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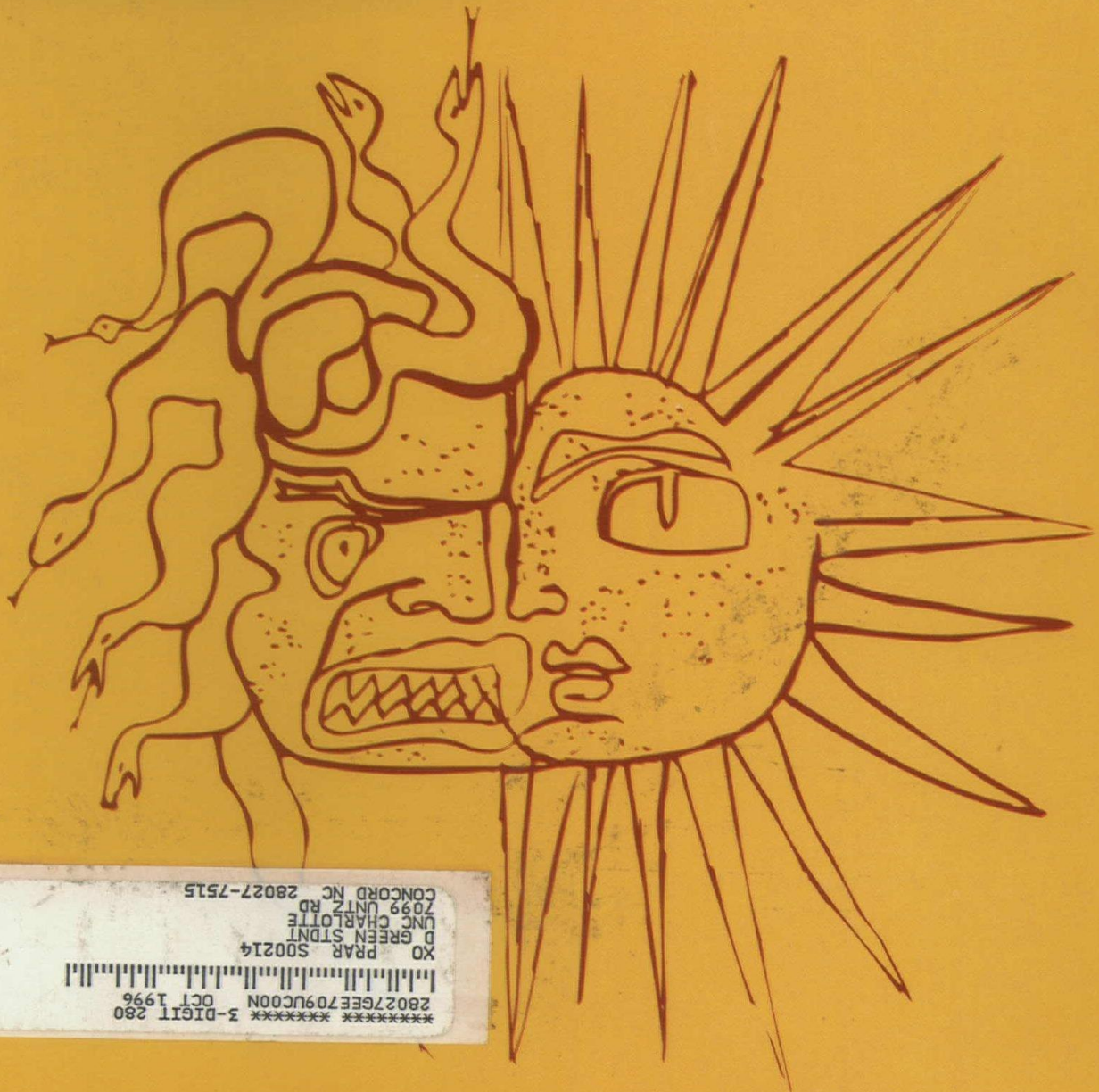
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Progressive Architecture

A Penton Publication August 1995

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- Profile: Brian MacKay-Lyons
- New Urbanism
- Process: Battery Park City Pavilion
- Critique: Sainsbury Wing
- Technics: Tile



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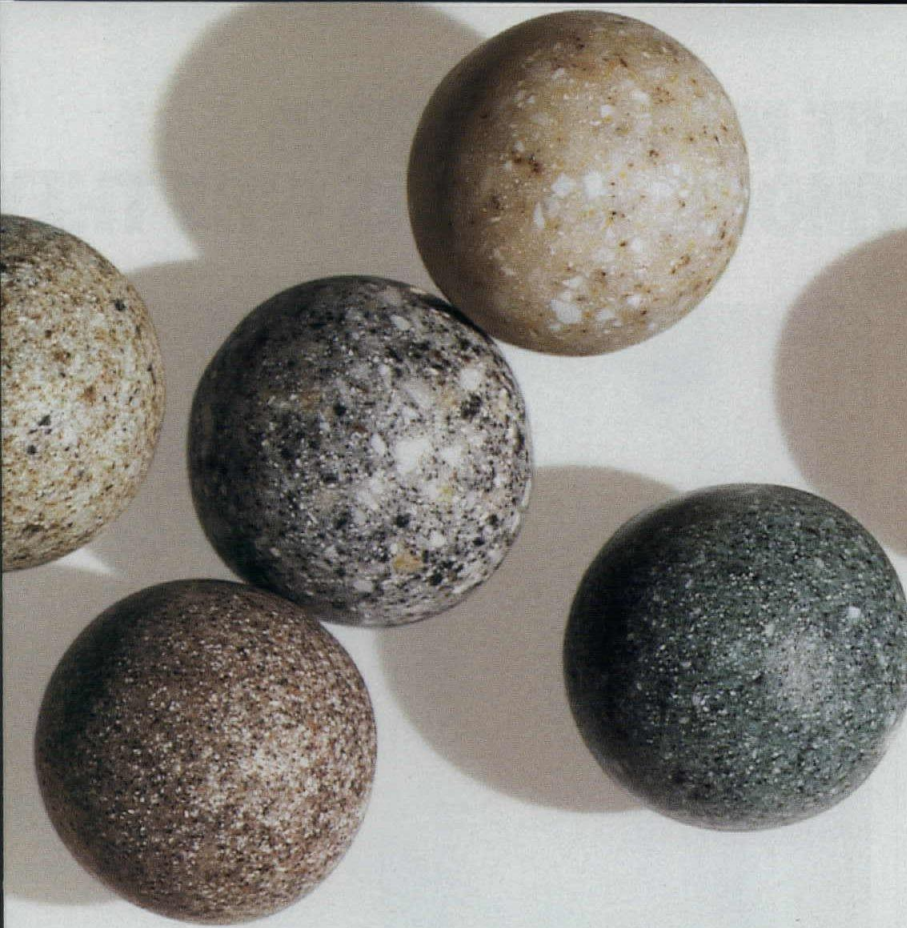
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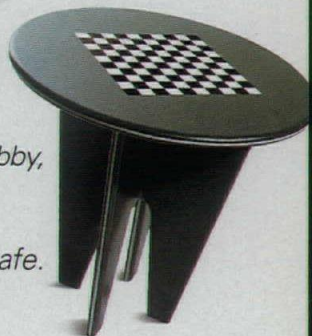
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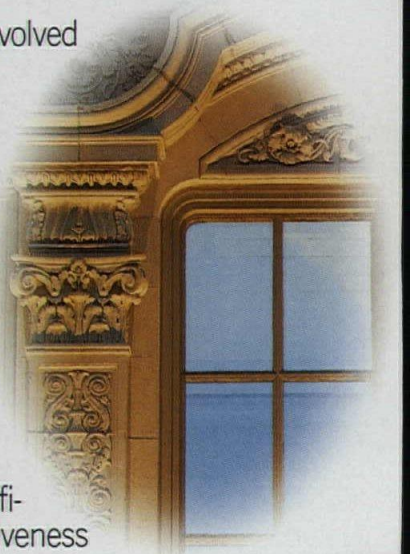
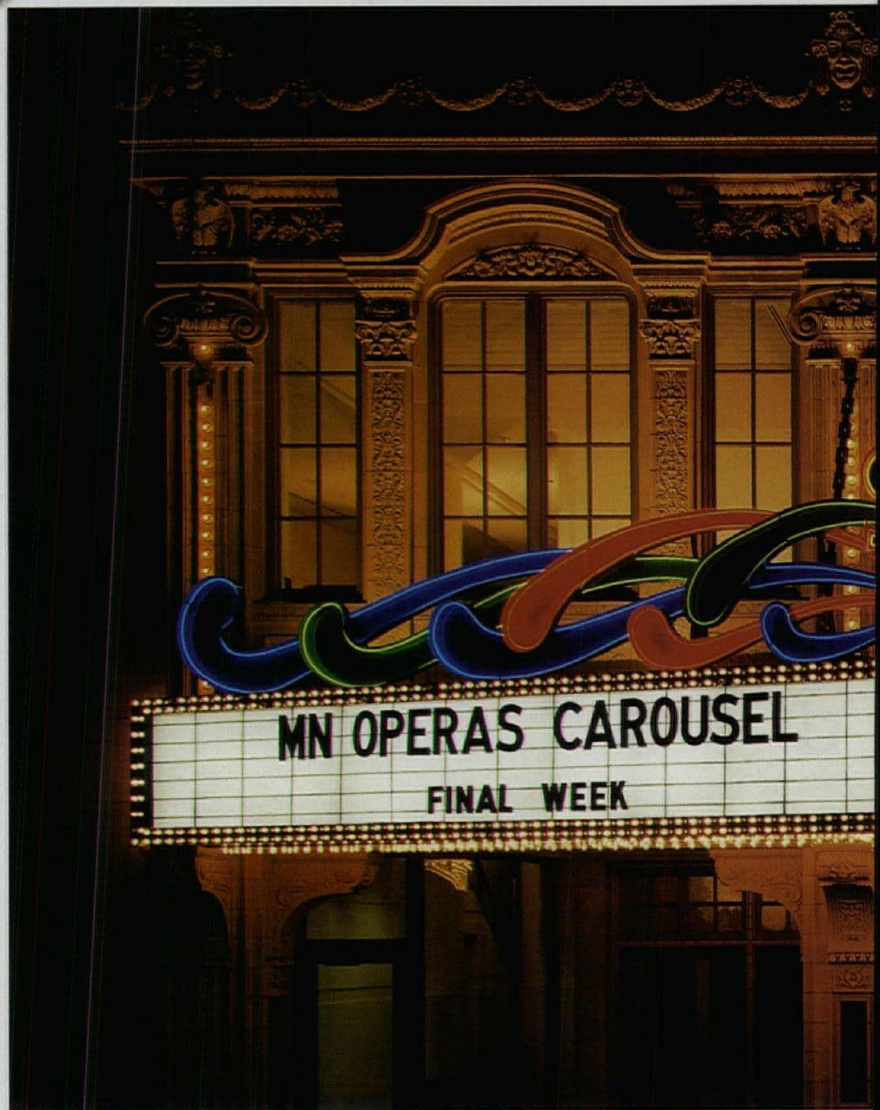
When it opened in 1921, the State Theatre in Minneapolis was hailed as the most luxurious showplace between New York and San Francisco. Sixty years later however, when planning began for a \$130 million office/retail complex for the site, it appeared this grand old theatre would go the way of the silent films it once screened.

But in 1985, a determined group of preservationists succeeded in getting the State placed on the National Register of Historic Places. And one of the first companies to become involved in its restoration was Marvin Windows and Doors.

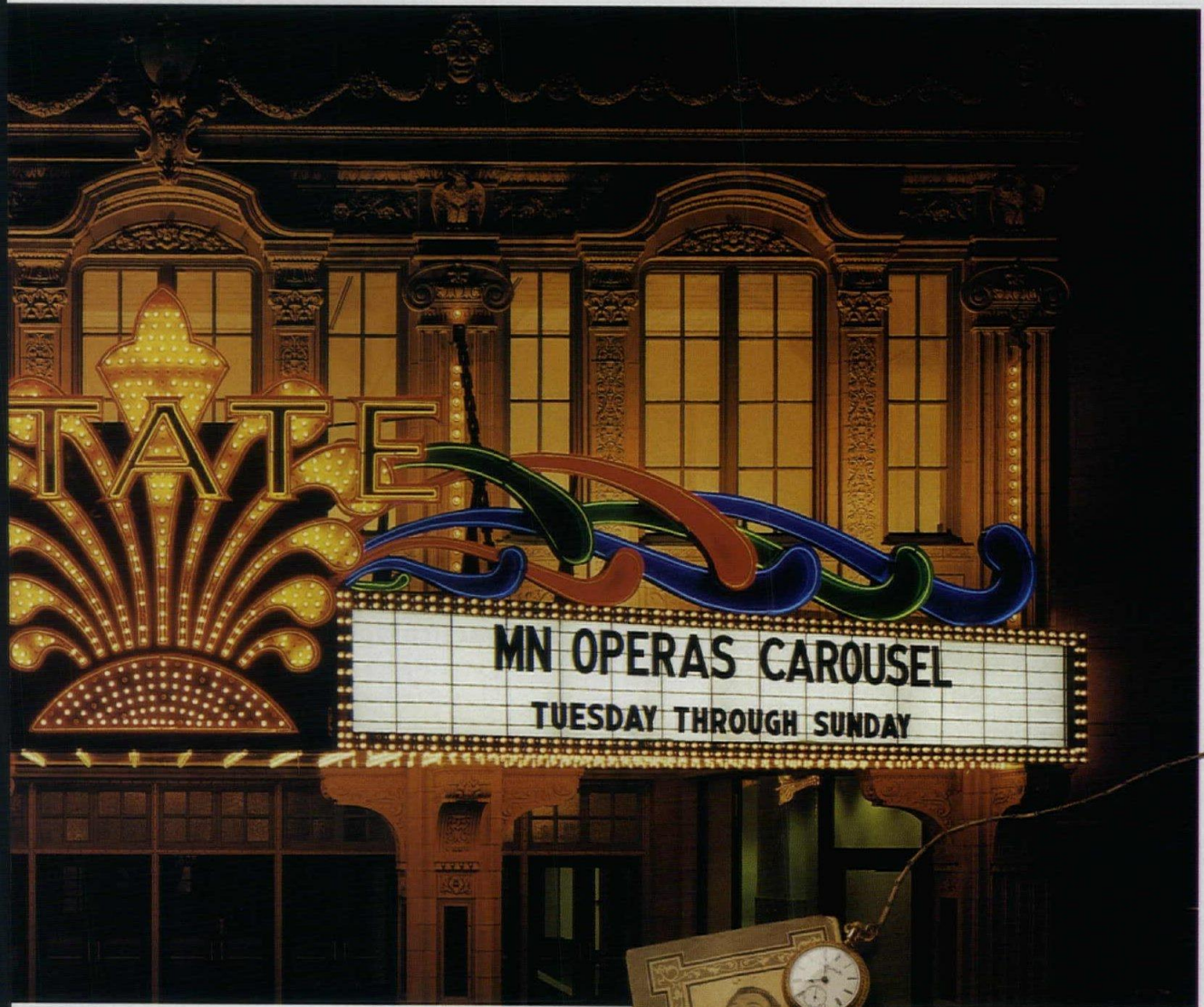
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Drawing: Medusa-Sun by Le Corbusier - © 1995 Artists Rights Society (ARS), New York/ SPADEM, Paris
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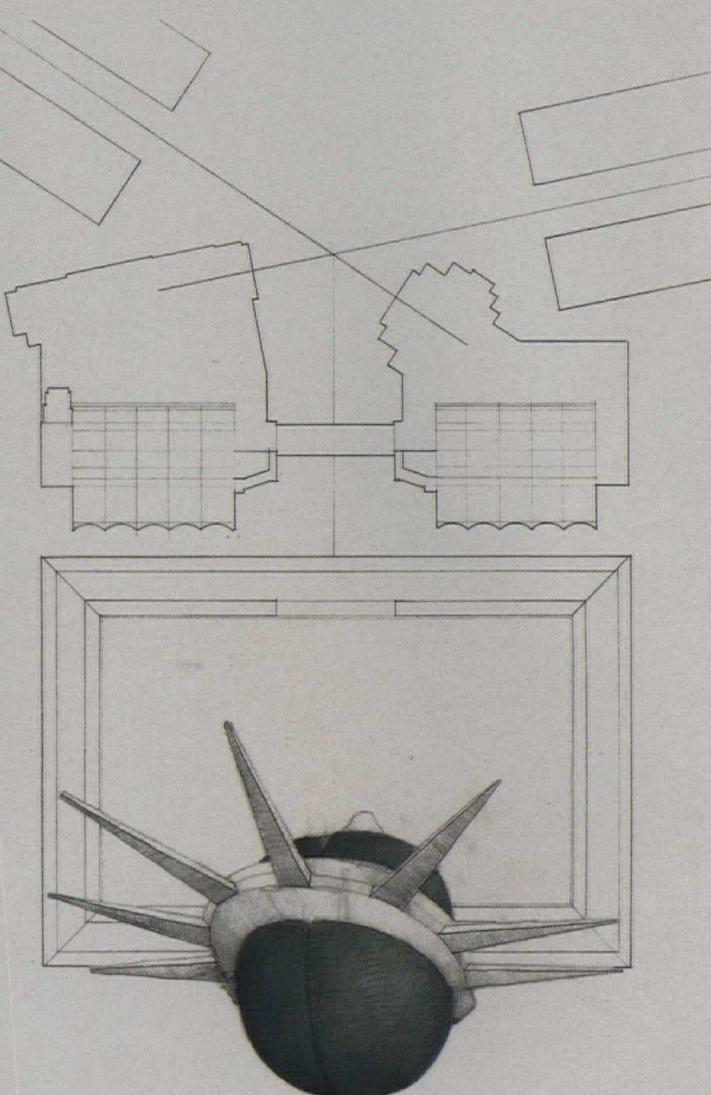
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Don't Kill the NEA

As we go to press, Congress is preparing to make deep cuts in many programs and agencies, among them the National Endowment for the Arts. As the only national advocate of the arts and design communities, the NEA should not only be allowed to survive, but should be encouraged to flourish. While the NEA, like many other government agencies, could be trimmer, its proposed elimination, based on hysterical condemnations of its support of a few controversial art pieces, overlooks the NEA's broad mission and accomplishments.

Little known even among the design professions, the Endowment's Design Program, with a very modest grants budget of \$3.4 million (fiscal year 1994), makes grants to a wide variety of organizations, urban and rural, for design education, design history, documentation projects, and arts facilities design. While the grants are relatively small, recipients can use them as "seed money" to secure funding from private sources, says Marc Sokol, director of the NEA-funded Architectural Youth Program (P/A, Dec. 1994, p. 45).

Among the projects supported recently are: the Early Childhood Facilities Fund (P/A, May 1995, p. 37), a competition to create a functional, affordable prototype for Head Start facilities; Parks Council, Inc., a program to design, develop, and reclaim abandoned, city-owned vacant lots in inner-city New York; Rural Opportunities, Inc., a program in Camp Hill, Pennsylvania, for the design of housing for migrant workers; and Design as a Catalyst for Learning, a project to demonstrate the potential of using design throughout the curriculum in American elementary and secondary schools.

If the architectural and design communities are to have a voice in decisions affecting the built environment, then we must come together to support a national design agenda. With appropriate federal backing, design can benefit our economic and industrial base, making the U.S. more competitive in the global marketplace; its use in educating future generations is vital. The support provided by the Design Program must be reciprocated by practitioners and educators in architecture, product and graphic design, landscape architecture, planning, and preservation, and by the architectural press.

But to date the design community's voice has not been

heard in the national debate on the arts. The AIA, for example, has not made an official statement in defense of the NEA, although support for it has been included in broader public policy statements delivered to Capitol Hill. According to Al Eisenberg, the Institute's Senior Director for Federal Legislative Affairs, the AIA has focused on other budget cut proposals affecting the well-being of the architectural community and the nation at large; the Advisory Council on Historic Preservation, HUD, and ISTEA are on the chopping block.

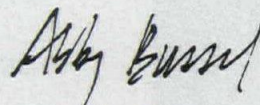
Seemingly unfazed by the threat to the NEA, the director of the Design Program, Samina Quraeshi, argues that "design is a strategic national resource." A graphic designer and former assistant director of Harvard's Carpenter Center for the Visual Arts, Quraeshi emphasizes that the Design Program is a proactive

organization, not an agent for highbrow ventures. Regarding the NEA's threatened demise, she urges designers to "stand together to send a loud and clear message. We must have a place at the table," she asserts. "You must join the political process to change it."

Currently there are two bills vying for passage by the end of September that will likely define the future of the NEA. A reauthorization bill introduced by Representative William Goodling (Rep.-PA), Chairman of the House Economic and Educational Opportunities Committee, calls for 40 percent cuts to the NEA's budget over each of the next three years and eliminates the individual disciplines, phasing out the agency by 1999. In contrast, a bipartisan proposal introduced by Senator James Jeffords (Rep.-VT) calls for a five-year reauthorization and structural consolidation of the Endowment, with a 2 percent annual decrease in funding.

NEA Chairman Jane Alexander calls the Senate bill "a solid bipartisan effort to preserve and strengthen the Endowment's national leadership role in the arts, while streamlining the grant-making process." Of the Goodling bill, Alexander says, "This is not a three-year phase-out, as advertised. The Arts Endowment, quite simply, would cease to exist in any functional way on October 1, 1995." The design community should not let this happen. Support the NEA by writing to your representatives in Washington. □

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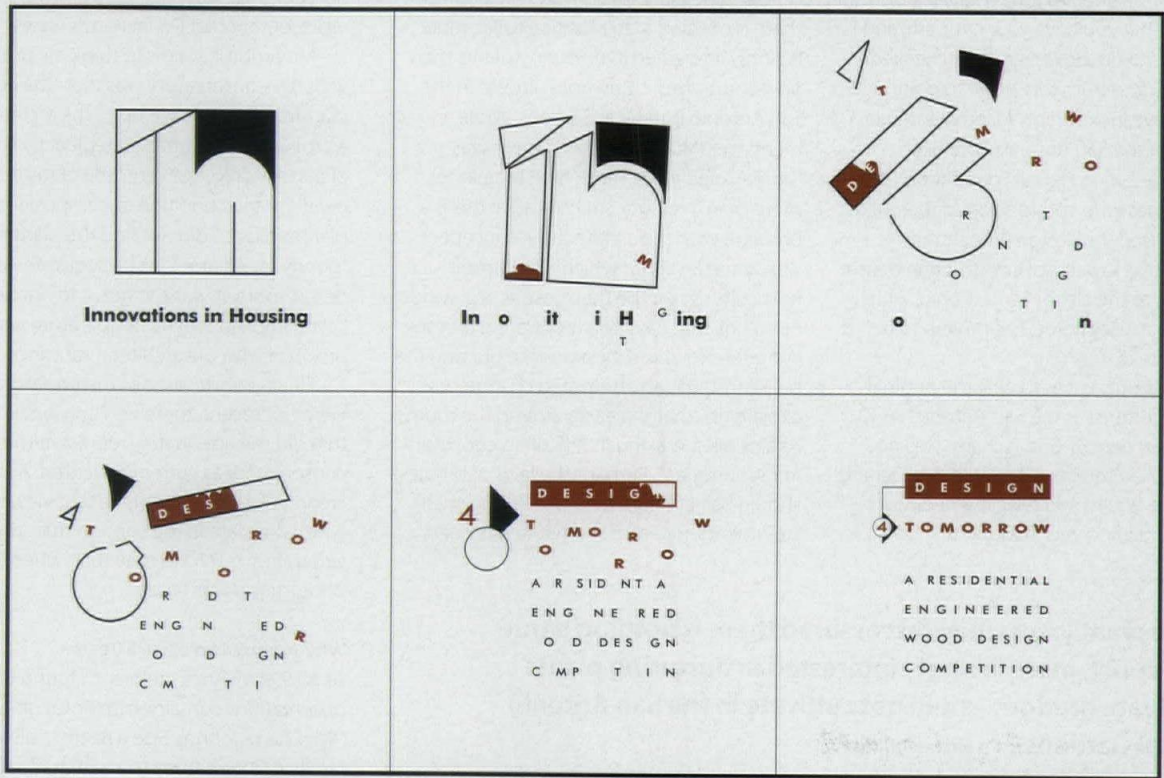


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Botanical Gardens Critique

It has been a longstanding policy of mine not to answer articles (P/A, June, 1995, p. 86). My position is that you have your criticism, and I have my building. However, an unchecked commitment to truth forces me to point out that you have inexplicably failed to interview the client of the San Antonio Botanical Gardens, the Ewing Halsell Foundation. They were the ones who commissioned the building, supervised the design process, and attended to all aspects of construction before donating it to the city of San Antonio, which in retrospect, they agree, has proven to be a great mistake.

I am also puzzled as to why the original chief horticulturist at the San Antonio Botanical Garden, Dr. Eric Tschanz, was not consulted. Had this interview with Dr. Tschanz taken place, you would have learned that when the building was inaugurated, Dr.

you and your readers why the current planting does not live up to the architecture.

Genuine plant lovers may rest assured there is nothing a true horticulturist, more lovingly interested in nurturing plants than private grudges, could not cultivate in the San Antonio Botanical Gardens. While you mentioned that the "desert" room was "unreasonably hot" and "hard to bear for more than a minute," might I ask if this is a problem with the architectural concept or simply the levels [at which] the current horticulturist set the thermostats and window openings that day? You mentioned that the current horticulturist claims that burying the buildings "was an attempt to change physics," explaining "that the earth around the rooms retains heat, making it difficult to cool them in the summer." Perhaps the laws of physics should be verified before publishing such statements, for earth sheltering has been

Mr. Ambasz may be right in saying that I should have spoken to Dr. Tschanz, the original horticulturist, but I did report Mr. Ambasz's representation of Dr. Tschanz's views.

Mr. Ambasz seems to think my problem with the conservatory was that "the current planting does not live up to the architecture," a problem he ascribes to neglect by the city of San Antonio. But very little of my article dwelt on the condition or composition of plants; in fact, I did not find the planting as "poorly maintained" as he suggests. As for the desert room, it was too hot. I do not believe I even implied that its temperature was "a problem with the architectural concept."

Finally, while some of the photographs were not recent, there was only one (p. 90) that did not adequately represent the conservatory as currently planted. Although I regret not using a more recent view in that case, I did state in the caption that "the vegetation is thicker now than when this photograph was taken."

"Genuine plant lovers may rest assured there is nothing a true horticulturist, more lovingly interested in nurturing plants than private grudges, could not cultivate in the San Antonio Botanical Gardens." – Emilio Ambasz

Tschanz implemented a philosophy of planting which was indeed in perfect harmony with the composition of the architectural forms of the building. You complain about the "arbitrary nature" of the roof forms, claiming for example that the temporary exhibition pavilion is "least effective at exploiting the shape of its skylight" because "all of the plant life is at ground level or eye level." Dr. Tschanz's beautifully skilled and highly original exhibitions for this pavilion arranged a multitude of flowering plants in a graceful spiral moving from low bulbs to high trees at the center, precisely following the spatial transformations afforded by the roof above. You mention that the current horticulturist claims that "the palm room's conoid shape allows for only a few tall palms," but the reality is that the palm room floor spirals up toward the center precisely as the roof spirals up, thereby affording equal height to every palm in the facility! The forms of these buildings only appear "arbitrary" when you do not take the time to discover and collaborate with the intent of the design. Had you interviewed the client or the original horticulturist, you might have discovered that the San Antonio Botanical Gardens have in fact been the victim of enormous budget cuts by the city over the years, which have resulted in its being poorly maintained almost to the point of abandonment. This might explain to

working for thousands of years to keep spaces cool in summer and warm in winter.

My greatest concern, however, is that while purporting to critique the "conception" versus the "implementation" of this building, many of your photographs (for which you must have paid publication fees) are not even recent, and they show barren paths and spaces from close to ten years ago, which are certainly not representative to your readers. Also, this is not a building trying to echo formal plans like "Chartres" as your reporter struggles to suggest, but rather it is entirely about growth, discovery, and transformation. By your interspersing of old photographs with the new and judging the architecture during a period of slashed budgets and limited planting insights, your readers are poorly served and the entire point of the architecture is sadly missed.

Emilio Ambasz
New York

Mark Alden Branch responds:

The fact is that the users of this building have significant problems with it. I gave Mr. Ambasz an opportunity to respond to what I viewed as design problems, and duly reported his responses.

I did attempt to speak with a representative of the Ewing Halsell Foundation, who did not respond in time to meet my deadline.

Why Johnny Can't Size a Beam

As a 1994 M. Arch. recipient, I found the observations contained in Mr. Crosbie's article, "Why Can't Johnny Size a Beam?," all too familiar. During three years of graduate study, I experienced firsthand the design studio emphasis on architecture as art, with little attention to the necessities of structure and mechanical systems and absolutely no consideration of the rigors of architectural practice. While these subjects were addressed in other required courses, they were not presented as critical design issues. These topics were, in my opinion, treated as supplemental – not integral – architectural considerations.

While Mr. Crosbie's article cites several promising approaches to correcting this situation, he did not mention what I consider to be a major cause of this attitude: the world of academia often emphasizes intellectual discourse and research over problem solving and pragmatic application. Our universities base job security – tenure – for their educators on achievements in research and publication. With no incentive to pursue the day-to-day issues of architectural practice, very few full-time educators will choose such a path – and who can blame them? Unfortunately, the result of this predicament is that the responsible architectural education professional grounds course work in his or her area of expertise, leaving issues like systems analysis and project delivery for the practicing professionals and I.D.P.

After all, if architectural education programs taught students how to be architects, architecture would (*continued on page 16*)



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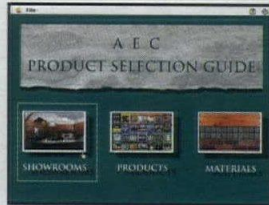
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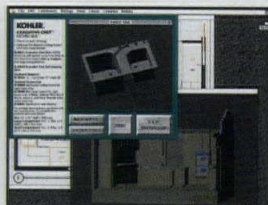
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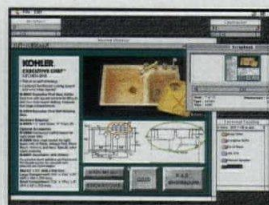
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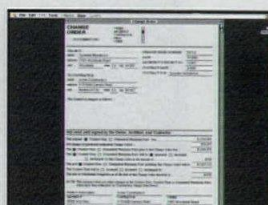


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STAGE I CASH PRIZES TOTALING \$126,000

TOWN PLAN

Three or four Finalists will equally share \$60,000 prize money. \$3,000 in cash will be shared by the selected Honorable Mention winners.

COURT HOUSE

Three or four Finalists will equally share \$60,000 prize money. \$3,000 in cash will be shared by the selected Honorable Mention winners.

STAGE II WINNERS WILL BE AWARDED

First Place	\$8,000	First Place	\$8,000
Second Place	\$4,000	Second Place	\$4,000
Third Place	\$2,000	Third Place	\$2,000

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TO FURTHER DEVELOP THE WINNING DESIGNS

THE JURORS

Each competition will have its own Jury. The Jurors are Joe Berridge, Grady Clay, Benjamin Forgey, Steven Hurtt, Ralph Johnson, M. David Lee, Mary Means, Judge W. Person, and Michael Pittas.

PRESENTATION

The first stage submissions for each competition will be limited to a presentation consisting of two boards.

SCHEDULE

Programs Available	Last week in August
Registration Closes	October 2, 1995
Stage I Submissions Due	November 20, 1995
Stage I Jury Deliberations	November 26 - 28, 1995
Stage II Jury	January 27, 28, 1996

REGISTRATION

There is a non-refundable registration fee of \$95.00 (US). All registrants will receive the Court House and Town Planning programs — and be permitted to submit proposals for one or both competitions. There is no registration form. Competitors need only include their names and addresses with the registration fee. Cash will not be accepted. Checks, money orders, bank drafts, payable in US dollars, must be made out to:

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Williamsburg, Virginia 23187-8784

PROFESSIONAL ADVISORS

Jeffrey Ollswang and Lawrence Witzling
Design Competition Services, Inc. 616 East Lake View Ave. Milwaukee, Wi. 53217

Views

(continued from page 12) be reduced from a profession to a trade, and who would want to be employed in an industry whose service is producing the built environment?

Jon T. Gurney
New York

Designers, Too, Can Say No, Thank you

Your "Just Say No, Thank You" editorial was on target. However, this is not just an architect's issue.

A couple of years ago the world renowned graphic designer Milton Glaser had this to say in response to the Atlanta Olympic Committee's request for uncompensated design work: "In our society, we express our respect for work by paying for it. When we refuse to do so, we are expressing contempt for the work and the worker."

Morgan Daly, Principal
Daly & Daly
Brookline, MA

Public Space Liberated

I agree that our public spaces are under siege from many quarters (rampant violence, as well as budget cutbacks and a racism that has institutions turning their backs on minority neighbors). I applaud you for encouraging architects to support gun control efforts (P/A, March 1995, p. 9). I do, however, have a different opinion about the closing of Pennsylvania Avenue in front of the White House. Closing the street is not a loss of public space, but a great opportunity for increased civic engagement in one of the most prominent public staging grounds available to Americans. This is really a reclaiming of

"Closing the street is not a loss of public space, but a great opportunity for increased civic engagement in one of the most prominent public staging grounds available to Americans."

—Joan Tally

the public realm from the domination of the automobile. On my recent visit, pedestrians, in-line skaters, and a variety of protesters were freely moving about in front of the "most secured residence in America." It is unfortunate that it took terrorist attacks to spur the creation of what should always have been a civic staging ground but was really a traffic thoroughfare. In many urban settings, public rights of way should be used to reduce traffic, not accommodate it. Why not use Pennsylvania Avenue as a national model of a truly civic street reclaimed for the pedestrian, tourist, and soapbox?

Joan Tally
Brooklyn, NY

CORRECTIONS

Denver Library Addition

The photograph of the Denver Central Library addition, designed by Michael Graves, (P/A, May 1995, p. 36) was mistakenly reversed (l. to r.).

Henry R. Luce Hall

In our article on Edward Larrabee Barnes (P/A, July 1995, p. 72), the caption for Mr. Barnes's Henry R. Luce Hall at Yale University should have identified his collaborators as John M.Y. Lee/Michael Timchula Architects. □

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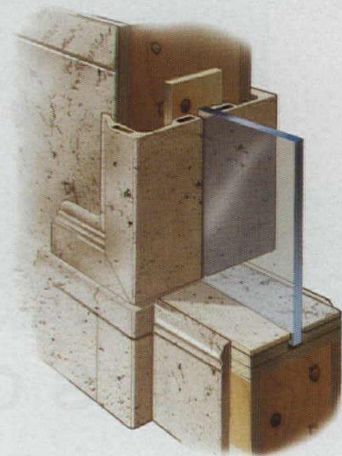
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Deadline for Submissions: September 8, 1995

43rd Annual P/A Awards

Jury

Will Bruder *President*

William P. Bruder-Architect, Ltd.
New River, Arizona

Santiago Calatrava, Architect
Principal
Santiago Calatrava Valls SA
Zurich and Paris

Douglas Kelbaugh, FAIA,
*Professor of Architecture and
Urban Design*
University of Washington,
Seattle

Noel Michael McKinnell
Founding Partner
Kallmann, McKinnell & Wood,
Boston

Patricia Patkau
Principal
Patkau Architects
Vancouver, British Columbia
Associate Professor
University of British Columbia

Progressive Architecture announces its 43rd annual P/A Awards program. The purpose of this awards competition is to encourage outstanding work in architecture and urban design before it is executed. Awards and citations will be designated by a jury of distinguished, independent professionals, basing their decisions on overall excellence and innovative ideas. In an effort to address the broader concerns of the profession, P/A is encouraging the jury to take into account various considerations in addition to formal qualities: response to program and context, management of the design and construction process, technical solutions and details, social and economic contributions. Potential entrants are urged to interpret the call for "outstanding work" as broadly as possible, consistent with the awards program's limitation to specific projects that have been accepted for execution.

Judging will take place in October 1995 and winners will be notified, confidentially, by October 31. Public announcement of the winners will be made in January 1996, and winning entries will be featured in the January issue of P/A. Clients, as well as professionals responsible, will be recognized. P/A will distribute information on winning entries to national, local, and specialized media.

Eligibility

- 1 Who Can Enter.**
Architects and other environmental design professionals practicing in the U.S., Canada, or Mexico may enter one or more submissions. Proposals may be for any location, but work must have been directed and substantially executed in offices in those countries.
- 2 Real Projects.**
All entries must have been commissioned, for compensation, by clients with the authority and the intention to carry out the proposal submitted. In the case of design competitions, the proposals eligible are those the client intends to execute.
- 3 Architectural Design Entries.**
Entries in Architectural Design may include only works of architecture scheduled to be completed after January 1, 1996. Indicate anticipated completion date on Projects Facts page (see item 7, below). Prototypical designs are acceptable, if commissioned by a client.
- 4 Urban Design Entries.**
Entries in Urban Design must have been accepted by a client who intends to base actions on them. Implementation plans and anticipated schedule must be explained in entry.
- 5 Verification by Client.**
The jury's decision to premiate any submission will be contingent on verification by P/A that it meets all eligibility requirements. To that end, P/A will contact the clients of projects the jury selects for recognition. P/A reserves final decision on eligibility and accepts no liability in that regard. Please be certain your entry meets the above rules.

*(Submission requirements
and entry form on the
following page)*

Entry Form: 43rd P/A Awards Program

Please fill out all parts and submit, intact, with each entry (see paragraph 12 of instructions). Copies of this form may be used.

Entrant:

Address: _____

Credit(s) for publication (attach additional sheet if necessary):

Entrant phone number:

Project:

Location:

Client:

Client phone number:

Category:

Entrant:

Address: _____

Project:

I certify that the submitted work was done by the parties credited and meets all Eligibility Requirements (1-5). I understand that any entry that fails to meet Submission Requirements (6-18) may be disqualified. Signer must be authorized to represent those credited.

Signature

Name (typed or printed)

Fees:

Subscriber \$90 Non Subscriber \$125 Entry plus one-year subscription, \$125

Awards Editor/Progressive Architecture

600 Summer Street, Stamford, Connecticut 06901-1403

Project:

Your submission has been received and assigned number _____

(P/A will fill in this number and return this receipt. Please retain it for reference.)

Entrant:

Address:

(Receipt)

Awards Editor/Progressive Architecture

600 Summer Street, Stamford, Connecticut 06901-1403

Entrant:

Address:

(Return label)

Submission Requirements

6 Binders.

Entries must consist of legibly reproduced graphic material and text adequate to explain it, in English. All entry material must be firmly bound in binders no larger than 17" in either dimension (9" x 12" preferred). Avoid fragile bindings. Supplementary documents such as research reports or urban design appendices may be bound separately to avoid unwieldiness, as part of the same entry. Occasional fold-out pages are permissible, but unbound material in boxes, sleeves, etc., will not be considered.

7 Project Facts Page.

To assure clear communication to the jury, the first page in the entry binder must list PROJECT FACTS under the following explicit headings: Location, Site characteristics, Surroundings, Zoning Constraints, Type of Client, Program, Construction systems, Funding, and Schedule. Give hard data (square footages, costs, specific materials) where possible. All Project Facts should fit on one page. Paragraphs amplifying this data, covering design philosophy, etc., should be included on subsequent pages.

8 Documenting the Process.

It is desirable for entries to document the design process, as well as its result: entrants are encouraged to include copies of preliminary sketches, alternative preliminary schemes, information on context and precedents for the design, and excerpts from working drawings.

9 Research Behind Projects.

While P/A is cosponsoring a separate annual competition for architectural research (results of the 2nd annual Research Awards competition in July 1995 P/A) we encourage the inclusion of any research done in support of a specific architecture or urban design project that is otherwise eligible.

10 No Original Drawings.

Original drawings are not required, and P/A will accept no liability if they are submitted. No models, slides, or videotapes will be viewed by the jury.

11 Anonymity.

To maintain anonymity in judging, no names of entrants or collaborating parties may appear on any part of the submission, except on entry forms. Credits may be concealed by tape or any simple means. Do not conceal identity or location of projects.

12 Entry Forms.

Each submission must be accompanied by a signed entry form, to be found on this page. Reproductions of the form are acceptable. Fill out the entire form and insert it, intact, into an unsealed envelope attached inside the back cover of the binder.

13 Entry Categories.

For purposes of jury procedure only, please identify each entry on its entry form as one of the following: Educational (including any campus buildings), House (single-family), Housing (multifamily), Commercial, Cultural, Governmental, Health-related (including nursing homes), Industrial, Recreational, Religious, Urban design. Mixed facilities should be classified by the largest function. If unable to classify, enter Miscellaneous.

14 Copies of Key Pages.

To provide P/A with basic information on your entry, even if it is not premitted by the jury, please include one set of xeroxes reproducing six or more key pages of the entry (including Project Facts page), stapled separately and slipped inside the back cover of the binder.

15 Entry Fees.

Entry fee must accompany each submission. Fee is \$90 for P/A subscribers, \$125 for nonsubscribers. (Nonsubscribers can choose to subscribe at a special rate of \$35 per year and pay the \$90 entry fee; see entry form.) Make check or money order payable to Progressive Architecture. Canadian and Mexican offices must send drafts in U.S. dollars. Fee must be inserted in unsealed envelope with entry form (see 12, above).

16 Entry Receipts.

P/A will send a receipt by October 1, which will indicate an entry number to save for your reference.

17 Return of Entries.

P/A intends to return all entries by January 1, by U.S. Mail. P/A assumes no liability for loss or damage.

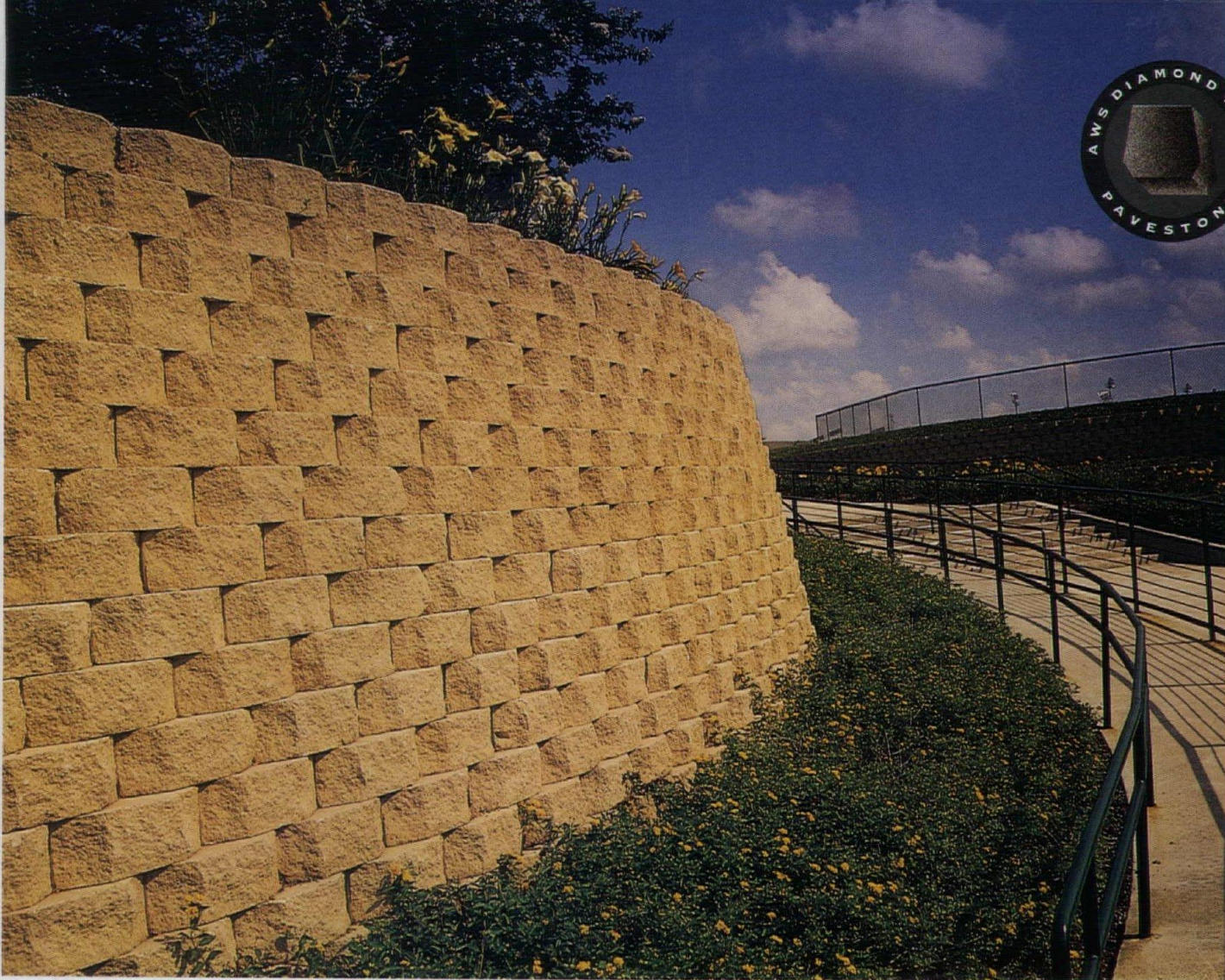
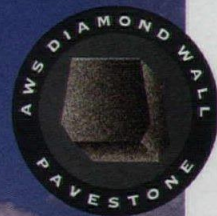
18 Entry Deadline.

Deadline for sending entries is **September 8, 1995**. All entries must show some date marking as evidence of being in the carrier's hands by September 8. Hand-delivered entries must arrive at P/A's offices (address below, 6th Floor reception desk) by 5 p.m., September 8. In order to assure arrival in time for the jury, P/A recommends using a carrier that guarantees delivery within a few days.

Address Entries to:

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**Deadline: September 8
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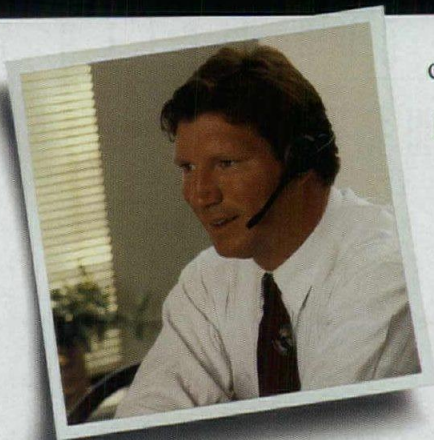
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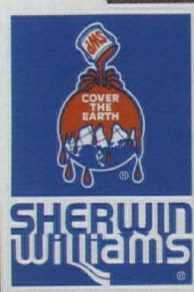
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Praemium Imperiale Goes to Renzo Piano

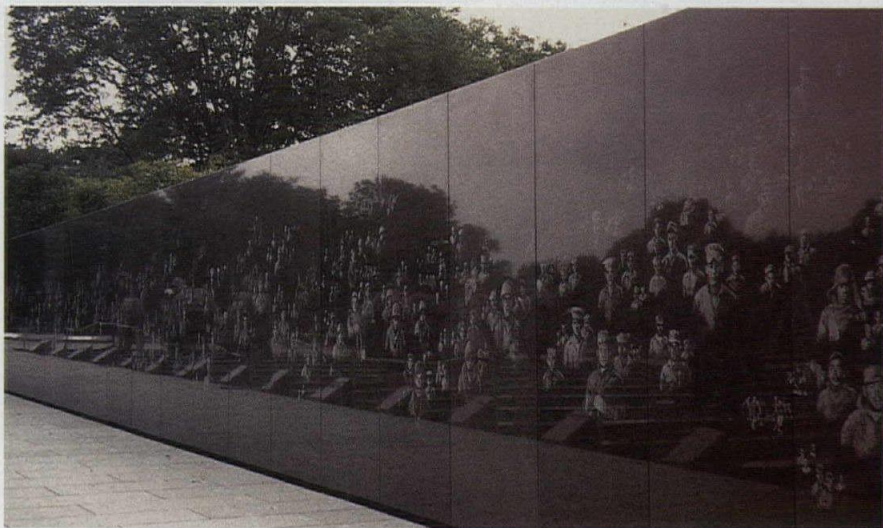
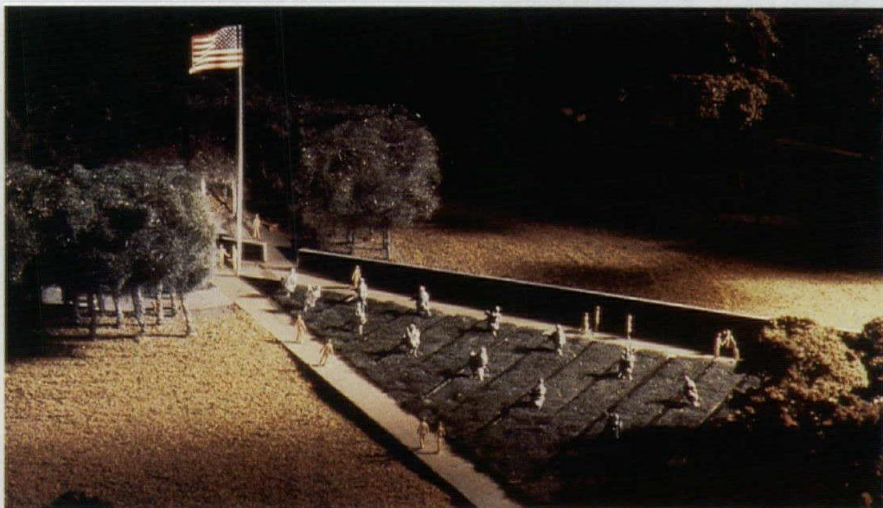


Renzo Piano, based in Genoa and Paris, has been named winner of the 1995 Praemium Imperiale for architecture. Sponsored by the Japan Art Association, the Praemium Imperiale program bestows prizes of 15 million yen each – about \$176,000 per winner – on artists in five different fields. (When the awards were first given in 1989, the exchange rate yielded about \$100,000.)



The other winners this year were the painter Matta, of France, who was born in Chile; the sculptors Christo and Jeanne-Claude Javacheff, Americans born in Bulgaria and Tunisia, currently in the news for their wrapping of the Reichstag; the noted Kabuki actor Nakamura Utaemon VI of Japan; and the composer Sir Andrew Lloyd Webber of England, creator of such crowd-pleasing (and money-making) musical extravaganzas as *Jesus Christ Superstar*, *Cats*, and *Sunset Boulevard*. The honor to Webber reflects some continuing confusion among the Praemium decision makers, who have not been identified, as to what constitutes art.

In architecture, the prize has been awarded more consistently to those recognized as worthy of it. Winners have been I.M. Pei of New York, James Stirling of London, Gae Aulenti of Italy, Frank Gehry of Los Angeles, Kenzo Tange of Tokyo, and Charles Correa of India. This year's judges made a sound choice in the 56-year-old Piano, whose substantial body of adventurous work includes two landmark competition winners: the Centre Pompidou in Paris (with Richard Rogers; P/A, May 1977, pp. 84–89) and the Kansai Airport in Osaka (top photo; P/A, April 1995, pp. 70–75). □



A Wall, a Mural, and Then Some

The new memorial to Korean War veterans, which opened late last month on 2.2 acres of the Washington Mall, is poised to become one of the capital's major outdoor attractions. Just south of the Reflecting Pool, adjacent to the Lincoln Memorial, it is ideally situated to appeal to the tens of thousands of visitors already making unstinting pilgrimages to the nearby Vietnam memorial, without question the city's largest outdoor draw.

The memorial to "the last foot-soldier's war" (model at top) is defined by an array of 19 larger-than-life, battle-garbed stainless steel statues by sculptor Frank C. Gaylord II. The poncho-clad figures appear to be approaching an elevated 30-foot-diameter "pool of remembrance" and a flagpole. To one side of the advancing soldiers is a mural (above) by Louis Nelson Associates, of veterans' images sand-

blasted onto reflective granite panels. The mural neatly solves what has become a virtual requirement for diversity: the 2,500 faces represent all services, all ethnic groups, and both sexes. Overall, it is a striking ensemble.

Billed as "a memorial not to the war but to those who served in it" – 54,246 killed in action, twice that number wounded, and 8,177 missing – the design was implemented and much improved by Cooper-Lecky Architects, retaining only a small portion of the original competition-winning concept by Lucas, Leon, Lucas and Pennypacker Oberholzer of State College, Pennsylvania. Especially fine are the design's provisions for seating and contemplation, enhanced by 225 new trees. Instead of filing past, as visitors do at the Vietnam memorial, people here will feel invited to sit and reflect. **Thomas Vonier**

Books



Alvar Aalto by Richard Weston, Phaidon/*Chronicle, San Francisco, 1995, \$75.*

Yet another study of the Finnish master, this one delves beyond the myth of the intuitive creator that Aalto himself cultivated. Weston carefully relates Aalto's work to specific experiences of his life, to architectural developments in Finland and neighboring countries, to both local and international cultural currents. The book amply discusses and illustrates works of predecessors and contemporaries, as well as Aalto's own early Nordic Classicist works, which he later dismissed. The work of his mature years is covered in thematic chapters – "Dwelling in the Modern World," "Sense of Place," etc. It's all very level-headed, if not heady, and the photos and drawings are excellent. (Shown above: interior of the 1959 Vuoksenniska Church in Imatra, Finland.)

Historical Building Construction: Design, Materials & Technology by Donald Friedman, W.W. Norton & Company, New York, 1995, \$48.

The author, an engineer in New York, takes us on a tour of construction technology from the mid-1800s up to the present to help us understand better what we are up against when we renovate and restore such buildings. The trip is circumscribed, because Friedman, uses examples almost exclusively from the Big Apple. His argument is that the development of construction can be best understood by examining extant examples, and New York is as good a place as any to find them. For the most part, this strategy works. Friedman has found interesting case studies for load-bearing masonry, cast-iron façades, steel framing, fireproof construction, and curtain walls and he includes lots of drawings, formulae, and historical photos; but other, even better, examples might have been found elsewhere.

Modern House by John Welsh, Phaidon/*Chronicle, San Francisco, 1995, \$69.95.*

With so many abysmally silly house anthologies in print, this compilation should be commended for its scope and relative intelligence. Welsh's contemporary lineup is refreshingly diverse, architecturally and geographically, and it includes spectacular works that somehow escaped publication in the U.S. But "relative" is the operative word here: the graphic presentation is effective (notwithstanding gratuitously tiny reference photos and drawings that lack scales and orientation), but the prose is annoyingly uneven. In the absence of rigorous editing, Welsh's attempt to synthesize the myriad social, economic, and aesthetic issues affecting latterday Modernism results in all but unreadable essays, in which genuine insights are buried amid much dead wood.

Mortal City edited by Peter Lang, Princeton Architectural Press, New York, 1995, \$12.95.

This first publication from Storefront Books is a project of the Storefront for Art and Architecture, a tiny gallery on the edge of New York's Soho that shows provocative, edgy works on a shoestring budget. Given its origins, it is no surprise that this book is small in format and big on ideas. With essays by Diane Ghirardo on recent events, both natural and manmade, in Los Angeles, Herbert Muschamp on the chaos of the Post-Cold-War era, and Lebbeus Woods on the "Warchitecture" of Sarajevo, among others, the book offers insightful, if sometimes densely presented, ideas about the nature of urban violence and the ways in which the physical city is used as a tool of political, social, and economic power and destruction.

Boston Bohemia, 1881–1900: Volume 1 of Ralph Adams Cram: Life and Architecture by Douglass Shand-Tucci, University of Massachusetts Press, 1995, \$50.

When 17-year-old Ralph Adams Cram migrated from rural New Hampshire to Boston to begin an apprenticeship at the fashionable firm of Rotch and Tilden, it was the start of what would turn out to be a remarkably diverse career – as art critic of the *Boston Evening Transcript*, as a poet and editor, and most important, as an acclaimed architect of churches. Shand-Tucci, in this thoroughly researched 569-page volume, shifts between Cram the designer of houses, churches, and public buildings and Cram the boyishly handsome dandy, exercising a leading role among the aesthetes who set the tone for the bohemian portion of Beacon Hill. Shand-Tucci, who is gay, argues that homosexuals had an affinity for the Anglican tradition known as "Anglo-Catholicism," and he thinks that Cram, who later married, had homosexual leanings and was a lover, "after some fashion," of Bertram Goodhue. Lacking outright proof, he subjects the reader to a long disquisition on homosexuality. Underneath the wandering, pedantic prose lies an intermittently interesting account of Cram's early years.

Briefly Noted

American Urban Typologies: Key West, Florida by Erick Valle, Village Publishers, Miami, Florida, 1995, \$39.95, paper.

First in a series of place-specific books, with urban history, photos, plans, drawings, and data of architectural types and landscape elements.

Architecture in Perspective 9 by The American Society of Architectural Perspectivists, Pomegranate Publications, Rohnert Park, California, 1995, \$16.95.

Winning entries from the ninth annual ASAP competition for architectural rendering.

Mackintosh's Masterwork: Charles Rennie Mackintosh and the Glasgow School of Art by William Buchanan, James Maccaulay, Andrew MacMillan, George Rawson, and Peter Trowles, Chronicle, San Francisco, 1995, \$22.95, paper. Paperback edition of this 1989 building monograph; beautiful photos and drawings.

Obituaries

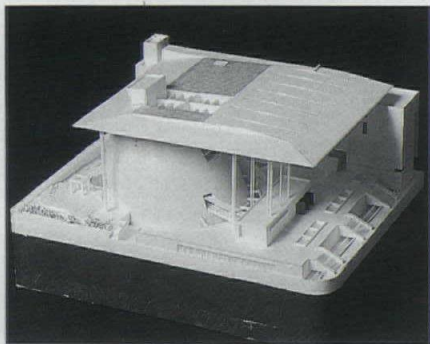
Jonas Salk, Louis Kahn's client and collaborator on the Salk Institute, succumbed to heart failure on June 23 at the age of 80. One of architecture's prominent, if controversial, patrons, Salk, discoverer of the first vaccine for polio, often described the design of the landmark institute as a collaboration between Kahn and himself, the scientist bringing his knowledge of lab functions together with the architect's sense of timeless design. Salk lectured widely on the building's design, and he was a former public member of the AIA Board of Directors.

His stature as an architectural patron, however, was tarnished in the last few years when controversy erupted over the design and siting of an addition to the Salk, which removed a grove of trees that critics of the design contend was a critical part of Kahn's conception of the building (*P/A*, Oct. 1993, p. 39). Salk disagreed, and produced drawings by Kahn showing the grove as the area intended for future expansion. In an interview with *P/A*, Salk described the lab as an evolving entity, "as distinct from the idea that this is supposed to be a place where architectural genius is to be fostered." He did not live to see the completed addition, scheduled to open this fall.

Arthur J. Benline, an architect who designed schools and hospitals in New York until 1938, when he embarked on 28 years in city and state government positions, died May 11. Benline, 92, progressed from being a housing official under Mayor Fiorello H. LaGuardia to heading the city's air pollution control efforts in the 1960s – a position in which he was known for his outspoken complaints, such as his charge that many "magnificent" buildings on the East Side "belch poisonous black smoke just as if they were a fleet of old-fashioned steamboats." □

An Olympian Effort

Those attending the Special Olympics World Games last month in the New Haven area benefited from the volunteer efforts of Connecticut architects. Thirty-three members of AIA/Connecticut, led by Gerald Kagan, donated their time to design a mock New England fishing village in West Haven, a spectator venue for touring 20 tall ships in New Haven harbor, support facilities at the Yale golf course, a submerged dividing bulkhead dividing a competition swimming pool, and 21 other installations for sports and special events. The donated services were estimated to be worth more than \$300,000. Many of the installations will remain in use now that the games, involving 7,200 athletes from 144 countries, have concluded. □



Healing Koreatown's Wounds

During the 1992 Los Angeles riots, many Korean-owned businesses were targeted by arsonists. Since then, L.A.'s Korean-Americans have been planning a new institution – the Korean-American Museum of Art and Cultural Center (KOMA) – that would rise in the heart of the tense Koreatown neighborhood, offering, in the words of architect and KOMA chairman Christopher Lee, “a symbol for the Korean community and its immigration experience” and a forum for discussions among different ethnic groups. The winners of a recently concluded international design competition are a team of Korean-born architects and designers in Nanterre, France – Eun-Seok Lee, Kwang Seog Lee, Hyun Jin Kim, and Sang Yun Kang – who conceived a scheme featuring a thin, canopy-like roof supported on slender columns, unifying a group of sculptural buildings, gardens, and courtyards, all on a raised concrete base.

The jurors – Michael Graves, Kimm Jong Soung, Richard Meier, Robert A.M. Stern, Yoon Seung Joong, Arthur Pfefferman, and Faranak Van Patten – praised “the echoes of traditional Korean architecture and structure,” notably the library and the performance hall, enclosed in a bell-shaped building that reminded some jurors of Korean temple bells. Jurors also admired the project’s strong presence on the street and a feeling of “openness to the community,” appropriate to an institution whose mission is community reconciliation. The center is starting fundraising for the 200,000-square-foot project, which has a projected budget of \$30 million. **Morris Newman**

Arising in the Sun

A poor man’s Euro-Disneyland has opened in Spain, on a site considered and rejected by the Disney organization prior to building at Marne-la-Vallée near Paris. The Spanish park reportedly is doing well, being much less expensive than its French model and always sunny. Meanwhile, the flagging French park has opened a huge new ride, Space Mountain, in hopes of reinvigorating public interest. □

Be Prepared for the Profession

The Dallas AIA chapter has helped the Boy Scouts of America, based in Irving, Texas, to rewrite the criteria and information pamphlet of the Scouts’ architecture merit badge for the first time since 1966. “We tried to make the profession appear more accessible and collaborative,” said Dallas architect Larry Good, who chaired the AIA committee responsible for the revision. “The impression you get from the old pamphlet is of an elitist, male-dominated profession – prima donnas designing monuments.” As part of the overhaul in the badge for architecture – one of 124 fields from agribusiness to



woodworking in which merit badges are awarded – boys are now required to interview and devise a program for a “client.” And how does architecture rate among Scouts? Considerably below camping, canoeing, dentistry, or dog care, but a bit higher than rabbit raising or cinematography. Some 3,470 Scouts were awarded the architecture merit badge last year, making it the 81st most popular badge. Nearly 160,000 Scouts have earned it since 1911, when architecture was among the first merit badges offered. The new booklet runs 44 pages. **Mark Alden Branch** □



A Symbol Transformed for a Reunited Germany

Christo and Jeanne-Claude Javacheff’s wrapping of the Reichstag for three weeks this summer not only transformed the exterior of the heavy Wilhelmine building; it effectively altered Germans’ understanding of a national symbol. In covering the once and future home of the country’s parliament with 100,000 square meters of silvery propylene fabric, the New York-based artists reemphasized the edifice’s importance and popularized a building whose turbulent history (it was ravaged by arson in 1933, bombed in 1945, and modestly rebuilt in the 1960s, though left largely unused through 1989) closely parallels that of Germany itself. Covered, the 101-year-old building seemed to give off light. While the spectacle captured the public’s imagination – hundreds of thousands flocked to Berlin

daily to witness the event – it equally catalyzed politicians, who demanded that the structure be renamed the more democratic *Deutsche Bundestag* (German Parliament).

The exterior transformation now history, the next task is for Sir Norman Foster to organize the building’s interior into a functioning seat for the Bundestag. Continuing in the spirit of the Javacheffs’ popularizing action, Foster is planning to integrate a public viewing platform into a new glass and steel dome that will top the building. From this vantage, Berliners will be able to view parliamentarians at work below or to gaze out on the city. By the year 2000 Foster’s transformation of the Reichstag – more lasting, it is hoped, than Christo and Jeanne-Claude’s – should be complete. **Mary Pepchinski**

Calendar

COMPETITIONS

P/A Awards

Deadline, submission: September 8

The 43rd Annual P/A Awards program recognizes projects scheduled for completion after January 1, 1996. See p. 21 for details.

Everyday Products Exhibition

Deadline, nomination: October 1

Products may be nominated for inclusion in "Refuse," a curated exhibition of well-designed everyday products made with recycled and reused materials. Contact Arango Design Foundation, 4740 SW 74th Avenue, Miami, FL 33155. Tel. (305) 662-9181. FAX (305) 661-0638.

Wood Design Awards

Deadline, submission: October 6

Buildings constructed predominantly of wood components and finishes and completed since January 1992 may be entered in the 1995 Wood Design Awards. Contact American Wood Council, American Forest & Paper Association, 1111 19th St., NW, Suite 800, Washington, DC 20036. Tel. (202) 463-2769. FAX (202) 463-2791.

Concrete Design

Deadline, submission: October 27, 1995

Concrete structures of any type that are predominantly site-cast and conventionally reinforced may be entered in this biennial awards program. Contact Concrete Reinforcing Steel Institute, 933 N. Plum Grove Rd., Schaumburg, IL 60173-4758. Tel. (708) 517-1200. FAX (708) 517-1206.

Housing Competition for Students

Deadline, submission: December 31

An ideas competition for housing in extreme climates is open to students in North American schools of architecture, interior design, landscape architecture, and planning. Entries must be created in BAGH's Architriton software. Contact The Architriton Competition, 1221B Gateway Rd., Winnipeg, Canada R2G 1E6. FAX (204) 663-9855. E-mail: huzza@merlin.magic.mb.ca.

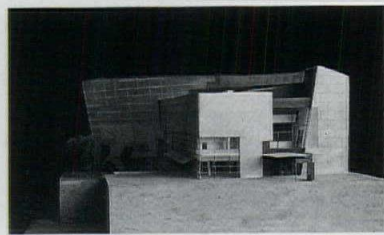
EXHIBITIONS

Bruce Goff

Through September 4

Art Institute, Chicago.

"The Architecture of Bruce Goff, 1904-1982: Design for the Continuous Present" is on view. (See p. 45 for a review).



Holl's Helsinki Art Museum

Through September 16

Urban Center, Architectural League, New York
"Kiasma: Working Process" documents Steven Holl's competition-winning design for the Museum of Contemporary Art in Helsinki.

Charles A. Platt

Through September 19

Octagon Museum, Washington, DC

Influenced by 16th- and 17th-Century Italian villas, institutional and residential projects by Charles A. Platt (1861-1933) are on view in "Shaping an American Landscape."

CONFERENCES

Recycled Products

September 6-7

Oakland, California

"Getting Down to Business II" is the second annual recycled products conference and trade show featuring building materials and office supplies. Contact Getting Down to Business II, tel. (510) 618-2150. FAX (510) 614-1698.

P/A Conference on Practice

September 23

Washington, DC

"New Directions in Architectural Practice" is a one-day forum conducted by P/A. Design management professionals and practitioners will discuss topics such as the changing economics of architectural practice; audience participation will be strongly encouraged. For details, see p. 114.

Alternative Office Expo

September 29-30

Los Angeles.

"AOX: Exploring the Changing Culture of Work" will address design's role in the nontraditional workplace. Contact Pacific Design Center, 8687 Melrose Ave., Los Angeles, CA 90069. Tel. (310) 657-0800. FAX (310) 652-8576.

A/E/C SYSTEMS® Fall

October 3-5

Chicago.

This is a computer show for design and construction professionals. Contact A/E/C SYSTEMS Fall, PO Box 310318, Newington, CT 06131. Tel. (800) 451-1196. FAX (203) 666-4782.

Design-Build

October 5-6

San Francisco.

"Professional Design-Build: A National Conference for Owners and Practitioners" will cover a wide range of subjects including the value of good design. Contact Stanford/DBIA Design-Build Conference, Stanford U., PO Box 3038, Stanford, CA 94309-3038. FAX (415) 725-6014.

Wright Building Conservancy

October 5-8

Milwaukee, Wisconsin.

"Wright in Wisconsin" is the theme of the annual conference of the Frank Lloyd Wright Building Conservancy. Contact Sara-Ann Briggs, Frank Lloyd Wright Building Conservancy, PO Box 5466, River Forest, IL 60305. Tel. (708) 848-1141.

AIA on Design and Urbanism

October 12-15

Pittsburgh, Pennsylvania.

"Pittsburgh: City Form and Architecture" is a joint conference of the AIA's Committees on Design and Urban Design. Contact PIA Information Line (202) 626-7482.

Practice Notes

So You Want to be an Architect?

In a survey of St. Louis junior and senior high school students reported in the *Post-Dispatch*, architecture rated as the third most popular career choice, after nursing and law. For males, architecture was the top choice, while for females, it didn't even make the top ten. Meanwhile, the *Jobs Rated Almanac* and the *National Business Employment Weekly* list architecture among the 25 most stressful jobs.

African-Americans' Status

A *New York Times* report on occupations, based on census data from 1970 and 1990, found that architecture has the third lowest percentage of African-Americans, although the percentage had increased noticeably in 20 years. African-Americans constituted 1.8 percent of the profession in 1970, 3.0 percent in 1990. The median annual wages were also lower than for whites: \$26,000 versus \$31,000. However, there were more African-Americans in design (3.7 percent), and their median income (\$24,000) was higher than whites'.

Technics Notes

House Subcommittee to Solar Industry: Drop Dead!

The House Appropriations Subcommittee on Energy and Water Development has released a spending bill that cuts solar and renewable energy programs at the U.S. Department of Energy by more than half. The subcommittee also voted to cut all programs that support solar technology commercialization. Scott Sklar, executive director of the Solar Energy Industries Association, described the cuts as "knee-jerk, short-sighted, reckless."

1995 Building Code Directory

Compiled by the National Conference of States on Building Codes and Standards, a new two-volume directory provides information on codes and regulations for commercial and residential buildings. The state volume details all 50 states plus U.S. territories and the District of Columbia. The city volume covers cities of more than 400,000 and selected smaller cities. Call NCSBC at: (703) 437-0100.

Copper Guide

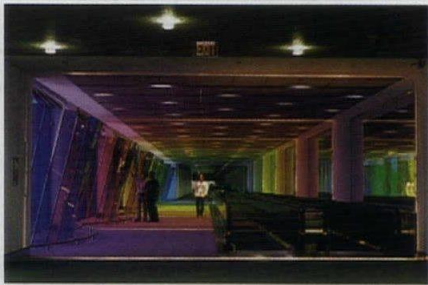
The Copper Development Association offers a comprehensive handbook, *Copper in Architecture*. The loose-leaf book is filled with design and installation techniques, complete with details and specifications. Contact: CDA at (800) 232-3282 or by fax, (212) 251-7234.

And the Prize for Conflict of Interest Goes To...

New York 1960 by Robert A.M. Stern, Thomas Mellins, and David Fishman, published by Monacelli Press, captured this year's "Book of the Year Award," the top prize in the AIA's International Architecture Book Awards. Stern also had the distinction of serving on the jury that bestowed the award. The jury, which selected the book unanimously, praised the volume as "extraordinary" and "brilliant," comparing the authors to "Gibbon, Petronius, and Boswell." Another book, *Philip Johnson: The Architect in His Own Words*, published by Rizzoli, also captured a prize. Johnson was the jury's chairman. The jury opined that the book's "graphics are incredible, reflecting a certain glamour appropriate to the architect."

The books have, incidentally, been praised by other, less biased reviewers. □

Florida's Wildlife Welcomes You



Terrell Lamb

Enter Concourse A of Miami International Airport and you feel you've arrived not in an anonymous terminal but in a distinct part of the country. The newly-installed "Harmonic Runway" by Christopher Janney surrounds visitors with an abstraction of South Florida's natural sounds: crickets chirp, frogs croak, loons cry, an alligator issues its basso growl. Tones from primitive but soothing instruments emanate as passing travelers trip photoelectric cells. Natural light in the 180-foot corridor filters through ten-foot-high sheets of colored glass that submerge passengers in a sequence of colors – which change with the sun.

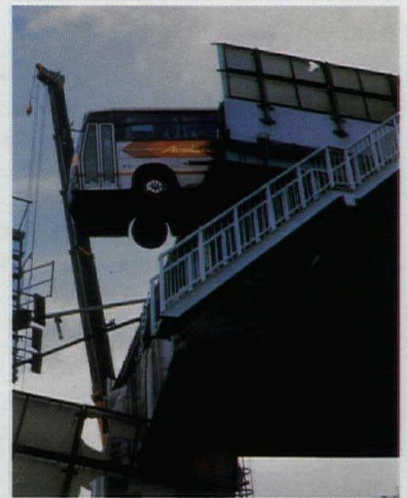
Farther along, passengers leave this simulated Everglades and arrive at "A Walk on the Beach," a floor by Michele Oka Doner that inlays a charcoal-colored terrazzo surface with 2,000 outsized bronze profiles of beach finds: sea anemones, starfish, a fish head, coral shapes, and even the molecular structure of salt. Sparkling irregular whorls of mother of pearl, set against dark terrazzo, imitate the mark of high tide on the sand. The effect is fanciful and random. Travelers stroll through the concourse looking as bemused and happy as scavengers at the beach. **Peter Whoriskey**

Post-Quake Kobe Prepares for a Long Reconstruction

In the months since the Great Hanshin Earthquake of January 17 devastated the Japanese port city of Kobe and other parts of Hyogo Prefecture, many basic services have been restored, including three vital railway links between Kobe and Osaka. At least 40,000 temporary housing units have been provided, but some, inconveniently located in the suburbs, remain empty, and as of mid-June about 23,000 people were still living in schools and other emergency shelters. Another 1,500 or more were in tents and containers in city parks, which the authorities hoped to clear out by the end of July.

Buildings continue to be demolished in the aftermath of the quake, which killed more than 5,500 people and caused destruction estimated at 10 trillion yen (\$122 billion). During the most intensive period of dismantling, alarm over asbestos particles from older buildings caused pedestrians to wear masks in the downtown area. Removal of debris from urban and residential areas is expected to be completed by March 1996.

How the cities ought to rebuild has become a sensitive issue. The Building Standard Law of Japan permits local authorities to ban or restrict construction of buildings in a stricken area for only two months after a disaster. When local governments rushed to produce new city planning proposals by the March 17 deadline – choosing which areas to rebuild first, demarcating certain areas for infrastructure improvement and redevelopment projects, and rezoning some sections – they were widely criticized for making decisions while residents were in too much disarray to review them. Since then, authorities have sought to reassure the public and have tried to work more closely with local community development councils in developing detailed plans, though these continue to evolve. The degree of



Photos: Chester A. Widom

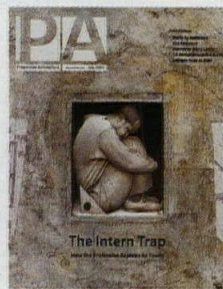
Buildings, roads, and other structures were damaged.

damage varies from area to area, and often from block to block, necessitating many approaches to reconstruction.

Volunteer work is still a relatively new concept in Japan, but a number of architects in the Kansai region, which includes Kobe, Osaka, and Kyoto, offered to inspect damaged houses to determine their habitability after the quake. Now, many of these same architects are volunteering as consultants to community development councils. Meanwhile, AIA President Chet Widom, who was part of an AIA team that went to Kobe in March, said AIA has been working with the Japanese Institute of Architects on a program that examines earthquake issues from an architect's perspective. **Hiroshi Watanabe**

P/A Wins Award for July Cover

P/A has won a national award for design from the American Society of Business Press Editors. The cover of P/A's July 1994 issue, on "The Intern Trap," captured first place in



the category of "cover – non-photo" in the society's national judging. The illustration was created by Joel Peter Johnson, working with P/A Art Director Julie Anne Yee. P/A also won two design awards in the society's Northeastern Region judging: first place for the July 1994 Intern Trap cover and second place for "publication redesign," in honor of the magazine's new format, which made its debut in the February 1994 issue and has been gradually refined since then. □

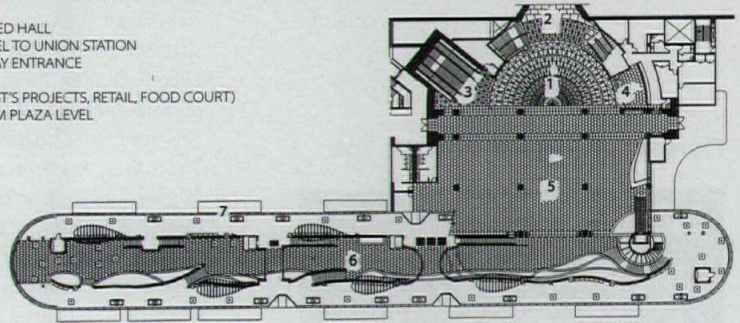
Back on Track

With the Metropolitan Transportation Authority of Los Angeles at work on the multi-billion-dollar Metro Rail system, there is the potential for the construction of major new civic edifices to complement Union Station, the grand terminal designed by John and Donald Parkinson in the mid-1930s. Among the projects with such ambition is the East Portal Pavilion, a domed concourse linking bus, rail, and subway now approaching completion downtown. The building, designed by Ehrenkrantz & Eckstut of New York with RAW Architecture as consultant, is part of a 70-acre masterplan by Ehrenkrantz & Eckstut for a 10-million-square-foot mixed-use commercial development and intermodal transit hub to be jointly built by public and private entities. The 35,000-square-foot Portal forms the key-stone of the masterplan, and is adjoined by the 26-story MTA headquarters by McLarand Vasquez & Partners. Commuters arriving by bus or car at a long plaza fronting the Portal will descend into an "arroyo," designed with Hanna/Olin landscape architects, en route to the amenities-saturated Portal concourse, subway, and tunnel to the historic Union Station.



Warren Merial Photography Inc.

- 1 EAST PORTAL DOMED HALL
- 2 PEDESTRIAN TUNNEL TO UNION STATION
- 3 METRO RAIL SUBWAY ENTRANCE
- 4 TICKETING
- 5 CONCOURSE (ARTIST'S PROJECTS, RETAIL, FOOD COURT)
- 6 ARROYO PATH FROM PLAZA LEVEL
- 7 BUSES

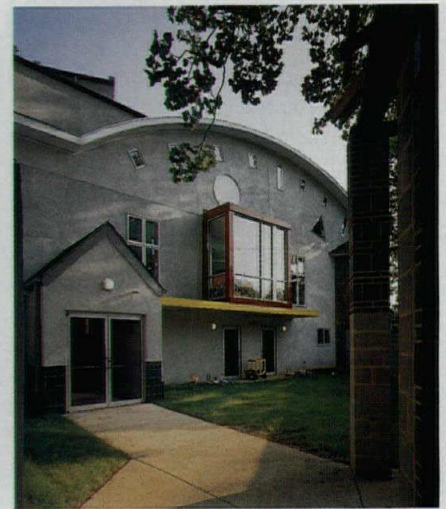


CONCOURSE LEVEL PLAN

N → 100'/30m



Robert Ikeiler



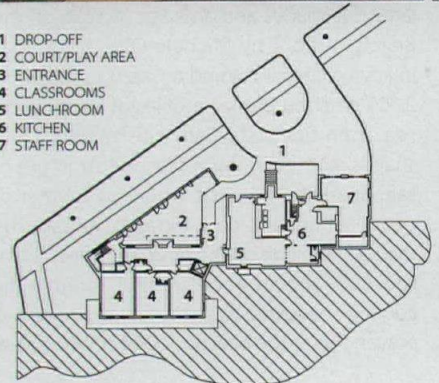
Robert Ikeiler

Contributing More Than Design

This small addition to the Community Child Development Center in a residential neighborhood of Philadelphia was funded by sources assembled, in part, by local architects Bloomfield & Associates. They, along with other consultants, agreed to a payment schedule that allowed for some fees to be rolled into the construction financing. With a limited budget (\$960,000 including fees, site work, and basic renovation), the architects de-

signed an 8,000-square-foot addition to the center. The concrete slab construction allows for the installation of a radiant heating system for clients who spend most of their time on the floor. A brick-clad stair tower and brick garden wall link the addition to the original building. Undulating, yellow-painted steel awnings on the south façade, small windows at child level, a ball room, and a curved roof ensure a friendly environment.

- 1 DROP-OFF
- 2 COURT/PLAY AREA
- 3 ENTRANCE
- 4 CLASSROOMS
- 5 LUNCHROOM
- 6 KITCHEN
- 7 STAFF ROOM



GROUND FLOOR PLAN

N ↑ 40'/12m

Benedictus Awards

As an international contest recognizing "significant and enterprising" uses of laminated glass, the Benedictus Awards brings to light works of daring concept and elegant detail. Glass is, after all, essential to effects of transparency and weightlessness, and the winners often press these qualities to the limit.

The Benedictus competition is open to both professionals and students and is sponsored jointly by the AIA, the Association of Collegiate Schools of Architecture, the American Institute of Architectural Research, and the International Union of Architects (UIA), with support from the DuPont Company, producer of Butacite inter-layer for laminated glass. Jurors for this latest competition were Thomas Beeby of Chicago, Dan Hanganu of Montreal, and Fumihiko Maki of Tokyo.

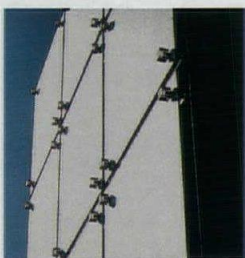
This year's top professional winner challenges credibility with a building envelope composed only of laminated glass, with no other supporting materials. This feat is accomplished at admittedly modest scale, in an entrance pavilion about 36' x 18' x 10' high attached to the Broadfield House Glass Museum in Dudley, England. The design, by the British firm Design Antenna, depends on the existing building for bracing, but there is admirable "enterprise" in its laminated glass beams and columns, devised with engineers Timothy Macfarlane and David Wilde. An almost imperceptible deposit of silver on the outer layer of the glazing provides some solar control.

Professional finalists included: a Tokyo police box by Takao Fujiki of Tokyo; the Design Center in Linz, Austria, by Herzog + Partner of Munich; the Glass Bridge, between two buildings in Rotterdam (another all-glass, totally transparent construction) by Kraaijvanger-Urbis Architects of Rotterdam; The Box, Culver City, California (P/A, May 1995, p. 65) by Eric Owen Moss of Culver City; the new roof of the railway station at Chur, Switzerland, by Richard Brosi and Obrist & Partner of St. Moritz; the "Inverted Pyramid" skylight in the mixed-use underground annex to the Louvre in Paris, by Pei, Cobb, Freed & Partners of New York.

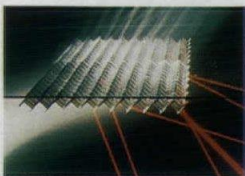
Of the 1,700 entries in the student category, the First Prize winner came from the same school as last year's top winner - Tampere University of Technology in Finland - and shared the same advisor, Juhani Katainen. The scheme, by Juha Mäki-Jyllilä, was for a center for the study of world religions and cultures on the shrine island of Miyajima in Japan.



ENTRANCE PAVILION, BROADFIELD HOUSE GLASS MUSEUM (ABOVE), DETAIL OF COLUMN AND BEAM (LEFT)



POLICE BOX (ABOVE), DETAIL OF ENVELOPE (LEFT)

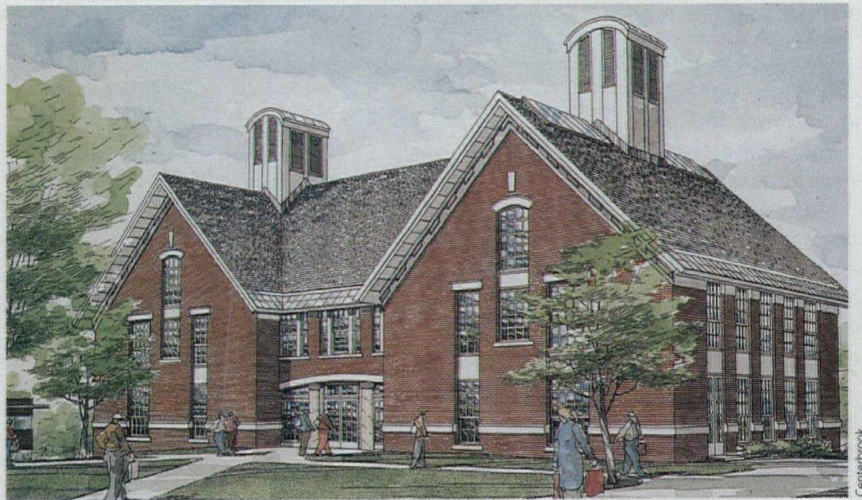


DESIGN CENTER (ABOVE), DETAIL OF ROOF PANEL (LEFT)

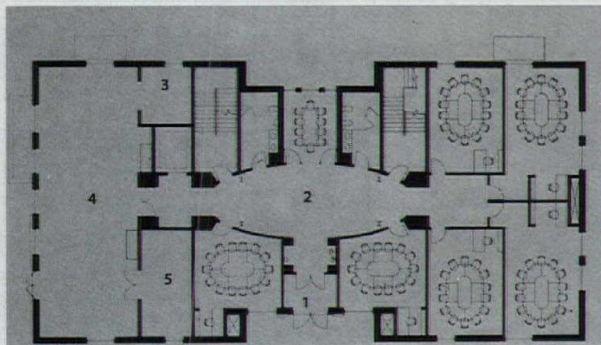
Photos this page courtesy Benedictus Awards

Centerpiece by Centerbrook

Construction is under way on a 20,000-square-foot arts and academic facility, designed by Centerbrook Architects of Essex, Connecticut, for the 100-year-old Pomfret School in northeast Connecticut. To create a new academic core for the prep school and to restore a sense of the original campus plan by Beaux-Arts architect Ernest Flagg, Centerbrook determined to locate the new Centennial Building on axis with the central School Building by Flagg. The decision necessitated moving the 500-ton historic Pyne Dormitory 700 feet from its original site. The Centennial Building, due for completion in Spring 1996, will contain art studios, shops, classrooms, and a 125-seat auditorium in a symmetrical plan, with brick cladding and cementitious slate roofs that are sympathetic to the surrounding architecture.



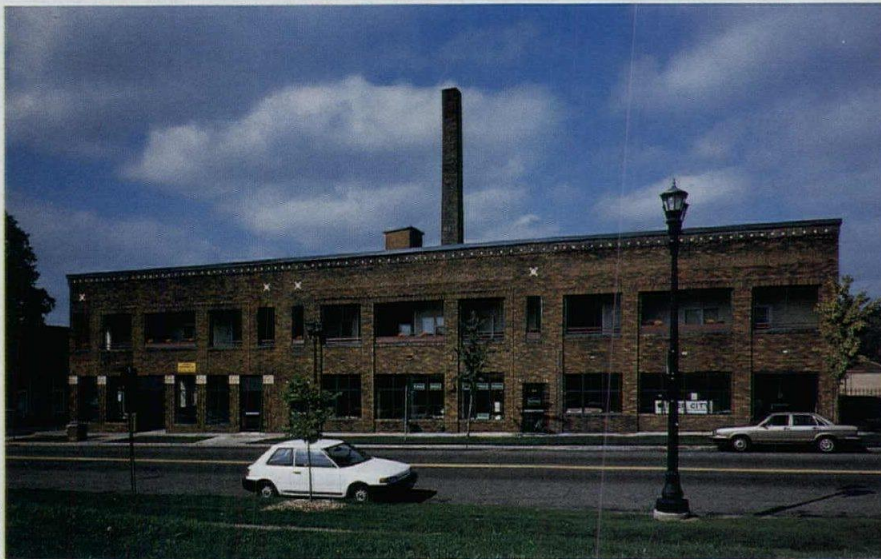
Centerbrook



- 1 ENTRANCE
- 2 ROTUNDA
- 3 OFFICE
- 4 3D ART STUDIO
- 5 KILN

GROUND FLOOR PLAN

N ← 40/12m

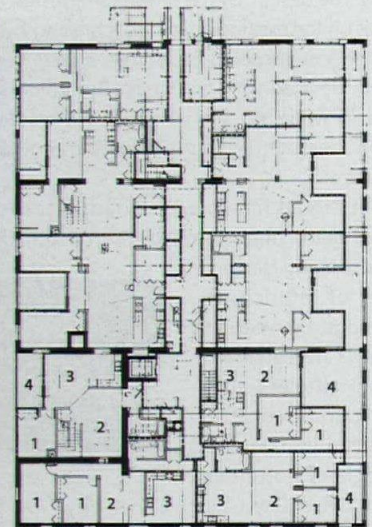


Don Wang

Anchoring the Neighborhood

A fur coat factory in St. Paul, Minnesota, had outlived its original function, but it was still a sturdy brick building, and the community groups that made up the Selby Commons Limited Partnership viewed its conversion to new uses as a way of bolstering one of the most violence-wracked parts of the city. The easy task for Close Associates of Minneapolis

was redesigning the ground floor of the structure – the 909 Building at Selby Commons – to become a drop-in center for teenagers and offices for a clinic, a neighborhood development organization, and others. The harder job was turning the upper floor into 11 apartments for single-parent families; the building's nearly square shape meant the interiors



- 1 BEDROOM
- 2 LIVING ROOM
- 3 KITCHEN/EATING
- 4 PORCH

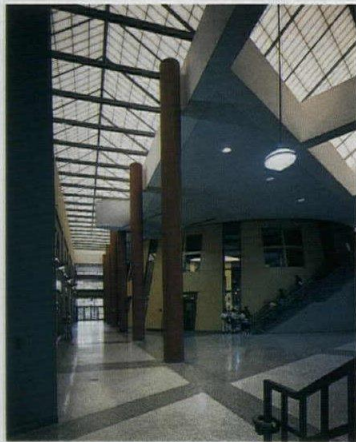
SECOND FLOOR PLAN

N ← 40/12m

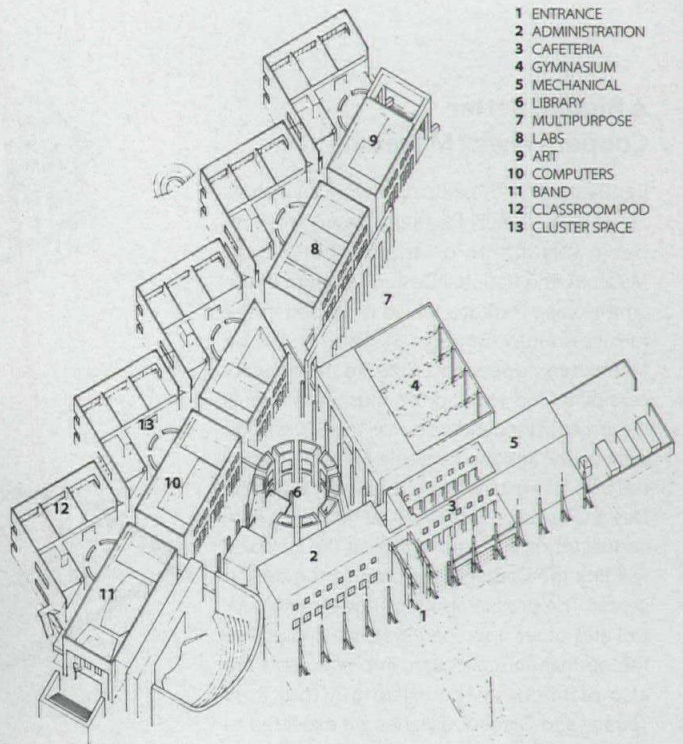
would extend too far from windows. The solution was to recess the assortment of one-, two-, and three-bedroom apartments behind terraces, simultaneously achieving three separate goals: reducing the apartments' depth, giving them safe outdoor areas, and putting eyes above the street.

Interaction-Packed School Plan

The client for the new Rice School/La Escuela Rice in Houston wanted a building that would foster pedagogical experimentation and opportunities for casual interaction. The client, a joint venture of Rice University and the Houston Independent School District, involved Taft Architects early in the planning process to mold the 170,000-square-foot building to the school's mission. The resulting facility for 1,300 students in kindergarten through 8th grade fills its 10-acre site with a density appropriate for an urban school. A wooded wetlands area was carefully preserved, providing solar shielding and a privacy buffer between the school and more public areas on the site. In plan the school stretches across the site from southeast to northwest, with a service bar, small classrooms, and labs as its spine. East of the spine are the building's administration and assembly spaces, plus the library. West of the spine are five pods, each containing four classrooms, configured so that each defines its own "community." A "cluster" space outside the pods permits groups of students and teachers to gather in informal settings. Naturally lighted from above, the generous circulation spaces are variously shaped, saving users from deadly views down straight, double-loaded corridors.



Richard Payne



- 1 ENTRANCE
- 2 ADMINISTRATION
- 3 CAFETERIA
- 4 GYMNASIUM
- 5 MECHANICAL
- 6 LIBRARY
- 7 MULTIPURPOSE
- 8 LABS
- 9 ART
- 10 COMPUTERS
- 11 BAND
- 12 CLASSROOM POD
- 13 CLUSTER SPACE

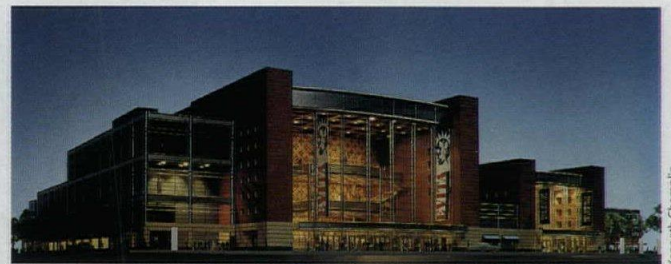
AXONOMETRIC

Pelli Performing Arts Center for Cincinnati

The \$82.4-million Aronoff Center for Arts, designed by Cesar Pelli & Associates of New Haven, Connecticut, is proceeding toward a fall 1995 opening in Cincinnati. It is located in the heart of Downtown, two blocks from Fountain Square. The 215,000-square-foot facility will include a 2,700-seat hall for dance and musical theater, a 440-seat theater, and a studio theater, plus ample lobbies, dining facilities, a 5,000-square-foot art gallery, and retail. The street-level lobbies form an interior public pathway linking small plazas at the corners of the site. The exterior is divided into distinct volumes representing the center's main components. The dividing elements are masonry-clad masses that suggest party walls of Brobdingnagian scale. Between them stretch curtain walls of almost uninterrupted clear glass. The whole composition recalls the large, diagrammatic designs c. 1960, before Modernism had been challenged on the issue of contextual response. The massive dividing walls and the stretches of clear-glazed lobby rate high for functional candor and legibility, but they may not offer enough small-scale detail to mediate between the individual and the vast institution.

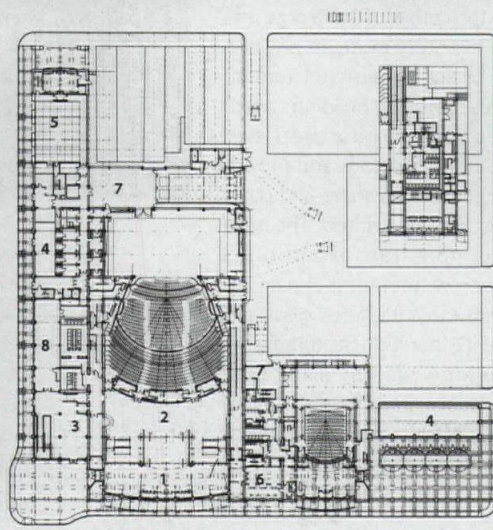


Cesar Pelli & Associates



Kenneth Champlin

MODEL VIEW FROM NORTHEAST



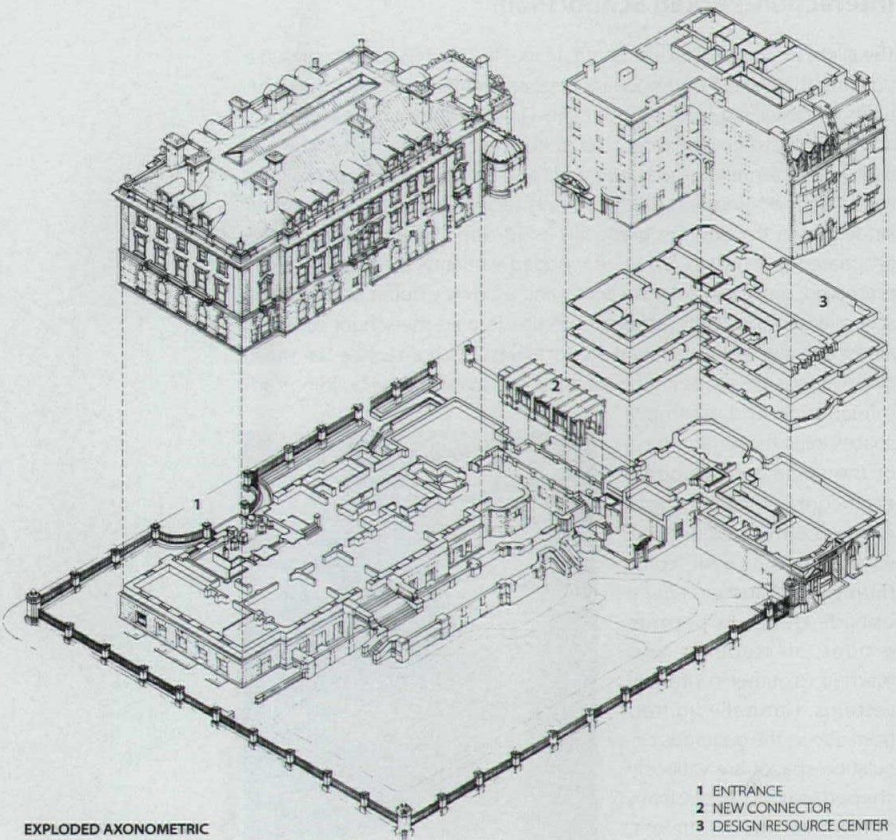
- 1 ENTRANCE
- 2 MAIN THEATER
- 3 ORCHESTRA LOBBY
- 4 GALLERY LOBBY
- 5 RETAIL
- 6 STUDIO THEATER
- 7 TICKET LOBBY
- 8 SCENE DOCK
- 9 GALLERY

GROUND FLOOR PLAN

N ← 100'/30m

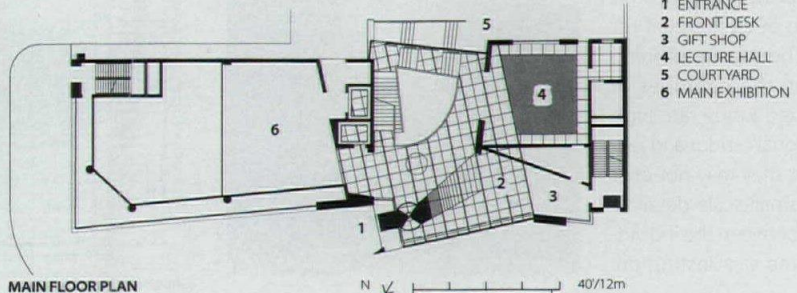
A Bigger, Better Cooper-Hewitt Museum

Renovation and expansion work by James Stewart Polshek & Partners, New York, is to begin this month on the Cooper-Hewitt Museum, the National Design Museum of the Smithsonian Institute, which is housed in the former Andrew Carnegie Mansion (1901) on Manhattan's Upper East Side. To improve accessibility and expand the museum's role as design educator and resource, the \$20-million project will link the Carnegie Mansion to two neighboring townhouses, where a new Design Resource Center will be housed. A new connector on the garden side of the complex will link the Carnegie building to the design center. The project also includes climate control and other upgraded systems to preserve the permanent collection; improvements are also planned for the existing Arthur Ross Terrace and Garden. Galleries are expected to be closed until fall 1996, but educational programs and workshops will not be disrupted.



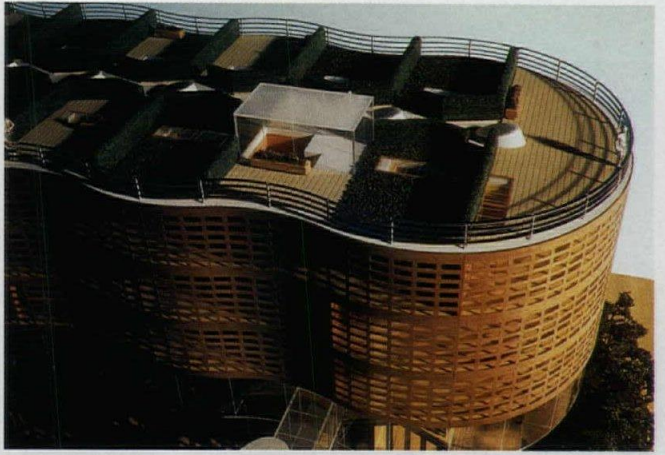
Footwear Through the Ages

With a collection of 10,000 artifacts spanning 4,500 years of history, the Bata Shoe Museum, which opened this spring in Toronto, is "dedicated to the exploration of the role of footwear in the social and cultural life of mankind." An abstracted shoe box with its lid ajar, the museum by Raymond Moriyama of Moriyama & Teshima, Toronto, is a 39,000-square-foot, limestone-clad rectangular volume with a deep copper-clad, wedge-shaped soffit. Filling a small parcel on the corner of St. George and Bloor Streets, the five-story museum is within walking distance of the University of Toronto and two other museums. The building's north and east walls are canted inward at street level, making the interior feel spacious and providing a place for street performances and other activities to occur, says the architect. The main entrance is through a transparent glass wedge, offering a view through the main circulation space with its cantilevered glass and steel staircase and 42-foot-high fractured glass south-facing window wall by artist Lutz Hafuschild. Two below-grade levels provide space for visitor orientation and shoe research and storage.

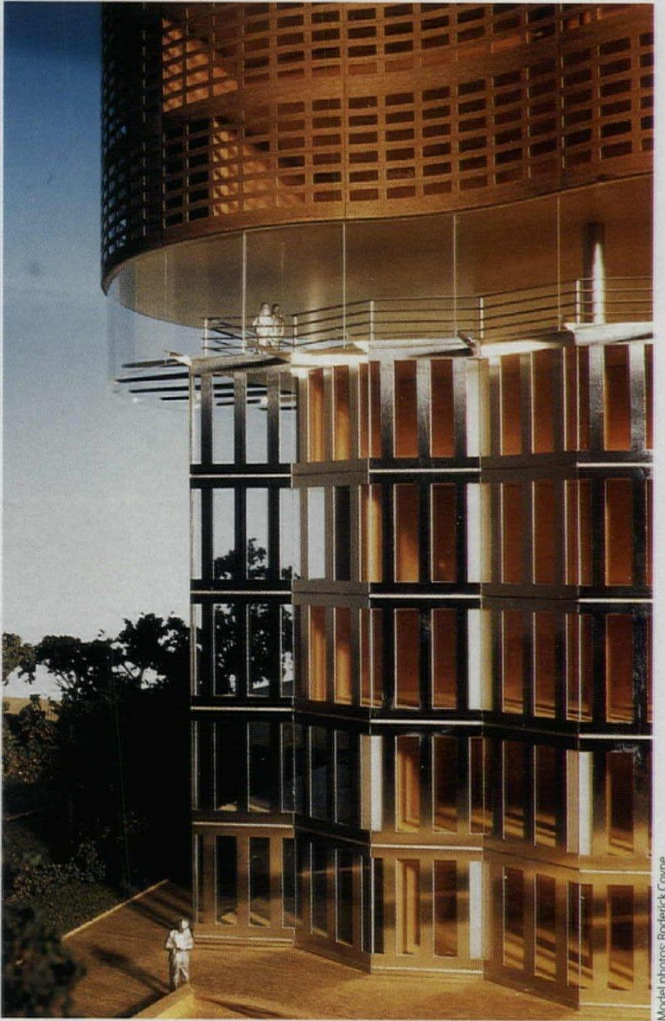


Hope for Housing

Designed for a key site on London's South Bank, adjoining the Tower Bridge, the Potter's Fields housing development by British firm Alsop & Störmer augurs a new era for public housing in England: in lieu of the dreary estates that have become commonplace throughout the country, the 153-unit project proves that in the hands of talented, intrepid architects, aesthetic and urbanistic values need not be sacrificed on the altar of efficiency. Commissioned by Southwark Borough Council, the 124,000-square-foot, L-shaped structure is composed of two distinct strata: the 5-story lower layer is encased by a faceted metal and glass curtain wall; the 3-story upper layer boasts an undulating envelope of hardwood with inset glazing. (Though striking, this fenestration may prove intolerably rigid). An open floor intended for circulation and communal activities separates the two layers, and is protected by a suspended glass apron. Further evoking the humane ambitions of early Modern schemes, Alsop & Störmer provide top-floor units with individual roof terraces lining a central pathway. The building configuration also promises considerable benefits for the site: the open space defined within the "L" will be a large garden adjoining the existing riverfront London Bridge City Park; the east leg of the structure forms a hard edge framing the southern approach to the Tower Bridge; along the south leg of the "L," the lower level is cut away and the upper portion of the structure is raised on stilts to afford river park views to historic South London College, which lies to the rear of the site. Potter's Fields has been approved by local planning authorities and resident groups, and has found powerful allies in English Heritage and the Royal Fine Art Commission. But, in what some construe as political haymaking, the Secretary of State for Environment has recently called for yet another public enquiry pending final approval.

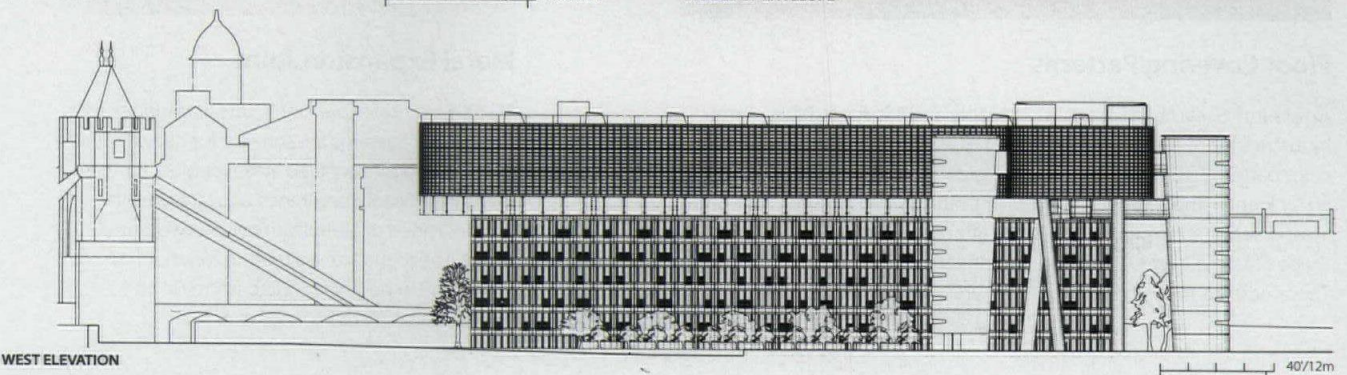
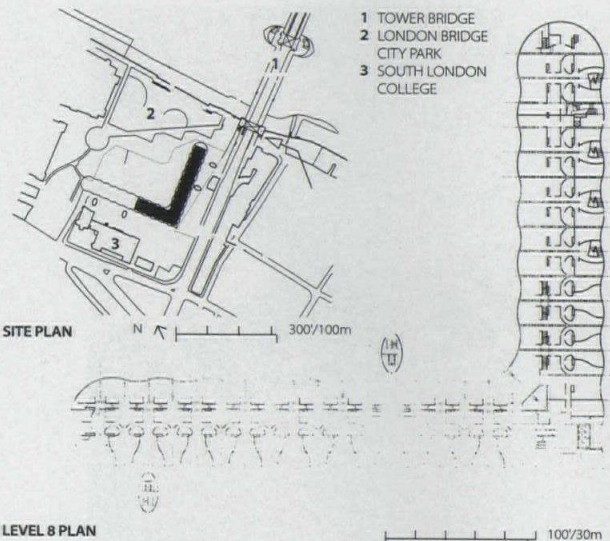


MODEL OF ROOF TERRACES



MODEL OF ENVELOPE

Model photos: Frederick Coyne





Ceramic Wall Tile Colors

The 1995 product catalog from Dal-Tile includes the manufacturer's 10 new wall tile colors. Timberline and Chamois have been added to the Kohler Coordinates line to complement

designs using Kohler fixtures; four colors have been added to the Dal-Softones line and four to the Dal-Semi Gloss line. Circle **100** on reader service card



Custom Signage

The Infinity Series by ASI Sign Systems meets ADA requirements. Designers can specify precision-cut plaques, decorative trims, accessories, or custom components. Permanent tactile and Braille lettering can be integrated into the system. Circle **101** on reader service card

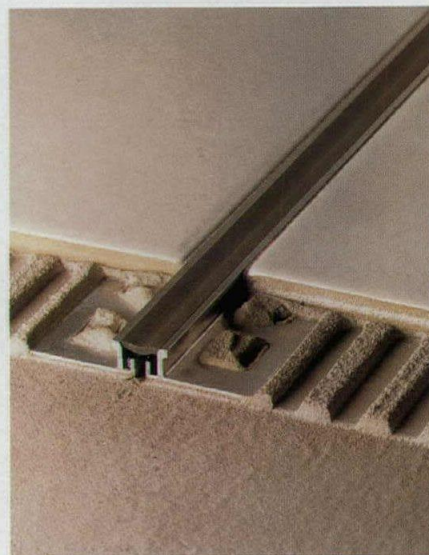


Floor Covering Patterns

Artoleum® Scala from Forbo Industries is now available in 30 color patterns. The series, inspired by French Impressionist paintings, is designed to complement Forbo's Marmoleum® Collection. The product is made of renew-

able and biodegradable materials, is easy to maintain, and exceeds federal slip-resistance standards and ADA recommendations. It is available in 79" x 105" sheets.

Circle **102** on reader service card



Metal Expansion Joint

DILEX-KS metal expansion joints manufactured by Schluter Systems are suitable for heavy traffic areas and to protect tiled edges subject to heavy loads. The system combines two lateral metal profiles (brass or aluminum) with a neoprene insert. The joints are available in four neutral colors and in heights ranging from $\frac{5}{16}$ " to $1\frac{3}{16}$ ". Circle **103** on reader service card



Ground Face Masonry

Products in the Trendstone® Monumental Series by Trenwyth Industries can be used in designs requiring finished walls, columns, and arches. These products can be used where oversized specialty units are needed. Made with the company's own cutting and molding techniques, products come in four specialty shapes and in large sizes ranging from 8" x 8" x 18" to 4" x 16" x 24". Custom designs can be specified. Circle **104** on reader service card



Energy-Conscious Power Strip

The PowerPincher™ Energy-Saving Occupancy Sensor from Steelcase is a 6-outlet power strip controlled by a passive infrared sensor that automatically sends or cuts power to office equipment, depending on whether it senses a person in the area of

operation. The unit can be mounted up to nine feet away from the operating area for maximum effectiveness, and can save energy and decrease costs. A retrofit model for existing power strips is also available. Circle **105** on reader service card



Double-Hung Replacement Windows

Pella Corporation announces its Precision Fit double-hung replacement window series for renovation and retrofit projects. The units are built to order and come fully framed and assembled. They maintain existing trim with no tear-outs, have a paintable/stainable interior, and a center pivot sash for easy cleaning. Circle **106** on reader service card



New Laminate Colors/Patterns

Wilsonart has announced the addition of 36 new Wilsonart® Laminate colors and patterns. The introductions include solids, abstracts, and woodgrains in

tones and textures inspired by those found in the natural environment. Circle **107** on reader service card

Roofing System Brochure

This 12-page, 4-color brochure introduces Versico's Versiweld™ Premier roofing system. The reinforced version of the system incorporates a polyester scrim embedded in the center of the sheet, improving the flow of material and increasing interply adhesion. The system is said to resist punctures, chemicals, fire, and wind.

Circle **108** on reader service card

ADA-Compliant Workstation

The Framework System by American Seating can be used to meet special needs identified by the Americans with Disabilities Act. The system is based on a series of structural panels fitted with work surfaces, cabinets, and accessories. It is designed so components can be attached, at one-inch increments, to panels at a variety of heights.

Circle **109** on reader service card

Historic Preservation and the ADA

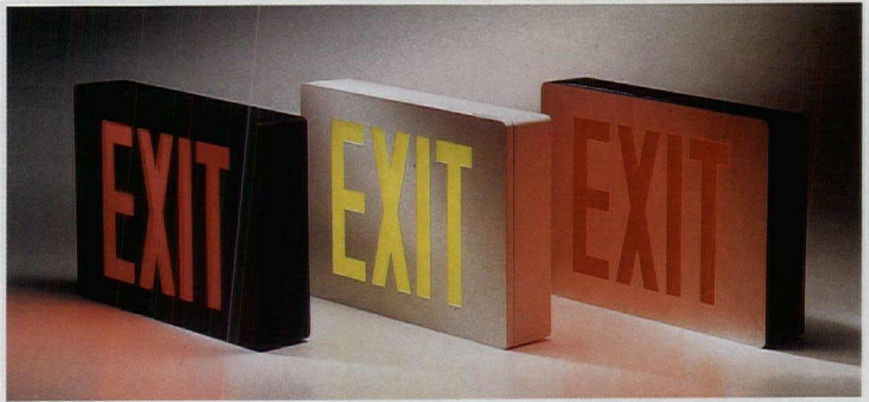
The Eastern Paralyzed Veterans Association has published a new 25-page booklet on the ADA and historic buildings. *Access the Past: How ADA Affects Historic Preservation* explains ADA compliance procedures for public and private historic properties and describes programs available to improve access.

Circle **110** on reader service card

Lighting Publications Catalog

The Lighting Source, a catalog offered by the Illuminating Engineering Society of North America, describes new and existing publications. Included is a special section on architectural lighting. Titles are divided into eight subject areas.

Circle **111** on reader service card

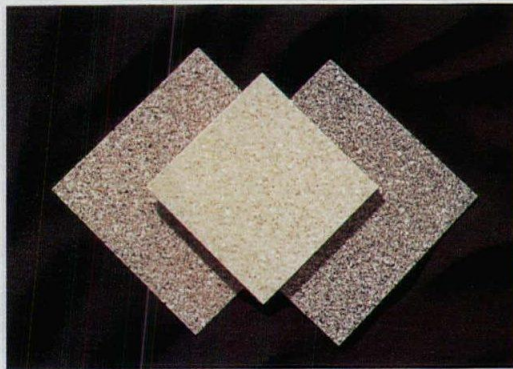


LED Exit Signs

Hubbell Lighting's Pathfinder "C" Series LED Exit Signs offer "an 80-year lamp life" and use "1.5 energy watts per face," according to the manufacturer. LED sources hidden in the lightbox create a diffused continuous image. Units are available in AC or battery backup; have line-latching,

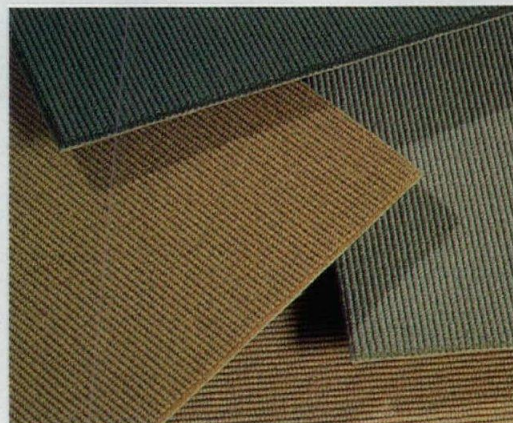
brownout, and short-circuit protection; and are available in black, white, or black with a brushed aluminum face. They are UL-listed and meet all applicable NEC, NFPA, and NRTL/CSA performance standards.

Circle **112** on reader service card



New Corian® Colors

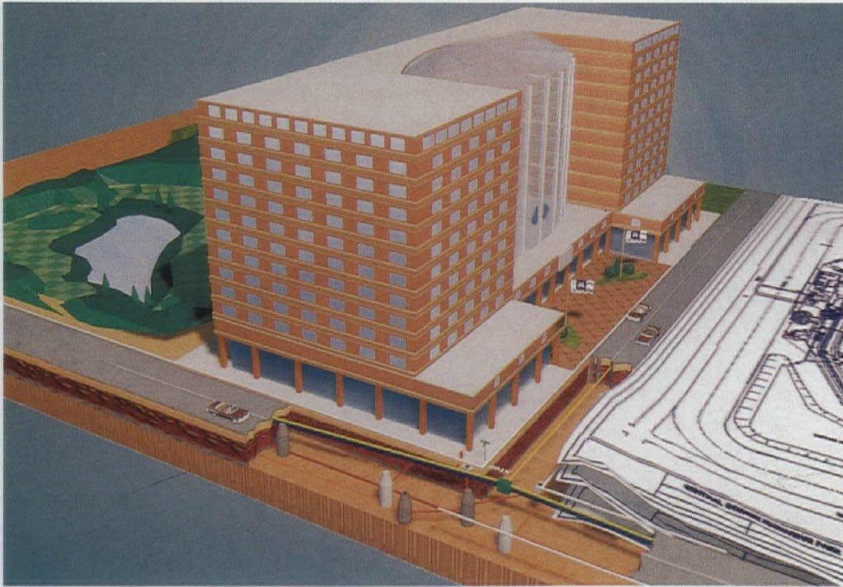
DuPont has added Magna, a new textured, solid surfacing material available in three colors, to its Corian® line. The colors are: Rosetta (a combination of black, white and pink); Sahara (white-beige tones); and Platinum (a combination of black and white). Circle **113** on reader service card



Broadloom Carpeting

Two new carpets are available from Stanton Carpet. "Atlanta" is an 81-ounce, level-loop broadloom with a corded texture resembling sisal. "Gloria" is an 83-ounce, two-tone, cut-loop broadloom with a corded texture. Both are made of 100% New Zealand wool, and are fusion-bonded with jute backing. Both styles are available in nine colors and are 13' 2" wide. Circle **114** on reader service card

Computer Products



Easy-to-use Software Interface

Softdesk, a major developer of AEC software for AutoCAD, offers a range of building-design products, including The Auto-Architect®, Piping, HVAC, Structural Plan & Elevations, and Steel Detailer. All Softdesk 7

applications use the new "Core" foundation, a user-friendly interface that allows the building of custom programs and the translation of the software into various languages. Circle 115 on reader service card

3D Solids Modeling Software

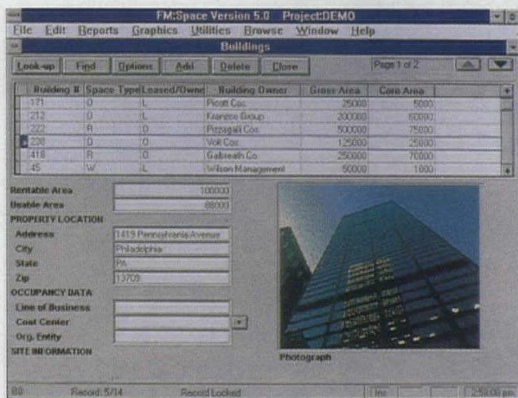
Form-Z RenderZone, by auto-des-sys, is a 3D solid and surface modeler that allows photorealistic rendering. Developed in alliance with LightWork Design Limited, the software creates renderings using everything from flat shading to photorealistic ray tracing at rapid speeds. Texture mapping, multiple types of light sources, and shadows, transparencies, and reflections are just some of the standard features.

Circle 118 on reader service card

Real-time Walk-throughs

ArchiCAD, fully featured 2D/3D software from Graphisoft®, is now available with Quicktime VR, virtual reality software based on technology developed by Apple Computer. Quicktime VR allows ArchiCAD users to move freely and in real time through 3D renderings of proposed spaces. The software also lets you pan in on details and zoom out to get a feel for an entire room.

Circle 119 on reader service card



Facilities Management Software

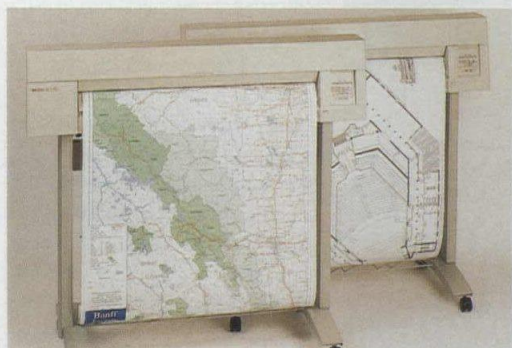
FM:Space Version 5.0, by FM:Systems, is a Windows-based facility management system for managing space, leases, and assets and for strategic planning. The new release has such new features as a database structure that can be customized, and the capacity to generate graphic reports.

Circle 116 on reader service card

High-Volume Scanners

The Digitizer Division of CalComp has introduced ScanPlus III, a series of high-volume, large-format scanners. Greatly reducing scan times, these machines let users select the resolution and computer platform.

Circle 120 on reader service card



Low-Cost Inkjet Plotters

Two low-cost, large-format inkjet plotters have been introduced by Hewlett Packard. The HP DesignJet 250C color plotter and the HP DesignJet 230 monochrome plotter. The 250 can output D-size full-color drawings in six minutes, and both plotters can handle E-size drawings. The color model costs \$3,995; the monochrome model, \$3,195.

Circle 117 on reader service card

AutoCAD® on Workstations

Autodesk has announced that AutoCAD® Release 13 will now operate on four UNIX platforms and Windows NT on Alpha Systems. UNIX will allow high-performance graphics and multitasking. Windows NT on Alpha Systems will enable drawing regeneration, rendering, visualization, and solid modeling.

Circle 121 on reader service card

3D Technology on the Power Mac

Apple Computer's Power Macintosh™ now has built-in 3D capabilities. QuickDraw™ 3D, a 3D extension to the Mac™ OS operating system, gives users of the Power Mac graphics capabilities previously available only on graphics workstations. A common file format and consistent user interface will allow rapid movement from one application to another.

Circle **122** on reader service card

Advanced Architecture Software

Advanced Architecture from Eagle Point Software is easy to learn and allows you to draw rapidly in either 2D or 3D. The software features flexible layering, multiple hatching patterns, a text editor, and a movie command. The company's virtual simulator software also lets users tour solid 3D renderings of proposed buildings.

Circle **123** on reader service card

Air Quality Product Guide

E-House has released its 1995 Indoor Air Quality Product Guide™ on disk. A directory of air-quality products, the guide describes thousands of products from over 500 companies.

Circle **124** on reader service card

Low-Cost Plotters

The CADJET™ and NOVAJET™ III plotters, from ENCAD™, are low-cost, high-performance plotters. CADJET™ costs about the same as entry-level inkjet plotters and yet it offers color and roll-feed capabilities. NOVAJET™ III provides color or monochrome line drawings much faster than pen plotters. In its merged vector/raster mode, you can also print scanned images on the same sheet as vector plots.

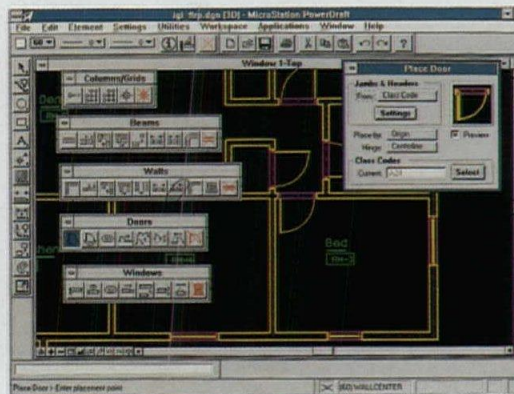
Circle **125** on reader service card



Large-format Copiers

Océ-Brüning has announced the Océ 7050 series of large-format, low-volume, plain-paper copiers. The copiers have a radiant fusing system that dramatically reduces energy use and provides an instant-on capability. The radiant technology also fuses the image into the paper, ensuring crisp, high-quality copies. The copier itself is also designed for eventual dismantling and recycling. Prices range from \$6,995 to \$12,995.

Circle **126** on reader service card



Improving Architectural Drafting

Bentley Systems has teamed up with IdeaGraphix (now owned by Softdesk) to produce PowerArchitect™, software for high-productivity architectural drafting. Based on Bentley's MicroStation PowerDraft™, the new software offers a number of 2D drafting tools that ease the placement and modification of walls, windows, doors, beams, plumbing, columns and grids, stairs, and drawing notations.

Circle **127** on reader service card



Affordable Design and Production Software

Intergraph has packaged several application programs into an affordable new package called the Architectural Office. The package allows users to draw plans with parametric components, to produce schedules and reports, and to utilize 2D and 3D furniture, fixture, and symbol libraries. Photorealistic images and animations are also possible. It is priced at \$4,250, which is 50 percent less than if these applications were purchased separately.

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Buffer Size (RAM):	Standard: 2MB (2M Series) 4MB (2C Series) Maximum: 32MB (Accepts 1MB, 4MB, & 16MB SIMMs)
Standard Interfaces:	Serial and Bi-tronics parallel
Network Capability:	Optional Ethernet adapter supports TCP/IP and Novell™
Accuracy:	0.1% of vector length
Resolution:	Draft mode: 300 dpi Final mode: 300 dpi
Options:	Color upgrade. Automatic roll feed. Stand. Ethernet adapter.

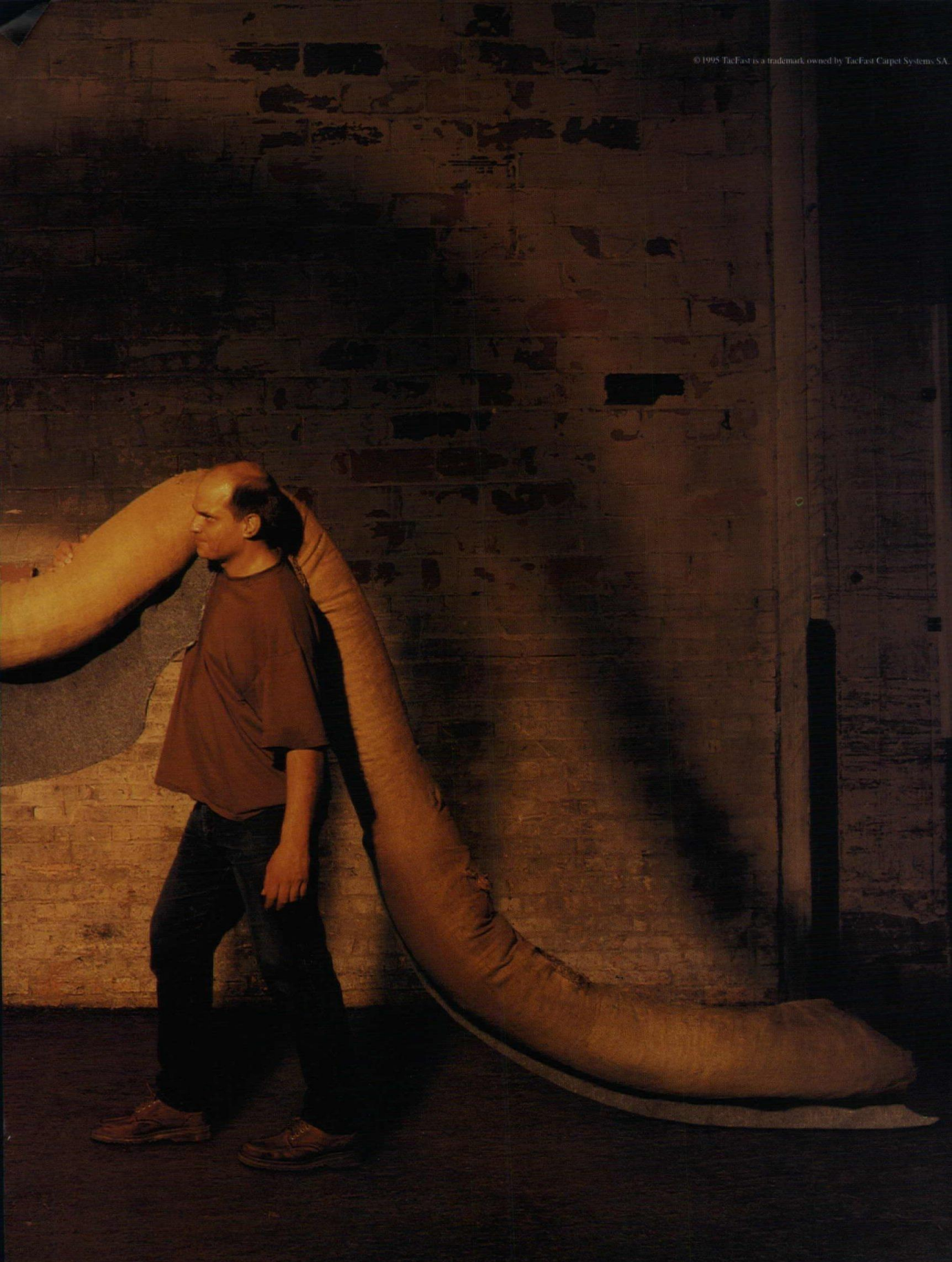
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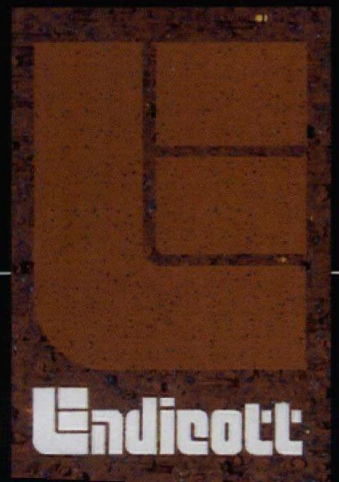
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When Optimism Prevailed

An impressive Chicago show recalls the buoyant and ingenious designs of Bruce Goff, from an era without limits.

by Cheryl Kent

Bruce Goff's ebullient work found expression in what now seems a remote time: the years soon after World War II, when America, like a 16-year-old boy, saw no end to youth or possibilities. The future-oriented Buckminster Fuller had finished the Dymaxion House and was working on the geodesic dome. And in Oklahoma Bruce Goff was hitting his stride, the results of which are on display through Sept. 4 at the Art Institute of Chicago.

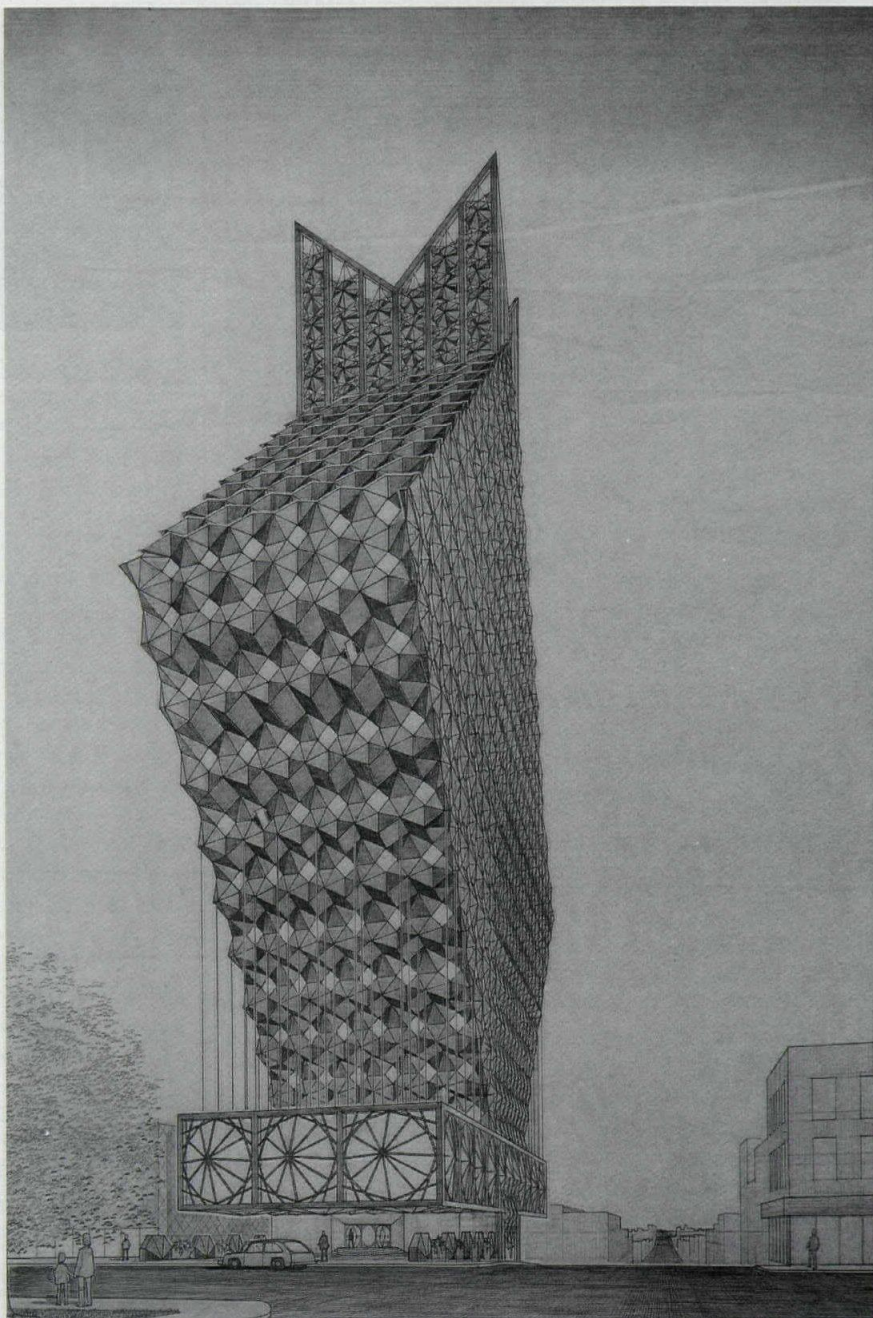
This is the largest exhibition of Goff's work ever mounted, and it reveals the architect designing as though technology had conquered all forces, including gravity – as though all imaginings, no matter how improbable, were entitled to realization. The most famous of Goff's built works, the Bavinger House in Norman, Oklahoma, is twice suspended: the spiraling roof is hung from a central mast and the "rooms" within – actually enclosed platforms – are suspended from the ceiling.

The complete Goff archives were given to the Institute by Joe Price, the architect's patron and the executor of his estate, after Goff's death in 1982 at age 78. Bart Prince of Albuquerque, Goff's longtime friend and collaborator and a noted architect in his own right, has sensitively designed the main gallery installation, which consists primarily of renderings of Goff's built and unbuilt projects. In separate spaces are displays of Goff's letters, photographs, and abstract paintings.

Starting Young

Goff designed 500 buildings, of which 150 were built – "not a bad average," in the estimation of Pauline Saliga, the show's curator. His career began early. He became an apprentice in the Tulsa architecture firm Rush, Endacott & Rush at 12. At 15 he was designing buildings, and at 25 he was a partner. In his youth Goff explored a wide range of styles. Frank Lloyd

Cheryl Kent is P/A's Chicago correspondent.



Goff's design for the First National Bank of Independence, Missouri, in 1970 remained unbuilt. Larry W. Grantham produced this drawing of it in 1977.

Wright had the most enduring impact, however, and his influence remained evident to the end in Goff's penchant for organic forms.

Throughout his life, Goff moved where career and clients beckoned. He went to Chicago when his Tulsa firm dissolved during the Depression. In 1946 he joined the University of Oklahoma at Norman, becoming chairman of architecture the following year. Though he left in 1955 after what many said was an orchestrated exposure of his homosexuality, the years at the university were Goff's most creative and productive.

Still, the architect achieved a great deal in his last 25 years. Joe Price became a patron: among Goff's undertakings for him were a house and two substantial remodelings of it. Near the end, he designed the Pavilion for Japanese Art at the Los Angeles County Museum of Art, which houses Price's collection and was constructed with the support of a donation from Price (P/A, November 1988, p. 33–34). Goff died before the pavilion was built, and the difficult tasks of translating it into working drawings and overseeing construction were left to Prince. *(continued on next page)*

Art Institute of Chicago; Gift of Shen Kenan, Inc.

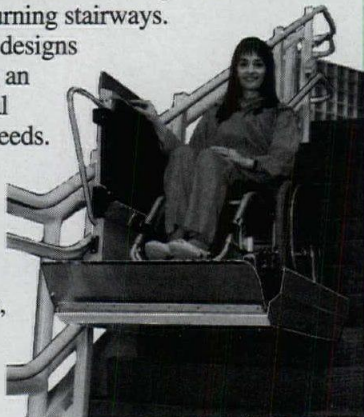


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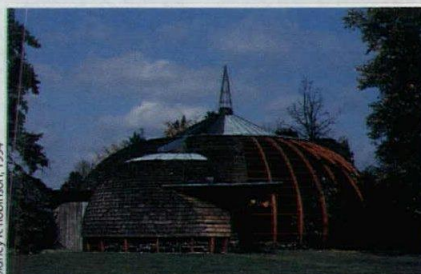
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Reports

Goff Exhibition (continued from previous page)



Quonset hut ribs framed the roof of the Ruth Ford house, built in 1947 in Aurora, Illinois.

Nothing Wasted

As the Chicago show demonstrates, from 1945 on, Goff developed his own vocabulary of forms (the spiral and other variations on the circle), materials (rough stone, glass cullet – the slag from glass manufacturing – and tile), and devices (floating roofs, open plans, ramps, bridges, and suspended platforms). Goff's use of unconventional materials was born of his time. At war's end, building materials remained scarce, and Goff improvised. Piping donated by an oil company became the structure for the Hopewell Baptist Church, built in 1948 in Edmond, Oklahoma. The church looks as though it were designed around an idea for a contemporary expression of Christianity, not constrained by the material that happened to be available. Goff's experiments with Quonset huts culminated in the Ruth Ford House of 1947 in Aurora, Illinois, where Quonset hut ribs framed the curving roof. Skylights were plastic domes salvaged from military planes.

It is a shame that some of Goff's conceptions were never built. The Viva Hotel (1961), with its looping balconies edged in white neon, would have been delightfully appropriate for Las Vegas. Also regrettably unrealized was the Cowboy Hall of Fame (1956), resembling giant horse shoes looped around a stake. This building would have made Venturi Rauch & Scott Brown proud if they had designed it in the 1970s. A high-rise scheme for the First National Bank of Independence, Missouri (1977) – also unbuilt – looks like a rectangle tipped on one corner, with floors successively cantilevered.

Expressing the Client

Houses formed the bulk of Goff's work. What emerged in the design process, Goff and others said, was a portrait of the client in the form of a house. The unbuilt John Garvey House (1951) designed for a site in Urbana, Illinois, is one of the more exotic and inventive examples. Shaped like a donut and clad in a translucent plastic, it was to have an open center resembling the horn of a trumpet, thus relating to the musician-client. "Rooms" were to be fashioned of salvaged, globe-shaped gas storage tanks that would be reached via a tube hallway snaking through the house. Garvey wanted to build the house, and in the end it was Goff who blinked when the manufacturer could not guarantee the plastic for more than five years. Another house designed for William H. Bass in 1956 for a Tulsa site, but never built, looked like a star that had fallen to earth.

The fundamental buoyancy of Goff's work, evident in this excellent show, seems almost funny at first, so distinctly does it recall a different time, before experiences like Vietnam sobered us. He designed as though the worst thing anyone would need protection from would be rain and snow; surely the first years of the Cold War showed us there was more to be afraid of.

The thoughtfulness and thoroughness of this exhibit remove Goff from the world of mere curiosities. Looking at his work, your first smile may be ironic, but in the end it will be wistful. It must have been lovely to have such hope. □

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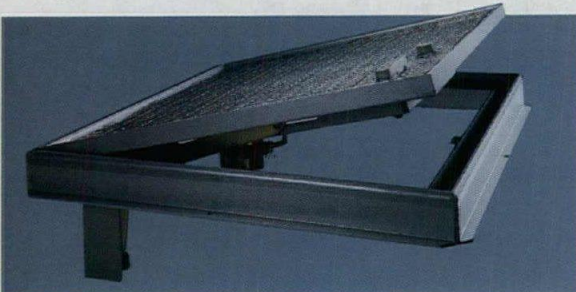
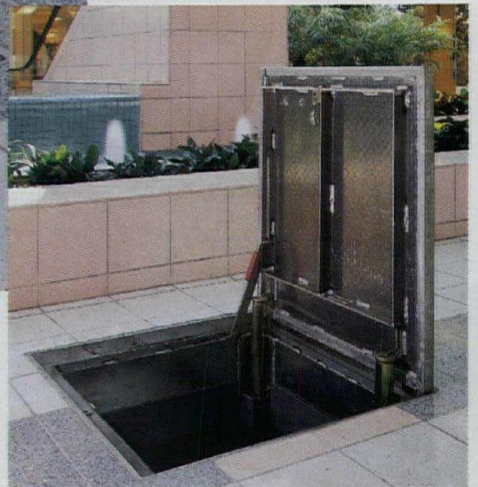


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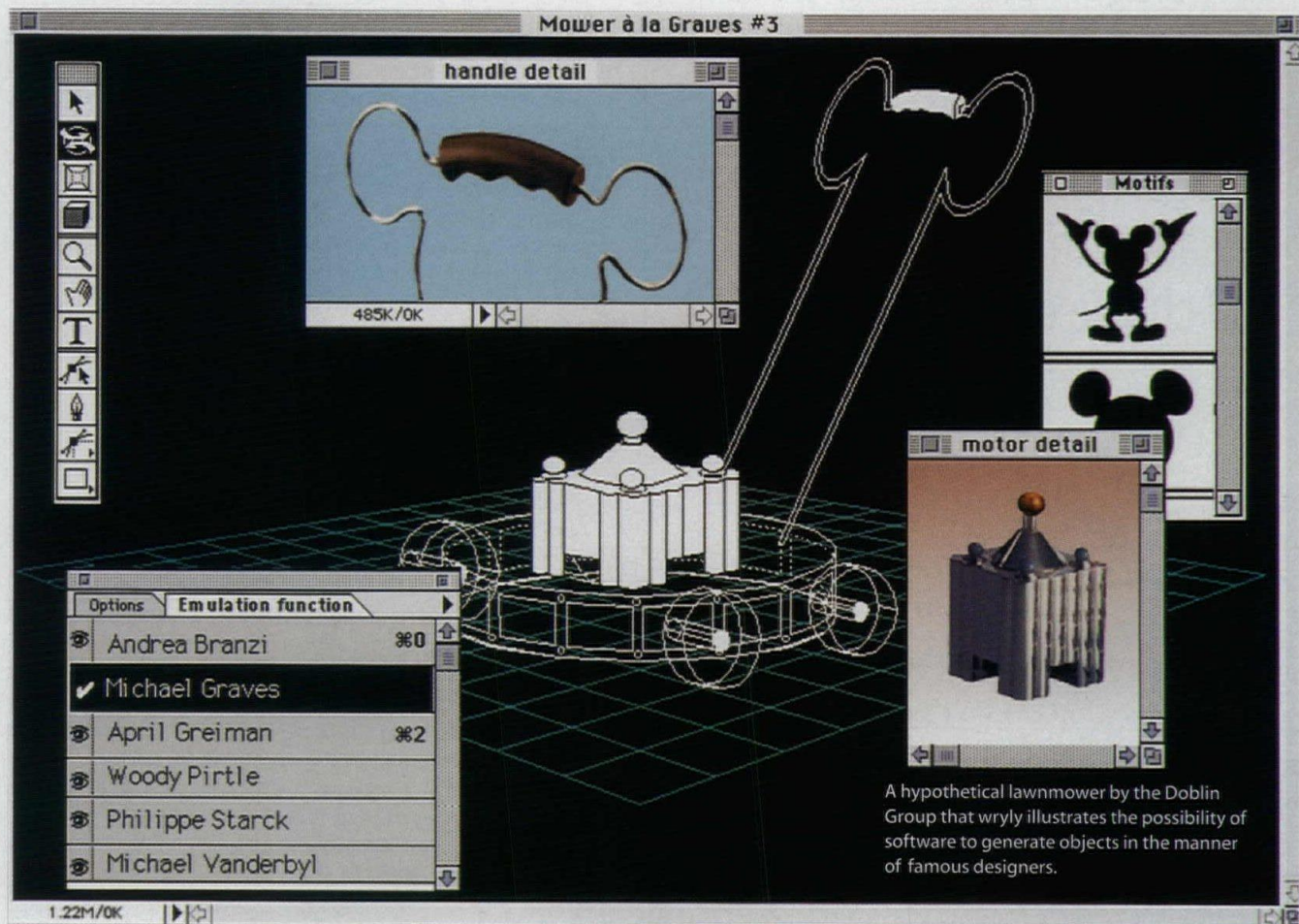
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The Gulf Between Business and Design



A hypothetical lawnmower by the Doblin Group that wryly illustrates the possibility of software to generate objects in the manner of famous designers.

Christopher Way, Doblin Group

The annual design conference in Aspen struggled over mutual disappointment between businesses and designers, and searched for remedies.

by M. Gordon Brown

Two complementary ideas ran through this year's International Design Conference in Aspen: Business is "dramatically out of touch with what designers actually do," in the words of John Kao, and designers "don't know the core needs of business."

The speakers at the three-day event in June – the 45th in a line of sometimes illustrious Aspen design conferences – had ample qualifications for analyzing the gulf between business and design. Kao, the conference chair, came from Harvard, where he teaches in

its Business School. Keynote speaker was Tom Peters, who, years before he attracted a following as coauthor of *In Search of Excellence* and author of many subsequent books on the fun and function of business, was a drop-out from the Cornell architecture program. The gathering at Aspen presented an opportunity to explore design's relationship to everyday life, something in which business is inevitably involved.

Strained Relations

Though designers work in businesses and as businesses, they are neither thought of as business people nor do they think of themselves this way. No two groups could differ more in work habits, personal styles, preferred rewards, and attitudes toward authority. Surveying the poor relationship between designers and business, Michael Shrage, a writer and research associate at MIT's Sloan School and the Media Lab, observed, "It's not that there are missed opportunities; there's genuine disappointment."

Participants noted that what businesses want (but sometimes do not get) from designers are things that create value for the company and that are different from what currently exists. And businesses want things fast, which does not lead to a relationship made in heaven. Even so, unheavenly relationships can succeed. Some speakers proposed well-defined operational approaches to re-designing the design process. Peters argued that design is not so much process or appearance as it is a culture – a system of beliefs and practices manifest in tangible and intangible things made by businesses of every size.

Designers and businesses view creativity differently. In the design professions, the creative individual is a hallowed idol; in business, it's the work relationships in the organization that are seen as having to be creative.

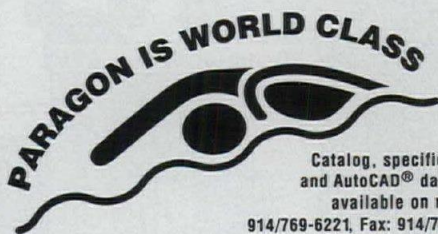
Models for Progress

Central to this difference is the idea of prototyping. Shrage pointed out that prototyping, a key step in (continued on next page)

M. Gordon Brown is an architectural consultant and freelance writer in Denver.

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Reports

Aspen Conference (continued from previous page)

developing a new product or service, can turn a relationship into a creative one. The prototype creates a third node in what is otherwise a two-way communication link between the designer and the business executive. Conceived this way, the prototype is not something carted out of the designer's mental atelier. It is both medium and message, altering traditional two-way relationships and agendas. The prototype establishes a platform that accelerates understanding and innovation and that lifts the designer out of isolation. In Shrage's formulation, "Innovative prototypes generate innovative teams."

While prototypes come in many forms – produced manually or by computers – it is the electronic form that is making a formal and substantial difference in work relationships. If computer-based prototyping allows designers to innovate faster, it also enables them to broaden the scope and power of their work – and it allows some architects to shape buildings even from the grave. Some CAD programs entering the market incorporate the subtle design signatures of famous or deceased architects. As Larry Keeley, president of the Doblin Group, a strategic design planning firm in Chicago, put it, this enables anyone to design a building in the manner of Le Corbusier, Frank Lloyd Wright, or other architects "who are still dead."

Computer-based prototypes are double-edged: they could replace the two-way client-designer relationship with a two-way client-software relationship. Such automation of design means that star architects who now concentrate largely on big public commissions like museums and concert halls could in the future extend their activity to projects as small as a garage addition. The stars could compete with the next-door architect, injecting more competition into an increasingly supersaturated design labor market. When a client says, "I want my house to look like Michael Graves did it," the software, using a template based on Graves's designs, could accommodate that wish. To show the extremes to which these sorts of computer templates could be taken, Keeley showed an illustration of a lawnmower as it might look in Graves's style.

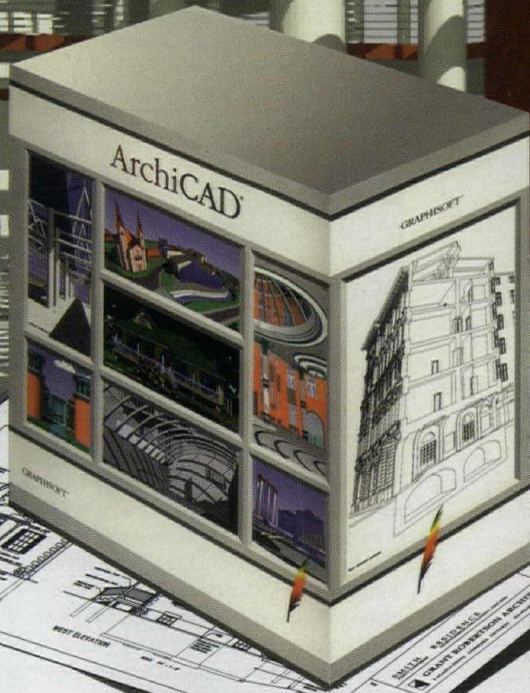
Crossing Professional Boundaries

For designers, one problem already evident is that preferences of the market are not neatly matched with what any one design discipline can deliver. This is why graphic design overlaps product design, and both meld with interior design, site design, and building design. And as changes increase, companies are approaching design with strategies that ignore traditional disciplinary boundaries.

An example is a recent project by the Doblin Group involving gas stations. So long as the gas station was a couple of service stalls, three pumps, and a pump jockey, a loose-fitting, muddled-through physical arrangement would work. Now that the station is a multifunctional interface between petroleum producers, food distributors, and rushed consumers, every point of tactile and visual contact between the customer and the facility and its contents and staff – the entry patterns, signs, pump handles, wash basins, security, glazing, and so on – is being reexamined by the Doblin Group and designed as a coordinated whole.

Architecture's traditional way of relating to clients – formed in the preindustrial past, when clients were the landed nobility and the priesthood – is out of sync with the realities of today's business. So the Aspen Design Conference's focus on redefining the idea of design came at the right moment. Even if the conference didn't produce a new definition of design, it drove home the idea that a new way of working is coming into being, pushed forward by the rapidly evolving conditions of everyday life. If architects want to secure their future, they will have to heed those changes. □

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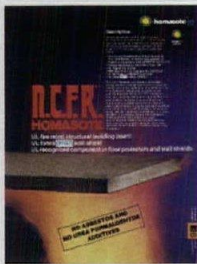
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Forms + Surfaces. Circle No. 354



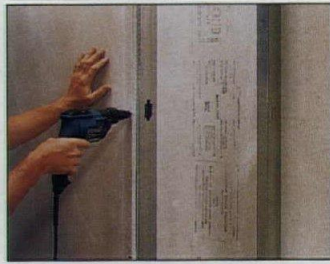
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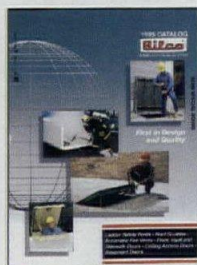
This new four-page flyer shows the lighting products available from BEGA that conform to ADA standards. A simple, easy to follow grid of product photographs indicates each product number and the corresponding page number for the BEGA Catalog No. 6. An index on the back page denotes lamp and dimensions for each product.
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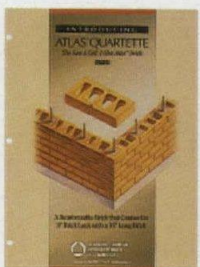
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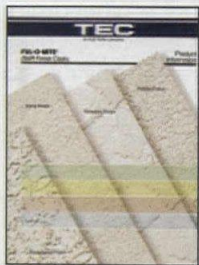
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(continued on page 105)

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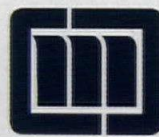
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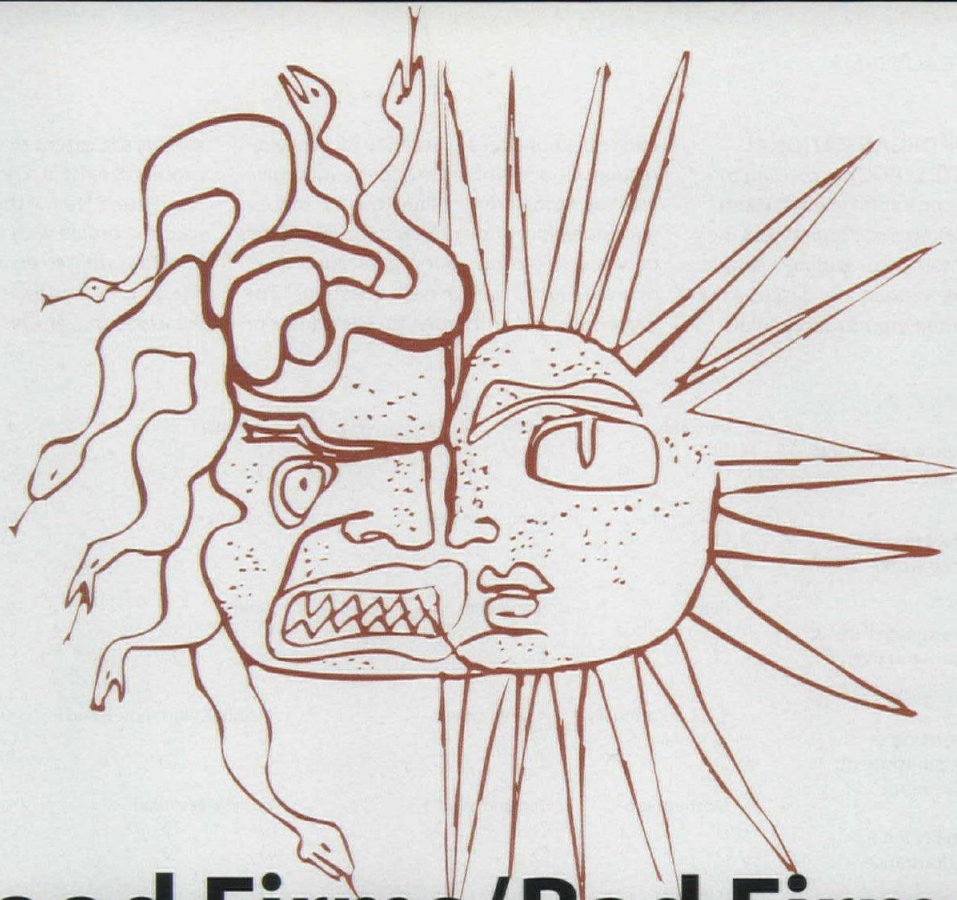
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Good Firms / Bad Firms

Poor personnel practices are, unfortunately, widespread in this profession. But that is something employees should no longer tolerate and employers can no longer afford.

by Thomas Fisher

What is a good firm or a bad one, and how can you tell the difference? I asked that question of our readers in both telephone interviews and in a survey in the magazine and did I get an earful! Most seemed to agree, for example, that poor personnel practices are endemic in the profession. Virtually everyone said they had been, or knew someone who had been, treated badly in a firm, especially when they were young. As one recent graduate said: "Only about 60 percent of my graduating class got jobs, and everyone who did is unhappy." Yet my conversations also revealed a certain fatalism about the situation, in part because it has become normalized – even mythologized – within the profession. "There's an attitude among some partners," says one architect who recently became a partner himself, "that I went through hell and so will you."

Even a cursory reading of the business press, however, shows that we, as a profession, can no longer afford such attitudes. In a series of articles that recently ran in the *Harvard Business Review*, Christopher Bartlett of Harvard's Business School

and Sumantra Ghoshal of the London Business School argue that "the scarcest corporate resources are ... the knowledge and expertise of the people on the front lines." They go on to say that, if a business is to survive the tough competition of a global economy, management must create "an organization with which members can identify, in which they share a sense of pride, and to which they are willing to commit."

This runs counter to the conventional wisdom that the market of architectural employees is flooded and that if unhappy staff members leave, there are plenty more to take their place. That "wisdom," however, overlooks the fact that knowledge and expertise are, indeed, scarce resources in our field. Knowledgeable employees need to recognize their value and to avoid firms that don't. Likewise, firms with poor personnel practices need to realize that disgruntled employees can have a direct effect on the bottom line, hampering the firm's performance, lowering its profitability, and reducing the service it provides. Finally, the profession, as a whole, needs to pay

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each question you are asked to fill out two responses, one which describes your organization at the present time (the "N" row for each question) and another which describes how you would like your organization to operate (the "L" row for each question)." The gap between N and L rows for each question

reveals the extent to which personnel problems exist in a firm. "The hard work," says Peter Piven of the Coxe Group, which uses the profile with some clients, "is in knowing what to do once you've identified the gaps." - Used by permission of Rensis Likert Associates, Inc., Ann Arbor, Michigan

LEADERSHIP

How much confidence and trust is shown in subordinates?	Very little N <input type="radio"/> <input type="radio"/> L <input type="radio"/> <input type="radio"/>	Some <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Quite a bit <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	A very great deal <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
How free do they feel to talk to superiors about their work?	Not very free N <input type="radio"/> <input type="radio"/> L <input type="radio"/> <input type="radio"/>	Somewhat free <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Quite free <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Very free <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
How often are subordinates' ideas sought and used constructively?	Rarely N <input type="radio"/> <input type="radio"/> L <input type="radio"/> <input type="radio"/>	Sometimes <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Often <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Very frequently <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

MOTIVATION

Is predominant use made of 1. fear, 2. threats, 3. punishment, 4. rewards, 5. involvement?	1,2,3, occasionally 4 N <input type="radio"/> <input type="radio"/> L <input type="radio"/> <input type="radio"/>	4, with some 3 <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Mainly 4, with some 3 and 5 <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	4 and 5, primarily based on group-set goals <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
Where is responsibility felt for achieving high performance?	Mostly at top N <input type="radio"/> <input type="radio"/> L <input type="radio"/> <input type="radio"/>	Top and middle <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Fairly widespread <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	At all levels <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
How much cooperative teamwork exists?	Very little N <input type="radio"/> <input type="radio"/> L <input type="radio"/> <input type="radio"/>	Some <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Quite a bit <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	A very great deal <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

COMMUNICATION

What is the usual direction of information flow?	Downward N <input type="radio"/> <input type="radio"/> L <input type="radio"/> <input type="radio"/>	Mostly downward <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Down and up <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Down, up, and sideways <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
How is downward communication accepted?	With distrust N <input type="radio"/> <input type="radio"/> L <input type="radio"/> <input type="radio"/>	Often with suspicion <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Usually with trust <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	A great deal of trust <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
How accurate is upward communication?	Usually inaccurate N <input type="radio"/> <input type="radio"/> L <input type="radio"/> <input type="radio"/>	Occasionally inaccurate <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Often accurate <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Almost always accurate <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
How well do superiors know problems faced by subordinates?	Not well N <input type="radio"/> <input type="radio"/> L <input type="radio"/> <input type="radio"/>	Somewhat <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Quite well <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Very well <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

DECISIONS

At what level are decisions made?	Mostly at top N <input type="radio"/> <input type="radio"/> L <input type="radio"/> <input type="radio"/>	Policy at top, some delegation <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	General policy at top, more delegation <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Widespread decision making <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
How often are subordinates involved in decisions related to their work?	Almost never N <input type="radio"/> <input type="radio"/> L <input type="radio"/> <input type="radio"/>	Occasionally consulted <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Generally consulted <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Fully involved <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

GOALS

How is goal setting usually done?	Orders issued N <input type="radio"/> <input type="radio"/> L <input type="radio"/> <input type="radio"/>	Orders, some comments invited <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	After discussion, by orders <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Generally by group discussion <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
How much do subordinates strive to achieve the organization's goals?	Very little N <input type="radio"/> <input type="radio"/> L <input type="radio"/> <input type="radio"/>	Some <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Quite a bit <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	A very great deal <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

CONTROL

How concentrated are review and control functions?	Very concentrated at top N <input type="radio"/> <input type="radio"/> L <input type="radio"/> <input type="radio"/>	Quite concentrated at top <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Moderately delegated at lower levels <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Widely shared <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
What are cost, productivity, and other control data used for?	Policing punishment N <input type="radio"/> <input type="radio"/> L <input type="radio"/> <input type="radio"/>	Reward and punishment <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Reward, some self-guidance <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Group guidance and problem solving <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

attention to the amount of disaffection among the rank and file. How many bad work experiences can architectural employees have and how many changes in project personnel can clients tolerate before the entire field begins to get a reputation as one to avoid?

What Characterizes a Bad Firm

A pretty clear picture of what constitutes a "bad" firm emerged from our survey. Readers described firms where "bosses watch over their workers by the minute," where "time is more important than performance," where "the employee is treated more like a slave than a person," where "one is not appreciated whether it is by monetary compensation or an occasional word of encouragement," where "secrecy," "duplicity," "pettiness," "jealousy," "back-biting," "disrespect," and "distrust" prevail.

I also found people who had worked in such firms and were determined not to make the same mistakes. "Now that I am an employer," says one partner, "I am trying to treat my employees as people. I am trying to be considerate of individual needs and requirements. I am trying to give realistic deadlines and not demand more from my employees than I would expect from myself. I am trying to give performance evaluations on a regular basis and am talking to my employees individually as often as possible to find out about their grievances."

Why doesn't this happen more often? Some of the people I talked to attributed it to the lack of attention given to personnel issues in architecture school. "One of the failings of our education," says this same partner, echoing an oft-heard sentiment, "is that we rarely take business courses and yet are expected to be well-rounded and to know how to run an office." The little exposure many of us had to legal and economic issues in school is bad enough; personnel matters are often not even mentioned. Of the 53 subject areas in the NAAB's Criteria for Accreditation of architectural programs, for example, not one deals with personnel or human resource issues as a subject of study. And this at a time when Bartlett and Ghoshal report that "top-level managers in most of the companies we studied have begun to spend at least as much time with the top human resources executive as with the chief financial officer."

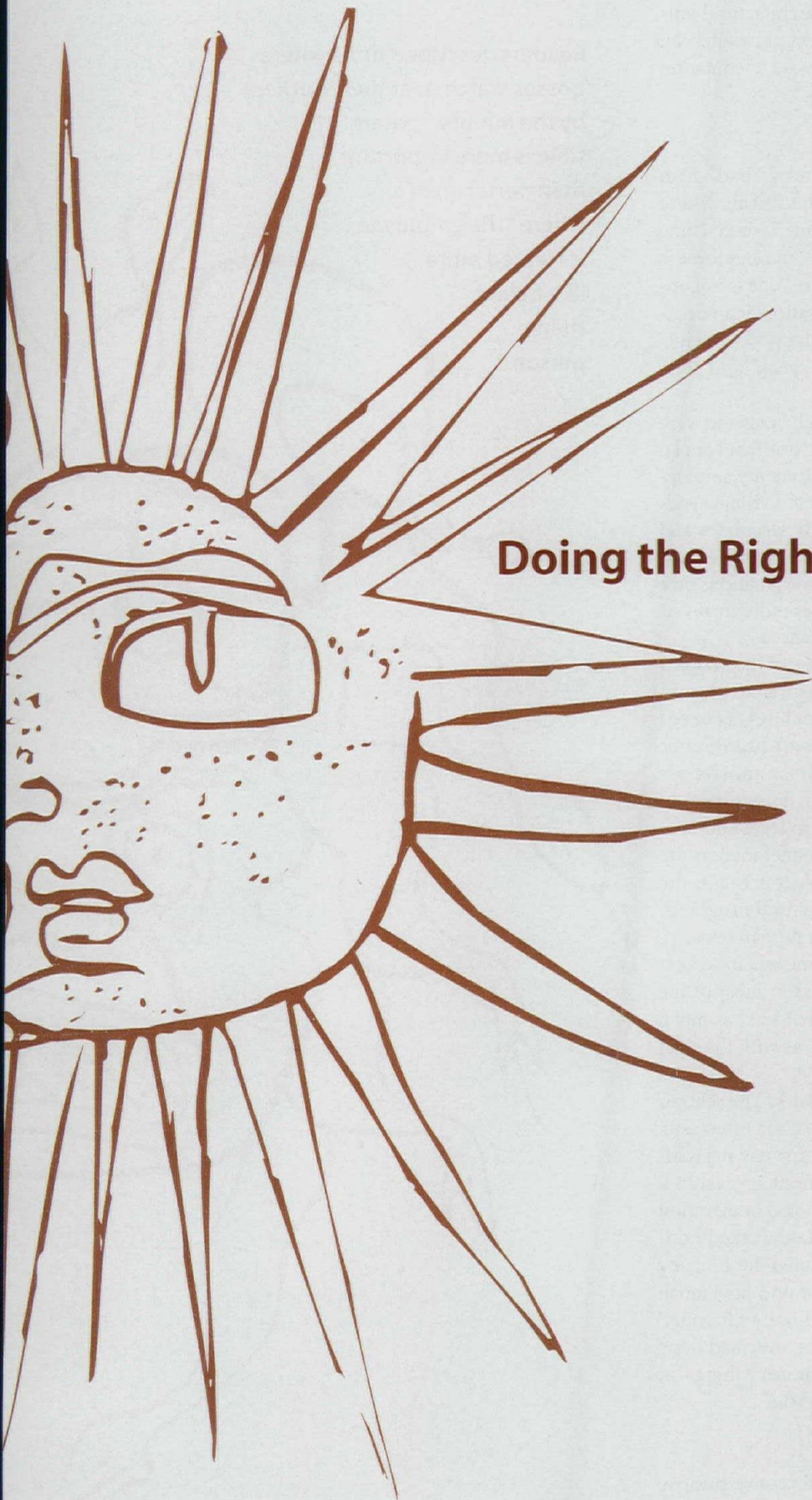
But the problem extends beyond course work. The schools themselves, particularly in the design studios, too often set a bad example of how to treat people. On my first day in architecture school, we were given an assignment to design a house: to do floor plans, a site plan, and sectional or elevation drawings in two days. Virtually the entire class worked non-stop for the next 48 hours, only to have pointed out to us by our professors at the jury how little we knew and how much we were, as one faculty member put it, "visually illiterate." When I asked one of the professors later why they had done that to us, he said that he had gone through the same thing - in other words, "I went through hell and so will you."

What Employees Can Do

The schools seem to assume that we will receive positive lessons about personnel matters on the job, which of course depends entirely on what jobs (if any) we get. If I happen to

Readers described firms where "bosses watch over their workers by the minute," where "time is more important than performance," where "the employee is treated more like a slave than a person."





Doing the Right Thing

For all the bad firms out there, many good firms also exist, demonstrating that good design and good personnel practices can coexist. Gensler & Associates, with a staff of 750 in 14 offices, is one such firm. "To have a steady stream of work," says L.A. managing partner Ed Friedrichs, "we need a continuity of people, so we have to provide opportunities for people to grow in their careers." The firm, accordingly, offers employees a number of personal and professional educational programs and tuition reimbursement, as well as employee stock ownership and regular bonuses. "The biggest thing," says one employee, "is the sense that management is willing to work with you, to find a place for you." An indication that this form of management works, says Friedrichs, is that "We grew by 100 people last year and billings rose from \$78 to \$90 million, all during a recession."

A firm doesn't have to be as large as Gensler, however, to afford such perquisites. Centerbrook, in Essex, Connecticut, is a 63-person firm that, according to partner Bill Grover, offers a 100-percent-paid health plan, a \$1,000 travel grant and an extra week of vacation to two employees every year, profit sharing, and paid overtime for registered as well as nonregistered staff. Even more important are some of the small things, like the partners sitting in the middle of the drafting room, with desks the same size as everyone else, and their paying the exam and registration fees of employees. Architecture requires years of accumulated knowledge," he adds. "If we share our knowledge and keep people here, we'll be smarter as a firm." The result: a 5 percent turnover.

Even smaller offices, such as the 12-person San Diego, California, firm of Rob Wellington Quigley, can do a lot to ensure employee commitment. "Rob's philosophy," says Maryanne Welton, a longtime employee who has started a branch office in Palo Alto, "is that everyone in the firm contributes equally. He wants everyone to have a say in the design, including the secretary. He also lets the professional staff name our own hours, trusting us to record our time accurately, and he discourages overworking; over the course of a year, most of us average eight-hour days." Longevity is one sign of the firm's good personnel practices; core staff people have been there 11 years, 17 years. Another sign, says Welton: "We laugh a lot."

work for a firm that treats its staff well, I will learn good personnel practices; if not I won't. As a result, our knowledge of human resource issues is largely haphazard, further hampering our ability to change the situation.

As I discovered in interviewing for this article, some personnel practices that seemed outrageous to some architects sounded completely normal to others. Among these were practices such as listing job candidates as current employees in order to get a job and hiring them only if the work comes through, or filling the office with people working as independent contractors, mainly to avoid paying benefits.

I heard a few readers say that we need regulations against, or organized resistance to, such things. "We should form a union," said one recent graduate. But the marketplace, in this case, is probably the best disciplinarian. Employees in the job market, for example, hold a certain power simply by refusing to work for bad firms. To the recent graduate who has had trouble finding work or to the experienced person who has been laid off, the idea of being choosy about who to work for may sound unreasonable, but that, of course, is just what employers want you to believe. "Most firms," says one intern, "make employees feel lucky to have a job, keeping you off guard." But "it's a cop-out," says management consultant Mark Zweig, "to say that, because jobs are hard to find, I'll go work for a bad firm. I don't believe it is hard for good people to get a job, but it may mean making a move to another part of the country or maybe working for a lesser-known firm."

Zweig advises learning about a firm before going for an interview. "Check out its credit history, see if they have a positive net worth and if they have had sustained growth over time. Also ask around about the firm; what reputation do they have?" At the interview, he adds, "Look at the office layout. Are the partners insulated in their own quarters? And look for a firm with a business plan, one that has everyone selling as well as doing work." Readers mentioned other warning signs. "Watch out for all one-gender offices," says one architect, and "miserable expressions on people's faces." "Look at how people interact," advises another practitioner. "Are there conversations and casual discussions, with no awkwardness when the 'boss' goes by, or are people keeping their heads down and scattering at the approach of senior personnel?"

The legal profession offers an example of how prospective employees can affect the working environment in offices. Every year, *The American Lawyer* conducts an extensive survey of summer associates working in the major law firms in the largest cities around the U.S. Rating firms according to several factors, including the quality of the work experience, the importance of the work performed, the amount of client contact, and the length of the work week, the magazine produces a special supplement that, I hear from lawyer friends, is the best-read issue in their field. An indication of this is the number of firms who take out full-page ads in the issue touting their working environment to prospective employees. Whatever the differences in the marketplace for young attorneys and young architects, that one supplement shows how seriously the legal profession takes personnel matters. And it makes you wonder: Is there a connection between how lawyers treat staff and how they are treated, in turn, by clients?

What Clients Know

Such a connection exists in our field. Clients' sensitivity to the quality of service they receive from architects is another way in which the marketplace disciplines firms with poor personnel practices. "Clients can tell if the staff working on their projects is unhappy or insecure," says Ed Friedrichs, managing partner of Gensler's L.A. office. "If you want happy clients, you must have happy employees. It is as simple as that." Zweig is even more blunt. "Firms that see their staff as expendable will go out of business and deserve to go out of business."

One reader, an architect in Boston, paints a vivid picture of how bad management directly affects a firm's service and profitability. "People with less than ten years' experience are treated like draftspeople. I'm an architect, and yet I'm not copied on memos about my projects nor am I given necessary

The principals are always asking "Is this project losing money?" without ever asking the related question, "Are my employees informed and are they motivated?"

information about them, which means that I do things wrong and have to redo them, while being blamed for the errors. The principals are always asking 'Is this project losing money?' without ever asking the related question, 'Are my employees informed and are they motivated?'"

That architect's tale suggests that, while the project-based studios in most offices can ease communication and promote teamwork, they cannot overcome other barriers that arise between employees and employers. Bartlett and Ghoshal think that if an organization is going to survive in an increasingly competitive economy, it must encourage employees' "creativity" and "entrepreneurship" – qualities that architecturally trained people have more than enough of. But to unleash those traits, "top management," says Bartlett and Ghoshal, "first must build fairness into its organizational practices. People must have confidence that those with whom they share responsibility will contribute equitably despite vague lines of authority. And they must believe that those who evaluate the outcome will deal with them fairly. A well-established sense of fairness serves as an organizational safety net for risk takers."

Along with problems of equity in an office are those of communication. "In survey after survey of architectural employees," says Peter Piven, principal consultant of the Cox Group, "the single most-mentioned problem is communication. There is nothing in the nature of architectural practice that prevents communication. It is just that many architects haven't learned that communication is important."

Can Good Design Firms be Well Managed?

A good firm, of course, can mean different things to different people. For some, it might be one that pays handsomely or that treats its employees well; for others it might be one that does neither, but that has a strong design reputation. That raises several questions, though. Are the different types of "good" firms mutually exclusive? Is (continued on page 104)



Brian MacKay-Lyons in his office
in Halifax, Nova Scotia

The work of Canadian architect Brian MacKay-Lyons shows that, in this information age, there is still much to learn from vernacular buildings and agrarian settlement patterns.

by Thomas Fisher

Folk Tech

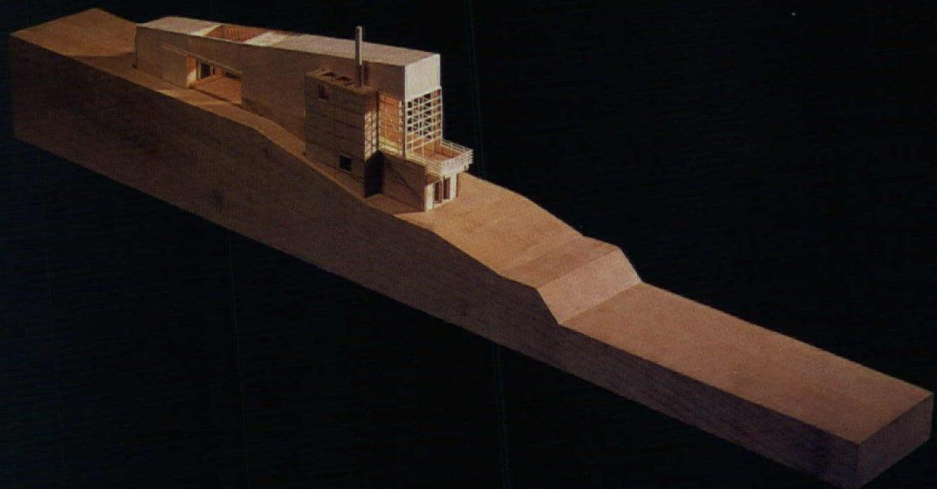
What do older agrarian societies have to teach us? Quite a lot if you listen to one of Canada's most promising architects, Brian MacKay-Lyons. At a time when architects everywhere are struggling with tight budgets, rapid schedules, and reduced fees, MacKay-Lyons has derived relevant lessons from the vernacular architecture of his native Nova Scotia – lessons about simple detailing, efficient construction, and running a practice accessible to people of modest means. Also, at a time when an increasing number of people can live and work almost anywhere along the information highway, the agrarian settlement patterns of his province, of which MacKay-Lyons is a knowledgeable student, offer guidance for those who may be telecommuting to offices.

At first sight, Nova Scotia hardly seems a place rich in lessons for architects. Its fishing villages and coastal farms, centered around the charming but somewhat placid city of Halifax, have the pace and feel of earlier centuries. But if you spend a few days driving around the province with MacKay-Lyons, as I did this spring, you see a place being transformed by the global economy. Consider Brian MacKay-Lyons's clients. They include an artist, a writer, professors at a U.S. college, a couple who work as flight attendants – people, in other words, whose livelihood no longer depends on daily commutes. But the land and the sea have drawn these people to Nova Scotia much as they did farming and fishing families hundreds of years ago. *(continued on page 66)*

The inspiration for much of MacKay-Lyons's work comes from rural buildings, such as "pay-as-you-go" houses (1), where owners roof over a basement and live in it until they can build more. That vernacular is echoed in the Howard house (2), a long low structure, with living spaces above and bedrooms below.

Project: Howard House, West Pennant, Nova Scotia

Project team: Brian MacKay-Lyons with Niall Savage, design; Brian MacKay-Lyons, Niall Savage, Trevor Davies, working drawings; Talbot Sweetapple, model; Michel Comeau, structural; Jamie Steeves, model photo.



Chris Reardon

2



3

2042 Maynard Street

Another recurring inspiration in MacKay-Lyons's work is the simple gable-roof form of local vernacular structures. Last summer, MacKay-Lyons, along with first year "free lab" students from The Technical University of Nova Scotia's School of Architecture, built the "ghost" of that form (3) out of timber-and-cloth over the foundation pit of a vanished house on MacKay-Lyons's farm. When illuminated by fire from within, the structure was at once a lantern and an apparition in the landscape.

That ghost haunts many of MacKay-Lyons's buildings. It reappears, for example, as a conference room on the roof of the old gas station that he rehabilitated as his office in Halifax (5). And it is echoed, at a larger scale, in the row houses that MacKay-Lyons added to the side of his office (4), the end unit of which he occupies with his family. The units face another MacKay-Lyons building across what was once a vacant lot, since turned into the extension of an existing street. By acting as if the street were there, these buildings helped bring it to life.

Project: 2042 Maynard Street, Halifax.

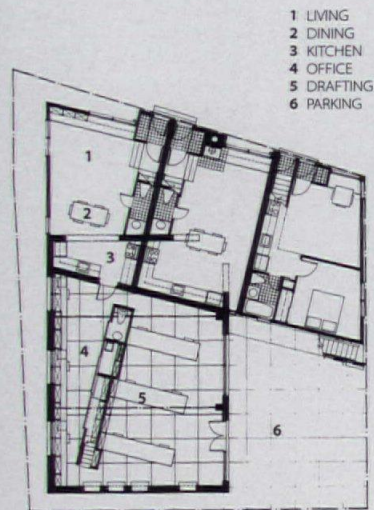
Project team: Brian and Marilyn MacKay-Lyons, developers; Brian MacKay-Lyons, assisted by Bob Benz, Michael Carroll, Andrew King, design; Michael Carroll, drawings; Archie Frost, structural; Gordon MacLean, construction manager; Chris Reardon, Jamie Steeves, photos.



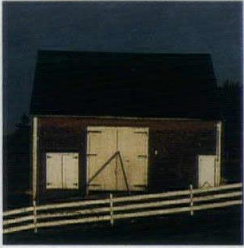
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5



FIRST FLOOR PLAN N 20/6m



6

LeGallais House

Voluminous barns, with their simple three-bay forms and asymmetrical openings, populate the Nova Scotia landscape (6). The most barnlike house MacKay-Lyons has designed is the LeGallais house (7), which overlooks Halifax's Bedford Basin. The plan, based on a tartan grid, consists of a central three-story-high living room, flanked by other daytime living spaces on the lower floor, and sleeping spaces on the upper floors. Circulation occurs mostly within the narrow slots of the tartan grid. Like a barn, the house has large openings and slight asymmetries within a symmetrical form. But unlike a barn the house has volumes carved out of the overall form to accommodate porches and terraces, and other volumes pulled out from the ends of the building to create service zones. Inside (8), wood is used in a variety of ways, from pole columns to rough-sawn beams to soft-wood planks to hardwood floors. "Rather than offer a symbol of growth," says MacKay-Lyons, "with lots of additions, the barn form allows real growth, with a big shed that gets filled over time."

Project: LeGallais House, Bedford, Nova Scotia.

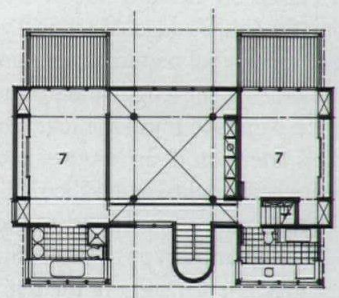
Project team: Brian MacKay-Lyons assisted by Andrew King, Brenda Webster, design; Niall Savage, drawings, Michel Comeau, structural; Gordon MacLean, construction manager; Jamie Steeves, photos.



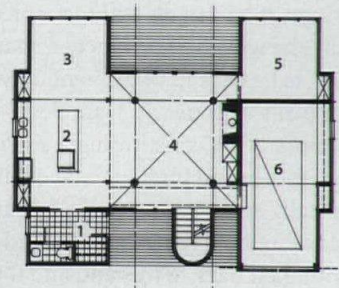
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8



SECOND FLOOR PLAN



FIRST FLOOR PLAN N ↙ 20'/6m

- | | |
|-----------|-----------|
| 1 ENTRY | 5 STUDY |
| 2 KITCHEN | 6 GARAGE |
| 3 DINING | 7 BEDROOM |
| 4 LIVING | |

(continued from page 63)

Likewise, many of these clients seem to see the houses that MacKay-Lyons has designed for them as places not only to live and work in, but also to retire to and someday to pass on to their children – an association of family and land that is also reminiscent of the agrarian economy, where many generations have occupied the same properties. The more people can live *anywhere*, it seems, the more they want to live *somewhere*, and to stay.

Finding a Place to Work

MacKay-Lyons's own life reflects that. Just over 40 years old, with a dry wit and an outward modesty, he was raised in Nova Scotia, went to college in the province, and studied architecture there. After practicing for a while, he left to get a degree in urban design at UCLA, studying under and working with Charles Moore. But instead of staying in L.A., MacKay-Lyons returned to Nova Scotia to practice and teach in Halifax, where he now works out of a rehabilitated gas station at the edge of the downtown, living next door and spending weekends tending an old farm on the coast.

MacKay-Lyons's move back to Nova Scotia seems to have given him some perspective on Charles Moore. Moore tended to view traditional architecture as a smorgasbord from which to pick and choose forms for his own work, a sensibility that ironically removed vernacular buildings from their context, the very basis of their appeal. MacKay-Lyons has come to view such buildings differently. Rather than seeing them as some great architectural feast, he seeks to understand the connection between vernacular form and culture and to apply those lessons to his own work.

Adding to the Vernacular

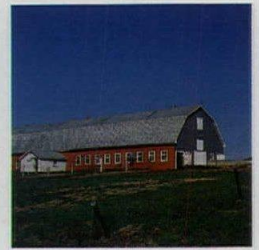
This has involved, first, a process of abstraction in looking at the archetypal forms of buildings in the region. "There are just a few archetypal forms in Nova Scotia," says MacKay-Lyons – the cape house, the gabled barn, the fishing shed, the chicken house – and these are arranged in certain prototypical ways, with the house and barn often on the land side of the coastal roads and fishing sheds along the water's edge. MacKay-Lyons has retained the memory of those archetypal patterns in his architecture, simplifying and flattening them. The length and thinness of many of his houses, for instance, brings to mind the region's long Scottish barns. One result of this attention to archetypes is that his buildings have a certain nonstylistic quality about them; like tools, they seem finely adapted to their purpose, yet almost generic in form, like a boat or a plow.

If those archetypes have influenced the overall form of his buildings, the frugality of the region's vernacular architecture has affected his detailing. "I go out of my way to make things simple," he says. If he can do without a piece of trim or minimize an overhang, he will. This produces a spartan aesthetic, a "zero" architecture, as he calls it, of elemental exterior forms, of nearly windowless walls and nearly frameless windows, and of spare interior volumes often constituting a single space. The plans of his buildings, too, have a fundamental quality, with services and circulation typically arranged in blocks or bars along the back of a structure. "Most buildings here face east and south to the water," he observes, "with their back to the land and the north wind."

The occasionally outlandish mix of materials and colors in local buildings has also made its way into his architecture. MacKay-Lyons will clad one side of a shingled house (continued on page 70)

Leahey House

One of the largest residences MacKay-Lyons has done, the 3,400-square-foot Leahey house (12) recalls the long Scottish barns of northern Nova Scotia (9), whose metal-clad gambrel roofs seem to sweep up from the surrounding fields. This wood-shingled house has a series of post-and-beam bays, with a service zone to one side. A series of plywood-clad trusses, evident on the seaward side of the house, provide wind bracing and support the lateral rafters of the curved roof. The side that faces the road (10) presents the visitor with a deeply inset front porch and a sweeping metal-clad roof that seems to usher you inside. The scale of the interior (11) is surprisingly grand, with a two-story living room facing a large

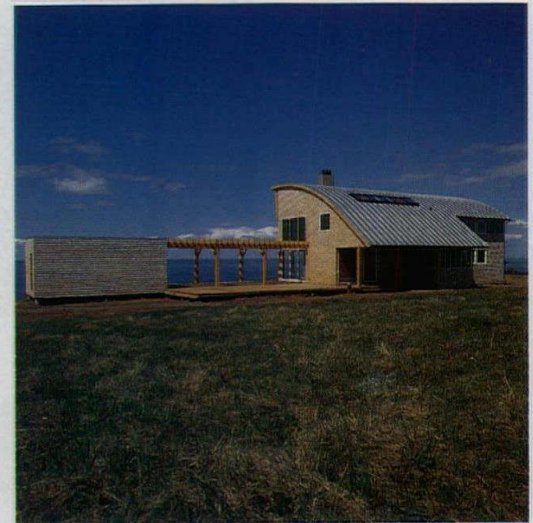


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stone fireplace and a spacious kitchen with broad counters. The house, now a vacation retreat, is planned to grow into a house for an extended family.

Project: Leahey House, Pugwash, Nova Scotia.

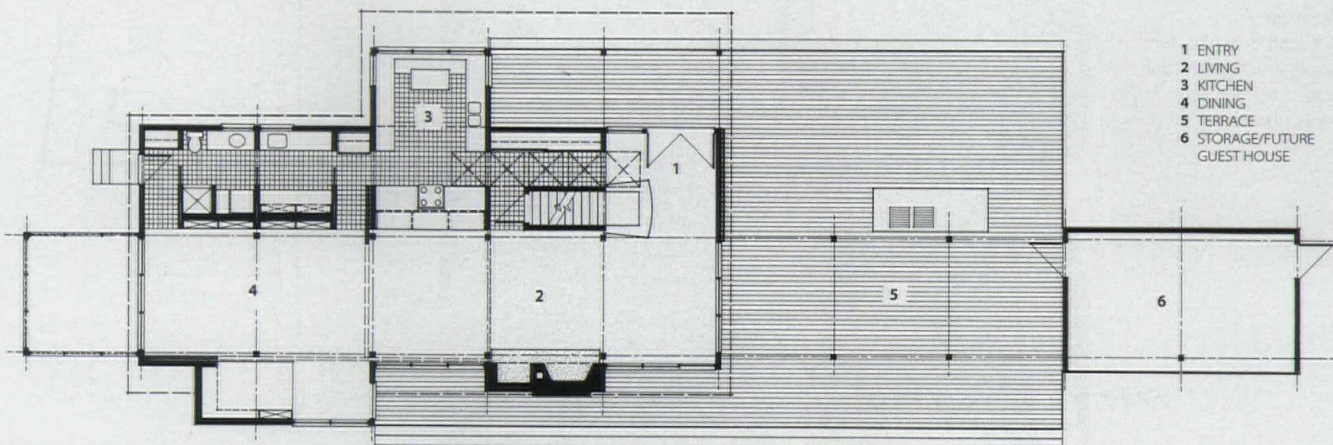
Project team: Brian MacKay-Lyons with Niall Savage, John Geldart, design; Niall Savage, Charles Fawkes, Adam Fawkes, Lois Luke, drawings; Michel Comeau, structural, Arthur Baxter, construction manager; Kem Kam, photos.



10



11



- 1 ENTRY
- 2 LIVING
- 3 KITCHEN
- 4 DINING
- 5 TERRACE
- 6 STORAGE/FUTURE GUEST HOUSE

FIRST FLOOR PLAN

N ← ———— 20'/6m

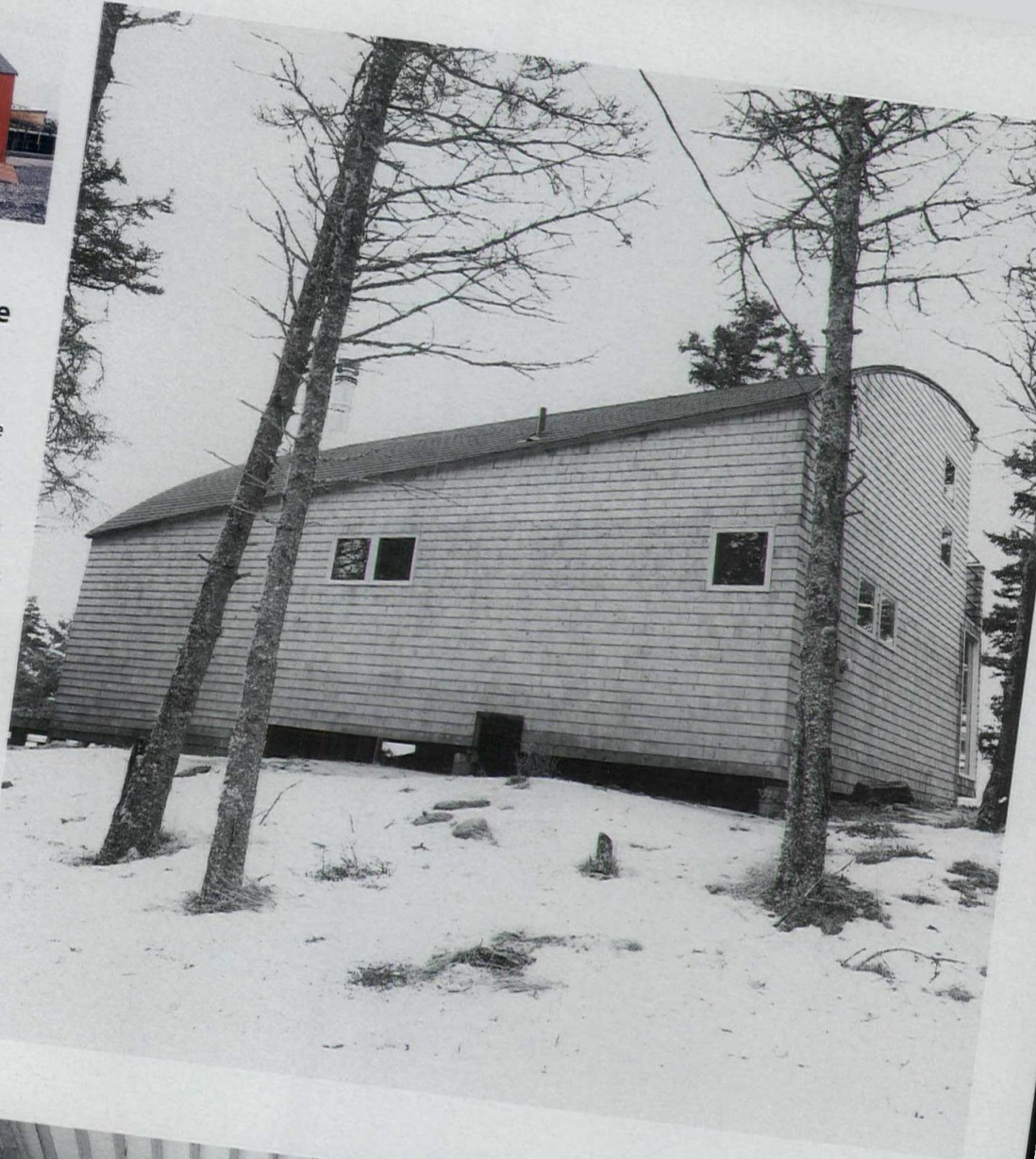


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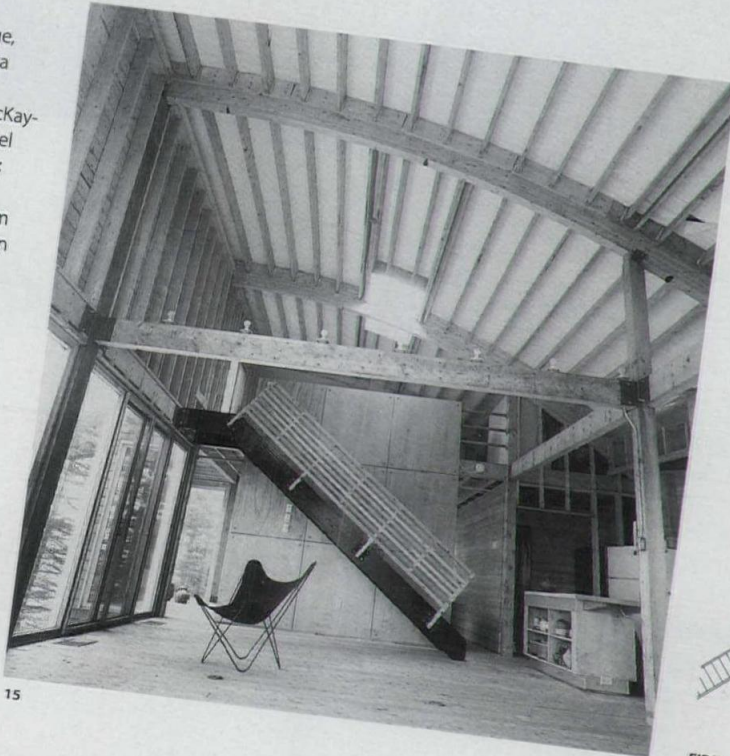
Yaukey Cottage

Located near Cape Sable Island, the heart of Nova Scotia's boat-building traditions, this small house brings to mind both the sagging barns and the dry-docked boats occasionally spotted in the area (13). The first phase, costing \$50,000 Canadian, involved site work and the erection of the structure, skin, and essential services. The wood-shingled skin is closed to the north and east, against the forest (14), with sliding glass doors opening to the south and west water views. The service core is also arrayed along the northeast side of the house. A second phase of this "pay-as-you-go" project will involve finishing the interior (15) and landscaping the site, also for a cost of \$50,000. Even when finished, though, the interior will retain much of its current character, which recalls the exposed wood framing of a boat.

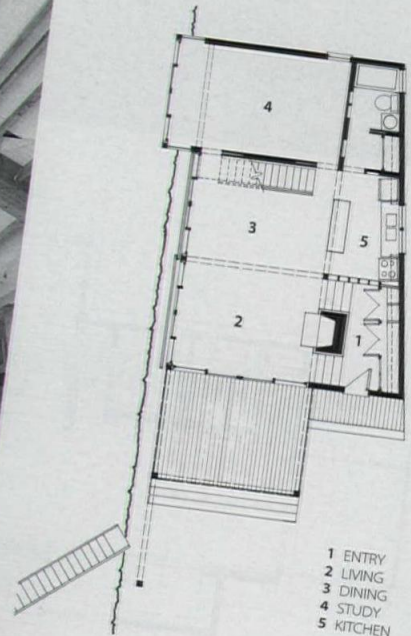
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Project: Yaukey Cottage, Blanche Peninsula, Nova Scotia.
Project team: Brian MacKay-Lyons, assisted by Michael Carroll, Bob Benz, design; Niall Savage, Peter McClelland, drawings; Tom Harland, structural, Gordon MacLean, builder; Jamie Steeves, photos.

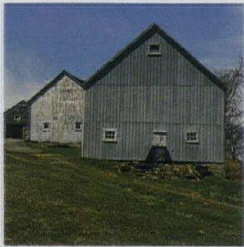


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FIRST FLOOR PLAN

N ↑ 20'/6m



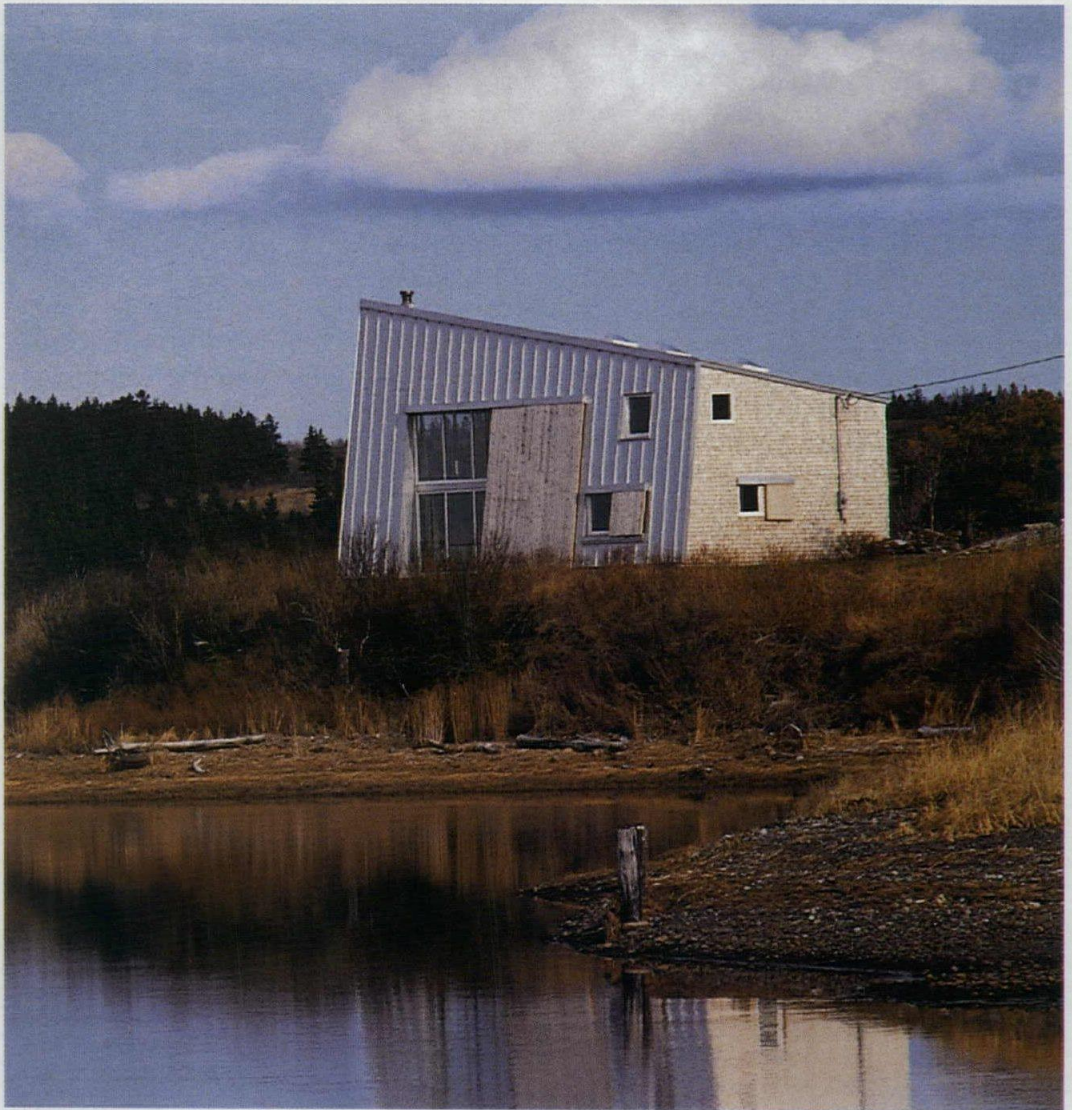
16

White/Leger House

The mix of cladding materials and the combination of large forms and small windows in many of Nova Scotia's farm buildings (16) finds a refreshing interpretation in the White/Leger House, a 1,600-square-foot residence for a couple on the north shore of Nova Scotia (17). The nearly rectangular structure has metal cladding on its shed roof and its north face. "Cedar barn doors," writes MacKay-Lyons, "close the house up ... like an advent calendar." The other wood-shingled sides of the building are minimally detailed, with an entry marked by exposed wood framing. Visitors spiral in past the kitchen and stair and under the second floor bedroom to arrive at the two-story living room (18), whose glazed walls provide views of the ocean and neighboring farms. As in other MacKay-Lyons projects, the services here are arranged in a bar to one side of the living spaces, along with a small guest room, a music studio, and a loftlike study. A polished concrete slab on grade contains a hydroponic heating system, driven by a conventional hot water heater and boosted by a wood stove.

Project: White/Leger House, Bayfield, Nova Scotia.

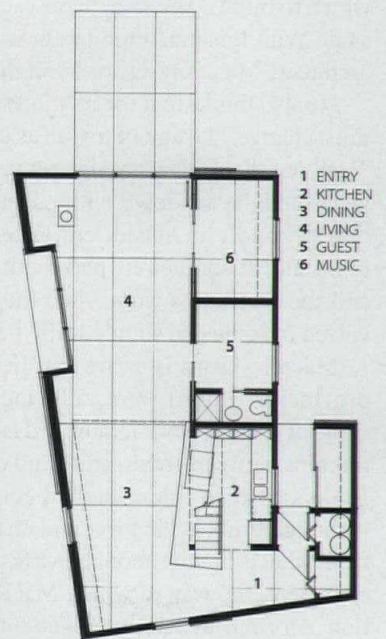
Project team: Brian MacKay-Lyons with Niall Savage, John Geldart, design; Charles Fawkes, drawings; Archie Frost, structural; Wendell White, construction manager; Jamie Steeves, photos.



17



18



FIRST FLOOR PLAN

N   10/3m

(continued from page 66) in metal, as happens on some of the local farm buildings, or will paint a part of a building a bright turquoise, the color of many local fishing boats. His buildings may look idiosyncratic, but they fit seamlessly with their older neighbors.

Behind all of his work is a sure sense of how things are built. "I like to talk to carpenters," says MacKay-Lyons. "I ask a lot of questions and learn a lot." The "folk tech" of the region, as he calls it, has traditionally involved boat builders who, off season, erect structures with beautifully improvised stick construction and truss designs. One shipyard building documented by MacKay-Lyons and his students at the Technical University of Nova Scotia, for example, has walls with layers of primary, secondary, and tertiary structure supporting trusses with accordion-like webs. MacKay-Lyons's competition-winning design for an addition to Nova Scotia's architecture school – a big space with similar layers of structure, support, and skin of steel – shows how he draws from this "folk tech" mentality. "There is a certain wisdom in building simply and well," adds MacKay-Lyons, "It is a deeply cultural activity."

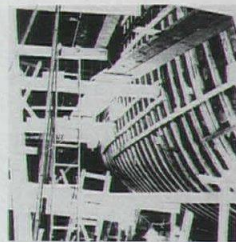
A Sustainable Practice

MacKay-Lyons has learned lessons from the vernacular about architectural practice as well. In older agrarian economies, architecture was less a profession than a trade or a craft, working within established construction practices and formal types. And compared with later consumer economies, the demand for – and the willingness of people to pay for – highly original work was very limited. Which raises the question whether, in an information-based global economy a similar condition may prevail – or may already prevail – given the downward pressure on architectural fees and the time squeeze being placed on architects.

MacKay-Lyons has grappled with the problems in a couple of ways. By working with established archetypes, familiar materials, and simple construction methods, he has learned to deliver buildings that are affordable by even the most strapped clients. He has designed houses for \$50, \$40, even \$30 (Canadian) per square foot, and he tells of one couple who came to him with only \$30,000 with which to build. "She said, 'How can we afford an architect?' and he said, 'With this much money, how can we afford to be without an architect?'" MacKay-Lyons's design met their budget.

He also thinks that the relationship between architect and client must change. "I think of myself as a kind of family doctor," he says. "I tell my clients they are signing up with me for life." At one house we visited, he sat down with clients over a beer and talked about how to handle an outside entrance to their basement they wanted to install; at another, he paced out with the clients the location of and the access to a wood shed they wanted to build. "You get involved in some real simple stuff," he adds, "but it's all architecture."

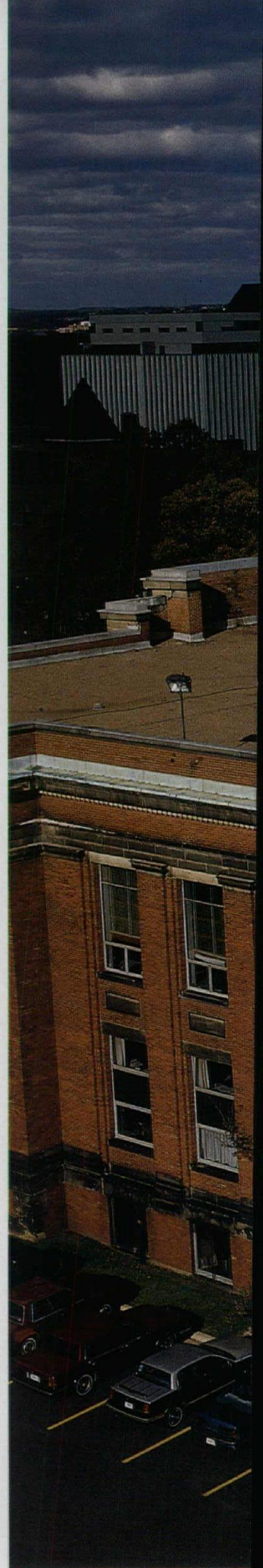
MacKay-Lyons is aware that he may be dismissed by some as provincial. "I don't want to be tagged a regionalist," he says. But some of the best work in our field is happening at its margins: at the margins between architecture and other disciplines or, in MacKay-Lyons's case, at the margins between architecture and culture. Although the specific form and character of his buildings, derived from what is unique about Nova Scotia, may have limited relevance elsewhere, the way in which MacKay-Lyons works – his abstraction of formal archetypes, his attention to vernacular construction, his achievement of an accessible practice – has direct bearing on the province we call architecture. □



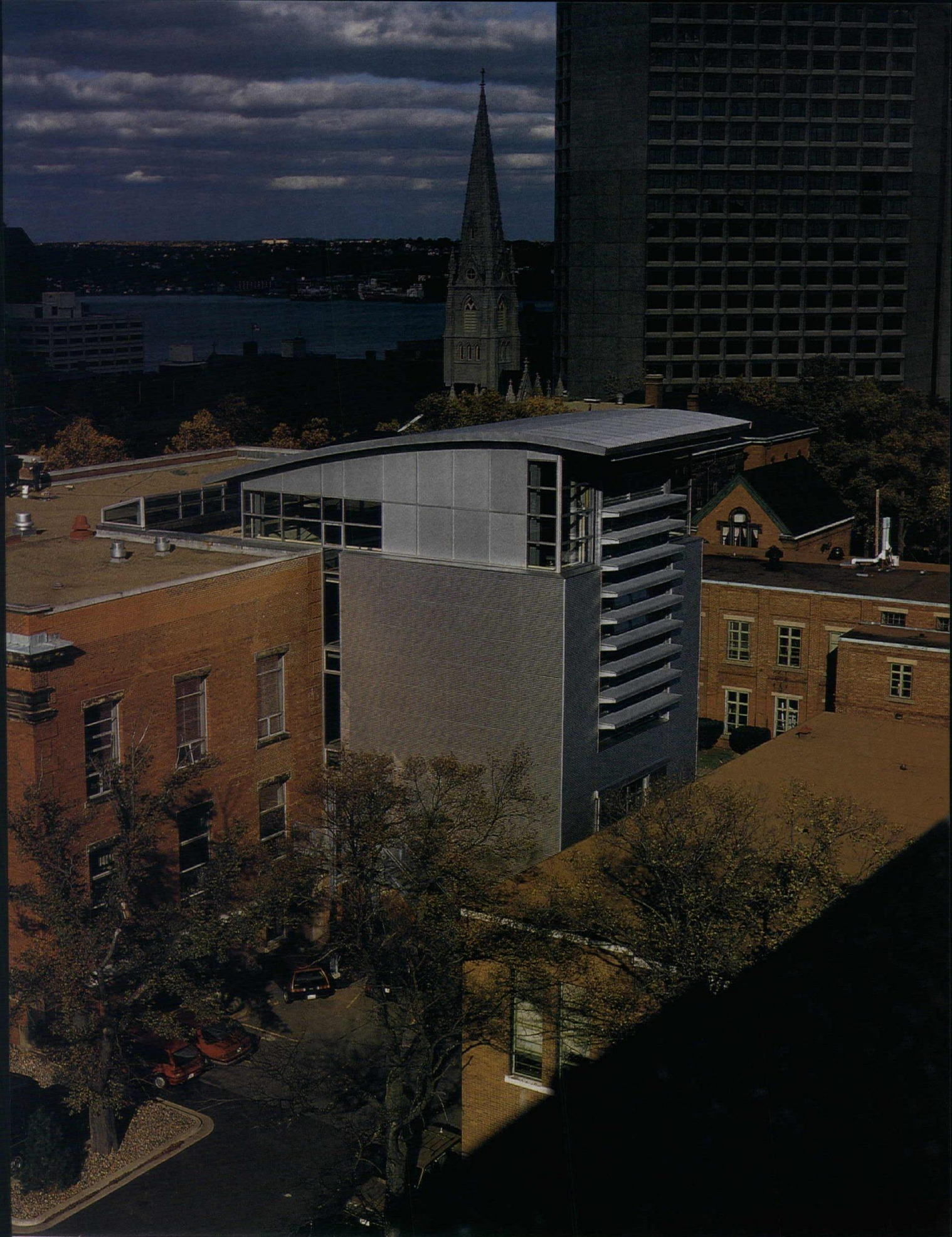
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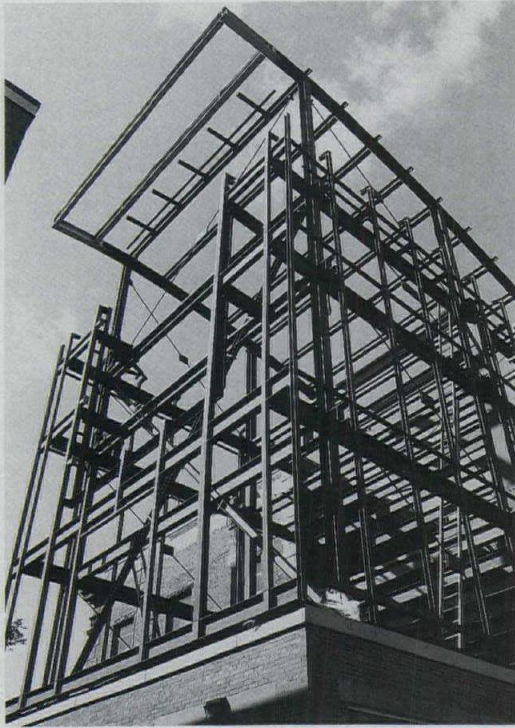
Addition, School of Architecture, Technical University of Nova Scotia

MacKay-Lyons won a competition to add to the school where he teaches in Halifax (20). The addition, inserted into the rear recess of the C-shaped building, consists on a large shed, 52 feet tall, with exposed steel framing, metal cladding and roofing, and glazing that separates the new and old structures. The idea of the building, he says, was to create a "high warehouse space," within which floors could be added later. The tall narrow shape of the addition and its layers of primary, secondary, and tertiary structure wrapped in a corrugated cladding, echo the form and construction of Snyder's Shipyard, which MacKay-Lyons documented in 1993 with first-year students from the university (19).

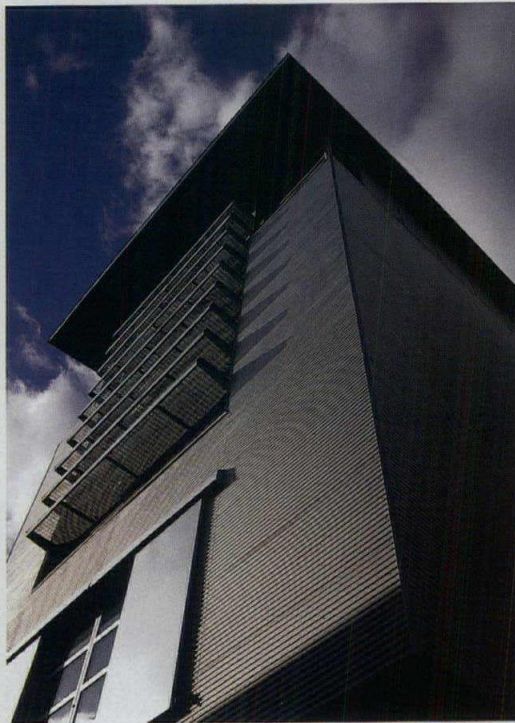


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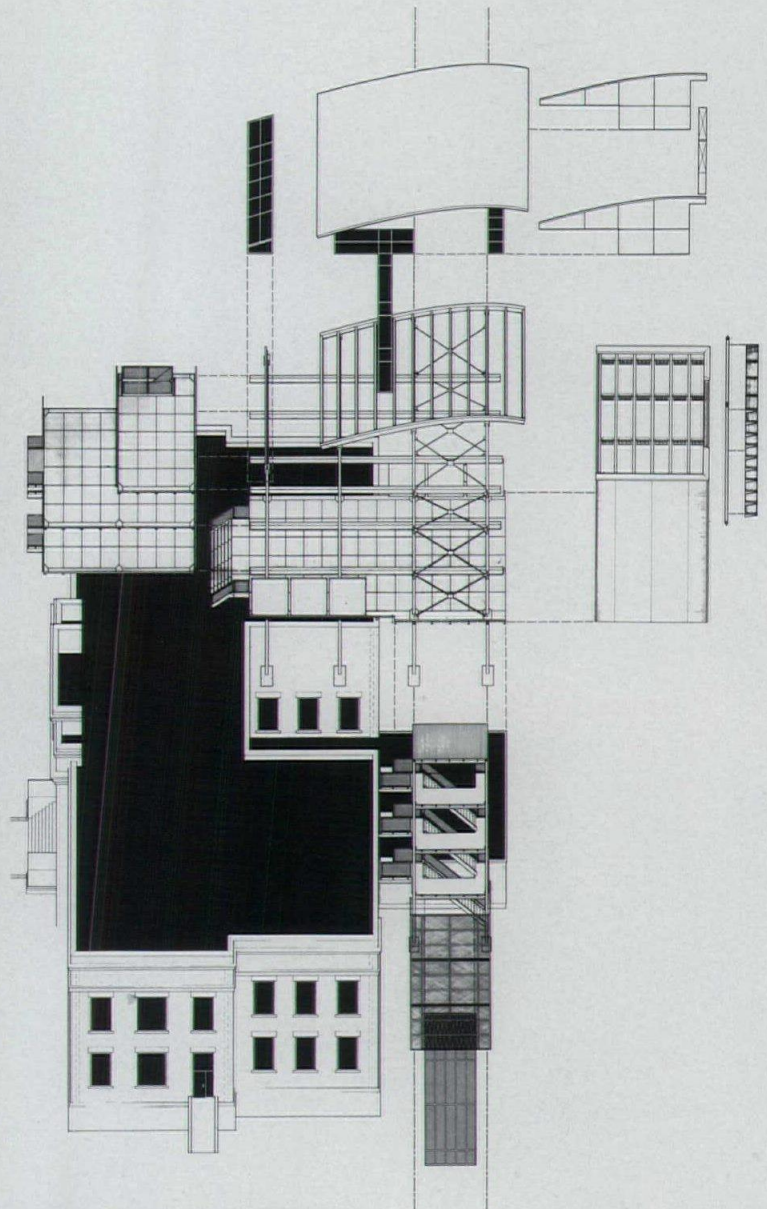
**Addition, School of Architecture,
Technical University of Nova Scotia
continued**

"The folk-tech attitude of Nova Scotia boat building sheds," he says, "arranges the component systems according to the sequence of assembly. The result," he adds, "is a tough rather than a precious architecture, a simple steel frame wrapped in a corrugated metal box" (21). Another result of MacKay-Lyons's attention to vernacular design and construction is that his

architecture often attains the monumental scale and almost heroic character of farm buildings (22). Inside the addition, which is used for juries, exhibits, and construction activities, the exposed structure and skin serve a didactic as well as a pragmatic purpose, revealing to students how the building was made, as well as how it can grow and change over time.

Project: School of Architecture, Technical University of Nova Scotia, Halifax.

Project team: Brian MacKay-Lyons, assisted by Attilio Gobbi, Bob Benz, Michael Carroll, Antony Gillis, John Geldart, Andrew King, Brenda Webster, Niall Savage, design; Charles Fawkes, drawings; Michel Comeau, structural; Dineen Construction, builder; Jamie Steeves, photos.



EXPLODED AXONOMETRIC OF ADDITION

The Graph of Greed

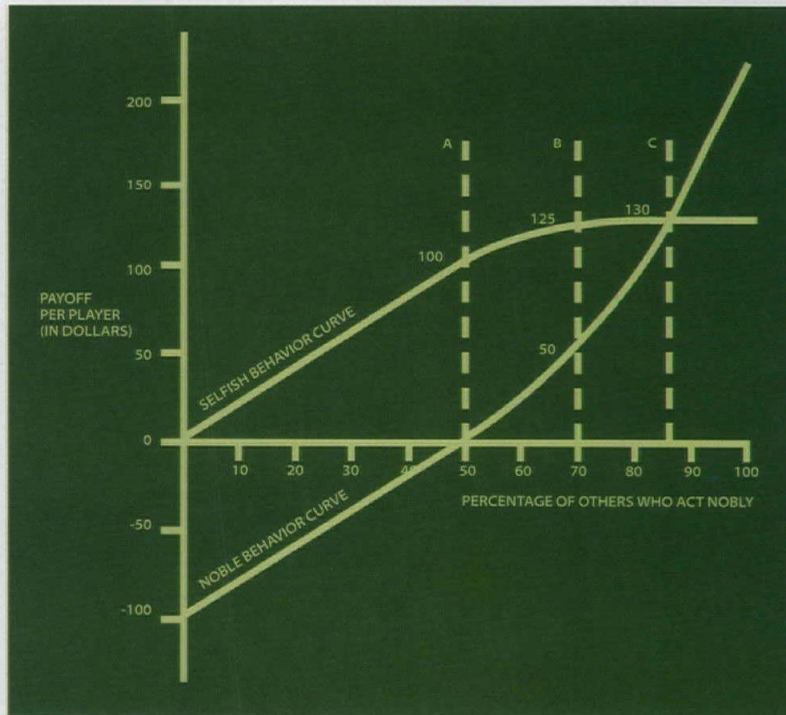
All architects pay a price for the selfish actions of their fellow practitioners, but we can all benefit if we act in enlightened self-interest. *by Eric J. Oliner*

Competing for design work is an ethical minefield. Like stones cast into the water, our actions have immediate impact on our individual firms and rippling effects for all firms. They affect short-term cash flow, long-term viability, professional stature, and self-respect.

If all architects agreed on how to compete, that consensus would guide us safely through the mines. Yet we disagree on almost every aspect of competition, virtually assuring that many of us will be maimed. A large part of the problem (and, perhaps, the solution) stems from the heterogeneity of firms. Some of us are low-cost, lean, efficient service providers; others are design boutiques. Some are small, young, and struggling to step up the ladder, while others are well-established, multi-office megafirms. Our organizational goals, financial structures, corporate cultures, and the breadth of services offered are all different. Yet we tend to compete for many of the same jobs, all of us hungry for a slice (sometimes the same slice) of what we often view as a finite-sized pie.

The Commodities Market

Because most clients for architectural services are unskilled in distinguishing among firms, many of us are indeed treated as commodities. Except for the largest or best-known firms who have successfully differentiated themselves, the majority of small- to mid-sized firms get sucked into a vortex of price competition. As with airline price wars, the overall value of services provided is debased and profits for affected firms are reduced or eliminated. Firms with relatively high cost structures must cut back on the scope of services they provide or they lose money. However, younger and lower-cost operations view undercutting the competition as one of the only ways to make inroads. Otherwise, they feel caught in the "Catch-22" of experience. Loss leaders, they



claim, allow them to get a foot in the door. They may even be willing to give away schematic design concepts to secure a job where the eventual compensation is not assured.

Such desperate behavior stems from the twin beliefs that getting the job is all that matters and that selfish actions will go unpunished. However, there is ample evidence that neither belief is valid. Research suggests that architects receive a large portion of their work from past clients, who, if accustomed to paying low fees, will continue to expect a bargain. In the long run, cut-throat competition means cutting your own throat.

The Games Architects Play

The ethical question at this problem's core can be illustrated by what might be called the "architect's dilemma," a variation on Thomas Schelling's "prisoner's dilemma game," a psychological experiment invented to test for cooperative behavior. In the original two-party version,

The author is an architect and a real estate consultant in Cheshire, Connecticut, who also holds a masters degree in public and private management from Yale.

"prisoners" are given a choice between "cooperating" with each other, or "defecting," or ratting on each other, and are assigned payoffs or penalties associated with their choices. If both parties cooperate, they both receive modest payoffs. If both defect, both are mildly penalized. However, if one cooperates and the other defects, the cooperating party is more heavily penalized while the defector gets a big reward from the jailer. If both parties understand the consequences of their actions, they have sufficient knowledge to act unselfishly. They can both cooperate and both win, albeit more modestly than if they risk defection.

In the literature, the multiplayer versions are sometimes called "social dilemmas" or "the problem of the commons." Whenever someone uses the commons for nothing more than private gain, without thought to sharing the resource, there is a little less for everyone else.

With the "architect's dilemma," you must choose between acting nobly (setting your firm's fees at or above a reasonable level of profitability) or selfishly (undercutting the competition.) If you act nobly, you will be helping others at your own expense – you may not get the commission. If you act selfishly, you will be helping yourself at others' expense. Similarly, those "others" have the same choices. If all firms act nobly, all do well and the profession flourishes; but regardless of how others act, your firm can usually do better for itself (monetarily) if you act selfishly. Morality aside, the greatest rewards may accrue to you if you act selfishly and all other firms act nobly. But if all firms act selfishly, all firms suffer greatly.

The Graph of Greed

The graph illustrates how this might work. It looks at one segment of architects, comprising firms with similar cost structures, competing for similar clients. The exercise is not necessarily intended to reflect accurately any particular group of firms, but is constructed merely as a tool to demonstrate the potential effects of cooperation versus defection, or noble versus selfish behavior. For the sake of simplicity, let's say there are 101 firms in the group – yours and 100 others. Your payoff depends on your choice of acting selfishly or nobly and on the percentage of others who choose to act nobly. Both choices are represented as straight lines of identical slope to the left of point "A," at which half of the competing firms act nobly and begin to earn profits. To the right of point "A" both lines begin to curve.

The decreasing slope of the noncooperative (selfish) behavior curve represents the negative effect of public perception to undercutting competition. This is based on the notion that, as a greater proportion of firms behave nobly, the

public becomes better educated as to the true value/cost of architectural services. They may then see selfish firms as of inferior quality. The selfish firms may then see their client base shrink to only those clients seeking bargain services.

The increasing slope of the cooperative (noble) behavior curve accounts for the cumulative effects of a better educated client base willing to pay a fair price for architectural services. Better compensation also means that architects can apply their increased profits to marketing services to a broader field of clients.

Looking at a sample point on the graph (point "B") where 70 percent of the other firms act nobly, your firm's payoff is \$50 when you act nobly and \$125 when you act selfishly. By switching from noble to selfish action, you would receive \$75 more; but because of your switch, each of the others would be penalized by \$2.50 and the total penalty to others would be \$250 – several times what you personally gain.

If the others can see that you are acting selfishly, then acting nobly may be a prudent action from a strictly hard-nosed, practical, long-term point of view. Your good reputation may be a proxy for future tangible rewards. But if the others cannot see how you behave in particular and can only see how many of the other firms choose the selfish option, how would you act? If you are in a position to influence the others to act nobly by publicly appealing to their consciences, you need to convert only slightly more than 50 percent of them to be better off personally than if you joined the ranks of the selfish. Once about 87 percent of the firms act nobly (point "C"), you should be indifferent to both noble and selfish personal action from a practical standpoint, i.e., you can expect a \$130 payoff in either case. But if some of the last 13 percent of selfish-acting firms can be convinced to switch, all noble-acting firms begin to benefit while the remaining selfish-acting firms stagnate – giving them a practical incentive to switch – until all firms act nobly.

Think Globally, Act Nobly

While clearly a simplified and somewhat unrealistic scenario, this exercise should help architects to understand how our firms' competitive behaviors influence the way all firms behave, and how self-destructive today's competitive environment is. Changing this environment means looking at both "buyers" and "sellers," at their respective goals, the risks they assume in negotiating, and the nature of the services in question.

However banal they may seem, advertising themes like "An educated consumer is our best customer" underscore the need for buyers to understand value. Design professionals must ensure

Research suggests that architects receive a large portion of their work from past clients, who, if accustomed to paying low fees, will continue to expect a bargain.

that clients realize that they get what they pay for. Pressing for the widespread use of qualifications-based selection (QBS) processes, and giving entertaining presentations at chambers of commerce luncheons or on local TV cable access programs that explain what architects do, how they work, and how they create value, can help make that happen. Informative advertising in the print and visual media, if carefully planned and targeted, might also be effective.

Encouraging architects to behave "nobly" also begins with education. Articles like this one might open some eyes to the effects of "selfish" behavior. But that won't be sufficient encouragement when profits are low, jobs are few, and bills are due. Other inducements must be examined.

Exposing the Selfish

Increasing the rewards for noble behavior or the penalties for selfish behavior may be problematic; it is difficult to recognize which firms are to be rewarded or punished. Firms are understandably reluctant to reveal their cost structures and, given the variety of firm organizations and sizes, it would not be easy to make fair determinations, to decide who would make those determinations, or what appropriate actions should be taken. Anything even remotely resembling price-fixing or fee-setting must be avoided. However, where bids for professional fees are submitted and the low bid is accepted on a public project, the Freedom of Information Act makes available such information as the amount of the successful low bid and name of the selected firm, as well as the range of bids received. AIA chapters might see fit to make that information known (without additional comment) in their newsletters. In cases where the low bid falls significantly below the range of other bids, the stigma of being exposed to one's peers might serve as a deterrent to flagrantly selfish behavior.

Diluting the economic risks associated with noble behavior could take many forms, all of which require collaborative action. For example, lowering the cost of money to firms with temporary cash flow problems would ease the pressure on those firms to undertake selfish actions. Professional liability insurance carriers have a vested interest in preventing any actions that might tempt firms to provide inadequate services or careless work that would result in lawsuits. Perhaps in conjunction with the AIA, these insurers could help structure a mechanism - loan or credit guarantees, below market-rate loans, or some form of insurance-based instrument - that would help firms resist selfish urges.

The rules of competition can be changed by expanding the range of options. Larger, better es-

tablished firms might agree not to compete for smaller jobs or might offer joint-venture opportunities to younger, smaller, striving firms that now use price competition as a core business strategy. Such pairings of firms with complementary skills and experience would be beneficial both to firms and their clients. One perverse consequence of the current competitive environment is that larger firms, seeking to lower their overall costs, are outsourcing production to offshore CAD service bureaus (in India, for example). Doing so lowers payroll expenses at the lowest levels of the corporate hierarchy, decreasing opportunities for interns here to learn the nuts and bolts of documentation and construction technologies. Some architects displaced by outsourcing must then start their own firms, going head-to-head with their former employers, thereby exacerbating competitive pressures in the industry. While outsourcing does trim some costs, it leaves in place a more top-heavy organization with a disproportionate number of higher-paid executives. Eventually, that "fat" will need to be trimmed for those firms to survive. Instead of sending work overseas, these firms should initiate and/or affiliate with production-oriented firms in the U.S. - behavior that is at once noble and less self-destructive.

Finally, the "commons" can be enlarged. Competitive pressures may be reduced if firms are able to offer a greater variety of services such as construction management, facilities management, and building forensics. Driven by client needs, architects can stake out broader territories by investing in continuing education and by supporting technical research. The long-standing "generalist versus specialist" debate is relevant here. Firms can differentiate themselves along a number of dimensions, such as design innovation, quality of service, technical expertise, and specialties of building type or construction. Despite a natural inclination to be all things to all clients, architects would do much better to focus on their areas of distinctive competence.

Given the chronically pathetic profits of many architectural firms, transforming competition into collaboration is an idea worth trying.

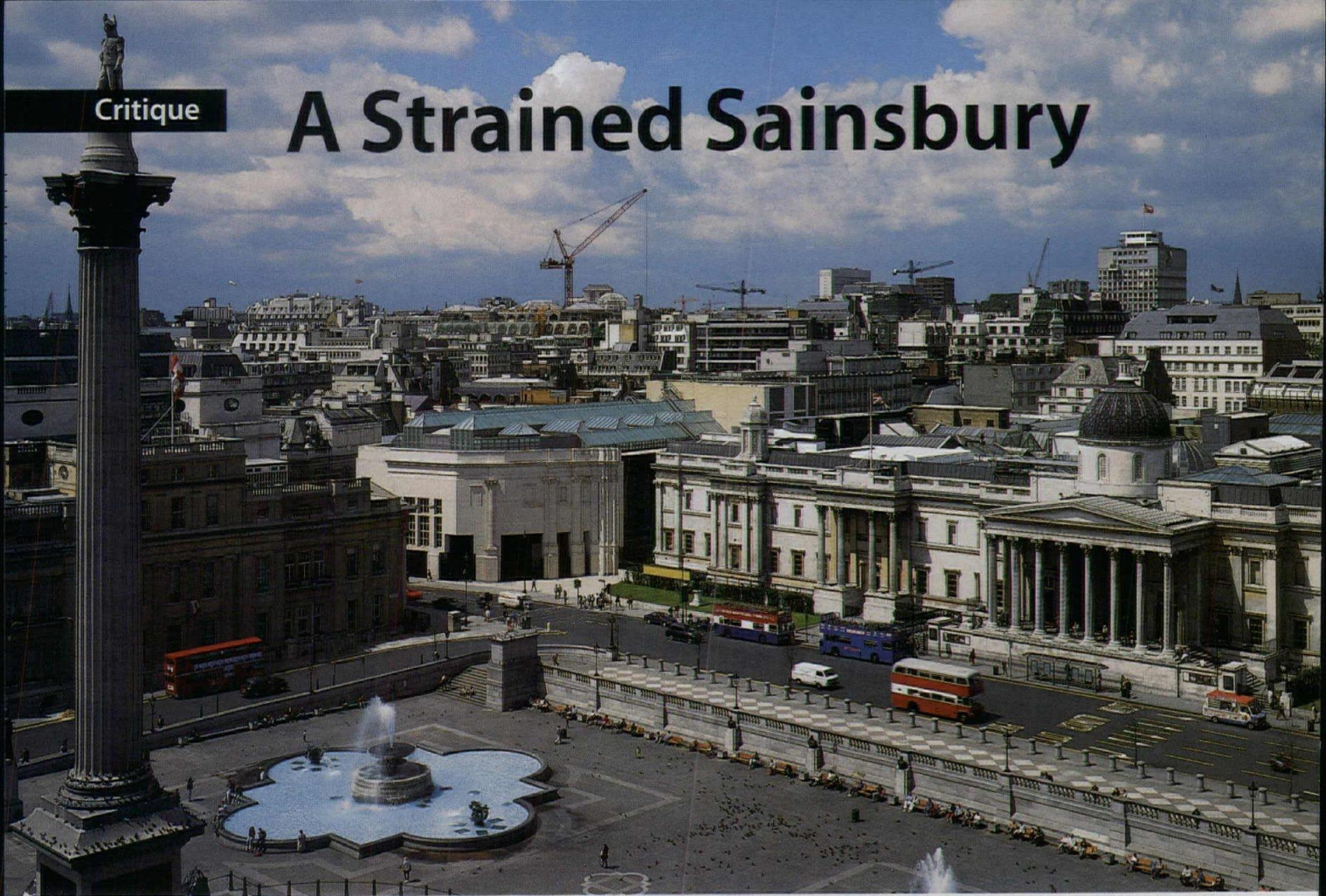
References

Raiffa, Howard, *The Art & Science of Negotiation*, Belknap Press/Harvard University Press, Cambridge, Massachusetts, 1982.

Schelling, Thomas C., "An Essay on Bargaining," *American Economic Review* 46, 1956, pp. 281-306. The "architect's dilemma" is a variation on Raiffa's "Social Dilemma Game," which is a variation on Schelling's original. □

Diluting the economic risks associated with noble behavior could take many forms, all of which require collaborative action.

A Strained Sainsbury



Venturi and Scott Brown were fully aware of the Sainsbury Wing's **important diagonal relationship to Trafalgar Square** and skewed the main entrance accordingly. But while the cut-out portals are legible from afar, the same cannot be said for other features of this key façade, which forms the missing corner of the square: **its low-contrast bas-relief details have little impact** in the vast open space.

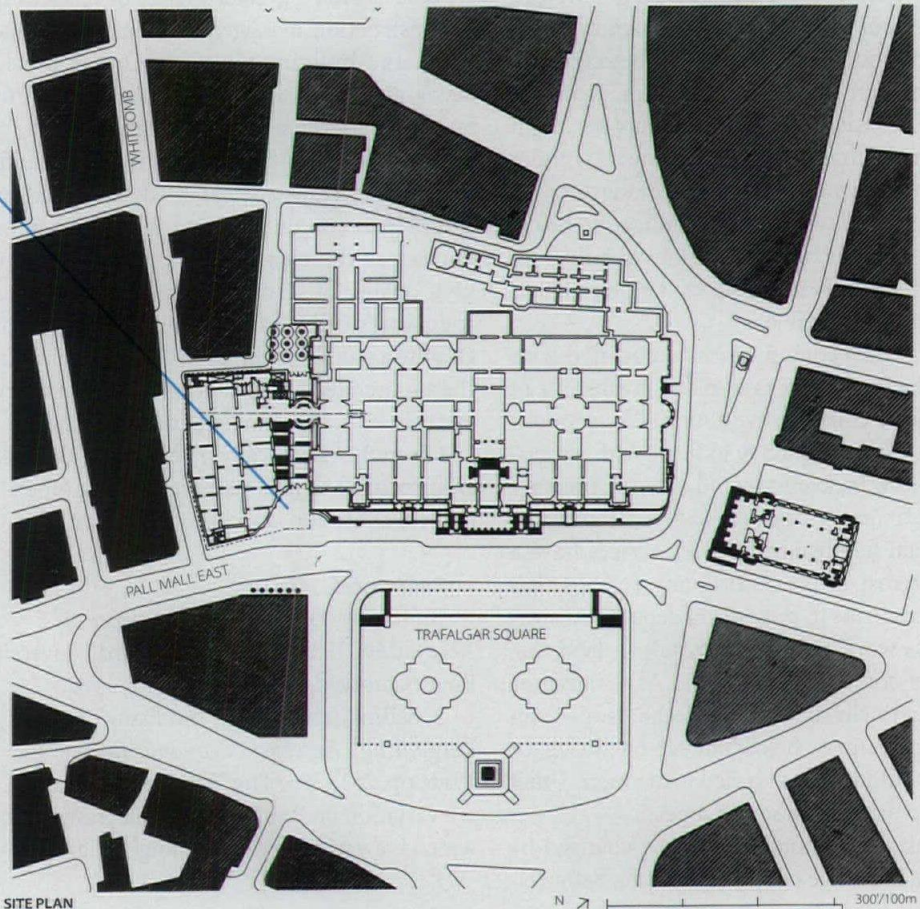


Photo above: Nail Clutton/Arcaid

SITE PLAN

N 300/100m

Venturi, Scott Brown & Associates' addition to the National Gallery in London proves a mixed bag, compromised by overuse, under-maintenance, and a confused sense of identity. *by Daralice D. Boles*

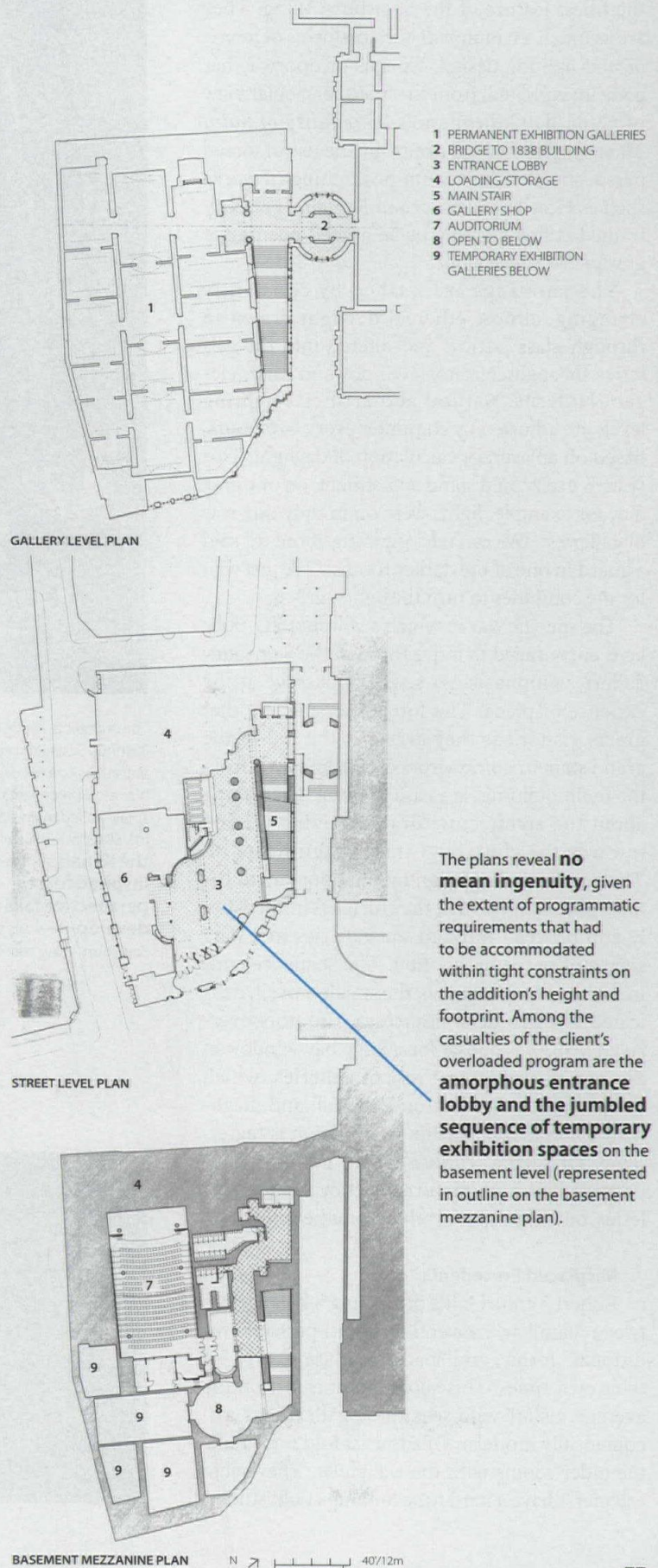
Aesthetic controversy in England never dies; it just goes dormant. Thus it seemed apropos that debate over the National Gallery in London should flare up again just as I was finishing the research for this critique of the four-year-old Sainsbury Wing by Venturi, Scott Brown & Associates (VSBA) of Philadelphia. And it is typical that the latest salvos should be delivered from within the institution itself, in a lecture series picked up by the national press. Lecturer Brian Sewell opens old wounds. What is a National Gallery in the first place, he asks? What is its role in a city whose art is divided among upwards of ten major museums and private galleries with overlapping collections and constituencies? How should it be housed?

Not one of these questions is new. The Sainsbury Wing is just another chapter in a long acrimonious history. The opening, in 1838, of William Wilkins's Neo-Classical National Gallery building on Trafalgar Square followed years of bureaucratic wrangling, public inquiry, and start/stop funding that may well have driven its architect to an early grave a year later.

British architects Ahrends Burton and Koralek might identify with the pitiable Wilkins. In 1984, their Modernist proposal for a combination speculative office building and gallery was brought down by the Prince of Wales's notorious "carbuncle" indictment (P/A, Aug. 1991, p. 80). Enter the Sainsbury brothers, three knights with a grocery fortune. Their generosity – of a magnitude never publicly disclosed – enabled the National Gallery to ditch the ABK scheme and to start fresh with a purpose-built museum. It was further decided that the Gallery's superb Early Renaissance collection would be given permanent quarters on the top floor of the new wing, which would also house such "new museum" functions as a lecture hall, a computer information room, a video theater, and a restaurant, which were lacking in the old buildings. At the end of 1985, the Gallery announced that VSBA had won an invited competition of six architects, not one of whom submitted a Modernist scheme.

Spotty Staging

The National Gallery is unusual among major museums worldwide in the fact that virtually all of its collection is on public view. VSBA had the luxury of designing intimate galleries for a permanent collection of mainly small-scale art that



The plans reveal **no mean ingenuity**, given the extent of programmatic requirements that had to be accommodated within tight constraints on the addition's height and footprint. Among the casualties of the client's overloaded program are the **amorphous entrance lobby and the jumbled sequence of temporary exhibition spaces** on the basement level (represented in outline on the basement mezzanine plan).

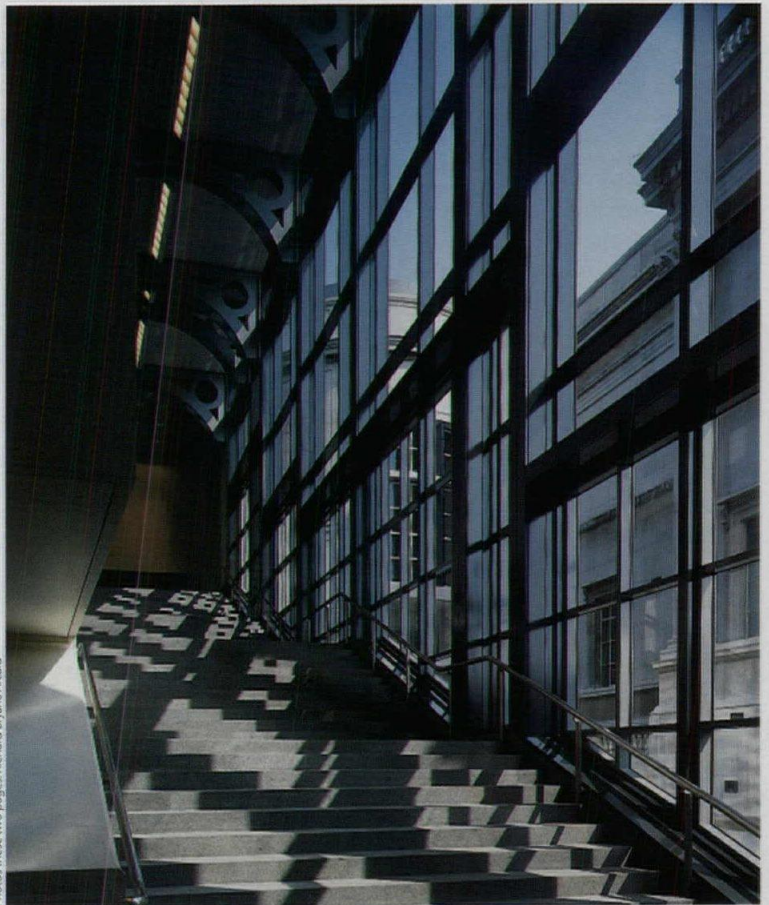
was unlikely to grow or change in any meaningful way. Four years later, these galleries, although not perfect and chronically overcrowded, are still the finest feature of the Sainsbury Wing. They are as much a triumph of curatorship as of interior and lighting design. No axis or doorway has gone unexploited, from the first spectacular view of Cima da Conegliano's *Incredulity of Saint Thomas*, given added drama by the use of forced perspective, to the careful positioning of works such as Uccello's *Battle of San Romano*, perfectly framed at first sighting by an arched opening of gray *pietra serena* stone.

The paintings are washed by constantly changing, almost ethereal daylight drawn in through glass "attics" and filtered into the galleries through clerestory windows in high, elegant lanterns. Natural and artificial lighting levels are adjusted by computer every two hours, based on an average calculation of daylight. This system itself could stand adjustment; on one gray day, for example, lights were on in only one row of galleries. "We can't do anything about it," said a guard in one of the darker rooms. "We just wait for the computer to turn the lights on."

The specific way in which a voluminous public is encouraged to move through the Sainsbury galleries emphasizes a sense of passage at the expense of place. The forced perspective that greets visitors as they arrive at the top of the grand stair, or come across on the long axis from the main building, is a case in point. Everything about the architecture draws arriving visitors towards the climax – Cima's magnificent *St. Thomas*. But a large sign by the doorway to the first room suggests that they turn left immediately and proceed through the galleries in a long zigzag of perpetual motion. The sequence ends in a whimper in room 66, the smallest of all, dedicated to Piero della Francesca. Curators overruled VSBA's proposal for a large bay window at the end of the central row of galleries, which would have looked out on Pall Mall and diagonally on Trafalgar Square. Its omission is regrettable, for such a window would not only have provided an architectural anchor for the galleries, but also a spatial relief from the throng.

Misplaced Precedents

Robert Venturi talks of striking a balance between "familiar, conventional, and perhaps traditional" forms, and spaces that are clearly "of their own time." This subtle point is lost on the average visitor who sees these galleries as unequivocally modern. One tourist told me, "I like the older rooms with the wallpaper. They seem warmer. I have a hard time looking at old stuff in



Photos these two pages, Richard Bryant/Arcaid

The architects allude to Bernini's Scala Regia in the Vatican as one of several historical precedents for the splay-walled main stair. But in VSBA's latterday rendition, **the Renaissance-inspired forced perspective fails to develop:** the walls of the Sainsbury Wing stair differ

so dramatically from each other – machined rustication on one side, black aluminum frame and gray-tinted glass on the other – that the sense of "tunnel vision" that is key to the illusion never occurs, and there is no repetition of vertical detail to further confuse the eye.

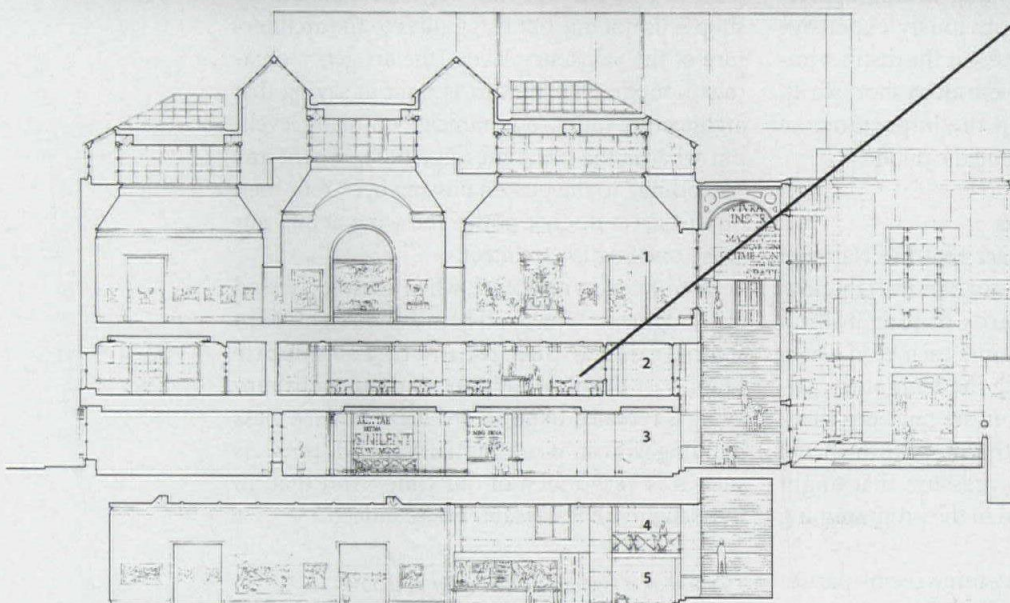
The **entrance lobby's prosaic mien** derives from a number of factors: a relatively low ceiling, indeterminate spatial boundaries, and a workaday vocabulary. As one enters, the Gallery shop on the left wall provides the only color. Ahead lies a bland information desk. To the right, hidden from view by **a row of pointlessly fat columns**, is the ticket desk for temporary shows.





At the top of the stair, visitors find themselves on the **main axis connecting new and old buildings**. The new galleries are laid out perpendicular to this axis.

In devising the vertical layers of the addition, the architects were constrained by a cap on its overall height, and by the client's insistence that the new main gallery floor be on the same level as the galleries in the Wilkins building. As a result, **the much-trafficked mezzanine is squeezed** into an uncomfortably low-ceilinged band.



- 1 GALLERY LEVEL
- 2 MEZZANINE LEVEL
- 3 STREET LEVEL
- 4 BASEMENT MEZZANINE
- 5 BASEMENT

CROSS SECTION

20/6m

cold surroundings." "Ahh," said a guard, "I know a lot of people say the new wing is too modern, too cold. But you cannot go on living in the past."

Is it only architects, then, who see the Sainsbury Wing as anything other than "modern"? The question pertains to the grand stair by which visitors are drawn up from the lobby to the gallery floor. All sorts of historic precedents are listed for this space, with the most referenced Bernini's Scala Regia in the Vatican. It is true that the walls of the Sainsbury stair are not parallel and therefore ostensibly "force" the perspective. It is also true that just as Bernini's stair terminates in a work of art, so does the Sainsbury's. There, however, the resemblance ends. In any event, the historical reference is lost on uninitiated visitors. The space at the top of the Sainsbury stair is diffuse, and the painting placed there, while magnificent, is too flat and weak a terminus. "I would take down the painting at the head of the stair," says Denise Scott Brown. "We wanted a bas-relief of the period. The stair is meant to feel outdoors, and you really don't hang paintings outdoors." In fact, the window wall is so heavy that any sense of being outdoors is lost.

The lobby entrance is weaker still. Here, there is no art to focus a leaky space with limp boundaries and uncertain style. Museum goers who have passed beneath a stone screen into an ill-defined portico, through a revolving door, to land in a characterless, low-ceilinged space, might be excused for imagining they had mistakenly entered the speculative office building once planned for this site. A sign directs up to the main galleries. Visitors flee there, grateful.

Unless, that is, they've come to see a temporary show in the basement galleries. These are airless, even at 10 a.m. opening, and ill-lighted, in sharp contrast to the obviously expensive lighting system upstairs. There is the distinct impression that these spaces were given short shrift, which is surprising, given the importance of temporary shows in attracting the public.

Not Meant for the Masses

But then, it would appear that the National Gallery has all the public it can handle right now. It is estimated that upwards of four million tourists press through its doors each year. There are lines in the hall outside the temporary galleries, lines at the register in the museum shop, lines at the entrance to the mezzanine-level Brasserie – all suggesting pressure that might have been better anticipated in the programming for the Wing.

The claustrophobic mezzanine seems particularly cramped with too much program (and too

many people) packed into too little space. The Brasserie's maitre d' told me they could easily fill 50 percent again as many seats, and the computer information center has signs posted limiting terminal use to 20 minutes. Clearly, the Gallery settled for a little of everything on the menu at the cost of comfort and architectural character.

Moreover, a complete lack of maintenance adds to the strain on the architecture. Worn wooden flooring is in desperate need of refinishing (recommended for every three to four years by the architects but clearly never done). Worse still, door surrounds in the Renaissance galleries are badly blackened by the rubbing of passing hands and guards' shoulders. The architects specified the same finish for these door surrounds as for the baseboard and floor stone which is still in good shape, but they were overruled.

Turning to the wing's exterior, we find a façade that is at once modest and mysterious, deferring to its neighbors, and yet toying with them. Where there is no context – on the west façade along Whitcomb Street and to the rear – there is no architecture. Venturi justifies these blank brick façades by reference to Italian Renaissance *palazzi*, whose elaborate fronts were often tacked onto plain brick boxes. It's a pedigreed reference and one appropriate to the art housed within, but the actual streets in question have been rendered dull and potentially dangerous. That's particularly unfortunate given the location of the area's major public parking structure half a block up Whitcomb Street.

There is further irony in the fact that a building born out of a reaction to elitist Modern architecture should itself be elitist and academic, more talk than architecture. It is interesting to note in this context that the National Gallery shop sells not one but two guides to the architecture of the Sainsbury Wing (the art gets a separate monograph). Venturi is right in saying that architecture must communicate on many levels, but what is the basic message here, absent any "decoding," to the person passing by? "Your man on the street doesn't notice the wing at all," answers one English architect.

A woman on the street, when pressed, passed this judgment: "New and blah." She's right. Seen from Trafalgar Square, the façade's subtle Mannerist details disappear, and the Sainsbury Wing is revealed to be an ordinary modern glass building with an insubstantial stone wrapper. As such it is very much of our time. And that, in these flighty times, is faint praise indeed. □

The author, a former Senior Editor and now correspondent for P/A, lives outside London.

Architects: Venturi, Scott Brown & Associates, Philadelphia.

Client: NG Services Ltd.

Consultants: Ove Arup & Partners, structural; Ove Arup & Partners with Jaros Baum & Bolles, mechanical; Jules Fisher and Paul Marantz, lighting; Cladtech Associates, glazing.

Construction Management: Sir Robert McAlpine Construction Management.



The galleries are undoubtedly the most successful feature of the Sainsbury Wing: **masterfully scaled to the art on display, the spaces are unfortunately less suited to the high volume of tourist traffic.**

The pyramidal lanterns are the principal means by which a sense of "room" is attempted in each of the galleries, but only partially realized. Were it not for the lanterns, which define discrete volumes, the rooms would "run" together. In some of the smaller galleries, **the ratio of door opening to wall is perilously high.** (This effect is not visible in plan where the openings appear modest.)

Sightlines from one row of galleries to another are enhanced by the jogged alignment of rectangular openings. In this photo, taken shortly after the addition's inauguration, **the soiling of the door surrounds** is not yet apparent.



The addition's façade on Whitcomb Street **devolves into a banal brick wall:** however consistent such a design strategy may be with Renaissance *palazzi* precedents, it has a **deadening effect on the street.**



At least three times a week, J. Carson Looney answers the phone in his Memphis office and hears, at the other end of the line, yet another developer calling for his help. Thanks to a continuous stream of such calls, nearly all of them unsolicited, Looney Ricks Kiss Architects in the past two years has garnered work in Biloxi, Mississippi; Charlotte, North Carolina; Orlando, Florida; New York's Orange County; Indianapolis, Indiana; and numerous other places across the country. Looney, the partner in charge of residential design, attributes the abundance of work largely to one thing: the 12-year-old firm's expertise in "Traditional Neighborhood Development," a key element of the New Urbanism.

Looney's firm first captured developers' attention by devising the architectural code and designing much of the housing for Harbor Town, a Memphis project that, since breaking ground in 1989, has become one of the New Urbanism's conspicuous success stories. Because of the praise and publicity given this development – located on Mud Island in the Mississippi River, just opposite downtown – the 64-person firm won the plum job of designing the "New American Home" for this year's National Association of Home Builders convention in Houston, and Looney, at 39, has become a prolific shaper of houses and design codes.

Winning Planning Jobs

Looney's experience provides a glimpse at the opportunities that New Urbanism is bringing to some architects. These opportunities take at least two forms. First, there is an opening for architects to become more involved in the planning of developments than they have been for several decades. Conventional tract development, involving the fairly simple task of plunking new houses on yesterday's truck farms, does not require many architects. But New Urbanist development is different – more dense, more civic in its aspirations, and almost always more complex. Each house, each store, each institutional building is seen as a member of an ensemble, a definer of public "outdoor rooms" where, according to New Urbanist formulations at their loftiest, the citizens of a democracy have a chance to meet and talk with one another.

For architects who subscribe to its conception of buildings and spaces forming a tightly unified whole, the rise of the New Urbanism offers a chance to make inroads into planning work. Twenty or more years ago the majority of planning schools drifted away from teaching their students about the three-dimensional forming of physical environments; consequently, most professional planners lack the training needed to shape communities around a coherent New Urbanist

vision. It is no accident that most of the individuals laying out New Urbanist developments – Peter Calthorpe, Alexander Cooper, Andres Duany, Elizabeth Plater-Zyberk, Jaquelin Robertson, Daniel Solomon, to name only a handful – received their training not in planning but in architecture. Architects who can visualize buildings and open spaces reinforcing each other and who can design at the scale of the block, the neighborhood, and the town are strong candidates for community planning assignments.

The Urbanist's Reward

Opportunities to practice the New Urbanism are growing, but to limit sprawl, a regionalist approach is needed.

by Philip Langdon

Refining the Housing

A second opportunity presented by New Urbanism is that of raising the quality of the individual buildings. Conventional building designs tend to fit poorly in Traditional Neighborhood Developments (TNDs), which emphasize sociable streets and a density great enough to support shops and institutions within walking distance of home. In comparison with conventional development, TNDs generally call for shallower front yards, smaller lots, and more compactness – all of which reduces the tolerance for visual and planning flaws. "When the houses are 15 feet from the sidewalk instead of 30 feet away, details like handrails, window

heads, doorways, columns, and entablatures become very important," says Looney. Because of this, stock house designs often have to be discarded.

Henry Turley, the principal developer of Harbor Town, set out to give his 134-acre project a close-knit, varied character reminiscent of the old Memphis neighborhood he'd grown up in, and to generate housing designs, he had Looney and others start on the architecture practically from scratch. Harbor Town, laid out by RTKL, has its garages mainly along alleys, allowing the fronts of the houses to feature spacious porches and balconies overlooking the sidewalks and streets. Unlike the Memphis area's typical new houses, which sit low to the ground on concrete slab foundations, those at Harbor Town stand on foundations 30 inches high, providing more vertical proportions and at the same time elevating the windows and limiting the ability of passersby to peer into the interiors – a sensitive issue when houses are built close to public ways.

To their regret, some New Urbanists have underestimated how important the quality of the architecture and construction is. At Laguna West in Sacramento, Peter Calthorpe, as chief planner, persuaded builders to recess the garages and put porches on the houses' façades, but on the whole he let builders operate by the usual standard of California tract housing, resulting in cheap pompositives such as quoined corners rendered in stucco. For that, the development has paid a price: the enthusiasm that greeted Laguna West's (*continued on page 84*)



Harbor Town, Memphis, Tennessee

Harbor Town near downtown Memphis is laid out with a network of straight and curving streets that focus motorists' views toward small parks, a pavilion, and other landmarks. Not that the 134-acre development is designed mainly for drivers; with its predominantly narrow streets closely lined by sidewalks, porches, and balconies, Harbor Town is intended to foster walking and sociability. One of several public spaces embedded in its neighborhoods is Nursery Park (shown above in aerial view and at right), tightly defined by rows of two-story dwellings on its perimeter. Nearly 600 of a projected 800 dwellings have been built since 1989; they range from garden apartments to stacked flats to contemporary versions of narrow

"shotgun houses." Six ponds have been created in a linear park that meanders through the development on Mud Island in the Mississippi River. Retailing was difficult to attract at first, but a shopping area will be under way soon, with apartments above its stores. A number of other developments in the Memphis area have borrowed from Harbor Town's techniques.

Architectural/planning consultant: Looney Ricks Kiss Architects.
Town architect: J. Carson Looney.
Developer: Island Property Associates (Henry Turley Company, managing partner; Antonio Bologna, FAIA, development director).
Planner: RTKL.
Engineers: Reaves & Sweeney.

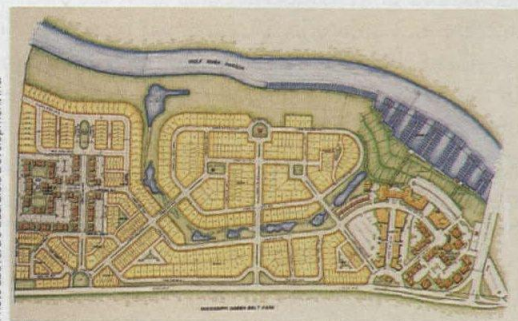


Photo above: De Guardiola Development Inc.

SITE PLAN

N ← 400'/120m



Looney Ricks Kiss Architects

original plans has been dampened by disappointment in the houses. Looney makes an important point: New Urbanism requires the layering of many elements, including a high quality of building design and a discriminating choice of materials and craftsmanship. Part of the architect's job, in his view, is to ensure that "the house adds value to the neighborhood." Architects who succeed at this are likely to reap additional opportunities. "I have three organizations interested in talking with me about plan books because we've developed an extensive portfolio of TND architecture," says Looney. "The next decade is going to be exciting."

Obstacles in the Road

The number of firms committed to the New Urbanism is growing. For instance, CHK Architects and Planners of Silver Spring, Maryland, which has designed about 300,000 housing units since 1953, recently shifted its housing and community design work to New Urbanist principles. But as CHK has discovered at its 2,000-acre South Riding project in Loudoun County, Virginia (P/A Citation, Jan. 1994, p. 66), there are formidable obstacles. CHK has faced protracted struggles with governments and other institutions about how much the streets can be narrowed, how tight the curves at intersections can be (to slow traffic and make shorter crossings for pedestrians), whether schools can be in two-story buildings and can be located where they terminate views, and other issues that help spell the difference between success and failure in a traditional plan. John Torti, CHK's president, says that currently the New Urbanism "falls down in the implementation because, although a growing number of architects, planners, and developers accept it, we run up against an uncooperative second ring of decision makers: streets departments, boards of education, marketers, lenders. In Loudoun County, the minimum size site for an elementary school is 20 acres, which makes it extremely difficult to integrate the school into the neighborhood."

Especially vexing are street standards. To obtain approval for narrow streets with pedestrian-scale intersections, many TND developers have had to make the streets private, passing the maintenance costs on to homeowners. Decisions like these hamper the ability of TNDs to compete economically, especially when the houses may already cost more because of extra architectural expenses and better materials.

New Urbanists are finding ways to make housing affordable in particular developments. For instance, John A. Clark, developer of Haymount, a 1,600-acre Duany/Plater-Zyberk project near Fredericksburg, Virginia, has concluded that "most house lots have a back corner that goes unused." As a result, says Clark, "we're going to allow one- and two-level cottages of 400 to 1,200 square feet to be built along the side or

rear of the lot. A young person or someone who's retired could live there." Unlike the garage apartments at DPZ's Kentlands development in Gaithersburg, Maryland, where outbuildings are controlled by the owner of the adjoining house, the cottages at Haymount will be sold separately, with an estimated base price of \$58,000 for an 800-square-foot unit. But unless there are government policies requiring affordable housing throughout entire regions, as Calthorpe advocates, New Urbanism in the suburbs will be predominantly for middle- and upper-income people.

Taking a Regional Approach

To broaden the New Urbanism's support, Calthorpe invited neighborhood activists, low-income housing advocates, environmentalists, transportation reformers, and other nonarchitects to speak at the third Congress for New Urbanism (CNU) last February in San Francisco. It was a much-needed attempt to forge alliances. After the conference, however, three influential individuals – Robert D. Yaro of the Regional Plan Association of New York, landscape architect Harry L. Dodson of Ashfield, Massachusetts, and Armando Carbonell of the Cape Cod Commission – sent CNU leaders a memorandum arguing that New Urbanism continues to pay too little attention to regional and environmental concerns. "One of the important roles of the CNU," the three said, "should

New Urbanist opportunities are greatest in cities, in very expensive metropolitan areas, and in states that press their municipalities to rein in leapfrog and low-density development.

be to develop specific locational criteria for new development based on solid environmental and regional planning principles to prevent 'New Urbanist Sprawl.' Failure to base the New Urbanism in regional and environmental thinking could result in hundreds and perhaps thousands of attractive Charleston, Nantucket, and Seaside look-alikes springing up across the American landscape wherever large landowners and developers happen to own a suitable piece of land." Calthorpe did not disagree. The regionalist perspective, he believes, needs to be strengthened, and should encompass not only environmental matters but also economic and social goals, such as "decentralizing poverty" and fostering a "jobs-housing balance."

Currently New Urbanist opportunities are greatest in three kinds of places: in cities (both large and small), in very expensive metropolitan areas (where the cost of real estate makes dense forms of development inevitable), and in states that press their municipalities to rein in leapfrog and low-density development. Since New York's Battery Park City took shape, New Urbanist principles have been winning broad acceptance in cities. One example: the South Miami firm of Dover, Kohl & Partners (with Ron Frazier & Associates, architects; Nancy Prine, landscape architects, and Glatting Jackson, traffic engineers) recently produced a plan for adding buildings, fences, street trees, and other traditional (*continued on page 88*)



PERSPECTIVE SHOWING NEW DEVELOPMENT AND EXISTING NEIGHBORHOOD

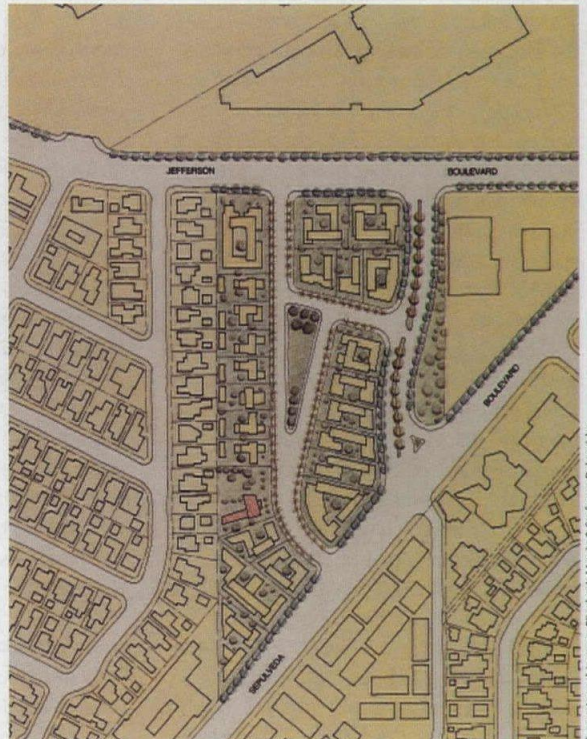
Culver City, California

In Culver City, California, one of the last pieces of open land available for redevelopment is a nine-acre drive-in movie theater property. Elizabeth Moule & Stefanos Polyzoides of Los Angeles have proposed to the Culver City Community Redevelopment Agency that development of the site extend the adjoining neighborhood by continuing its streets (something of a feat in increasingly walled-off southern California) and building a daycare center and a public park for the expanded neighborhood. The 150 dwelling units would use housing types rooted in California traditions. One such tradition is that of placing two or three units in a building that reads as a single house. Another is

sideyard housing containing several units. The third, delivering the highest density, is courtyard housing, which organizes several units around a shared outdoor space. All of these, says Polyzoides, allow for a range of unit sizes and a variety of architectural detailing – and a two-story height in keeping with the surrounding area. The plan, being prepared in consultation with director Mark Winogrand and Margaret Liu and Miriam Mack of the Redevelopment Agency, has yet to win official approval.

Architects and urbanists: Elizabeth Moule & Stefanos Polyzoides.

Client: Culver City Community Redevelopment Agency.



SITE PLAN

N ← 400/120m

Illustrations this page: Elizabeth Moule & Stefanos Polyzoides

Read All About It The New Urbanism's message comes in many varieties.

The shelf of literature on the New Urbanism's outlook, goals, and techniques grows longer by the year. Probably the most essential book for understanding the movement is Peter Calthorpe's *The Next American Metropolis: Ecology, Community, and the American Dream*, a \$24.95 paperback published in 1993 by Princeton Architectural Press. An outgrowth of Calthorpe's years of advocating land- and energy-conserving patterns of development in California, *Next American Metropolis* offers a cogent, well-organized argument for how America could move toward more compact communities and toward regions organized around public transit. It contains two dozen of his firm's plans, commissioned mostly by developers or public agencies in the West. *Next American Metropolis* should be paired with *Towns and Town-Making Principles: Andres Duany and Elizabeth Plater-Zyberk*, for the Miami architect-planners have championed an element that neatly complements Calthorpe's regionalism: a concern for the small-scale design decisions that make streets, blocks, and neighborhoods genial and aesthetically satisfying. Edited by Alex Krieger with William Lennertz, *Towns and Town-Making Principles* documents 13 DPZ developments and several regulatory codes. Though somewhat dated – the \$29.95 paperback was published by Rizzoli and the Harvard Graduate School of Design in 1991, before DPZ became more heavily involved in urban planning – it features incisive essays by Krieger, Vincent Scully, and others, analyzing many of the firm's strengths and gently probing a few of its weaknesses.

The closest thing to a composite of these two books is Peter Katz's *The New Urbanism: Toward an Architecture of Community* (McGraw-Hill, 1994, \$49.95). Katz, a marketing consultant in San Francisco, has assembled fine essays by Todd W. Bressi, the prolific Professor Scully, and three others. What's eye-catching about this book, however, is its lavish assortment of full-color plans, sketches, and photos of projects ranging from resorts to urban infill. Indeed, with its large format, color photos, and ethereally serene DPZ sketches, this volume fills whatever need there may be for a New

Urbanism coffee-table book. A less photogenic but well-informed survey of current urban design is Jonathan Barnett's *The Fractured Metropolis* (HarperCollins, 1995, \$40).

From City to Small Town

A number of writers have concentrated on a particular size or type of community. For urban neighborhoods and downtowns, a wonderfully pithy guide is *City Comforts: How to Build an Urban Village* by David Sucher, a developer and former planner in Seattle. Sucher aims to "refocus our public policy discussion from abstract generalities, colored maps, and grandiose projects to the details that create our daily experience," and he succeeds, wedding lively observations (none longer than a page) to black-and-white photos and drawings. The slim \$18 paperback is available from City Comforts Press, 5605 Keystone Place North, Seattle 98103.

In *Visions for a New American Dream*, Anton Clarence Nelessen, a planner and Rutgers professor, shows how his "Visual Preference Survey," based on photos of a series of community scenes, enables the public to identify what it would like to achieve in its surroundings and to incorporate those desires into small-community design decisions. Critical readers will have qualms about the ease with which a biased planner could rig the visual preference survey to produce whatever findings he wants. Photograph a tawdry roadside shopping center from its least flattering angle and then shoot an immaculately maintained village street under a canopy of century-old trees and the public will indicate a "preference," but is this a meaningful choice? Its pseudo-scientific method aside, Nelessen's paperback (a second edition of which was published last year by APA Planners Press for \$50) is refreshing in its forceful attempts to bring aesthetic matters – and public concern about them – back into the planning process.

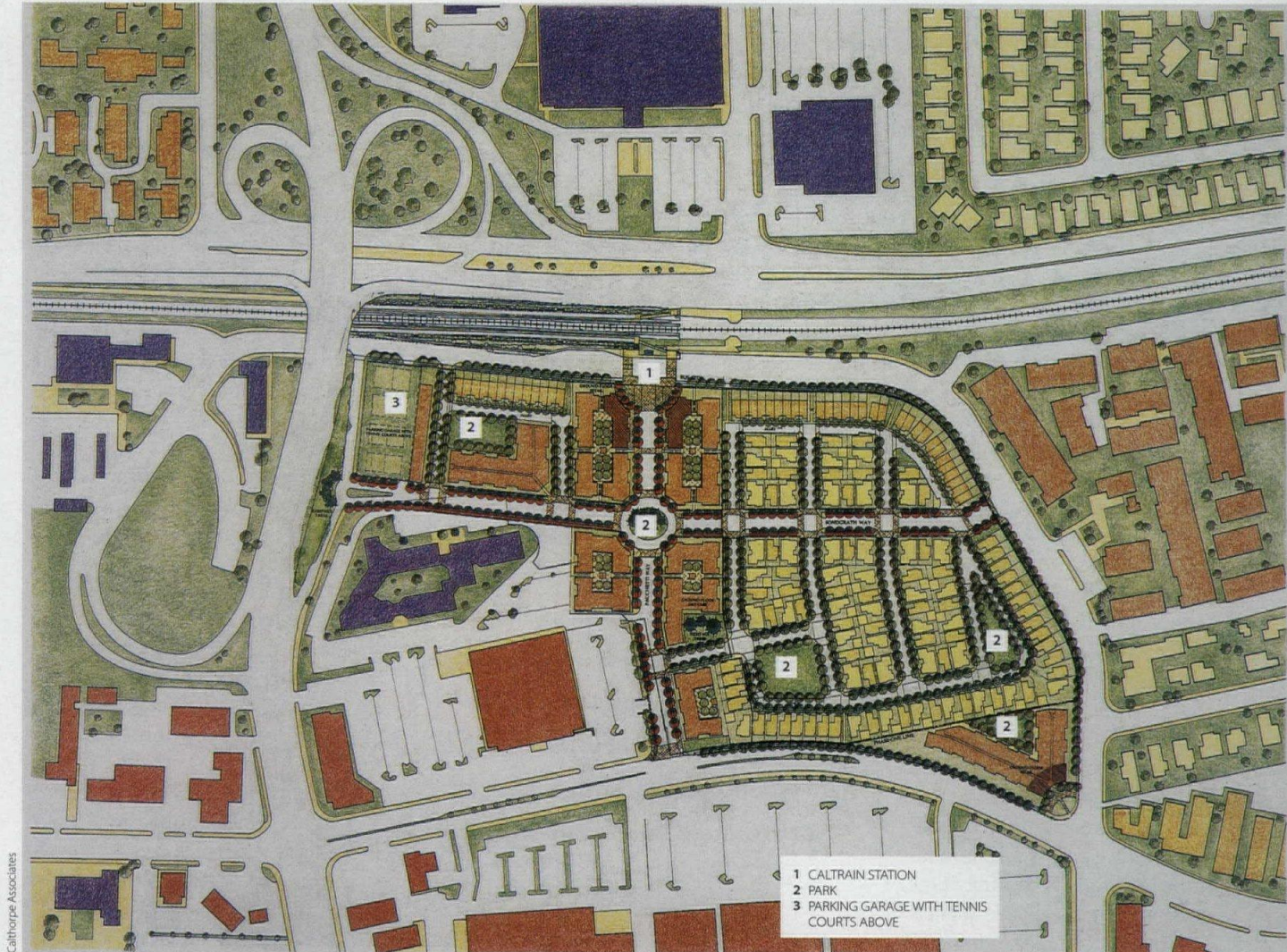
Preserving Countryside

Randall Arendt, vice president of the Natural Lands Trust and an indefatigable speaker to community groups, is author

(with other contributors) of *Rural by Design*, which presents numerous case studies of how to maintain small-town character, particularly by clustering new development in tight configurations that preserve much of the landscape. APA Planners Press, which brought out this guide last year at \$84.95, calls it "the most comprehensive look at small town and rural design ever published." With 441 oversized pages, it's certainly the most exhausting; *Rural by Design* subscribes to the notion that anything worth saying is worth saying twice. A more limited, but mercifully more concise booklet from the American Planning Association's Planning Advisory Service is Suzanne Sutro's 41-page *Reinventing the Village*, published in 1991 at \$24, which explores planning, zoning, and design strategies for very small communities, using examples mainly from the Mid-Atlantic and New England states.

Then there is *New Visions for Metropolitan America* by Anthony Downs. Judged by its title, this \$28.95 paperback promises to be a clarion call to far-sighted regional planning and design. But instead, this volume, published last year by Brookings Institution and the Lincoln Institute of Land Policy, turns out to be an argument that Americans have supported "unlimited low-density sprawl" for half a century and will do all in their power to perpetuate the dream of a freestanding house, a private yard, and an automobile in every garage. The problem is not that Downs, a Brookings economist, gets facts and figures wrong; he's quite meticulous about those. The trouble is that in focusing obsessively on why things are as they are, he forgets that societies do change their minds. Downs reminds me of the Detroit automakers in the 1970s who said Americans would never buy small cars. Alas, the real lesson of his book is that to present new visions effectively, you have to be the kind of person who believes we're not destined to go on forever repeating the bad choices of the past.

Finally, P/A Senior Editor Philip Langdon has written *A Better Place to Live: Reshaping the American Suburb*, published earlier hardbound and last month in paperback by HarperCollins (\$14).



Calthorpe Associates

SITE PLAN SHOWING REDEVELOPMENT

- 1 CALTRAIN STATION
- 2 PARK
- 3 PARKING GARAGE WITH TENNIS COURTS ABOVE

N 300/100m

The Crossings, Mountain View, California

Current suburban land uses will not last forever. When conditions change, as they did in Mountain View, California, where a 1960s shopping mall failed, there are opportunities to redevelop the land in a denser, transit-oriented fashion. Calthorpe Associates' design for The Crossings calls for 540 apartments, townhouses, side-by-side duplexes, and detached houses on 18 acres within walking distance of stores, a Hewlett-Packard facility, and a planned CalTrain commuter rail station. The detached houses, with garages recessed along the side or at the back of the lot, occupy lots of just 1,440 to 2,580 square feet, achieving a density of 15 units an acre. An alternating pattern of bigger and smaller lots helps alleviate a jammed-in feeling. "It demonstrates we can deliver the American dream in a very dense

package – single-family houses at multifamily densities," says Peter Calthorpe. Housing in Silicon Valley is in great demand – and costly – so those built last year in the project's first phase have sold quickly, at \$269,000 to \$369,000 for 1,252 to 1,937 square feet. Calthorpe sees this as proof that production housing in California can be pedestrian-oriented. Integrated into The Crossings' network of 28-foot-wide tree-lined streets are five neighborhood parks. There are also plans for low-income housing, and a daycare community center.

Architecture and planning: Calthorpe Associates.
Owner/contractor: TGP Development.
Landscape architects: Gary Leonard Strang.
Civil engineer: Wilsey & Ham.
Structural engineer: TEAC.



SITE PLAN BEFORE DEMOLITION OF SHOPPING MALL

N 400/120m

Calthorpe Associates



A ROW OF DETACHED HOUSES

Chris Wurmman

urbanistic elements to a down-at-the-heel neighborhood in Orlando, accentuating the positive traits of that poor, close-in urban precinct, now rechristened the "Parramore Heritage District." New Urbanist techniques have the potential to strengthen shaky inner-city neighborhoods.

The Effects of State Policies

In states that are concerned about sprawl, there are moves toward directing growth into denser patterns. Washington State's Growth Management Act gave the City of Olympia the impetus to plan for more concentrated future growth within the municipal boundaries and in the unincorporated growth area for which Olympia does the planning. Recently Olympia adopted a comprehensive plan that, reinforced by new regulations, dramatically increases density and for the first time sets not just a maximum but also a *minimum* density. Among the new zones authorized in Olympia are an "urban village" and a "neighborhood village," both intended to foster lively mixed-use development rarely found in conventional suburbs.

One of Calthorpe's recent assignments has been to advise the metropolitan government of Portland, Oregon, on how building and population growth could be accommodated within Portland's urban growth boundary. Calthorpe's recommendations favor concentrating some development in walkable, higher-density centers containing employment, shopping, parks, and cultural activities, all served by mass transit.

In very expensive metropolitan areas, the pressure of economics is expected to result in redevelopment of many underused pieces of land, creating opportunities for concentrations of mixed uses. In Mountain View, California, Calthorpe laid out a compact collection of apartments, duplexes, townhouses, and single-family houses on land that used to contain a shopping mall and a big parking lot. His view is that "converting underutilized commercial sites in residential neighborhoods is going to be a major opportunity in the future."

Opportunities also crop up in suburban business centers that need to upgrade their attractiveness and convenience. Recently the Village of Oak Brook, Illinois, commissioned Lohan Associates of Chicago to suggest improvements in its prosperous business areas, which face competition from newer developments in municipalities farther out. One Lohan idea under consideration is creation of a street called Commerce Drive, which would link offices, stores, and other establishments into a pedestrian-scale network. Office buildings that now sit a hundred feet back from the road behind empty lawns would be allowed to have two-story retail appendages reaching toward the new Commerce Drive, which Lohan Associates would complement with tree-lined sidewalks. These building extensions, accompanied by extensive

landscaping, would help define outdoor gathering places and make Oak Brook more pedestrian-oriented, if not exactly urban. One of the lessons of Oak Brook is that sprawl can be ameliorated in many kinds of places – among them, suburbs that have already passed through a first cycle of automobile-oriented development.

There remains a question of just how much density and urban character the suburbs will be willing to accept. Oak Brook has wanted to retain a suburban feeling. Because of that, Lohan Associates has suggested generous intervals of landscape between buildings and has recommended setbacks of 15 feet or so from the buildings to the sidewalks. One builder attending a Chicago area seminar on "neotraditional development" last March observed that in most suburbs, "urbanism" is a dirty word.

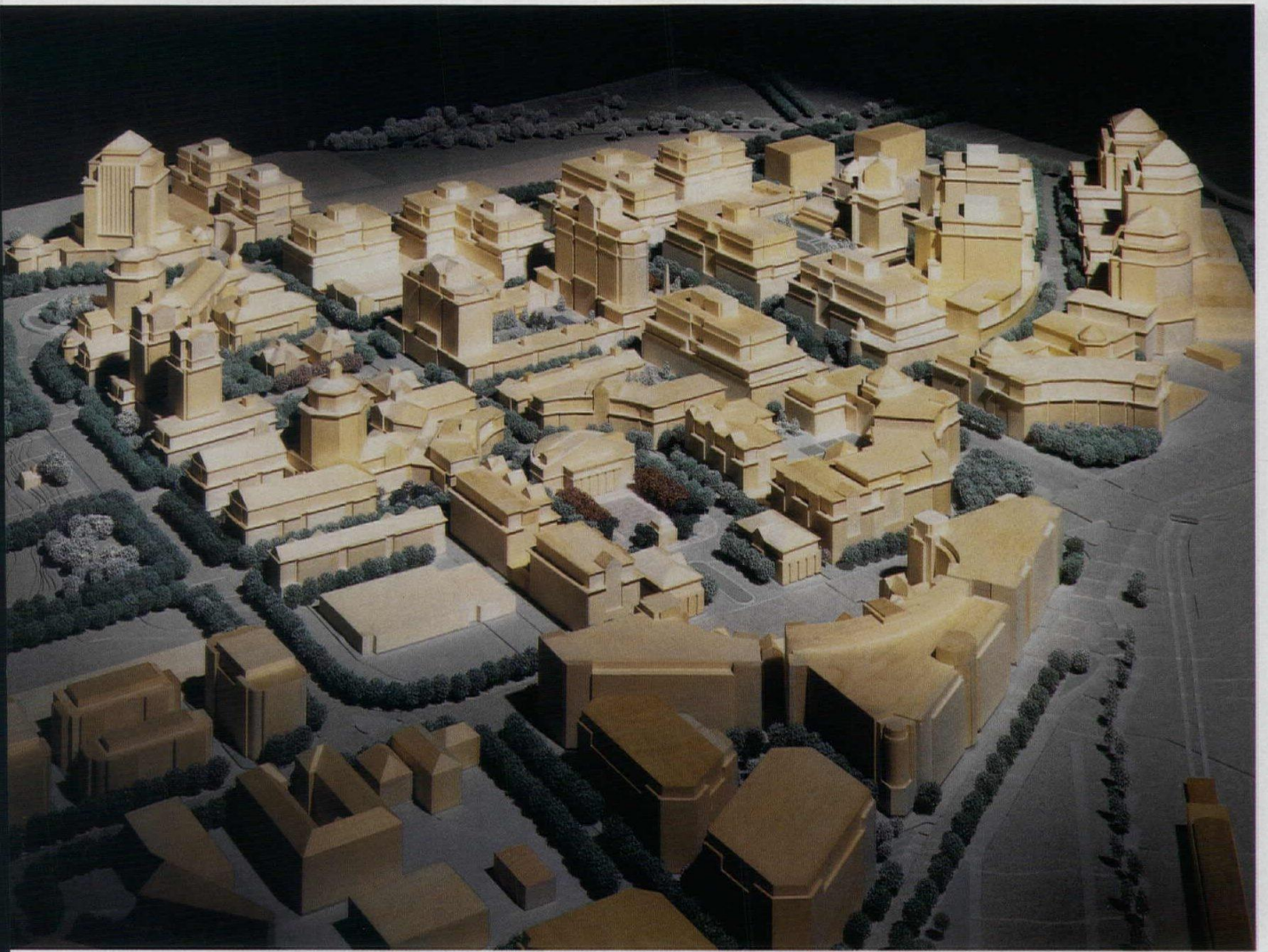
Sprawl: Bad for Business?

But things may change, especially if business gets on the bandwagon. New Urbanists have taken heart from a California study entitled "Beyond Sprawl," which argues that "unchecked sprawl has shifted from an engine of California's growth to a force that now threatens to inhibit growth and degrade the quality of our life." The encouraging thing about the study is that it was produced by a coalition that included the Bank of America – California's largest bank, financier of sprawlmeisters – as well as by organizations

that might be expected to be anti-sprawl: the Greenbelt Alliance, the Low Income Housing Fund, and the California Resources Agency. Even *The Economist*, no fan of government controls over private enterprise, has concluded that the American pattern of rapid dispersal across now-vast metropolitan areas is inordinately wasteful. Perhaps the business community is on the verge of supporting alternatives to unchecked outward development.

Certainly New Urbanism is gathering momentum and is moving in healthy directions: toward a regional framework, toward working in already settled communities, and toward meshing aesthetic and social concerns. It will take persistence and intelligence to produce the great changes in community life that the New Urbanism promises, but there is reason for hope. The New Urbanism does not require knock-'em-dead architectural invention, which, as the 20th Century has taught us, is difficult to produce satisfactorily and harder yet to coordinate into cohesive places. The approaches used by New Urbanists are based on what has been tested and found effective. As John Torti of CHK says, "This is not rocket science." For that, we should be grateful. The New Urbanism is, at its core, simple enough to comprehend that Americans, after many years of wrong turns, just might manage to get it right. □

**The New Urbanism does not
require knock-'em-dead architectural
invention, which, as the 20th
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yet to coordinate into cohesive places.**



COOPER, ROBERTSON'S MODEL OF CARLYLE MIXED-USE DEVELOPMENT

Carlyle, Alexandria, Virginia

One of the most ambitious New Urbanist projects on the East Coast is Carlyle, being built on about 82 acres in Alexandria, Virginia, most of it former Norfolk Southern rail yards. "It has a mixed-use commercial program like you'd find in a suburb, but it's handled in an urban way," says Brian Shea, a principal of Cooper, Robertson & Partners in New York, which laid out Carlyle for the Oliver Carr Company. Eight- to ten-story office buildings, accommodating large tenants, will generally rise from the ends of the blocks on major streets or open spaces. Lower buildings resembling traditional row houses will fill in between them on the side streets, containing smaller offices, residences, and other uses. Two Metro stations will tie Carlyle in to mass transit. In addition, 13,000 parking spaces are to be created, most of them in two-story garages in the centers of the blocks. On top

of the garages will be landscaped plazas, turning the interiors of the blocks into urban amenities. Roughly 3,000 housing units are anticipated along with retailing, daycare centers, a theater, and other uses. The first group of buildings, called King Street Station at Carlyle and designed by Florence Eichbaum Esocoff King Architects of Washington, D.C., has been completed. In the main portion of the site, a Federal District Courthouse by Spillis Candela is nearing completion.

Urban designer: Cooper, Robertson & Partners.

Client: Oliver Carr Company and Norfolk Southern Corporation.

Phase I projects (King Street Station at Carlyle) Architects: Florence Eichbaum Esocoff King Architects.

Planners: Weihe Partnership, with revisions by Florence Eichbaum Esocoff King.



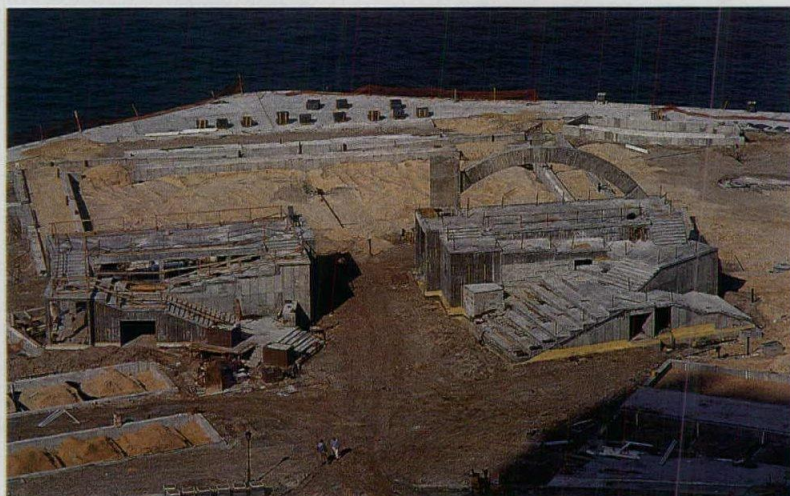
SITE PLAN

N ↓ 400'/120m

Cooper, Robertson & Partners

View Point

An interdisciplinary team including Machado & Silvetti Associates is creating a civic park at a pivotal location in New York's Battery Park City. *by John Morris Dixon*



The timetable of New York's huge waterfront landfill development, Battery Park City, has been set back a few years by the economic downturn. But the project's management has used the slow years of the early 1990s to proceed with public improvements that should increase the area's appeal for apartment and commercial development on remaining parcels. A high school for gifted students has been completed at the north edge of the precinct, and Battery Park City management has been extending the band of waterfront public spaces along the project's entire one-mile river frontage. At the development's south tip, where a sweeping view of the harbor opens up, the 3.5-acre Robert F. Wagner, Jr., Park is now taking shape, its design developed by three firms collaborating on an equal footing: architects Machado & Silvetti Associates of Boston, landscape architects Hanna/Olin of Philadelphia, and public garden designer Lynden B. Miller of New York.

The dramatic site brought with it a history of public controversy. Battery Park City had earlier commissioned artist Jennifer Bartlett to design an environmental art work for this point, but her proposal of a walled garden, filled with an abstract grid of planting beds, was defeated by overwhelming opposition from New York's civic watchdog organizations, who charged that it virtually ignored its spectacular setting and would accommodate only small numbers of visitors.

The choice of a new design team had to reassure all concerned parties that the result would be a truly public celebration of this special vantage point. Hanna/Olin had been consultants on the original Battery Park City plan and had just worked with Lynden Miller on the much praised rehabilitation of Bryant Park in Midtown Manhattan.

The inclusion of architects on an equal footing with landscape architects may seem to have prefigured the prominence of a structure in the final design, but Machado & Silvetti was chosen largely for its urban design skills. The firm had been interviewed earlier for a planning consultant assignment and is now filling that role for the north end of the development; Battery Park City executives had been impressed by Machado & Silvetti's design of Piazza Dante for Genoa, which won a P/A Award (P/A, Jan. 1991, p. 118) but has not been funded. Many meetings with organizations and community groups took place as this design was hatching, and all of the key designers argued effectively – in contrast to the aloof Bartlett – for the design they were evolving.

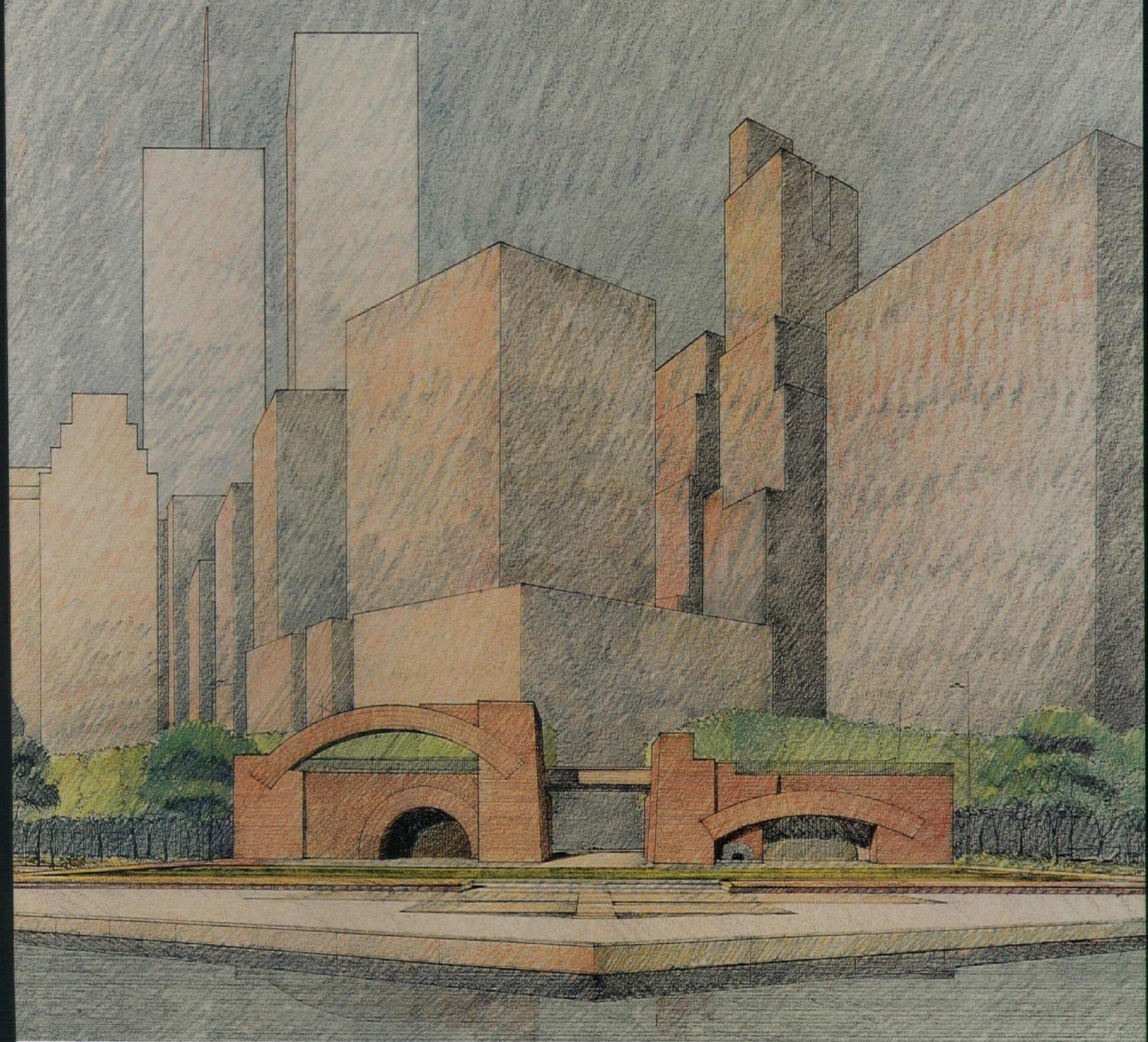
The Statue of Liberty as Their Muse

The collaborating designers quickly decided to let the view to the Statue of Liberty – from this closest point on Manhattan Island – establish the main axis of their plan. As Laurie Olin points out, the statue is visible the entire length of the waterfront esplanade, but the view of it could be framed at this one closest point to give it a heightened intensity. In the first freewheeling concept, the park would have included the remains of a mythical temple for the Goddess of Liberty, from which she had proceeded to her island pedestal. Rodolfo Machado's succinct series of sketches (p. 93, top) show how successive waves of reality then reshaped the structure into something quite different. Throughout this evolution, the structure retained key elements of that first inspiration: its two-part organization around the statue-oriented axis and its evocation of a very large-scaled ruin.

Some steps in this transformation grew out of sensitivity to the way people could experience the site: an elevated platform facing the harbor

A view of Robert F. Wagner, Jr., Park from early this summer (facing page) shows construction of the two-element central building, with the harbor beyond and foundations for the two allées of trees in the foreground. The rendering of the completed building,

seen from the water, shows the brick cladding in varied patterns and the beamlike bridge that will unite the halves; the right pavilion will house a kitchen and a food counter, the left one restrooms and park maintenance facilities.



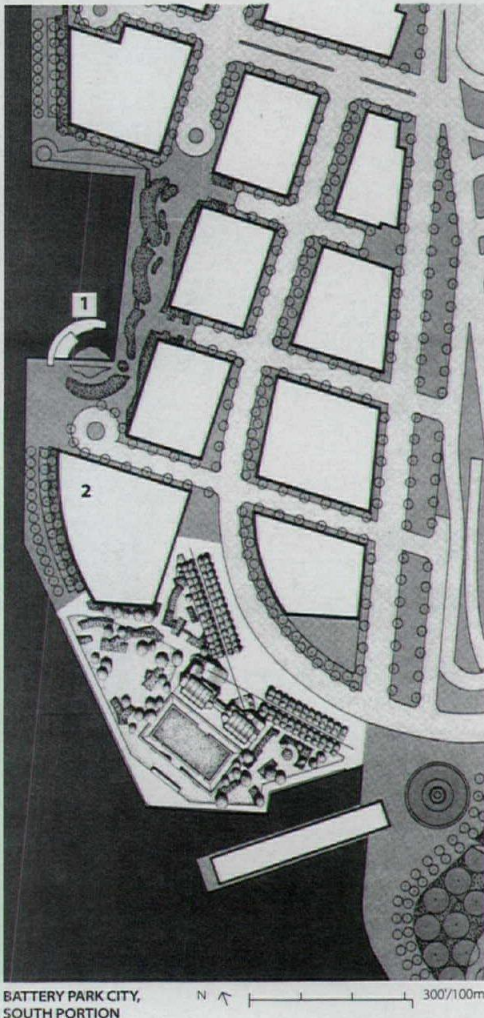
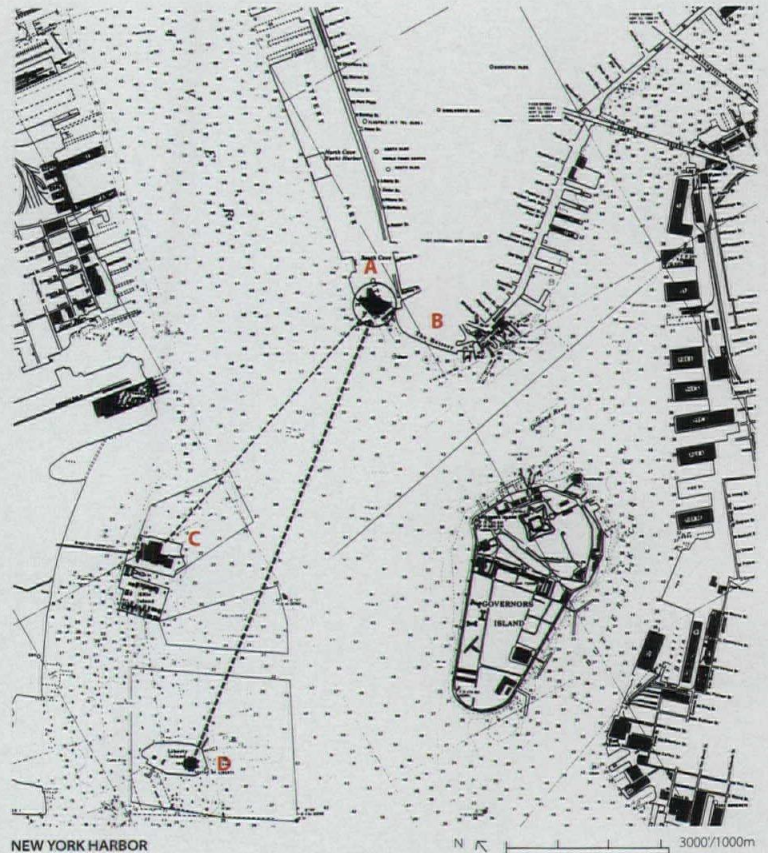
could enhance the vista by affording a overview of the site in relation to the harbor and the statue; a bridge carrying this platform over the axial gap could frame the statue more effectively; stairs up to this platform could be angled to relate to axes of approach and elaborated to provide tiered seating on the leeward side of this wind-swept site. At one point in the design, the principal building volumes and the stairs were clad in large-scaled stone that still suggested temple ruins – and echoed the massive stonework of the statue’s superb William Morris Hunt pedestal – while cable-supported canopies over the upper platform referred to appropriately nautical precedents. The structure’s allocation of available funds (roughly \$4 million out of a total park budget of \$14.5 million) eliminated both the stone cladding and the canopies; instead, the architects turned for inspiration to the rough brick ruins of Roman structures.

As the park’s central building evolved, so did the landscape around it. The clients resisted paving the whole harborfront area. The designers, ruling out naturalistic planting here, developed a severe rectangle of flat grass, surrounded by sitting walls, raised above the waterfront esplanade on crisply geometrical terraces.

On the inland side, two allées were laid out, peeling off on tangents from the curved approach streets and approaching the central structure at angles. Other portions of this inland side of the park are being developed as intimately scaled flower gardens. In response to the exposed site, which Lynden Miller likens to “the deck of the Queen Elizabeth,” the design team opted for sinking these plant areas, in part for the survival of flowering plants and in part for other advantages: the flowering beds can be surveyed from higher surrounding areas, and the flowers can be set off against low hedges and shrubbery that then do not wall these areas off.

A Public Asset for New York

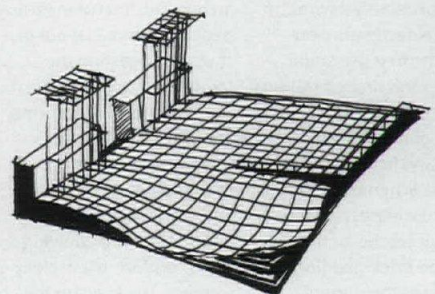
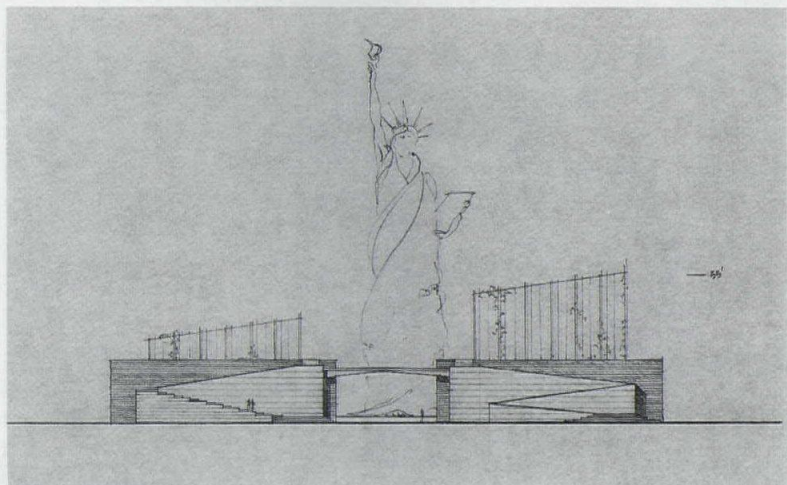
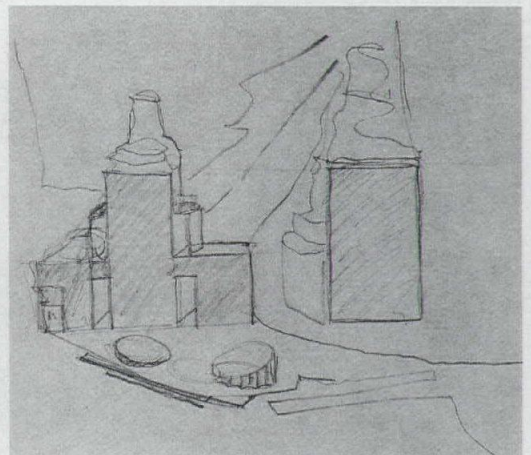
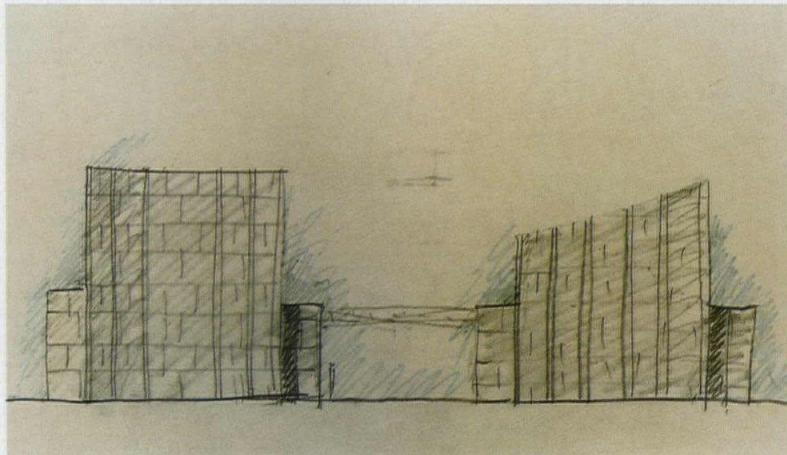
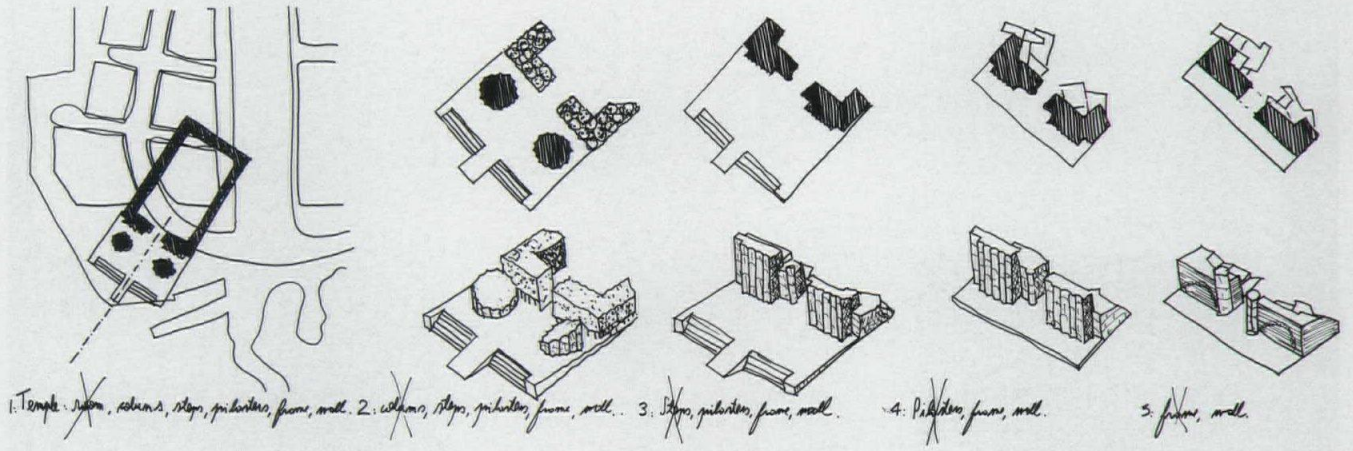
When the apparently meticulous construction of this park is completed in the summer of 1996, New York will have gained a very thoughtful addition to the public realm. As one follows the logic of its design, the main question never quite answered is why at this point the city should have a structure suggesting a Cyclopean ruin. One could rationalize this formal choice with references to the enormous statue it salutes and the colossal surrounding skyscrapers; one could say the structure’s modest size and its much larger scale both work well on this unique site. To the lingering question, “Why a ruin?” there seems be no real answer beyond the classic New York response: “Why not?” □

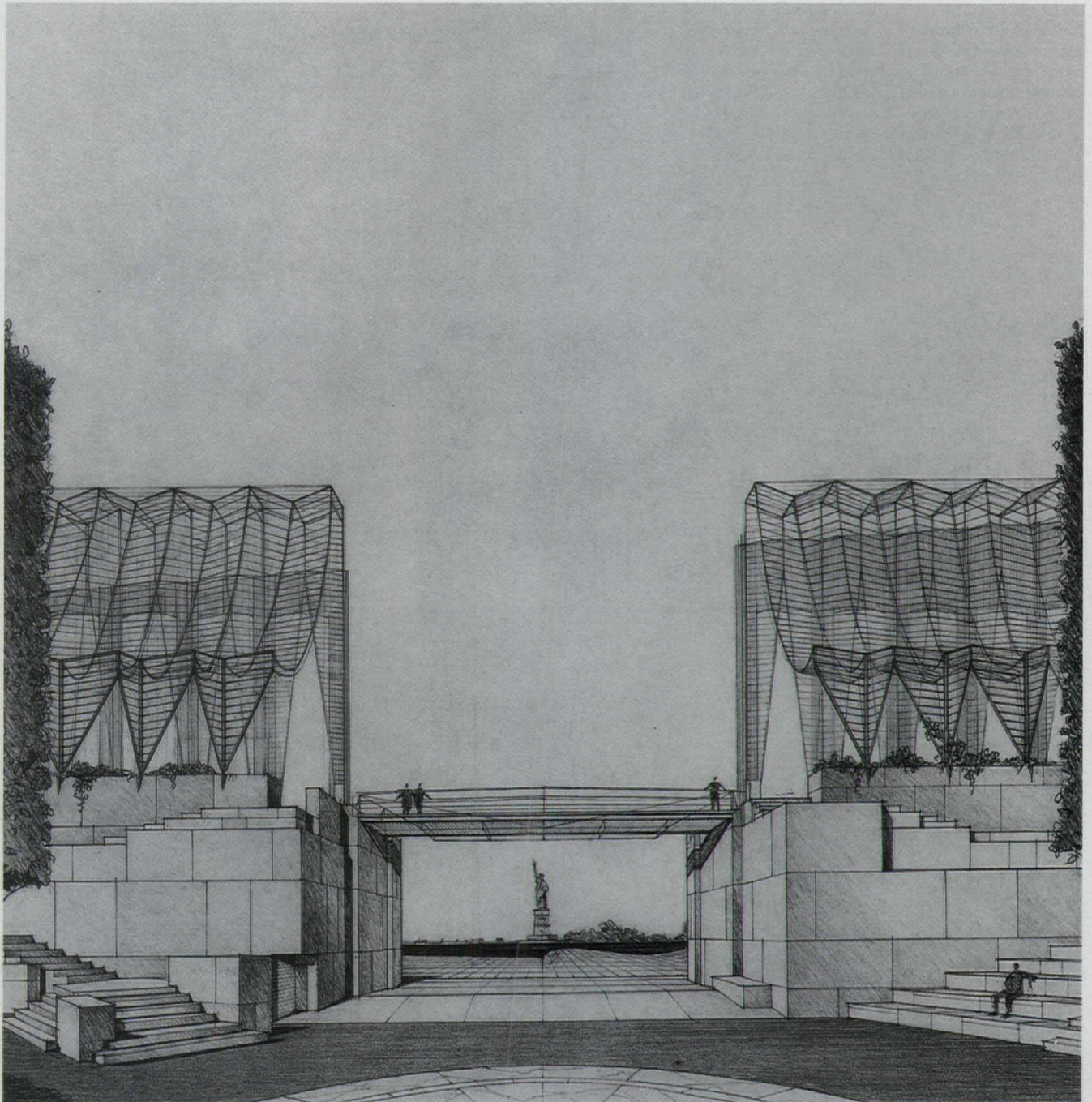


A map of New York Harbor (above) shows the park site (A) at the south tip of Battery Park City, where it adjoins the larger open space of Battery Park (B); the design team’s lines lead to the harbor landmarks, Ellis Island (C) and the Statue of Liberty (D). A plan of Battery Park City’s south blocks (left) illustrates the relationship of its axial elements to the street grid and to the development’s continuous waterfront esplanade. Mary Miss’s fanciful pierlike environmental sculpture is nearby in the South Cove (1) and Roche Dinkeloo’s Living Memorial to the Holocaust/Museum of Jewish Heritage (2) is to be built on one of the development’s six southernmost blocks, which are still undeveloped.

Sketches by Rodolfo Machado succinctly trace the evolution of the design from literal representations of temple ruins to a far more abstract evocation. Other sketches from the firm's archives (bottom of page)

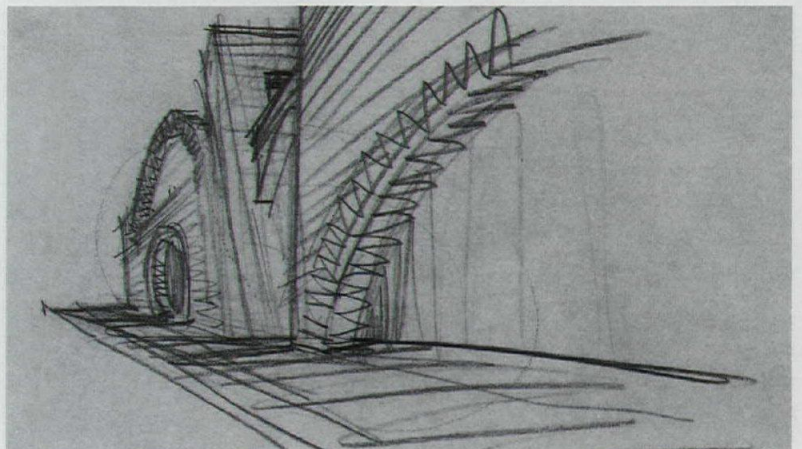
show various early versions, with and without elements of their context; the bottom right sketch shows an intermediate scheme with trellis-topped pavilions and a terrace representing the Statue of Liberty's book.

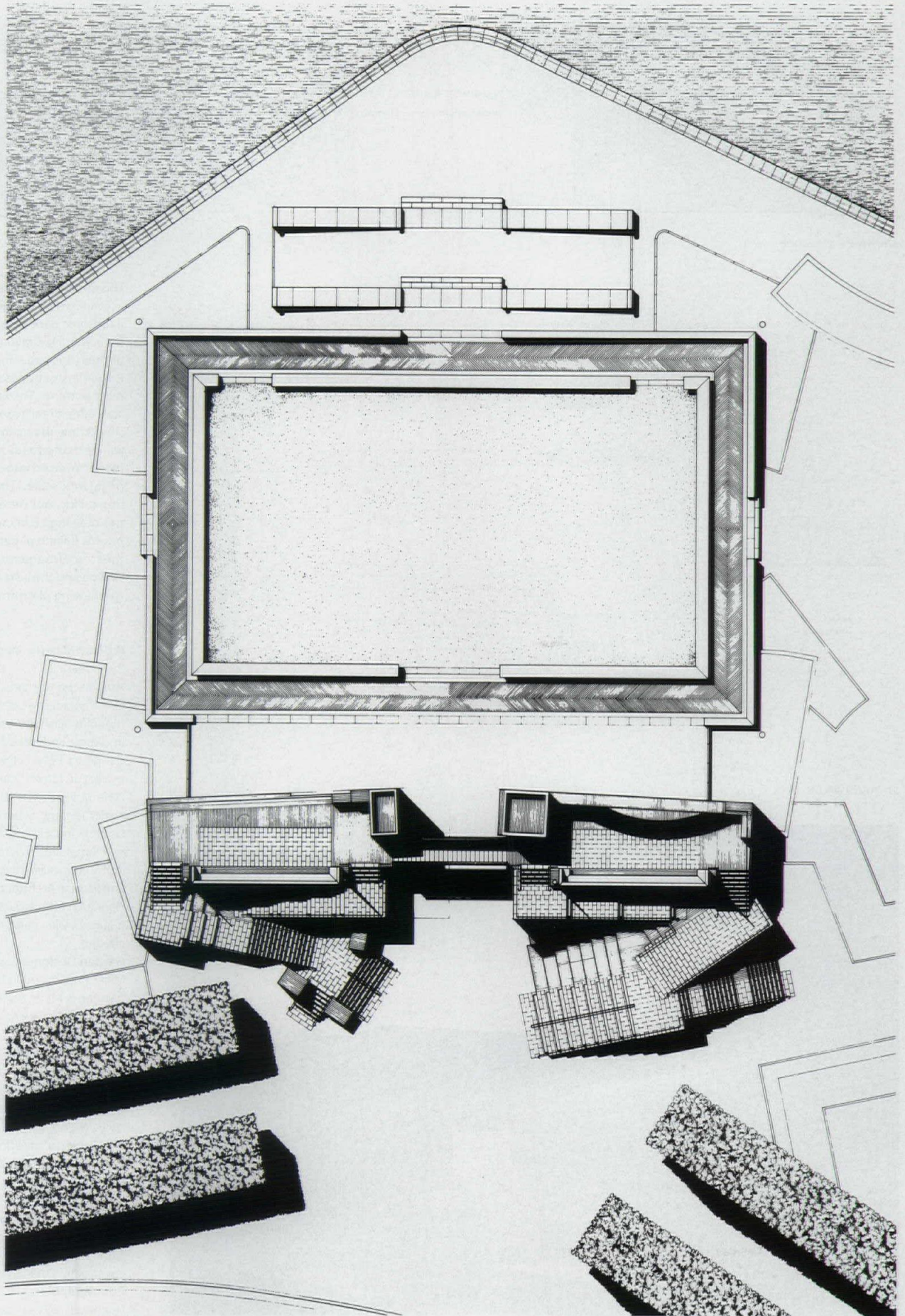




After the structure evolved to approximately its present form, the designers were proposing massive stone cladding and draped trellises (above) that were echoed aspects of the Statue of Liberty and her massive pedestal. When both stonework and trellises had to be sacrificed, the architects proposed brick cladding that evokes the ruins of Roman structures that have lost their stone cladding (right); and, as even the ancient Mesopotamians

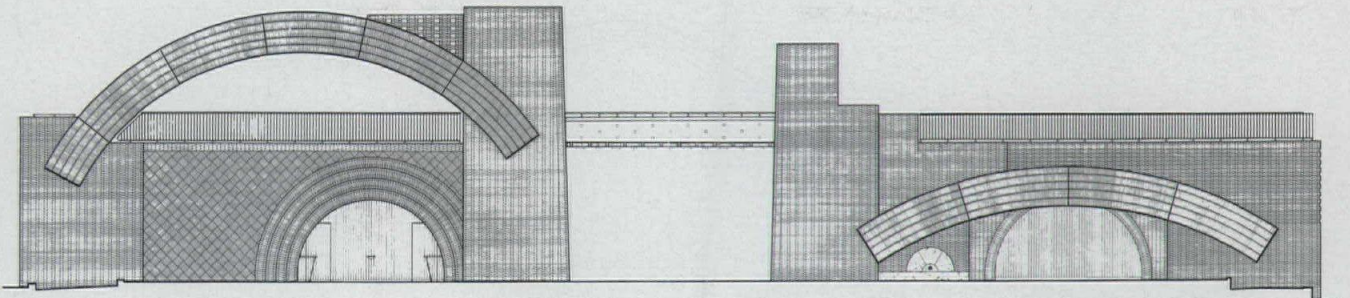
knew, brick wants to form arches. The final plan (facing page) shows the layout of stairs – suggesting the “crumbling” of a massive ruin – that can form an informal amphitheater. Elevators provide alternative access to the viewing platforms, and high-backed benches will make harbor viewing more comfortable in chilly weather. The lawn on the harbor side will be a severe rectangle of grass delineated by geometrical sitting ledges.





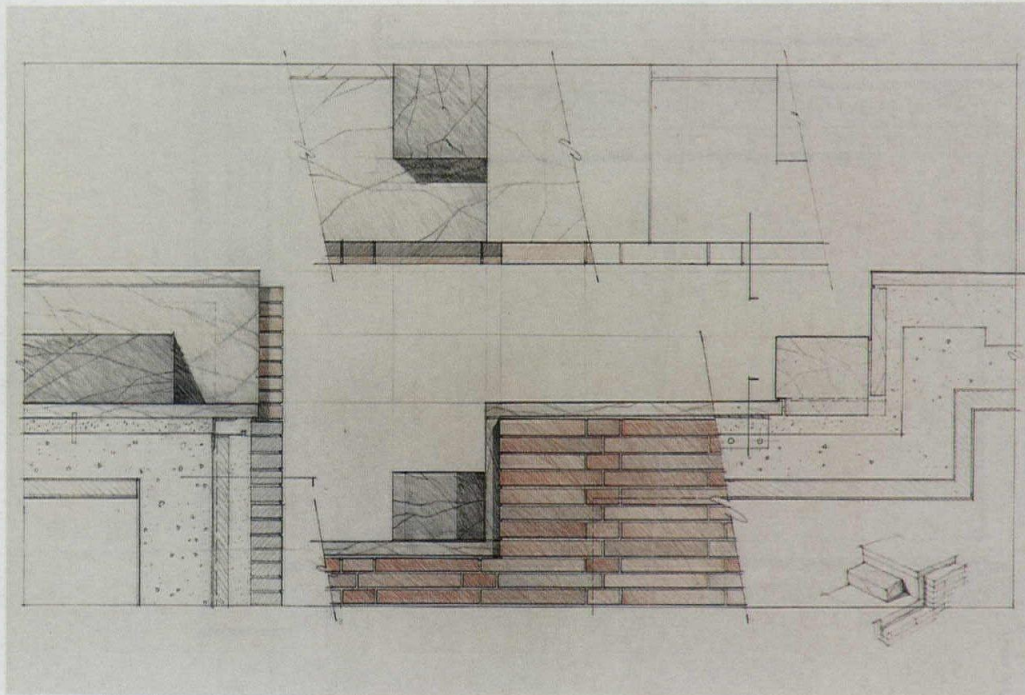
ROOF AND SITE PLAN

N ↓ 40/12m



SOUTHWEST ELEVATION

207/6m



STAIR AND WALL DETAIL

17.3m

This summer, the structure is acquiring its cladding with a handsome dark red iron-spot Roman brick. Drawings and photos (this page) indicate the variety of bonds and relief patterns. The rendered stair edge detail (center) shows how the main stair will be treated as stone blocks inserted into steps of gigantic scale. (There will be a railing, not shown on this drawing.) Early summer photos (facing page) show the structure against the skyline and the vista from the viewing platform.

Project: Robert F. Wagner, Jr., Park, New York.

Architects: Machado & Silvetti Associates, Boston (Rodolfo Machado, principal in charge, and Jorge Silvetti, designers; Peter Lofgren, project architect; Douglas Dolezal, Elizabeth Gibb, Nader Tehrani, design team; Davin Hong, Chris Keane, Sun Kim, Julio Salcedo, Phil Smith, assistants).

Landscape Architects: Hanna/Olin, Philadelphia (Laurie D. Olin, partner-in-charge).

Garden Designer: Lynden B. Miller, Public Garden Designer (Lynden B. Miller, principal).

Consultants: Ove Arup & Partners, structural/mechanical/electrical engineers; Mueser Rutledge, geotechnical engineers; BJLJ Engineers and Architects, civil/site engineers; Raymond W. Searby, specifications; VJ Associates, cost estimators; Fisher Marantz Renfro Stone, lighting consultants.

Construction Managers: Humphreys & Harding; Signe Neilsen, landscape construction manager.

Photographs: Eduard Hueber, except as noted.



Courtesy Machado & Silvetti Associates, Boston



Exterior Tile Cladding: Winning Against the Water

Tile cladding can be fraught with water problems, but getting the details right will give you an edge in wet climates. *by Jonathan Kahn-Leavitt*

Abstract

Tile offers an economical alternative to masonry exterior cladding systems, and can provide durable cladding if proper attention is paid to detail design and execution. Critical details include: the use of cavity walls in wet and temperate climates; the proper placement and sealing of waterproofing membranes; the use of corrosion-resistant fasteners; and the installation of through-wall flashing to divert water to the exterior.

Tile has a long history of successful use as an exterior finish on masonry buildings located in warm and dry climates. However, using tile as part of a thin-set veneer system in temperate regions introduces a host of potential problems, problems that are not unique to tile and are rarely addressed in tile manufacturers' recommended installation practices. The difference between a well-performing tile-clad building and one fraught with headaches depends primarily on designing to mitigate water penetration, as is the case in most cladding systems. Severe weather exposure, freeze/thaw-cycle stress, improper waterproofing design, and improper installation practices can contribute to leakage, deterioration, and total failure of the cladding.

How Does it Work?

Clay tile is appealing as a cladding material because of the durability of the material, the wide variety of colors and textures available, and its relatively low cost when compared with conventional masonry or stone veneer construction. Conventional exterior tile wall cladding systems have five basic component layers: ceramic tile with grouted joints; a three-coat cement mortar bed, which consists of a scratch coat, brown coat, and a bond coat; galvanized expanded metal lath; 15-pound asphalt-impregnated felt; concrete block back-up wall.

In a tile cladding system, normal thermal and moisture movement are accommodated by dividing the tile, mortar setting bed, and lath into small panels. The felt membrane also serves to isolate the wall cladding from the back-up wall. The lath penetrates the membrane and is fastened to the back-up wall.

What Makes it Fail?

As with most exterior wall systems, a tile cladding system's biggest enemy is water. It can

enter the wall in many locations, even when the ceramic tile itself is impermeable and the grouted mortar joints well proportioned and compacted. One of the most common routes is directly through mortar joints. Mortar is a porous material and absorbs water. Small cracks often exist at the interface between the tile and the mortar. Capillary action serves to pull water through these cracks and into the wall. The mortar setting bed is also porous, and water can soak directly through it, or flow into small cracks that originate at reentrant corners of openings, around penetrations, and at other stress concentrations.

Expansion and control joints, wall penetrations (such as handrail or balcony intersections), and window perimeters interrupt the continuity of the waterproofing layer and are common water entry locations. Too often these joints rely solely on a single line of external sealant to remain watertight. A sealant joint alone will not provide reliable protection against water leakage. Even properly configured and installed sealant joints allow some water entry that tends to increase with weather exposure and general degradation of the sealant and substrates.

Water may also enter directly through joints in the windows. Many window designs rely on sealant at the frame corners and at the glass perimeter to remain watertight. Window-frame corners leak for a variety of reasons (P/A, June 1990, p. 41). When leakage does occur, it may continue for years undetected or with no obvious harm to the interior finishes. Meanwhile, the interior of the wall suffers steady deterioration.

Although tile industry trade standards often show a "waterproof" membrane behind the tile installation, those publications do not necessarily provide adequate guidance on how this waterproofing joins with other building elements. As noted above, many tile systems rely on sealants alone to waterproof the joints between building elements. The designers of such systems fail to consider the consequences of porous, micro-cracked mortar or other sources of water entry

The author is a staff engineer with Simpson Gumpertz & Heger Consulting Engineers in Arlington, Massachusetts.



1 CRITICAL POINTS IN DETAILING TILE CLADDING

through or around sealants. Many of these problems can be solved through the use of an interior drainage cavity and proper flashing, common in other kinds of veneer cladding systems. The flashing collects the water entering the cavity and conducts it back to the exterior. The cavity allows prompt evacuation of the water and extends the life of the wall.

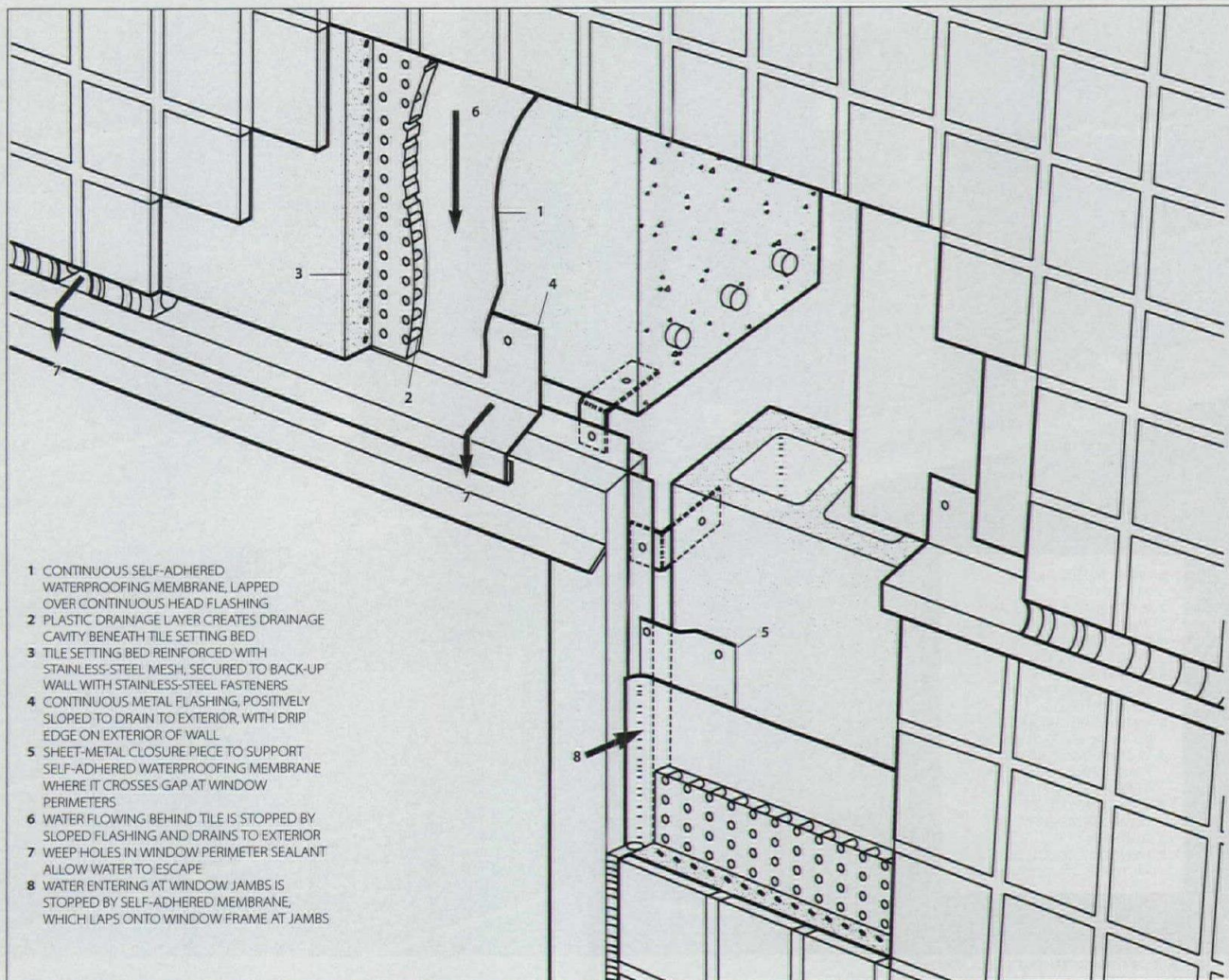
Too often, thin facings such as tile are applied directly to the structural back-up wall rather than constructed as a veneer wall with a cavity. This is false economy, however, because it introduces a host of problems. When the waterproofing membrane is in contact with the mortar setting bed, water does not have an open cavity through which to flow. Substantial water can accumulate within the wall system, promoting corrosion of the fasteners and lath and damage to the mortar bed during freeze/thaw cycles.

Hot-dipped galvanized coatings on the expanded metal lath or fasteners do not provide permanent protection, especially in a wet environment. Galvanized coatings are often abraded during installation, which invites corrosion at critical areas, such as at screw fasteners. Fasteners

are particularly vulnerable to corrosion, as they penetrate the waterproofing membrane and extend into the wet space. Not all coated or electroplated fasteners are suitable for long-term exposure to moisture, either. We've found that stainless steel fasteners work best.

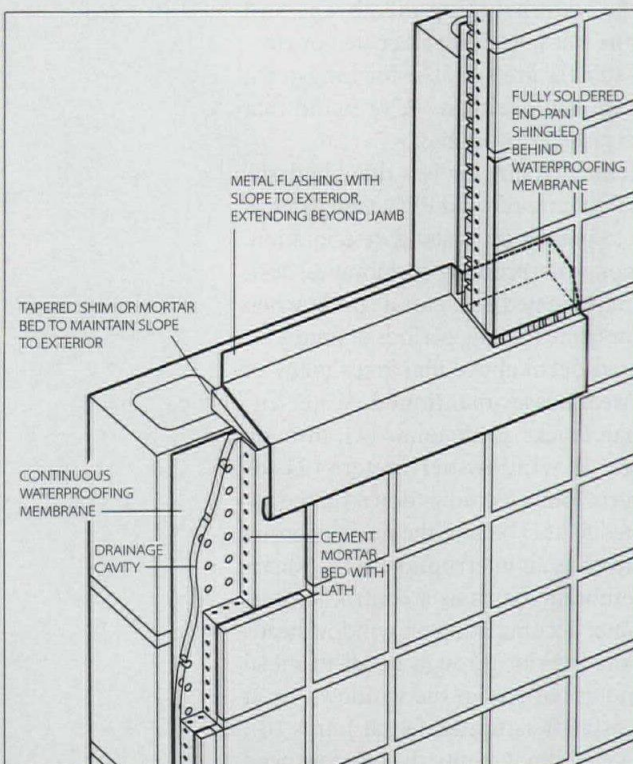
Wall systems that employ less durable flashings, such as thin unreinforced PVC, tend to allow leakage due to premature flashing deterioration. Some common waterproofing membranes, such as asphalt-impregnated felt, can degrade when exposed to moisture for long periods of time.

The colored detail above illustrates many of the design weaknesses mentioned. Water entering through cracks at tile joints (1), through failed sealant at window perimeters (2), or through control joints (3) flows down on the asphalt saturated felt (4) behind the mortar setting bed until it reaches an interruption in the waterproofing membrane (such as a control joint or window). Water accumulating on window heads can leak to the interior through metal-to-metal joints (5) and at corners in the windows, or at gaps in the asphalt saturated felt at joints (6). Weep tubes (7) will not empty the window head

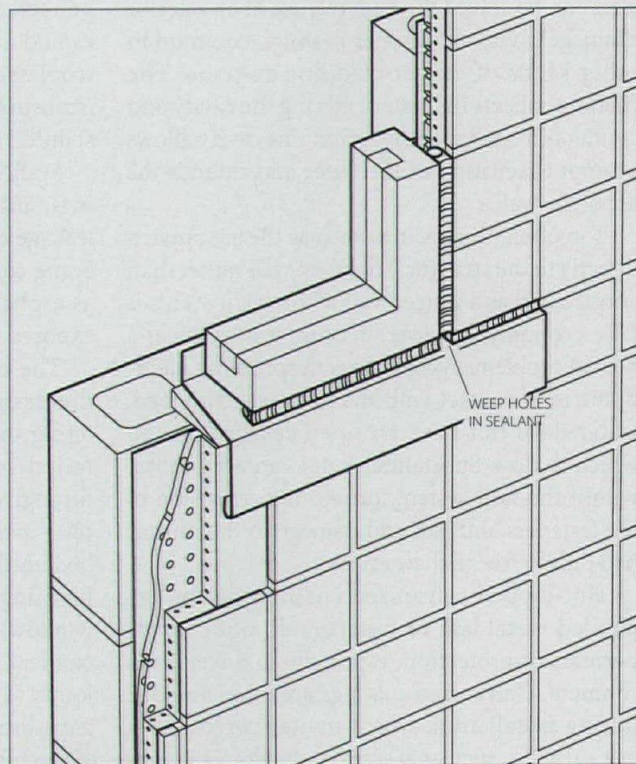


- 1 CONTINUOUS SELF-ADHERED WATERPROOFING MEMBRANE, LAPPED OVER CONTINUOUS HEAD FLASHING
- 2 PLASTIC DRAINAGE LAYER CREATES DRAINAGE CAVITY BENEATH TILE SETTING BED
- 3 TILE SETTING BED REINFORCED WITH STAINLESS-STEEL MESH, SECURED TO BACK-UP WALL WITH STAINLESS-STEEL FASTENERS
- 4 CONTINUOUS METAL FLASHING, POSITIVELY SLOPED TO DRAIN TO EXTERIOR, WITH DRIP EDGE ON EXTERIOR OF WALL
- 5 SHEET-METAL CLOSURE PIECE TO SUPPORT SELF-ADHERED WATERPROOFING MEMBRANE WHERE IT CROSSES GAP AT WINDOW PERIMETERS
- 6 WATER FLOWING BEHIND TILE IS STOPPED BY SLOPED FLASHING AND DRAINS TO EXTERIOR
- 7 WEEP HOLES IN WINDOW PERIMETER SEALANT ALLOW WATER TO ESCAPE
- 8 WATER ENTERING AT WINDOW JAMBS IS STOPPED BY SELF-ADHERED MEMBRANE, WHICH LAPS ONTO WINDOW FRAME AT JAMBS

2 TIPS FOR DETAILING CRITICAL POINTS IN TILE CLADDING



3 WINDOW SILL BEFORE UNIT INSTALLATION



4 WINDOW SILL WITH UNIT INSTALLED

pan completely if the window head does not slope to the exterior. Nonstainless fasteners (8) that penetrate the membrane can rust, thereby detaching the tile veneer from its supporting structure. Also, the galvanized lath can corrode where it is not embedded into, and protected by, the alkalinity of the cementitious scratch coat. This problem can occur where the fastener draws the lath up tight to the waterproofing membrane and backup wall.

Design Recommendations

A successful design must anticipate the effects of water entering behind the tile, and provide sufficient means to control the water and direct it out of the wall. Detail 2 (on the facing page) is a schematic illustration of a tile-clad wall at a typical window head that rectifies the shortcomings of the previous design. The detail shows a continuous waterproofing membrane (1) and a through-wall flashing (4) to collect water and divert it to the exterior. The flashing has a positive slope to the exterior, and the sealant has weep holes (7) to allow water to escape. The waterproofing membrane is supported by a sheet metal closure (5) and laps and seals onto the window at the jamb. This jamb condition (8) controls water that penetrates or bypasses the window perimeter sealant. It conducts that water to a sill flashing, which then directs it to the exterior.

These remedies are developed from analysis of failed tile cladding systems. A small investment of time to investigate the performance of older tile wall claddings in the same or similar environment can pay big dividends. It is important to verify the details of the existing wall assembly under investigation since slight changes in design can have a significant impact on performance. The evaluation of the design should go beyond analysis of the typical wall cross-sections, to include architectural features such as window setbacks, overhangs, and surrounding topography. Site visits provide the best assurances of gathering reliable information.

Environmental issues such as vapor drive and air moisture content play an important role in determining the success or failure of a non-cavity waterproofing system. What works in Southern California or New Mexico may not work in Florida or New York.

Details of Wall Assembly

A wide variety of detailing standards exist. Systems that offer less protection against moisture than those listed above (such as a less durable membrane and no drainage cavity), may be satisfactory in sheltered or relatively dry environments. To maximize the effectiveness and

long-term durability of tile cladding in wet, harsh climates, the following design features should be considered:

Drainage: Include a drainage system behind the tile and mortar setting bed, with through-wall flashings above and below all penetrations and interruptions such as windows. Through-wall flashings perform the function of collecting water flowing down the waterproofing membrane and directing that water to the exterior. Install a durable waterproofing membrane on the inboard side of the cavity to protect the building interior from moisture in the cavity.

Flashings: Metal flashings should have fully soldered end pans for reliable performance and should extend beyond the window jamb into the adjacent wall to collect water that may bypass the jamb perimeter sealant. They should project through the face of the wall and turn down to form a drip to protect the vulnerable joints below the flashing. Details 3 and 4 (on the facing page) are schematic illustrations of the key elements of a typical window sill corner before and after installation of this type of metal flashing. Because flashings are buried in the wall and therefore cannot be maintained, select durable flashing materials, such as lead-coated copper or stainless steel, that have a high probability of remaining watertight for the life of the building. Make design allowances for differential thermal expansion of the through-wall flashings.

Waterproofing membranes: Do not compromise on critical items such as the durability of waterproofing membranes, or the use of stainless steel fasteners or lath, if the wall is in an environment where it is likely to be wet for prolonged periods. Match the durability of all components to the projected life of the wall system.

Material terminations: Detail membrane and flashing transitions and terminations explicitly and carefully. Show isometric details of typical and critical areas. Consider membranes such as self-adhered bituminous or butyl rubber that tend to seal around fastener penetrations.

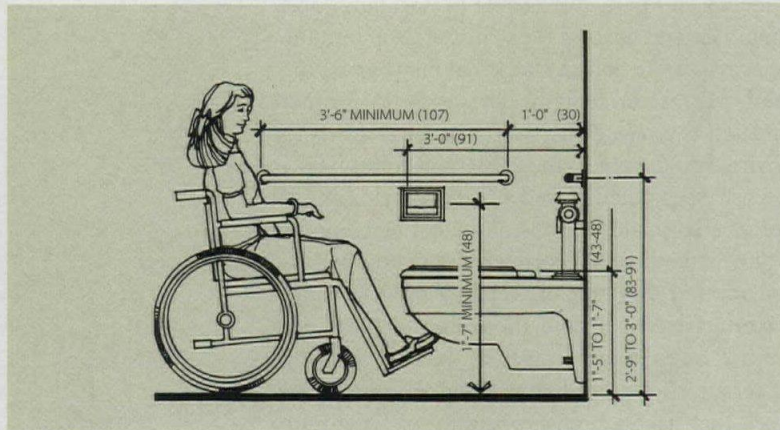
Conclusion

Tile cladding for exterior walls provides a cost-competitive and attractive alternative to other masonry options. But tile cladding systems that do not use materials capable of enduring prolonged contact with moisture and that do not incorporate reliable features to drain water entering the wall tend to deteriorate prematurely in a wet environment. Tile systems, when designed without appropriate regard to geographic location and environmental exposure, can end up costing the owner much more to fix the failed cladding than was saved by cutting corners. □

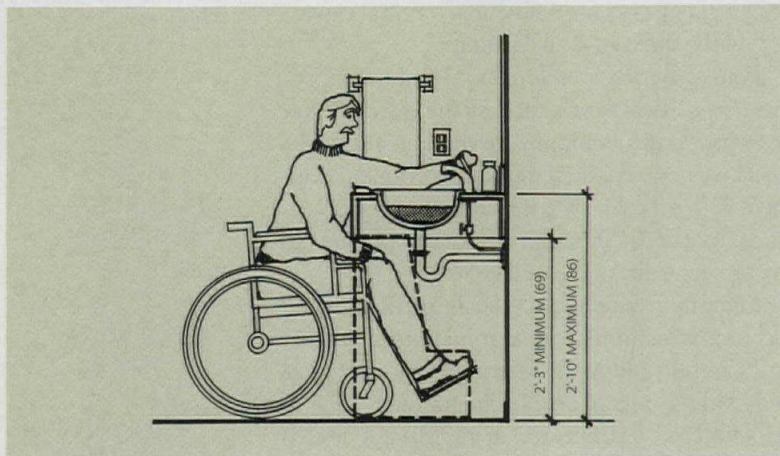
Varying Standards for Residential Bathrooms

Accessible bathrooms in residential design are governed by a number of regulations that are not always clear and are sometimes contradictory.

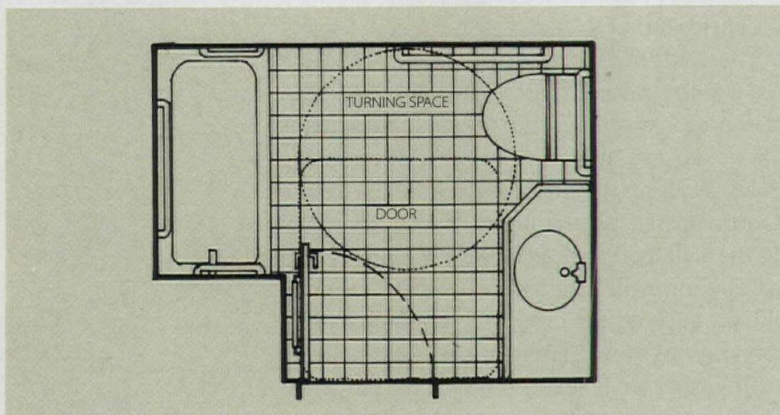
by Kim A. Beasley and Thomas D. Davies, Jr.



1 WATER CLOSET POSITION AND CLEARANCES PER ADAAG STANDARDS



2 LAVATORY POSITION AND CLEARANCES PER ADAAG STANDARDS



3 DOOR-SWING CLEAR OF FIVE-FOOT DIAMETER TURNING SPACE

Design requirements for accessible bathrooms in transient residential occupancies, dormitories, institutional occupancies, and Title II residential facilities vary among federal and national voluntary accessibility standards. These differences, which can be confusing and contradictory to architects unfamiliar with the regulations, often result in design errors and in noncompliance with federal standards.

The specific standards include the ADA Accessibility Guidelines (ADAAG), the Uniform Accessibility Standards (UFAS), the Fair Housing Design Guidelines, and the American National Standards Institute's A117.1 standards.

In order to avoid costly construction mistakes and possible legal difficulty, architects should first determine which standards apply to their project. The Fair Housing Design Guidelines apply to private and public multifamily housing with four or more units; UFAS applies to federally owned or federally subsidized housing; dormitories are covered by ADAAG, and may also be subject to Fair Housing; hotels, motels, and institutional occupancies such as hospitals are typically subject to ADAAG.

Accessibility standards for residential bathrooms typically include requirements for individual plumbing fixtures and maneuvering space. There are significant differences between the fixture requirements for Fair Housing Design Guidelines and the requirements for ANSI, UFAS, and ADAAG. This article describes some of those differences.

Water closets: The clear floor space required adjacent to water closets is similar in the ANSI, UFAS, and ADAAG standards, and in the Fair Housing Guidelines. The major differences between Fair Housing and the other standards are the minimum wall space required behind the water closet (33 inches versus 36 inches) and the configuration of the lavatory or vanity adjacent to the toilet. To meet Fair Housing Guidelines, the lavatory or vanity need not include kneespace, whereas it must in ANSI, UFAS, and ADAAG (1, 2). Architects should also be aware of how other technical requirements for grab bars and wall reinforcement affect the placement of the

The authors are principals with Paradigm Design Group in Washington, D.C., specializing in the design of accessible buildings.

toilet. Water closets that meet ANSI, UFAS, and ADAAG, for example, must be located next to a wall to accommodate a side grab bar.

Lavatories and vanities: The major differences among the accessibility standards for lavatories and vanities are based on the need to provide kneespace under the basin. Fair Housing Guidelines do not necessarily require kneespace, but the other standards do. The height of the kneespace has been increased in ADAAG as compared with both ANSI and UFAS. There are also additional requirements in ANSI, UFAS, and ADAAG for the maximum depth of the sink basin, lever-type faucets, and location of the mirror and medicine cabinet.

Bathtubs and tub/showers: Clear floor space requirements for bathtubs and showers are specified in each of the accessibility standards. Fair Housing Guidelines have allowed designers to choose from two different standards. Of these alternatives, the second option (Alternative B) is the more strict. This requires a 30" x 48" clear space parallel and adjacent to the tub.

All the standards require grab bars or reinforcement, which dictate that the tub must be enclosed on three sides. There is also an alternate tub configuration in ANSI, UFAS, and ADAAG with a small built-in seat. These standards specify, as well, the location of the mixing valve, other operating controls, and the hand-held shower-spray head.

Stall showers and roll-in units: Accessible showers include both transfer stalls (where a bather moves from the wheelchair to a bench or portable seat) and roll-in shower units (where the bather remains seated in a special shower chair and is either pushed by an attendant or is self-propelled into the stall). Fair Housing has less strict requirements for the stall size and requires a smaller clear space outside the shower entrance. ANSI, UFAS, and ADAAG require a built-in seat in the shower and they also address the location and design of the mixing valve, operating controls, and shower-spray head. All accessibility standards require either wall reinforcing or grab bars in the shower. ANSI, UFAS, and ADAAG allow a maximum ½-inch-high beveled threshold for stall showers.

All the accessibility standards except Fair Housing include optional roll-in showers. These stalls are larger and have no threshold to restrict

wheelchair access. The floor structure or slab beneath the shower must typically be depressed to provide an essentially flush transition from the bathroom floor.

Maneuvering space: According to the Fair Housing Guidelines, if a door swings into the bathroom there must be enough clear space to position a wheelchair clear of the door swing in a rectangular space 30" x 48". For ANSI, UFAS, and ADAAG, the required maneuvering space is described as either a five-foot-diameter circle or a five-foot T-shaped area (3).

All of the standards permit the floor space for fixtures to overlap with required clear-floor space. ADAAG, however, does not permit the bathroom door to swing into any fixture clearances. In almost all cases this will mean that the door must swing out.

Exit doors: For ANSI, UFAS, and ADAAG a three-foot-wide door must be used to provide the full 32-inch clear opening width. For Fair Housing, a 2' -10" door can be used to provide a "nominal" 32-inch clear opening.

Grab bars: The placement of grab bars can affect the floor plan of an accessible bathroom. For Fair Housing, the standards for grab bars are less strict. For example, the grab bar adjacent to a water closet can be shorter than that required by ANSI. Fair Housing Guidelines also permit swing-down grab bars so that the water closet doesn't have to be next to a wall. The more strict grab bar requirements of ANSI, UFAS, and ADAAG are critical factors in water closet and bathtub arrangements.

For More Information

If it's unclear what standard may apply to the project you're working on, specific questions may be directed to appropriate federal agencies or departments:

U.S. Department of Justice, (800) 514-0301 (Americans with Disabilities Act);

U.S. Architectural and Transportation Barriers Compliance Board, (800) USA-ABLE (Americans with Disabilities Act and UFAS);

U.S. Department of Housing and Urban Development, (800) 343-3442 (Fair Housing Amendments Act).

American National Standards Institute, (212) 642-4900 (ANSI A117.1 standards). □

there, for example, something inherent in being a top design firm that causes so many of them to treat their staffs poorly? And are there things that employees put up with that tend to perpetuate the problem?

I asked those questions of many people and most agreed that, at least over the short term, top design firms can thrive despite poor personnel practices. One recent graduate says, "A number of my friends work for well-known design firms and they're treated like slaves, but they wanted the experience for their résumés." "They get away with treating people badly," says another architect speaking from experience, "because there are plenty of others eager to work for them."

Bad firms are almost always driven by some guy's ego, by someone who wants to control everything and take credit for everything.

The long-term prognosis for such firms, however, does not seem to be very good. Mark Zweig argues that firms that mistreat employees will not thrive, no matter how good their design. "They can get phenomenal short-term results by exploiting their staff, but none of these firms will succeed over the long run." And Peter Piven thinks, "There are enough 'good design' firms that are also well run to prove that the two are not incompatible. It is true that, in some firms, design is the product of a guru, some of whom are arrogant, but not all good design comes from gurus."

Whether design gurus or not, partners repeatedly came up for criticism in our survey because of their egos. "Bad firms," says Zweig, "are almost always driven by some guy's ego, by someone who wants to control everything and take credit for everything." But the effects of ego extend beyond matters of control and credit. I heard stories of partners who cry poverty with employees and then go out and buy expensive cars, who are stingy with pay increases and then take lavish vacations, and who never walk back to the drafting room but call staff members to their quarters at the front of the office, sometimes just to fire them. Isolated cases? Perhaps. But the overriding sense you get as you read through the responses to our survey is that, as one employee writes, "Most firms don't care about their people!"

You hear this particularly about firms organized around single "star" designers. Such firms tend to rise quickly, but they rarely seem to last more than a decade or so before breaking up, stagnating, or slipping into oblivion – a fact often explained in terms of changing design sensibilities or the inability of a designer to change with the times. But I suspect that a study of such firms would find that what they really failed to do was to turn the tremendous number of talented people moving through their offices into committed long-term employees. Whatever else these firms represent, they reveal the hollowness of the myth that firms cannot be good at design

and be well-managed at the same time. Any firm that still believes that is on a sure path to ruin.

What Makes a Good Firm

The good news is that avoiding the road to ruin is not so hard. Just ask those employees in this profession who, from the evidence of our survey, seem to have a pretty sure grasp of what it takes to create a good working environment: "a respect and valuing of employees," an "ability of management to delegate responsibilities," a "collaboration between all firm members," a "clear direction and shared professional ethos," a "positive leadership," an "interest in training/developing staff," "good communication and rapport, diversity of projects, and adequate compensation," "teamwork," "trust," and "honesty." What it gets down to, says Steve Whitney, a vice president at Albert Kahn Associates, is "How would you like to be treated if you were in the same situation?" Too many principals, he feels, don't ask that question of themselves often enough.

Another good sign is that at least some think that personnel practices will get more attention in the future. The mistreatment of employees, says one architect, is "a practice of the past. The new generation can't afford it anymore. There is too much pressure on us to be efficient and competitive." Bad management, in other words, like bad design, is wasteful and expensive over the long term.

And what would current employees do if they were running firms? Some I talked to would focus on compensation. "Pay higher wages; more money is still the best way to achieve high levels of productivity and to keep good people," says one employee. Others would provide their employees with a variety of interesting work. "Try to bring in work that architects as a group enjoy working on," says another architect. "Onerous work usually brings with it staff disaffection, boredom, poor effort, and high turnover."

The majority of people, however, would strengthen relationships among staff members. "Be as honest as possible about hiring intentions and create a personnel handbook and follow it." "Distribute responsibility, display trust, and attempt not to show favoritism or prejudice." "Try to harvest creativity and output by motivation instead of by extraction." "Share as much information about the firm's direction as possible with all staff, and reward overtime with time off, bonuses, or a simple thank you." "Make a conscientious effort at team-building and related group activities." "Encourage an open/creative environment by acknowledging that you can have fun and also be serious about and committed to the work."

Such things, of course, are easier said than done. Still, I find such comments cause for hope, because they show a growing awareness in our ranks that we need to become as sensitive to the people we work with as we are to the objects we design. And it is about time, for as one astute employee asked, "How much credibility can we have talking to clients and the public about creating good environments for people if we fail to do so in our own offices?" □



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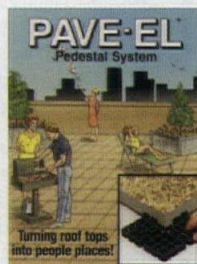
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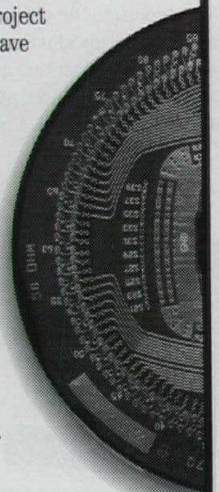
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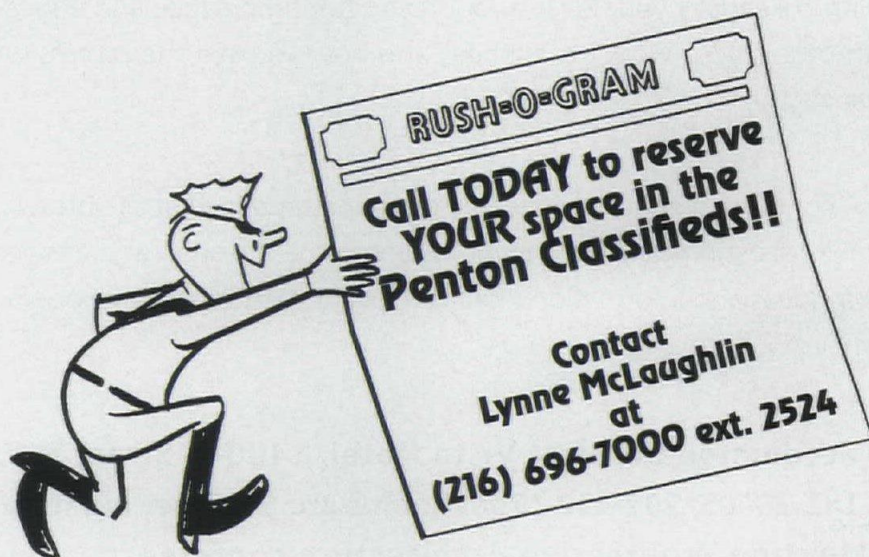
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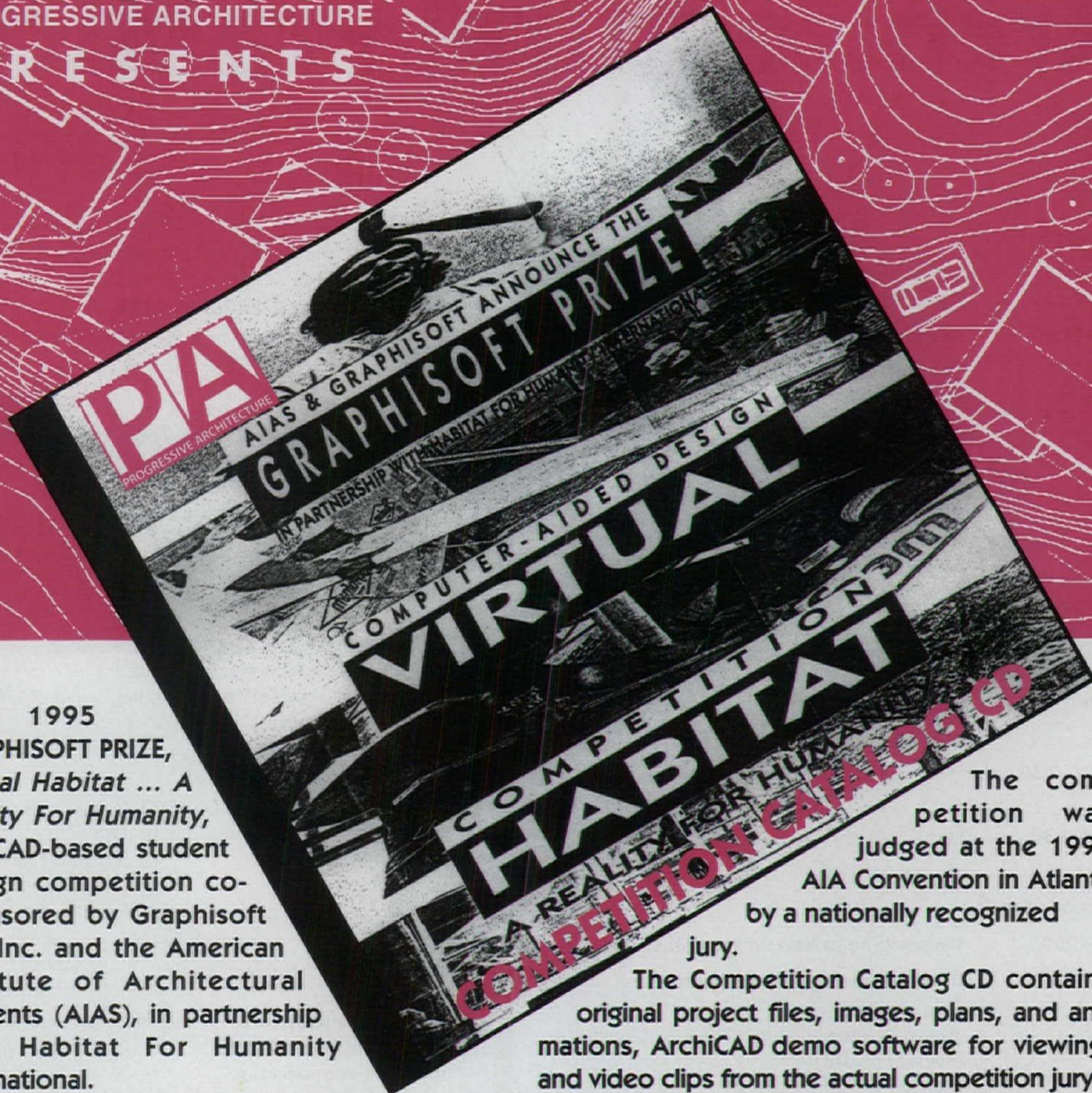
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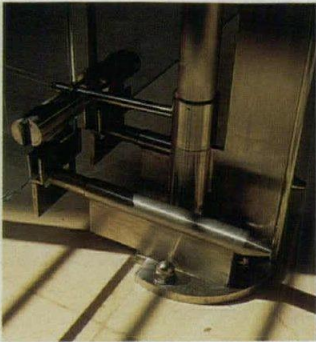
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Curtain Wall of Salvaged Parts

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1



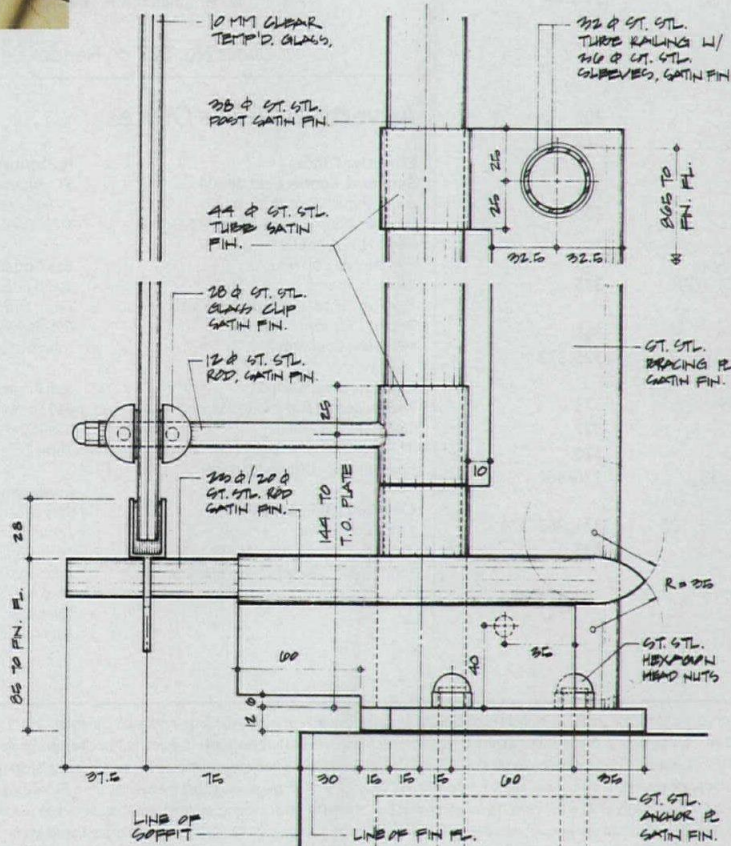
2

For the head office of the Da Cin Engineering Company in Taipei, Taiwan, the owners wanted an interior that would communicate a sense of material refinement and craftsmanship. The Guan Hu Lintrott Partnership responded with a design that expresses those ideals in its details, and draws some of its materials from an unlikely local source.

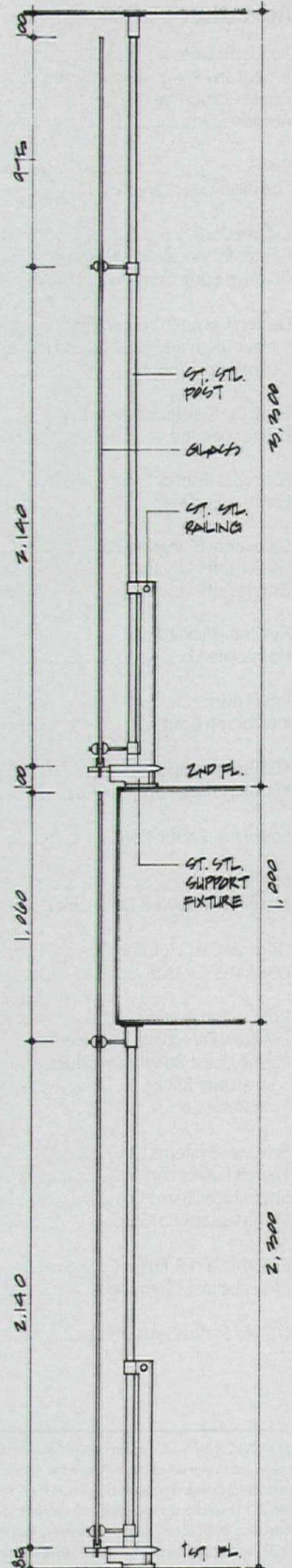
For example, the office lobby includes a two-story space with an interior glass space with an interior glass curtain wall (1) that serves as a translucent partition on the first floor, and as an enclosure for office space on the second floor. The curtain wall takes the form of plate glass supported by a delicate stainless steel framework (4).

This custom-designed framework was inspired by found pieces from one of Taiwan's major industries: ship salvage. According to architect David Hu, the slender vertical poles that support the glass anchoring system are refurbished ship railings. The bases of the curtain wall (2, 3) are assembled from ship-engine transmission rods that have been polished to a number 4 stain finish and honed to a point. Hu refers to them as the "fingers" that delicately reach out to support the glass. The clips that anchor the glass to the vertical poles are made from salvaged steel rods that were divided. To anchor the bases, Hu chose unadorned hexagonal stainless steel nuts to complete the nautical theme.

Michael J. Crosbie



3 SIDE ELEVATION OF CURTAIN WALL BASE



4 CURTAIN WALL SECTION