extraordinary power of the building" is journalistic hogwash. What you should have said is "Here's a few photos by a friend of ours to fill a couple of pages." If you want to give me a fresh insight, give me plans that relate to the photographs, background facts, and more information. This was like a Sunday paper colour supplement article and not worthy of you.

Your new second section feature article on design "... of greater depth" ... on curtain walling was similarly a total waste of a lot of good trees. The introductory article told me that there were four major areas of concern in curtain walling. Just read it; it didn't tell me much more. The white box insert by Mr. Sturdevant told me *nothing*. "It is important that the various elements of a wall system all have the same performance requirements." No, really?

Then when you turn to the case study (continued on page 38)

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Views

(continued from page 37)

ies, again, as in the article on Sverre Fehn, it is so brief as to be totally useless. The two-page spread on Hopkins' Bracken House just isn't detailed enough. The remaining studies are, admit it, a joke. Where do the freehand sketches of the Madrid building actually occur? And I can't make head or tale of the Mansell Street building. This is "greater depth"?

When I got to the Technics Q&A section, I couldn't believe the banality of the answers (or in the case of the quarry tiles, non-answer) until I reread the questions which were so unspecific as to leave the greatest expert baffled.

Now on to the good points. The news section is good. The article on the recladding of the Amoco building was interesting, but still could have done with more drawings and more technical detail. The article on Koch was good. The article on the Greater Columbus Convention Centre was excellent, and could surely be the prototype of future magazines features.

I really hope that you can get your act together. Yes, we need to be serious about our profession, and superficiality is some-

thing we must be wary of. I disagree that your coverage of buildings has been superficial in the past. However, I fear that what you are now producing, while appearing to be more serious, is actually dangerously superficial.

Richard Shepley
Wakefield, England

CORRECTIONS

Sverre Fehn Photo

In *The Workings of Sverre Fehn* (P/A, February 1994, p. 50) the black and white portrait of Sverre Fehn is by Guy Fehn.

Research Juror

Julia Robinson is an associated professor, not a full professor, as we stated in the announcement of our first annual research competition, (P/A, Feb, 1994, p. 37).

Witch Trials Memorial Designer

The Salem Witch Trials Tercentenary Memorial (P/A Projects, Feb. 1994, p. 27) was collaboratively designed by architect James Cutler and artist Maggie Smith. She designed and implemented the project as an equal partner with the architect.

Memorial Fountain Credits

The Martin Luther King, Jr., Memorial in Yerba Buena Gardens, San Francisco (P/A Jan. 1993, p. 21), was a collaborative effort of Houston Conwill, sculptor, Joseph De Pace, architect, and Estella Conwill Majozo, poet. The fountain itself was designed by Romaldo Giurgola/MGA Partners (Lawrence D. McEwen, Truett Roberts, Boyd Petterson and Susan Gallagher, design team).

Miami Bridge Credit Clarification

While the Coral Gables, Florida, firm of Portuondo Perotti Architects is the architect of record for the new bridge over the Miami River at U.S. 1 (P/A, Feb. 1994, p. 5), the competition-winning design was a collaboration of three individuals: Raphael Portuondo and Mike Sardiñas, both of Portuondo Perotti, and Jorge L. Hernandez, director of the Graduate Program at the University of Miami School of Architecture.

Project Credit

The West Bend Insurance Company (P/A, Mar. 1994, p. 51) was designed by the Zimmerman Design Group, Milwaukee.

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HUD (continued from page 13)

agement. It could, for example, favor states and locales that, like Oregon, have zoned higher percentages of urban land for multifamily residences, have passed tough fair-housing laws, and have required substantial reductions in the number of vehicle miles driven each year.

New Criteria for Funding

One approach being advocated is for HUD to move toward allocating funds on the basis of how well whole regions are doing in terms of such issues, including mechanisms for regional government, environmental management, land use, and mass transit planning. "These factors really affect concentrations of poverty and could help to thin them out," says one proponent.

"We also need to look at coordinated, cross-departmental programs," says Calthorpe, noting that more substantial funds could be garnered from a unified approach involving the Departments of Transportation, Health and Human Services, and even the Environmental Protection Agency.

For now, the AIA – with the American Planning Association, the Urban Land Institute, and several other organizations who consulted in preparation of the first guidebook – hopes to work out a "consolidated planning process" with HUD, to integrate planning and funding for public-housing ownership programs, community block grants, emergency shelter efforts, and housing for people with AIDS.

"There's a new coalition at work," Calthorpe maintains. "Urbanists and community activists were just at the centers of cities and environmentalists were at the edges. Now they're coming together around these ideas."

"No More New Money"

Perhaps, but progress in HUD's efforts will be hampered by limited means. "There will be no more new money," said one close observer of the Congressional budgeting process, and HUD already finds itself having to explain why it reduced budget proposals in these areas while preaching action. Not all of the evidence from the new HUD is reassuring. The strategic planning guidebook is long on community planning-process talk (saying repeatedly that it should be "vibrant") and almost startlingly short on specifics. On the other hand, according to the new formula, specifics are to come from local communities: "The idea is to have a collaborative process, not to be prescriptive," says a guideline author. "The process surfaces the local issues, talents, and ideas, which get you to the visions."

That remains to be seen. Meanwhile, if just a few of these visions take hold, it will signal an encouraging turn of events for urban America. □

Wright (continued from page 15)

panies museum exhibits on architecture.

Even if the show doesn't offer a new point of view, the items selected for inclusion by chief curator Terence Riley and assistant curator Peter Reed do permit us to renew our admiration for certain aspects of Wright's *oeuvre*. Most notable is the room dedicated to the Imperial Hotel (1923) in Tokyo, which includes an enormous, beautiful plaster model dating from the hotel's construction, plus a large-scale perspective and plan on linen and replicas of columns from the building's lounges. Such documentation of a Wright building that can no longer be visited is especially gratifying.

Early Wright Most Satisfying

The upper floor of the exhibit, which takes us from Wright's earliest work with Sullivan up to the 1929 San Marcos-in-the-Desert project, is alone enough to demonstrate that Wright was America's greatest architect to date. The lower floor, which devotes almost as much space to Wright's last 30 years, could not so easily convince on its own. While this floor includes some of Wright's greatest buildings – Fallingwater (which seems to get short shrift), the Guggenheim Museum, the Price Tower – it also portrays his ill-fated efforts at urban (or rather anti-urban) planning. The famous model of Broadacre City is here, taking up a room and including replicas of the original text panels that went with it. These optimistic words seem both naïve and slightly chilling ("no slum, no scum," it promises). The show closes with the late, bombastic schemes for public buildings in Baghdad, Arizona, and Marin County. The chronological organization – aptly, perhaps, but a little sadly – requires this peak-filled exhibition to end on a rather unsatisfying plateau.

A catalog of more than 300 pages (\$60 cloth, \$29.95 paper, distributed by Harry N. Abrams, New York) includes drawings and photos from the exhibit but, regrettably, no photos of the show's illuminating models. Its five essays, like the exhibition, are interesting but by no means earth-shattering.

Even if the traffic would allow it, don't expect a blockbuster on Mies or Corb – or anyone else – soon. Curator Riley says that the kind of sponsorship needed to produce them – Andersen Windows, the David H. Cogan Foundation, and the National Endowment for the Humanities helped make this one possible – went away with the 1980s. □



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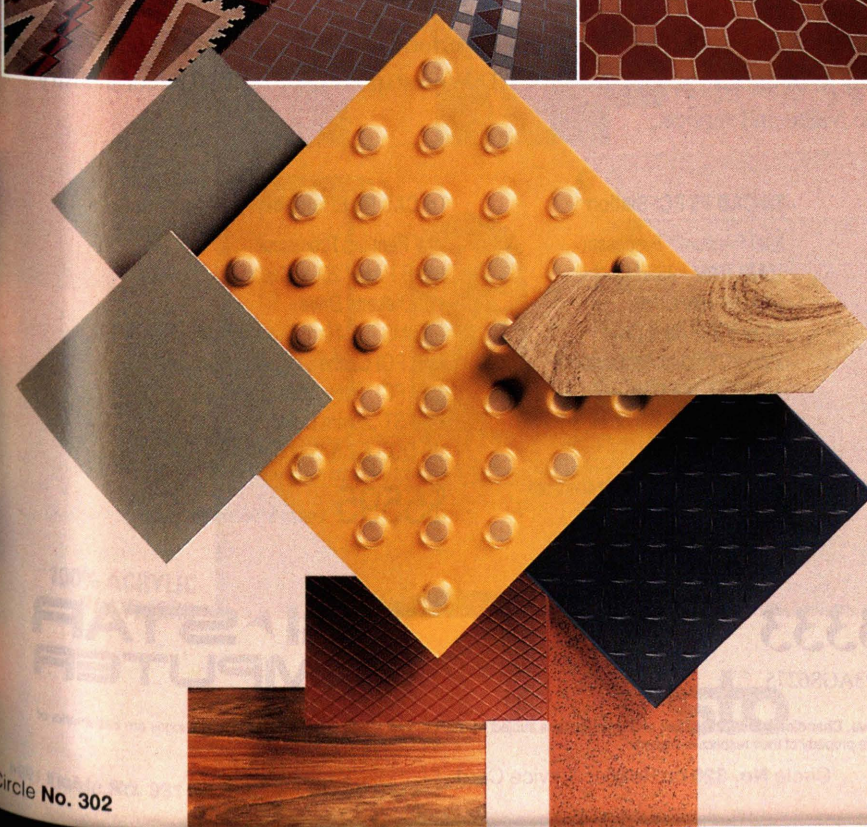
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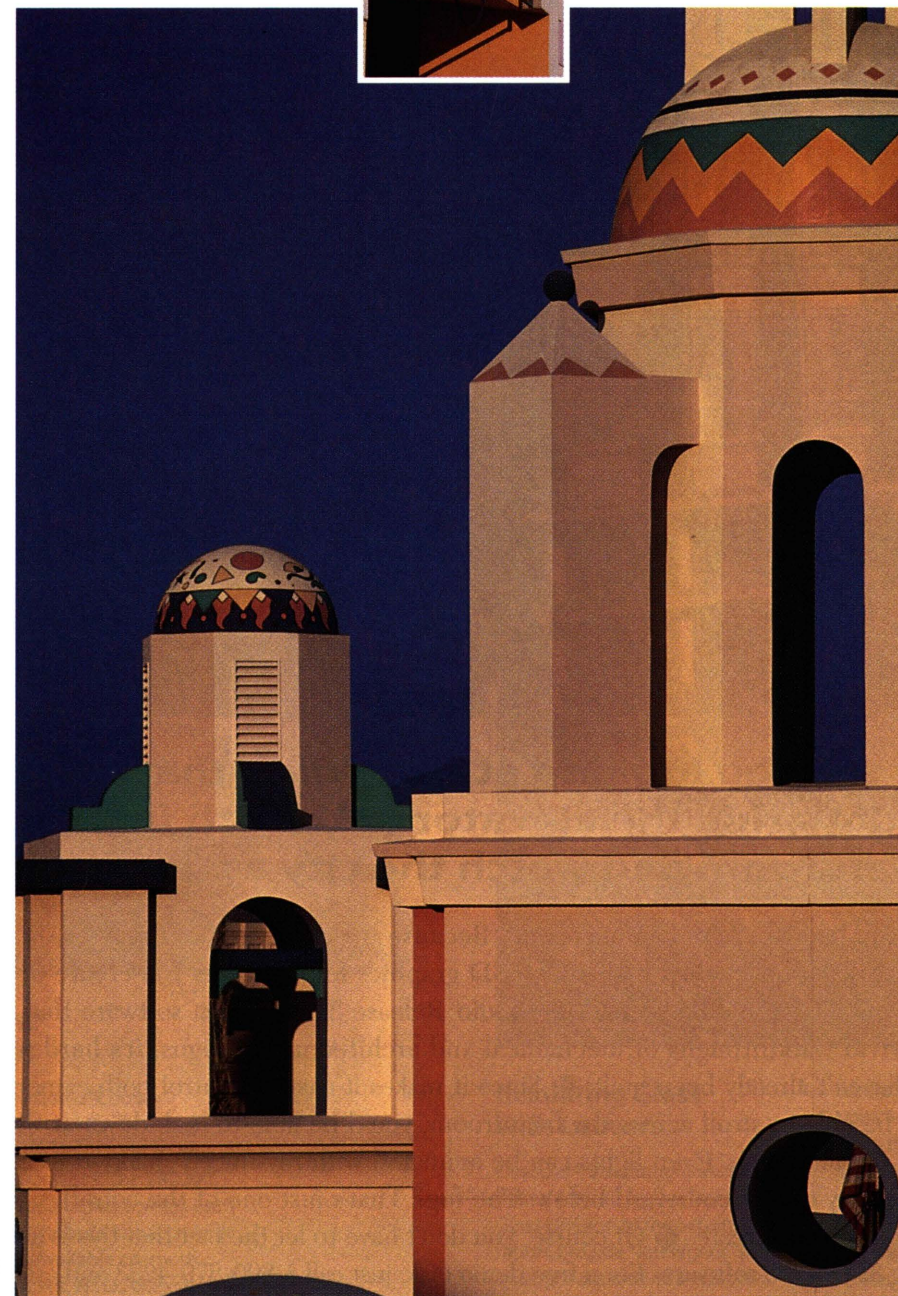
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News Products



Eames and Nelson Classics Reissued

Herman Miller recently announced the reissue of classic products designed by Charles and Ray Eames and by Charles Nelson. Targeting the retail residential market, Herman Miller is now offering the Eames® molded plywood coffee table, molded plywood folding screen, the Hang-It-All™ coat rack, and Nelson's miniature chest and platform bench.

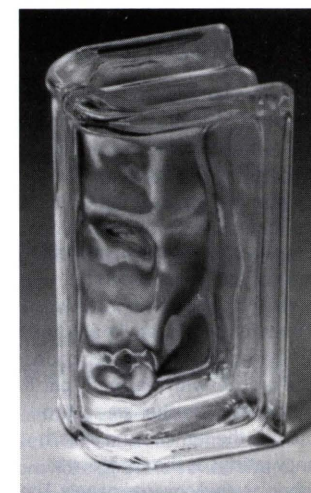
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Vandal-Resistant Lighting Fixtures

The Lumark Lighting division of Cooper Lighting has introduced a new family of high-performance, vandal-resistant fixtures to enhance security in public facilities. The VR2000 series has angled facets and radius corners both to deflect blows and to distribute impact evenly into the mounting plate. Available are more than 40 compact fluorescent, H.I.D., linear fluorescent, and LED lamp sources, with various wattages and performance characteristics. Standard and custom color options are extensive.

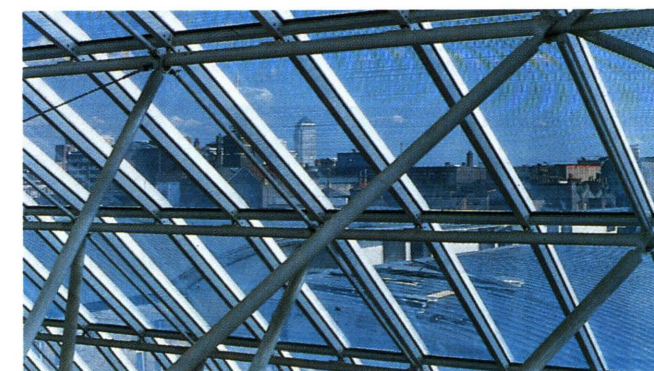
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Glass Block Finishing Unit

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Metallic Finish for Acoustical Panels

Decoustics, a Canadian manufacturer of acoustical panels for walls and ceilings, has introduced a new line of six metallic finishes (in shades of silver, pewter, copper, and bronze) with real metal particles. Metallo finishes are said to provide the same sound absorbency ratings as the company's fabric or vinyl covered panels. The finishes can be applied to a sound-absorbing core or to a sound-reflective panel.

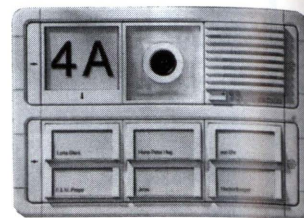
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Tables by Yabu Pushelberg

The Virso Table series, fabricated by Nienkamper, was designed by Yabu Pushelberg, an interior design firm based in Toronto. The laser-cut stainless steel frames support a 1/4"-thick tabletop available in clear or frosted glass, tile, stone, or wood; several table sizes and shapes are available.

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Integrated Building Communications System

This integrated intercom and security camera (shown above) is part of a comprehensive building communications system called Siedle-Vario® from SSS Siedle. The modular system, constructed of high-grade polycarbonate for indoor and outdoor applications, includes entryway speakers, call button, lamp, and other viewing, lighting, and speaking functions. Flush wall-mounted and freestanding units of various sizes and styles may be ordered.

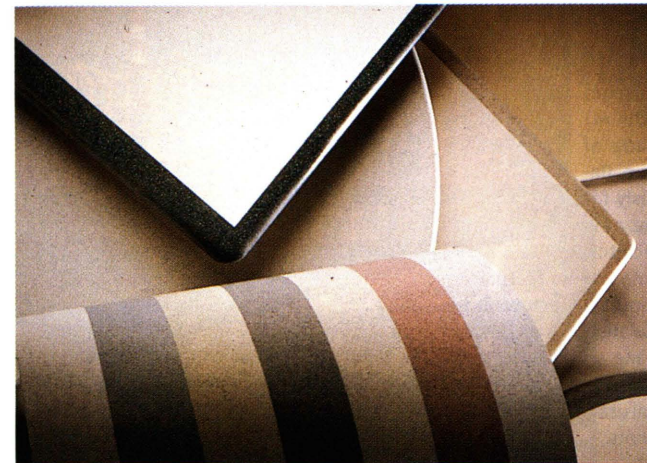
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Wall System with Waferboard Finish

Marlite's Surface Systems interior wall finishes (P/A, Jan. 1993, p. 107) are now available with a stained waferboard surface. Each module has a tinted stain applied to an industrial waferboard substrate, including the edges, and is coated with a catalyzed clear finish. Standard module sizes and metal trim options are available.

Circle 107 on reader circle card

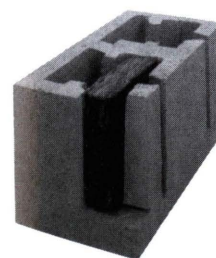


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Acoustical Masonry Units

Soundblox load-bearing masonry units from Proudfoot have a cavity/slot resonator construction. The unit's cavities are closed at the top and the funnel-shaped slots allow the cavities to function as damped resonators for low-frequency sound absorption. Insertion of a metal septum and fibrous filler into the cavities significantly increases the amount of sound absorption. (See Sound Blox article for related information, p. 88.)

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Sound-Absorbing Masonry Units

Trenwyth Industries' new Type III Acousta-Wal blocks are structural, sound-absorbing concrete masonry units designed to absorb a wide range of sound frequencies; the units have closed tops and vertical slots in front of the cavity. High-frequency sounds are reflected by a metal septum inserted into each cavity, and resonate within the smaller chamber created by the septum; low-frequency sound waves reverberate throughout the entire cavity. Acousta-Wal blocks are suitable for auditoriums, gymnasiums, power plants, and other industrial and institutional uses; they are available in four-, six-, and eight-inch thicknesses and may be specified with glazed or ground-face finishes.

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News Products

Energy Efficient Product Directories

Iris Communications has announced the publication of its 1994 *Residential Energy Source® Directory* and 1994 *Commercial Energy Source® Directory*. Each contains hundreds of building product descriptions.

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Sound Control Mortar for Tile, Stone

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Directory of Products with Recycled Content

The Harris Directory is a national database of building materials with recycled content. Published by The Stafford Architects, Seattle, it has more than 1,500 listings, each of which includes CSI division and section; product description; type and percentage of recycled content and environmental benefits; tests and standards approvals.

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Editing Tool for Scanned Drawings

Rasterex's RxSpotlight V 1.0, billed by its distributor Expert Graphics as the first true scanned drawing editor for Windows, runs as a stand-alone, Windows 3.1-based application that cleans up paper drawings for archive purposes; it is positioned as an alternative to raster editors that work inside the CAD environment, requiring use of a high-end CAD workstation. Fifteen different filters (speckle removal, thinning, thickening, and contour decoupling, for example) are included for single-operation cleaning of the entire file. Circle 113 on reader service card

VersaCAD Version 8.0 for PC CAD Users

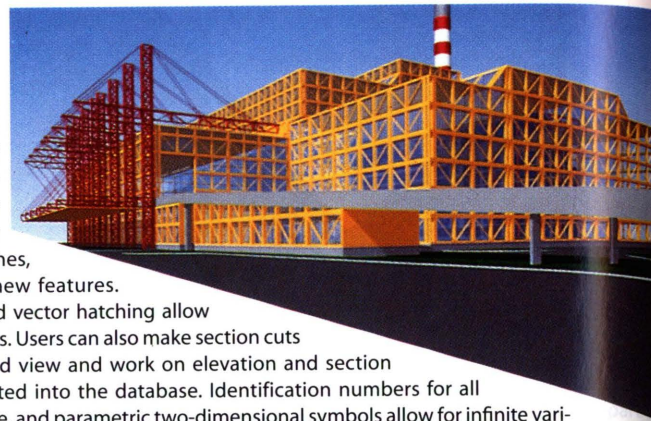
VersaCAD® Version 8.0 is a new release of CAD software for MS-DOS®-based PCs from Computervision Corporation. Some of its new features are: automatic change updating for reference files; storage of multiple files with drawings; and enhanced network utilities that enable rapid, graphic selection of file names. Two versions of Version 8.0 are available: VersaCAD/386 for users working on Intel® 386 and 486 MS-DOS-based PCs; and VersaCAD Design for users of IBM® PCs and compatibles with a minimum memory of 640K running MS-DOS version 3.3 or higher. Circle 114 on reader service card

Drawing Management Software for Windows

CAD Systems Unlimited's Slick! drawing management software is now available for Windows. The Windows version supports DDE, the Windows Clipboard, and MDI. Slick! supports viewing of native AutoCAD drawing files, slide files, HPGL plot files, DXF files, and RLC and CALS Group IV raster files. Its features include query and reporting capabilities and a user-defined database structure. Circle 115 on reader service card

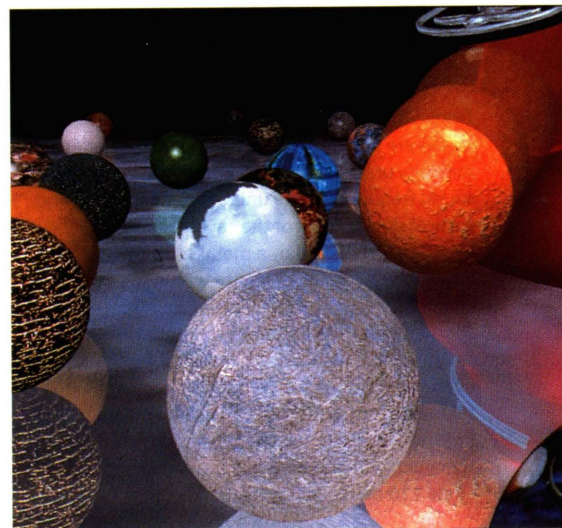
ArchiCAD Upgrade

New this month from Graphisoft U.S. is ArchiCAD 4.5, a major upgrade of the AEC CAD software. Released simultaneously for the 680X0 and the new PowerPC-based Macintoshes, Version 4.5 offers many new features. Vector shadow-casting and vector hatching allow precise shadow calculations. Users can also make section cuts along a staggered line and view and work on elevation and section drawings that are integrated into the database. Identification numbers for all objects track material usage, and parametric two-dimensional symbols allow for infinite variations of basic elements. Circle 116 on reader service card



Three-Dimensional People

Schreiber Instruments, a developer of software programs for AutoCAD® and 3D Studio®, has introduced a new grouping of 30 human mesh models for use in any rendering or animation. IMAGINE 3D People™ has a minimum number of vertices, allowing users to add people to their files without any noticeable change in file size or rendering time. The software includes male and female models sitting, standing, walking, and jogging, in three clothing styles (office, casual, and athletic). Circle 117 on reader service card



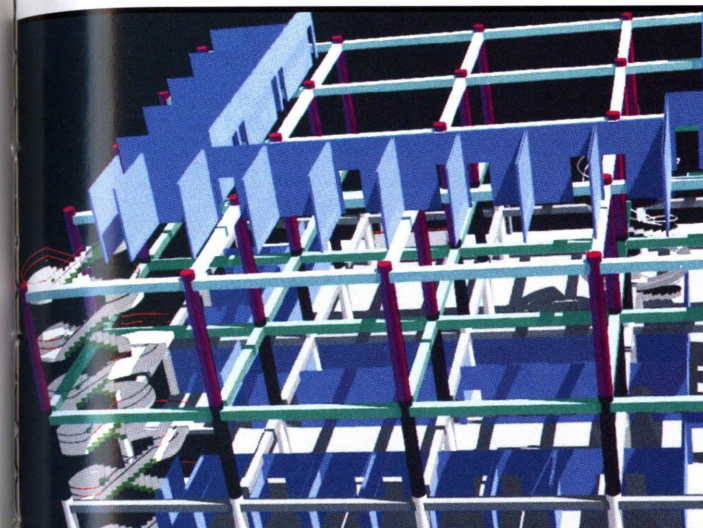
Texture Maps in CD-ROM

The Multimedia Division of Autodesk has introduced Texture Universe™, a collection of texture maps in both .GIF and .TGA file formats, formatted on a single PC- and Macintosh-readable CD-ROM. Offering more than 400 natural and synthetic materials arranged in categories such as minerals, water/ice, laminates, stone, plastics, concrete, metals, and fabrics, the texture maps are intended primarily for use with the Autodesk's visualization tools (3D Studio® Release 3 and AutoVision™), though they can be used with any PC- or Macintosh-based graphics software. Circle 118 on reader service card

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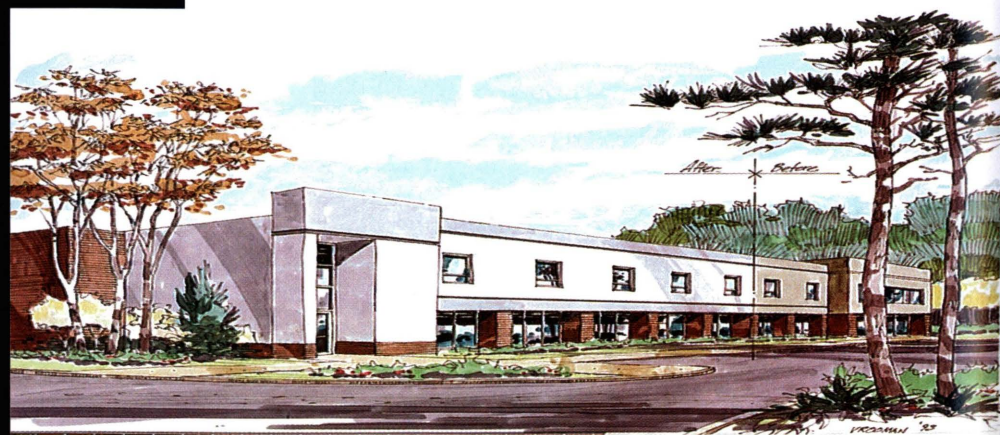
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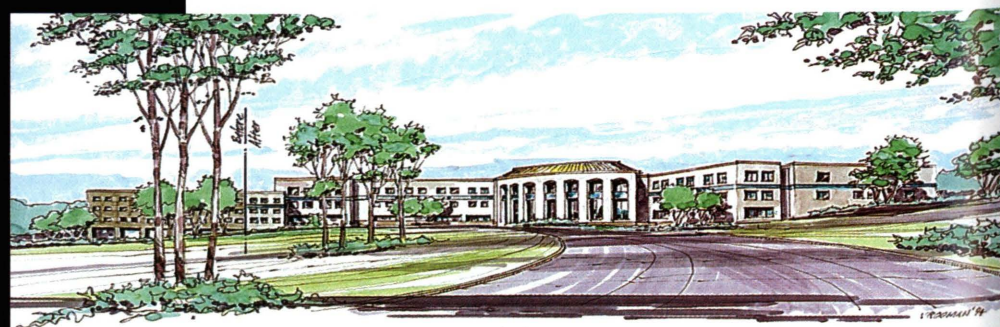
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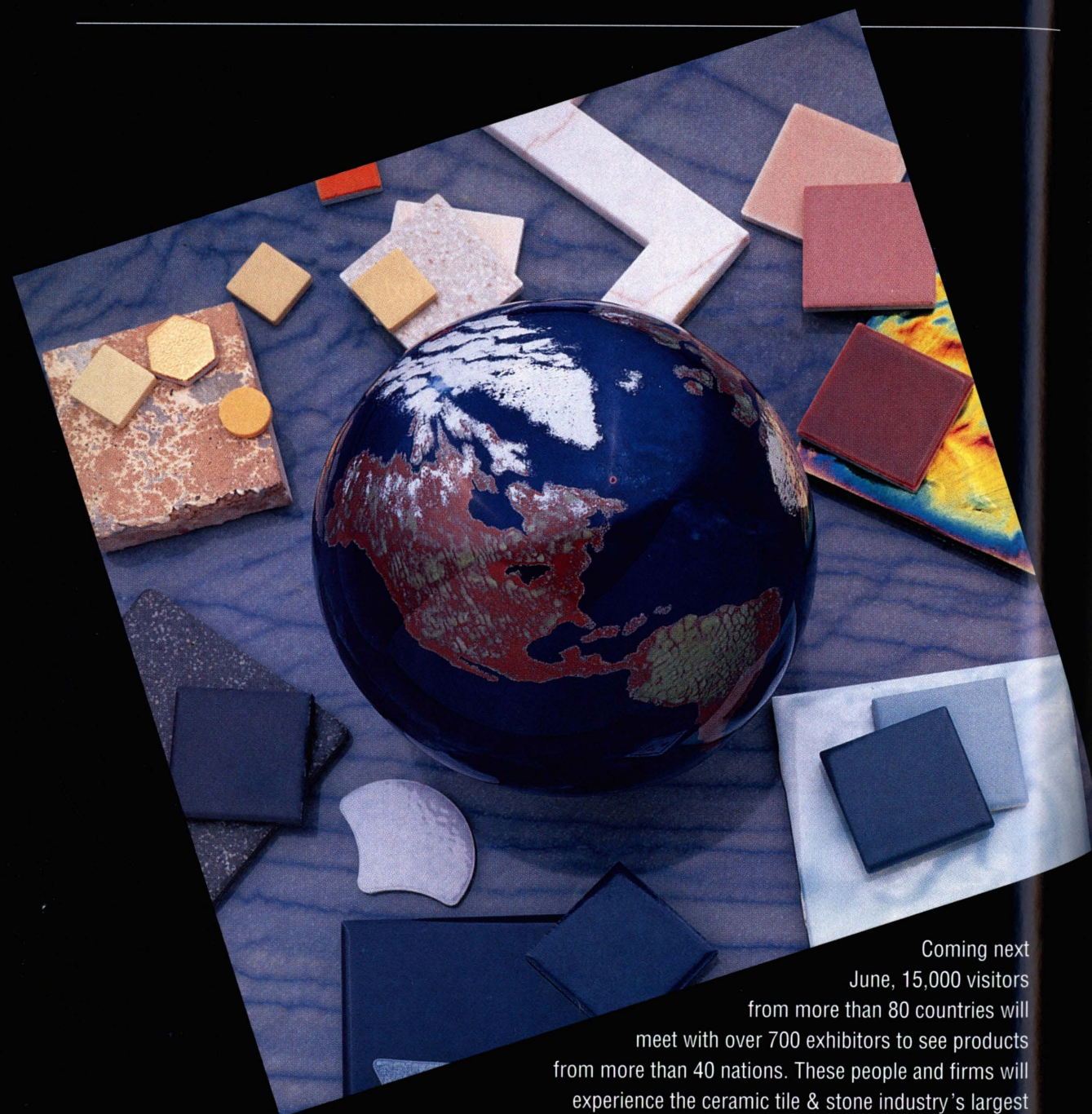
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While architects struggle for their very livelihood, the American Institute of Architects sits fat and happy.

Is this any way to run a professional association?

by Michael J. Crosbie

Photos: Michael Hurd



AIA:

Worth the Price of Admission?

Last December, an audible groan issued from me and thousands of other members of the American Institute of Architects as we opened our dues invoices. The AIA was in our mailboxes again, hand out, asking for our yearly offering to sustain the honor of belonging to this grand and glorious Institute. Is it worth it, we wondered. Don't we have better things to do with several hundred dollars than send it to Washington, for the privilege of putting three letters after our names and receiving an annual allotment of AIA junk mail?

Right on cue, the next issue of the *AIA Memo* carried an article, "AIA membership—What's it worth to you?" Written by an AIA staff member, the article reassured us that, yes, membership is worth every penny, and listed the Institute's accomplishments over the past year. Send the check.

In an interview before he stepped down last month as AIA's Executive Vice President and Chief Executive Officer, James P. Cramer was chipper about the Institute's accomplishments during his five-year tenure. In a time when the architectural profession is being beaten to a pulp — losing jobs, losing money, and losing influence on the built environment — AIA membership is up, AIA revenue is up. "If you look at the growth of the organization, and the renewal of its products and services, it's pretty amazing," beamed Cramer. "We're a leader among other associations."

In comparison with the AIA's 300-plus chapters, Cramer went on, things

are positively rosy. "Financially, it's been a real struggle for our chapters to get through the recession," explained the CEO. "Revenue sources dried up, and some firms that had been supporting the chapters dried up. But even during this time, AIA national was growing by a couple of million dollars a year. We were actually doing better than the chapters."

What's Wrong With This Picture?

Alan Weiss of the Summit Consulting Group, the latest in a parade of consultants hired by AIA over the years to study the Institute's effectiveness, finds the Cramer scenario strange. "I don't believe the purpose of the AIA is to be managing its business centers, no matter how great the profit," observes Weiss. "The AIA could outlast the profession under current conditions, which strikes me as bizarre. The Institute is financially stable, but the profession isn't. I'd rather have it the other way around."

So would its members. Weiss's survey reveals their widespread disgust with the AIA for its ineffectual support of architects in the trenches. They point to the Institute's inability to raise public awareness of architecture and the profession's worth, and to raise the financial rewards of practice. They see the national AIA as out of touch with the typical member, unresponsive, its programs uncoordinated. On a scale of 0 to 10, respondents to Weiss's survey ranked the value of AIA membership at 4.41. "The AIA does nothing for us," said one member polled. "It's a pretty expensive loyalty."

Why Not an Architect?

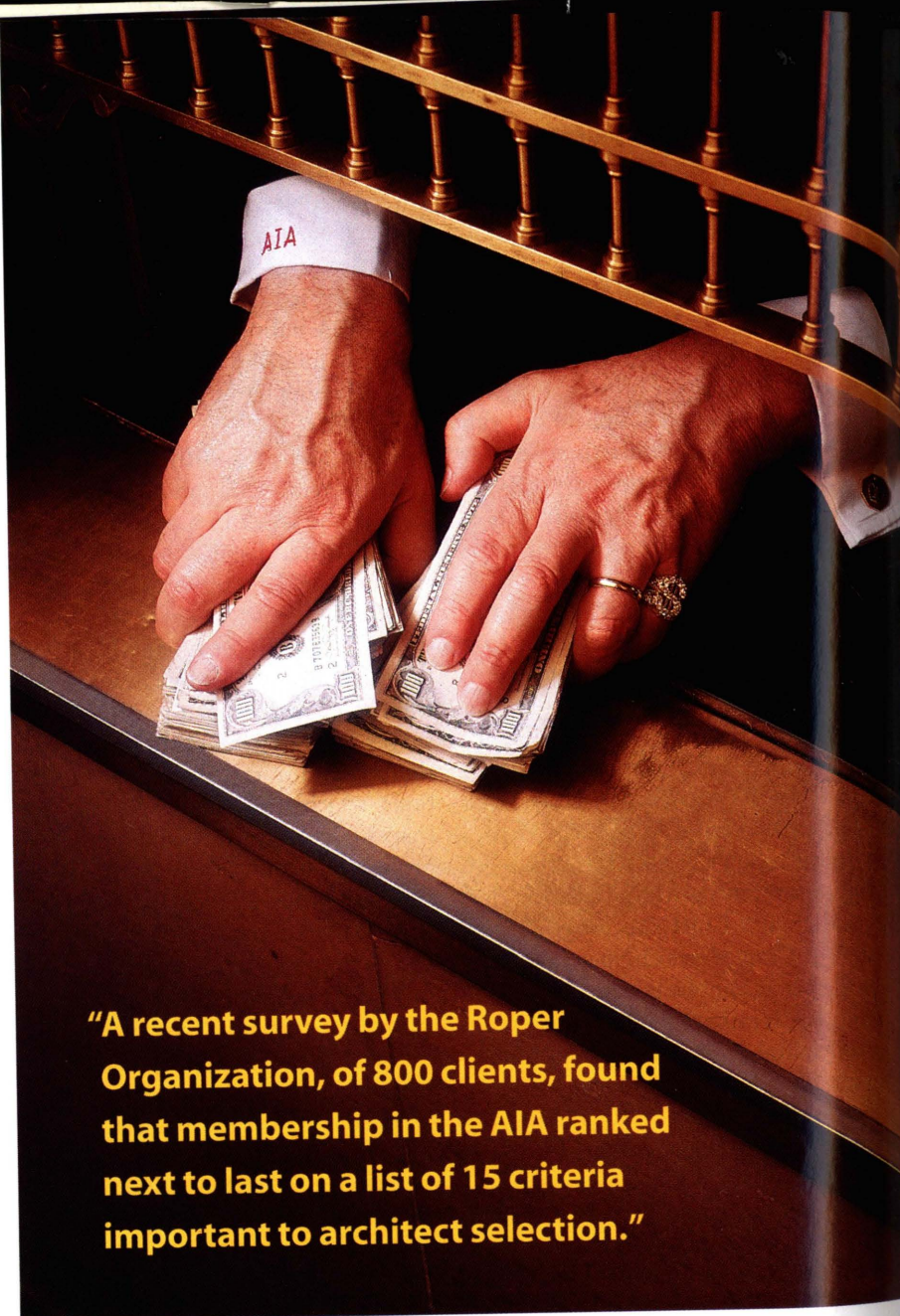
At the beginning of last month Terrence McDermott, a publishing executive, assumed the helm as the AIA's new CEO. The AIA is one of the few associations whose head is not a member of the profession it represents. The American Bar Association, American Medical Association, American Psychiatric Association, American Society of Civil Engineers, American Society of Mechanical Engineers, American Society of Heating, Refrigeration and Airconditioning Engineers, and the American Planning Association are all headed by represented professionals.

A senior AIA staffer believes it sends the wrong signal: "The AIA's CEO should be an architect. It would be a good, strong message to the membership that architects can do a lot of different things and still be architects. It should be someone who understands how an architect's mind works, rather than someone interested in association management and bureaucracy."

PIAs or MIAs?

In 1992 the AIA instituted "Professional Interest Areas" for members who wanted to be kept abreast of developments in a range of subjects, such as design/build or the environment. The response to the PIA program was lukewarm — a result, no doubt, of the \$50 fee for each one, in addition to membership dues. Many of the PIAs existed in name only, and produced little usable information.

This year, to generate more interest, members can sign up free for one PIA, with additional subscriptions at \$50 each, which appear on the annual dues invoice. There are 23 PIAs altogether, and 25,000 members have signed up. The most popular PIA is "Design," with 2,316 subscribers; the least popular is "Risk Management," with 300.



Why Do Architects Join?

There are numerous reasons members cite for joining the AIA. Putting three letters after your name is a big reason. Architects feel that association with the Institute gives them better standing in the eyes of potential clients, who may assume that membership is required for practice, or that it's a higher standard of licensing. But clients are wising up. In his survey Weiss discovered that the luster of "AIA" is fading.

"Buyers are getting smarter," notes Weiss. "They're beginning to learn that as long as they're dealing with a registered architect, it's okay. Or they may not even have to deal with an architect.

The very nature of the designation is eroding." Another recent survey by the Roper Organization, of 800 clients, found that membership in the AIA ranked next to last on a list of 15 criteria important for architect selection. And, as clients become more savvy, they may mistrust AIA members who allow misconceptions about the designation to stand. In that case, "AIA" may become a liability.

Another common reason mentioned for joining is camaraderie with fellow architects, a benefit that members gain at the chapter, not the national, level.

Then there are a number of resources cited that are also accessible to non-AIA members, including professional docu-

ments (Masterspec, contract documents, and the *AIA Handbook of Professional Practice*, all of which receive very high marks), lobbying (the benefits of which accrue to all architects), and publications such as *AIA Memo* and *Architecture* (which can be obtained through subscription).

How Much Does It Cost?

Joining the AIA is not cheap. The standard national dues are \$165 for full membership. Associate status (for those working toward registration) and emeritus membership are slightly less. But that's not all. You cannot join the national AIA without joining one of its

AIA REVENUE AND EXPENSES (1992)

	OPERATING FUND	CORPORATE RESERVE FUND	RESTRICTED FUNDS	TOTAL
REVENUE:				
MEMBERSHIP	\$11,032,547	\$ —	\$ —	\$11,032,547
CONVENTION	1,183,655	—	—	1,183,655
PROFESSIONAL DEVELOPMENT	2,873,471	—	—	2,873,471
PUBLICATION AND ROYALTIES	5,069,736	—	—	5,069,736
SUBSCRIPTION REVENUE	4,803,716	—	—	4,803,716
GAIN ON SALE OF MAGAZINE	1,500,000	—	—	1,500,000
INVESTMENT INCOME	232,830	798,337	409,117	1,440,284
RENTAL INCOME	2,139,163	—	—	2,139,163
PROGRAM SERVICES	257,429	—	—	257,429
FEES - ADMINISTRATIVE SERVICES	149,553	—	—	149,553
OTHER REVENUE	946,820	—	—	946,820
TOTAL REVENUE	30,188,920	798,337	409,117	31,396,374
EXPENSES:				
MEMBERSHIP	4,021,554	—	—	4,021,554
CONVENTION	933,411	—	—	933,411
PROFESSIONAL DEVELOPMENT	5,900,674	—	—	5,900,674
PUBLICATION	4,923,509	—	—	4,923,509
SUBSCRIPTION	3,692,112	—	—	3,692,112
REAL ESTATE OPERATIONS	3,498,024	—	—	3,498,024
PROGRAM SERVICES	112,640	—	—	112,640
ADMINISTRATIVE AND CORPORATE	11,500,277	81,023	40,588	11,621,888
SCHOLARSHIPS	—	—	283,719	283,719
TOTAL EXPENSES	34,582,201	81,023	324,307	34,987,531
EXCESS (DEFICIENCY) OF REVENUE OVER EXPENSES	(4,393,281)	717,314	84,810	(3,591,157)
FUND BALANCES, BEGINNING OF YEAR	1,684,281	8,226,337	5,764,853	15,675,471
FUND TRANSFERS	3,841,309	(3,841,309)	—	—
FUND BALANCES, END OF YEAR	\$ 1,132,309	\$ 5,102,342	\$ 5,849,663	\$12,084,314

chapters, and that will at least double the cost. For example, my Connecticut chapter dues are \$220, bringing the grand total to \$385. Fellow editor John Dixon's New York Chapter membership, which requires that he belong to state and local components, carries a hefty price of \$482.

Firm principals take an additional dues hit. AIA members who own their own firms are liable for "supplemental" dues. These are tallied according to the number of architects you employ. AIA national charges \$75 for each architect employee who is an AIA member, and \$182 for each nonmember. There are local supplemental dues, too. For a

hypothetical New York architect heading a midsize firm with 20 architects, half of whom are AIA members, the supplemental dues bill alone would be \$4,190.

It is in the employer's interest to pay employees' national AIA dues, and hope they will pay their own chapter dues, thus reducing the firm's supplemental dues bill. Such an arrangement boosts AIA membership, of course, but it also makes the Institute vulnerable to changes in the dues structure. The Summit study found that if firms did not subsidize their employees' AIA dues, at least 50 percent (and maybe as many as 90 percent) of those employees would drop their memberships.

Membership: Up, Down, or Interred?

During the past five years, AIA membership has seen-sawed. From December 1989 to December 1990, membership grew by 1 percent. The following year, it remained virtually the same, increasing by only .002 percent. In 1992 membership took a tumble, decreasing by nearly 4 percent. Last year, from December 1992 to December 1993, it declined by approximately 1,200 members. Membership currently stands at 55,000, but this tally is probably inflated. A number of spouses of deceased members report trying to have their loved one's name removed from the AIA rolls, to no avail.

"Believe it or not, it is cheaper to join the American Bar Association, the American Dental Association, or the American Medical Association than it is to join the AIA."

How do AIA dues compare to those of other professional organizations? Not very well. Believe it or not, it is cheaper to join the American Bar Association (\$225), the American Dental Association (\$330), or the American Medical Association (\$420). Among the engineering associations, it is less expensive to join the American Society of Civil Engineers (\$125), or the American Society of Mechanical Engineers (\$80). The American Planning Association dues are based on income, but are never more than \$161.

Where Does the Money Go?

In 1992, the last year for which audited records are available, AIA national took in over \$11 million in dues, which accounted for nearly 37 percent of its revenue. The rest of AIA's operating budget came from publications, program services, rental income, and other assorted sources (see table, page 63). That year the AIA had a \$4.4 million deficit of expenses over revenue, which was partially offset by a transfer of \$3.8 million from the Institute's corporate reserve fund.

The AIA's largest single expense is its staff: more than 200 employees at headquarters, a number that has remained virtually unchanged, according to Cramer, during his tenure (while the profession downsized). The Institute's payroll is over \$11 million annually. Salaries range from \$12,000 at the basic staff level to \$85,000. The Institute's seven group vice presidents each earn \$100,000. The EVP/CEO is paid \$225,000. Benefits add another 31 percent to salaries.

Do these incomes seem high, especially for a nonprofit organization? Well, the AIA's executives are doing much better than most of the members they serve. According to the Institute's own surveys, the average compensation in 1992 for principals and partners in firms with more than 20 employees was just over \$100,000. Firm associates (comparable to AIA's group VPs) averaged \$58,700. Think of it this way: it takes the dues of 7,344 members to pay these eight members of the AIA's top brass.

If you ask AIA members why they

pay dues, chances are they will say for lobbying or to improve the public's understanding and appreciation of the profession. When P/A polled architects seven years ago about what the AIA should be doing, these two activities were at the top of their list. The Summit study found a similar emphasis. But only a tiny fraction of dues money actually goes towards these activities. Of national dues, less than 6 cents out of every dollar goes toward lobbying. The AIA has three registered lobbyists, according to one of them, Ann Looper, and their staff support recently was cut back by two people. The public/client-outreach program has a budget somewhere between \$100,000 and \$200,000, and is run by one staff member. This post remained unfilled at press time after a three-month vacancy.

The Million-Dollar Board

Believe it or not, the AIA spends more money on its 49-member board of directors than it does on lobbying and public outreach combined. The board meets four times a year, (five, if you count its get-together at Grassroots). One meeting is held at AIA headquarters, another at the AIA's annual convention, and the other two at locations determined by the AIA President. Last year the spring meeting was in Miami and the fall meeting was in Aspen. The meetings last from two to three days (more about this later).

The board's budget allows \$100,000 for direct expenses (hotels, food), \$150,000 for overhead, and \$180,000 for travel (board members are funded to bring spouses to three meetings). There are \$206,000 for Grassroots travel, convention expenses, transportation for board candidates, and regional travel, and \$6,000 in miscellaneous expenses. The AIA President has a \$50,000 travel budget and a \$30,000 discretionary fund. The EVP/CEO has a discretionary fund of \$10,000. Then there's a \$300,000 "opportunity" fund that the board can distribute as it wishes. "It gives the board the flexibility to be responsive, without getting wrapped up in bureaucracy," explains Cramer.

Is the AIA board worth it? Some of

its own members have their doubts. For one of them, it was not the rarefied, deliberative body he expected. "It's more like Moe, Larry, and Curly go to Washington," he chuckles. Another board member commented that the meetings are interminably long, as discussions are conducted by passing a microphone around the room so that all 49 members can have their say. Deliberations routinely veer off into the minutiae of AIA operations.

Staff Infection

The board saps staff time and attention that might otherwise be directed toward serving members. Weiss's study found that the AIA staff focuses primarily on keeping the board happy. According to one staffer, "My customer is the board and senior management." Another AIA employee, in a priceless display of the Beltway mentality that pervades Washington, told Weiss: "If it wasn't for these members continually bothering us, and for the board and its demands, this would be a fine job."

Weiss observes that "the national staff has been adversely affected by a dysfunctional, strained, and often hostile relationship with its own board." He found no evidence that staff was paid in relation to helping members. The staff was focused on and was rewarded for completing tasks (churning out reports, minutes, cassette albums, and other AIA "products") to the board's approval. "Some of these products might have helped the membership," says Weiss, "but that was almost by accident." Weiss believes that the AIA staff is talented but "unempowered," because it needs several layers of board and executive approval to do anything. The relationship needs to be more congenial and collaborative.

As for the board itself, its size is the biggest hindrance to its effectiveness (and it also makes it more costly). Several consultants over the years have suggested that the board be reduced to seven to 11 members. Weiss presented a strategy to cut the board to 21 members. The board deliberated and voted 29 to 15 to reject Weiss's plan. Not only that, it

(continued on page 100)

Glenn Murcutt's Ecological Eloquence

Australian architect Glenn Murcutt has been blending European Modernism with vernacular and indigenous Australian forms for more than 30 years, producing buildings that are a model of ecological architecture. *by Françoise Fromonot*

At a time when architects around the world are addressing environmental concerns, it is worth studying the work of Australian architect Glenn Murcutt. He has designed a number of eloquent steel, aluminum, and glass buildings that seem to float above their sites. Along with their sensitive siting, these structures also attend to the climate and context with a Modernist vocabulary, belying "the notion," writes Anne Whiston Spirn of the University of Pennsylvania, "that ecological architecture must be rustic architecture with sinuous forms, half-buried in the ground, or nostalgic imitation of vernacular building forms." This is, she adds, "an ecological architecture appropriate for our time." She's right. Editors

Glenn Murcutt's buildings strongly assert their manmade quality in their environment. But the architect's reverence for the natural world is the main key to his work. In his houses, whether in urban or rural locations, he strives to connect the owner to nature's ritual cycles. His unshakable faith in the absolute value of nature has led to his use of analogies between natural and architectural principles as catalysts of the design-generating process: the continuity and logic of structures, the importance of limits and articulations, adaptation to climate, and the restraint and efficiency of forms.

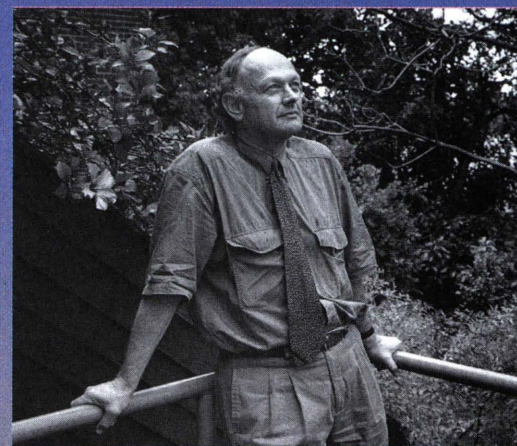
Murcutt, who practices just outside Sydney, also has an extensive knowledge of the complex Australian landscape,

and endeavors to offer his interpretation of it in built form. For each new project, his thorough analysis of the site becomes one of his design tools: topography, flora, prevailing winds, temperatures, sun angles, rain, vistas, become part of the brief, determining siting, orientation, openings, and materials. Murcutt also attempts to let the constraints of the site shape the design so that disturbance is minimized – an attitude reminiscent of Ian McHarg's pragmatic use of ecology.

An interest in traditional societies is evident in Murcutt's work as well, particularly the way they dwell in relationship to place – landscape, climate, resources – and how they see it as sensible and timeless. During his first trip to Europe, in the early 1960s, Murcutt was impressed by the geometric shapes of the Greek villages and their clever, spectacular sitings and by Finland's Modern architecture softened by local tradition and inspired by the landscape.

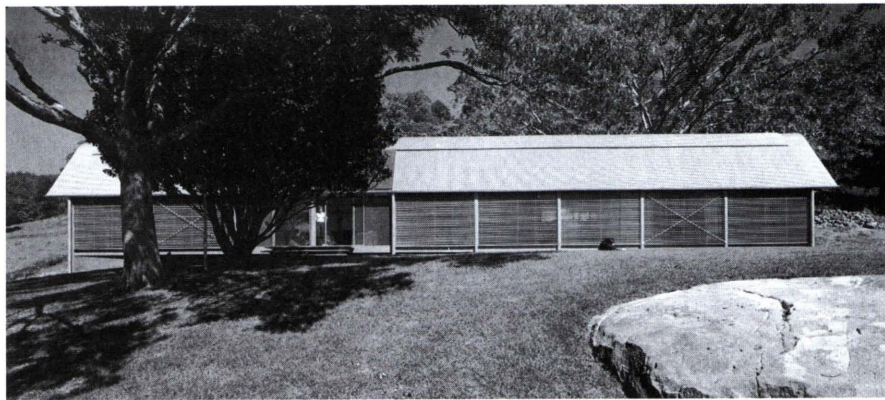
Murcutt often refers to design as a "chess game"; each new building implies for him a new strategy, with different data but identical rules. This has produced a "Murcutt typology," which over several decades, has resulted in a rich and remarkably consistent *oeuvre*.

Françoise Fromonot is a practicing architect and writer who lives and works in Paris and Sydney. Her monograph on Glenn Murcutt will be published by Electa later this year.



HOUSE AT BINGI POINT, NEW SOUTH WALES, 1984, GLENN MURCUTT (INSET)

Anthony Browell



FARMHOUSE AT JAMBEROO, NEW SOUTH WALES, 1982

The Vernacular Meets European Modernism

Unlike the traditional Australian house – historically a variation on stiff domestic patterns imported from England and merely adapted to the climate by the grafting of awnings or verandas – vernacular agricultural and industrial buildings have provided Murcutt with local examples of the “appropriateness to place” he seeks for his own architecture. He feels close to the aesthetics of necessity and the common-sense inventiveness displayed by timber and corrugated iron barns, stores, woodsheds, and shearing sheds, adapted to function and responsive to climate. His work explicitly refers to these modest constructions, regional versions of widespread building types. Murcutt also “borrows” from them simple materials or devices he considers suitable to his own purpose – corrugated iron, glass louvers, or ventilation systems.

Since the mid-1980s, Murcutt has also become familiar with the original culture of Australian Aborigines, the now marginalized tribes he calls “traditional custodians of the land.” In their both pragmatic and sacred relationship to their home, he sees a precedent for the symbiosis between man and nature he also strives for.

Concurrently, Murcutt’s architecture is deeply indebted to European Modernism. Mies van der Rohe’s 1946–1951 Farnsworth House and Pierre Chareau’s 1928–1931 Maison de Verre have had a crucial impact on the modeling of his

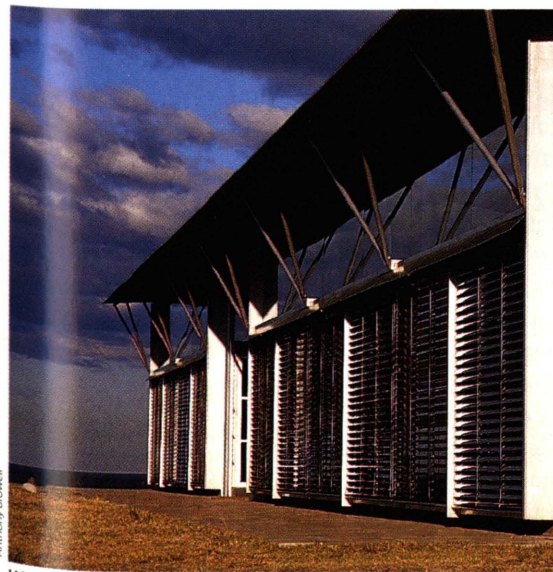
architectural vocabulary.

Murcutt has been familiar with Mies’s work since the newly completed Farnsworth House was first published by *Architectural Forum*. Although his first work was more akin to the California architecture he admired while a student (Ellwood, the Case Study Houses) than to the sublime purity of Mies’s steel and glass temples, there are direct quotes from Mies in early plans and details and a stated endorsement of his master’s planning principles. The powerful image of the Farnsworth House remains somehow present throughout Murcutt’s work as the elongated glass pavilion mediating between man and nature.

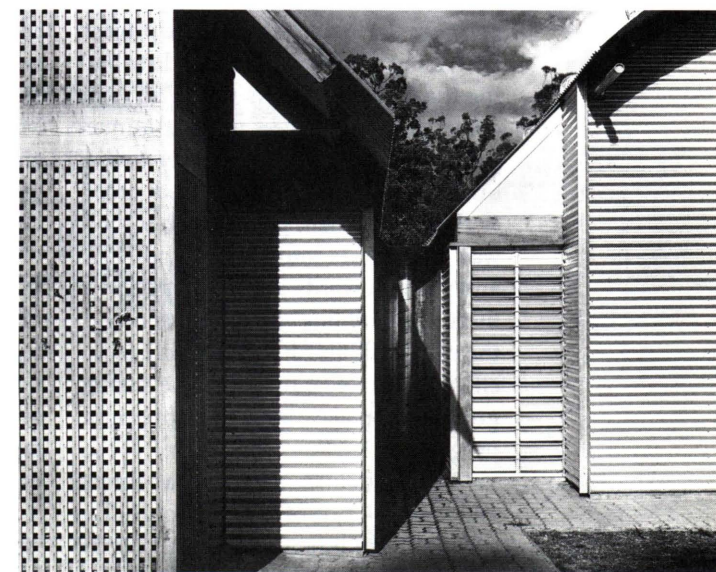
Murcutt visited Chareau’s Maison de Verre in Paris during his 1973 round-the-world trip, and the liberating experience of its “modernity without dogma” gave his architecture a decisive impetus. Stimulated by the example of Chareau, Murcutt reconciled his equal taste for craftsmanship and industrial products: for instance, he uses standard components as often as possible, but alters them if required, like a semitailored garment. Affinities with the spirit of Chareau can also be traced in Murcutt’s conception of his houses as adjustable machines, where light and air can be tuned to changing needs, and in the rational and poetic way he can express function, as demonstrated with *brio* by his efficient and lyrical column-like rainwater pipes.



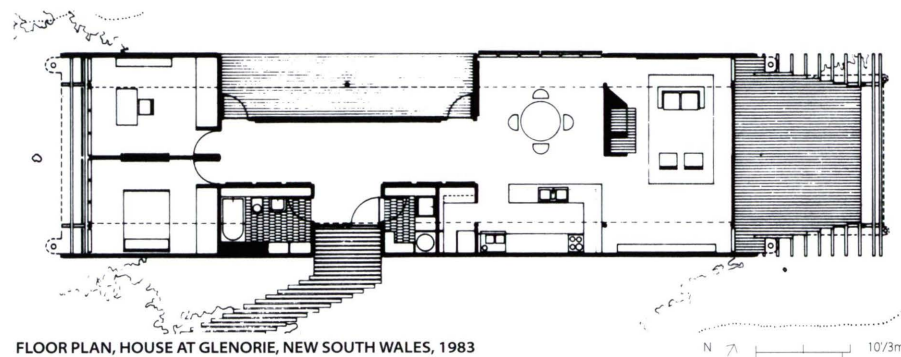
MUSEUM AT KEMPSEY, NEW SOUTH WALES, 1988



HOUSE AT BINGI POINT



MUSEUM AT KEMPSEY



FLOOR PLAN, HOUSE AT GLENORIE, NEW SOUTH WALES, 1983

The Long Plan

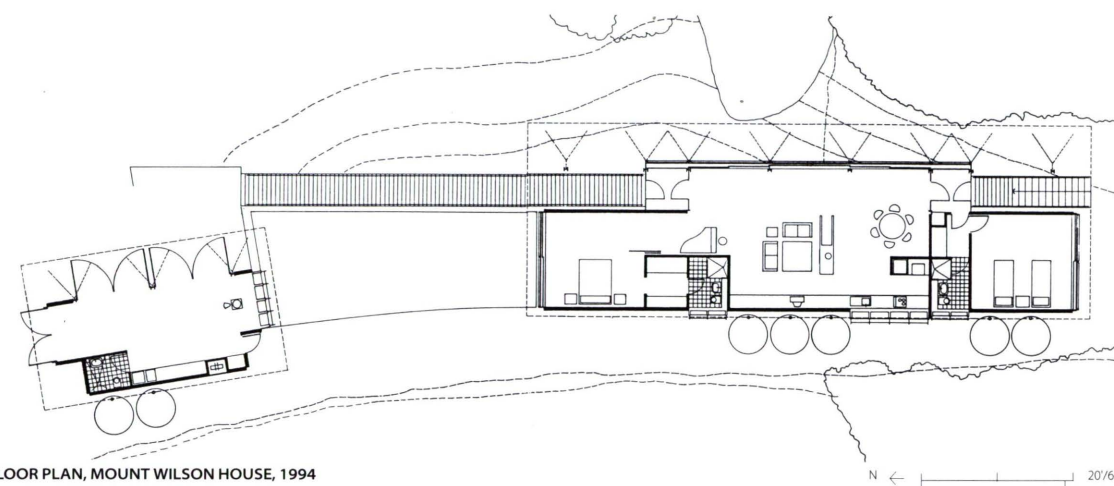
The most striking of Murcutt's hallmarks is the long, lean rectangular plan, common to most of his houses but also to larger projects such as the regrettably unbuilt Broken Hill Museum. This recurrent shape echoes the stretched clear span volumes of Murcutt's influences (the Farnsworth House and the Australian shed), reflects a similar structural order (post and beam), and serves climatic efficiency (one-room-wide naves can easily be cross ventilated). The route through the building can even become a kind of narrative in the landscape. Validated by his discovery of comparable perceptions in Aboriginal culture, Murcutt has increasingly investigated this idea. At the Mount Wilson house, such an open-ended journey becomes the main feature of the project, describing the whole site and distributing the buildings on its way. The route comes from the access path, continues past the workshop on a slender timber bridge alongside a planted pond, crosses the house, then, going down a stairway, disappears into a scenery of trees and rocks towards a sweeping view of distant mountains. The subtle siting of the two pavilions further dramatizes the effect as the elevation above the sloping ground increases with the horizontal progression.

Thus Murcutt's plans appear simple and legible – two of his key words. The way he disciplines servant and served spaces also contributes to this clarity. The Bingi house presents the most radical version of an organization he has often explored. Circulation and “wet”

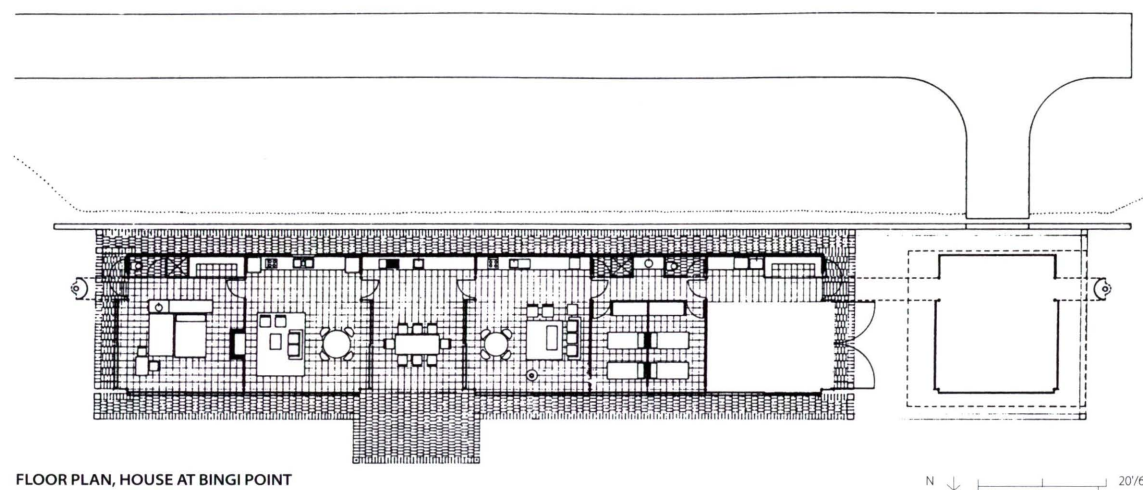
areas are lined up on one side and living areas on the other, in parallel layers. The two opposite long façades are devised according to this distribution and to their orientation – almost hermetic and opaque to the south, while to the north (the sunny side in Australia) large glass windows can slide open onto the view. Such a dichotomy has always been a Murcutt favorite: his very first house, designed while still a student for Olympic swimmer John Devitt, was dubbed “the house with two faces” by a critic.

In his isolated pavilions, Murcutt gathers all his spaces within a primary envelope, extruded from a typical cross-section – the largest-scaled sheet in his sets of working drawings. Even in his urban projects, this envelope is designed to differentiate the functional and the symbolic roles of protection and enclosure, related respectively to what Murcutt calls refuge and prospect. Roof and structure define the shelter; independent “skins” delimit the free plan; the interval between the specific shape of the roof and the constant height of these skins is left virtually open, often throughout the building, to ensure the constant legibility of this duality. Thus the winglike roof of the Bingi house seems to hover above the seven-foot-high façades and partition walls, wherever you stand inside the house.

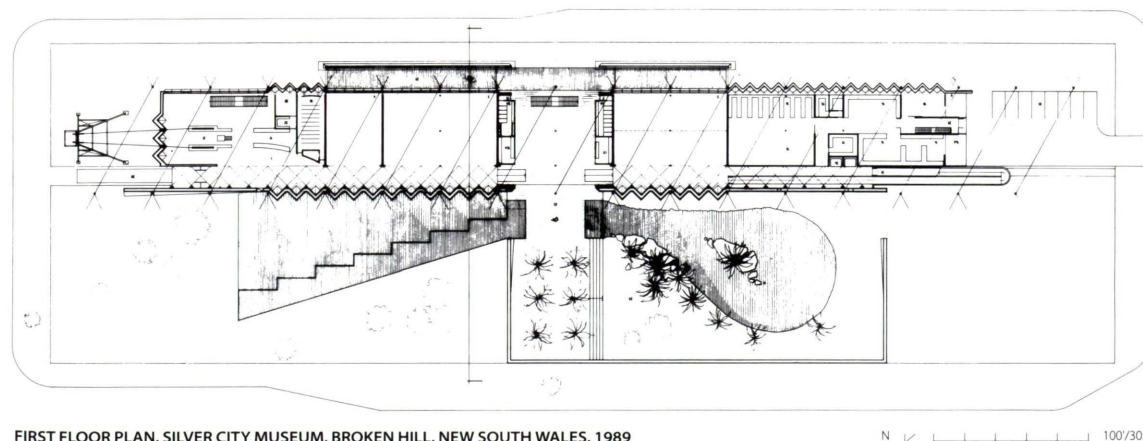
It is in this sense that Murcutt most symbolically – and successfully – embodies in his buildings both the essential notion of shelter and the technological sophistication of Modern architecture.



FLOOR PLAN, MOUNT WILSON HOUSE, 1994



FLOOR PLAN, HOUSE AT BINGI POINT



FIRST FLOOR PLAN, SILVER CITY MUSEUM, BROKEN HILL, NEW SOUTH WALES, 1989



NORTHWEST ELEVATION, SILVER CITY MUSEUM



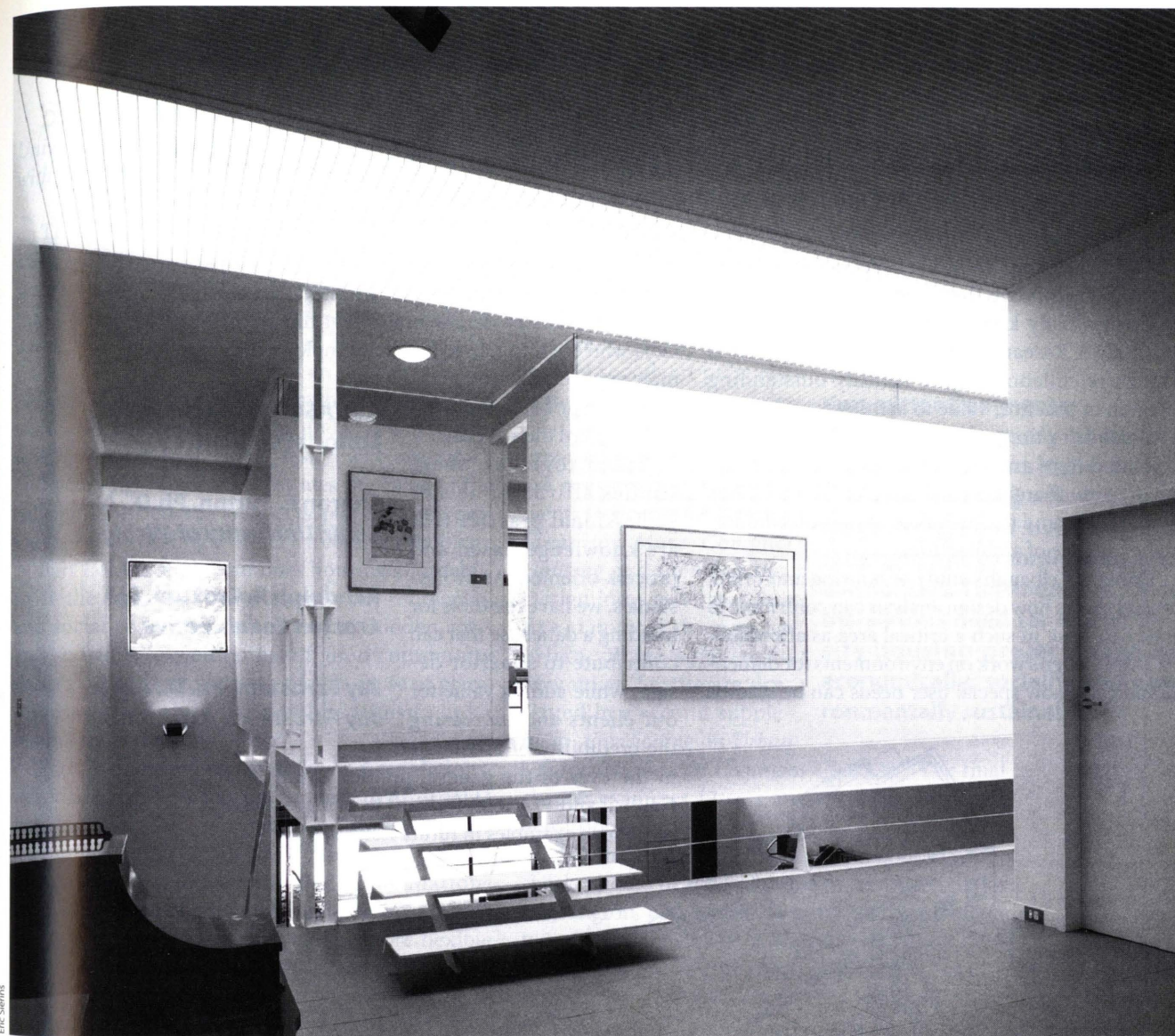
HOUSE AT BINGI POINT

Light to Separate and Connect Space

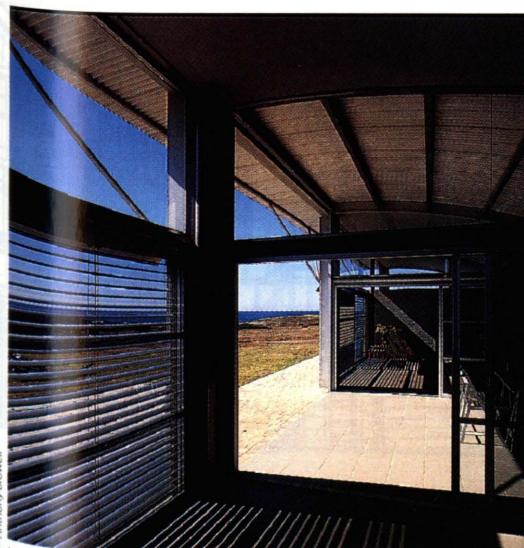
Murcutt treats light as a Modern material and celebrates it in its local specificity. The interiors of his buildings are easy and fluid. Filtered or bounced, always controlled, a tamed flow of light reinforces spatial continuity. Insertions of glass between walls and ceilings, or in the corners of façades, allow unexpected glimpses beyond each room. In his numerous renovations, Murcutt shows his virtuosity in transmitting light and vistas throughout a house from distant or restricted openings. In the Paddington terrace house, for instance, he has split the street level in two and raised the back portion a couple of feet above the street side, thus creating a dramatic visual link between the north-facing living room veranda, one floor below, and the darker entrance hall.

But Murcutt also plays with a characteristic of the Australian light to separate rather than connect. He once again draws this observation from the Australian landscape, where a unique

combination of species, soils, and harsh climates generates a tough but light, scattered flora and a discrete foliage disclosing the structure of the trees. Consequently, the external envelopes of Murcutt's buildings are often crisp, even sculptural. In his detailing, Murcutt likes to underline reliefs and discontinuities which will be further emphasized by this sharp, raw light: carefully dimensioned gaps between different planes (the floating roof, detached walls, and steel frame of the Paddington veranda); embossed expression of the envelope's sectional composition (the gable end of the Glenorie house); conspicuous folds or overhangs to accentuate cast shadows at the junctions between materials – almost a Classical device. From inside to outside, as soon as it crosses the glass fanlights between façade and roof, the ceiling turns from the smooth surface of timber or painted plasterboard to a mere exhibition of the bare purlins and their metal sheeting. □



TERRACE HOUSE RENOVATION, PADDINGTON, SYDNEY, 1990



HOUSE AT BINGI POINT



FARMHOUSE 1, MOUNT IRVINE

Architectural Research

Important current research into housing density, designing for those with dementia, and the globalization of the construction industry.

Can practicing architects tap into the latest research to improve their services and make the profession truly knowledge-based? P/A and the AIA/ACSA Research Council think so, which is why we're collaborating to identify outstanding research of practical value to architects and to disseminate it to the profession. The three projects presented here are heterogeneous, and illustrate the breadth of architectural research, the methods it can utilize, and the relevance of rigorous inquiry to the practice of architecture.

Douglas Kelbaugh's study of housing and urban density shows how design analysis can contribute to policy-making in such a critical area as affordability. Uriel Cohen's work on environments for dementia indicates how special user needs can be studied

and supported through design. And David Hawk's examination of trends in the international construction industry demonstrates that those architects who wish to participate in complex projects may require new organizational responses and attitudes toward their clients.

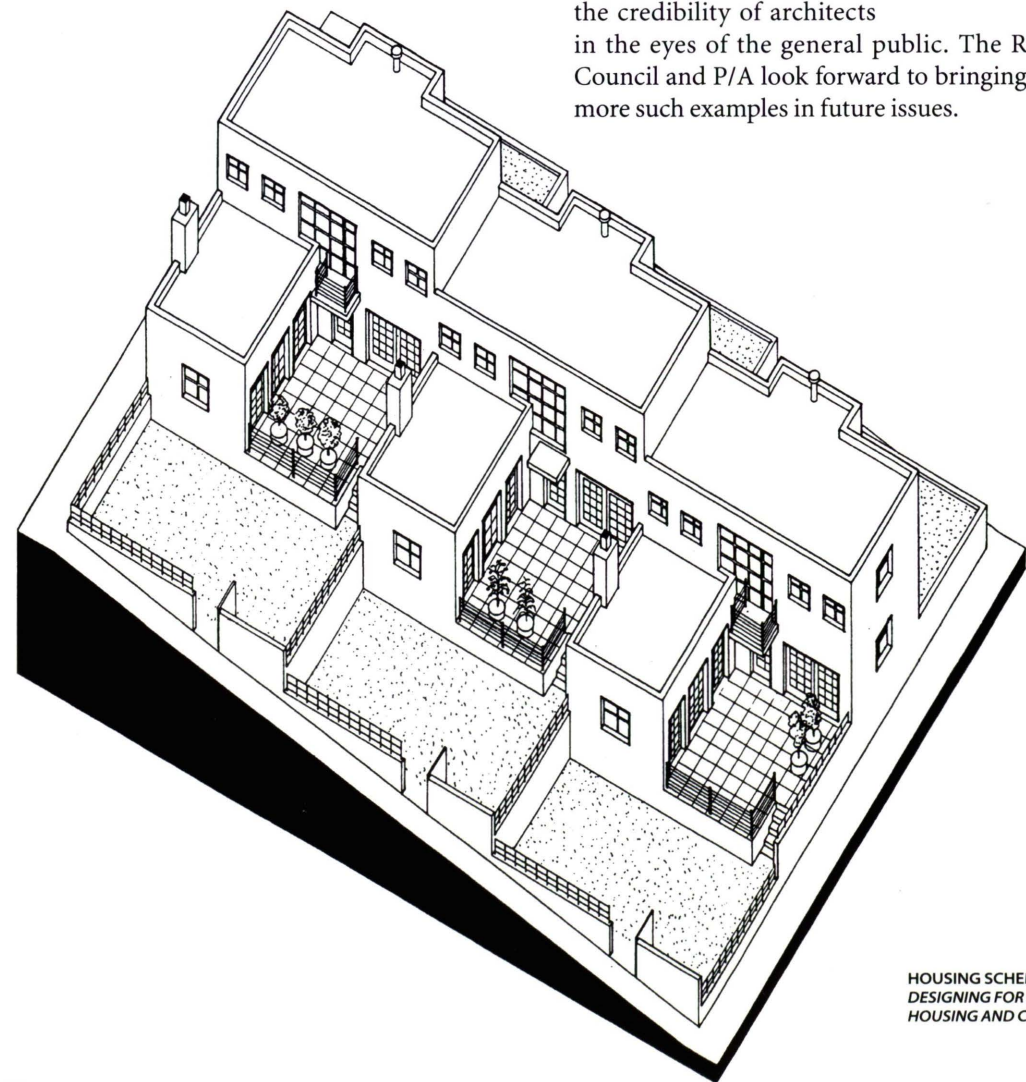
Taken together, these studies affirm models of professional practice that are knowledge-based and process-oriented. As professionals, we have the tools for building a data base that can contribute to superior design, while adding value for our clients and increasing the credibility of architects in the eyes of the general public. The Research Council and P/A look forward to bringing readers more such examples in future issues.

AIA/ASCI Research Council Editorial Committee

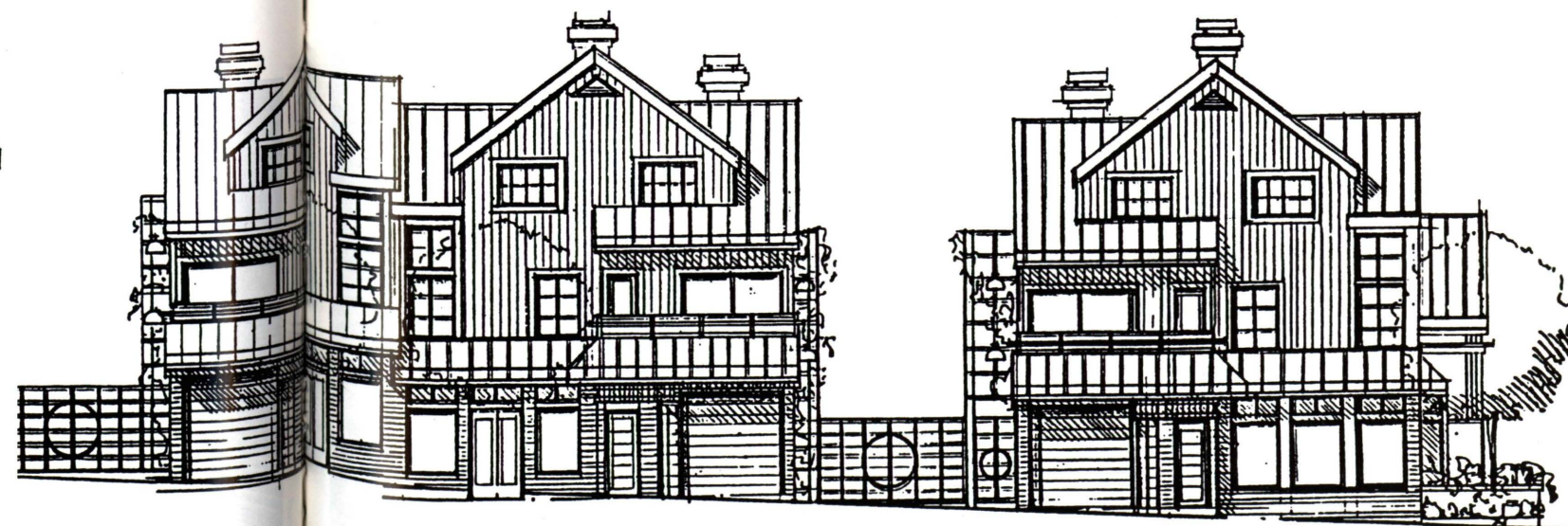
Sharon E. Sutton, Ph.D., AIA
Chair, University of Michigan

Randolph R. Croxton, AIA
Croxton Collaborative

Jay Farbstein, Ph. D., AIA
Jay Farbstein & Associates



HOUSING SCHEMES FOR A SUBURBAN STRIP FROM
DESIGNING FOR DENSITY: IDEAS FOR MORE COMPACT
HOUSING AND COMMUNITIES



Housing Affordability and Density: Regulatory Reform and Design Recommendations

Douglas Kelbaugh, Department of Architecture, University of Washington, Seattle, in collaboration with Mark Hinshaw and David Wright.

This interdisciplinary study analyzes housing affordability at neighborhood and community scales. Because the study addresses the diverse issues that affect housing affordability – design, building codes, zoning, housing policies, land-use regulations, and sprawl – it provides an unusually broad perspective of a chronic problem that is usually dealt with in a fragmented way. The underlying research, which attempts to integrate design with regulatory and planning issues, demonstrates the value of the collaboration between architects, planners, and policy experts in dealing with such a complex problem.

Part I of the study examines housing affordability in the context of the economic, environmental, and social costs of sprawl, including hidden costs and subsidies. Seven points of good community design are proposed, among them a sense of place, increased walkability and public transit, and a rekindling of the public realm.

Part II, focusing on land use and regulations, describes regulatory impediments to affordable housing. Twelve recommended land-use reforms are accompanied by citations of model ordinances drawn from various states. Recommendations include increased mixed-use zoning, model design guidelines to replace zoning codes, more flexible development standards, density incentives, and time limits on permit processing.

Part III presents survey results from professionals in the Washington state's housing industry on costly, unnecessary, or conflicting code requirements. Recommendations include establishing a cost benefit analysis for code changes and interpretations and allowing test-case deviations from codes to encourage new cost-saving ideas.

Design issues and techniques to lessen the impact of higher-density development on surrounding neighborhoods are presented in the final section. Drawings of illustrative designs for urban and suburban housing are presented in a supplement, *Designing for Density: Ideas for More Compact Housing and Communities*. Design ideas generated in a five-day workshop on an urban village adjacent to downtown Seattle are presented in a second supplement, *Envisioning an Urban Village: The Seattle Commons Charrette*. The final chapter examines 17 case studies of existing high-density housing projects.

The three-volume study is available for \$35; checks should be made payable to the University of Washington, and sent to Department of Architecture, JO-20, University of Washington, Seattle, WA 98195. For more information contact: Joanne Hanley, (206) 685-8407, Fax: (206) 543-2463.

Committee Comments:

We chose this study because it integrates the multiple dimensions of housing affordability, from design and building code requirements to zoning and land-use policies. The findings support the serious need for higher density housing projects that are economically, socially, and environmentally sustainable.

Environments for People with Dementia

Institute on Aging and the Environment, School of Architecture and Urban Planning, University of Wisconsin, Milwaukee, WI, 53201.

People with dementia, and those who care for them, demand specially designed environments.

Committee Comments:
Comprising a complete range of programming and design services, this project exemplifies the utilization of research in practice. It is an especially appropriate approach to designing for users whose well-being depends upon having an environment that is fine-tuned to special needs.

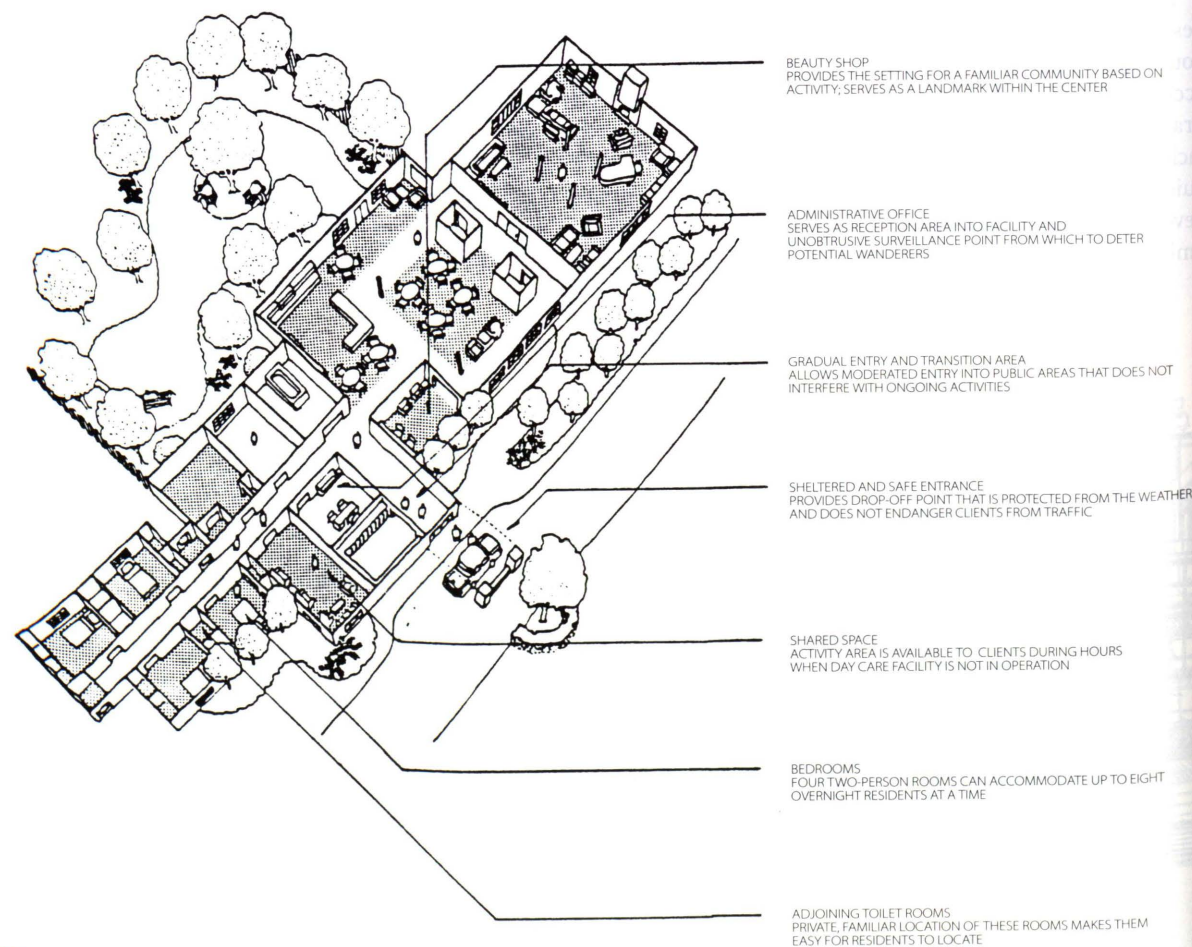
This study addresses their needs in a variety of settings, including homes, day care and respite centers, group homes, various forms of assisted living environments, and long-term care facilities.

Initiated by a seed grant from the AIA/ACSA Health Facilities Research Program, the seven-project series covers the

whole development continuum, from examining problems, establishing goals, developing design guidance, demonstrating potential design applications through the development of generic prototypes, and providing programming and design assistance, to evaluating design applications.

The researchers have produced two books, numerous articles and book chapters, over 60 presentations in national and international conferences, and a design assistance program servicing over 30 design projects across the US. The results of the research are directly applicable to architectural practice and the field of care-giving. They synthesize key research-based design principles, offering solutions that respond to the needs of people with cognitive impairments.

For more information contact: Uriel Cohen, (414) 229-6481, Fax: (414) 229-6976.



SCHEMATIC PLAN BASED ON RESEARCH INTO ENVIRONMENTS FOR PEOPLE WITH DEMENTIA

Conditions of Success: Internationalization of the Construction Industry

David L. Hawk, Schools of Architecture and Industrial Management, New Jersey Institute of Technology, Newark.

This study focuses on the building industry around the world, which is undergoing reformation to meet increasing client demands for higher efficiencies and higher quality in building products. The impetus behind such demands springs from the growing importance of international clients and construction firms. Clients find they can get better for less from providers in other parts of the world. This is shaking the building industry in most developed countries.

The study, based on interviews with major players in the field worldwide, identifies a number of issues that are reshaping the construction industry. Among them:

- Changing consumer ideas: consumers increasingly expect higher quality workmanship, at lower costs, with greater environmental sensitivity.
- A search for new business ideas and customers: Ideas and potential customers may be found in new kinds of built environments such as new housing typologies and leisure-time facilities, environmental concerns, and technological and

material developments.

• Adding value through design and procurement: Systems sciences to organize design, beyond the traditions of architects and engineers, adds value, as do new approaches to materials and component production.

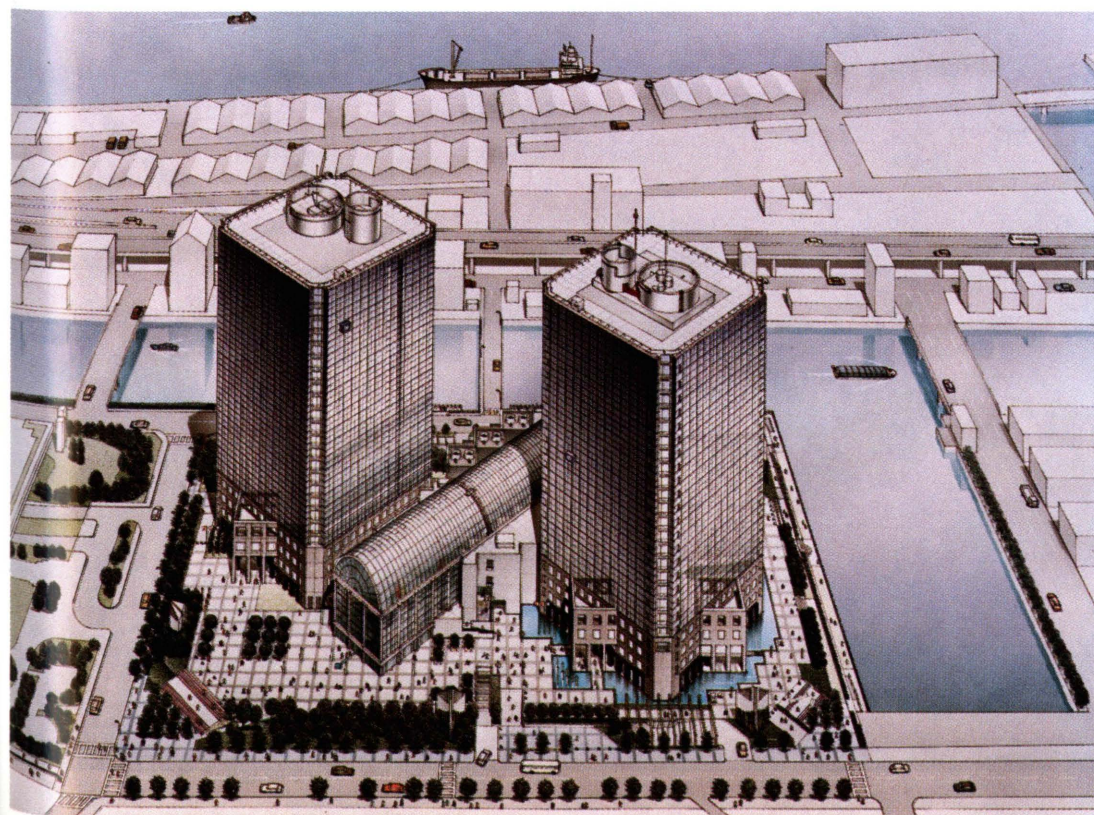
• Building a knowledge base for construction: Construction needs to invest in a scientific-technological knowledge base for continually improving the quality and efficiency of what it does.

• Emerging strengths of the Japanese model: Its successes come from a combination of innovative organization, adaptiveness, and hard work by people who believe that what they do matters.

The study elaborates on these issues, and presents ways in which the different players in the construction industry, including architects, can adapt to these changes.

For more information contact: David Hawk, (201) 596-3019, Fax: (201) 761-5204.

Committee Comments:
The topic of this study is not only of great interest but its findings are broadly applicable to all practitioners who wish to increase their capacity to provide value-added services. This research offers clues for improving teamwork and for responsive problem solving, as well as suggestions for expanding professional competence.



OFFICE TOWERS IN JAPAN FOR SHIMIZU CONSTRUCTION COMPANY, ALSO USED TO DEMONSTRATE CONSTRUCTION TECHNOLOGIES



Shaper of Perceptions

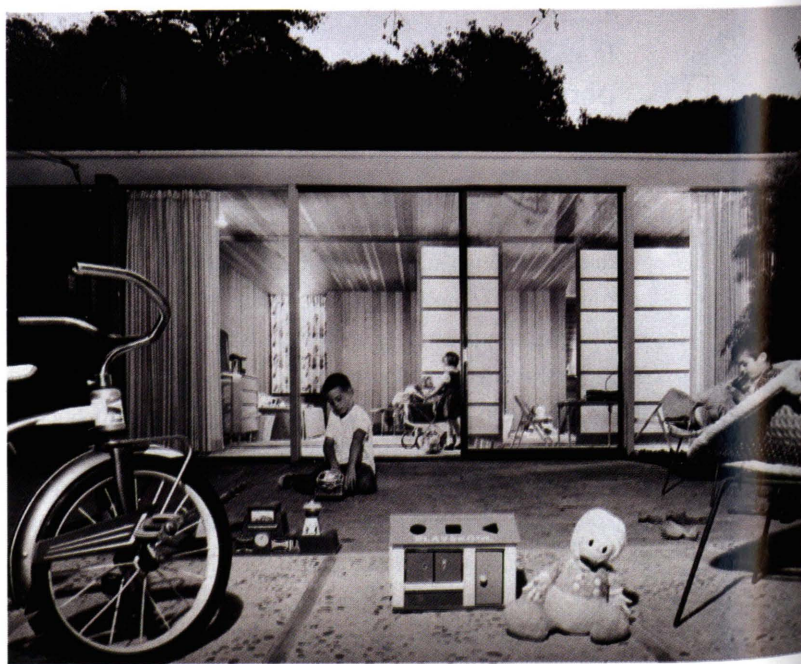
In more than 50 years of work, California photographer Julius Shulman expertly cast Modern architecture in the best light.

When Julius Shulman began photographing Modern architecture in California in the 1930s, the ethic and the aesthetic were unknown and somewhat suspect entities in the public's eye. What he accomplished is lavishly illustrated in *A Constructed View: The Architectural Photography of Julius Shulman*, a monograph by Joseph Rosa due out from Rizzoli this month. Shulman significantly influenced and educated popular perceptions of the austere imported style, interpreting and disseminating the built works of Californian masters such as Richard Neutra, Raphael Soriano, Gregory Ain, and John Lautner. Far from being apologetic about his avowedly "subjective" pictures, the photographer saw himself as a "propagandist," obligated to manipulate the images in the cause of "selling" good design.

Light, deep shade, and shadow are employed by Shulman to bring out the architecture's most salient characteristics of form, material, and texture. In his 1947 photograph of Clark & Frey's Frey House I in Palm Springs (left), the play of sunlight and shadow brings out every nuance of the metal structure. Likewise, contrasts and gradations of light in a 1946 interior (above), vividly convey the grainy, woody textures of Gordon Drake's Los Angeles house.



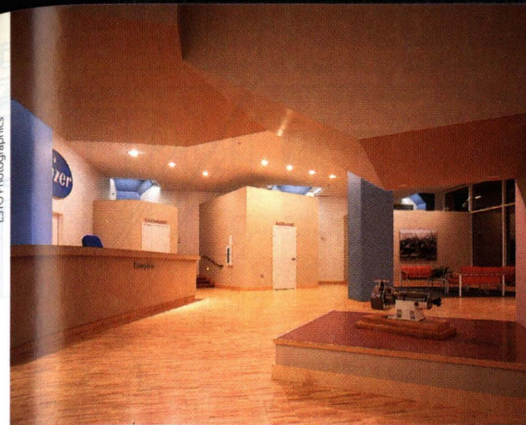
The photographer's famous 1947 image of Richard Neutra's Kaufmann House in Palm Springs (above) was produced using only the house's interior lights in a 45-minute exposure; the radiant sky tones were brought back by manipulating the print in the darkroom. For Shulman such darkroom techniques "are as much a part of the photographic process as clicking the camera shutter." Another strategy used frequently to capture the ethos behind the style involved careful staging: the 1959 image of Robert Skinner's Los Angeles House (near right) was taken from the imaginary vantage point of a stuffed toy animal; the children populating the scene seem taller, and as author Rosa points out, they "illustrate... typical domestic and gendered roles." Shulman was known to frame photographs of new buildings with imported plants placed strategically in the foreground. But to illustrate how well the rocky formation of John Lautner's Wolff House (far right) fit into its hilly context, Shulman returned nine years after the building's 1961 completion to shoot it with mature vegetation.



New Life For Old Plants



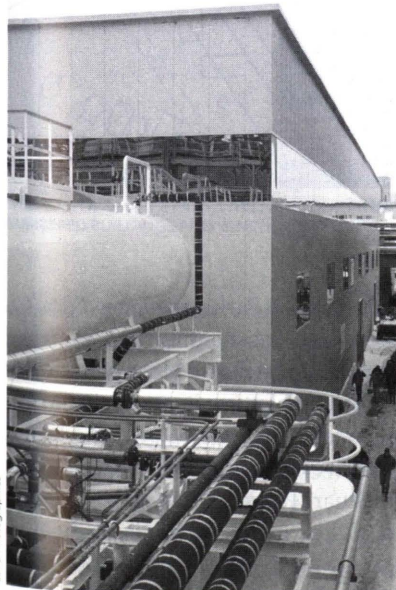
CENTERBROOK'S MAIN GATE BUILDING AND PARKING OVAL FOR PFIZER VISITORS



MAIN GATE BUILDING'S LOBBY, WITH ENTRANCES TO AUDITORIUM AND CONFERENCE FACILITIES



NEW EMPLOYEE GATE, WITH PIPES AND TANKS REPAINTED ACCORDING TO THE ARCHITECTS' RECOMMENDATIONS



NEW ENGINEERING BUILDING CONTAINING REPAIR SHOPS, OFFICES, AND CAFETERIA, WHICH ARE ON A TOUR ROUTE ALSO PLANNED BY CENTERBROOK

PFIZER'S PLANT, WITH SOME OF THE NEW CONSTRUCTION SHADED

300'/60m

Old factories are being rediscovered by nonprofit and for-profit corporations alike as ideal environments in which to start new companies and partnerships. *by Thomas Fisher*

Some old chemical plants and a partially abandoned gun factory may seem far removed from the concerns of architects. But these and hundreds of other aging industrial facilities around the country are becoming sites of an industrial revolution, of sorts. And architects not only may benefit from this transformation, but may be essential to its success.

Some factories, especially those abandoned in inner cities, are being converted by nonprofit corporations into incubator facilities, where young entrepreneurial firms, offering a range of custom services and products, can get started with both public and private support. Other plants, built for mass production, are being rehabilitated by their corporate owners as research and development sites for new technologies, often in start-up partnerships with other companies.

There are currently over 500 incubator facilities in the U.S. alone, according to the National Business Incubation Association in Athens, Ohio. And the growth of such facilities should continue to be robust as states become more aggressive in attracting business and creating jobs. The Clinton administration also seems to be making the development of new businesses a priority, with an incubator advocate - Harvard political economist Robert Reich - as Labor Secretary, and with the

recent appointment of William Ginsberg, who headed Science Park, to lead the Economic Development Administration.

Global Competition

One of the factors behind this trend has been the rapid rise of a global economy. As "older, heavy industries," writes Secretary Reich, "move to where labor is cheapest and most accessible around the world ... America's core corporations are gradually, often painfully, turning toward serving the unique needs of particular customers. The firms that are ... succeeding are shifting from high volume to high value."

In some respects, these high-value enterprises are turning the ideas of the first industrial revolution on their head. Where mass-production of commodities once reigned, innovation and customization are now the way to profitability. Where labor and management once feuded, employees are increasingly seen as collaborators. Where large-scale corporations once controlled markets, smaller upstart operations are leading in several industries. And where the character of industrial facilities was once a relatively minor concern, it is now viewed by many companies as critical to enhancing worker productivity and attracting high-skilled employees.

Pfizer Groton, Connecticut

Covering 53 acres, with over 2 million square feet, Pfizer's Groton, Connecticut, plant is moving away from production of commodity chemicals to research-based health-care products. Centerbrook, Architects & Planners, have helped the plant make that transition over the last five years.

Their first commission was for a conference room, which was well received. That led to a master plan for the entire plant, identifying buildings to be rehabilitated or demolished, suggesting an overall color scheme and signage program, clarifying vehicular and pedestrian circulation, and even charting the best tour routes for customers visiting the plant.

Subsequent projects have included the design of a new parking lot and entry gate, new stock rooms and computer control rooms, a new visitors' entry and a rehabilitated main gate building, a plant engineer-

ing building, and a feasibility study for a huge new organic synthesis plant.

The main gate building is indicative of how far such plants have come. Once located in several wood and metal buildings, with trucks and visitors' cars vying for access, the plant administration now occupies a glass-clad structure, inside of which are training facilities, an auditorium and conference room for visitors, and offices for the plant administration, employee resources, and procurement. Outside, a steel-framed structure defines a grand entry oval, now used solely by visitors. This globally competitive plant is now beginning to look the part.

Architects: Centerbrook, Essex, Connecticut (Chad Floyd, partner-in-charge; James Martin, Nick Deaver, and Jean Smajstrla, project managers).

Consultants: Besier Gible Norden (structural), van Zelm, Heywood & Shadford (MPE), Lester Collins (landscape).

Science Park New Haven, Connecticut

Established in 1982 by state and city governments along with Yale and Olin Corporation, Science Park is an industrial incubator, with almost 100 companies employing 2,000 people. Occupying an 80-acre inner-city site in New Haven, it has more than a dozen buildings totaling nearly one million square feet.

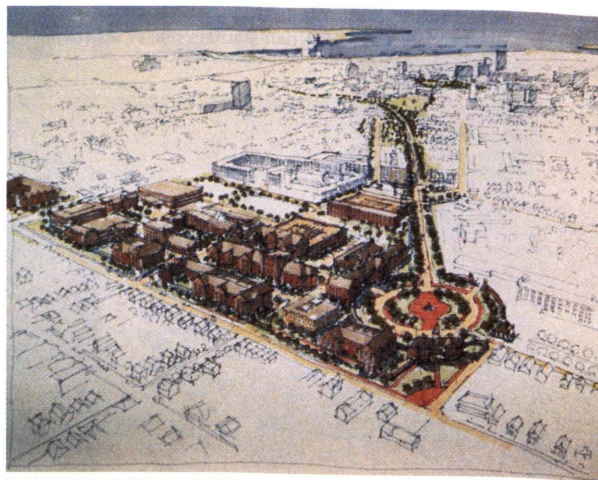
Svigals Associates has done much of the fit-out work for tenants. The firm has also worked at a larger scale there. Svigals took part in the first master plan of the park in 1987, done with Herbert S. Newman & Partners and Urban Design Associates. That plan envisioned a university-like campus (connected by light rail to the downtown), now somewhat obsolete with the construction of a new 250,000-square-foot factory by Dubose Associates.

Svigals has rehabilitated building four, soon to be partly occupied by Kodak, and is studying rehab options for another structure. "The ideal incubator building," says Svigals, "is a series of 8,000-to-12,000-square-foot, three-to-four-story-high increments, each with its own core and its own identity. The difficulty is giving identity to companies in a situation that is mutating all the time."

Four Science Park

Architects: Svigals Associates, New Haven, Connecticut (Barry Svigals, principal; Jay Brotman, project architect; Ann Sellars, Robert Skolozdra, design team).

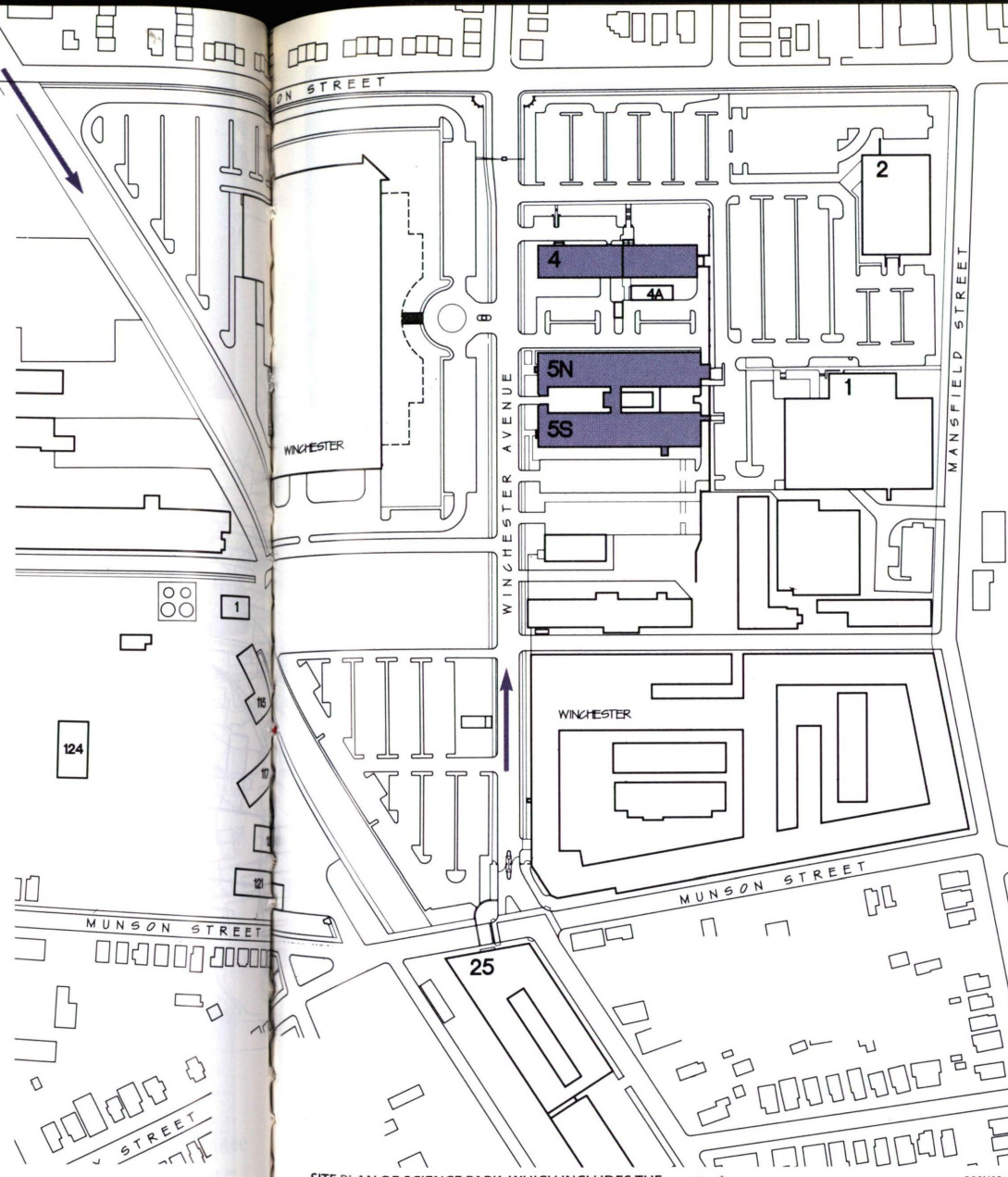
Consultants: DeCarlo & Doll (structural, environmental, cm), Martin - Horton Associates (structural).



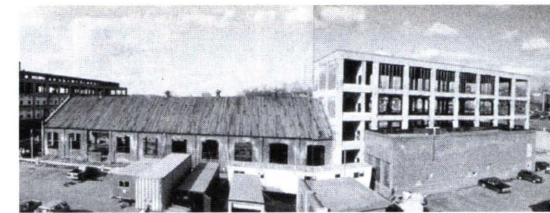
PERSPECTIVE OF THE 1987 MASTER PLAN OF SCIENCE PARK, WITH DOWNTOWN NEW HAVEN IN THE DISTANCE



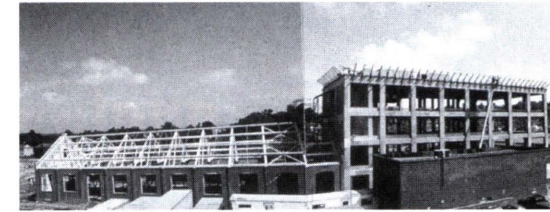
VIEW OF SCIENCE PARK SHOWING REHABILITATED BUILDINGS FOUR AND FIVE



SITE PLAN OF SCIENCE PARK, WHICH INCLUDES THE NUMBERED BUILDINGS AND WINCHESTER PLANTS



BUILDING FOUR DURING DEMOLITION PHASE



CONSTRUCTION OF NEW ROOF AND CORNICE



BUILDING FOUR NEARING COMPLETION



THE SVIGALS-DESIGNED OFFICES FOR A BIOMEDICAL RESEARCH TENANT IN BUILDING FIVE

The Role of Design

This is all good news for architects. "Before, process engineers laid out factories," says John Schuyler of Haines Lundberg Waehler, "with E/A firms giving some design input. Now architects are becoming more involved," in part because of a concern about image on the part of startup companies and partnerships. What was once accepted in old factories - rusting buildings, chaotic plant layouts, badly maintained interior space - is no longer acceptable to owners trying to convince tenants, strategic partners, or Wall-Street investors to join forces with them. The same is true of startup operations within large companies, notes Chad Floyd of Centerbrook, where there is "internal competition with other plants for corporate investment."

Architects, however, must be careful not to "overshoot clients' needs," cautions Schuyler. Owners of startup operations "don't want things to look too expensive." Most incubators, explains Jonathan Gorham, managing partner of the

New Haven consulting firm, Science Park Associates, "don't have a lot of working capital. Also, most entrepreneurs are frugal and don't want to spend big bucks on plush offices." Companies rehabilitating factories for use in research and development have similar constraints. "Wall Street and the focus on quarterly returns drive down the dollars spent on industrial facilities," notes Stuart Pertz of HLW.

Even if these owners don't like spending money, "when they do," observes Kenneth Drake of HLW, "they want it to have an impact on the image of the place." For architects, that means getting involved in everything from repainting and recladding structures, to building new plant entries and visitor facilities, to upgrading HVAC and other systems, to organizing and clarifying pedestrian and vehicular circulation.

Focus on Employees

If improving the image and organization of these facilities is central to attracting tenants or corporate investment, it is

equally important in retaining skilled workers, who are becoming crucial to the success of companies. "In the high-value enterprise," writes Secretary Reich, "profits derive not from scale and volume but from continuous discovery of new linkages between solutions and needs." To achieve that, factories must be seen not as enclosures for machines, but as places for people to innovate.

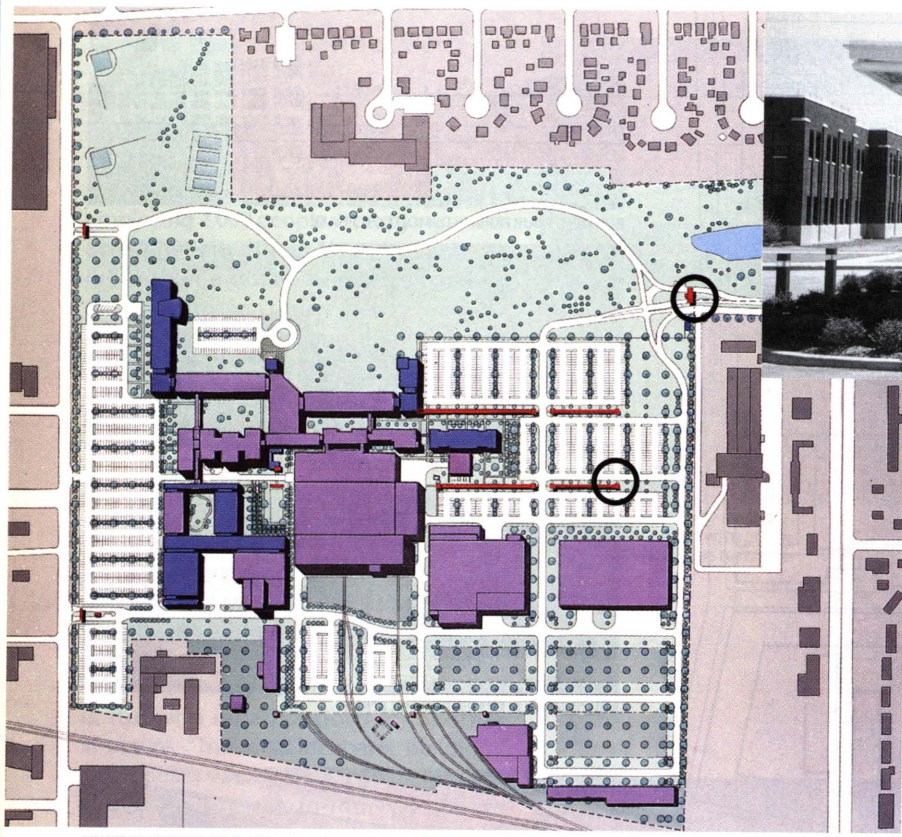
Factories have tended to do just the opposite, separating production workers from management and providing few places for workers to share ideas or retrain. "Companies have begun to realize," says Stuart Pertz, "that when the union guy is treated the same as the salaried guy, things go easier and cost less money."

That equality translates into many changes, both large and small, in the rehabilitation of older factories. Blue- and white-collar employees are increasingly using the same parking lots, the same entries, and the same cafeterias, requiring the redesign of once-segregated facilities. Paved areas are being

torn up and buildings torn down to make way for trees and outdoor gathering and recreation space. And conference rooms and employee lounges are being designed and built to be accessible to all. At the same time, companies are shifting their view of what a factory should be; it is no longer a big machine but a small city of people. "We never paid attention to aesthetics before," says Nancy Win-Alderson, project engineer for Pfizer. "Buildings were erected ad hoc; there was no city planning."

The Importance of Training

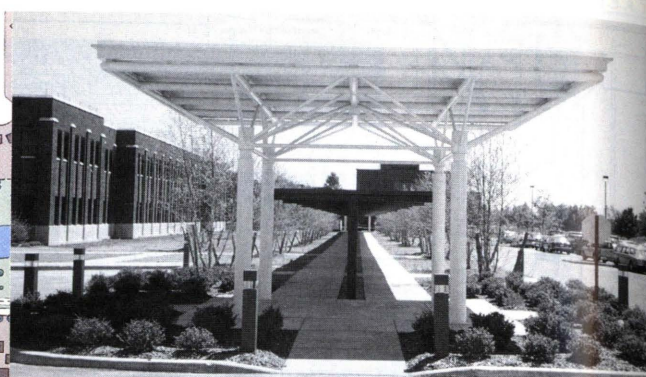
With these changes, though, has come a change in the relationship of employers and employees. Companies are laying off workers and retraining those who remain to handle jobs of much greater complexity. As Pfizer plant manager Robert Schachner puts it, "We treat our employees as business partners. They have to be flexible and cross-trained, and many are on call 24 hours." Training facilities, rarely seen



HLW'S MASTER PLAN OF PRAXAIR, SHOWING NEW TRAINING AND RESEARCH FACILITIES (UPPER LEFT), A NEW CENTRAL SQUARE TO ENCOURAGE EMPLOYEE INTERACTION (LEFT OF CENTER), NEW ENTRY GATES, AND A NEW STREET GRID AND PARKING LOTS



NEW ENTRY GATE TO PRAXAIR BY HLW



PARKING LOT CANOPIES, DESIGNED AS PART OF FIRST PHASE WORK

Praxair Tonawanda, New York

The masterplan by HLW for Praxair consolidates engineering and research facilities, now scattered about the 900,000-square-foot plant; creates a "central park" where management, researchers, and production employees can gather; and calls for a new training and educational center facing the front lawn. Vehicular circulation is ordered into a grid, and pedestrian access from the parking lots is aided by covered walkways and pavilions, recently completed. Other completed structures include new gates and gatehouses, intended to give the facility a stronger public presence.

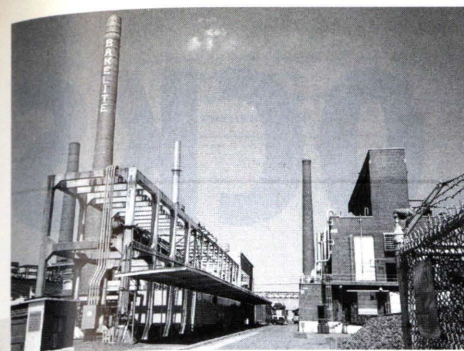
Architects: Haines Lundberg Waehler, New York (Leevi Kiil, managing partner; Stuart Pertz, director of urban design; John Schuyler, senior designer; Kenneth Drake, project manager; Michael Blauvelt, landscape architect; Philip Vivian, John Fotiadis, designers; Rene Byers, landscape designer; Marianne Geers, rendering).

companies and communities alike, since both are increasingly dependent upon highly skilled workers to survive.

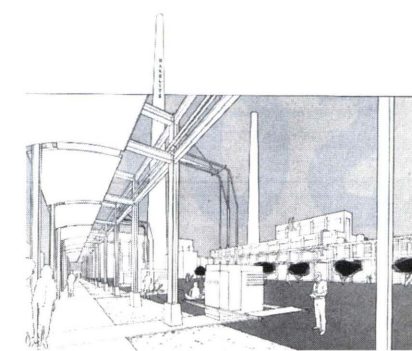
Environmental Compliance

A third reason why old factories are being rehabilitated, in addition to global competition and employee productivity, is the need to comply with environmental regulations. In many states, if companies abandon an industrial site, they must leave it clean, while if they stay and rehabilitate the property, they can stretch out the clean up. "Companies are finding that it is too expensive to shut plants down," says Stuart Pertz, "so they are turning around and improving them."

The pollution on a site, nevertheless, presents the owner and the architect with special problems. Owners may have to spend money to mitigate below-grade pollution, while architects may have to deal with hazards such as lead paint and



EXISTING PLANT, WITH UTILITY RACKS AND ASPHALT-PAVED SURFACES.



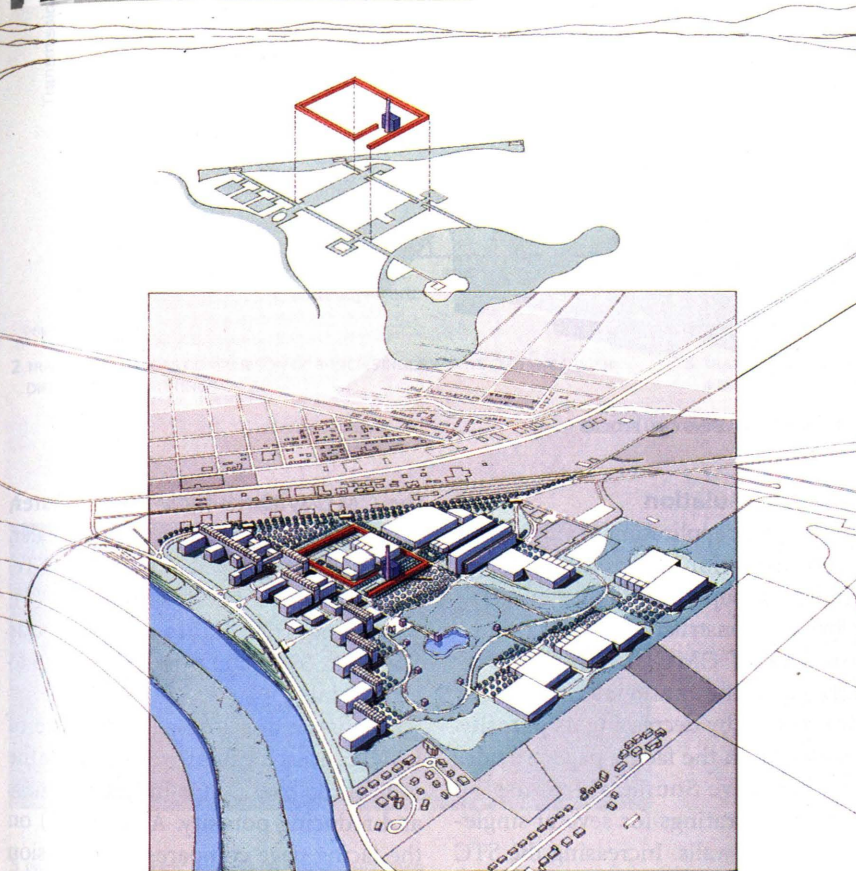
PERSPECTIVE OF NEW EMPLOYEE PARK AND WALKWAY.

Union Carbide Bound Brook, New Jersey

Haines Lundberg Waehler's master plan for this 233-acre factory shows how a mass-production facility can be turned into a campus for research and development. Laboratory buildings are strung along the river, behind which are recreational space, tree-shaded parking, and batch manufacturing. The chaotic street system is organized into a loose grid, while elevated utility racks are used to define a central park. In ten years, the one-million-square-foot plant, employing 1,000 people, will double in size and population.

Architects: Haines Lundberg Waehler, New York (Leevi Kiil, managing partner; Stuart Pertz, director of urban design; John Schuyler, senior designer; Nancy Gould, project manager; Mary Davis, programmer; Robert Sovinski, landscape architect; Philip Vivian, John Fotiadis, urban design; Marianne Geers, Peter Tow, John Schuyler, rendering)

Consultants: Federman Construction, cost estimating.



AERIAL PERSPECTIVE OF HLW'S MASTER PLAN FOR BOUND BROOK PLANT

asbestos before construction can begin. "A lot of money is spent just maintaining the antique infrastructure," says Barry Svigals, "repairing concrete and replacing windows."

Opportunities for Architects

No architect involved in this type of work will tell you it is glamorous. Much of it entails small-scale interventions: a new conference room or a reconfigured cafeteria here, a few thousand square feet of offices for a start-up company there. Still, this work has definite compensations.

First, it tends to be steady. Some firms are part of a package of services that an incubator facility will offer a new tenant, so that the start-up company can get into its space quickly, at low cost, without hassles. Other firms have developed long-term relationships with companies, doing whatever is needed.

Second, this work is valued by clients. "When clients see

an architect analyzing the organization and making recommendations that may involve little or no construction," says Stuart Pertz, "you gain their confidence." "Even small tasks," adds Chad Floyd, "such as putting together a slide show to help a company sell a project, are services that clients value."

Finally, this work is important. It may never win design awards and may only rarely be published in an architectural magazine, but it stands at the leading edge of economic thinking and public policy, in the center of current debates about global competition, worker retraining, inner-city revitalization, and environmental responsibility.

Architects arrived rather late at the first industrial revolution, missing opportunities because some believed that it had nothing to do with Architecture. May we not be so foolish the second time around. □

SOUND BLOCKS

An acoustician tells how to get the best acoustical performance from concrete masonry units, through careful specification and detailing
by Neil Thompson Shade



1 SOUND DIFFUSING CMU BLOCKS

Abstract

The acoustical properties, application, and specification of standard and specialty-engineered hollow concrete masonry units (CMU) used in acoustical design are reviewed. CMU can provide sound isolation, sound absorption, or sound diffusion in a variety of spaces, ranging from mechanical equipment rooms to auditoriums.

For many architects, the concrete masonry unit (CMU) is the material of choice when ease of installation, low cost, and durability are of prime concern. But standard and specialty-engineered CMU can also deliver effective acoustical control, if properly specified and detailed. In fact, CMU is ideal for many applications because of its wide range of acoustical properties.

CMU, sealed with paint or gypsum wallboard (GWB) or manufactured to absorb or diffuse sound, can provide greater transmission loss performance than standard CMU (the higher a material's transmission loss, the less sound passes through it). The material can often economically solve simultaneous requirements for sound insulation and room acoustics, if used properly.

Sound Insulation

A frequent application of CMU is for sound insulation where its mass and stiffness are superior to other materials or forms of construction. The transmission loss of CMU is improved by increasing the material's weight or thickness, or by decreasing its porosity. A table (4) on the facing page provides representative Sound Transmission Class (STC) ratings for several single-wythe CMU walls. Increasing the STC rating by 10 points results in a subjective loudness reduction of transmitted sound by 50 percent. Some variability will exist in the STC ratings of CMU because of differences in aggregate weights used by CMU manufacturers.

Specifying thicker CMU is a practical means to increase transmission loss. A maximum thickness of 12 inches for single-wythe CMU walls is reasonable where common building structural systems are specified. Beyond this thickness, specifying double-wythe walls, using smaller or lighter weight CMU, is recommended to increase sound insulation performance while maintaining conventional structural systems.

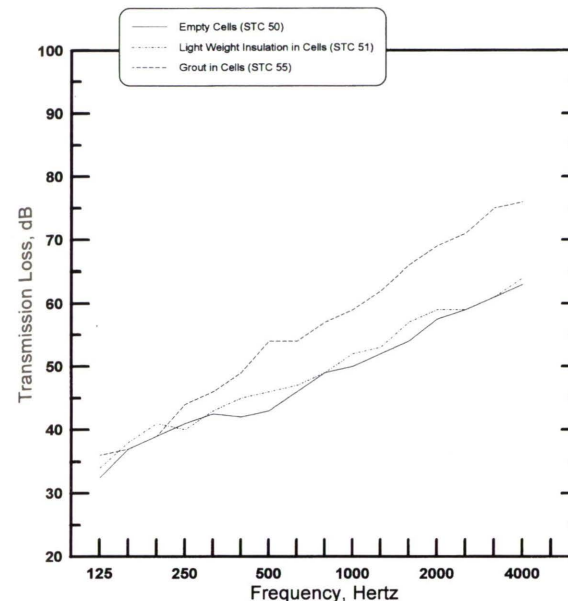
Sealing CMU is necessary to maximize its transmission loss performance. Comparable improvements in STC values are obtained by sealing one side of

the CMU with 1/2-inch-thick plaster, three coats of latex paint, or epoxy sealer. Unsealed normal weight CMU has STC ratings reduced one to two points (4), while unsealed, lightweight, porous CMU has STC ratings reduced by up to eight points.

Transmission loss performance of CMU can also be improved by filling the cells of the block, thus increasing mass and reducing porosity. A graph (2) on the facing page compares transmission loss data for 8-inch-thick empty-cell CMU and the typical improvements resulting from filling the cells with lightweight insulation or grout. Lightweight insulation can improve STC ratings by up to three points, and grout or sand can improve ratings by up to eight points.

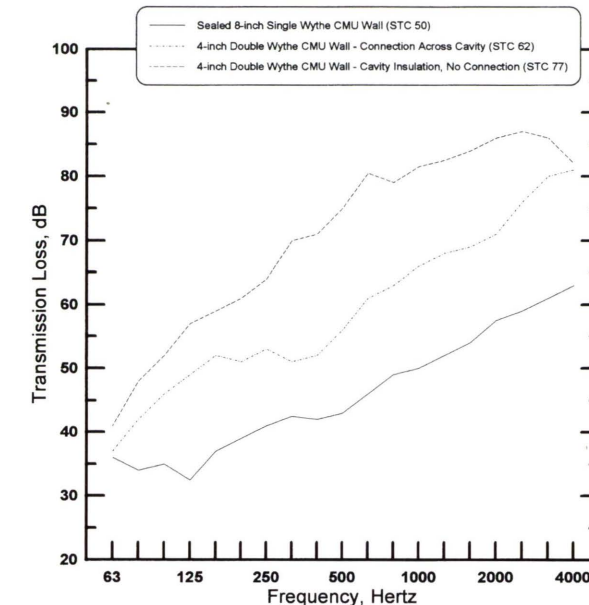
Double-wythe CMU made of thinner or lightweight material, separated by an air space of three inches or greater, and filled with cavity insulation, can surpass the transmission loss performance of thicker or heavier, single-wythe walls.

Neil Thompson Shade, president of Acoustical Design Collaborative, Ltd., in Falls Church, Virginia, is an acoustical consultant and a part-time instructor in architectural acoustics and audio technology at two Washington, D.C., area universities.



Data Courtesy NCM

2 TRANSMISSION LOSS COMPARISON OF 8-INCH SINGLE WYTHE CMU WALL WITH DIFFERENT CELL FITTINGS



Data Courtesy of (Handbook of Acoustical Measurements and Noise Control)

3 TRANSMISSION LOSS COMPARISON OF 8-INCH SINGLE WYTHE CMU WALL WITH 4-INCH DOUBLE WYTHE CMU WALL WITH AND WITHOUT CAVITY COUPLING

4 STC RATINGS FOR REPRESENTATIVE CMU*

BLOCK THICKNESS (INCHES)	LIGHT WEIGHT BLOCK (LB/FT ²)	STC RATING	NORMAL WEIGHT BLOCK (LB/FT ²)	STC RATING
4	17	43	25	44
6	25	44	37	46
8	33	45	42	48
12	45	48	62	51

*STC RATINGS ASSUME ONE SIDE OF THE BLOCK IS WELL SEALED

5 IMPROVEMENT IN STC RATINGS WITH ATTACHED GWB

GWB ATTACHMENT METHOD	WITH CAVITY INSULATION		WITHOUT CAVITY INSULATION	
	GWB ON 1 SIDE	GWB ON 2 SIDES	GWB ON 1 SIDE	GWB ON 2 SIDES
DIRECT	N/A	N/A	0	-1
1/2" RESILIENT CHANNELS	+4	-1	+2	-1
1 1/2" WOOD FURRING	+5	+9	+3	+4
2 1/2" STEEL STUDS	+10	+22	+8	+7

6 NOISE REDUCTION COEFFICIENTS (NRC) RATINGS OF UNPAINTED CMU AGGREGATES

CMU AGGREGATE TYPE	POROSITY	NRC RATING
LIGHT WEIGHT, UNPAINTED	COARSE	0.50
	MEDIUM	0.45
	FINE	0.40
NORMAL WEIGHT, UNPAINTED	COARSE	0.28
	MEDIUM	0.26
	FINE	0.24

*NRC RATINGS ARE REDUCED APPROXIMATELY 50% - 75% WHEN SEALED

Glossary

Flanking Path: a sound transmission path other than the common element (such as a wall) separating two enclosed spaces.

Hertz: a unit of measurement for the frequency of sound in cycles per second.

Noise Isolation Class (NIC): a single number rating based on noise reduction data from 125 to 4,000 Hz.

Noise Reduction (NR): a measure of *in situ* sound pressure level at a specific frequency that is dependent on the material's size, room absorption, and sound flanking paths.

Noise Reduction Coefficient (NRC): a single number rating based on the average of the sound absorption coefficients from 250 to 2,000 Hz.

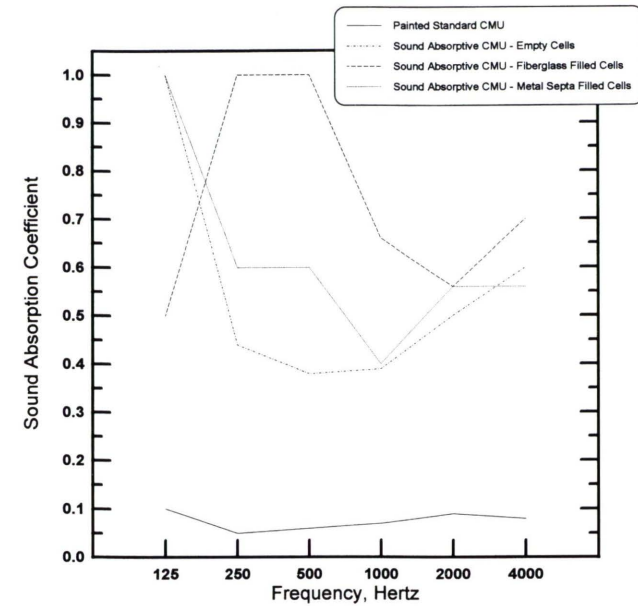
Quadratic Residue: a residual number sequence based on a prime number used to develop surface shapes that generate highly scattered sound reflections.

Sound Absorption Coefficient: a measure of the fraction of sound energy absorbed by a material at a specific frequency with values ranging from 0 (total reflection) to 1 (total absorption).

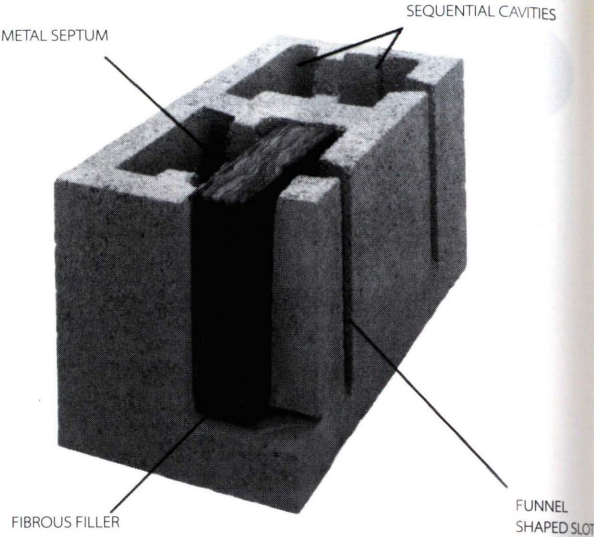
Sound Diffusion: the physical process where sound is scattered from a surface.

Sound Transmission Class (STC): a single number rating based on transmission loss data from 125 to 4,000 Hz.

Transmission Loss (TL): a measure of sound insulation at a specific frequency that is independent of the material's size and room absorption.



7 SOUND ABSORPTION COEFFICIENT COMPARISON OF STANDARD PAINTED CMU WITH SOUND ABSORPTIVE CMU



8 SOUND ABSORPTIVE CMU BLOCK

9 PROJECT MANUAL CHECKLIST

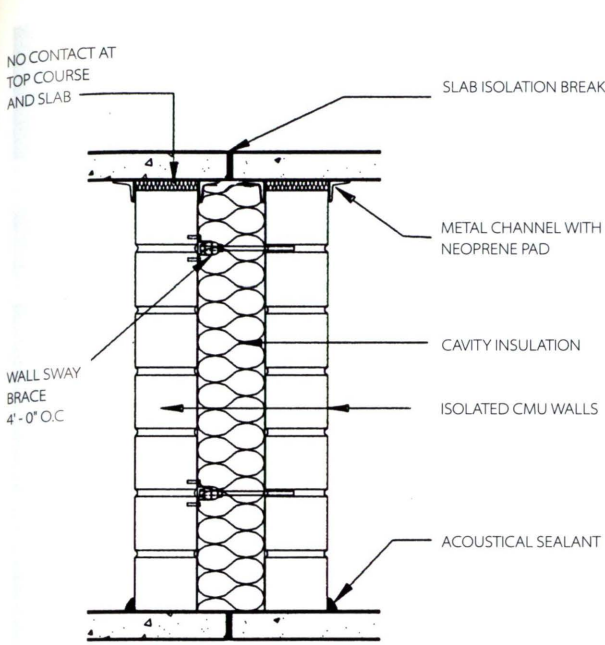
Project Manuals, typically section 04200 "Unit Masonry," should reference standards that address products, performance, samples, submittals, and installation of CMU so the intended acoustical result is realized. This checklist highlights requirements applicable for most projects where CMU is specified in acoustical applications.

PRODUCTS	<ul style="list-style-type: none">• TYPES OF CMU TO BE PROVIDED• CONCRETE AGGREGATES PER ASTM C33• BLOCK WEIGHT AND DESIGNATION PER ASTM C90• SPECIALTY INSTALLATION HARDWARE AND FLEXIBLE TIES• SEALANTS AND CAULKING
PERFORMANCE	<ul style="list-style-type: none">• SOUND TRANSMISSION LOSS PER ASTM E90• SOUND ABSORPTION PER ASTM C423• FIELD NOISE ISOLATION CLASS (NIC) PER ASTM E336• FIRE RATING PER ASTM E119• FLEXURAL STRENGTH PER ASTM E72
SAMPLES	<ul style="list-style-type: none">• EACH TYPE OF CMU TO BE PROVIDED• SPECIALTY INSTALLATION HARDWARE AND FLEXIBLE TIES• SEALANTS AND CAULKING
SUBMITTALS	<ul style="list-style-type: none">• SOUND TRANSMISSION LOSS TEST REPORTS PER ASTM E 90• SOUND ABSORPTION TEST REPORTS PER ASTM C 423• FIELD NOISE ISOLATION CLASS (NIC) TEST REPORTS PER ASTM E 336• CERTIFICATION WITH ASTM C90• FIRE TEST REPORTS PER ASTM E119• FLEXURAL STRENGTH TEST REPORTS PER ASTM E 72
INSTALLATION	<ul style="list-style-type: none">• GUIDELINES PER ACI 530.1• INSTRUCTIONS ON TAMPING TO SET CELL FILLERS• METHODS FOR INSTALLATION OF FLEXIBLE TIES AND SPECIALTY INSTALLATION HARDWARE• METHODS FOR INSTALLING GWB• METHODS FOR SEALING AND CAULKING

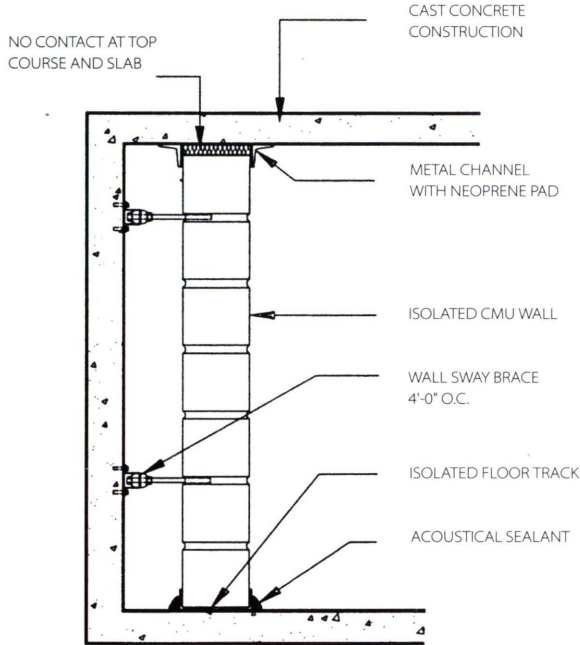
Connections between the separate wythes, either through structural ties, mortar droppings, or through floor or ceiling slabs, can limit transmission loss performance.

Improvements in STC ratings from 8 to more than 30 points are possible with double-wythe walls, depending on the CMU thickness, separation, and ties between wythes. The reduction in transmission loss (3) for a cavity-coupled double-wythe wall, compared to the uncoupled condition, affects all frequencies but is more pronounced below approximately 80 Hz (a frequency comparable to mechanical room noise).

Direct attachment or furring of GWB to CMU walls is another method to improve transmission loss performance. The degree of improvement will depend on the spacing between the GWB and the CMU, the rigidity of attachment, and the presence of cavity insulation. A table (5) on page 89 summarizes the improvement in STC ratings for CMU walls with various attachments of 5/8-inch GWB. Combined CMU and GWB wall constructions with STC ratings of 45 to 50 meet the sound insulation requirements of most building codes for party walls in multi-unit dwellings and hotels. Care should be taken in specifying GWB over CMU where low-frequency sound (such as from mechanical rooms) requires isolation. Contrary to



10 ISOLATION OF TWO INDEPENDENT CMU WALLS



11 ISOLATION OF CMU WALL AT CAST CONCRETE CONSTRUCTION

intuition, the low frequency transmission loss performance can be eroded by as much as 10 dB because of the GWB, compared to the CMU alone.

Sound Absorption

Standard CMU does not possess a high degree of sound absorption in contrast to conventional "acoustical treatments" such as glass-fiber acoustical panels. CMU's sound-absorption properties are relatively constant with a given frequency and they depend on the weight and porosity of the aggregate. Lightweight aggregates or aggregates with small, uniform pore structures have higher sound absorption than normal-weight aggregates or aggregates with large and nonuniform pore structures. Sealing CMU reduces its sound absorption. A table (6) on page 89 summarizes representative Noise Reduction Coefficient (NRC) values for CMU of different aggregate weights and porosities. CMU with molded slots in the face permits sound to pass through to the air volume within the cell cavities (known as Helmholtz resonators) and can be specified when high sound absorption below 500 Hz is required. The CMU can be "tuned" to provide greater sound absorption at specific frequencies by varying the slot shape, the cell cavity volume, or by installing insulation in the cell cavities to broaden the frequency

range of the absorbed sound. The graph (7) on the facing page compares the absorptivity properties of sealed sound-absorptive and standard products.

Absorptive CMU should be selected according to the frequency content of the noise source, the reverberation time in the space, and the absorptive properties of other finish materials. Sound-absorbing CMU can be specified to reduce noise levels or shorten reverberation times in low-maintenance spaces such as factories, gymnasiums, natatoriums, or prison day rooms. Sound-absorbing CMU with cavity insulation should not be specified for locations exposed to high humidity or moisture.

Sound Diffusion

Another type of CMU can be specified when sound diffusion is required, such as in an auditorium. This material (1) uses several smaller "component" blocks keyed for sequenced installation that comprises a "quadratic-residue" sequence. Some of these products are available with optional molded slots in the face and cavity insulation inserts that also provide sound absorption.

Sound-diffusing CMU is of particular advantage in music performance spaces where shaped wall surfaces are necessary. The sound-diffusing properties of CMU can increase the sensation of auditory spaciousness and can reduce

reflected sound levels from potentially echo-producing surfaces such as rear walls. When installed in music performance spaces, sound-diffusing CMU does not require cavity insulation inserts since the seating usually provides ample acoustical absorption.

Installation Details

Flexible connections in double-wythe CMU walls maximize sound insulation. Conversely, stiff wire ties can reduce the transmission loss of double-wythe walls by up to 7 dB. Specialty engineered masonry installation hardware can be used to interconnect CMU wythes, which reduce coupling and provide lateral stability to the wall.

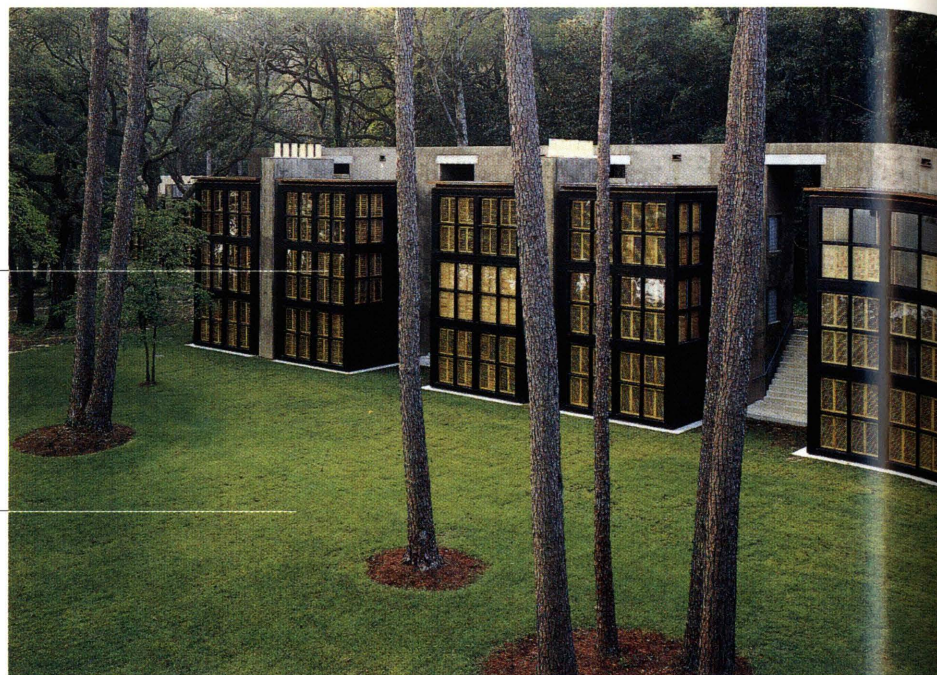
Wall section details (10, 11) show some strategies to cut sound transmission. Neoprene wall sway braces are installed on four-foot centers to connect wythes. Metal channels with neoprene elements are used to isolate and restrain the top CMU course. The first CMU course is laid on a neoprene or semirigid fiberglass track to isolate the material from the floor slab. A structural break or a cut in the floor and ceiling slabs can be specified to reduce "sound flanking" via these paths. These installation often necessary to preserve wall STC ratings greater than 65 and to diminish measures are sound-flanking paths. Local (continued on page 103)

Cagelike volumes

containing the inn's guest rooms are paired around prominent chimney blocks. Buff stucco and "Charleston green" wood trim are traditional locally. Concrete bands at the base of the building allow for accurate lawn mowing without damage, and they keep phosphate-laden mud from splattering on the dark-painted wood.

Pines on the central lawn, which architect

W.G. Clark had wanted cut down, were eliminated in 1989 by Hurricane Hugo.



Critique:

The Art of Accommodation

Can high-minded architecture help an enterprise through difficulties? At the Middleton Inn in South Carolina, design quality seems to have inspired a crucial persistence.

by John Morris Dixon

Designed by the Charleston firm of Clark & Menefee and completed in 1985, Middleton Inn was quickly recognized as exceptional, winning a cover story in the May 1986 P/A and a national AIA Honor Award. At a time of numerous competing design strategies, this modest inn was making an effective plea for order, craftsmanship, and sensitivity to setting. I immediately entered it on my informal list of buildings to visit.

When that opportunity came, several years later, I found the reality of the inn a gratifying fulfillment of its promise in print. Calling in advance for a reservation, I had been cautioned that this is a "contemporary" inn, in case I was expecting something historic or pseudohistoric in this garden pilgrimage zone outside Charleston. The management has since published brochures that illustrate the buildings and describe them as "a 20th-Century counterpoint" to Middleton Place, the 18th- and 19th-Century gardens – with only remnants of a plantation house – that the inn adjoins.

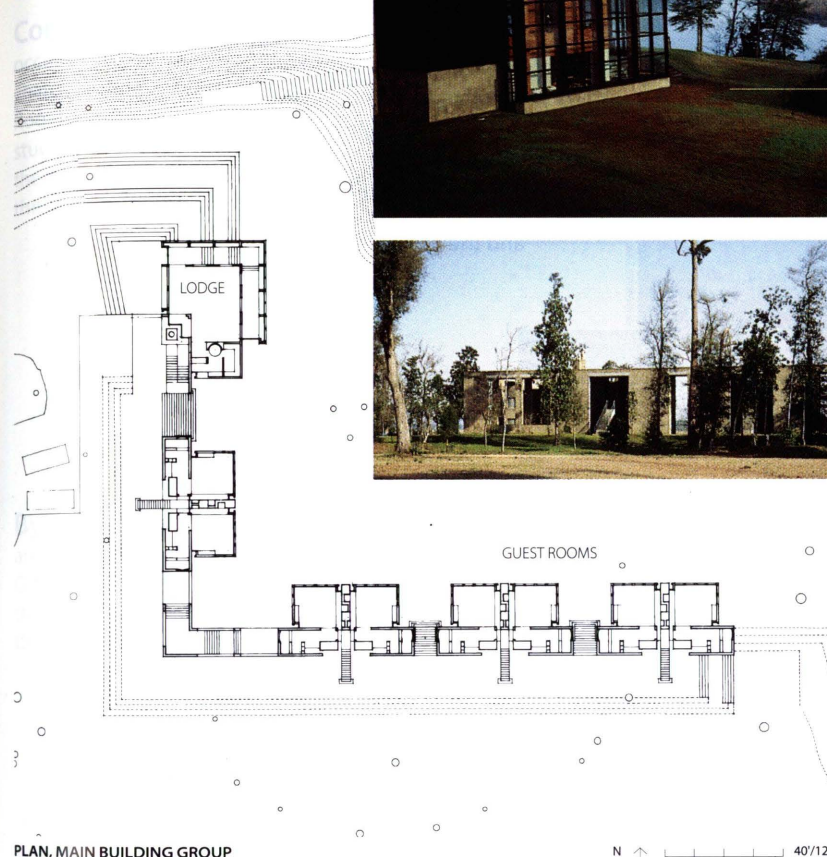
On arrival, I was immediately impressed with the inn's metaphorical representation of a ruin: its blank rectangles of stuccoed wall are imposing in scale but moderated by mottling that suggests age (actually, they were mottled as built). The resulting ceremonial quality and the articulation of parts immediately recall the work of Louis Kahn (though, oddly, he was not mentioned in P/A's earlier 1,500-word article).

This is classic architects' architecture, a retreat where design professionals can savor the logic of siting and layout, the careful modulation of surfaces. My experience of the place – observing good details, noting calculated views, feeling differences in floor and paving material, – was in many respects like staying in a Japanese temple precinct.

Surviving Vicissitudes

But the Middleton Inn saga is by no means a simple success story. In its few years, the inn has suffered two major setbacks: financial failure in 1987 and a killer hurricane in 1989. Its repurchase by the original client represents the persistence of a serious patron; and the hurricane, by altering the setting, allowed for some "silver lining" landscape improvements.

The inn's early economic problems stemmed not from design deficiencies, but from a business plan never fully carried out. Built as a leasehold on land owned by historic Middleton Place, the inn was expected to be busy during the spring blossom season, and to a lesser extent in the fall, but summer and winter were likely to bring little more than week-end getaway guests. To draw steadier business, the owners decided to go for year-round conference clientele, and for that purpose they more than doubled the programmed guest rooms from 25 to 55. But since they never built the proposed



PLAN, MAIN BUILDING GROUP

conference center on which this strategy rested, there were simply more empty rooms, and foreclosure followed.

In the years 1988 through 1991, the bank operated the property – adequately – while seeking a buyer. At the end of 1991, the asking price had dropped to the point where a new company, headed by the original patron, Charles Duell, could afford to carry the debt, even with serious gaps in occupancy. Cooperative efforts with the neighbor and landowner, Middleton Place, have enhanced customer appeal: an improved meeting/banquet facility at the Place makes possible some conference business; special tours such as a "water, woods, and wildlife" experience take advantage of the Place's 6,500 acres of wilderness. Duell reports that the inn broke even in 1993 and may make a modest profit this year.

Conceiving a Different Kind of Inn

Duell has played the patron's role from the initiation of the project. He and his associates visited inns around the country. (The legendary Ventana Inn at Big Sur, California, was one inspiration.) They contacted a number of nationally known architects, but chose W.G. Clark, who had set up an office in Charleston after six years with the Venturi firm. (The firm of Clark & Menefee has since moved to Charlottesville, Virginia, where both partners teach at U.Va.) Clark had remodeled a

few outbuildings on the Middleton Place property, generating confidence that won him this much larger commission, still his largest completed work.

The influence of these earlier renovations not only clinched the choice of architects, but strongly affected the client's attitude toward design. An addition to one of these auxiliary buildings (actually a 1930s NeoGeorgian structure) qualified for a tax incentive, but only if it followed the Secretary of Interior's standing rule: the new portion must in no way imitate the old fabric. The success of this addition as a counterpoint in the historic complex set the example for the inn, from its overall Modernist approach down to the choice of paint color.

Clark's parti for the inn was based on the original 25-room program and on topographic peculiarities of the site. Nineteenth-Century phosphate mining along the river had left a neatly rectangular terrace notched into the bank, a plateau that sustained only scattered pine, rather than the jungle of mixed hardwoods flourishing elsewhere on the site. Clark deliberately stretched his clusters of guest rooms around the brink of this depression – which became a lawn – exploiting the one-story drop in level to minimize stair-climbing for the three-story blocks. When 30 more units were added, they were scattered at three other locations, where the fit with terrain is not quite as effective.

The view from a guest room

across the cleared lawn, includes the inn's lodge, the Ashley River, and the protected marshlands beyond. A swimming pool is notched into the bank. The breakfast area on the lower floor of the lodge, reached by a ceremonial stair from the reception space, is ideally sited to catch the morning sun.

The stucco ramparts

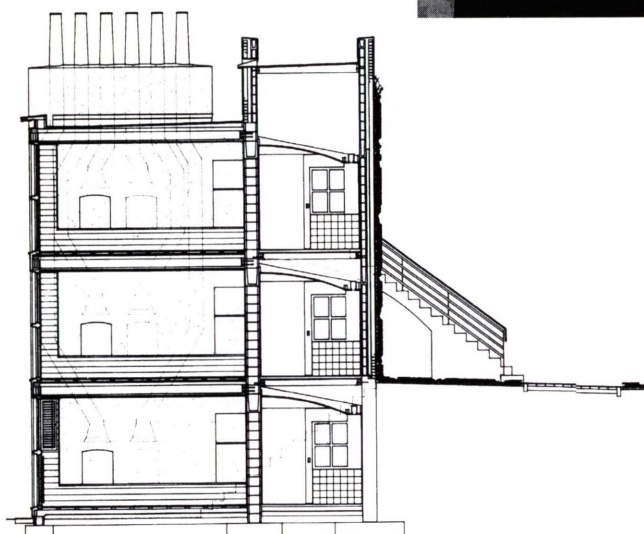
of the inn's south walls, formerly hidden by dense forest, are now seen by approaching visitors through the remaining trees.



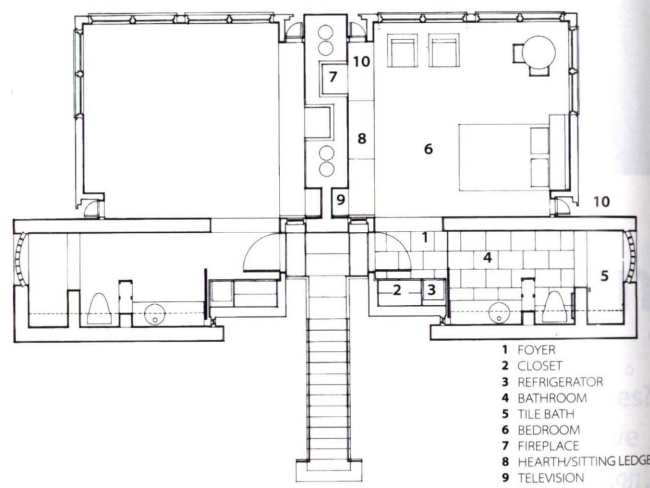
Walls of stucco over brick follow South Carolina tradition and show tree shadows more effectively than bare brick; used this way, the stucco needs no expansion joints, and surface damage is no great problem. Stairs look like stuccoed precedents in Charleston, but are actually cast concrete.



An entry niche for each group of units serves pairs of rooms on the ground and second floors (lower units are reached by stairs between groups). This niche demonstrates the design's articulation of parts, although the dark green paint blunts these distinctions. Daylight enters the niche from an open clerestory and narrow windows make a visual link between the niche and the room.



SECTION, TYPICAL GUEST ROOMS



TYPICAL ROOM PLAN

Rooming in a Metaphorical Ruin

It is in the L-shaped main building group that Clark's design can best be appreciated. The arriving visitor confronts a 200-foot-long phalanx of blank stucco walls, interrupted as in some large-scaled ruin (somewhat aptly, since the center of Middleton Place is the heaped brick ruins of its plantation house). Some gaps in this rampart frame tempting views toward the river to the north, and others contain dark-painted entry recesses. On the short side of the L, projecting toward the river, is the "lodge," which houses registration, lounge, and breakfast facilities.

The sequence of entering the individual guest rooms explains how they are clustered in pairs flanking an articulated chimney wall. Slit windows that yield raking views along this wall can be shuttered from the inside for privacy, presumably signaling which rooms are occupied. Opening the room door reveals a line of "servant" spaces – entry and compartmented bath – sandwiched between stuccoed walls. Stone, ceramic, and plastered surfaces underline the identity of this zone; then the guest steps into the spacious, wood-lined volume of the bedroom itself. Floor-to-ceiling wood blinds form an adjustable privacy and light-control membrane inside the cagelike glazing, offering endlessly varied possibilities for framing views of the river and the marshy opposite

shore, which is protected from development. The experience of opening these blinds in the morning to a scene of mists over the river is not soon forgotten.

The meditative mood of the guest room is supported by the sparest of furnishings. Interior designer Dian Boone provided each room with a pair of "peacock" chairs and a braided rug – each updating old craft methods. Fixed lighting has since been supplemented by a floor lamp in each room to satisfy the AAA's hotel raters (not to mention guests who want to read).

Recent inn guests, too, seem to relish the apparent order of the architecture and the straightforwardness of the furnishings. One woman reported that after staying here she and her husband had purchased peacock chairs for their own house. Like me, they enjoyed playing the variations of the blinds; and one guest called the relation of room to views "ceremonial." A sampling of recent visitors suggests, not surprisingly, that architects are among the inn's most loyal fans. Says one, who designs low-budget schools for a living: "At least my architectural education wasn't for naught; I can recognize great architecture when I see it."

If I were to quibble about the guest room, I would say the stair to the top floor is a bit daunting. Inside the door, the view is directly through the bathroom, not quite the ideal introduction even though it is discretely compartmented; the cumbersome

Compartmented bathrooms

occupy a linear service zone and are characterized by hard surfaces – marble floors and tile walls – under a low stuccoed vault. Glass block at the back of the oversized tub was sand-blasted on the outside for greater light diffusion.



By contrast, the guest rooms

are spacious and bounded by wood surfaces. Guests seem to enjoy varying lighting and the chance to frame views by manipulating the Ponderosa pine shutters.



(though well-crafted) sliding bathroom door is unlikely to be closed except for moments when total privacy is called for.

Outside, Hurricane Hugo clarified the design parti by eliminating the pines once scattered over the terrace inside Clark's L – trees he had wanted removed in the first place. The same winds – felling over 700 trees on the inn's 8.5 acres – decimated the forest to the south, which had hidden its walls from arriving guests until they were virtually upon it. Now one gets an unintended distant view of the discontinuous wall, in which its scale is indeterminate and its unframed openings more puzzling than they are up close, where you can see what's beyond them. And the wall no longer marks the clean separation between dense forest and groomed landscape that was its original premise.

While the owners will let most of woods grow back, they took the opportunity to improve guest parking. The original concept of one big parking area well removed from the units simply imposed an inconvenience in this steamy, often rainy climate; after the hurricane, parking was dispersed to areas no more than 50 feet from unit entries – yet invisible, and barely audible, from the guest rooms themselves. Guests like the carefully maintained rusticity of the grounds beyond the lawn, with crushed granite drives and walks and occasional piles of firewood; one couple relished being greeted by a fox.

For Tara, Look Elsewhere

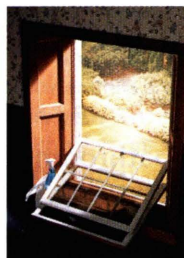
Charles Duell says some potential guests, perhaps those less sophisticated about design, are seriously disappointed to find that the inn "doesn't look like Tara," and some of them even leave in haste. But almost everyone who stays the night, he claims, becomes an "aficionado" of the inn. Refined design does seem to count with the inn's patrons – understandably since the initial attraction to Middleton Place is its willful, orderly landscape. The attraction here was never bowers of blossoms reflected in naturalistic ponds, but the rather austere remains of one of America's first and greatest geometrical, Baroque gardens. While superficially there may be a contrast between the historic site here and its resolutely Modernist annex, both represent the cerebral satisfactions of thoughtful design. □

Project: Middleton Inn, Charleston, South Carolina.

Architects: Clark & Menefee Architects, Charleston (now in Charlottesville, Va.), in association with Charleston Architectural Group.

Consultants: Sheila Wertimer, landscape; Dian Boone, interiors (including custom furniture design); Robert A. Shoolbred, structural; Rosser White Hobbes Davidson McClellan Kelly, mechanical; G. Robert George, civil.

Products and Services Literature Digest



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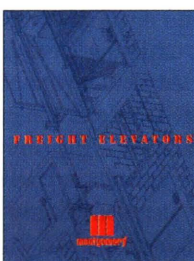


KDI Paragon has just published a new 16-page color catalog of its extensive line of competitive and recreational swimming pool deck and underwater equipment. The catalog includes diving stands and towers, life-guard chairs, competitive starting platforms, grab rails and ladders, and underwater windows and loudspeakers. For pool designers, architects, and builders, the catalog also includes drawings and specifications.

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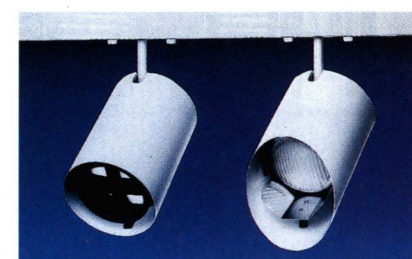
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Montgomery Elevator Company. Circle No. 356.

(continued on page 98)



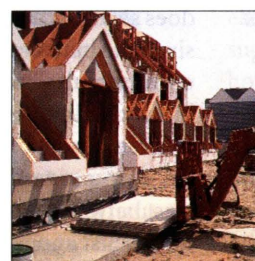
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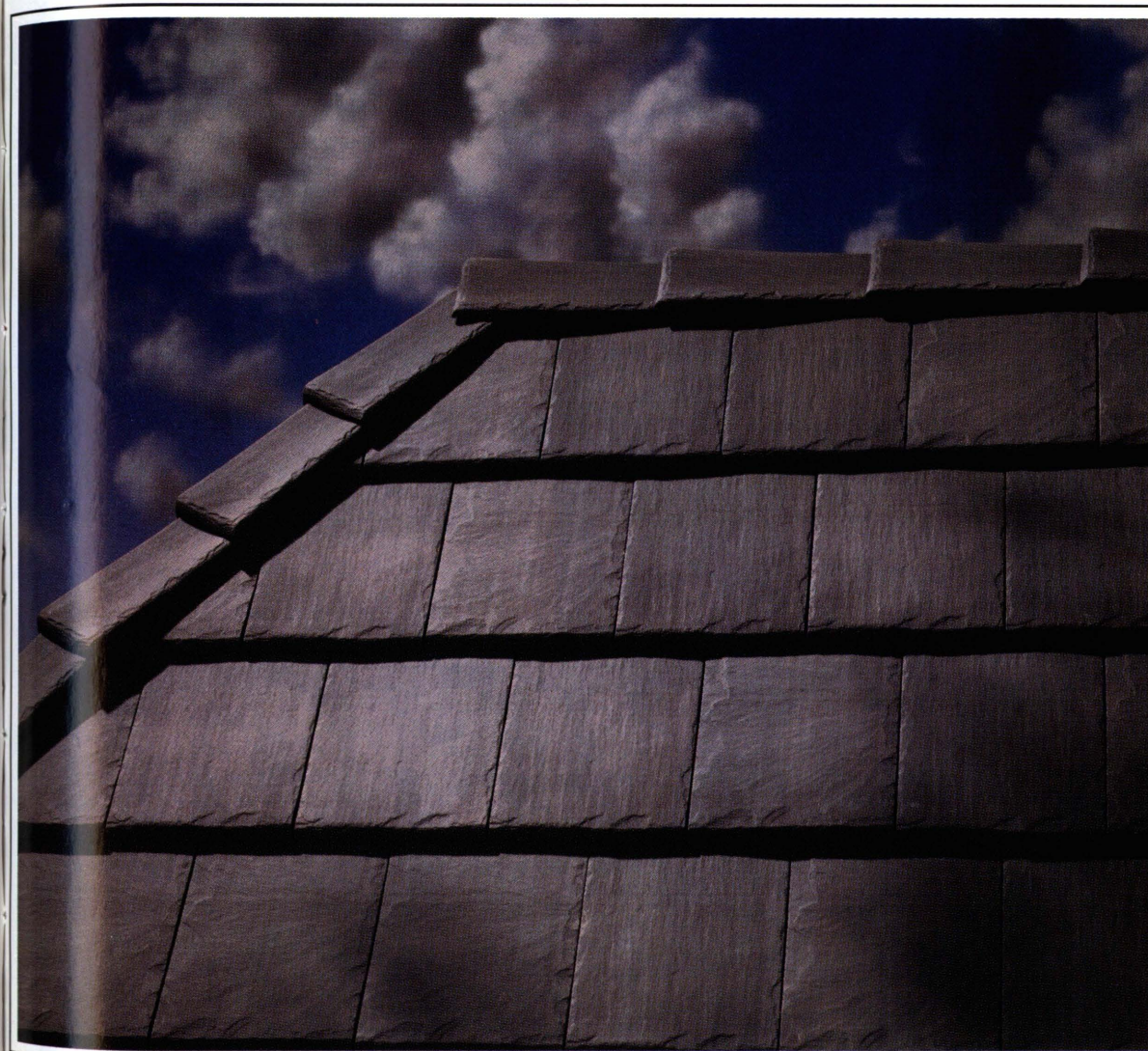


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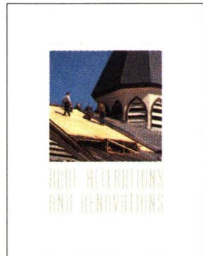
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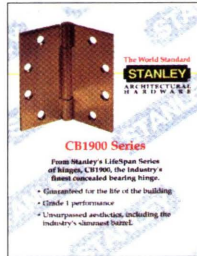
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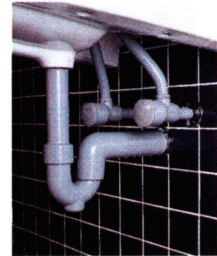


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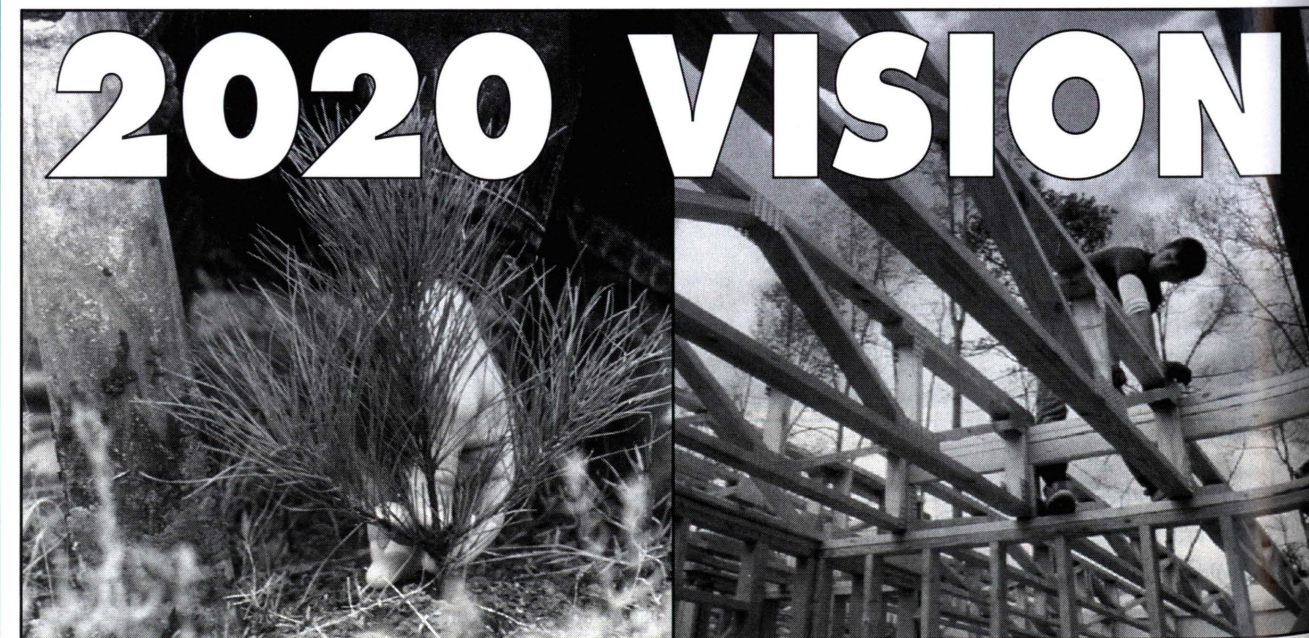
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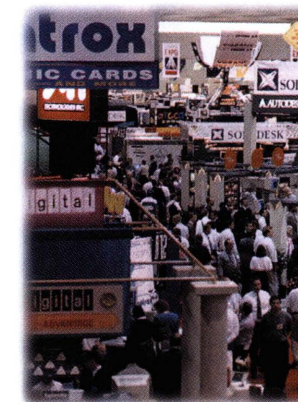


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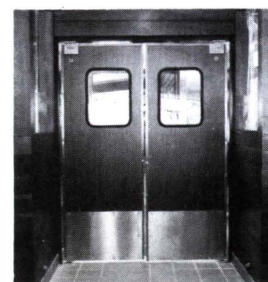
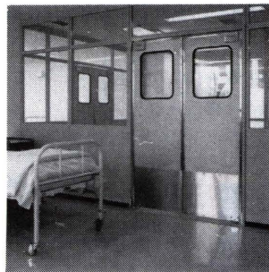
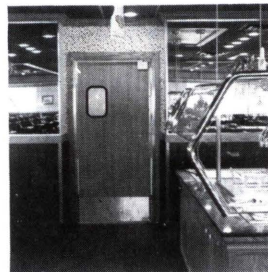
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AIA: Worth the Price of Admission?

(continued from page 65) voted to add another board member!

An AIA Troika

Weiss had other suggestions to make the AIA more effective, which the board has given lukewarm reception. He concluded that the Institute would benefit by splitting into three entities – an AIA trinity of nonhierarchical, mutually supportive parts. This would eliminate the crazy quilt of 300 overlapping components. Local chapters would provide collegiality, information, and education for professional development. State councils would focus on state-level lobbying and public promotion of the profession. AIA national's platform would be at the national level to promote the profession through Federal lobbying, and to provide credentials beyond state registration. He further suggests breaking national into three centers: member support services would be located in the Midwest, component support services would be on the West Coast, and public policy and outreach would be conducted in Washington.

Cramer and the board apparently reacted to this last suggestion in typical Beltway fashion. "We wondered whether moving out of Washington could reduce overhead and get us closer to the member," says Cramer. "We discovered that it wouldn't save money, and in this day of 800 phone numbers, we don't need to move." At the Grassroots meeting, attendees were reluctant to change the chapter structure, but thought the chapters should provide services, not the national AIA.

There are developments on the horizon that may make or break the Institute. The first threat arises from the board's decision last June to end supplemental dues in 1997. This will result in an estimated revenue shortfall of \$3.2 million and (if Weiss is correct about the loss of members whose dues are not subsidized) a substantial drop in membership. The AIA's national leadership is now scrambling to figure out how to boost revenue. One plan is to set individual member dues at \$390 across the board, and another is to cut deals with firms on AIA products and services by making prices significantly higher for non-members. Renegotiating the publishing deal on *Architecture* with Billboard Publications (under which Billboard publishes the magazine) might bring (continued on page 102)

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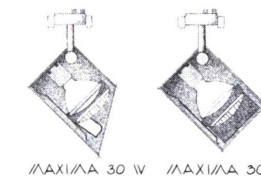
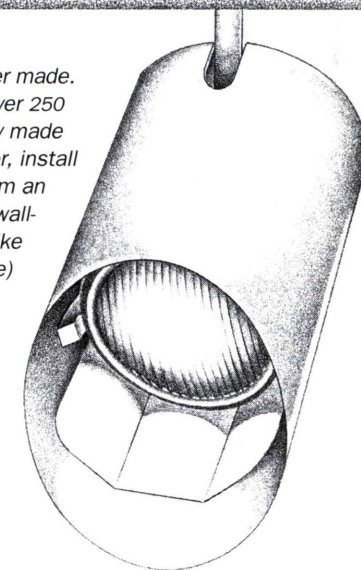
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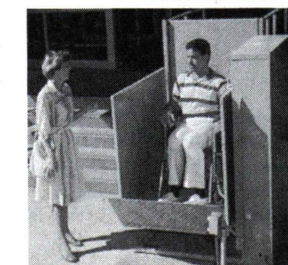
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AIA: Worth the Price of Admission?

(continued from page 100) in another \$500,000, AIA hopes. But Billboard may have less latitude for negotiation when the contract expires in 1996, having recently been sold to a Dutch publishing conglomerate. Other ideas include cutting services and programs. In other words, fewer services for more dues. Does this sound like a winning strategy?

Another development is the requirement of continuing education for AIA membership, as of 1996. The Institute could increase the value of membership by making continuing education free (thus making the designation "AIA" substantive) or it could turn off more members by operating the continuing ed program as a bald-faced revenue enhancer.

The AIA's best short-term bet is to promote its new service, AIA Online, to members and nonmembers. AIA Online is poised to revolutionize the profession by giving it swift access to

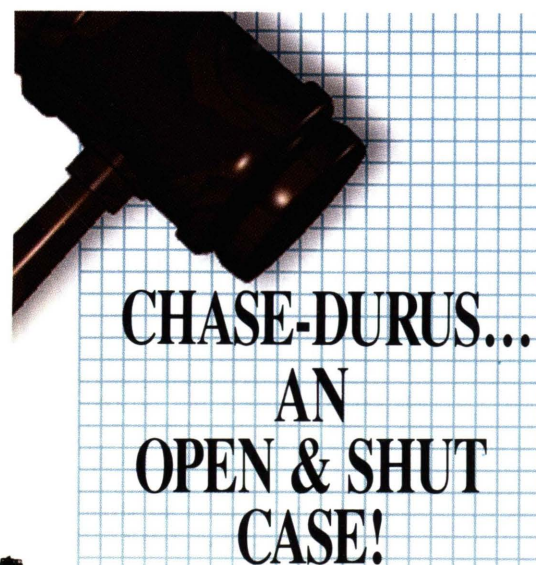
professional data bases, publications (such as the *Commerce Business Daily*), specifications and codes, employment referrals, professional directories, building products sources, costing information, AIA's Professional Interest Areas, and professional development aids — all at the touch of a keyboard.

There is not much traffic right now on AIA's information superhighway, but the infrastructure is in place, and is improving daily. Members can access information as they choose, instead of getting a barrage of AIA junk mail. An Internet-like chat line, soon to be added, will allow architects across the country to talk to each other, giving another dimension to professional collegiality. When AIA Online was demonstrated to attendees of Grassroots in January they responded enthusiastically, calling for the Institute to "make AIA Online free with membership,

extend and exploit its potential, and make it a key AIA value."

Over the Edge

When the AIA's members gather for their annual convention in Los Angeles next month (the theme of which is "Edges"), they should demand a fair hearing and debate on changing the Institute's structure to serve them better. They should call for fiscal responsibility on the part of the board and the executive leadership (a balanced budget resolution would be a good start). They should force the Institute to reorder its priorities as evidenced by where their dues money is spent, and to address first and foremost the public promotion of this embattled profession. Most of all the members should ask the question: If the AIA is not part of the solution to the profession's dilemma, might it be part of the problem? □



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SOUND BLOCKS

(continued from page 91) building codes should be checked to verify acceptability of these wall and floor constructions.

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mortar during installation to close off potential acoustical leaks at their slot openings. Electrical fixtures should be surface-mounted on CMU walls that have either grout- or sand-filled cells.

Conclusion

While this article covers the basic principles of acoustical design using CMU, the architect should consider consulting an acoustician for projects that require superior acoustical characteristics. However, when carefully selected and detailed, the common material of CMU can deliver outstanding acoustical performance. □

Recommended Reading

- Egan, M., David, Architectural Acoustics, Chapter 4, McGraw Hill, 1988.
Harris, Cyril, M., Noise Control in Buildings, Chapter 5, McGraw Hill, 1993.
Harris, Cyril, M., Handbook of Acoustical Measurements and Noise Control, Chapter 31, McGraw Hill, 1991.
Warnock, A.C.C., "Sound Transmission Through Concrete Blocks with Attached Drywall," Journal of the Acoustical Society of America, 90 (3), September 1991.
Warnock, A.C.C., Sound Transmission Loss of Masonry Walls, Building Research Note No. 217, National Research Council of Canada, June 1984.
Various publications from the National Concrete Masonry Association, P.O. Box 781, Herndon, VA 22070, (703) 713-1900.



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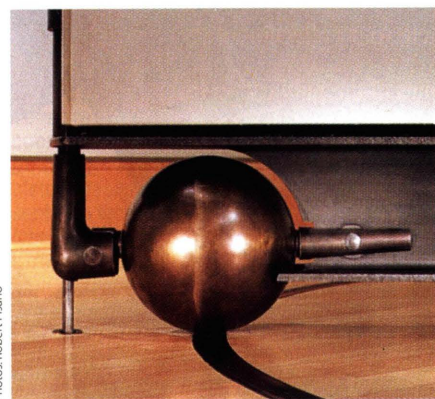
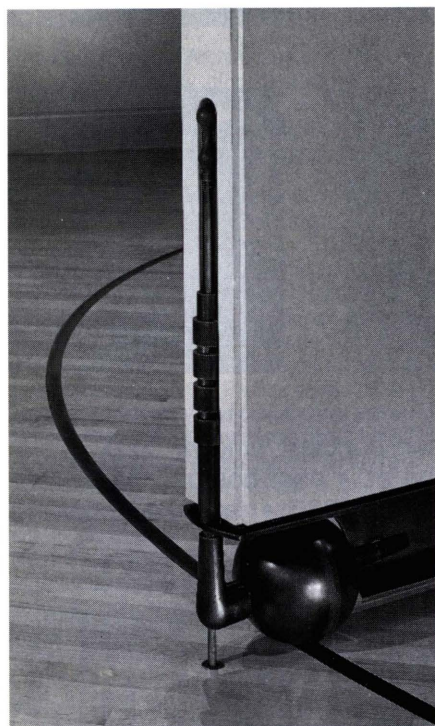
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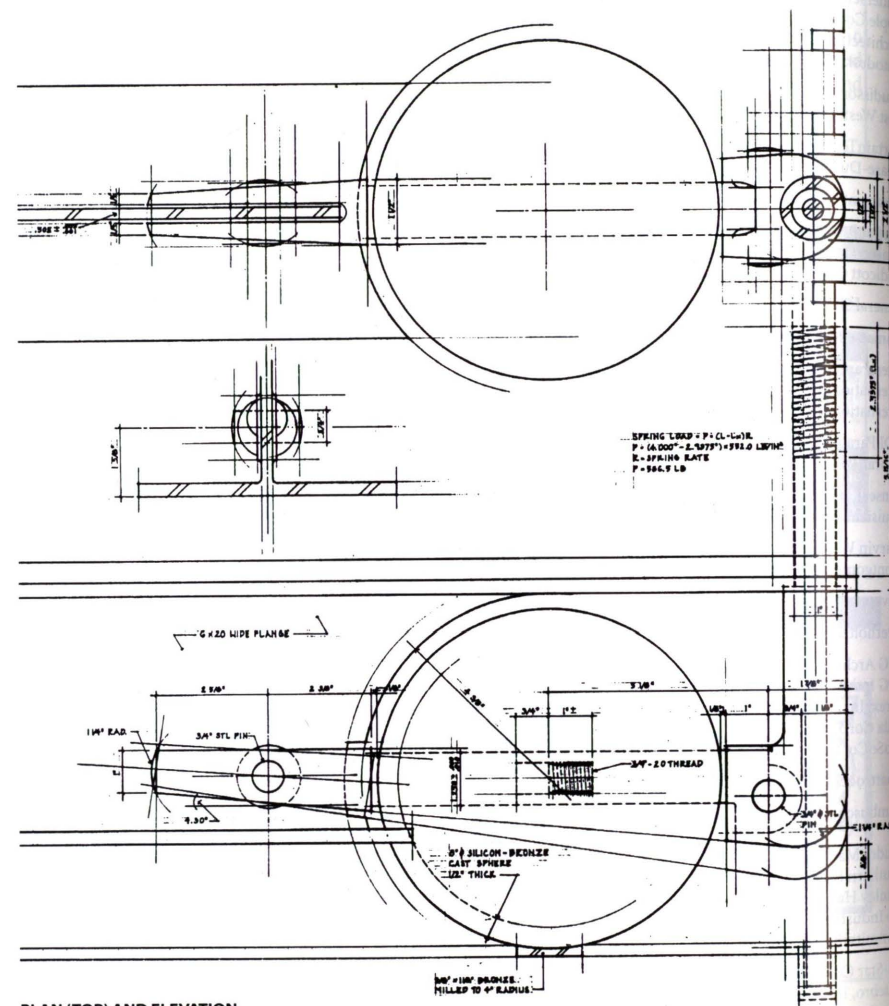
Selected Detail

Artful Partition System

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Photos: Robert Planno



PLAN (TOP) AND ELEVATION

For the Seafirst Gallery in Seattle, the local firm of NBBJ Architects developed a movable partition system that gives the 3,000-square-foot space flexibility. This practical aspect is married to artful detailing of the partitions that glide into place on elegant bronze spheres.

According to project architect Brent Rogers, each element of the partition system is articulated according to its function. Motion is expressed in bronze, in the form of an eight-inch cast bronze sphere that rolls along a bronze recessed floor track. The track's concave surface matches the radius of the sphere for a snug fit.

A steel W6x20-section, zinc-plated and acid-etched, connects the sphere to the

underside of the partition. The partition is wood frame clad with $\frac{3}{8}$ -inch gypsum wallboard over $\frac{1}{2}$ -inch plywood. The partition surface allows objects to be hung at any location on the surface without the use of molly bolts.

Wood is used as a neutral material on elements such as the gallery's floor, which is maple. The handle that operates the partition's spring-loaded cane bolt is made of "ironwood" (its species name is *lignum vitae*). Known for its strength and durability, ironwood was commonly used for ships' gears, and was selected for this detail to resist the shear and structural loads generated by its function as a handle. *Michael J. Crosbie*



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