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May I congratulate RECORD for the inspiring story by Martin Filler on Lewis Mumford [RECORD, April 1982, pages 116-123]. It is certainly one of the finest and most moving pieces I've ever read about America's truly preeminent architectural writer.

Mumford stands alone as the most understanding and sympathetic observer and critic of architecture and architects. *Arthur Rosenblatt, FAIA*
Vice President,
Architecture and Planning
The Metropolitan Museum of Art
New York City

I was very excited to read RECORD's article "Islamic Architecture and Rural Dwellings from Beijing to Kashi" in the May 1982 issue [pages 92-101]. I had been in Urumqi and Turfan and Xi'an in the summer of 1980, and had planned to go to Tashkent and Samarkand last year but was forced to cancel the trip.

When I saw the photograph of the Mosque of Turfan, it really brought back pleasant memories. We were not able to see the Fing Ho people's commune, although we did see a great many cave-type dwellings. (I am certain I have a photograph of that same gentleman with those same glasses that you show on page 94.)

Thanks again for bringing back some fond memories. *Gordon Wildermuth, AIA*
Partner
Skidmore, Owings & Merrill
New York City

I'm writing in response to RECORD's March 1982 interview with Paul Rudolph [pages 90-97]. I, being a young upstart just out of school, certainly have no credentials with which to challenge the ideas of such a distinguished and experienced architect as Mr. Rudolph, but I can spew criticism like everyone else.

I thought some of Mr. Rudolph's views were enlightening, but his criticism of post-modernism lacked an open-mindedness that was disturbing. I wonder if it actually isn't his way of taking some revenge on those post-moderns who so defiantly and often unjustly rip at the integrity of their predecessors. But I suppose it is more than just revenge. He calls 19th-century eclecticism "not, as I see it, an admirable state of affairs." I cannot agree. A neighborhood of Victorian houses, or even one standing alone, is to me an exhilarating and esthetic experience, and I know that many, including residents, share this view. I think his aversion is not so much intellectual as just plain personal taste.

If Mr. Rudolph has never seen a post-modern building in plan or section but only in elevation, I suggest he has not looked very far. Those renderings of a "Study of Lower Manhattan Expressway" by Paul Rudolph appear to me no less like a pipe dream or a joke than a Michael Graves drawing, though less fascinating.

To undermine eclecticism or pluralism, which is in this day an inevitable swing of the pendulum, is dogmatic. If it is not "true architecture," perhaps Mr. Rudolph should write up a program for us all to follow so that his modernism can proceed as it is supposed to. *Douglas R. Boldt, Architect*
Rock Island, Illinois

Artistic scholasticism, phooey! As Bradford Perkins so lightly shrugged off in his enlightening February 1982 RECORD article "Who should be afraid of Tom Wolfe?" architects are underpaid. In my opinion, no amount of professional recognition can compensate for that. It is a shame that those who build the buildings we design should be paid more for it. Being amiss for nearly a century now, while trade unions continually put us to shame, we must demand top dollar and not try to cut each other's throats. If we are to maintain ours as a viable profession, we must cut the bull and get the bucks.

Alan J. Nevins, Architect
Woodbury, New York

I read with great interest the article by Jonathan Barnett in RECORD's January 1982 issue entitled "Designing downtown Pittsburgh" [pages 90-107].

I would like to call your attention to page 105, where two references were made to "Llewelyn-Davies Associates, whose successor firm is Buckhurst, Fish, Hutton, Katz." Llewelyn-Davies Associates did not and has not ceased to operate in the United States. It only relocated its corporate headquarters to Houston and is actively doing business as Llewelyn-Davies Sahni. *Randhir Sahni, AIA*
Llewelyn-Davies Sahni, Inc.
Houston

Correction

F. Harlan Hambright should have received photographic credit for four illustrations in the April 1982 issue of ARCHITECTURAL RECORD: on page 130, at upper left and lower right, and on page 132, both photographs at bottom left.

Continued on page 37

July 6-9

Seminar on Passive Solar Energy, sponsored by MIT Laboratory of Architecture and Planning. Contact: William Ronco, Coordinator of Special Programs, MIT Laboratory of Architecture and Planning, 77 Massachusetts Ave., Cambridge, Mass. 02139.

July 12-15

Seminar on Low Energy Approaches to Commercial Building Design, sponsored by MIT Laboratory of Architecture and Planning. Contact: William Ronco (see July 6-9).

August 8-13

Conference on Advanced Automation, sponsored by Engineering Foundation; New England College, Henniker, N. H. Contact: Dr. Sanford S. Cole, Director, Engineering Foundation, 345 E. 47th St., New York, N. Y. 10017 (212/644-7835).

August 16-20

Seminar "Adaptive Reuse: Integrating Traditional Areas into the Modern Urban Fabric," sponsored by the Aga Khan Program for Islamic Architecture at Harvard and the Massachusetts Institute of Technology: to be held at MIT. Contact: Office of Special Programs, Sharon Trohon, Room 4-209, MIT Laboratory of Architecture and Planning, 77 Massachusetts Ave., Cambridge, Mass. 02139.

Through September 30

Exhibition "Barry Byrne and John Lloyd Wright: Architecture and Design"; at Chicago Historical Society, Clark St. at North Ave., Chicago.

September 5-11

International Passive and Low Energy Alternative 82 Seminar/Course, sponsored by Laboratory for Architectural Science and Environmental Research, University of Miami, Coral Gables, Fla., in cooperation with the Florida Solar Energy Association and the Arab Section/ISES; at Biological Station for Research, Bermuda. Contact: International PLEA 82, Box 248271, Coral Gables, Fla. 33124 (305/284-4766).

Through October 10

Exhibition, "New American Art Museums," showing current work of eight architects; at Whitney Museum of American Art, Madison Ave. at 75th St., New York City.

October 4-6

First North American Conference on Industrial Architecture, sponsored by the American Institute of Architects; in Detroit. Contact: AIA Professional Interest Programs, 1735 New York Ave., N.W. Washington, D. C. 20006 (202/626-7300).

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Letters/calendar, 4

Editorial: On fees, fairness, fungibility, 9

Business

News, 17

Practice: Can small offices succeed at design-build?, 19

Legal perspectives: New rulings on indemnification clauses, 25

Costs: Materials steady, labor still going up, 27

Successfully negotiating and collecting a fee, 29

Design

News, 53

Design awards/competitions, 58

Building Types Study 578: Record Apartments 1982, 77

The French Quarter, San Rafael, California, 78

by Design Phase II Associates

222 Columbia Heights, Brooklyn Heights, New York, 82

by Alfredo De Vido

William Bell Townhouses, Birmingham, Michigan, 86

by Carl Luckenbach/Robert L. Ziegelman, Inc.

The Car Barn, New Bedford, Massachusetts, 88

by Boston Architectural Team

Glover Street Condominiums, San Francisco, California, 92

by Daniel Solomon and Associates

William R. Cannon Chapel, Emory University, Georgia, 94

by Paul Rudolph, architect

The role in architecture of Denise Scott Brown, 102

An illustrated interview

Conference Center, Nanticoke, Pennsylvania, 108

by Bohlin Powell Larkin Cywinski, architects

"Physical and metaphysical in architectural criticism," 114

An article by Dr. James Marston Fitch

E.F. Hauserman showroom, Los Angeles, 120

by Vignelli Associates, designers

Engineering

Clustered columns play hide-and-peek, 124

An analysis of the structure of Paul Rudolph's first glass building

Focus on ceilings: an architect's view, 128

An interview with Kenneth Walker, president of Walker/Group

New products, 132

Product literature, 139

Office notes, 39

Classified advertising, 162

Advertising index, 176

Reader service inquiry card, 179

Cover:

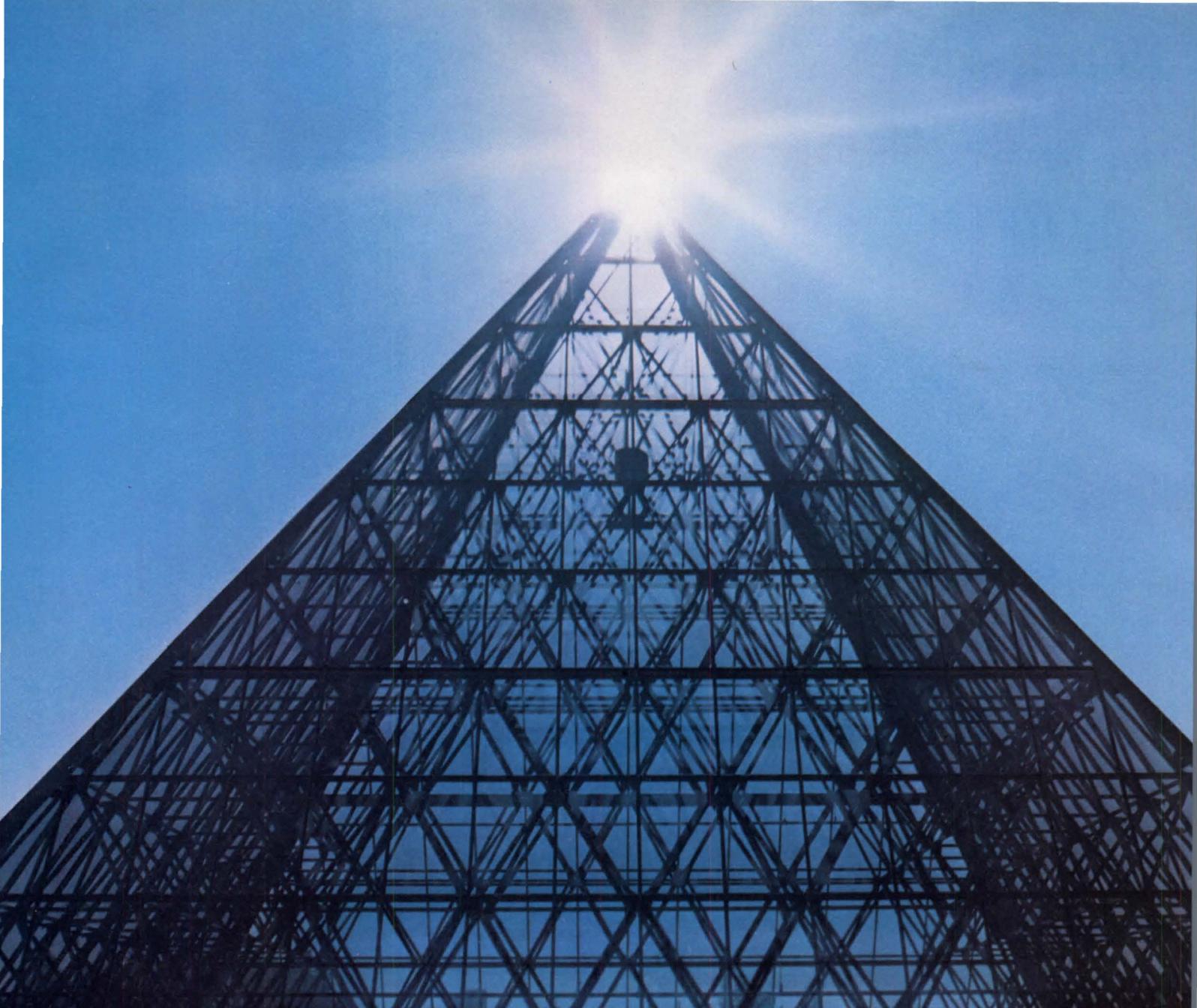
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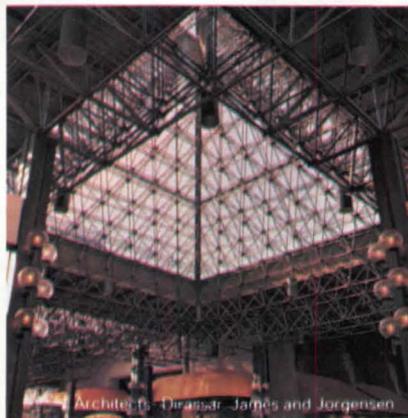
Nanticoke, Pennsylvania

by Bohlin Powell Larkin Cywinski, architects

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On fees, fairness (to thyself and others), and fungibility

This month's Business pages begin with a news story that is bound to attract a lot of attention—it reports the results of a survey of architects' compensation made among its members by the New York Chapter of the AIA. The results are (predictably) exceedingly depressing; the reaction of the chapter members is (hurray for them!) bold and exceedingly positive.

Briefly, the survey (with 109 of 310 firms responding) reveals that “starting salaries vary from \$10,500 per year in firms of three to five persons to \$14,472 per year in offices of 41-100 persons. . . . Only 20 per cent of architecturally trained personnel earn over \$35,000 per year, only 7 per cent over \$50,000.” Except, as the survey report puts it, “for a very small group of principals who are, perhaps, fairly compensated. . . . professional compensation is woefully inadequate, particularly at the starting levels.”

The positive part? The NYC/AIA committee that made the survey has recommended (with, reportedly, very strong initial support across the chapter) that “a financial program be implemented that will enable starting salaries for qualified architectural school graduates to be increased approximately 20 per cent each year for the next three years. . . . This adjustment should be exclusive of any further adjustments for inflation. The effect of this increase will bring architects' starting wages to approximately the same level as neophyte mechanical and structural engineers. . . .”

What would the total cost be? With a 60 per cent increase over three years for starting professionals, plus “suitable adjustments for all other [higher] levels in the firm . . . including an increase in partner draw of 15 per cent,” the committee estimates “an overall increase in salaries of 35 per cent. Overhead attributed to payroll, taxes and vacations would go up 5 per cent for a total increase of 40 per cent.”

How would that affect fees? Depending on the multiple of wages used by a firm in calculating its cost and the level of profit (from “same as now” to a 35 per cent increase, paralleling the salary increases), the committee calculates that fees would need to go up between 13 and 19 per cent. The committee's challenge to the chapter members: “Can any of us honestly look at our list of clients and our operations and categorically reject the possibility of this result over a three-year period if we make it a first order of concern?”

Well, can we? In another article in this month's Business section, attorney Barry LePatner, who was on the NYC/AIA committee and who specializes in contract and legal concerns of architects and engineers, argues that “[the same] architects who express dismay at the competition for projects which compels them to submit fee proposals that result in minimum profit . . . will devote little, if any, time to improving their business acumen as a means of increasing their ability to negotiate for higher fees.” And he points out, as he undoubtedly did to the committee, that “if problems of cash flow, collection, or lack of business become a daily psychological Sword of Damocles, the caliber of services will inevitably decline. As a correlation, an effective and efficient staff is a function of profitability.”

Thus, what both the New York Chapter committee and attorney LePatner say—and what we might say to ourselves—is this: Can't we bite the bullet (and be fairer to ourselves and our employees) and decide to push hard for that increase in fees and/or increase in-house efficiency? Heaven knows that no organized and concerted effort to raise fees is possible—remember the Justice Department's hassle over those booklets of suggested fees, and the more recent prohibition of any ethical standard that prohibits price quotations (which of course invite price bidding). But it clearly is within the province of any professional to decide that he is going to fight for a fee that does make the firm a fair profit and pay the staff a decent wage. Some clients will buck—and must we continue to take clients with so little respect for professional skills and effort? I get a strong sense that more and more clients are pushing for quality in their buildings, and know that the likeliest way to get a good building is to hire a good architect. Clients will not, of course, be willing to increase fees unless they are asked and unless the reason for the increase is made clear. But if I were a practicing architect I would not hesitate to ask for a fair fee and I would not hesitate to argue, in defense of a fee above some low bid, that architects' services are not (to use a word Barry LePatner taught me) *fungible*. Fungible means interchangeable—and any architect who believes that his or her services are no different and/or better than a price-bidding competitor deserves neither the fee nor the job. *Walter Wagner*

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Architects' salaries going up? The New York Chapter takes on the cause

Moved by the "medieval" results of a recent survey of salaries for architects in New York's metropolitan region, the New York AIA chapter has passed a landmark resolution that would commit its members to raise salaries substantially and that probably will raise national controversy.

According to chapter president Joseph Wasserman, "The current situation is medieval. Our survey showed that salaries haven't even kept pace with inflation over the last 25 years, while all other professions have improved their lot generously."

What the survey shows specifically is—that while the New York metropolitan region leads most areas of the country in architects' salaries by a substantial margin—newly hired graduates are paid barely survival salaries (\$10,500 to \$14,472), while principals earn a median compensation of \$60,000 for 12- and 14-hour days, six or seven days a week. Only 20 per cent of architecturally trained personnel earn over \$35,000 per year.

What does the chapter propose to do? Work for the cooperation of all member firms to raise salaries by 20 per cent a year, "exclusive of any further adjustments for inflation" until the top starting salary reaches \$25,590 by January 1, 1985, and other salaries rise on a proportional basis. A principal's median income would be \$72,000.

What would this mean for the already tenuous profitability of many firms? Wasserman and the members of the chapter's

Compensation Committee—many of whom represent some of the largest and most business-oriented firms in the country—figure that the proposal would add somewhere around 13 per cent to current costs over the next three years, assuming current profit levels are to be maintained. The committee has based the 13 per cent on costs in a hypothetical office (see chart).

According to Wasserman: "The question before us is simple: Can the typical firm increase its fees 13-19 per cent, or reduce its non-salary costs by that amount, or more probably affect a combination of the two? Can we categorically reject the possibility of this result over a three-year period, if we make it a first order of concern?"

Another committee member says, "What we need to do is work smarter, not harder." And indeed, there are some convincing arguments. Wasserman: "We will have an incentive to produce work infinitely more effectively than we do at present. Firms will have a much greater incentive to make use of time- and labor-saving practices, architectural schools will be obliged to train young professionals with truly marketable skills."

"The result will be that those offices that select and use personnel most effectively and offer them adequate and self-respecting compensation will turn out work of better, more dependable quality than that of 'cheaper' competitors. Our clients will see the difference quickly, and will be willing, maybe even happy, to pay the difference, if that is what is required." C.K.H.

New rules pending on reporting payments to non-employees

The definition—for tax purposes—of independent contractors should be clarified once and for all by new legislation this summer. The issue affects architects and engineers who employ consultants or "farm-out" their work loads to non-employees. At issue: withholding taxes, Social Security, and employee benefits. The IRS is becoming increasingly wary of "independent contractor" arrangements that can result in non-reporting of income by the outside firm or persons.

Staffers of the Senate Finance Committee, whose chairman, Robert J. Dole (R-Kan.), introduced a clarification bill this spring, report that it has drawn 20 co-sponsors, including nine members of the Committee. In the House, a companion bill introduced by Rep. Richard A. Gerhardt (D-Mo.) also has attracted some co-sponsors.

The new bill includes a five-element "safe harbor" definition of what constitutes an independent contractor for tax purposes. It also retains the currently employed common-law definition as an alternative standard.

Under Dole's "safe harbor" definition, to qualify as an "independent contractor," the "contractor" rather than the employer (the "service recipient") must control work hours and scheduling. The contractor must have his own principal place of business, and must be "economically independent." Contractor and employer must agree on the independent-contractor classification, and the employer must comply with IRS requirements to report payment to the contractor.

The bill would not create any new reporting or record-keeping requirements, but would introduce rather stiff penalties for those employers who fail to report payments to contractors to the IRS. The maximum would be a fine of 30 per cent of unreported payments for any employer who fails to file information on more than one-fifth of total payments to independent contractors. Also, if an independent contractor refuses to supply his taxpayer identification number, the employer would be required to withhold 15 per cent of payments.

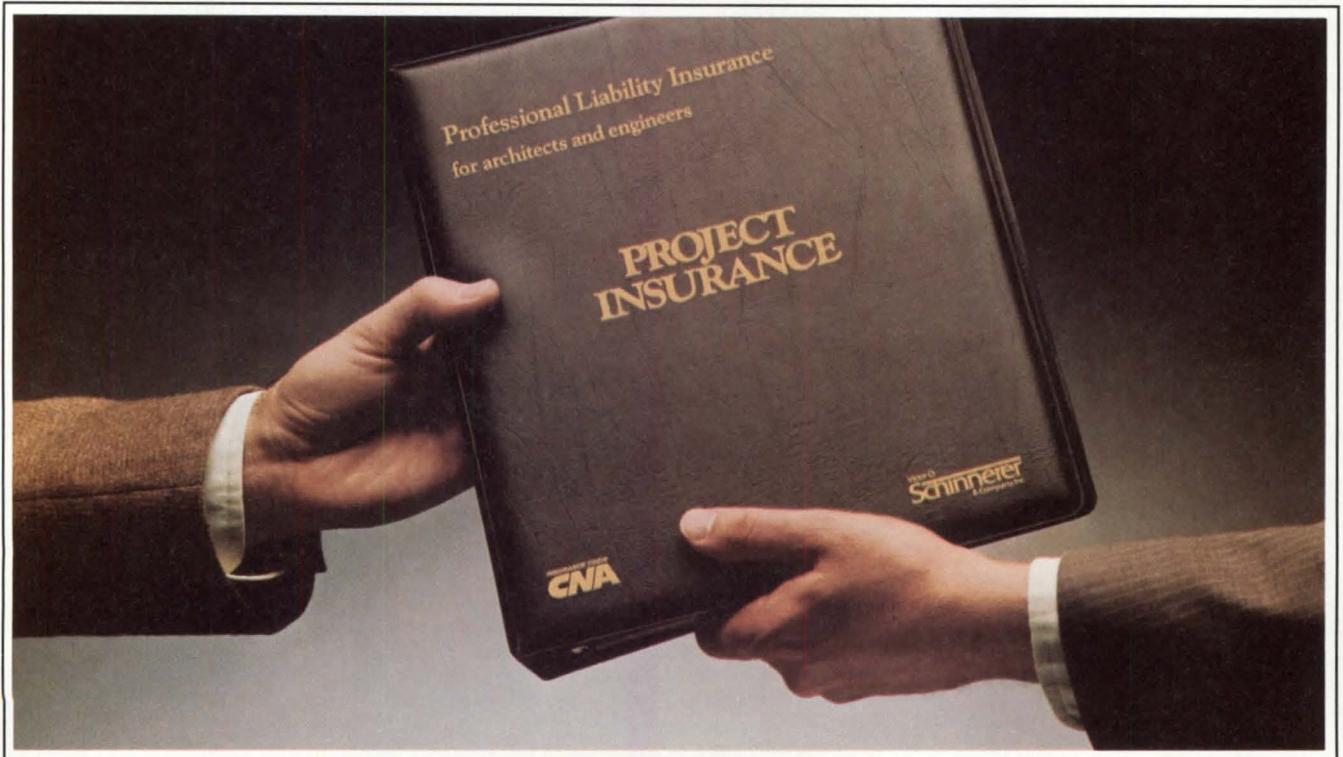
Dole had been pressing for this bill because existing temporary restrictions on IRS audit efforts in this area expire June 30. This "moratorium" legislation had prevented the IRS from re-classifying workers as "employees" subject to withholding taxes whenever there was a "reasonable basis" for regarding them as independent contractors. Peter Hoffman, World News, Washington, D.C.

Profile of a hypothetical 10-man office

Assumptions: 1. "Break even" multiple is 2.5 x wages which covers all expenses, including a draw of \$60,000 for a single partner/owner. 2. Consultants are paid 30% of gross fees.

| | Before | | After Adjustment | |
|--|------------------------------|---------------------------|--------------------------------|--------------------------------|
| | "break even" before increase | "break even" after 1/1/85 | Profit at 50% of "old" payroll | Profit at 50% of "new" payroll |
| Payroll & partner draw | \$ 291,000 | \$ 393,000 | \$ 393,000 | \$ 393,000 |
| Overall wage increase | 0 | 35% | 35% | 35% |
| Overall required increase in fees or reduction in cost | 0 | 16% | 13% | 19% |
| Multiple of "old" payroll | 2.50 | 2.90 | 3.40 | 3.57 |
| Multiple of "new" payroll | | 2.15 | 2.50 | 2.64 |
| Gross Fees Including Consultant | | | | |
| Fee | \$1,039,000 | \$1,206,000 | \$1,413,000 | \$1,484,000 |
| Fee per man/year | 104,000 | 120,000 | 141,000 | 148,000 |
| Fee per man/hour | 58 | 67 | 78 | 82 |
| Net Fees After 30% Consultant Payment | | | | |
| Fee | \$ 727,500 | \$ 844,000 | \$ 989,400 | \$1,039,000 |
| Fee per man/year | 73,000 | 84,000 | 99,000 | 104,000 |
| Fee per man/hour | 40 | 47 | 55 | 58 |
| Profit | 0 | 0 | 145,000 | 196,000 |
| Average wage or draw | 29,100 | 39,270 | 39,270 | 39,270 |

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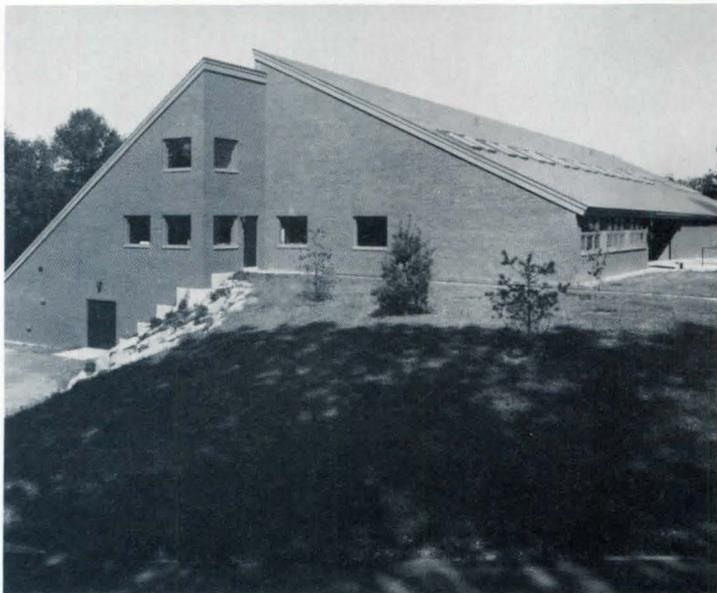
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Practice: Can small architectural offices succeed at design-build? Here's case-study proof



Close control of projects: Architect Douglas Trees (right in photo above) enjoys the day-to-day contact with his construction sites and crew. He also enjoys the control of the finished building that results from this contact. Here, he is seen working on the second phase of the New England Biolab (see photos and caption, overleaf). The second phase was anticipated by building an unfinished basement with "knock-out" panels under the original structure. Discussion began last September, and construction is to be complete this September.

Opening some options: The Bruel & Kjaer Company is based in Denmark and makes sound and vibration equipment. In the largest project for Trees to date, the company wanted Denmark's standard of a 100-year life for their U.S. building (photo, below). But the



© John Krieger

company might have settled for the U.S. standard of 25 to 30 years, until Trees guaranteed a cost of only 40 per cent more for 300 to 400 per cent more life expectancy. The building has heavy, laminated-wood framing with a slate roof and brick walls. An unusual insulation feature supplied by Trees is gas-filled double glazing for greatly improved resistance to heat transfer.

Several years ago the American Institute of Architects set out on an experiment that allowed its members to practice design-build, the process in which the architect is also the general contractor and may or may not have a financial interest in the project. With the abandonment of the mandatory Code of Ethics, the question of whether design-build is "professional" became moot—and at any rate design-build is already an established fact with many firms.

In last month's survey of ten leading architects on their business survival tactics, none were interested in design-build—preferring instead to stick to the traditional role of the architect as an overseer, and not a participant, in the construction process.

Nonetheless, reports on the AIA's "experiment" in design-build make clear that many professionals do see advantages in such participation. What are they? What do they mean for those professionals? And what do they mean for the quality of the buildings that result?

An interview with Douglas Trees, a highly successful and highly-satisfied practitioner of design-build, gives some insight. Trees left Earl Flansburgh & Associates, where he was an associate, almost ten years ago, and set up the Lindentree Corporation in rural Hamilton, Massachusetts.

He has kept his architectural office small and tight, with no more than three or four people, though he also employs some 30 construction personnel. Initially he designed and built only single-family houses (some 70 houses since 1973), but he is currently moving into much larger commercial projects (see photos and captions). He attributes a large part of his success to working on a turn-key basis, without the long-term financial involvements that have put other design builders in trouble.

Trees went into design-build because he likes to control the whole construction process, and feels that this works for both his and the clients' advantage. "I like projects and processes that I can get my arms around," he says.

Design-build advantage No. 1: Control of the finished building "Often, in design-build, design falls by the wayside," says Trees. "My aims are just the opposite: to assure that the building gets built the way it is designed. Normally the architect and contractor become adversaries and the contractor interprets design drawings in ways that can't be controlled by once-a-week visits."

Trees also controls his person-to-person relationships and hence his time and lifestyle. "Being the architect *and* contractor with your own work force not only eliminates unwelcome surprises, but a lot of unpleasantness as well," he says. "This applies equally to the architect-client relationship. I don't have to argue with the client if an employee takes an extra five minutes for lunch. We are delivering a building at a fixed cost and time."

Advantage No. 2: A whole new clientele that eludes most architects "We aren't asking a businessman to plank down X number of dollars for six sheets of paper and a promise that *someone* will build the building like the paper."

Trees feels that the process is particularly appropriate for those commercial projects that cost less than \$1 million to \$2 million. He says, "Businessmen building in these price ranges seem to have a difficult time justifying a fair architectural commission—unless they can see it as part of the cost of the finished product.

"In any case, the traditional architect-client-contractor relationship doesn't serve the best interests of the client in these situations. There's just too much fat—too many profits—with all of those people involved. And the contractor—if he's big—may only work on that small project when other jobs aren't calling."

Trees argues that design-build improves control and quality in many ways

First, Trees's crew of workmen are seasoned, and he and they are used to working together. He gains loyalty from the carpenters, whom he employs directly by guaranteeing full-time work. "I accept the responsibility for their employment, scheduling inside work in the winter and major construction in good weather," he says. Similarly, he employs the same plumbers and electricians steadily. "In return, everyone is in the same game, and there is constant motivation for workmen not only to do a good job, but to point out better ways of doing things.

"One of the joys is that bad details—and every architect can draw them—can be improved on the spot without change orders and delay. There's no competition to prove who's the idiot this week—the architect or the contractor.

"I don't want to demean good contractors. There are many, but under the standard procedure, there are just too many temptations to cut corners, and the



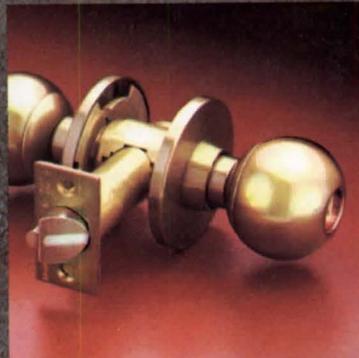
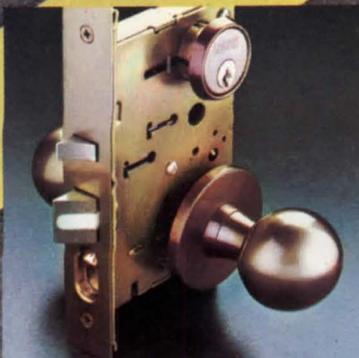
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Circle 13 on inquiry card

New markets for architectural services:

The owner of the New England Biolab—which makes enzymes used in DNA research—thought that he could afford only the type of building that often gets built without architects: a plain industrial shed. Still, he was anxious to attract specialized technicians to the rural location by offering a good working environment. Turning around this client's thinking on affordability, Trees has answered the needs for both speed and economy while providing a very pleasant working environment, as shown in the completed first phase in the photos right. He feels that his ability both to design and to build the building placed him in a unique position to do this (see text). There was no precedence for the plans, as the manufacturing process was developed by the owner, and is subject to frequent changes. The interior is light and airy because there is one open space under the clerestory, in which clerical functions occur on a balcony over the production facilities. It was possible to expose the laminated wood beams because of the high fire resistance inherent in their thickness.

Scheduling and cost control:

Central Pond Associates office building (photo bottom) had to be produced on both a tight budget and time schedule, while maximizing the advantages of the picturesque site inside and out. An added criteria was fitting the design into a group of historic buildings.



©John Krieger



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contractor who is the low bidder isn't always the best—or the cheapest in the long run."

Another way that Trees controls his buildings is through those construction and design techniques that can only grow out of very close experience with the construction process. He is always looking for new products and systems that *perform*. And he is compiling an ever growing list that suits his particular operation.

Some, like the preassembled wood frames that he uses to save construction time on houses, are not unusual. Nor are his standardized cabinet details, except for their high quality. His experience with doors has led him to take up the dealership of one particular door that pleases him.

Trees feels that standard construction contracts thwart the incentive for inventiveness on the part of architect and owner alike. And he has come up with some surprising results through invention.

For instance, he is experimenting with plastic laminate as an interior finish. "The savings in labor and loan interest because of speed may more than offset the cost of the material," he says. At the moment he uses plaster, because he feels that the appearance is worth the 30-35 per cent premium in his area.

A more daring experiment is his revival of the wood-burning stove with a long-forgotten heat distribution system called the Russian flue. He has installed this in his own office where he "debugs" his ideas. The Russian flue, instead of leading most of the heat up and out of the building, snakes back and forth above, beside and even underneath the hearth, transferring heat into a large volume of masonry all around it—and hence back into the building. The total fuel costs on one new, heavily insulated, 3,800-square-foot house with the flue was \$500 last winter. That's payback.

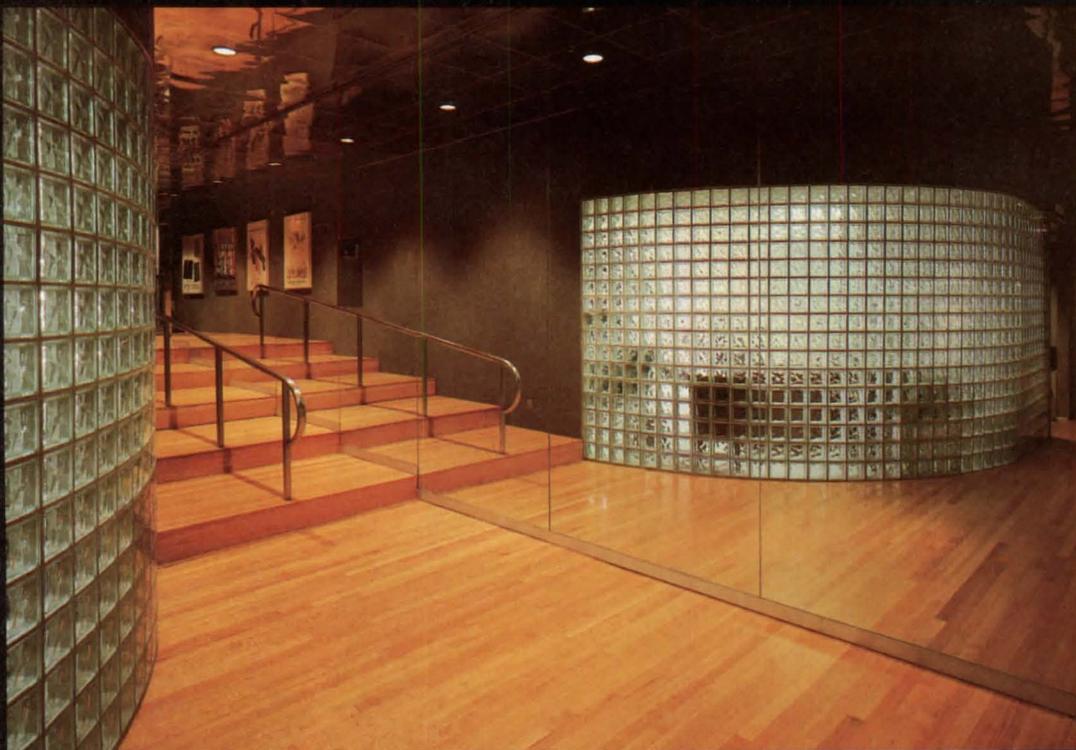
Trees sees little "payback" in most other energy saving techniques, such as active solar systems: "The pipes freeze and the pumps break. The owner has to be a mechanic to make them work. The first considerations should be the insulation of walls and windows."

In design-build, says Trees, financial success depends on a firm definition of the work

To control both the finished building and costs, Trees starts each project with not only a fixed cost but a firm definition of what that cost is buying, in both drawings and contract. This avoids misunderstandings with the client, and encourages the workmen to do

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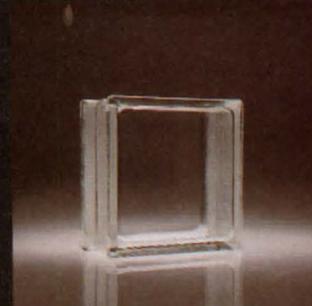
Lincoln Center for the
Performing Arts
New York, NY
Architect: Gwathmey Siegel

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Innovation and cost control: Tree's client for the Zampel residence (photo top), who is in construction and could have built his own house, preferred the complete "package" that Trees could provide. Situated on a cliff near the Massachusetts coast, the large residence has a combined heating system of conventional furnace, passive solar collection and Tree's unusual flue system (see text). Fuel costs last winter were only \$500. The Weaver residence (photo above) has the first installation of Tree's unusual flue, and shares similar energy-conservation advantages. Trees produced a very different design for this house. The roof has been brought close to the ground to give a visual tie to the site on the top of a gentle hill in the middle of a field.

a better job. "They know they won't have to rip something out because someone changed their mind," says Trees. "Do it once and do it right."

Trees's feelings are so strong on this point that he seldom accepts a job on a cost-plus basis. Although his contracts are written for both design and construction at a total of 15 per cent profit, he reserves the right to turn the drawings over to the owner for 5 per cent at the end of design, if he sees a lot of client changes ahead. "It's a matter of pride and reputation," says Trees.

And his success depends on the ability to "keep your word on costs, quality and time"

"I have never had to advertise, although I have nothing against it. My work is by word of mouth," says Trees. "Many clients are on the rebound from construction bids 50 per cent over the budget. Despite all of the bad-mouthing of design-build architects, there is the question of who is making a bad reputation for whom."

Another way that Trees maintains control of his projects is to limit his geographic area to within a manageable 10-12 mile radius of his office in Hamilton, Massachusetts. This gives him the ability to watch work closely as it progresses.

And it allows him to become involved in the shaping of this particularly scenic area. "Part of the reason my wife and I moved from Boston was to adopt a small-town lifestyle," says Trees. "We are deeply involved in community affairs, as are the people in our office. And again, this has advantages in bringing in work."

Because of the combination of his local involvement and ten-year track record on many local buildings, Trees is able to influence local planning, and in fact wrote Hamilton's cluster zoning ordinance. In one of his few speculative ventures, he bought 13 acres and broke them into five house lots, where zoning would have allowed nine. The advantages to the town in terms of reduced density were obvious, and the town waived a number of its requirements to allow an uncluttered and rural atmosphere. Among these requirements were sidewalks, curbs and a minimum common-road width of 28 feet.

"Trade-offs like this are the way to go," says Trees, and the town seems to agree. Proceeds from such land ventures go into a revolving fund for future acquisitions.

Trees equates his role in Hamilton to that of a doctor who is a general practitioner, ready to meet most needs with the expertise

at hand. "When more specialized knowledge is required—such as unusual foundation problems, I can go to the specialist consultants in Boston."

While many design-build architects take a financial interest in projects, not all do

As stated earlier, Trees gets financially involved in few of the buildings he designs and builds, preferring instead turn-key contracts with a fixed (and stated) profit. This tactic may have saved him problems in the current economic climate, and—in any case—agrees with his financial conservatism.

"Remember, Lindentree started in a recession," he says. "The philosophy of getting every bit of borrowed money available has killed otherwise good businesses. Firms that are locked into debt service have no flexibility to meet changing situations. We are ready to double or halve our volume on short notice, while others must keep going at constantly expanding levels just to stay solvent."

Trees is very happy with the way his "experiment" has turned out, because design-build suits his personality. Others, contemplating such a jump, might do well to view his experience with their own personalities in mind.

Charles Hoyt

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Legal perspectives: New rulings on indemnification clauses

As part of a continuing series on the law, this article by architect/attorney Kornblut explores a nettlesome issue.

By Arthur Kornblut, Esq.

An indemnification (or hold harmless clause) is a contractual device which shifts certain defined liabilities from one party to a contract to the other party. A common feature of such clauses is that the party to be indemnified often has superior bargaining power and can demand this protection as a condition of the contract. Although the law normally does not interfere with the right of any private party to enter into a contract (as long as the contract is not for an illegal activity), the use of one-sided indemnification clauses in construction contracts has led many state legislatures in recent years to enact statutes to limit their use.

Indemnity clauses came into being for basic and specific purposes

Since 1966, the AIA General Conditions form has included an intermediate type of indemnification clause that requires the contractor to indemnify the owner and architect (and their agents and employees) from and against all claims arising out of the construction work, if the claims are caused in whole or in part by the negligence of the contractor, any subcontractor, or anyone for whom they are liable.

The obligation to indemnify the owner and architect exists even when they (the owner and architect) may have partly caused the claim. The only exception is when the claim involves the liability of the architect for the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications, or the giving or failure to give directions or instructions (if the giving or failure to give is the primary cause of the injury or damage). In other words, the contractor is obligated to indemnify the owner and architect when the contractor is solely or partially responsible for the claim, but not to the extent of the architect's liability for his professional services. The major objective of this clause is to make the contractor responsible for construction-site accidents for which he otherwise would have immunity from liability because of the worker's compensation laws. If the owner and architect are subjected to a third-party suit by an injured construction worker, the AIA clause shifts the burden of liability back to the contractor.

The current problems stem from attempted broadening of use

Since the advent of the intermediate form of indemnification clause in the AIA

General Conditions, other, more onerous clauses have appeared in non-standard general and supplementary conditions and in subcontracts. These clauses go beyond shifting liability back to a party who is solely or partially at fault and require indemnification for any and all claims—even when the party to be indemnified is solely at fault. These so-called broad-form indemnification clauses have appeared in both prime and subcontracts and have generated a significant amount of legislative activity to regulate and restrict their use because of the patent unfairness. The most recent state to enact legislation in this regard has been New Jersey.

The New Jersey Law starts out to be clearly prohibitive

The first section of a New Jersey statute, P.L. 1981, Chapter 317, approved December 3, 1981 (supplementing subtitle 6 of Title 2A of the New Jersey Statutes) reads as follows: "1. A covenant, promise, agreement, or understanding in, or in connection with or collateral to a contract, agreement or purchase order, relative to the construction, alteration, repair, maintenance, servicing, or security of a building, structure, highway, railroad, appurtenance and appliance, including moving, demolition excavating, grading, clearing, site preparation or development of real property connected therewith, purporting to indemnify or hold harmless the promisee against liability for damages arising out of bodily injury to persons or damage to property is against public policy and is void and unenforceable. . . ."

This section of the statute is a broad prohibition against any form of indemnification clause in construction-related contracts in New Jersey. Relative degrees of culpability as between the parties to the agreement would have no bearing on the validity of an indemnification clause.

But uncertainty creeps in—

Section 2 of the statute invalidates clauses that would require the indemnification of "an architect, engineer, surveyor or his agents, servants or employees" for claims arising out of "maps, drawings, opinions, reports, surveys, change orders, designs or specifications" prepared or approved by professionals. Section 2 also applies to claims caused by the professional giving or failing to give directions or instructions that cause the damage, claim, loss or expense. This section of the statute appears to parallel the subparagraph in the AIA General Conditions indemnification clause,

which likewise eliminates the contractor's obligation to indemnify when the cause of the claim is deemed to have been within the province of the design professional.

With Section 1 of the statute containing a broad prohibition against indemnification clauses, Section 2 at first glance would appear to be unnecessary and redundant. The courts, however, will construe statutes as a whole and will make every effort to give meaning to each section. One possible explanation for Section 2 might be that architects and other design professionals still can be indemnified in New Jersey as long as the indemnity does not deal with claims arising out of what might be considered the professional's area of responsibility.

Section 3 of the statute makes it inapplicable to contracts with railroads and the State of New Jersey. There is no explanation of why railroads were excluded or why local government entities were not given the same rights as the state. Sections 4 and 5 simply state that the act will take effect immediately (as of December 3, 1981) and that it will apply only to contracts entered into from and after that date.

The legislative attempt in New Jersey to regulate hold harmless clauses illustrates the importance of utilizing fair contract provisions such as those found in the AIA documents. The New Jersey effort to eliminate "unfairness," however, will require extensive litigation, in all likelihood, to interpret that particular statute.

Mr. Kornblut is a registered architect and practicing attorney in Washington, D.C.

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Costs: Materials steady, labor still going up, uncertainty the rule

U.S. Summary of Building Construction Costs —in percent

| Districts | Number of metro areas | 1/82 to 4/82 | 4/81 to 4/82 | 1977* to 4/82 |
|---|-----------------------|--------------|--------------|---------------|
| Eastern U.S. | | | | |
| Metro NY-NJ | 17 | 1.00 | 1.06 | 1.42 |
| New England States | 30 | 1.02 | 1.10 | 1.43 |
| Northeastern and North Central states | | | | |
| Central states | 116 | 1.01 | 1.07 | 1.49 |
| Southeastern States | 106 | 1.04 | 1.07 | 1.51 |
| Average Eastern U.S. | 269 | 1.02 | 1.07 | 1.49 |
| Western U.S. | | | | |
| Mississippi River and West Central States | 123 | 1.00 | 1.06 | 1.48 |
| Pacific Coast and Rocky Mountain States | 101 | 1.02 | 1.11 | 1.57 |
| Average Western U.S. | 224 | 1.01 | 1.08 | 1.52 |
| United States: Average..... | 493 | 1.02 | 1.08 | 1.50 |

* USING ONLY CITIES WITH BASE YEAR OF 1977

Costs in a given city for a certain period may be compared with costs in another period by dividing one index into the other; if the index for a city for one period (200.0) divided by the index for a second period (150.0) equals 133%, the costs in the one period are 33% higher than the costs in the other. Also, second period costs are 75% of those in the first period (150.0 ÷ 200.0 = 75%) or they are 25% lower in the second period.

Based on a survey by the McGraw-Hill Cost Information Systems Division for the period December 1981 through March 1982, the prices for most construction materials are continuing in a stable pattern, because of competition among suppliers for the limited work available. Concrete block is down by 1 per cent, plywood by 1/2 per cent, and lumber by about 3 per cent. Gypsum board is up 1/2 per cent, reinforcing steel up 4 per cent, structural steel up 1 per cent and concrete up .2 per cent.

The 20 Major U.S. Cities Index still indicates a continuing rise in labor costs. In view of an 18 per cent unemployment rate among the construction labor force and an oversupply of manpower because of project slowdowns, this trend should soon moderate. Union leaders are faced with the problem of maintaining wages and working conditions while still trying to keep control over construction in the face of competition from open-shop contractors.

The volume of construction, of course, remains low, and previous reports of an end to the recession are being pushed farther into the future by almost every major economic and industry expert. The depressed housing industry, locked in by high interest rates, and a Federal policy directed to reducing inflation, is moving in a more aggressive manner—mostly by cutting prices—to reduce its backlog of unsold units.

The one saving grace for the housing industry is the current interest in remodeling and repair. More and more homeowners, unable to afford to "move up" to a larger house, are clearly becoming more inclined to upgrade their existing houses.

The trend toward still more

office construction has raised fear that an office space "glut" will result. This problem will be compounded by the housing construction slow-down. Companies planning to move to new areas are tending more and more to stay put, because of the reluctance of key personnel to undertake selling a house and trying to find an affordable new one.

The construction industry and its related suppliers and labor force clearly continue to find no relief for their problems in the Congress and in the Administration's continuing stalemate on the budget deficits. The Federal Reserve will have to define its course of action in order to inspire confidence in its policies.

While this may be forced on the Reserve, so the questions remain: when will the benefits of the tax cut and the stimulated inducement to capital spending filter their way down through the economy to the construction industry? When will the loan rate drop close to 12 per cent, the figure most analysts think is needed to trigger a strong recovery? The leading forecasters of the economy now place this big "when" no sooner than the end of 1982.

James Stewart,
Cost Information Systems
McGraw-Hill Information
Systems Company

Historical Building Cost Indexes—Average of all Non-Residential Building Types, 21 Cities

| Metropolitan area | 1941 average for each city = 100.00 | | | | | | | | | | | | | | | | |
|-------------------|-------------------------------------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1979 | | | | 1980 | | | | 1981 | | | | 1982 | | | | |
| | 1975 | 1976 | 1977 | 1978 | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | | | | |
| Atlanta | 598.7 | 657.1 | 714.2 | 755.8 | 819.6 | 836.0 | 872.1 | 904.3 | 875.6 | 901.9 | 935.1 | 964.3 | 961.3 | 1023.5 | 1023.5 | 1013.3 | 1077.1 |
| Baltimore | 581.1 | 585.0 | 635.6 | 662.2 | 729.6 | 744.2 | 773.6 | 802.2 | 779.0 | 802.4 | 817.2 | 825.3 | 836.0 | 837.1 | 837.1 | 812.0 | 824.2 |
| Birmingham | 448.9 | 551.9 | 585.4 | 609.2 | 704.1 | 718.2 | 724.5 | 751.3 | 736.8 | 758.9 | 757.4 | 764.9 | 781.6 | 797.7 | 797.7 | 797.7 | 815.3 |
| Boston | 513.2 | 555.9 | 587.7 | 759.5 | 691.9 | 705.7 | 718.9 | 745.4 | 736.2 | 758.3 | 752.4 | 759.9 | 769.0 | 779.6 | 826.3 | 834.6 | 853.0 |
| Chicago | 560.1 | 635.2 | 689.9 | 717.3 | 805.4 | 821.5 | 885.9 | 918.7 | 889.4 | 916.1 | 944.5 | 953.9 | 963.4 | 1000.8 | 1020.8 | 1020.8 | 1019.8 |
| Cincinnati | 550.6 | 609.8 | 656.6 | 669.5 | 750.7 | 765.7 | 810.0 | 840.0 | 823.0 | 847.7 | 868.3 | 876.9 | 887.4 | 939.5 | 958.3 | 920.0 | 921.8 |
| Cleveland | 531.0 | 632.9 | 625.2 | 653.5 | 794.7 | 810.6 | 853.6 | 885.1 | 881.8 | 908.3 | 920.6 | 929.8 | 936.3 | 986.0 | 1005.7 | 1005.7 | 998.7 |
| Dallas | 499.6 | 538.5 | 615.2 | 637.6 | 739.0 | 753.8 | 873.0 | 905.3 | 787.7 | 811.3 | 827.1 | 835.3 | 869.3 | 965.6 | 984.9 | 1014.4 | 1008.3 |
| Denver | 553.6 | 616.0 | 703.8 | 730.5 | 803.2 | 819.3 | 847.4 | 878.8 | 905.9 | 933.1 | 927.6 | 936.8 | 934.1 | 961.6 | 980.8 | 1010.2 | 1016.3 |
| Detroit | 597.5 | 617.2 | 664.2 | 756.6 | 840.6 | 857.4 | 865.5 | 897.6 | 860.5 | 886.3 | 911.3 | 920.4 | 945.9 | 1078.1 | 1099.6 | 1099.6 | 1106.2 |
| Kansas City | 509.1 | 547.3 | 603.0 | 631.8 | 657.7 | 670.8 | 711.0 | 737.3 | 735.2 | 757.3 | 771.2 | 789.9 | 791.3 | 818.2 | 834.6 | 876.3 | 850.0 |
| Los Angeles | 594.1 | 673.1 | 756.8 | 784.2 | 886.3 | 904.0 | 955.4 | 990.8 | 978.3 | 1007.6 | 1022.3 | 1032.5 | 1056.0 | 1116.8 | 1139.1 | 1139.1 | 1152.8 |
| Miami | 558.9 | 592.5 | 628.4 | 649.0 | 686.1 | 699.8 | 736.9 | 764.1 | 742.8 | 765.1 | 777.0 | 784.7 | 788.7 | 840.6 | 840.6 | 840.6 | 818.7 |
| Minneapolis | 538.0 | 564.1 | 629.4 | 651.3 | 793.4 | 809.3 | 824.3 | 854.8 | 827.6 | 852.4 | 848.3 | 856.7 | 871.2 | 934.3 | 952.9 | 962.4 | 968.2 |
| New Orleans | 494.7 | 534.8 | 614.7 | 637.0 | 697.7 | 711.6 | 734.7 | 761.9 | 753.8 | 776.4 | 785.5 | 793.3 | 816.9 | 818.1 | 834.5 | 842.8 | 824.8 |
| New York | 533.5 | 580.8 | 619.8 | 646.3 | 666.6 | 679.9 | 778.9 | 807.8 | 793.7 | 817.5 | 815.1 | 831.4 | 838.7 | 845.3 | 887.5 | 905.2 | 904.3 |
| Philadelphia | 567.5 | 579.2 | 658.8 | 680.0 | 778.0 | 793.5 | 814.6 | 844.8 | 830.9 | 855.8 | 849.2 | 857.6 | 869.6 | 901.9 | 919.9 | 938.3 | 947.7 |
| Pittsburgh | 509.5 | 526.3 | 589.6 | 614.0 | 692.2 | 706.0 | 736.5 | 763.8 | 746.1 | 768.5 | 773.0 | 788.4 | 795.4 | 864.0 | 881.3 | 907.7 | 927.7 |
| St. Louis | 528.9 | 537.1 | 617.1 | 637.4 | 752.0 | 767.0 | 782.8 | 811.8 | 786.7 | 810.3 | 820.5 | 836.9 | 839.4 | 859.0 | 876.1 | 884.8 | 886.6 |
| San Francisco | 753.3 | 820.8 | 963.2 | 990.0 | 1239.0 | 1263.8 | 1200.3 | 1244.8 | 1202.7 | 1238.8 | 1260.4 | 1285.6 | 1320.9 | 1411.7 | 1439.9 | 1454.2 | 1454.2 |
| Seattle | 515.1 | 570.5 | 629.6 | 669.0 | 700.7 | 714.7 | 761.0 | 789.1 | 763.3 | 786.2 | 807.6 | 823.7 | 829.4 | 879.9 | 897.5 | 906.5 | 951.8 |



Patterns of Thought.

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 **Gardco Lighting**

The profitable professional: successfully negotiating and collecting a fee

The first in a series of articles on sound management, by an attorney who specializes in architects' and engineers' problems.

by Barry B. LePatner, Esq.

Among the most important things that an architect *should* do is to negotiate a fair fee and make sure that he can collect it all by the end of the job. Developing a sound professional approach to these critical areas of management is a fundamental stepping-stone towards the architect's ultimate goal: a quality product that results in a fair and reasonable profit.

Trained in creative and technical methods of producing quality work, most design professionals have little experience as entrepreneurs to fall back on. As a result, the pitfalls of frequent negotiations with owners and contractors places the architect in the unhappy posture of dealing from a position of weakness.

Most architects express dismay at the competition for projects that compels them to submit fee proposals that result in a minimum profit. Yet these same architects will devote little, if any, time to improving their business acumen as a means of increasing their ability to negotiate for higher fees—even though it may mean survival in these troubled times.

It is essential that architects distinguish between the different relationships they have with owners during the course of a given project. Many professionals fail to understand the need to view the contract negotiation stage as separate and distinct from the design stage.

There is nothing unprofessional or otherwise undignified in being known as a first-rate designer skilled in the ways of the business world. Those architects who embody this rare combination of talents carry into their contract negotiations a sense of purpose and confidence that earns them the respect of the clients they serve.

And clients clearly prefer to do business with architects who talk business. They want creativity combined with cost effectiveness—and they are demanding that both disciplines be included in the same package of services. To believe, therefore, that in these financial times art and business do not go hand in hand, is to court financial peril.

As a general rule, architects must understand that consistent quality design is the product of a stable firm which carries out its services free from distraction. If problems of cash flow, collection or lack of business become a daily psychological Sword of Damocles, the caliber of services will inevitably decline.

As a correlation, an effective and efficient staff is a function of today's profitability. It relies on the belief, by principals and employees alike, that the prospects

for future financial reward are equally optimistic.

A program of establishing fees that returns a reasonable profit obviates the need for using the firm's capital or borrowing to meet ongoing expenses. Principals can devote all their creative energies to ongoing projects and new client development.

Negotiate the fee from a position of strength and confidence

The professional who renders services on behalf of a client is entitled to the fee agreed upon at the outset of the project. Unless those services were not rendered properly, the *quid pro quo* for time, talent and devotion is the client's faithful adherence to that fee agreement. Those who look for exceptions to this rule will find themselves admitting psychological defeat, and face sure setbacks in their dealings with owners.

Although there may be instances when, for business reasons, you may choose to reduce your fee, the right to collect the agreed-upon fee is unassailable and should not be lightly dismissed. Establishing the correct fee—a fair fee, a fee that leaves a profit—is, of course, imperative. Knowledge of the project scope, client's needs, special conditions and labor, and material availability must be incorporated into the fee structure. Here again, experience is the hallmark of profitability.

For young architects, and those principals of newly-formed firms without such expertise, a word of caution and advice: if you underprice yourself on one project there will be many important lessons to be learned from the miscalculations. If the same mistakes occur again and again, your chances of continuing in practice are highly problematic.

Thus, it would be beneficial to seek out the friendly, experienced advice of a colleague who has designed similar jobs. Ascertain the amount of manpower, time allocation and unusual problems that can be anticipated. Explore possible contingencies and build them into your fees. Taking a fellow professional to lunch for this type of discussion can prove to be one of the most important steps toward avoiding cash flow problems.

Once the fee is properly established, it is important to see that it is structured in a way that does not create hardship during the project. This includes establishing an initial minimum fee, apportioning payments to reflect the real ebb and flow of work, and making provision for the collection of *all* the basic and additional-service fees.

A rarely followed rule: Insist on an initial minimum fee

Good business practice justifies referring to what is commonly called "the retainer" as the initial minimum fee. It is my experience that most architects fail to understand the underlying importance of this initial client payment. In fact, more can be learned about a client's commitment to you and the project during this initial stage of the relationship, than from all that may ensue during the balance of the work.

The client should be advised that it is your firm's policy to begin work only after an initial minimum fee is received. This payment, which should be approximately 15-20 per cent of the total anticipated fee, serves several salutary purposes.

1. It establishes your strong business practices in the client's mind;
2. It determines whether the client is sincerely interested in proceeding with a) the project and b) you as the designer;
3. It prevents the firm from committing firm resources to a project that may never get off the ground;
4. It ensures up-front money to coordinate staff transition to a new project without having to tie up profits from other projects;
5. It gives you a psychological lift and enthusiasm for the project.

If you are utilizing the AIA Standard Form Agreements, it is essential to revise those provisions on "Basics of Compensation" to reflect this concept of the initial minimum payment. This idea of accelerated payments as a means of generating increased cash flow is important for improving profitability.

A further recommendation is to add a provision that calls for applying the initial minimum fee towards the last payment due from the owner. The first billing recaptures all costs advanced at the outset of the project, and ensures that you have the final payment (and usually the most difficult to recover) already in hand to be applied upon completion of the project.

The client must also understand that the retainer payment will be deemed *earned whether or not* the project is abandoned or terminated early in the game. The reasoning behind this concept is clear; meeting with clients to formulate the conceptual phase of the work and orchestrating staff to a new project is time-consuming. It removes principals and associates from other productive work. If the client elects to abandon the project, reorienting the firm to other

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projects will result in additional transition time.

**Another must:
Define the work to be performed**

Many architects express a great reluctance to identify and bill clients for additional services rendered on a project. Moreover, designers often shudder at the thought of defining the basic services to be performed, employing at times the loosest of language to describe the scope of work to be undertaken.

It is always distressing to learn how many architects (and engineers) persist in using letter agreements which fail to define the precise parameters of the services to be performed. Such confusion allows the client to use such vagaries to demand, as part of the basic services, additional services beyond the original scope as understood by the architect.

Unless such a project is performed on a time card basis, the firm faces the prospect of substantial losses in such a situation. Blindly agreeing to perform all requested services, preferring to leave the compensation issue until the job is complete, is the mark of the business novice.

Conversely, by assiduously following strict contract language that defines basic services, the client should be immediately alerted when additional services are requested. They must be authorized in writing and treated, for compensation purposes, as an item to be separately invoiced.

Bill every month, and do not work without payment

Once the project is under way, it is essential to submit to the client monthly statements for services rendered. Even though payments are to be apportioned on a "by-phase" percentage, monthly invoicing for the work to date speeds collection of fees and the recovery of costs advanced on a client's behalf.

You must remember that every construction contractor on a job expects his monthly payment request to be promptly approved for payment by the client. Your invoicing of fees should be given equally courteous treatment.

In a recent situation, I suggested that an architect refuse to approve the contractor's monthly payment request until the client brought the architect's account current. When the contractor raised a hue and cry to protest the delay over processing his payment, the client promptly recognized the architect's need. Needless to say, the mere threat can, on occasion, be highly effective.

Quite often, disbursements by you on behalf of a client—for instance, printing, travel and models—can be quite costly. Most architect agreements call for these advances to be treated as reimbursable items.

It is important to remember that every dollar you advance on behalf of a client of firm funds represents a loan to the client. Since this loan is to be interest free, the true cost is equal to the interest on what funds been in an interest-bearing account, plus loss due to inflation, plus the cost of the money if the architect had to borrow it. Hence, if your firm is several thousand dollars out of pocket on many projects at any one time, the real cost to the firm over the period of a year can be substantial.

The impact of runaway inflation has resulted in many clients adopting a policy of delaying payments to suppliers of services. Monitoring of accounts receivable is the only sure way to protect against next year's uncollectable fees. An increasing number of firms are using computers to provide monthly surveys of outstanding accounts. These updated reports are a first alert, but securing in full the outstanding item due is the only acceptable goal for the profitable professional.

Make the client understand why fees must be collected

Understanding the psychology of collecting a fee due and owing requires no quantum leap into dangerous waters. Having benefitted from the designer's services, the client who is quick to recognize the value of those services will be equally quick to pay for them.

If your client perceives that the fee is at all times negotiable, notwithstanding the existence of a written contract, he will exploit the architect's sense of acquiescence. Hence, the architect must clearly fix in the owner's mind the inviolate nature of the fee arrangement.

The process of communicating this heightened sense of consciousness to your client requires that the value of the services rendered and the work performed be fully understood. How often do designers bring clients to their offices to explain the design process? Has the client been educated as to what specific tasks are required to be performed to bring rough ideas into reality? Are written status reports at all phases of the project being provided to the client, or are you merely relying upon periodic conversations, which do not involve the client in the actual work?

Clients are interested in the finished product. Equally important to a successful client relationship is the ability to communicate your interest and concern during this process so that you both reach a mutually desirable goal.

What if the client still does not pay?

In the event that a client fails to pay fees, recourse to recover these monies can take various forms, besides the one already mentioned. If the contract provides for arbitration as the sole forum for disputes arising between the parties, a demand for arbitration must be filed.

Alternatively, an action can be commenced to recover the outstanding receivable. Though infrequently used, the filing of a mechanic's lien, if state law permits, can bring pressure on an owner to make prompt payment. This is so, because many construction loan agreements require an owner to immediately remove any liens that assert or challenge priority of the construction loan mortgage.

Of course, the owner can always bond off the lien to remove the immediate pressure from the lender. In such an event, action to foreclose the lien should be commenced to recover the fee.

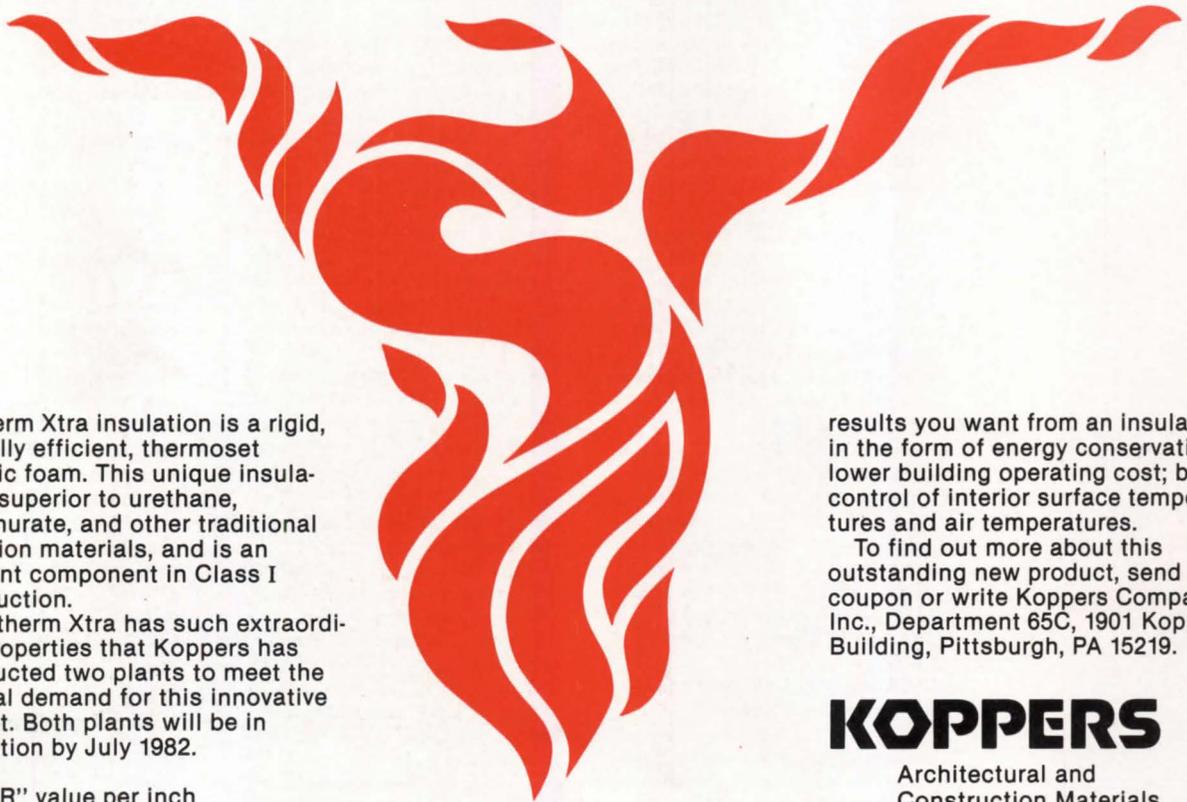
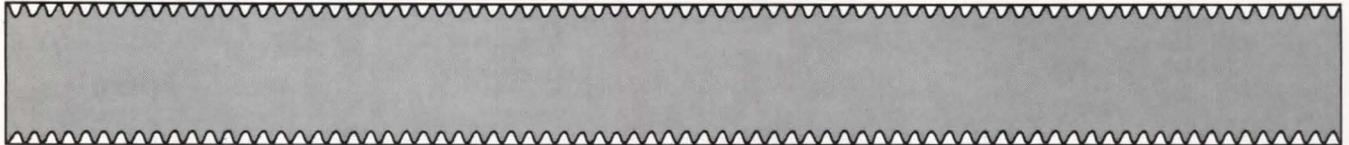
Architects have traditionally accepted a passive position in the give and take of fee-setting and collection. As economic conditions trigger a change from a relaxed attitude to a more tightly structured business approach, insistence upon the sanctity of the fee arrangement is mandatory. Movement in this direction may not result in immediate financial success; the failure to move in this direction will certainly consign a firm to long-term financial inertia.

Mr. LePatner has law offices in New York City, where he specializes in the representation of architectural and engineering firms. He is co-author with Sidney M. Johnson of "Structural and Foundation Failures: a Casebook for Architects, Engineers and Lawyers," published this year by McGraw-Hill. Portions of this article appeared in the May 1982 issue of the "LePatner Report," a newsletter for the design professionals published by the author. Copyright © 1982 by Barry B. LePatner, Esq. All rights reserved.

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Thank you for your March 1982 editorial in which you recognized the efforts of builders to adjust to some of the basic changes taking place in the housing industry by attending some of the more than 100 educational programs at our annual convention. We were pleased to note the participation of ever-increasing numbers of architects in programs, workshops and "meet the expert" panels this year, and we strongly believe that such cooperative effort is not only mutually beneficial but, during these times of rapid and fundamental change, essential to our very survival and that of the industry.

As more architects express willingness to apply their unique talents and skills to solving the problems of the low- and middle-income housing markets, and as more builders recognize the role that architects and designers can play in making housing more affordable, appealing, and marketable, we find many of the traditional barriers between our respective professions falling and a new, truly symbiotic relationship emerging. Together, I believe we can accomplish what neither of us can do individually.

This past year has witnessed intensified efforts on behalf of AIA and NAHB to work cooperatively toward solutions to mutual problems. In addition to our more traditional activities in producing convention programs and workshops, the staff and members of both organizations have met throughout the year in order to stay informed of each other's activities. This effort culminated in a joint meeting of the presidents and chief executive officers of both organizations in May, which resulted in a better understanding of each other's goals, objectives, problems and means for dealing with them.

Increased recognition of good design as a major element in the production of homes resulted in two major "firsts" for NAHB this year. The Board of Directors at its January meeting adopted a policy by which builders formally recognize and pledge support for the concept of good design as being integral to the home building industry. In further recognition of the importance of design on the part of the home builders, we have more recently seen the establishment of what we hope will be the first of many Design Councils within our local home builder associations, a vehicle by which all members of the design profession can be brought together to discuss cooperative efforts amongst individuals or groups. Perhaps one beneficial by-product of the current paralysis of the home building industry will be a renewed respect for each other's roles and an on-going cooperation between those who design and those who produce our nation's homes.

Fred Napolitano
1982 President
National Association of
Home Builders
Washington, D. C.

I sit in a mud and stone bamboo hut on a terrace looking over steep valleys of dried red clay and stone, I have no furnishings, and below me the young water buffalo bump the decaying supports.

So you see it is with humor but great interest that I am reading every detail of your new book *25 Years of Record Houses*. My only other entertainment is my radio with its dying batteries. I can, however, walk over to see my friend when my work stalls. He is just two days and three river crossings away!

How came I to be reading your book? My sister sent it as a Christmas present and since I received it last week [the end of March], it's held my every spare moment, marveling out the genius of the architects' spatial perceptions. I have some training in architectural design through my degree in environmental design (1980, University of Massachusetts).

This is a small hillside village in eastern Nepal. The people work hard just to survive, using tools and methods millenia old. All land is tilled that has less than 40-degree slope, and easily available water is a luxury the villagers can't afford. I build water systems, piping water from far above to tapstands located near groupings of houses. The work is hard, and I pay a dollar a day for working cement and stone, and there are many delays with corrupt officials and inferior materials. Now I'm awaiting the return of my technician with porters carrying more cement. That takes a week, and I decided to sit and read.

In my spare time, I invent houses, depending on sites I remember or dream up. But I spent the first half of today studying Paul Rudolph's New York City townhouses—a truly amazing accomplishment. Tired but happy, I read about the Lam house [designed by Ericson/Massey] and then came to the Radial house [designed by Gunnar Birkerts]. You must have found what made me question my sanity for a half hour—the top photo on page 34 is reversed. I was amused to note that to play the piano in that picture would be to create mirror music, notes falling as one plays "up" the keyboard.

I would like to say that I am enjoying your book immensely. It is by far the finest thing I own here and contrasts greatly with the basics I buy on my \$15 a week. The Nepalis don't understand that these are photos of houses, but then they have difficulty understanding any photo.

Ben Northrup
U. S. Peace Corps
Katmandu, Nepal

Mr. Northrup, unlike our nonmusical readers, observes correctly: the photograph was flopped. As a result, that piano has its treble at the bottom of the keyboard, its bass at the top.—Ed.



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Office notes

Offices opened

Cronenwett Associates, successors to James Sudler Associates, announces the opening of its offices for the practice of architecture and interior design. They are located at 1201 18th Street, Suite 200, Denver, Colorado.

David T. Demarest announces the opening of his new firm, David Demarest Architects, AIA, located at 2713 McKinney, Dallas, Texas.

Ellerbe Architects and Engineers announces the opening of its office at 3025 One Union Square, Seattle, Washington.

HLM Engineers announces the opening of a new office located at Southeast Bank Building, 201 East Pine Street, Orlando, Florida.

Charles Kober Associates Architects has acquired a Phoenix area office located at 5800 East Thomas Road, Suite 104, Scottsdale, Arizona.

Herbert Nadel, AIA and Partners and Abraham Shapiro and Associates, AIA announce the merger of their firms. The combined organization will relocate to new offices at 6th & Broadway, Santa Monica, California.

Melvin Smith and Noel Yauch are now practicing as a partnership at 160 East 56th Street, New York, New York.

Elliot J. Rothschild announces the commencement of The Rothschild Company Architects, Candy Factory Court, 616 South American Street, Philadelphia, Pennsylvania.

Venturi, Rauch and Scott Brown announces the opening of a New York office located at 215 Lexington Avenue, New York, New York. The director of the New York office is Frederic Schwartz.

Peter Webb announces the opening of his office for the practice of architecture. The firm is named P. Whitney Webb AIA, 416 High Street, Paris, Kentucky.

Firm changes

ADD, Inc. announces the appointment of Dianne M. Ludman as marketing director.

James N. Van Dуйn has been named business manager at Broome, Oringdolph, O'Toole, Rudolf & Associates.

H. Robert Yeager has joined Richard Browne Associates/RBA as the firm's director of architecture.

Brown/Heldt Associates, Inc. announces their reorganization. The firm has separated its two existing divisions into two independent new organizations to be known as Brown/McDaniel, Inc. and David Heldt Associates. Both firms will remain in the same offices at 730 Montgomery Street, San Francisco, California.

Corgan Associates Architects

announces the promotion of Philip J. Mein to vice president.

CUH2A announces the promotion of Stephen F. McGarty to an associate of the firm.

Gordon Edberg has been named manager of Ellerbe Architects and Engineers.

Elliott + Associates Architects announces that David C. Foltz has joined the firm as project architect, and Rodney Morrissey as a project representative.

Fisher Friedman Associates announces Stephen B. Haines, Jr. as principal and Joseph D. Chance, Dan H. Chung and Charles J. Trevisan as associates.

Krusinski Gelick Foran Ltd. is changing its name to Gelick Foran Associates Ltd. to reflect the continued partnership of Michael Gelick and Walter J. Foran.

Golemon & Rolfe Associates, Inc. announces the election of its 1982 corporate officers. They are: Harry A. Golemon, chairman of the board and president; Charles Kerner, executive vice president; Lynn Hanson, secretary; and Joe Richards, treasurer.

Greenwell Goetz Architects announces that Suzanne Mintz has been promoted to senior associate and John Thompson has been appointed an associate.

Arthur L. Kelly has joined Gresham, Smith and Partners as quality assurance coordinator.

Milan Srnka of GSAS, Architects and Planners, has been named chairman of the board. The corporation also announces that Robert J. Hunt has been made a principal in the corporation and will fill the position of senior vice president. Mr. Hunt will also assume the duties of secretary of the corporation.

Hall Goodhue Haisley & Barker announces that Frank Hennessy has become a principal. William Foster, Gerald Galliano and Philip Korchek have been named associates.

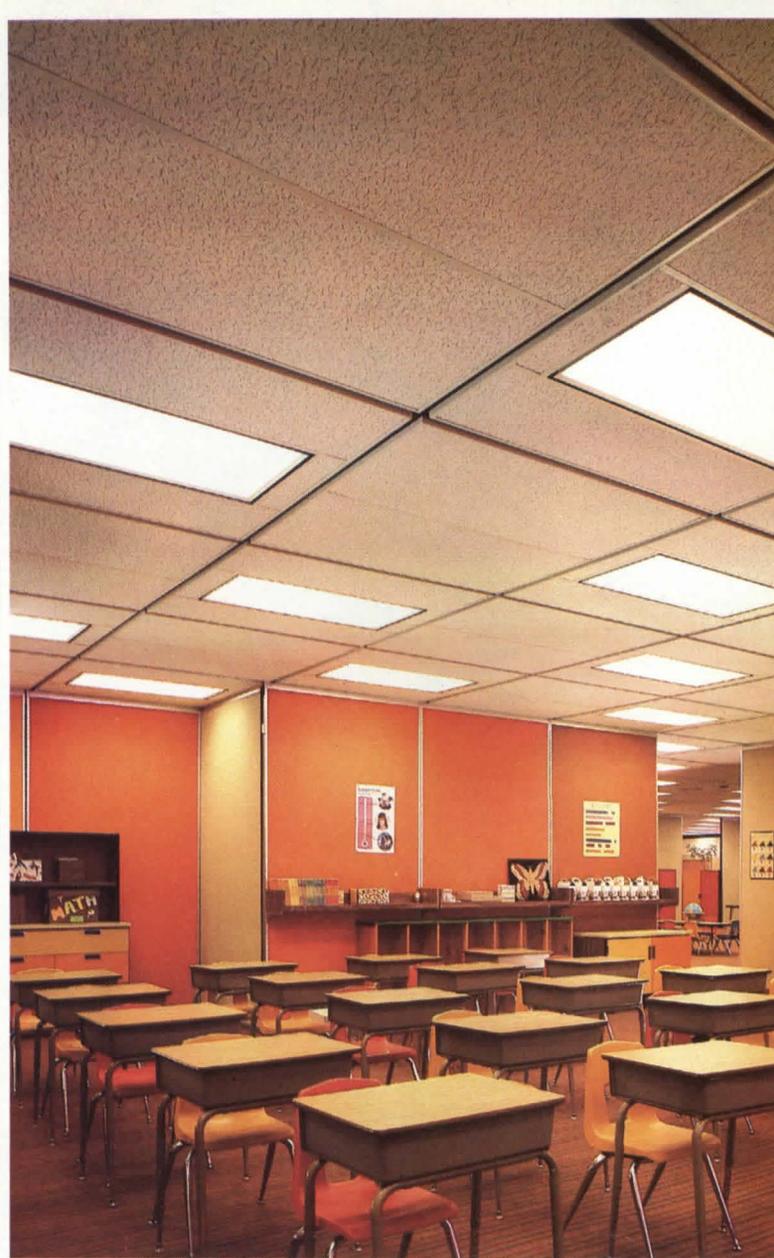
Hellmuth, Obata & Kassabaum, P.C., Architects announces that Birch Coffey has joined the New York office as design director-interiors. Duncan K. Finlayson, Jr. has also joined the New York office as director of marketing.

Helman Hurley Charvat Peacock/Architects, Inc. announces the appointment of James M. Dorsey, Jr. to vice president.

Kaplan/McLaughlin/Diaz announces that Jeffrey Heller has joined the firm as a partner.

Charles Kober Associates Architects announces that the following persons have joined the firm: James Winstead, senior vice president and managing director of the Chicago and Phoenix offices; Donald Billman, vice president and

Continued on page 41



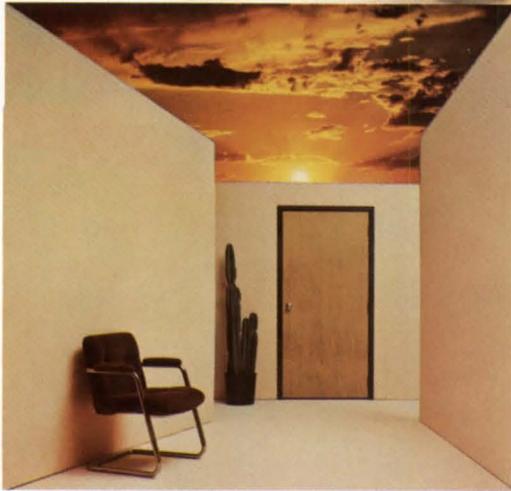
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Office notes continued

director of retail projects, Chicago office; David Houck, vice president and resident manager of the Phoenix office.

Lloyd Jones Brewer Associates announces Leonard E. Addicks, James A. Farrar, Billy H. Glaze, Edward A. Keyes, Karl A. Schmidt, Jr. and Elmo M. Valdes as associate principals; Duane L. Bradshaw, Alfred Z. Carvajal, H. Keith Hall, Christopher R. Moore, Robert C. Murray, Jr. and Russell R. Reynolds as senior associates; and Bennie F. Brown, Oliver R. Cantrell, William R. Madden, Charles E. Petak, Carolyn S. Pfannkuche, Ann Schweikert and Leon Z. Yawitz as associates.

Richard R. Moger Architect AIA announces that G. Lawrence Woodson is now a partner of the firm.

Alex Frank Orkow & Associates Architecture Planning announces that Diarmid A. Campbell has been appointed an associate of the firm.

Willaim L. Pereira Associates announces several new appointments. Steven F. Jellison and Melvin J. Sieks have been named presidents. The following people have been named associates: William Akiyama; Romeo R. Asprey; Barbara Cass; David DeSelm; William H. Fain, Jr.; Kathy Fischer; Robert G. Ford; Douglas S. Greene; Charles J. Grein; Borge Jensen; Fernand Levin; Lee Lowman; Les D. Mazer; Chris Northrup; Carlo Paganuzzi; Dennis R. Reitz; Dale J. Saunders; Robert P. Shaffer; E. Anthony Valaitis and Philip V. Warde.

Alan H. Larson has been named a vice president of Perkins & Will International and Paul A. Mezzone has been named a vice president in the New York office.

Pfluger + Polkinghorn AIA Architects announces its name change to Pfluger Polkinghorn Cline AIA Architects. Robert A. Guy has been promoted to partner and will be responsible for design and production. Galen W. May has been named partner and manager of the Victoria, Texas office known as Pfluger Polkinghorn Cline May-Victoria.

Maureen Reed has been named chief operating officer at Richardson Nagy Martin Architecture/Planning.

Robinson Mills & Williams announces that Robert F. Mattox has joined the firm as general manager.

ROMA announces the appointment of the following associates to the firm: Robert B. Howell, senior associate; James B. Adams, Bonnie H. Fisher, Warren C. Fuller, Spencer H. Hall, John G. Skibbe, John E. Stafford, William Stevens Taber, Jr. and Jeffrey A. Truesdell as associates. ROMA is also expanding its services to include interior design and space planning with the addition to the staff of Claire Anspach, associate.

Russo + Sonder, Architects and Planners announces the appointment of Jean Mah as a partner and William David Rogan, Jr. as an associate.

Seracuse Lawler & Partners, Inc. of Denver, Colorado has changed its corporate name to SLP, a professional corporation.

Shepley Bulfinch Richardson and Abbott announces that Geoffrey T. Freeman, W.S. Mallory Lash and Paul Sun became directors of the firm. Paul E. Bell, Penelope P. Beya and Oliver W. Egleston became associates.

Smith Segreti Tepper Architects and Planners PC announces that Robert J. McMahon has become a vice president of the firm.

The Eggers Group P.C., Architects and Planners announces the promotions of David L. Finci and Peter B. Halfon to executive vice presidents; C. William Eilers, Jr., and Jan J. Kalas to senior vice presidents; and John W. Jappen to vice president.

John Hart Cable, AIA has joined The Ehrenkrantz Group.

The Grad Partnership announces changes in their senior management. Harry B. Mahler and Michael J. Savoia have been named senior partners; Howard N. Horii will lead the office buildings and interior design studios; Lowell Brody will direct the marketing group; Kenneth D. Wheeler has taken on a new assignment as consultant for special projects.

Samuel M. Burnett has been named a partner in The Luckman Partnership, Inc. and has joined the firm's Denver office as director of the management team.

The McKinley Architects announces that Gerald Gerron has been named a principal and that the firm will continue practice as MGA McKinley/Gerron Architects.

3D/International announces that James E. Furr has been appointed to the firm's board of directors.

Albert T. Rosselli has been elected associate partner of Tippetts-Abbett-McCarthy-Stratton (TAMS). Swanke Hayden Connell Architects announces Roland L. Lieber, partner; George Alexander, William G. Brown and Neil P. Frankel, associate partners; Fanny T. Gong, James B. McLeod, Bradley M. Meade, Eugene Van Sharpe, Harry E. Van Meter and Alvaro Velez as associates. The firm also honors Albert Homer Swanke and David H. Stern on the occasion of their forthcoming retirement.

New addresses

Belcic & Jacobs Architects announces the relocation of their offices to 157 West 57th Street, New York, New York.

Frizzell Hill Moorhouse Beaubois, Inc. Architects and Planners announces the relocation of their San Francisco office to 170 Maiden Lane, San Francisco, California.

ISD Incorporated is now located at 305 East 46th Street, New York, New York.

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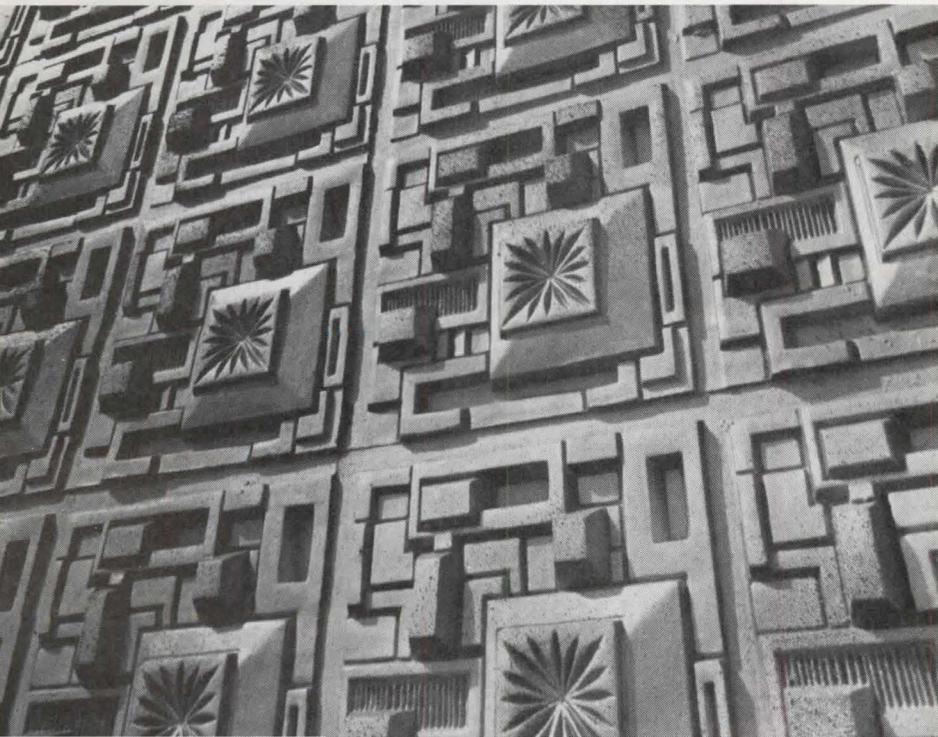
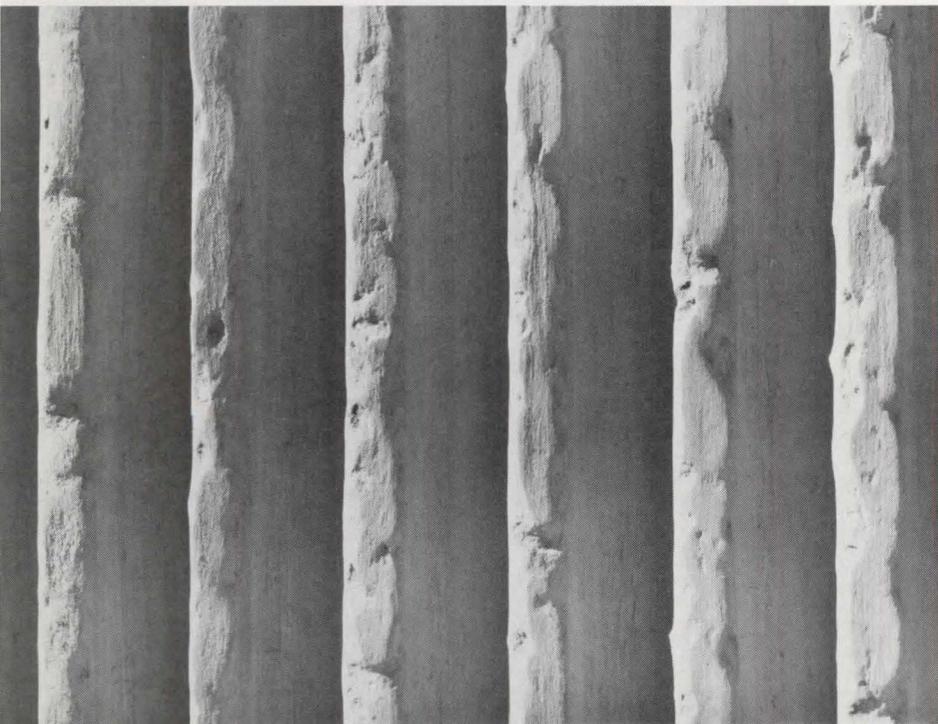
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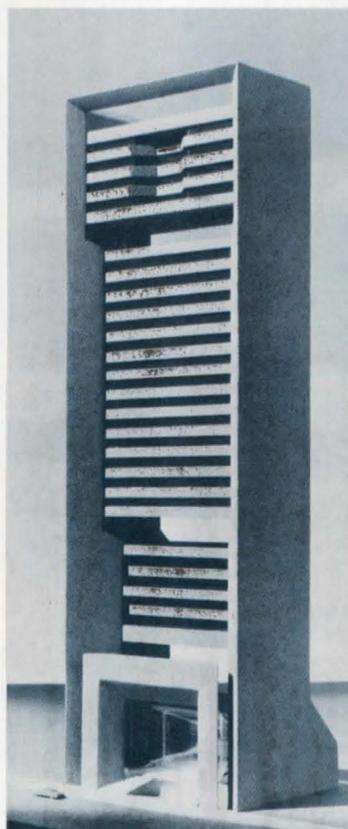
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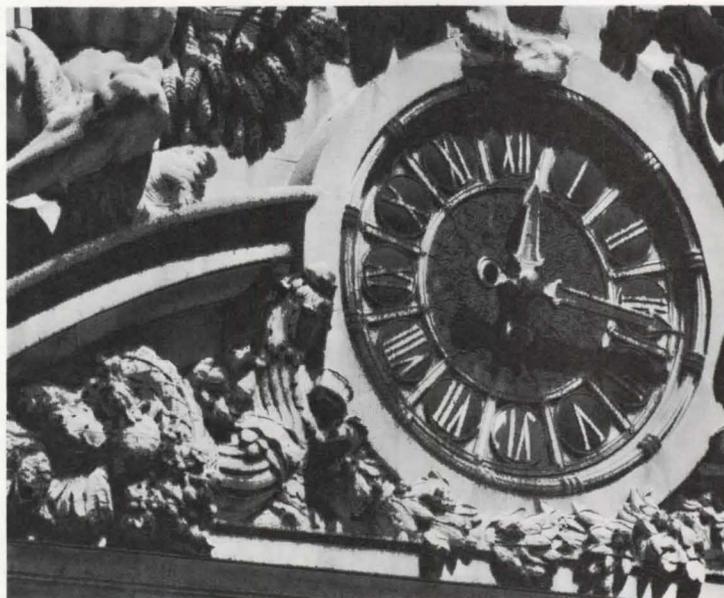
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New York's Museum of Folk Art introduces a well mannered tower

Although the uniform silhouette of its block on West 53rd Street has already been broken by the lofty apartment tower capping the neighboring Museum of Modern Art, the tiny Museum of American Folk Art and architects Emilio Ambasz & Associates have approached the controversial conversion of the museum's air rights to a rental office tower with uncommon restraint and sensitivity. As a result the museum, now operating in cramped and ill-fitting quarters, will acquire a distinguished permanent home, and the block a good neighbor. The design of the high-rise building, according to the architects, is intended to synthesize the evolution of New York's skyscrapers, from the early column typology of base, shaft, and capital through the setback configuration (here turned upside down) to the late-emerging prism form. Office floors have been broken up into three blocks (the column components) suspended within a prismatic envelope. The "set-forwards" draw the eye to the entrance portal for museum and tower, a proscenium frame that dominates the view from street level and holds the horizontal height line set by the Museum of Modern Art. Ceremonial stairs lead to the museum's grand foyer, which gives on to exhibition floors placed at half levels in an elongated circulation spiral.



Coming and going: A portrait of Grand Central Terminal



©Cervin Robinson

Grand? The main concourse is 160 feet wide, 470 feet long and 150 feet high. Central? Although it no longer serves long-distance travelers, it handles over 500,000 commuters daily. Terminal? Possibly. The same malady that consumed Penn Station, the Commodore Hotel, the neighboring Biltmore and its clock poses no less a threat to the Grand Central Terminal. To date, the best known cure for this affliction is public interest. On May 27th "Grand Central Terminal: City Within the City," an exhibition celebrating the terminal as a New York City landmark, opened at the New York Historical Society. Conceived and designed by Hardy Holzman Pfeiffer Associates and organized by the Municipal Art Society of New York with Deborah Nevins as guest curator, the exhibit is sponsored by Philip Morris Incorporated, the National Endowment for the Arts, and the National Endowment for the Humanities. "City Within the City" is a visual exploration of the origin, design and development of the terminal and its influence on the physical, economic and social life of New York. A wealth of information is conveyed by a system of sub-exhibits on the need for the terminal, the competition, the controversies over its construction, its history, the fight to save it, and the need for it now. There is even a model cut in half to allow one to view not only the passageways in the terminal but also the network of tunnels stretching far beyond it. Photographs, drawings and artifacts are all arranged to provoke questions: Can we afford to lose the Oyster Bar and its famous whisper chamber? Can we afford to lose the celestial ceiling of the main concourse—painted in reverse

to be, so the artist claimed, viewed by passengers as if from the vantage of a divinity? According to Whitney Warren, one of the original architects, the sculpture on the main facade signifies "... the glory of commerce, as typified by Mercury, supported by moral and mental energy—Hercules and Minerva." Can we afford to lose all this? In addition to the sepia-tone photographs, the rare period prints and the memorabilia from famous long-distance trains, there is in the final stage of the exhibit a prognosis for the terminal's future. The threat that it may be destroyed by sheer attrition is exposed in photographs of the terminal today. The decay revealed in these final pictures is a shock softened only by the fact that this beautiful building with its Beaux-Arts detailing, ingenious engineering and inspired planning still serves so well the needs for which it was created. The exhibit, in itself a tribute to planning, will remain on view through September 13. *Lindsay Li*



Municipal Archives, City of New York

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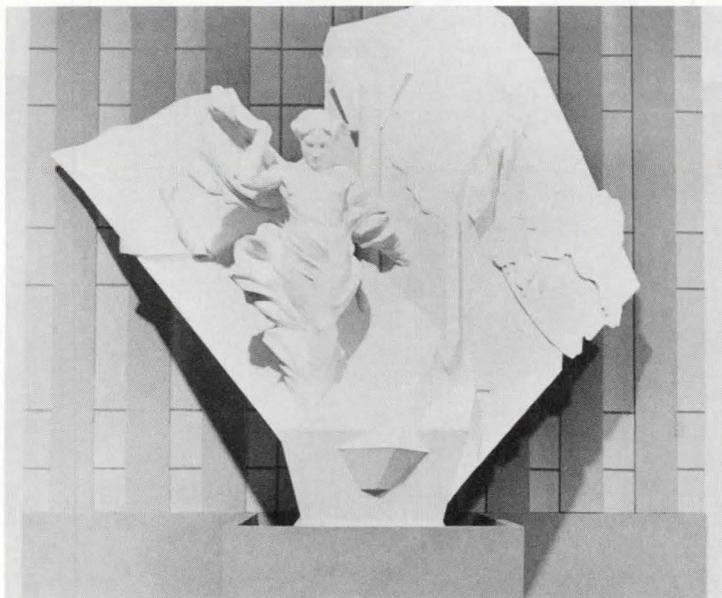
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Hail, Portlandia!



If you relished the stir caused by Michael Graves's rendered suggestion for a sculpture of Portlandia to adorn his Portland Public Services Building, now nearing completion, just wait till you see the real thing. The maquettes by Raymond Kaskey (right) and Richard Savini (above) were tied in what was to have been the final round of a competition previously narrowed down to five semifinalists who were asked to submit specific proposals for the \$200,000 sculpture that will perch three stories above the building's main entrance. Unable to decide between the two entries, Portland's public art selection committee sent both artists back to the drawing boards to refine their proposals and submit modified designs for review. To be continued . . .

Neutra at MOMA: A show within a show



Neutra Archive, UCLA

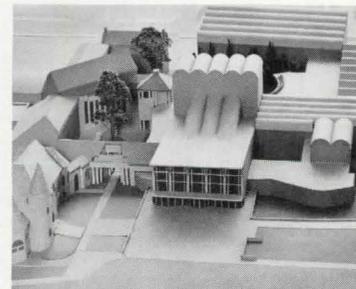
A glimpse of the young Neutra as a participant in the Viennese art world of the late teens highlights "The Architecture of Richard Neutra: From International Style to California Modern," an exhibition opening July 31 and running through October 19 at New York's Museum of Modern Art. Thirty-five of the architect's earliest drawings—landscapes and portraits (self-portrait above) as

well as architectural studies—introduce a survey that focuses on Neutra's contribution to American domestic architecture as traced through photographs and architectural drawings of 45 projects. A supplemental section examines Neutra's handling of various formal problems. After the New York showing, the exhibition will move to UCLA.

La Strada Novissima novissima

After a stop in Paris the controversial First International Exhibition of Architecture assembled for the 1980 Venice Biennale (RECORD, March 1981) has found its way to San Francisco where it will be shown through July 25 in Pier 2 of Fort Mason Center. Titled "The Presence of the Past," the exhibition was the first major showcase of the work of architects known (or becoming known) for their pursuit of post-modern ideas. The centerpiece of the show is La Strada Novissima [The Newest Street], a 250-foot-long street of facades designed by 22 leading post-modernists. Interiors of the units provide exhibition space for the more than 70 architects represented in the show with photographs, maquettes, and original drawings. New for the San Francisco showing are four facades by Andrew Batey and Mark Mack, Daniel Solomon, Marc Goldstein of Skidmore Owings & Merrill, and William Turnbull. The entry portal to the exhibit, designed by Crosby Thornton Marshall, was selected in a competition sponsored by the San Francisco chapter of the AIA and the Friends of the Biennale, the group of enthusiasts through whose efforts the show was brought to San Francisco.

Infill and outreach at Dartmouth



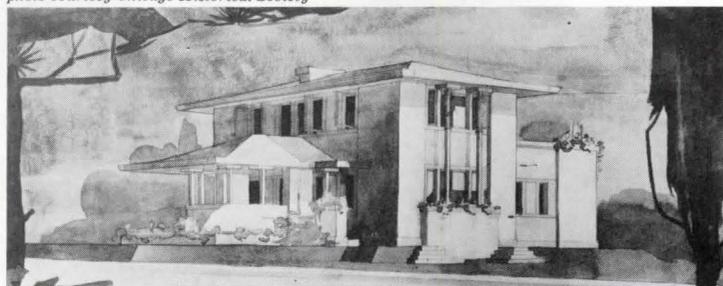
© Stuart Bratesman photos

Designed to expand and consolidate the arts facilities at Dartmouth College, the new Hood Museum of Art seems to forge a temporal as well as physical link between venerable turn-of-the-century Wilson Hall (foreground in photo) and the curiously old-fashioned modernism of 20-year-old Hopkins Center. In addition to providing gallery and teaching space for the visual arts, the museum will free enough space to regroup the other arts in a renovated Hopkins Center, thus restoring the "critical mass" concept that informed the original complex. Despite a cramped site in the elbow between the two existing structures, the building carves out a well-defined outdoor space and clearly marks a heretofore missing front door. Architects are Moore Grover Harper.

Beyond the Prairie Style: The architecture of Barry Byrne and John Lloyd Wright

Recently acquired collections of the work of Barry Byrne (1883-1967) and John Lloyd Wright (1892-1972) constitute a major exhibition at the Chicago Historical Society, through October 15. Contemporaries and personal friends, the two Midwestern architects shared the early influence of Louis Sullivan, Frank Lloyd Wright, and the Prairie School but later chose divergent career paths. Byrne is

now best known for his Prairie-style homes and radical designs for Catholic churches; Wright moved toward an assimilated modernism and later California influence in his domestic architecture. The show includes presentation drawings, sketches, plans, models, and original documentation of some 55 buildings and unbuilt projects reflecting the scope of both men's work.





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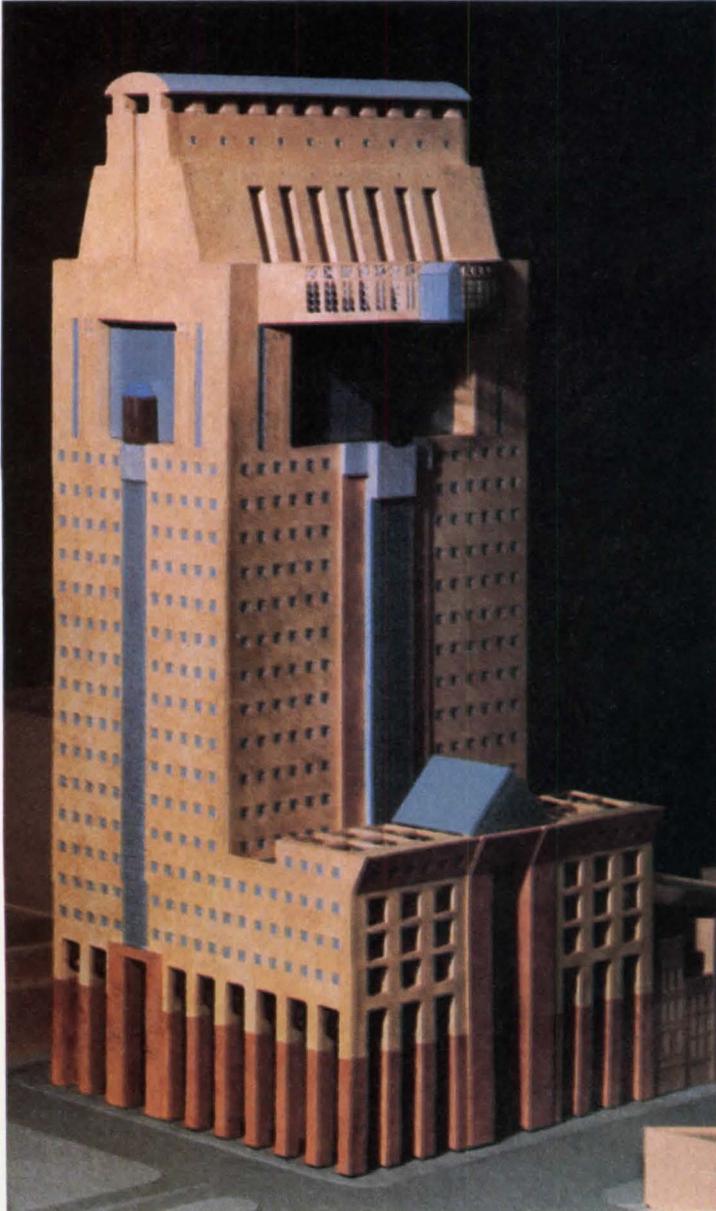
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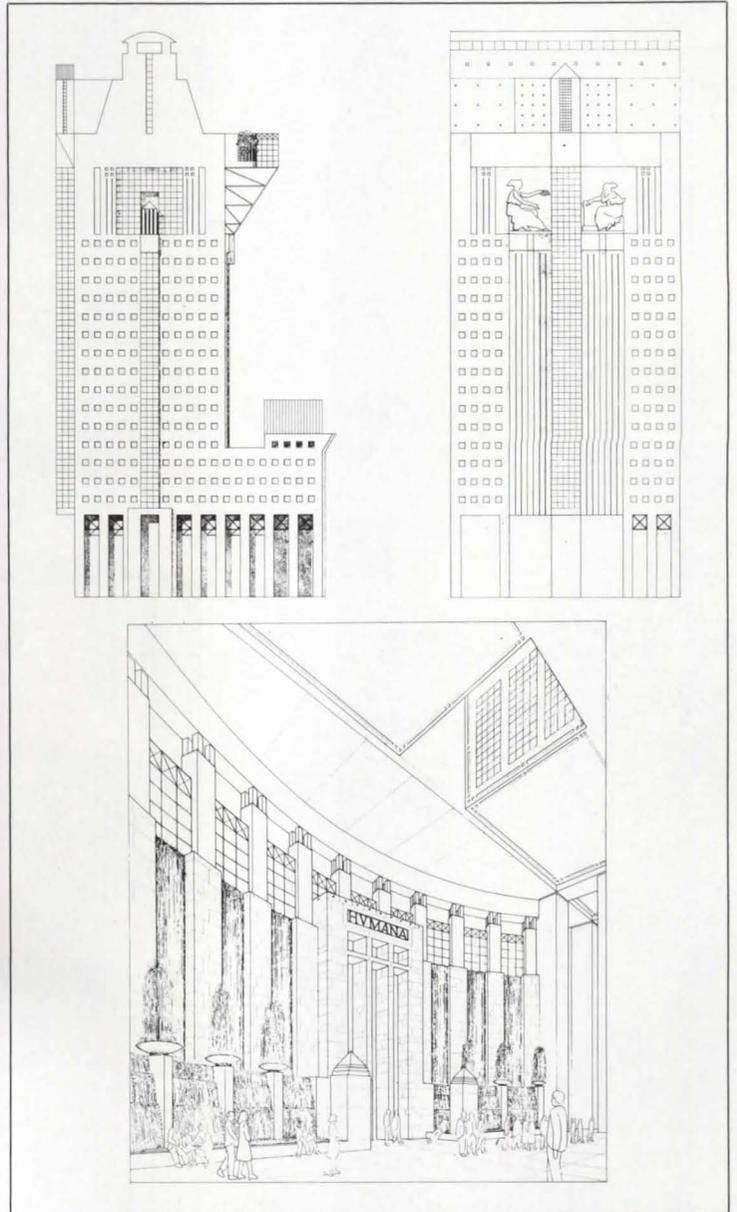
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Design awards/competitions: Humana Headquarters design competition



1. Michael Graves and Associates. Whether measured by physical size (27 stories, 450,000 square feet) or cost (\$50 million), the Humana Headquarters Building is Michael Graves's biggest commission to date, surpassing the nearly-completed Public Service Building in Portland, Oregon, as well as his project for the San Juan Capistrano Library in California (another competition-winner—see RECORD, March 1981, pages 48-49), and a proposed addition to New York's Whitney Museum of American Art. The Humana Building recapitulates formal concerns present in Graves's earlier schemes, recalling the articulation of the Portland office tower with its garniture of polychrome classical ornament, and the porticoes and roof-lanterns of the California library (designs for

the New York museum addition have not yet been released). In adapting his idiosyncratic design vocabulary to the specific demands of Humana's program, Graves focused on two primary aspects of the site: its proximity to the Ohio River and the architectural diversity of its neighbors. The latter include a row of 19th-century cast-iron commercial buildings, the new Kentucky Arts Center, and the 40-story First National Tower, set amid open plazas. Covered arcades and a loggia at the base of Graves's building are intended to reassert the traditional urban boundaries, human scale, and ceremonial dignity of street-level pedestrian spaces. A curved wall of cascades visible behind the main entry loggia (sketch above) is both a symbolic reference to the river and a gesture of welcome to passersby, drawing them into the lobby and



the shops and restaurant alongside it. A skylighted cafeteria for Humana employees is situated overhead with a view of the public loggia.

The warm hue and set-back massing of the granite- and marble-clad facades are calculated to harmonize with the low Victorian buildings next door while standing out against the dark slab of the bank tower, the tallest building in town. Tripartite elevations reflect the vertical organization of the interior into three major zones: public/commercial, offices, and a health club on the 25th and 26th floors. A north-facing cantilevered porch on the 24th floor, supported by an exposed projecting truss, encloses a roof garden and observation deck. On the south facade, sun rooms admit light and views to elevator lobbies.

Graves has specified a steel structure, mounted on a concrete mat. In the entry-level loggia, a long-span structure that extends approximately 48 feet, unbraced piers 60 feet high will be stiffened by the composite action between steel columns and concrete fireproofing. It is proposed that well water be tapped as a heat-pump source, with condenser water used for heating. Humana management expect to begin construction early next year, with completion targeted for 1985.

Thorough graphic documentation of the premiated design and the four other design proposals commissioned by Humana will be published this fall by Rizzoli in *A Tower for Louisville: The Humana Corporation Skyscraper Competition*, edited by Peter Arnell and Ted Bickford, with commentary by Vincent Scully.

Michael Graves and Associates of Princeton, New Jersey have won an invited design competition for the headquarters of Humana, Inc., an international hospital management company based in Louisville, Kentucky. Graves's project for the downtown Louisville site (opposite) was selected by a five-man jury of Humana corporate officers that included architects James J. Walters, AIA, vice president, and Robert B. Harris, AIA, design coordinator. The four runners-up (projects shown below) were Cesar Pelli and Associates, of New Haven; Murphy/Jahn

Associates, of Chicago; Ulrich Franzen/K. Kroeger and Associates, of New York; and Foster Associates of London, England. (Richard Meier & Partners were also invited to participate, but chose to withdraw before the design stage.) Shifting from monumental towers to more modest low-rise structures, we also illustrate (overleaf) the winners in the Plywood Design Awards Program, co-sponsored by the American Plywood Association and Professional Builder magazine.



2

2. Cesar Pelli & Associates. An octagonal plan honors Louisville's original gridiron layout while accommodating later diagonal paths that connect the city's Galleria and Convention Center to the Arts Center and riverfront. Unlike Graves, who pointedly avoided plazas and skylighted atria, Pelli incorporates both a glass-enclosed winter garden and an open corner plaza. Two kinds of granite, keyed to the warm earth colors of existing buildings nearby, alternate with clear glass as the curtain wall rises from its base. The upper segment of the 30-story tower that emerges from this granite-and-glass shell is a prism of silver-coated glass, crowned by an octagonal stainless-steel pyramid.

3. Murphy/Jahn Associates. The principal public space in this design is a six-story covered plaza sunk three feet below street level. The scale and color of the cast-iron facades next door are reflected in a diagonal glass entry wall punctuated by exposed steel columns that border an interior arcade. Seven four-story atria step up in a helical series to encase the building's 31-story octagonal core. These elevated glass-enclosed courtyards are adaptable for conversion to tenant use. Curtain walls are aluminum inset with silver and blue reflective glass.

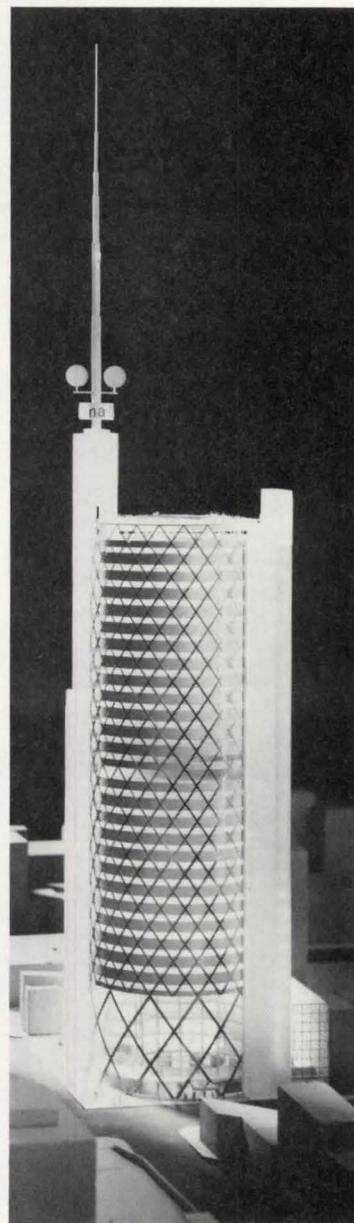


3



4

4. Ulrich Franzen/K. Kroeger & Associates. Clad with brick, granite, and tinted glass, this 26-story tower ascends from a low base whose scale and fenestration accord with those of its older neighbors. The four-story low-rise element expressed on the angled sides houses the main lobby and specialized Humana operations. Humana offices occupy the lower floors of the tower, with tenant space above. A single bull's-eye window at the top overlooks a corner forecourt embellished with a waterfall and pool.



5

5. Foster Associates. A six-story atrium and an outdoor sculpture garden afford multi-use public space at the base of a 32-story cylindrical tower. Triangulation of the circular shaft's perimeter structure transmits floor and wind loads to the foundation, minimizing vertical columns. Rectangular service towers are propped against the curved outer wall, and a communication spire is mounted above a rooftop helipad. Besides displaying an electrographic sky-sign that flashes local news, weather, time, and the Humana logo, this electronic mast would be equipped with satellite antennas, a three-way video link to hospitals, and a local microwave hookup.

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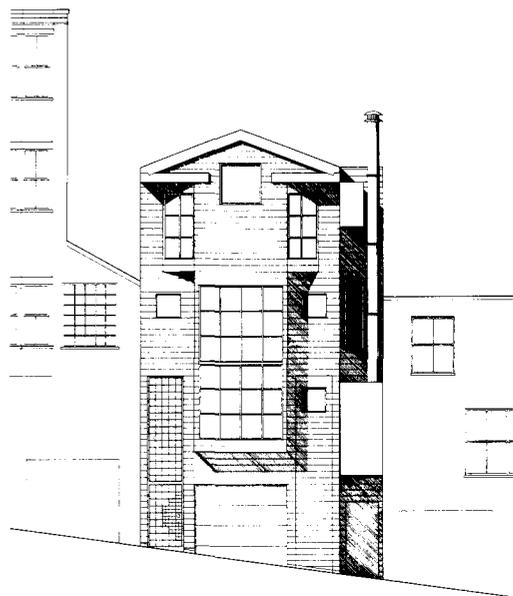
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Record Apartments 1982

There are no “stars” in Record Apartments 1982. And that’s by design—editorial and architectural. When the submissions to this year’s annual awards program for multi-family housing projects were collated, a theme emerged: the jury noted—with some pleasure—that there were fewer prima donnas, fewer blockbusters, and fewer mega-developments. Whether owing to escalating fuel costs, rendering sub-suburban tracts of open land inaccessible, or to the current back-to-the-city trend, prompting a closer look at sites once thought too meager to satisfy a developer’s profit margin, architects are increasingly being called upon to make some *small* plans. The neighborhoods for which these small plans are being made, however, are, naturally, quite interested. Community groups, zoning boards, preservation commissions, and city planning officials keep vigilant watch—*caveat architectus* . . . sensitivity to context is a foregone conclusion. Or as post-modernists would more grandly argue, “Paris should not look like Rome.”

Although the five projects illustrated over the next 16 pages are considerably closer to home, each adheres to the principle. The respective architects pay homage to the prevailing architectural climate of their context: Alfredo De Vido anchors a row of 19th-century Brooklyn brownstones with a 20th-century Brooklyn brownstone; Daniel Solomon revives the classic San Francisco rowhouse; and Robert Ziegelman borrows more than a cup of inspiration from a farmhouse neighbor for three townhouses on a sleepy suburban street. The Boston Architectural Team and Chris Craiker perform even greater community service—bringing new life to old buildings.

It’s all a question of appropriateness. *Charles K. Gandee*



The French Quarter
San Rafael, California
Design Phase II Associates



Women's magazines have long exploited the classic "before" and "after" photograph as an instant gauge by which to measure degree of personal improvement: it works for architecture—especially rehabilitation efforts—as well. Thanks to the City of San Rafael Redevelopment Agency, and architect Chris Craiker, the before-and-after photographs of seven tumble-down houses turned "mini-urban" center are especially striking (right and above).

From suburban blight to mixed-use delight



Karl H. Rick photos





"You can't always take . . . you have to put a little back in sometimes," generously (and wisely) offers Seaport Development partner Dennis Horne: to which residents of San Rafael, California, would respond, "Hear! Hear! And thank you very much!" For where a ramshackle row of abandoned houses once greeted visitors to the fashionable county seat of fashionable Marin County, a sprightly mini-village now stands like a chamber of commerce billboard proclaiming commercial, residential, and esthetic vigor.

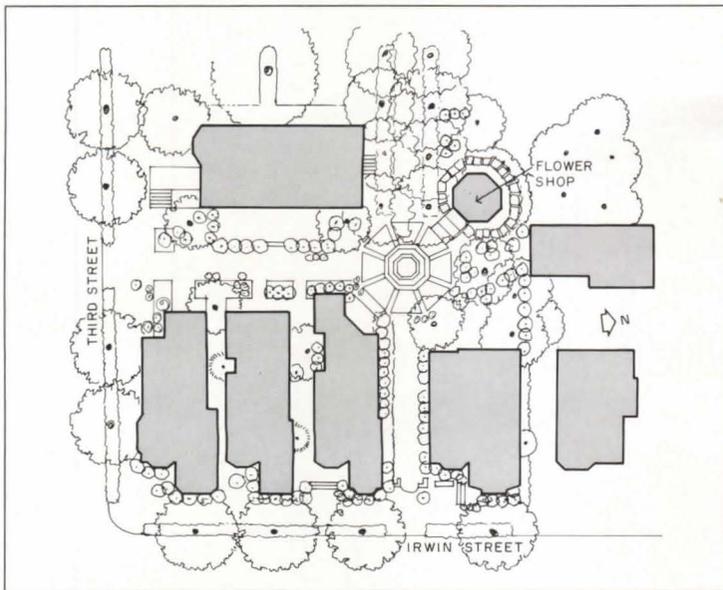
The transfiguration of seven dilapidated wood-frame houses into "The French Quarter" is a welcome sign—not only to traffic on Irwin Street, but of the community's success in parlaying their indignation over suburban decay into action. Although reaction to the citizenry's "raze or rehabilitate" clamor was for some too slow in coming, the collective voice reached its target ear in 1979, when the City Redevelopment Agency acquired the property for public offering to developers. Five proposals later, Seaport Development picked up the lease-option on the dreary little domiciles—replete with broken windows, dry rot, and deteriorating foundations. What turned the heads at City Hall, and snared the project for the Mill Valley-based developers, was a mixed-use adaptive-use scheme that promised the charm of picture postcard "preservation" (renovation), and the safety of around-the-clock occupancy. It didn't hurt that Seaport took the initiative to independently purchase an adjacent house, thereby upping the ante; nor that they negotiated with the California Transportation Department to lease parking space beneath a nearby elevated highway (running along the western border of the site), thereby trading cars for an open-air public "mall."

Surprisingly, architect Chris Craiker was not involved in the initial planning stages of "The French Quarter"—the proposal was written, the sketches sketched, and the City Redevelopment Agency convinced by the developer, sans architect. It did, however, fall to architect Craiker to refine and execute; to transform a good idea into a delightful, and most welcome, enclave of shops, offices, restaurants, and over-the-store style apartments. While the vicissitudes of the economy have, to date, forestalled more than a modest financial success for the project—and return for Seaport Development—partner Horne looks to the bright, and equally important side: "We've gained a certain amount of credibility from the city." For a developer, credibility is no mean commodity.



"The French Quarter" has been designed and detailed to charm passers-by off Irwin Street and into the various retail businesses surrounding its central courtyard. Architect Chris Craiker shows a definite flair for the picturesque—from fancy-cut shingles adorning gables and bay windows, to wooden newel posts punctuating balustrades. Subtle hues of green and blue are intended to provide

kinship for the seven 1862 houses, while common trim colors link the buildings together; stamped concrete paving acts as a unifying element.



*The French Quarter
San Rafael, California*

Owner:
Seaport Development
Architect:
Design Phase II Associates—Chris
Craiker, architect-in-charge
Engineer:
Callarman-Komendant (structural)
Landscape architect:
Ralph J. Alexander Associates
General contractor:
Seaport Development

Learning to live with Landmarks

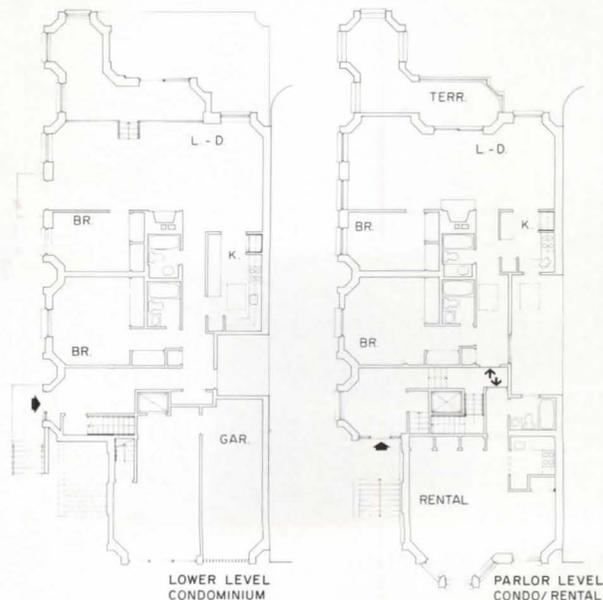


For sheer glory of prospect, the five-story four-family residence at the intersection of Pierrepont Street and Columbia Heights rivals Dorothy's first vision of Oz from the yellow brick road: Manhattan looms across the river with immodest splendor. The site, a rare commodity in Brooklyn Heights, was made available in the '40s, after fire razed the end unit in a row of seven brownstones built between 1852-60. Bound on the west by a grand public esplanade cantilevered over the riverside Brooklyn-Queens Expressway, and

on the south by a pedestrian thoroughfare and children's playground, the 40- by 100-foot plot had more recently enjoyed the attentions of the neighborhood garden club. Though the community was dubious about new construction, De Vido assuaged their concerns with a design that offers contemporary counterpart—in massing, proportions, and fenestration—to its context.

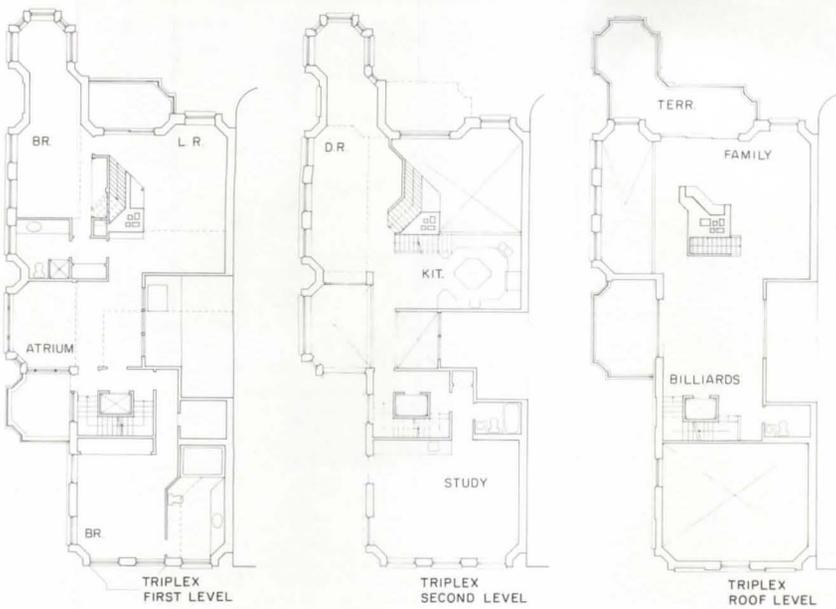
Residents of Brooklyn Heights keep close watch over their charming tree-lined streets and century-old brownstones. And wisely so: the neighborhood's rich architectural fabric is fragile, with original threads dating back to one Hezekiah Pierrepont, who opened this southwesternmost tip of Long Island to subdivision and development in 1820, six years after ensuring a constituency by bankrolling Robert Fulton's steam-powered ferry. Though commuters now trundle across the East River to Manhattan by subway, appearances suggest that little else has changed since 1890 when the Heights' infill was substantially complete. The community has fought hard to maintain that impression—tackling such Goliaths as urban planning czar Robert Moses and his proposal to bisect the Heights with an expressway—and in 1965, New York City's Landmarks Preservation Law added bite to their watchdog efforts with "Historic District" designation and protection. For the last 17 years, architects and developers have been filing through the vigilant esthetic gauntlet of an 11-person commission empowered to approve as "appropriate," or reject as "inappropriate," all proposed designs. Four years ago, architect Alfredo De Vido and client/developer Ian Bruce Eichner went before the commission with plans for a two-unit residence (one for Eichner, one for sale); according to De Vido, the process was "quite an odyssey."

Architect and developer persevered through three schemes before snaring the commission's elusive approbation with a four-unit residence bearing almost no resemblance to the initial submission. The problem was, naturally, contextual harmony: the original two-unit scheme was grossly underscale with the elegant row of six townhouses it was to terminate (photo right), and De Vido's modernist vocabulary was deemed insensitive to the prevailing Renaissance Revival style. In addition to upscaling the program (kudos to Eichner), changing the exterior finish from stucco to 8- by 8-inch brick (brown, as in brownstone), and revising the fenestration from free to regular, De Vido added a stoop and bay windows, and high-profile Torus-profile sills, belt courses and cornices to enliven the facades. For De Vido, the evolutionary road from community-commission rejection to approval was "an education." His journey was assisted by Landmarks Preservation Commission advisors architect William Conklin and historian/preservationist James Marston Fitch, who, says De Vido, "nudged" rather than pushed.





© Otto Baitz photos



222 Columbia Heights
Brooklyn Heights, New York

Owner:
Ian Bruce Eichner

Architect:
Alfredo De Vido

Engineers:
A. Hertzberg (structural); Irving
Haase & Co., Inc. and Vincent J.
Pantuso (mechanical)

Interiors:
Barbara Schwartz and Barbara
Ross of Dexter Design
Construction manager:
Saul Gersen

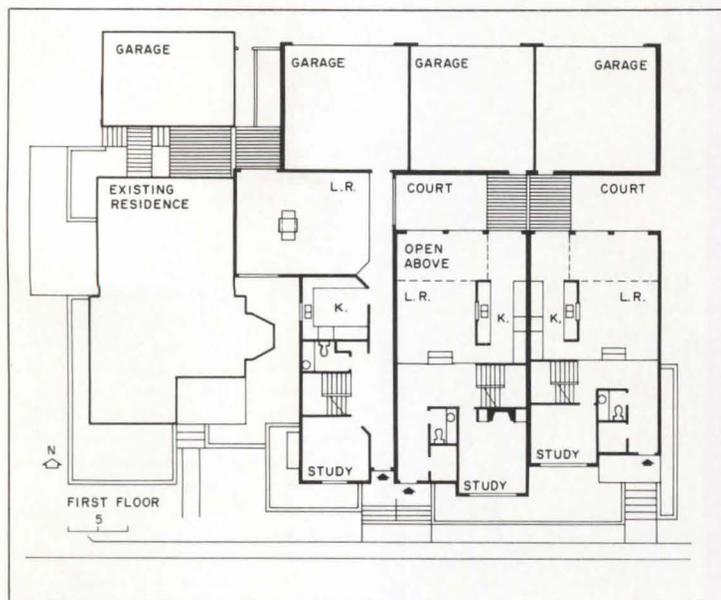
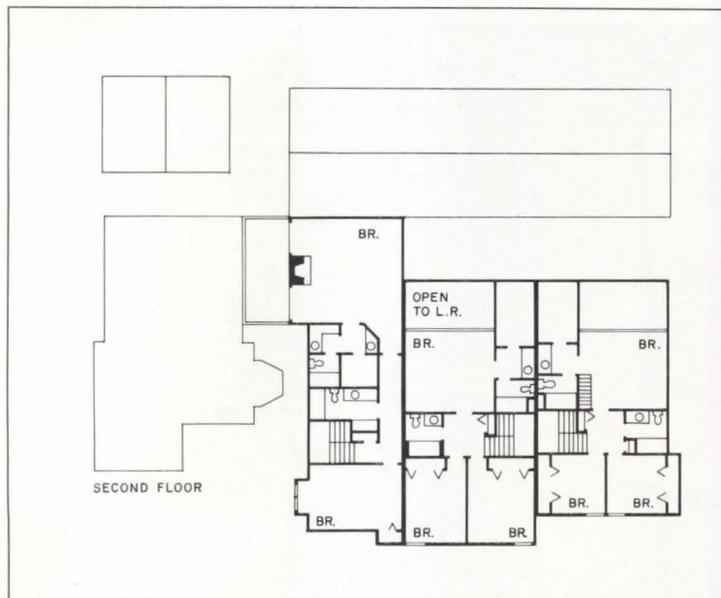




Norman McGrath photos

Nine months after New York architect Alfredo De Vido and client/developer Ian Bruce Eichner first went before the Landmarks Preservation Commission and the Community Planning Board with their proposal for a two-unit residence in the "Historic District" of Brooklyn Heights, New York, construction began on a modified four-unit residence. The addition of a rental apartment and second condominium (plans previous page), to Eichner's own 3,800-square-foot triplex and a speculative condominium, enabled the new construction to fall into line—and into scale—with the neighborhood. Though the original scheme was designed, according to De Vido, from the "inside-out," and the built scheme designed from the "outside-in," the "in" was not compromised for the "out." Just as the exterior deferentially reinterprets the architectural precedents established by its 19th-century neighbors, the interiors address the more relaxed predilections of a decidedly 20th-century bachelor client. Light-filled double-height spaces provide vertical punctuation for an informal, open plan that boasts extraordinary—and unexpected—vistas west, toward Lower Manhattan's Financial District. Spatial richness and complexity keynote Eichner's triplex (shown here); interior design consultants Barbara Ross and Barbara Schwartz selected classic modern furniture to complement De Vido's design—Le Corbusier's glass-topped dining/conference table, Charles Rennie Mackintosh's ebonized ashwood lounge chairs (inlaid with mother of pearl), and Mario Bellini's leather "Cab" chairs appear comfortably ensconced under the high ceilings.

Mrs. McClelland's house as model

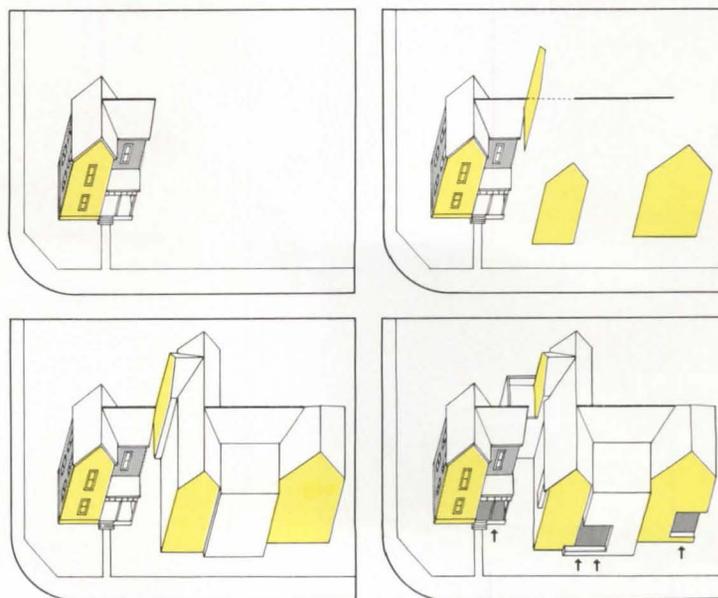


Last year, as workmen hammered the last nails into the three condominiums next door, Mrs. Evelyn Bell McClelland moved out of the little white house her father built in 1891 on the corner of Brown and Chester streets. While the octogenarian daughter must have sighed with relief to be free of porches that need sweeping, gables that need hosing down, clapboard that needs painting, and a vacant lot that needs mowing, she must have also sighed with relief to know that the family homestead would not fall to rack and ruin. For although the house is architecturally unremarkable—its simple forms, materials, and decorative trim are as common as maple trees on Main Street—the City of Birmingham, Michigan, generously supplied post-McClelland preservation in the form of “Historic Residence” designation. Architect Robert L. Ziegelman, along with three other investors, eagerly assumed the responsibility of seeing through the designation’s preservation promise by purchasing the house and adjacent lot (for \$80,000). Their interest (and investment), however, was not purely altruistic. Ziegelman planned a mini-multi-family housing development which would revere *and* re-employ the old house as linchpin and design model. Mrs. McClelland packed while her former garden gave way to three condominium/townhouses; they must have looked increasingly familiar as they took shape, for architect Ziegelman chose to continue the architectural tradition so modestly begun by Mrs. McClelland’s father (William Bell) 90 years before. And when the new construction was completed, Mrs. McClelland’s “Historic Residence” received a complete exterior restoration: double-hung windows were replaced with double-glazed double-hung windows, pock-marked clapboard was replaced with redwood siding (stained white) . . . even the lintels were removed, repaired, and reinstalled. But inside the 19th-century shell, historical accuracy was abandoned for modern convenience: the interiors were gutted, and a new plan introduced.

For those with a predilection for nostalgia, the William Bell Townhouses will surely inspire a lament—vacant lots are no longer the domain of children at play, and changing living patterns and needs require new and untraditional solutions. Though one might have wished for more finesse in the execution, the new neighbor on Brown Street displays all the right instincts.

A postscript is supplied by the realtor who sold Mrs. McClelland’s house for \$156,000.

William Bell Townhouses
 Birmingham, Michigan
Developers:
 James A. Simpson, Donald W. Graham, Jay H. Robinson, Robert L. Ziegelman
Architect:
 Carl Luckenbach/Robert L. Ziegelman, Inc.
Engineers:
 W.M. Harju & Associates
 (mechanical); Bada Engineering, Inc. (electrical)
Consultants:
 Kent W. Smith (landscape); Kathy Wilson (restoration and realty)
General contractor:
 Beacon Hill Construction Company

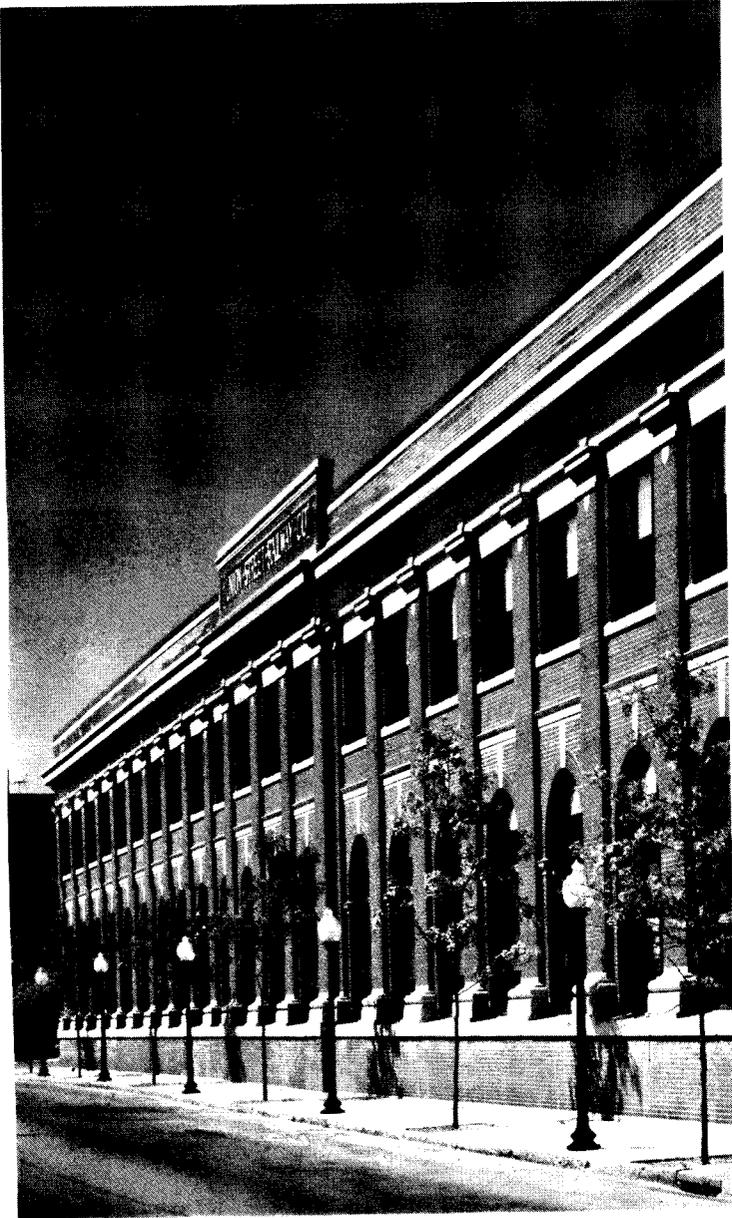




Though it's a tight fit, architect Robert Ziegelman squeezed three 2,000-square-foot townhouses (plus garages) onto a 60- by 100-foot lot between two existing houses. To counter the bulk, and to harmonize the new with the old, the same vocabulary, color, and forms were used. Cluster zoning guidelines dictated the linkage to an adjacent 19th-century house, renovated as townhouse number four.



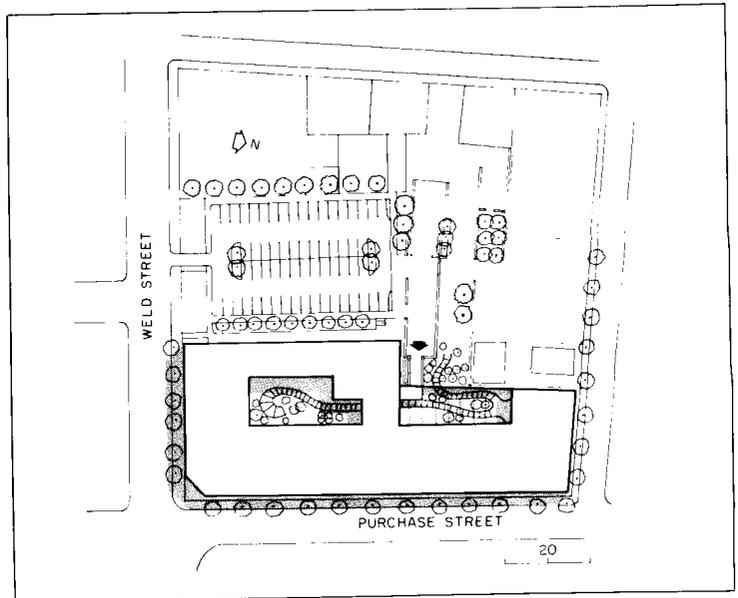
The Golden Years in/of a trolley barn

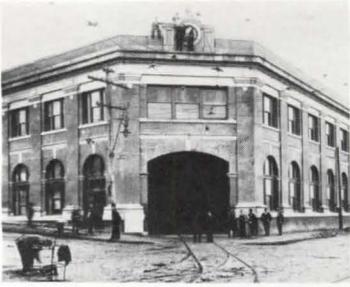


In 1947, the Union Street Railway Company blew the whistle, and work stopped at the New Bedford, Massachusetts, maintenance station: the last trolley rolled out into history, the garage doors slammed shut under the clock, and the hulking brick dinosaur at the corner of Weld and Purchase streets was put to sleep. If industrial evolution administered the sedative, it also administered the stimulant; roars and fumes soon replaced screams and sparks, with the advent, and occupancy, of the city bus company. But public transportation made a final exit from Purchase Street in 1970, and the dour depot took an unfortunate detour as warehouse to a wholesale grocery chain. Had the neighborhood been more prosperous—less depressed by the migration south of the local textile industry—the sturdy neoclassical structure might not have survived the decade which was to see the National Register of Historic Places recognize its humble dignity, and stave off the wrecker's ball. Legal protection, however, does not ensure physical revitalization, and 68 years of neglect, vandalism, and deterioration take their toll. It took the Department of Housing and Urban Development, the savvy instincts of a successful development company, and the expertise of first-rate restoration/recycling/rehabilitation architects to repair the ravages of time—to polish up the globe finial, and put back into community service a building whose “Golden Years” were still ahead. And they came in 1978.

Armed with HUD/Section 8 rent-subsidy funds, the City of New Bedford requested proposals from developers for rehabilitation housing in three designated Neighborhood Strategy Areas. The fading and grossly underutilized “warehouse” in the Weld Square section of town was made to order. Though the building had thrice been considered, and rejected, for rehabilitation, The Claremont Company and the Boston Architectural Team evinced more confidence in their ability to negotiate 22-foot-high ceilings, ungainly over-all dimensions, and reinforced concrete construction; after factoring in historical significance and potential positive impact on the neighborhood, they submitted a proposal to supplant decay with 114 units of elderly housing. The city approved, the funds were allocated, and after the last can of peas moved out, the architects set to work meticulously restoring the exterior and not-so-simply inserting a new interior (overleaf).

They hung out “The Car Barn” sign on Purchase Street in September; four months later, it was followed by “No Vacancy.”





The clock started ticking in 1910 for (and on) the New Bedford, Massachusetts, trolley depot. And though time ran out early for the transportation system, the 117,000-square-foot storage and maintenance facility rolled on in to the '70s—no better for the wear, but in time to have its casement cleaned and new workings inserted. "The Car Barn" contains 114 apartments for the elderly.



©Nick Wheeler photos





Protected open-air courtyards are a common, and welcome, amenity in elderly housing projects: residents are especially vulnerable, and, with advancing age, there's an increasing tendency to stay "shut in." "The Car Barn" provides two such garden areas—owing to the building's unwieldy 160-foot depth, which, otherwise, couldn't be adapted to a double-loaded corridor system. The equally unwieldy 22-foot-high ceilings allowed a third floor to be inserted between the original two—as the 68-year-old reinforced concrete construction was sound enough to support steel floor joists planted directly into the concrete columns and load-bearing walls. Of the 114 one- and two-bedroom apartments, 11 are specially designed for the handicapped.

*The Car Barn
New Bedford, Massachusetts*

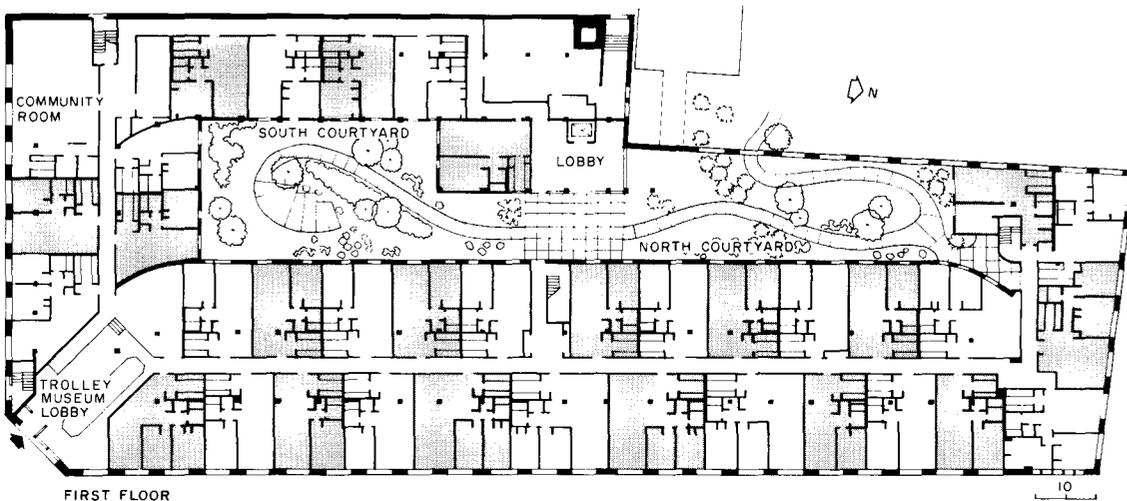
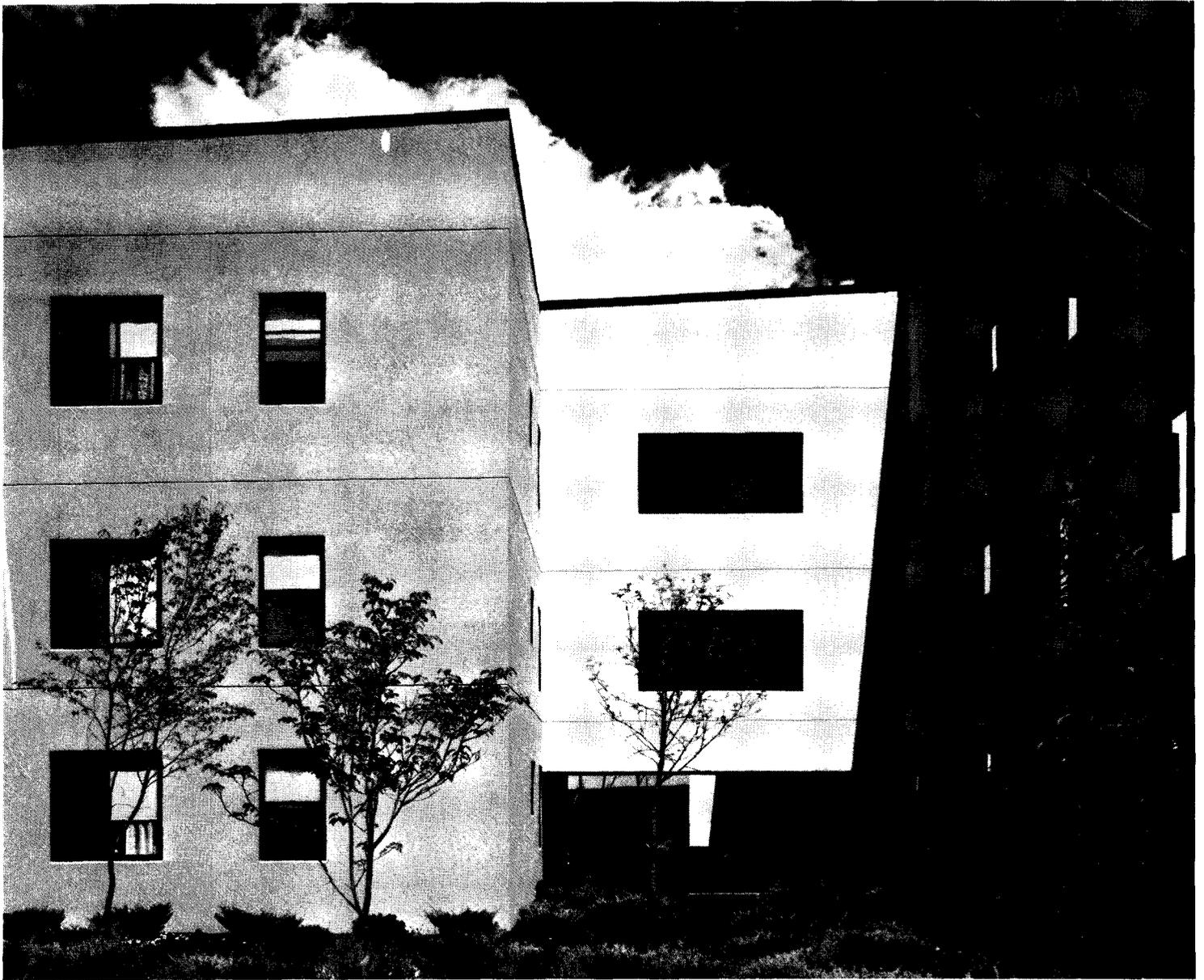
Owner:
The Claremont Company

Architect:
*Boston Architectural Team—Robert
Verrier, principal; Philip Hresko,
project architect; Andrea Sarzana,
job captain*

Engineers:
*Rene Mugnier (structural); Bay
State York (mechanical); Edward
Guzorsky (electrical)*

Consultants:
*Steve Woodman (interiors); Steve
Boros (wall mural)*

General contractor:
George B.H. Macomber Company



Reviving the rowhouse: San Francisco-style

© Henry Bowles photos



Where a modest one-story single-family house once sat, a decorous four-story two-unit condominium now stands. Taking advantage of higher density allowances for small—vs. aggregated—parcels of land, architect Daniel Solomon sandwiched 2,100 square feet of living space (plus street-level garage and storage) into a 22- by 60-foot blind-wall lot. (The higher density allowance is courtesy—at least conceptually—of urban planner Allan Jacobs, former Director of the San Francisco Department of City Planning; the intention is to provide an incentive for developers, while preserving the original city grid and resurrecting the rowhouse.) The Glover Street Condominiums pay deference not only to the rigid rules of zoning—in height, setbacks, and massing—but to the more genteel rules of neighborliness—in facade.



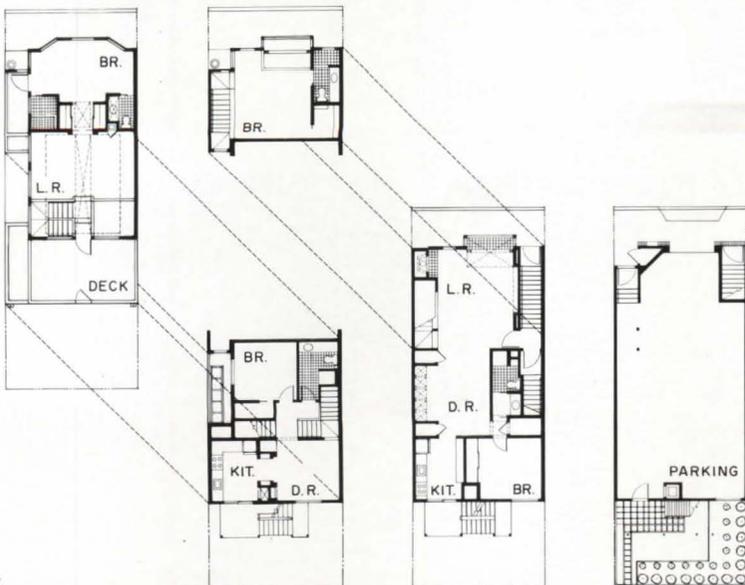
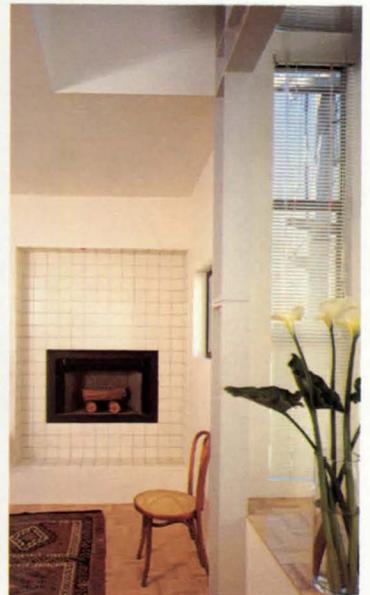
The streets of San Francisco have a reputation for being high in charm and low in scale. Residents would prefer that reputation unsullied; developers require some persuading. Architect Daniel Solomon is doing his part.

Seven years ago when the City Planning Commission began to realize the adverse consequences of “down-zoning” in residential areas (an idea whose time came in the early '70s under pressure from community groups anxious to stave off wholesale blockbuster development), Solomon spearheaded an urban design research team of fellow UC/Berkeley College of Environmental Design faculty and students to offer alternatives. Armed with an NEA grant, and an equally indispensable presupposition that the character of established neighborhoods could be maintained *without* sacrificing new construction, the team worked for two and a half years with the City Planning Department staff on an exhaustive residential zoning study. The results of their labor were presented to the Commission in a report (co-authored by Solomon) entitled “Change without Loss,” which received an American Institute of Planners Urban Design Award. The AIP was acknowledging not only irreproachable good intentions, but the scrupulous detail—and wisdom—with which questions of density, height, parking, facade treatment, and even developer incentives were handled: more gratifying still, however, was that the report served as a data base—and numerous recommendations were implemented—when San Francisco modified its residential zoning ordinances in 1978.

Since Solomon wrote the book, so to speak, on San Francisco residential urban design, his work—which, not surprisingly, is heavy on the housing side—invites some scrutiny. Although the Glover Street Condominiums offer the Bay Area a mere two units of housing—two units priced substantially above the reach of most San Franciscans—the care, and sensitivity, attending the design have applications far exceeding its diminutive scale. Inspired by the narrow site—and limited by a zoning-ordained maximum building envelope—Solomon elected to link architectural arms with local tradition: the classic San Francisco rowhouse is alive and well at 15-17 Glover Street—clapboard siding, bay window, and pediment intact. Though Solomon's rendition is more disciplined, near austere, no match for the panache of its 19th-century forebears, he argues, and not unconvincingly, that “replicas of Victorian architecture are a travesty.” Disneyland is, after all, 350 miles south.

While it's a long way from the Villa Savoye to Glover Street, the "Corbusian spatial model and ideals of compactness, efficiency, austerity, and health" served as inspiration, according to Solomon, for the interiors. Double-height spaces, expansive industrial-type

glazing, pipe-railing, and exposed steel structural frames are familiar 20th-century trappings: the effect is decidedly "modern"—open, sun-drenched, clean.



Glover Street Condominiums
San Francisco, California

Owner:

Napleso and Associates

Architect:

Daniel Solomon and Associates—Susan Davis McCarter, John Long, S. Pearl Freeman, project staff

Engineer:

Shapiro, Okino, Hom and Associates (structural)

Consultant:

James Goodman (color)

General contractor:

Durney Brothers

William R. Cannon Chapel
Emory University, Georgia
Paul Rudolph, Architect

Rudolph's chapel forms a quiet quadrangle







The meticulously formed concrete (the contractor calls it "molded") used rough-sawn forms bordering on cabinetwork, and contrasts herringbone panels and haunches with a horizontal pattern. At the ends of vaults overlooking the courtyard (preceding page), the herringbones joyously emphasize

the center of the vaults. Rudolph gets rid of rainwater in a fashion both straightforward and supremely architectural: metal drainpipes in the middle of the herringbones bisect panels, haunches, columns and all.

"One of modern architecture's greatest failures has been its lack of interest in relationship to the sky," Paul Rudolph wrote in an essay for ARCHITECTURAL RECORD 25 years ago. "One doubts that a poem was ever written to a flat-roofed building silhouetted against a setting sun." A generation later, the red-tiled vaults above Emory University's Cannon Chapel show the architect still taking that concern seriously.

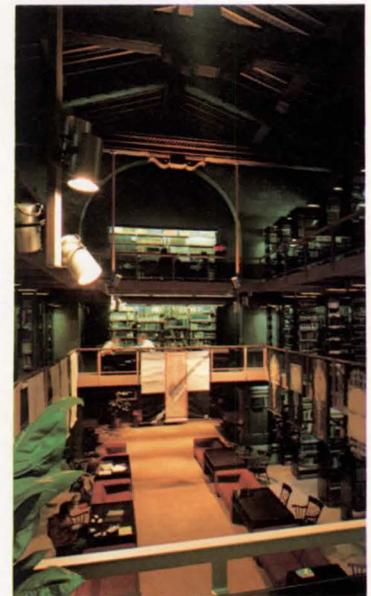
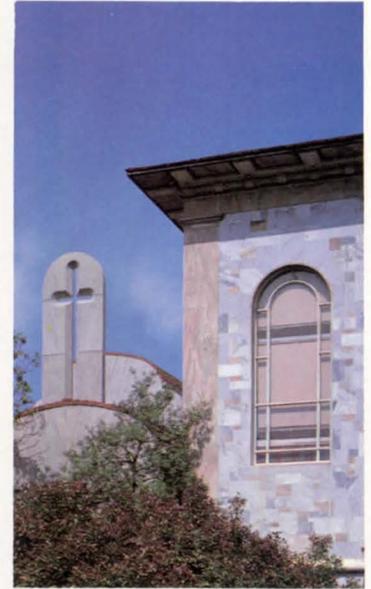
As a sensitive designer and keenly interested observer, Rudolph has always resisted the simplistic extremes of architectural theory, whether "modern" then or "post-modern" now. And while the genesis of this design might be considered "modern"—Rudolph, after all, got his architectural basics under the tutelage of Walter Gropius—it may be instructive to analyze the building with some concepts borrowed from "post-modernism," if only to demonstrate that the visual and intellectual satisfactions of a given building have, at best, tenuous connections with criticism formulated after the fact.

Symbolism? The overlapping vaults cover a spiral of balconies around the body of the chapel to represent the ascent of the spirit to God in the loftiest, brightest vault, with way stations at each level of aspiration. The vaults are clearly readable, both as balcony ceilings inside the chapel and as a rising series of tiled roofs outside. The balconies with their high-backed pews have a functional as well as a symbolic purpose—though which came first is one of those unanswerable questions about architectural intuition. While the chapel can seat as many as 450 congregants, the school wanted the space to seem full with as few as 150. The ranked pews, painted a putty color to match the concrete (see photographs on pages 100-101), thus appear to be simple walls when all worshippers sit on chairs on the chapel floor. The high pew backs also serve as protective handrails between the rows, the tiers getting steeper in the higher balconies.

Reference? Metaphor? The vertical clusters at the corners of the chapel call to mind the bundled columns that support Gothic vaulting—though, as Rudolph points out, those fluted stone columns have nothing to do with the facts of 20th-century structure. Each cluster contains two oval concrete columns, paired to support sides of clerestories that run the length of the chapel, and assorted duct work for mechanical systems, which Rudolph feels have great contemporary relevance. He takes an especial interest in the role of exposed mechanical systems as "a kind of scale-giving ornament." Further, the architect values the visible juxtaposition of structural regularity and mechanical irregularity. "If you look inside a Tin Lizzie, you see clearly that the mechanical systems are very, very irregular." Metaphor moves in mysterious ways.

Used chiefly as a teaching facility by Emory University's nondenominational Candler School of Theology (the main college chapel is elsewhere), the William R. Cannon Chapel is insinuated between two existing buildings belonging to the school: Bishops Hall to the north, which accommodates classrooms and offices, and the Pitts Theology Library to the south. The major public entrance to the chapel lies under an imposing propylaeum at the top of a long ramp from the university's 1916 quadrangle (at left and on page 100). In another sense, though, the *real* entrance lies at the back of the building. The brick-paved court there connects Bishops Hall and an arcade used by students to enter the chapel's lower floor (see preceding page). Crossing vaults and the pierced spire preside over this quiet quadrangle (an unrelated classroom building closes the fourth side). For special occasions, the administration already envisions musical performances on the circular brick platform for an audience seated on chairs and steps around the quad. *Grace Anderson*

Gordon Schenk photos

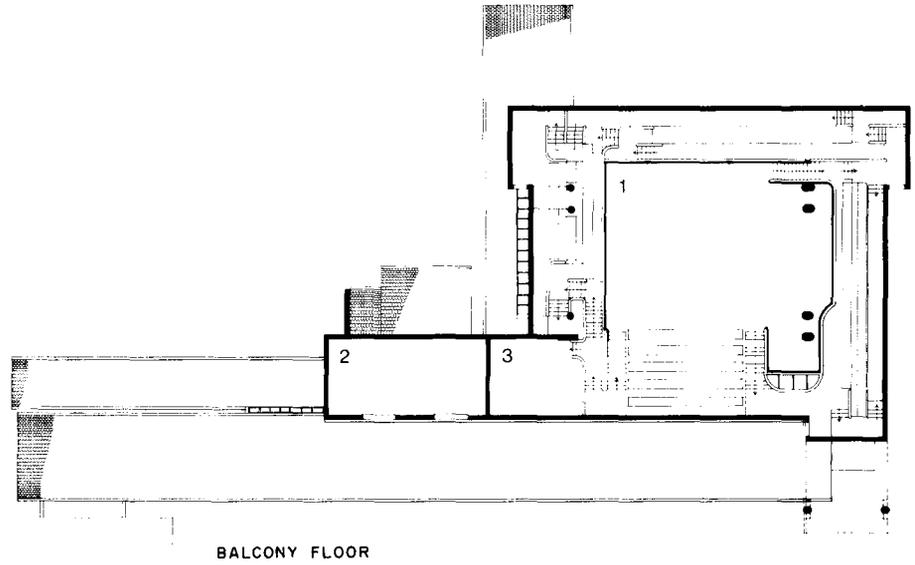


The theology school's former chapel was renovated a few years ago as a library when the school purchased a 250,000-volume collection from the Hartford (Connecticut) Seminary. The architect was Paul Rudolph. The original building and others like it around the quad were designed by Henry Hornbostel in 1916 and set the architectural context of Emory University. In response, Rudolph used the soft white, gray and mauve of the polished marble walls for color inside the new library, and repeated the shape of the round-headed windows with the new chapel spire. (Rudolph's father was in the Candler School's first graduating class, and the architect has dedicated a landscaped court at the juncture of chapel and library to the memory of his parents.)

Rudolph's plan places the floor of the chapel on the second level, raising it to an eminent position at the same time it clears space for a fire lane on the lip of the drop-off.

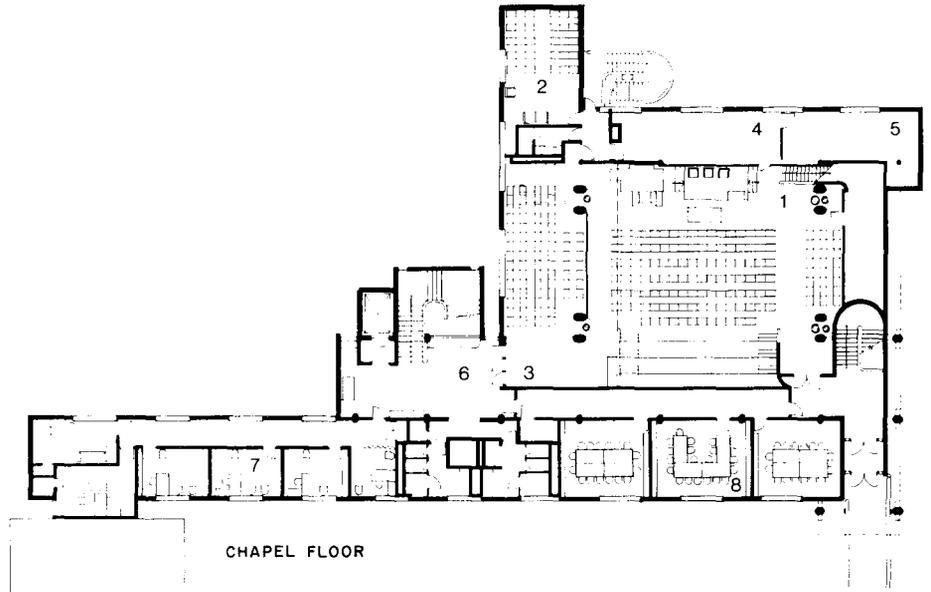
Facilities include:

- 1 Upper chapel
- 2 Upper entrance lobby
- 3 Recording room



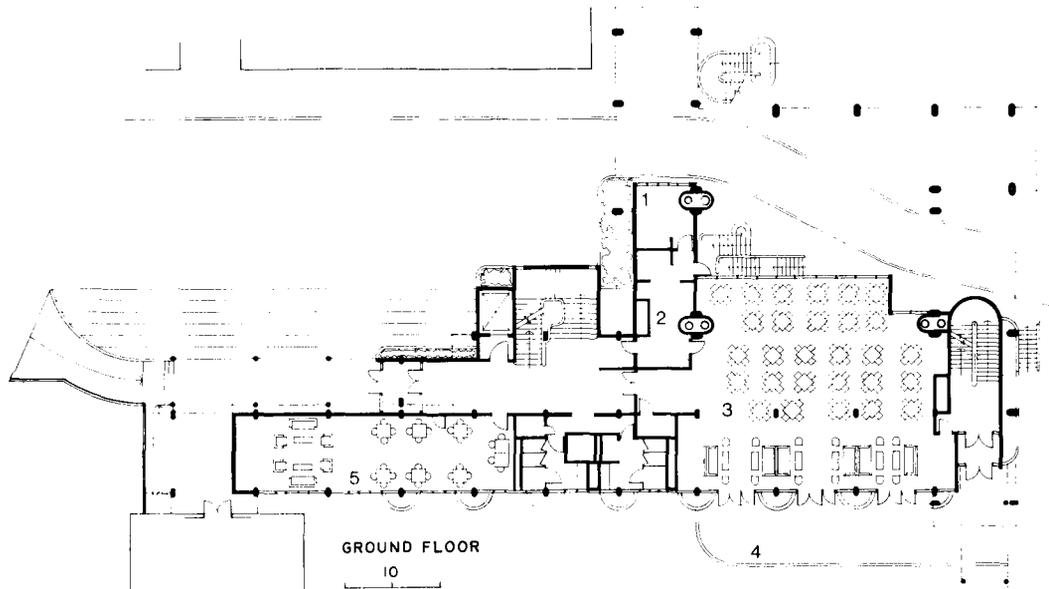
BALCONY FLOOR

- 1 Chapel
- 2 Choir room
- 3 Morning chapel
- 4 Sacristy
- 5 Storage
- 6 Entrance lobby
- 7 Offices
- 8 Seminar rooms



CHAPEL FLOOR

- 1 Kitchen
- 2 Pantry
- 3 Student café
- 4 Terrace
- 5 Bookstore



GROUND FLOOR

William R. Cannon Chapel and Religious Center
Emory, Georgia

Owner:
Candler School of Theology
Emory University

Architect:
Paul Rudolph, Architect

Associate architect:
Tippett, Taylor, Anderson/
Architects—James Kinnard,
project architect

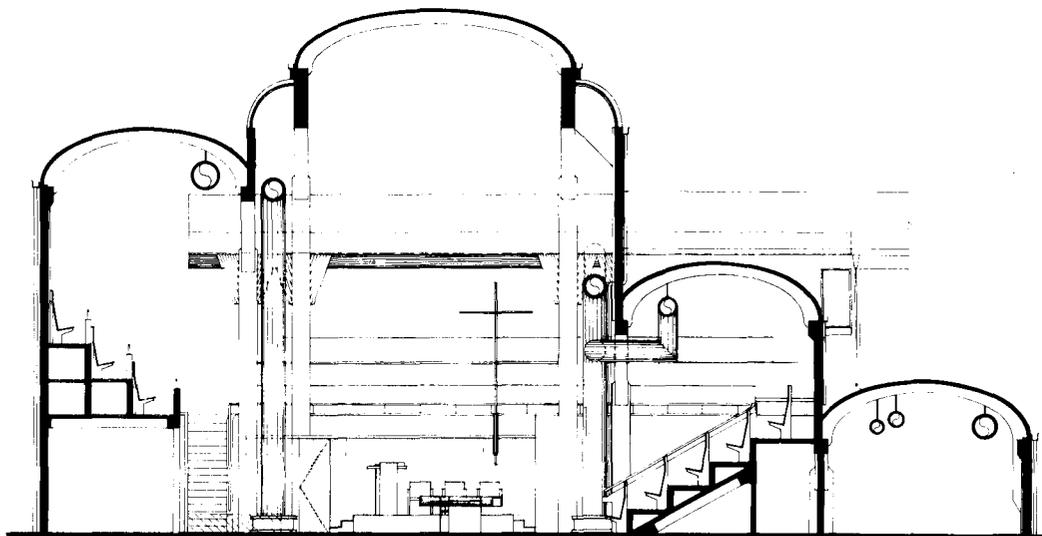
Engineers:
Jack Lynch & Associates, Inc.
(structural); Newcomb and Boyd
(mechanical/electrical)

Consultants:
Newcomb and Boyd, and Bolt,
Beranek & Newman (acoustics);
Robert Nix (graphics)

Landscape architect:
Edward L. Daugherty

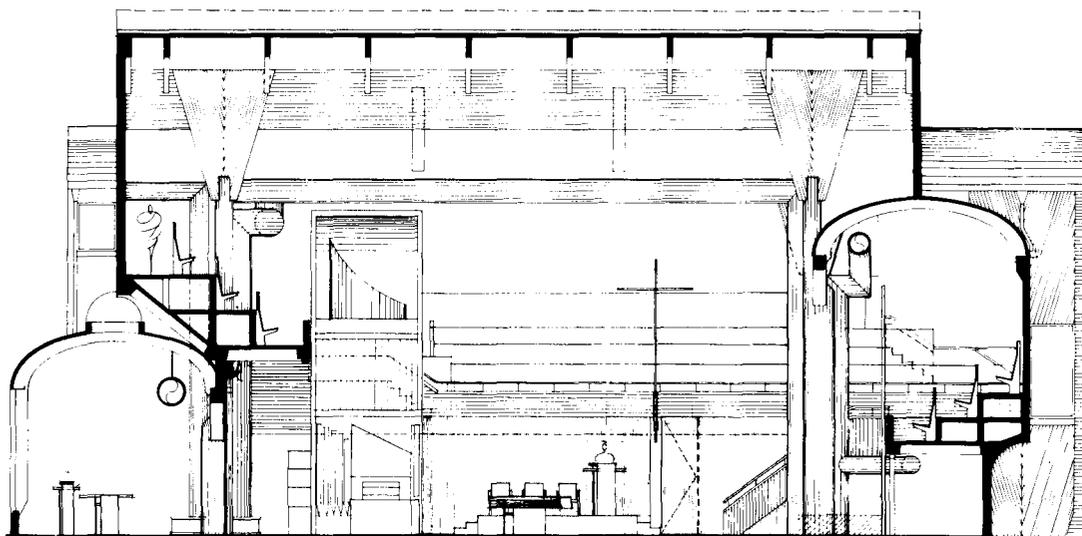
General contractor:
Hardin International, Inc.

The orientation of the chapel is changeable, with the worship center placed either on the short east wall (section top right) or on the long north wall (section center right). Worship furniture and the platform on which it sits are movable. The demountable cross (or Star of David) fits into brackets on either east or north balconies.



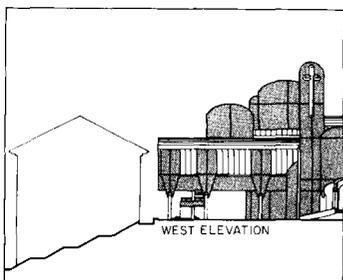
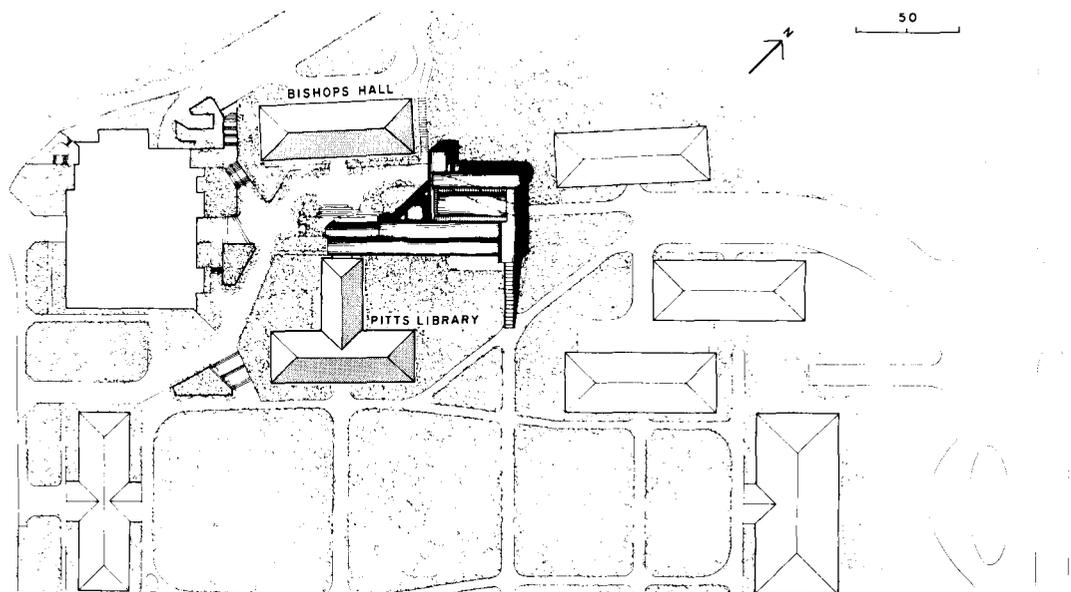
CHAPEL, EAST WALL

In its north-facing arrangement, the chapel is used for musical and dance performances as well as for religious services. The morning chapel accommodates homiletics training and is furnished with videotape equipment for students delivering practice sermons. (These sections show only the chapels on the second floor of the building.)



CHAPEL, NORTH WALL

The chapel sits on the edge of an abrupt drop-off, and bridges a fire lane at the top of the grade. The public and students coming from the main quad enter via a long ramp at the south, but theology students usually use a courtyard at the northwest. An enclosed bridge connects the chapel's classroom wing with the library.



WEST ELEVATION



In counterpoint to the site's sharp drop-off, a long ramp leads from Emory's central quad to Cannon Chapel's front door, beneath a high vault that crosses other vaults above and below (top). Red tiles, typically used on roofs around the campus, cover the cascading vaults on this facade. On the ground floor, theology students enter the chapel building through a door at the end of a colonnade on the courtyard (directly above).

The congregation may face either north (directly above) or east (opposite); religious furniture and the cross are transposed to the appropriate wall as orientation demands. Shaped laminated wood arches support the vaults, which are planked with pale stained yellow pine. Concrete struts, which transfer load from the top vault across the clerestories to the side walls, were known by the construction crew as angel wings.



Learning from Denise: the role in architecture of Denise Scott Brown



Thanks in no small part to Robert Venturi and Denise Scott Brown, architecture today has a new esthetic standard finally in consonance with the rest of our contemporary culture.

Architecture is now inclusivist, not exclusionist; accepting, not refusing. They have taught us to be pleased with all kinds of things: the new, the old, the unconventional—even Las Vegas. Famous for their critical writings, this remarkable literary pair has demonstrated something else—equally significant. Today, almost all theoretical, critical, and historical writing about architecture is done outside the art by architectural journalists, historians, or academic architects who don't practice. Much of this work is evaluative, not creative. The Venturis, on the other hand, write *within* the art of architecture and their writings are on the same high creative level as their architecture. They see their architecture as an inquiry in parallel with their critical ideas, and demand of their intellectual life that it make a tangible contribution to their architectural work.

Because they collaborate as partners in the 40-person firm of Venturi, Rauch and Scott Brown, the separate intellectual and creative contributions of each are not easily sorted out. Architect Denise Scott Brown, for example, though widely known as VRSB's chief planner, plays a significant role in the firm's architectural design. In a recent interview she agreed to discuss this role. She chose the VRSB projects included in this article to demonstrate the nature of her collaboration and to emphasize her point of view.

The work

"Bob and I bring rich lives to architectural design—everything we have lived and felt. We use heuristics chosen to stimulate investigation and help us get design ideas. I once heard Bob say: 'Well you can design it like a Victorian lady's feathered hat'—and what came out in the end was the Fairmount Park fountain which wasn't anything like a Victorian lady's feathered hat. But the heuristic method worked for him. It got his design processes going. This method has helped shape each project shown in this article, and my share in the associative process of design is what I want to describe. In my design collaboration with Bob and the firm I use ideas from my life, from literature, and from my studies in social planning. These ideas have influenced in different ways dozens of projects in our office, from small houses to large-scale urban designs."

A small house

This little house (1) was built in the woods of Westchester County, New York, for a bachelor who expected to occupy the house by himself. Denise reports: "He was a literary young person and he wrote a very beautiful poem called *Portrait of the House as Myself*. He wanted a house that was shy but eloquent. He really made a confluence between his personality and the house's personality, and Bob and I picked up from that. For me, spending a rainy day in a nook with books is a wonderful thing to do, so when Bob made a little attic library overlooking the high square living room and facing its great circular window, I suggested he include a reading nook in it. The library is not hermetic; it relates to the rest of the house and the trees seen through the window. The whole house feels like a tree house, but never more so than from the library couch."

Campus buildings

Denise remembers Lou Kahn saying that school building corridors were really the student spaces and should be designed to facilitate informal gathering. The three VRSB college building

plans shown—the Humanities Classroom Building and the Social Sciences Classroom Building at the Purchase Campus of the State University of New York (2,3), and the Mathematics Classroom Building Competition Design for Yale (4)—have circulation systems tuned to the ebb and flow of student pedestrians, as urban transportation plans are tuned to the ebb and flow of automobiles.

Denise's experience with transportation planning strongly influenced these three *partis*. As she explains: "Transportation planners don't plan for a peak load, but for something less than the peak—a heavy load but not the worst. During off-peak hours there are other uses for the extra space. This is applicable to architecture. We made the corridors big where necessary to allow for maximum milling about between classes, but these street-like spaces are designed to be like common rooms at other times. We strengthened that function by our careful placement of telephones, notice boards, coffee machines and sitting places."

Campus buildings designed by the firm are distinguished by a certain toughness and durability, almost Victorian in character. Denise thinks that this attribute of their institutional work has to do with the fact that she and Bob were college professors during the turbulent '60s. "Campus buildings must be kickable," she argues, "like Richardson's Sever Hall at Harvard. It has marvelous circulation space through it. The architecture is not in the classrooms, it's in the corridors. I believe every building has a chapel in it—some place of heightened emotion that the architect designs into it. In Bob's mother's house the chapel is the stair. Very often in Bob's designs the residual space has the high emotion; and certainly in these campus plans the corridors are the chapel."

A faculty club

In designing the Faculty Club for Pennsylvania State University (5), VRSB drew upon their studies of the design of roadside restaurants, their historical knowledge of Gothic collegiate and monastic refectory architecture, their sense of the shingle style as appropriate for this almost residential building on its wooded site, and their own experience as diners, solitary or in groups, in the halls of academe. The latter theme was of great importance to Denise: "From eating at Penn when I was a student, I came to think that a refectory should give one a sense of being in a group or community, but should allow smaller groups or people dining alone to inhabit what they sense as smaller spaces. This helps them feel part of the great space and the community in it, but not vulnerable to them. How can we all be together for some kind of ceremony, but also be protected and sheltered? The solution was to create a high narrow room for communal diners with alcoves at one end for groups and with a dropped ceiling on either side along the length of the hall to create more intimate space for couples and singles." A small library on the second floor doubles as a balcony for musicians.

A new historic park

The major contribution that Denise made to Franklin Court in Philadelphia (6) was to suggest that the museum VRSB had been commissioned to design by the National Park Service be put underground. "We gave Philadelphia a city park it didn't know it had. This idea came from Bob's knowledge of the colonial history of the site, including that it had originally been a quiet garden within a busy center; and from my analysis of the area as a place filled with office workers who would welcome a plaza at lunch time. Once we had decided on a park, and given the NPS' decision not to try to reproduce Franklin's house, we designed a

The client for this small house (1) was a literary young bachelor who, according to Denise, "wanted books in his house but did not want them to be over present, he just wanted glimpses of them. That is one of the reasons we used the attic with a deep window seat for the library. Another is that an attic with books is a metaphor for the mind as a little room where you think." Another analogy which impressed

Denise is found in T.S. Eliot's poem *Animula* which begins "Issues from the hand of God the simple soul" and is about the conditioning of the human being by the world around, from childhood through life: "The pain of living and the drug of dreams/Curl up the small soul in the window seat/Behind the Encyclopedia Britannica."

colonial garden and reproduced not Franklin's house, but a ghost of it, in part minimal sculpture and in part a beautiful reference to what his house was probably like—set over a floor plan of the house in marble and slate inlay. We made the plaza tough, touchable, and gutsy to take the large crowds who were expected to come (and have!), but it is also mellow and pretty."

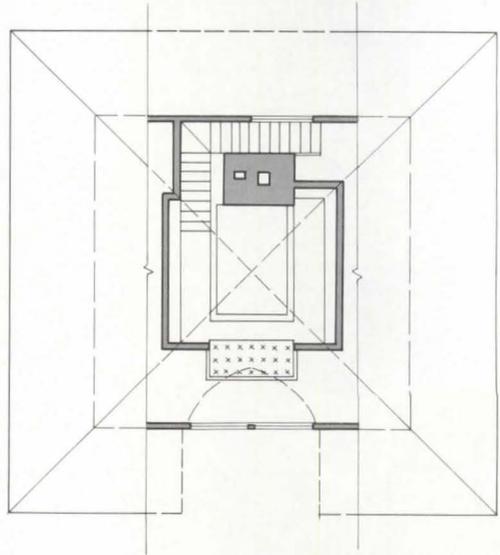
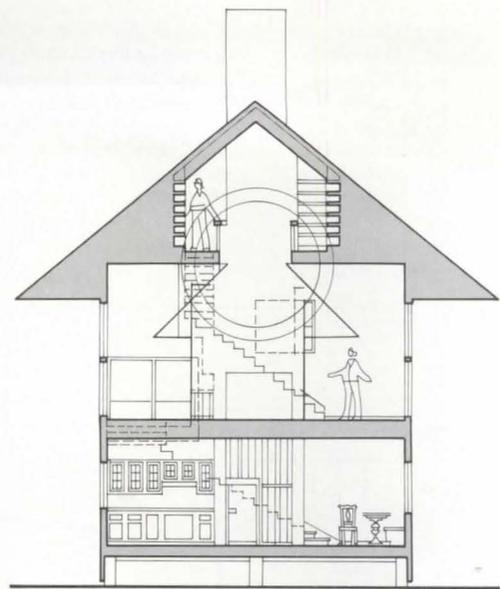
A competition entry for the design of a museum in Frankfurt

It is always sad to see a brilliant and innovative scheme lose a design competition. VRSB's proposal (7) lost to Richard Meier in the *Museum Fur Kunsthandwerk* competition held in 1979. The two schemes differed fundamentally in the attitudes of their designers toward urban open space. Meier developed a park along the river embankment; VRSB put their park behind their building to allow the creation of a long and gentle curving facade facing the river. For Denise, the River Main was the open space and the park behind was "a quiet enclave with lawns and sinuous paths which went under the trees, came out and went under again—paths to be used by leisurely Sunday strollers."

Urban design projects

As partner-in-charge of urban planning for VRSB, Denise combines her architectural philosophy with the social planning ideas she encountered as a student and professor at the University of Pennsylvania in the late '50s and early '60s. This was the era when social planning was first introduced at Penn and early first signs of the social movements of the '60s were visible there. Today she works with main streets and their populations—including a street in the Art Deco district of Miami (8), the central business district of Princeton (9), and Hennepin Avenue in Minneapolis (11,12). For such projects the VRSB team tries to set up a democratic decision-making process. According to Denise: "We have representational democracy and direct democracy going at the same time. Planning decisions are basically political decisions, and should be made by the town's elected representatives. So we try to bring citizens and officials very carefully to an understanding of what the planning issues and options are. We don't say, 'Here's the plan and here's what you ought to do.' At Penn I learned from Paul Davidoff to say, 'Here are alternative options you could follow and here are the implications of each alternative.' Then as part of the process of building the decision structure we leave town while the citizens debate among themselves and choose an option. Then we develop it. Of course, in addition to social perception and political organization, we offer Main Street imaginative design."

Denise's contribution to architectural theory and criticism has been some well known phrases—she invented "Learning from . . ." and "the duck"—but also a clarification of issues. Her span between architecture and planning broadens the base of VRSB's architectural philosophy and enriches their design. As an urbanist she refers to the quality of life of the city and the ways of life of its occupants; to the design of situation as well as of physical surroundings. She believes, unfashionably, in architecture's social obligation and in the need for cultural relevance. Concrete results of her influence on the firm are not only book nooks and corridor chapels, but *partis* that stem from an imaginative vision of the users' way of life, and an architecture inspired by its societal context. As she puts it: "We combine fantasy with what we feel about society. This is a rich mix. It adds to the intensity of our architecture and, I think, to its uniqueness." Denise's role in architecture helps to redefine the field. *Mildred F. Schmertz*



Tom Crane

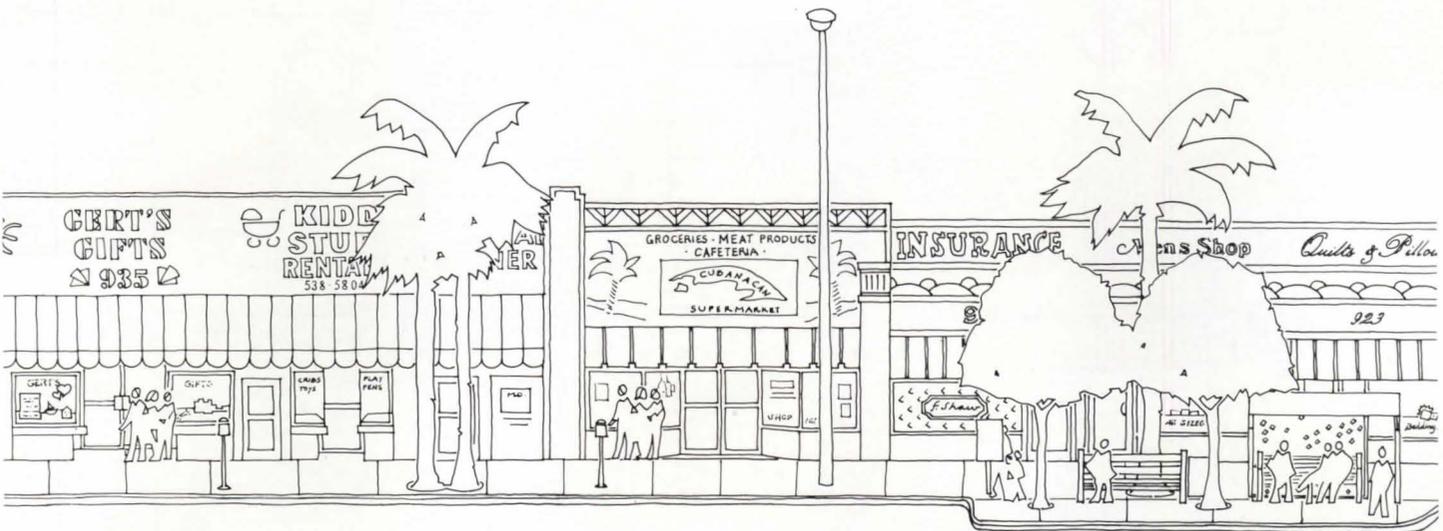
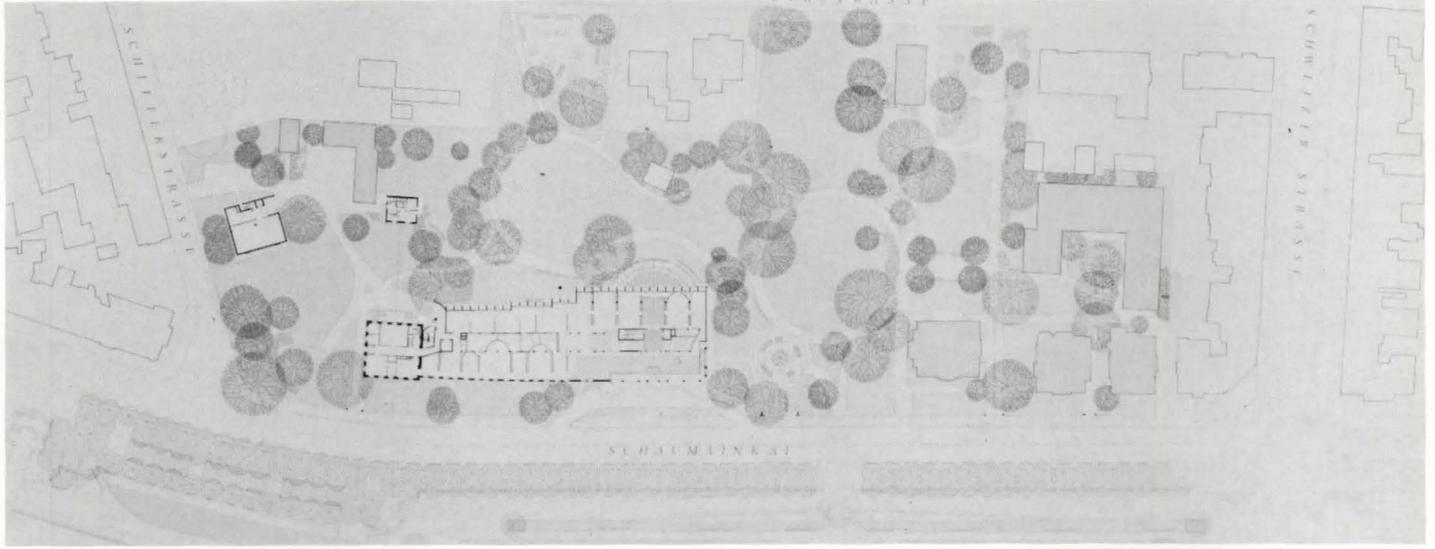


In 1979 VRSB took part in a design competition for the Museum Fur Kunsthandwerk in Frankfurt, Germany (7). Unlike the winning design by Richard Meier (RECORD, April 1981), which develops an axially ordered formal park along the river embankment, aggregating the building elements to one side within a geometric square, the VRSB building follows the curve of the embankment. Denise argues

that "this was not a place where you needed more unbounded open space. The point I made, early in our design process, was that because the site was along the River Main it already fronted the largest open space in the city. We put the open space behind the museum, making another kind of park with another scale."

In 1978, VRSB was commissioned by the local planning agency to prepare a revitalization plan for Washington Avenue (8), the main street of Miami's development-imperiled Deco district. "Our hands-on approach," says Denise, "meant dealing with the elderly, as well as two ethnic groups—Jewish and Cuban—and many of the Cubans were Jewish. There are beautiful Cuban and Jewish signs

on the street facades and we have encouraged the merchants to keep them. We made very small-scale recommendations within the pocketbooks of small businesses, including the installation of awnings with a wide stripe as a unifying feature. We urged the storekeepers to repair deteriorated Deco fronts and have called for a lushly planted median strip."



7

8

In 1978 VRSB was invited to do an urban design study for Princeton's central business district (9) as a result of a public outcry over the size of a proposed 800-car garage to be built near the public library, and because there were three additional important projects under consideration which were about to affect the CBD at the same time—the commercial development of Palmer Square (at the time owned

by Princeton University), a 100-unit senior citizen housing project and the expansion of the library. Explains Denise: "We established guidelines for the location of parking structures and other new projects and recommended designs for public spaces and guidelines for private improvements to help maintain Princeton's much loved architectural character."

Denise: "My special contribution to our design for the Western Plaza (10) on Washington's Pennsylvania Avenue was the infamous unbuilt pylons. Things went wrong in the execution of L'Enfant's plan for Pennsylvania Avenue; it didn't end up with the White House on axis in the center. Instead, with typical American checks and balances, we got the Treasury Building—off axis [note photo and drawing]. It is a

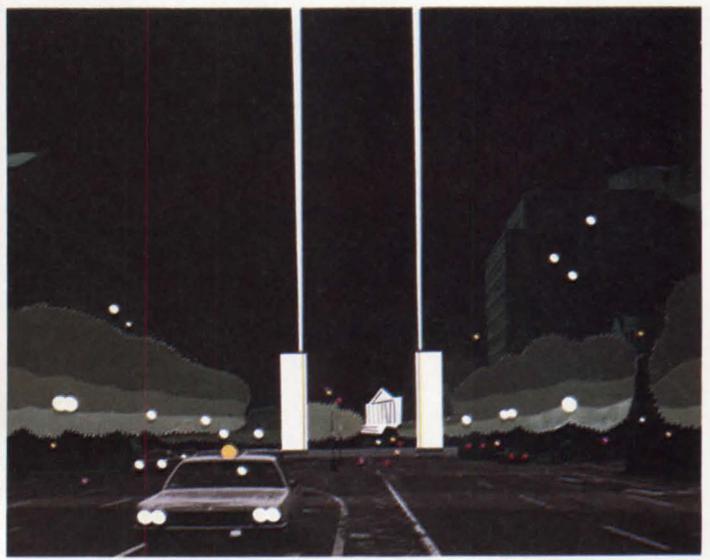
beautiful building but its siting in the English Romantic tradition makes it unable to hold its own within a French Republican plan. Because I think that this English Romantic vision down Pennsylvania Avenue needs a frame, I proposed the two pylons." They frame the view of the Treasury Building and add an axial termination to Pennsylvania Avenue.



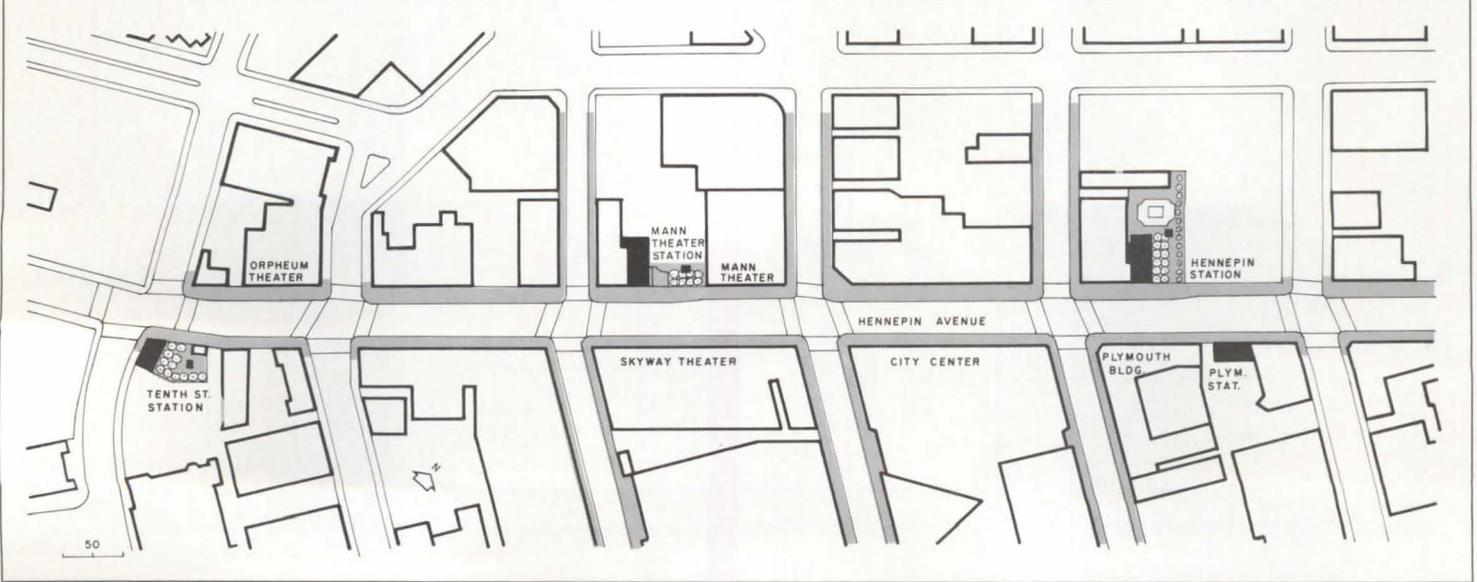
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Tom Bernard



10



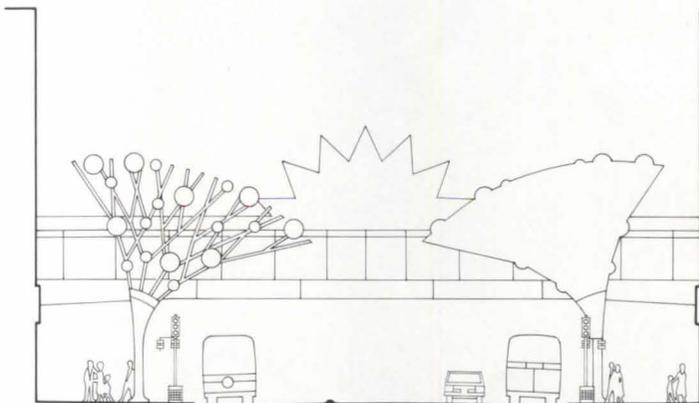
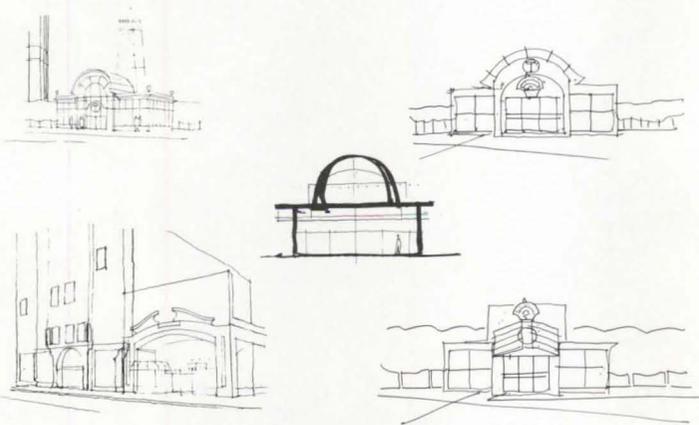
11

In 1980 VRSB was invited to help Hennepin Avenue in Minneapolis (11,12) attract development. Denise: "This beautiful but old and bedraggled street had once been the city's Great White Way, but most of the movie theaters have moved out to suburban malls. Because Nicollet Mall has its own identity, Hennepin Avenue was to have a different one. It would be a civic street, yet preserve the vitality that came

from its earlier career as an entertainment district. We had to reconcile the Madison Avenue gray-flannel image with the red silk petticoat image. We urged that ground floor sidewalk uses facing Hennepin Avenue be entertainment related (such as restaurants) with the entrances to the gray-flannel type buildings on the side streets. On Hennepin Avenue we recommended neon store signs. We

made studies for little transit stations similar to those in Paris and Vienna—small buildings which mix fantasy and civility and have some kind of big scale to them. And we invented reflector trees made of metal with white light in them to symbolize the new Great White Way."

Denise Scott Brown was principal-in-charge for the Washington Avenue Revitalization Plan, Miami Beach, Florida; Princeton Urban Design Study, Princeton, New Jersey and Hennepin Avenue Transit/Entertainment Study, Minneapolis, Minnesota. Robert Venturi was principal-in-charge for all the other projects shown. VRSB architects and planners who acted as project managers and delineators on the projects illustrated: Gerod Clark, W.G. Clark, Janet Colesberry, Steven Izenour, Arthur Jones, Paul Muller, Robert Renfro, Miles Ritter, Jeffrey D. Ryan, James Allen Schmidt, Frederick Schwartz, James H. Timberlake, David Vaughan, Robert Venturi, Mary Yee.



A conference center and a campus gateway



Conference Center
Luzerne County Community College
near Wilkes Barre, Pennsylvania
Bohlin Powell Larkin Cywinski, Architects





The 12-foot-wide spine expands and contracts to accommodate a series of "incidents" along its path. Bright colored furnishings and patterned quarry tile add welcome color accents and textural contrasts.

© Otto Bailz photos

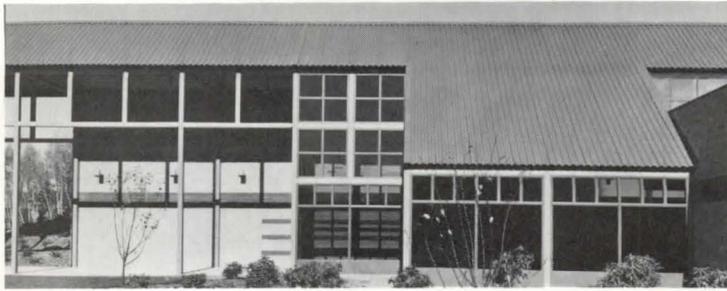
In an effort to satisfy their own expanding academic needs, and at the same time serve a growing number and variety of regional users, administrators at Luzerne County Community College commissioned this 21,000-square-foot conference center for their campus at Nanticoke, Pennsylvania. The existing campus core rises from land reclaimed from former mining operations, but no more building sites around the core were easily reclaimable. The new center, as a result, occupies a broad, flat site to the southwest of the campus center and is separated from it by a woodland undisturbed except by trails. In this detached, semi-secluded location, the center asserts its independence while establishing itself clearly as a formal gateway to the next area of campus expansion.

The latter seemed a task worth celebrating. The architects, therefore, thrust the entry to the center forward in the form of an exterior portal that, if largely symbolic, nevertheless guides arriving visitors gently but firmly from the parking area to the main vestibule (photo previous pages). From the design standpoint, the projecting portal sets up a long axis through the whole building (photo left), an axis left unterminated but arranged with conspicuous care to unite all the building's functions in a coherent, linear composition that extends, east to west, more than 200 feet.

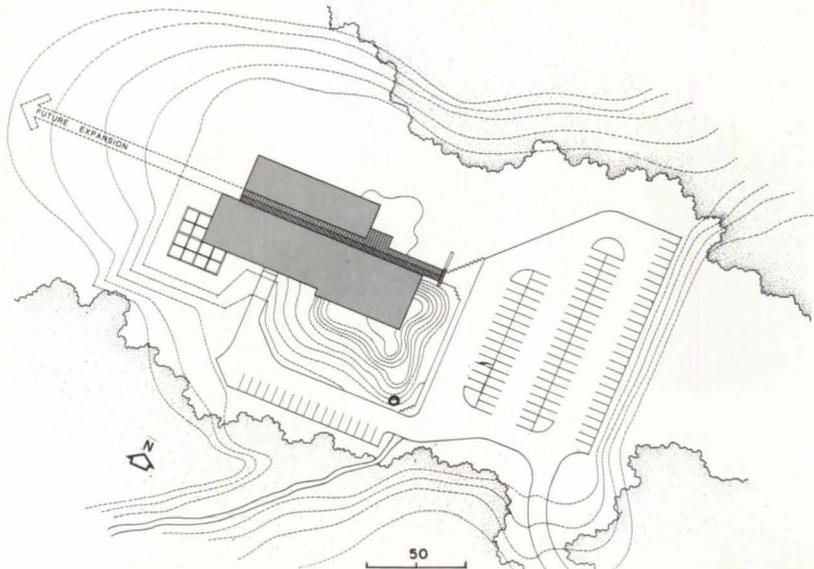
These functions include auditoria for 100 and 300 users, seminar rooms that accommodate from 12 to 40, a fully equipped kitchen and dining space that are used both for outside conferences and as a teaching tool by the college's culinary arts classes. A prototypical hotel room, in similar fashion, serves hotel management classes but doubles as an accommodation for visiting lecturers. Administrative and service spaces complete the building program.

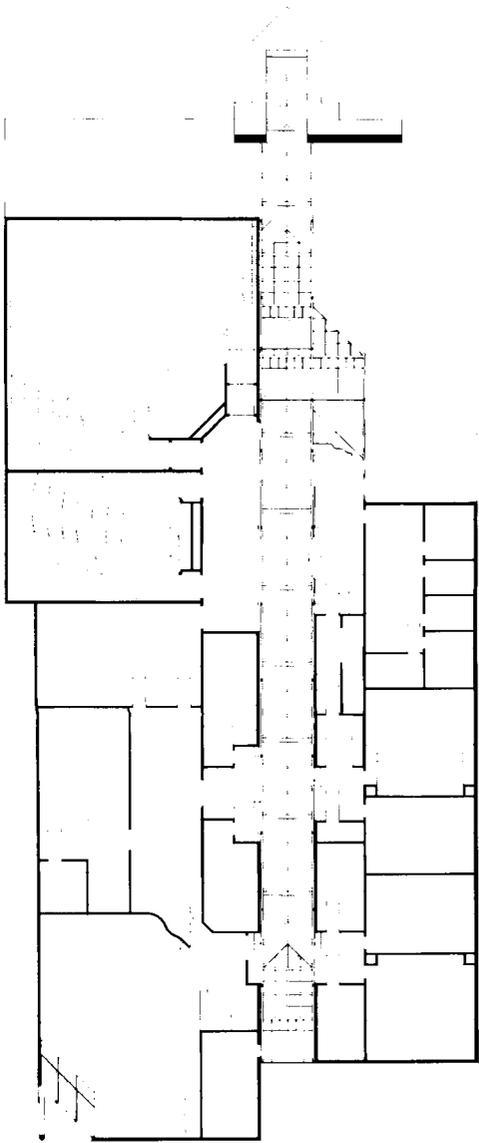
The axial spine is, of course, an explicit expression of circulation, and its simplicity is appreciated by those using the center for the first time. It is lined along both its long walls with small service spaces that act as visual and acoustic buffers. The spine is framed in tubular steel sections and daylighted by south-facing clerestory windows of translucent, insulated acrylic. The remainder of the structure, also steel frame, is clad in split face concrete block used in two colors to give the exteriors a pleasant and unexpected polychromy. The concrete block, in this particular application, clearly takes on the character of stone masonry both in texture and coursing. The other principal finish materials the architects have selected include quarry tile for floors, gypsum board for interior partitions, and a factory-painted metal roof.

But it is what the design achieves in terms of form and contour that is most remarkable. In spite of a restrictive budget, the interior spaces are modeled with complete sympathy for the functions they enclose, and brought together into a united, convincing, and altogether appealing composition. In the design of the center, the ends have been perfectly matched to the means. The structure's straightforward and unassuming message is intentionally carried into practically every detail, and the choice of finish materials underscores this design intention from first to last. The architects resisted any temptation to do something slick or outwardly facile for this rural Pennsylvania campus. Instead—and without the slightest sense of false modesty—they found the most direct and eloquent expression of regional values and embodied them in a design of simple but enduring quality. The building is by no means unsophisticated, but it achieves its ends without pomp, without pretense, and most important, without any sense of begrudging concession to either budget or function.

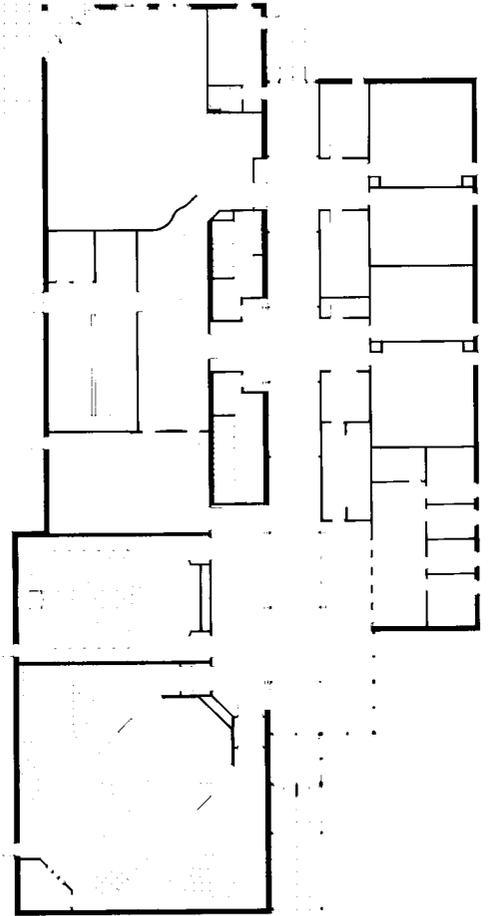


The site plan underscores the importance of the long axial spine that gives directly to the area of future campus expansion. A service road to the north of the center is shielded from the entry by a swelling ground form.





A worm's eye view.



10

*Conference Center,
 Luzerne County
 Community College,
 Nanticoke, Pennsylvania*

Architects:

*Bohlin Powell Larkin Cywinski—
 Peter Bohlin, principal-in-charge,
 Joseph Salerno, project architect*

Consulting engineers:

Utility Engineers

Contractor:

S.G. Mastriani Company



Physical and metaphysical in architectural criticism

By James Marston Fitch

Despite the presence of many able and well-trained people in the field, the literature of architectural theory and criticism has never stood in a more confused and less productive state than it does today. If the impact of this crisis were confined to a handful of critics and historians speaking only to each other, it might perhaps be written off as a small, if aberrant, development. But this literature has a wide circulation and prestigious institutional backing and its negative impact can be seen in both the teaching and the practice of architecture today.

The reasons for this qualitative decline are widespread and complex. Many of them no doubt reflect the deepening crisis of our culture as a whole. These may lie beyond the capacity of our field to correct. But some of them are specific to the architectural profession and are, therefore, subject to diagnosis and, it is hoped, corrective therapy.

One of the principal contributing factors to this confusion in architectural literature is the active presence in it of a wide variety of specialists, many of them from outside architecture altogether: art and social historians; sociologists and psychologists; archaeologists and anthropologists; semiologists and phenomenologists; journalists and photographers. Obviously, the architect has professional interfaces with all these specialists in adjacent fields. They are often valuable allies, especially during the decision-making stages of the design process. It is only when they appear as critics, interpreters of architecture, that confusion begins to appear. And increasingly, it is in this capacity that these outsiders are intervening. The paradoxical result of this tendency is that today the literary apparatus of architecture is largely in their hands—a condition hard to imagine in similar professions like law or medicine.

Licensed architects produce the "raw materials" of architectural literature—the plans, drawings, photographs of real or imagined buildings—without which the literature could not exist. But with few exceptions, the presentation, analysis and interpretation of their work is in the hands of others—persons who (whatever their training or experience in their own fields of expertise) are observers, spectators, amateurs vis-a-vis architecture itself. The consequences are dismaying. Not because these interpreters are hostile (on the contrary, they are usually friendly and supportive *aficionados*); nor because they are ill-trained (normally, their academic credentials in their own fields are impeccable). Their critical interventions are counter-productive because of their fundamentally superficial understanding of the environmental physics of architecture and its psychosomatic impact upon its users.

Paradoxically, some of the most significant contributions to architectural theory have been appearing from scientists completely outside the esthetic-art historical tradition. Environmental psychologists like Edward T. Hall, Harold Proshansky and Robert Sommer, and sociologists such as Robert Gutman have made important contributions to our understanding of the behavioral consequences of the architectural manipulation of space. The physiologist, James J. Gibson, in his *Senses Considered as Perceptual Systems*, (Boston, 1966), has given architects a brilliant holistic explanation of how the senses make it possible for us to perceive and occupy architectural space. Similarly, new dimensions have been added to architectural historiography by the work of folklorist Henry W. Glassie on Anglo-Irish origins of the vernacular architecture of Appalachia and the work of anthropologist-archaeologist James Deetz on the material culture of the Pilgrims at Plymouth.

Unfortunately, the vast and valuable literature generated by these circles has had little or no impact upon architecture, either upon the architects themselves or upon the critics who dominate the theoretical literature.¹ While it is true that most architectural curricula today will include courses on acoustics, lighting and air conditioning, they tend to be routine and craft-oriented, with little attention paid to the psychosomatic consequences of such environmental manipulation.

It is an odd commentary on architects themselves that, however much they might have lusted after attention and praise, they have seldom been effective interpreters of their own work.² Thus, if only by default, they have left the interpretation of their work in the hands of historians and critics from outside the field.³ Such hesitancy by architects to speak in their own defense may be due to several factors, one of which might have been a personality type (which they share with artists and designers generally), which often makes them impatient with abstract speculation or theoretical propositions. They tend to be more adept at expressing their concepts in visual rather than in verbal terms. And this predilection has undoubtedly been consolidated by the hard-edge anti-intellectual pragmatism of education in American architectural schools.

Experiential context of art criticism

Before we can productively analyze the shortcomings of contemporary architectural criticism, we ought first to formulate precisely the context in which art criticism in general takes place. Obviously, works of architecture share physical characteristics with all other artifacts and objects in the real world. And these can be analyzed and described according to a formal set of categories—size, scale, proportion; balance and rhythm; color and texture; plasticity and linearity. These characteristics are perceived by the same sensory means—vision, touch, proprioception—and it is upon this type of information that critical assessments and esthetic judgments are partially based. But it ought never to be forgotten (as it too often is) that the experiential relationship between the user of architecture and that of the viewer of a work of art are of fundamentally different orders of magnitude. Buildings are designed to be lived in: perceiving them visually is only one component of this complex experience, as any blind person can testify. The work of art, on the other hand, is designed only to be seen. The users of buildings are thus protagonists in the act while the viewers of art are only spectators, a process which involves them as organisms only in the sense that it occurs in real environments.

The inability of art and architectural criticism to discriminate between these two levels of experience is one of its most acute and pressing problems. Historically, such confusion became possible only with the appearance of engraved and photographic images: only then does the two-dimensional facsimile begin to be accepted as the surrogate for the multi-dimensional experience. Then, and only then, does it become possible to extricate, abstract, distill, the purely formal properties of the building from the rich and complex network of sensory experience which the building generates around its inhabitants.

In this process of distillation, the architectural photograph converts us into mere spectators, imposing an unprecedented restriction upon our perceptions of architecture. As with the painting, the photograph confines us to a single-point perspective (single point in space, single point in time). It can be described as a visual cone (not sonic, not thermal, not tactile, not olfactory) located along an axis which is centered in the pictured

“Given his training, the typical art-historian-turned-architectural-critic does what he has been trained to do: analyzes pictures of buildings in exactly the same way as he does paintings themselves.”

surface and vertical to it.

For the viewer of the work of art, the photograph—especially the four-color transparency—can serve as a reasonably satisfactory surrogate for the work itself: for, in a very real sense, *the visually accessible surface is all there is to art*. Form and function are one and the same. There is nothing *but* the surface (and in sculpture, of course, the volumes that surface defines). The esthetic function of the art work is entirely subsumed by this surface. It furnishes the sensuous basis by which the work pleases, stimulates, informs or exhorts the viewer. The photograph is an acceptable, if by no means optimal, substitute for such an experience. But it is all too easy for the critic to attribute the same viability to the architectural photograph, overlooking the fact that, even in purely visual terms, the still photograph cannot approach the visual experience of actually moving around and through the building. Nor can the photograph communicate all the other non-visual stimuli—heat, cold, noise, odor, emptiness or overcrowding—which make being in the building either a rewarding or an unhappy experience.

The analysis and criticism of works of art occur at two co-existent levels of experience—cultural and personal, cognitive and sensuous. When we confront the work of art, our final esthetic judgment on the event is the result of a reciprocal process. In the confrontation itself, we acquire first-hand sensuous information by perceptual means—sight and touch. (Sometimes, as in churches, sensuous input is enriched by music and incense.) This flow of information is continuously analyzed by the brain against a background of cognitive information which we have acquired from our culture. As a consequence, the esthetic process is dialectical: cultural standards monitor sensory perception but perceptual input in turn modifies them. Our final esthetic decision therefore represents a resolution of forces which are at once societal and personal, intellectual and sensual.

But this process does not take place in a vacuum. It occurs, like life itself, under concrete sets of experiential conditions. Although the confrontation between viewer and art work can occur anywhere, the normal locus is the art museum and art gallery and, more rarely, the private residence. Often, if the art work is sculptured, the meeting takes place in the open air. Though nominally exogenous to the process, these environments inevitably modify our judgmental processes. Thus, if the gallery is too hot or too cold, too noisy or too crowded, over-lit or dark, the esthetic experience will be negatively affected, no matter what the “objective” value of the artwork may be. In addition, of course, a whole spectrum of internal, endogenous forces play upon the act of reaching esthetic decisions. Among them are our physical condition (how tired we are, how much time we have for the viewing, whether we are hungry or thirsty, etc.) as well as our psychic state (whether we know that the art is esteemed by our peers or as yet unknown to them; whether we know it to be original or a duplicate, whether we view it in company or alone, etc.).

In any case, the experience is uniquely valuable—a first-hand face-to-face encounter between viewer and viewed, observer and observed, perceiver and perceived. There is no interpreter, no intermediary or interlocutor. At the same time, it is obviously true that our contact with the work of art remains highly tenuous, “disinterested and free” in Kant’s definition. When we find the painting or sculpture “bad” (i.e., esthetically unsatisfactory) or when we “grow tired” of looking at even

“good” works of art, we can easily terminate the encounter simply by walking away from it.⁴

The conventions of art-historical writing and art criticism derive from this prototypical confrontation. The profession aims at generalizing this experience—bringing it to students, scholars and laymen by means of lectures, tours, articles, books and film. This ambition to extend the range of the esthetic experience by vicarious means is wholly admirable, since it aims at involving ever-widening circles of the general public in the enjoyment and appreciation of art. But it is not without its own hazards—a fact which art historians do not always seem to recognize.

The art historian as architectural critic

The art historian is trained in the analysis of the formal properties of works of art and in the historical processes of their evolution across time in different cultures. He is taught to concentrate on the appearance of the work because, as we have seen, the visually accessible surface is all there is to art. By the same token, nothing which happens *inside* the work seems to require his explication—not the forces which hold it together, hold it in shape across time. The working artist requires a firsthand understanding of the complex physical processes involved in producing a metal casting, a serigraph or a fresco. But no comparable hands-on experience with fabrication methods is expected of the art historian. In fact, this separation of artistic practice from esthetic theory is very evident in the typical art history curriculum, where the distinction between art history and studio art is strictly enforced. The young historian is not only not encouraged to learn something of the *metiers* of the objects he will analyze: he is often actively discouraged from doing so. Only the art conservator is visualized as intervening in the life history of the artifact. And normally he is trained on another and “lower” academic track.

Given his training, the typical art-historian-turned-architectural-critic does what he has been trained to do: analyzes pictures of buildings in exactly the same way as he does paintings themselves. He accepts the photograph as a satisfactory surrogate for the four-dimensional experience of the building itself. (Naturally, the art historian with training and field work in archaeology will develop a much firmer and more multi-dimensional understanding of how buildings are put together, just as the art historian with comparable experience in anthropology will have a more vivid comprehension as to why each culture puts them together so differently.) This transfer of a critical method developed for one form of artifact to another of quite different nature has serious consequences. Leonardo da Vinci claimed for painting one great advantage over all other forms of art—namely, that the painter had the unique power of fixing, once and forever, not only the vantage point from which it was to be viewed but also the internal environment under which the painted action took place (spatial organization, cast of characters, time of day, etc.). This fix in time-space is a great convenience for the art critic. His whole critical apparatus is based upon it. Unfortunately, it cannot be transferred to architecture without hazards, for there are millions of points in time-space in which buildings are experienced and from which they are observed. When the critic selects a given visual vantage point, from the thousands that are theoretically available, he runs the risk of committing himself and his readers to a tunnel view of the experiential totality of the building.

It is when he tries to communicate the esthetic experience vicariously—i.e., by slides projected in the lecture hall or

“The literature of architectural criticism has recently seen a massive infusion from two specialized areas of academic philosophy: phenomenology and semiology.”

facsimiles printed in the journals—that he introduces a new set of complicating factors. The two-dimensional image is substituted for the three-dimensional original. Even in purely perceptual terms, without the intervention of the interpreter, this shift is more radical than commonly realized. Vision, here the principal channel of perception, is compromised. The luminous conditions under which the photograph was originally made (color and intensity of light, etc.) are imperfectly replicated by even the best film and developing. And the visual environment depicted in the image is now enframed in the radically different context of lecture hall or printed page.

And now the interlocutor (lecturer, author, critic) interposes himself between viewer and viewed: not only does he tell us where the object came from, who made it and why; he also tells us what we ought to think of it. The results of this intervention are incalculable. The pictorial information in the picture is now cocooned in a verbal web of spoken or printed word. The sensuous data of vision are now accompanied by factual cognitive data. Nominally, it aims only to supplement but often it tends to supplant and even override the visual data.

The cultural utility of spoken lecture or printed essay is not at issue here. It would, indeed, be hard to imagine the modern consciousness without the presence of both. What *is* at issue is that their profound influence on esthetic theory goes largely unremarked.

The semiologist as architectural critic

The literature of architectural criticism has recently seen a massive infusion from two specialized areas of academic philosophy: phenomenology and semiology. Simple dictionary definitions of these fields of action suggest that, whatever their utility for professional philosophers, they are apt to prove dangerous for the average architectural critic. Thus, one definition of phenomenology reads as follows: “the description of the formal structure of the objects of awareness, and of awareness itself, in abstraction from any claims concerning existence” (*Webster’s New Collegiate Dictionary*).

Another definition of phenomenology carries us a little further into metaphysics:

“the study of all possible appearances in human experience, during which considerations of objective reality and purely subjective response are temporarily left out of account” (*The American Heritage Dictionary*).

Although the earlier (1947) *Webster’s Unabridged* carries no definition for the term phenomenology, it gives a definition of the phenomenist as

“one who believes only in what he observes in phenomena, having no regard to their causes or consequences; one who does not believe in *a priori* reasoning or necessary prime principles; one who does not believe in an invariable connection between cause and effect, but holds this generally acknowledged relation to be nothing more than a habitually observed sequence.”

Semiology is defined by *American Heritage* as “the science dealing with signs or sign language. The use of signs and signaling, as with a semaphore”

while *Webster’s New Collegiate* defines semiotics as “a general philosophical theory of signs and symbols that deals with their function in both artificially constructed and natural languages.”

But *Webster’s New Twentieth Century Dictionary* has only this definition for semiotics (there is no entry for semiology): “semiotics—pertaining to the signs or symptoms of disease.”

These definitions share certain characteristics. Those for semiotics imply that vision is the unique channel of sensory perception, ignoring the fact that most phenomena are experienced through most of the other channels—hearing, olfaction, taste, and proprioception; and ignoring the fact that

many phenomena—e.g., heat, gravity, the composition and movement of gases—are not visually accessible at all. The definitions for phenomenology, the field which furnishes the intellectual platform for the architectural semiologist, are even more disturbing in their implications for architectural theory. We are told that the formal structure (e.g., of architecture) can be described “in abstraction from the claims of existence.” Architectural appearance can thus be evaluated without regard to “objective reality or purely subjective response.” The architectural semiologist is thus at liberty to observe architectural phenomena, “having no regard for their causes or consequences.” Indeed, he is freed from believing that there is “an invariable connection between cause and effect . . . this generally acknowledged relation (is) nothing more than . . . a habitually observed sequence.”

These are conceptual positions which, explicitly or implicitly, permeate the literature of architectural semiologists—and, for that matter, many of the Post-Modernist theoreticians as well. Are we to take this erudite literature literally? What would be the consequences if such a policy were actually applied to the design of structural members? If the action of gravity upon a loaded member is “nothing more than . . . a habitually observed sequence” are we supposed to assume that there are occasions in which gravity does *not* act in habitual modes? Is the “formal structure” of architectural space (e.g., classroom, laboratory, theater) to be evaluated in a process in which “considerations of objective reality and purely subjective responses are temporarily left out of account”? In actual fact, such “detached” evaluations are impossible when the observer is himself submerged in that space. Only the photograph of that space, purged of all other sensory pollutants and observed in another (and presumably stress-free) environmental context can give him the illusion of escaping a subjective response to objective reality. In real life, there are no circumstances, even “temporary,” in which the context of the observation does not modify the observation itself.

A number of able architects—among them J.P. Bonta, Geoffrey Broadbent, Charles Jencks, Raymond Studer—are actively contributing to the large and growing literature of architectural semiotics. But, despite its avowed intentions, the effect of this literature is not to enlighten us on the actual experiential impact of the building upon its users but rather to trace the literary waves which its publication and subsequent critiques have stirred up in the international critical community. It is as if, once photographed, the building has lost any corporeality: it has been transformed into a literary event, the nucleus of an impenetrable web of erudite cross-references and allusions.

Thanks to the semiologist, the literature of architectural theory has been given a new infusion—“a science of sign language; the use of signs as signaling, as with a semaphore.” But, paradoxically, this sign language can be either visual or verbal. Thus we find the semiologist telling us that the architect employs “metaphors” to “express” an idea, that he uses this or that “grammar,” “speaks” in such and such “language” of the design. Here the critic is describing visually perceived phenomena in verbal/literary terms and often attributing to the architect literary intentions which may or may not have been implicit in his work. These verbal referents are often mixed up with pictorial ones. With a flip of the wrist, he can convert the building from a “metaphor” into an “icon,” an “image” or a “symbol.” And sometimes the referents are aural: buildings are said to be “communicating,” or giving us “signals” or, alternatively, sending us “messages.”

“As a matter of fact, some of the most significant contributions to architectural theory have been appearing from scientists completely outside the esthetic-art historical tradition.”

The semiologist is much occupied with the “communication role” of architecture, though seldom making clear at what levels and by what means communication takes place.⁵ Buildings can indeed be said to “communicate” with their inhabitants in several distinct modes. Perhaps the most literal of these is the way in which buildings (or more precisely, their enclosed volumes) communicate with us by their acoustical response to the sounds which we make inside them. These sounds may be either deliberate (as in concerts, lectures, plays) or incidental by-products of other activities (business machines in an office, children in a schoolroom corridor). In the first instance, the architect manipulates the volume, shape and surfaces of the containing vessel (classroom, theater, concert hall) to transmit the manufactured sound with maximum fidelity. In the second instance, he manipulates space and materials to mask or exclude sounds extraneous to the programmed activity. But it is not productive, in either case, to regard the building as being any more an active communicator than the amplifier on a hi-fi set.

Buildings also employ accessory means of communicating with their users: *printed signs* for identification (“U.S. Post Office,” “Ladies Room,” “Exit”) and orientation (“On this spot stood the house in which . . .”). Here the message is cognitive, neutral. When the building employs *symbols* (crucifix, Star of David, hammer and sickle) the communication is less neutral, more pregnant with meaning. When monumental architecture employs *iconographic art* (sculpture, bas-reliefs, murals, and stained glass) to celebrate its function by visual anecdote and allegory, its communicatory role becomes explicit and unequivocal. But under such circumstances, no semiotic translation or interpretation is required: its “message” can be “read” by any member of its society. (If the monument comes from an alien or extinct culture, we need the help of art historians, archaeologists, or anthropologists to translate the message.)⁶

Ambiguous role of the photograph in architectural criticism

Today, the literature of architecture, though it may be written and published in dozens of different languages, is authentically international. It is at once the cause and the consequence of a worldwide architectural culture, shared by architects everywhere. The most powerful constituent of this literature is the photograph. It furnishes images immediately intelligible to everyone, irrespective of his mother tongue. In the consciousness of this international community of architects, these images fuse together to form an imaginary landscape, in much the same way that photographs of works of art form Andre Malraux's imaginary *Museum without Walls*. This landscape is actually a mosaic of architectural still-lives, each *tessera* a frozen image of its own locus in time-space. This imaginary landscape forms a kind of seamless conceptual cocoon which encapsulates contemporary architects and which obscures, where it does not obliterate, the circumambient vernacular and folkloristic architecture of their own cultures.⁷

And yet, valuable as it is for the intellectual orientation it affords the world's architects, this international literature is of little use as a guide to action in the design of new buildings. As a matter of fact, the tendency to simply appropriate the forms pictured on these *tesserae*, to transpose them from one very specific time-space context to another, is probably now at the base of the failure of the International Style, just as it was once the mechanism for its spread. It is not always understood, even by architects themselves, what a pivotal role is played by the picture (and above all the photographic print) in their design

decisions. Like any other member of the photograph-viewing public, the architect knows that the objects and actions portrayed in the photographic print existed for only a split-second in time, in a pinpoint in space. And he knows that, though the print itself may last indefinitely, the states of being which it records are unique, gone forever, never to be repeated.⁸ But once imprinted on the memory bank of the architect's mind, the image comes to play a special role. From being a record of past events it gradually becomes transformed into a set of parameters for future action. Subconsciously, the images of an architectural response to one specific set of cultural and geographic stimuli become generalized. What was unique for Aalto in Helsinki or Stirling at Cambridge begins to appear as being applicable anywhere. And the principal vehicle for such transpositions of architectural forms from their native habitat to other spots around the world is the photograph.

In subtle but very real ways the photograph affects the judgment of every critic who employs it in his lectures or essays. It tends to consolidate his intellectual perspective of the building: too often he stands outside it, figuratively as well as literally, just like the photographer, with whom interior views generally play a subsidiary role (if only for the reason that they are more difficult to shoot). And this externalizing perspective is further consolidated by the fact that most exterior photographs will be daytime shots (if for no other reason than that the camera is the creature of light). And most exterior views will be fair-weather exposures (if for no other reason than that rain, snow, sleet and fog complicate the photographer's work). Finally, most photographs, indoors and out, will be empty of people (if for no other reason than that motion is the enemy of the time exposure).

Taken individually these technical devices of visual manipulation may be innocent enough: but the cumulative impact of such filtered documentation upon our conceptual apprehension of the built world is hallucinatory. It serves to establish a structured displacement between the literature of architectural criticism and the experiential reality it purports to describe. The resulting discrepancy is so complete and so profound that it goes unnoticed, taken for granted, like our bodily accommodation to atmospheric pressure at sea level. Our conceptual grasp of architectural experience has been transposed from the plane of firsthand submergence in the real world to a putatively “higher” one, in which whole sectors of psychosomatic experience can be grossly undervalued—if not, indeed, ignored altogether.

It must always be remembered that the architectural critic, in preparing his critique, is twice removed from direct sensory contact with the object of his criticism.

1. He *may* have actually visited the building under review although he often relies upon textual and pictorial materials furnished by others.
2. He *always* produces his essay in a controlled environment, under conditions which only architecture can afford—though seldom if ever in the building under discussion.

This double isolation in time and space isolates him from the full experiential impact of the subject of his critique. This isolation acts as a filter through which only visually accessible data are transmitted, introducing a profound visual bias into all his esthetic judgments. This is an effect which perhaps can never be altogether eliminated from the critical process but it could be minimized if the critic himself abandoned his conceptual stance as spectator and instead accepted that of being a participant. The suffocatingly superficial quality of most

"A number of able architects . . . are actively contributing to the large and growing literature of architectural semiotics. But, despite its avowed intentions, the effect of this literature is not to enlighten us. . . ."

architectural criticism stems from the critic's unwillingness or inability to accept this fact.

The architect as architectural critic

If it is correct to say that architecture is mishandled or misinterpreted by art and cultural historians, by semiologists and philosophers, then one might well ask: why do not architects undertake the task themselves? The answer is that many architects are now doing just that.⁹ Under the general rubric of "Post-Modernism," we find them writing books and publishing essays; actively lecturing at architectural schools across the country; organizing exhibitions of "visionary" and "imaginary" architecture and promoting the publication of their own design projects in architectural magazines (whether these projects have actually been built or are even buildable seems to matter very little in their polemics: *vide* the recent Centennial exhibition of The New York Architectural League called "Collaborations"). This intervention into the field of architectural theory might well have been productive: but, in actual fact, it appears to be driving theoretical speculation still further into a metaphysical quagmire. Perhaps this should not surprise us since, by and large, these architects have accepted the formalist ideologies of the art historian and the semiologist. They have adopted, without challenge, the formalist posture which holds that functional considerations should play a secondary role, if any, in design decisions; and that the experiential performance of the inhabited building should carry no weight in the critic's analysis of that building. Post-Modernist architects behave as though the architectural photograph (and most recently, the architectural drawing) are the only real objects of critical discussion. "Function" has indeed become a dirty word.

Such a line of argument, so aggressively expounded by one section of the profession and so hesitantly rebutted by the other, might have been expected to have an impact on current architectural practice. And so it has: a line of causal relation surely exists between this persistent denigration of physical and societal functionality, this calculated separation of theory from practice, on the one hand; and the series of spectacular failures which have recently bedeviled American architecture.¹⁰

Obviously, none of these architects-turned-theoreticians has been personally associated with such disasters. The connection is more subtle. Their polemics have served to divert attention from the overriding obligation of architecture to provide safe shelter. Their polemics have encouraged the tendency, always endemic among architects, to regard esthetic satisfaction as detached from, and ultimately more important than, utilitarian concerns.

Architecture today needs historians, theoreticians, and critics who approach it from conceptual positions *inside* the field. Persons who understand that architecture is our prime instrument of environmental control and that its current inadequacies can be corrected only by a factual analysis of its *performance*, not by metaphysical disquisitions on its *appearance*. How these spokesmen are trained, what academic degrees they hold, is of secondary importance.¹¹ One thing is apparent, however: they must understand that problems of form cannot be fruitfully analyzed without a clear understanding of the functional necessities which underlie them. To continue to deny this umbilical connection is to drive our critical literature further into bankruptcy.

Some guidelines for the architectural critic

1. Visit the site—preferably after it has been inhabited for a year or so. If it is a building in which nighttime activities are

important (e.g., residence, theater, restaurant), be sure to visit it at night. The luminous behavior of rooms after dark is vastly different from that of daytime, especially where there are large areas of uncurtained glass. If the rooms have "view windows," check them out. Is there actually a view? Is it apt to be visually and thermally comfortable when the view is most apt to be used (e.g., a west-facing wall at cocktail time)? Is there privacy behind the transparent wall? If the building under consideration is a church, a concert hall, or theater, be certain to attend a performance. Critiques of theatrical types based solely on pictorial evidence are notoriously inaccurate. (The acoustical behavior of Lincoln Center's Philharmonic Hall was so outrageous that it had to be completely rebuilt *four* times: but each time it was the musical, not the architectural, critic who caught the malfunction. Contrarywise, the Metropolitan Opera was criticized by architectural critics for its bordello-decor: only the music critics reported its excellent sonic behavior.)

2. Interview the actual inhabitants of the building, not merely the legal owners. If it is a health facility, try to interview the staff and at least observe the behavior of the patients. (The Bronx Development Center by Richard Meier, a facility for the mentally disturbed, has been lavishly praised by the architectural press; it has been severely criticized by the staff for its disorienting effect on the patients. Several million dollars are now being spent to overcome these problems.) If the building is an office tower, find out what the staff thinks of environmental conditions: heating, lighting, acoustics. Always try to interview the maintenance staff: they are often the only ones who know if the building really works.

3. Photography is absolutely essential to architectural journalism: all the more reason then, that the critic should remember some of the limitations of professional photography.

Exterior photographs are usually taken from those vantage points which "make the building look its best." This often involves concealing the building's actual context—i.e., how it impinges upon its neighbors, how its neighbors impinge upon it. A real problem for most new buildings (especially if placed in a built-up context) is the extent to which they strengthen or weaken the visual integrity of the streetscape. And, too often, it is this relationship which the professional photographer either ignores or tries to "prettify." To minimize this type of distortion, the critic should ask for straightforward black and white documentaries, taken from real-life vantage points, even if these photos might not be used in the final publication. Dramatic shots, taken from improbable angles, have done more to mislead the public's comprehension of architecture than any other single aspect of criticism. (Thus the 75-year-old head-on black and white shots of the main facade of Wright's Robie House, Unity Temple, and Midway Gardens are among the most handsome and most permanently informative pictures ever taken, while the dramatic "waterfall" shots of Falling Water—taken from a vantage point made almost literally inaccessible by rough terrain, rattlesnakes and poison ivy—are perhaps among the most misleading.)

Hazards of interior photography. Because of the enormous disparities between outdoor and indoor levels of illumination, interior photography has always been technically difficult. And these difficulties have been vastly increased with color film because of the color differentials between natural and artificial light sources. For such reasons, photographers naturally prefer to shoot interiors at night. But most rooms,

however satisfactory their lighting may be in optical reality, are underlit for the photographers' purposes. Hence they will "beef up" the amount and location of light sources with floods and spots placed anywhere (except in the camera's field of view). This may result in beautiful transparencies which, unfortunately, bear little or no resemblance to the actual luminous environment of the room.

In view of this, the critic should demand interior photos which record the actual luminous conditions of the room. If this is literally impossible, even with highly sensitive film and/or time exposures, he should insist that any illumination added to the field of view should be introduced from the same locations as those provided by the architect. Color has vastly increased the verisimilitude of the photograph, *but not necessarily its veracity*. The photographer has developed a whole repertoire of strategies to "dress up" interior shots; flattering flower arrangements, strategically placed plants, colorful sofa pillows, bowls of fruit, items for which, in the real room, there is really no space. There is nothing inherently immoral in any of these devices, but the cumulative result is grossly misleading for the public. An experienced critic can mentally reconstruct the geography of the room and discover the extent to which it has been rearranged for a pretty picture. One sure clue to such manipulation will be the conflicting or contradictory shadows which can only come from lights concealed in the shrubbery.

People in the pictures. All buildings excepting tombs are designed for use by living people; indeed, for anyone to be in a completely empty building is a very unusual, not to say unnerving, experience. Yet most architectural photography depicts completely empty spaces, indoors and out. The origins of this convention of people-less pictures are probably technical—slow film, time exposures, etc.: today, they are no longer viable excuses.

Architectural critics should demand images of *occupied* spaces, inhabited by the sorts of real people who would be there normally, going about their normal occupations.

4. Learn the ABCs of physiology and comfort. Remember that the three critical factors of human comfort—heat, humidity and air movement—are *never* recorded by the camera. (When the effective temperature of a Las Vegas street is 145F., it's an intolerable environment for any animal no matter what the *Kodachrome* tells you: Hell is probably quite photogenic when seen on a video tape.)

5. Learn the physics of heat and light. A sheet of glass is transparent only when there is more light on the other side than on yours; and it's never transparent when it's dirty. Glass is transparent to short-wave solar radiation, but largely opaque to long-wave radiation. That phenomena is what makes the so-called "greenhouse effect." You can modify visible light by shades and blinds *inside* the glass, but infrared radiation can only be stopped *outside* the glass. Solar radiation is never symmetrical in time or space: the southwest wall of a free-standing building (e.g., the southwest facade of the new IBM building in New York) will receive 1400 times as much heat on a summer afternoon as the north facade of the same building.

The critic who masters a few simple experiential principles like those listed above can get along quite easily, whatever his academic training or professional expertise. They are not advanced to make architectural criticism *easier*, any more than to make it *more difficult*: their main purpose is to make the critical apparatus *more effective*.

1. Two books by architectural historians—*The Architecture of the Well Tempered Environment* by Reynar Banham (London, 1969) and *American Building: The Environmental Forces that Shape It* by James Marston Fitch (Boston, 1972)—show an awareness of the significance for architectural theory of this scientific input.
2. In the past century, Sullivan, Wright, Neutra and Le Corbusier are among the few who have written extensively and well in explanation of their theories and in defense of their designs. Richardson was all but wordless and Mies was notoriously taciturn, unable or unwilling to engage in polemics. Even Gropius, for all the vast literature generated by the Bauhaus, wrote surprisingly little about his own work.
3. American architects have been fortunate in that a succession of spokespersons have emerged to explain and defend their work to the American people. The line extends from Montgomery Schuyler, Fiske Kimball and Lewis Mumford down to Vincent Scully, Ada Louise Huxtable and the late Sybil Moholy-Nagy. Similarly, some of our best historiography has been done by art and social historians (e.g., George R. Collins, Anthony N.B. Garvan, Henry Russell Hitchcock, William Jordy, William Pierson, Jr., and Marcus Whiffen).
4. It is obvious that, unlike the gallery goer, the user of architecture has no comparable freedom of choice.
5. The very concept that the architect's principal role is to communicate with us through his buildings is disconcerting, and probably produces more confusion at one level of understanding than clarification at another.
6. Historically, the entire building, above and beyond any symbolic devices it might have employed, often becomes the accepted icon of the institution it houses. In America one thinks of the spired New England meeting house, the domed and porticoed capitol, the multi-storied office tower. Indeed, with 19th-century architects, historicizing eclecticism became a giant system of literary and pictorial allusion at the service of the upper classes.
7. Thus young architects in Nairobi or Lima today could more easily sketch from memory the plan of Mies' Tugendhat house or the rooftop of Le Corbusier's *Unité d'Habitation* than they could draw peasant houses 20 kilometers from their offices.
8. The staggering specificity of the photographic print is often forgotten. For example, any building to be photographed stands on a plane of 360 degrees in circumference, under a sky of 180 degrees. If we assume that it can be photographed only from points one degree apart (an absurdity, of course: there are an infinity of points in each degree), then the photographer must select a single point from among 32,400 positions in space. Then assume that a full second is required to expose the film (another absurdity, given the speed of modern film), he must select one point in time (summer, winter; day, night; good weather, bad): this works out to one second in 31,536,000. Pushing such arithmetic to the bitter end, we find that all photographers must select one point in time-space from among 1,021,766,400,000 for the year!
9. The older, more established critics like Peter Collins, Colin Rowe, Vincent Scully and Robert Venturi have been joined by a younger generation: Peter Eisenman, Kenneth Frampton, Christopher Jencks, Charles Moore, Nathan Silver, Robert Stern, and Stanley Tigerman.
10. In recent years three brand-new large-span roofs in Hartford, Chicago, and Kansas City have collapsed: the buildings were fortunately empty at the time. But occupants of another building type, the multi-story sealed-wall hotel, have not been so lucky. Hundreds have died of asphyxiation in such sealed environments as those at Lake Tahoe, Las Vegas, and Tarrytown. Most recently, 111 persons are dead and an equal number injured in the collapse of a "sky walk" in a Kansas City hotel.
11. Except for four professional magazines—*ARCHITECTURAL RECORD*, *AIA Journal*, *Inland Architect* and *Progressive Architecture*—architectural reporting and criticism in the media is almost wholly in the hands of writers who lack formal academic training and/or professional experience in architecture. It would be hard to conceive of a comparable situation in other professional areas—e.g., law, medicine, dentistry, horticulture or recondite academic journals of art history, archaeology or esthetics. Among the following great metropolitan newspapers—*The New York Times*, *The Washington Post*, *Chicago Tribune*, *San Francisco Chronicle*, *Los Angeles Times*, *St. Louis Post-Dispatch*, *Cincinnati Enquirer*—only one, *The Boston Globe*, has an editor who is a licensed architect. Among the national weeklies, much the same situation obtains. None of the following has trained architects as architectural critics: *The New Yorker*; *New York Magazine*; *The New York Review of Books*; *Time Magazine*; *Newsweek*; *the Village Voice*; *The Nation*; *The New Republic*. The monthly "shelter" magazines, as might be expected, all have architects on their editorial staffs—*House Beautiful*, *House and Garden*, *Better Homes & Gardens* and *Sunset*. But for its recent, long and savage critique on modern architecture, *Harper's Magazine* turned to a journalist who, however witty, is quite without competence in the field. Even those museums which pay consistent attention to architecture seldom have curators with formal architectural training.

Dr. Fitch established and for many years directed the nation's first preservation program at Columbia University's Graduate School of Architecture and Planning. Critic and author, he directs the Graduate Program in Historic Preservation at the University of Pennsylvania and heads the Department of Historic Preservation at Beyer Blinder Belle, Architects & Planners, New York City.

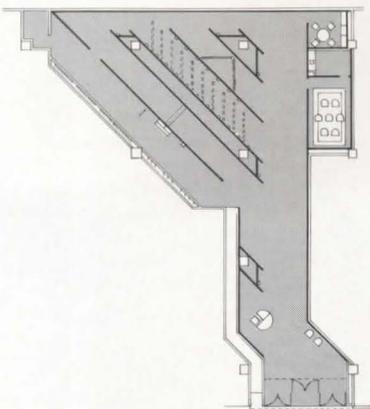
The walls: A showroom clothed in light



E.F. Hauserman Showroom
Pacific Design Center, Los Angeles
Designers: Vignelli Associates



A spare entry/reception area (1) sets the theme of the exhibit with a backlit sign announcing "The Walls." Other ancillary areas are a small projection room and an office (2) with storage and work station elements displayed in situ. Within the display space four corridors are framed of typical partition systems. A product corridor (3) shows wall and panel samples as a vocabulary of color and material; other corridors house Dan Flavin's light sculptures. Reading from top of plan, the first (4, 7) contains vertical fluorescent tubes set obliquely, green yielding to yellow. Blue tubes spiral through the central corridor (5), while a third is bisected by a horizontal light barrier, yellow on one side, pink on the other (6, 9). At the rear of the showroom a mirrored wall reflects borrowed light (8).



Toshi Yoshimi photos



Whatever their other qualities, demountable partitions and office systems are hardly . . . sexy. Unless, of course, these plain-Jane products are transfigured, as in this showroom, by a vibrant extravaganza of seductive light and color.

In designing the showroom Lella and Massimo Vignelli had two complementary aims. The first, obviously, was to draw attention to the product line. The second was to reinforce Hauserman's emerging image as a champion of cutting-edge design, following the precedent set by Michael Graves's spectacular showrooms for Sunar, a Hauserman subsidiary.

The problem lay in thrusting to the fore components that are by nature retiring; the solution lay in turning the problem on its head and treating background as background. Recalling the impact of artist Dan Flavin's recent light sculptures—colored fluorescent tubes under whose pervasive light spatial boundaries appeared virtually to dissolve—the Vignellis hit on the ploy of using full-scale mockups of the various wall systems as a foil for similar luminary constructions.

Accordingly, Flavin was commissioned to create for the showroom three such installations set in simple corridors. The resulting illusion of planes and volumes of light independent of the containing surfaces is amplified by a mirrored wall at the far end of the space, which is otherwise self-effacing to a fault—a monochrome shell of shiny bleached oak floors and sand-toned walls and ceilings.

Despite the mesmerizing effect of moving through pools of ambient light, the salient features of the walls are clear. For detail, a spectrum of color and material samples is slotted into the wall of an introductory corridor. And lest the spectacle of the display distract from its substance, the reception area is emblazoned with a bold reminder: "The Walls."

*E.F. Hauserman Showroom
Pacific Design Center, Los Angeles*

Owner:

E.F. Hauserman Co.

Designers:

*Vignelli Associates—
Lella and Massimo Vignelli,
principals-in-charge; David Law
and Michele Kolb, design team*

Artist:

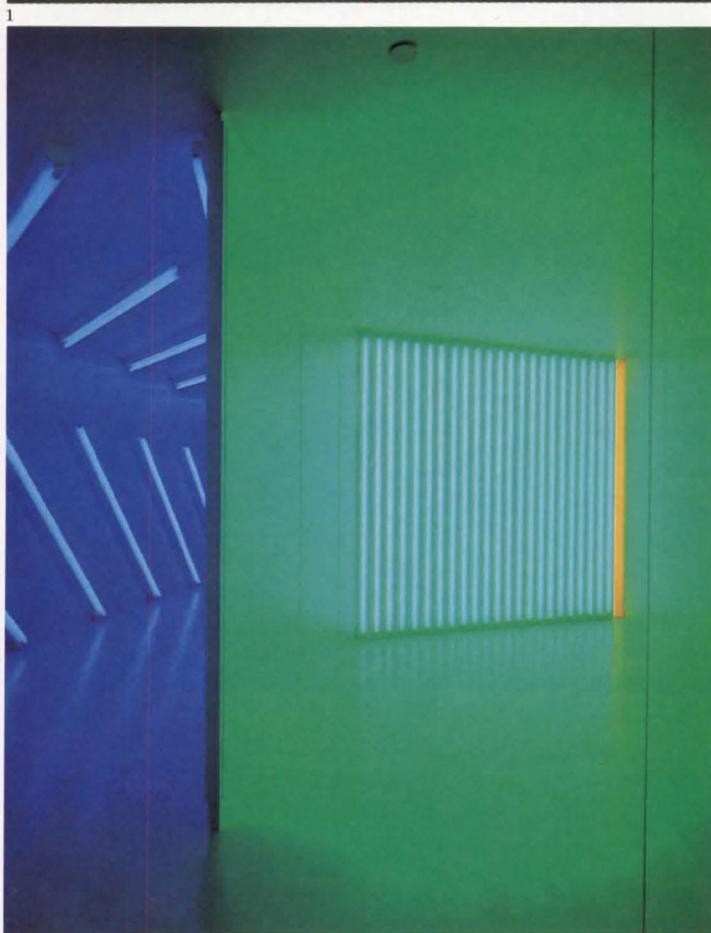
*Dan Flavin—Robert Skolnik,
supervisor of installation*

Engineers:

*(for Hauserman) Charles Saylor,
vice president; William Peterson,
facilities designer; Ray Baggs,
construction supervisor*

General contractor:

G.J. Krause Co.





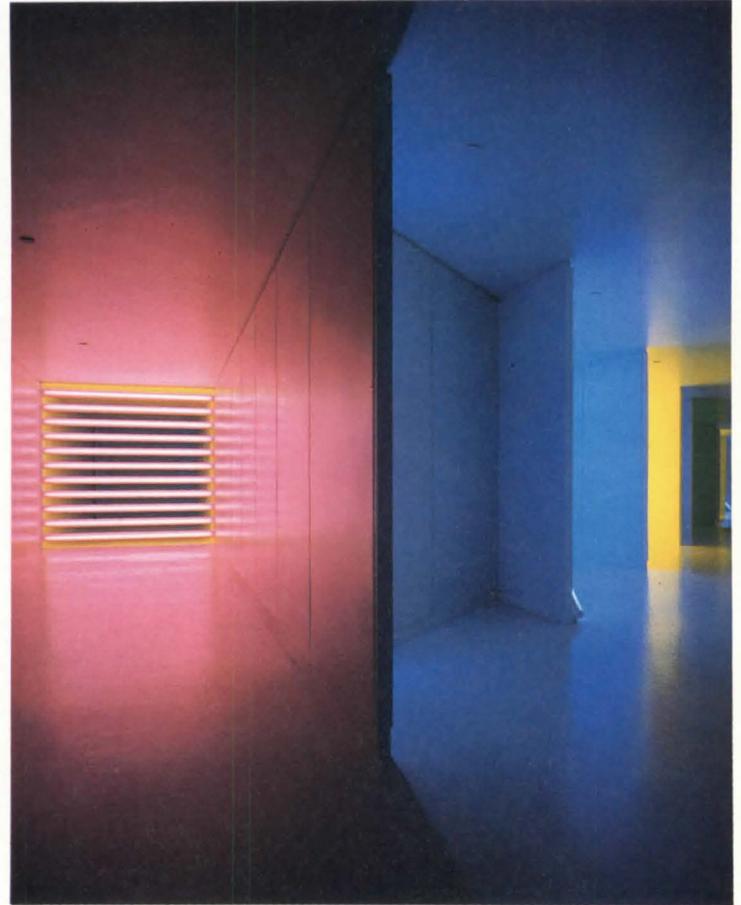
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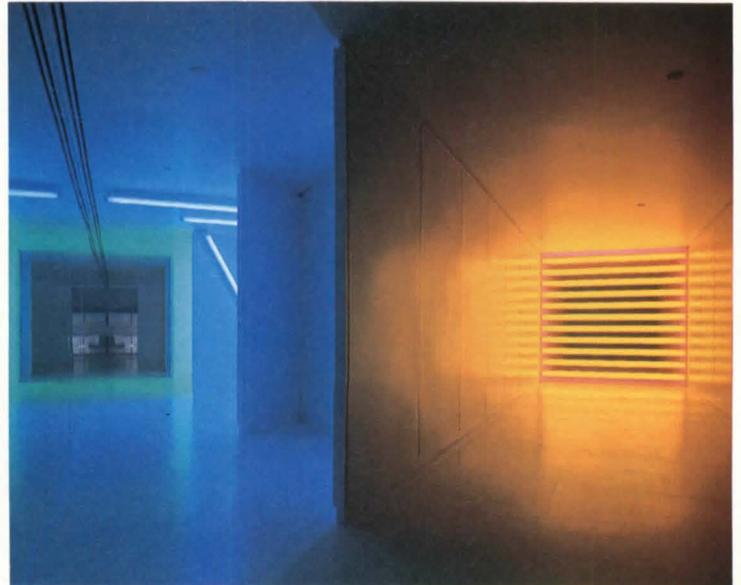
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9

City Center office towers
Fort Worth, Texas
Paul Rudolph, Architect
3D/International, Architects/Engineers

Clustered columns play hide-and-peek



Robert E. Fischer photos

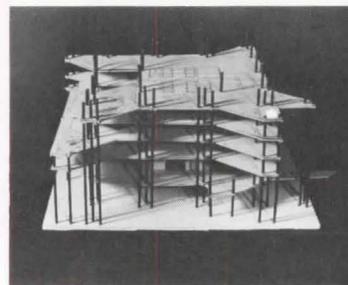
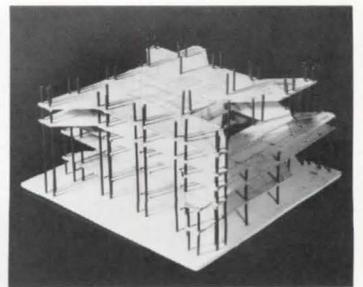
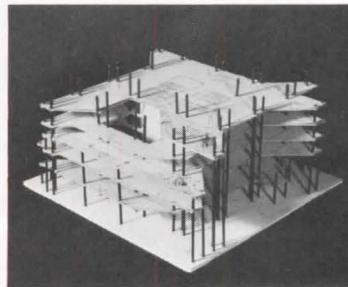
Paul Rudolph's first glass buildings are a 35-story tower for a bank and a companion, but not identical, 40-story tower in Fort Worth's new City Center project in the historic part of downtown. The towers add distinction to the city's skyline (which had only two office towers a few years back), fascinate the mind's eye, and offer intriguing spaces for commercial and office tenants. Part of the fascination stems from Rudolph's concern for scale of two blocks of adjacent turn-of-the-century buildings on Main Street that are being refurbished and adapted by Bass Brothers, developers of City Center (and nephews of a famous Fort Worth wildcatter, Sid Richardson).

Says Rudolph, "I felt that the towers should address themselves to the scale of the earlier buildings, in spite of the fact that they are very large. Everybody knows that the first five or six floors of a building are seen in very different ways from the rest of the building. I wanted to make the towers delicate in scale at the base so they would have some relationship in scale to the earlier buildings. This is partially a matter of the columns (when they are exposed to view). With towers this tall, the columns could get rather large at the base. Instead of bringing gravity loads to ground through single columns, it seemed to me that a certain lightness could be achieved if we split the gravity load into a tripod, tied together at several points along its height. At upper, typical floors, where the columns are behind glass (and tied in with floor framing), the inboard column would be omitted, and outboard columns would continue on up in clustered pairs.

"Another reason for the tripod is that it accommodates the plasticity of the building base. The use of lower floors is very, very different from the typical floors above. This led me to a system that allowed a lot of ins-and-outs at the first six floors."

Because the wings and balconies of the building start at different levels, the tripod and paired columns standing in the open have different heights—one tripod column soaring 7 stories before picking up the load of one wing of the building. Other tripod columns rise 3, 4 and 5 stories before continuing on up behind the glass as clustered pairs.

The cluster-column arrangement allowed Rudolph to play hide-and-peek with the glass curtain wall: "The glass doesn't have a rigid relationship to the columns. Sometimes they are forward of the glass; sometimes they are behind. That seems to me what a curtain wall is all about."



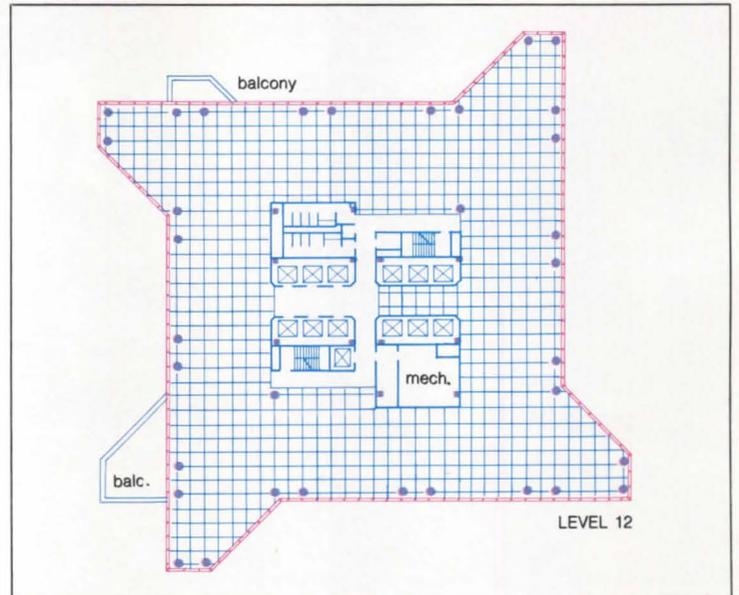
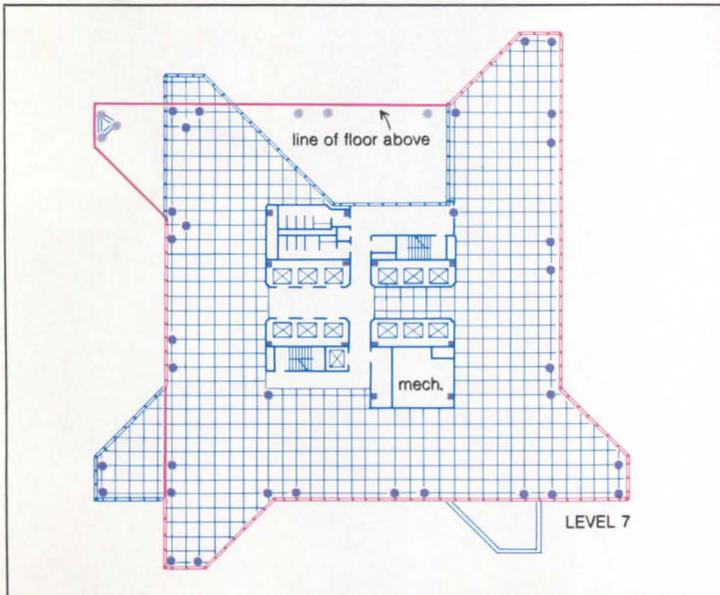
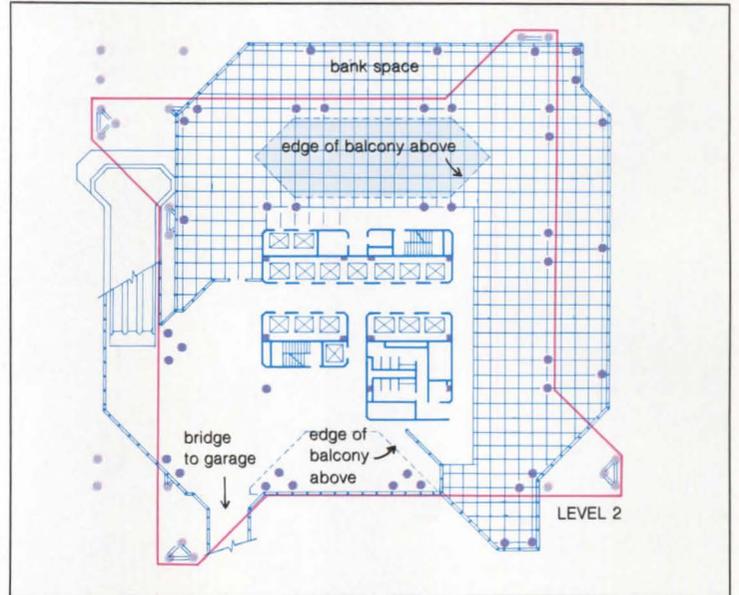
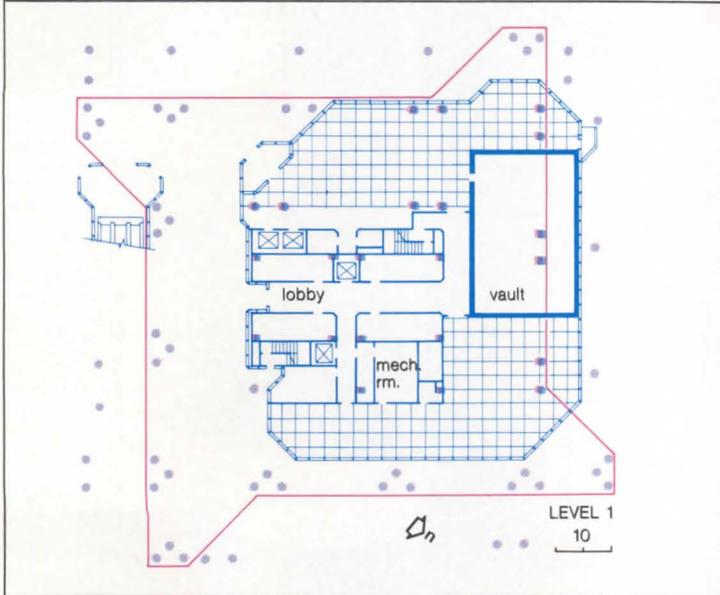
Rudolph built structural models for the owner and the engineer to clarify column relationships. The architects, engineers, and contractor, in fact, used the models to agree upon column positions for locating foundations.



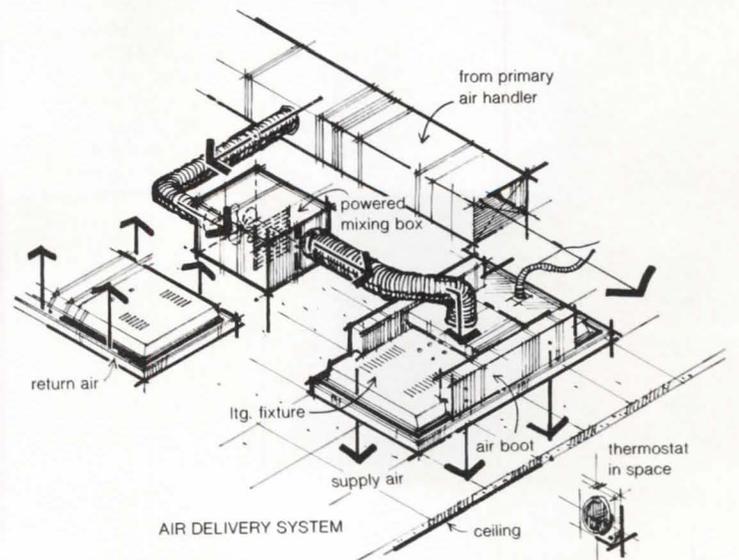
Exposed tripod and clustered-pair columns are scale-relating elements for Tower 1 (left) and Tower 2 (right) in City Center, which also embraces two blocks of historic building renovation (foreground) by the same developer. Rudolph expressed the plasticity of the curtain wall with turrets at top and bottom and wings at corners, and he notched Tower 1 to admit daylight to a skylight.



There are only 16 typical winged floors in the 35 stories of Tower 1. The four plans show how the tripod columns are incorporated into the building, and how, at the seventh level, the inboard column of the tripod has been omitted, leaving clustered pairs. The columns are 10 ft apart and 35 ft from the next pair. Notches at levels six and seven admit daylight to a skylight over the bank's atrium.



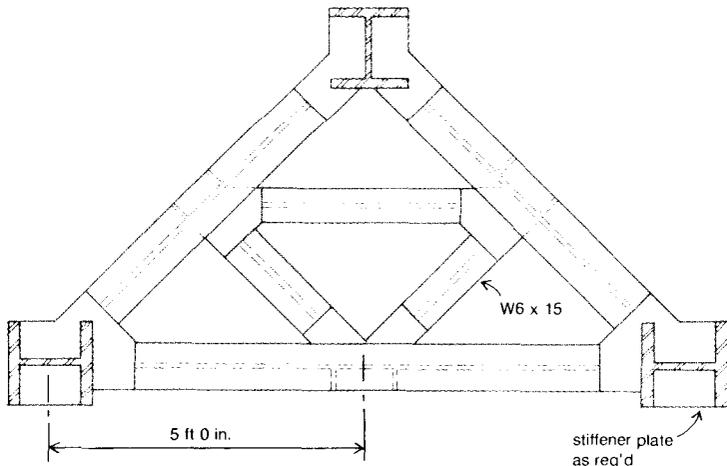
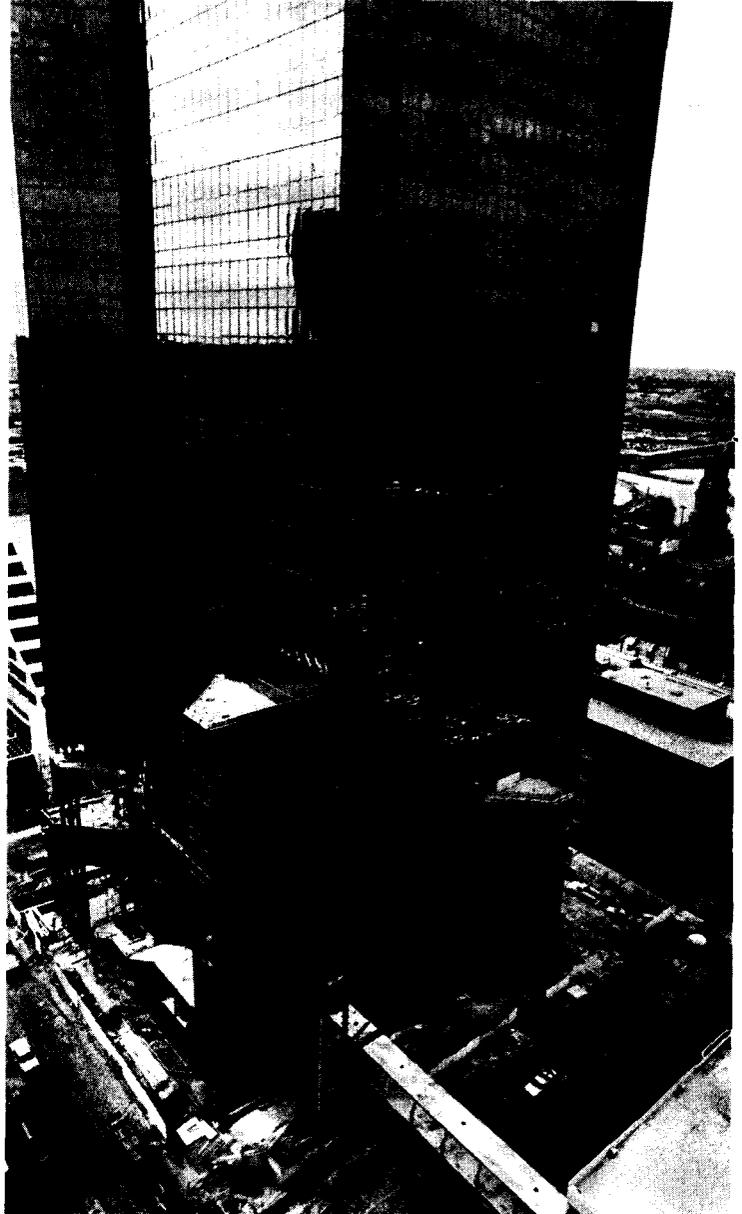
An innovative energy saver devised by 3/DI engineers comprises the use of chilled water from open-drive centrifugals at lower-than-usual temperatures (37 F) in conjunction with fan-powered mixing boxes. The boxes blend cool air from primary air handlers on each floor with return air. Engineer Rufus Glaze says fan energy saved should cut operating costs by \$1/4-million per year.



The tripod arrangement reduces the scale of lower columns, but because of its spread, and the lacing of columns for bracing, avoids the slenderness problem of a single unengaged column. Joseph Colaco, partner of CBM Engineers, the structural consultants, describes the wind-resisting system as truss bracing in the core of the building in both directions, supplemented by a welded perimeter frame. In the

upper stories, wind load is shared about equally by core and welded frame, but at the base, 95 per cent of the wind is taken by the core, since the tripod columns have little bending strength.

Basically, the office floors are pinwheel shaped because of the "ears" Rudolph used to emphasize corners. The engineers worried initially that wind might even cause the towers to turn like pinwheels, and so conducted wind tunnel tests. Pinwheel effect did not show up, fortunately, but the wind does "see" a broader "front" because of the projecting "ears."



TRIPOD BRACING DETAIL

*City Center
Towers 1 and 2
Fort Worth, Texas*
Developer:
*City Center Development
Company/Bass Brothers
Enterprises, Inc.*
Design architect:
Paul Rudolph
Architects/engineers:
3D/International
Structural engineers:
*CBM Engineers, Inc.—Dr. Joseph
P. Colaco, partner-in-charge; Dr.
P. V. Banavalkar, chief structural
engineer*
Contractor:
Linbeck Construction Corporation

Focus on ceilings: an architect's view

An interview with Kenneth Walker, president of Walker/Group, Inc., in which he talks about how his firm looks at ceilings from the viewpoints of appropriateness and good value. And he illustrates his points with seven recent examples.

Basically, we never think of the ceiling plane in isolation. It is one of the design elements we must deal with, and we try to look for the most appropriate solution to the design problem at hand. So many factors go into that decision that we work with a check list of variables that apply to the ceiling. This can be viewed as a matrix of priorities in which we consider: 1) appearance, 2) cost, 3) acoustic properties, 4) access and flexibility, 5) maintenance. We take these five as starting points and rate them. In some jobs cost may be the dominant element. In others appearance may be the dominant factor, and cost is not even an issue. In some places acoustics govern. In effect, we "tune" each job using the five variables.

Budgets are of course germane to every job we do. If we start doing gold-leaf ceilings, chances are we are going to have budget problems. There are some jobs where the budget has such restrictions that we know the money has to go to half a dozen other places, and the ceiling is not a place where we can put in the money for a design element.

In other cases appearance of the ceiling is paramount. Take a museum, for example. Relatively little goes into a museum in terms of fixtures and furniture. What is of prime importance is the articulation of the spaces that display the art. If you present works of art in an essentially clean and simple space, ceilings become quite noticeable. In a department store, on the other hand, so much cost goes into fixtures, decorative elements, carpeting, etc.—which take priority—that budgets often preclude a great deal of expression in the ceiling plane. Budget did not keep us from getting a special look in the atrium of Burdine's department store in Fort Lauderdale because we simply painted the underside of the industrial-type steel deck pink after it had been fireproofed. In a specialty store, the character and scale of the project is such that articulated ceilings may be of major importance to the image-making potential of the environment.

Executive offices are often distinguished by greater attention to detail. In these spaces, our first choice is to opt for more ceiling height. But, in addition, we might upgrade these areas by: 1) acoustic tile painted differently, 2) dimensioned tile, 3) concealed-spline tile ceilings, 4) flat metal panels, 5) wood ceilings, stock or custom, 6) plasterboard painted special colors. Three-dimensional ceilings, either manufactured or one-off, are interesting for office spaces. They make a lot of sense acoustically and visually for open-plan spaces. Precoloring of tile by manufacturers has broadened our palette, and it is good from a maintenance standpoint. I only wish the color ranges were broader.

We are using concealed-spline ceilings less often because we're finding that where we need access, a drop-in ceiling is hard to beat. Where we want a clean, smooth clean ceiling plane in spaces that will not be subject to change, we find that painted plasterboard produces the effect we want at a reasonable cost. For example, in stores there may be some departments with fixed show cases, and, therefore, fixed lighting. Since the ceilings will rarely change, we can create special finishes for the ceiling plane in those areas.

Designers in this country have a much wider variety to choose from than anywhere else in the world. In many ways, the bigger the vocabulary, the better. As designers, we prefer to "craft" spaces as much as we can, and this includes ceilings.

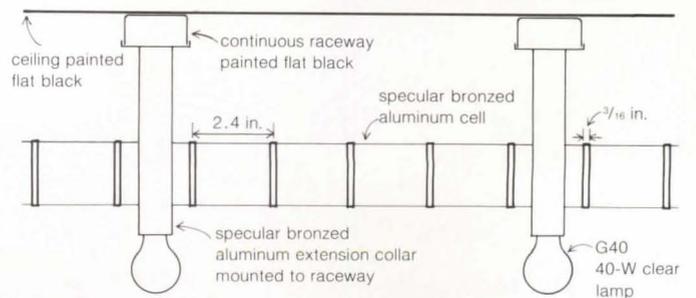


Gil Amiaga



Walker refers to the ceilings on these two pages as "crafted"—they are not directly out of a catalog. The vestibule ceiling in Pegasus Restaurant, Meadowlands, New Jersey sparkles and effuses elegance without such clichés as chandeliers. Sound absorption was not important because the space wants to be festive and alive. (Architects: The Grad Partnership and Walker/Group, Inc.; lighting

consultant: Howard Brandston). For the atrium of Burdine's Galleria Department Store in Fort Lauderdale, Walker/Group, the consulting architect, took "Florida" colors and applied them to an industrial esthetic. An "aggressive" metal deck is painted pink, while the modular steel frame is light blue. (Architect: Reynolds, Smith & Hills, lighting consultant: David A. Mintz).



When asked why certain ceiling products were chosen, Kenneth Walker cites "cost-effective" as a prime reason. Example: for offices of Ogilvie & Mather (top left) the designers used a narrow band of light to reinforce the bright-colored core and to light aisle space. They chose a concealed-spline acoustic-tile to give a crisp, uncluttered ceiling. For the Fashion Gallery of Bullock's Beverly Center (top right),

the designers wanted to enhance the height of the space and the "glitter" of the merchandise. Merchandise is moved around, so the ceiling needed flexibility. Solution: a T-bar ceiling with dropped-in reflective panels to make the space very shimmery. (Interior design: Walker/Group, Inc.; lighting: Bonvini/Kondos.) For the decorative home area (gifts, china, glassware) of an I. Magnin specialty store in Northbrook,

Illinois (bottom left), Walker/Group used plasterboard, painted to give a smooth finish and a rich, clear color as a foil for the merchandise. The space is the surround of an escalator well, and since the type of merchandise does not change, the flexibility of an acoustic-tile ceiling was not needed. (Architects: Solomon, Cordwell, Buenz & Associates, Inc.)



Victoria Lefcourt



Toshi Yoshimi



Hedrich-Blessing

In the renovation of Burdine's downtown Miami store (bottom right), Walker wanted the ceiling to reinforce the dynamism of the 45-degree angle to exterior walls on which the interior spaces are laid out. The reflectivity of the ceiling accentuates the kinetic activity of the on-off neon lighting in the store. The lineal elements of the ceiling also are used for supply and return air. (Consulting building architects: Herbert Johnson Associates; interior design: Walker/Group, Inc.; lighting: David Mintz.)



Gil Amiaga

Korean Air Lines office on Fifth Avenue in New York is a one-idea space—a three-dimensional advertisement for the company. All Walker/Group wanted the ceiling to be is a clean, simple color plane. It is a concealed-spline metal ceiling painted an old-gold color.

Since budgets often don't permit this, we are fortunate the manufacturers are accenting richness more and more in their standard products. One example is the dimensioned (patterned) tile that many companies now offer, and as demand increases in a variety of building types I think that the product will become increasingly cost-effective.

I like honest materials—I don't like to see simulated-wood-grain television sets. But I'm comfortable with linear and patterned acoustic tile because it doesn't look to me like anything but acoustic tile. But if a manufacturer were to "vinylize" a linear metal ceiling with wood grain, I'd get nervous. Again, I like honest materials, but I also like a material that adds a little bit of richness. Linear ceilings set up a certain design vocabulary that can be quite elegant. The new linear-patterned acoustic tile ceilings add richness to certain spaces when they are used properly. Well-resolved spaces are those in which all the pieces work in harmony. Just having linear tile ceilings in of itself is not going to make a space look good. In fact it would be out of place in room with highly-patterned carpet because the two materials would be fighting each other.

While, as designers, we resist what some may feel are "mundane" acoustic-tile ceilings, many of our budgets dictate otherwise. When this is the case, we make the ceilings neutral, rather than trying to draw attention to them with design features.

On every job we ask ourselves: 1) what is the end use, 2) what does the material look like, 3) what acoustic properties does it bring to the space? In some cases such as the large foyer for Pegasus Restaurant, or the three-story-high atrium for Burdine's, sound absorption is not an important issue. At Pegasus the space is meant to be acoustically "bright." At Burdine's the sound is not confined because of the ceiling height, and the murmur of background sound is expected by customers.

It continues to amaze me, though, how often the acoustics of an environment are neglected or misunderstood. I think one of the main reasons that some open-plan offices do not succeed is that the designers lack a real understanding of what it takes to make those spaces acoustically comfortable—or don't avail themselves of the expert knowledge of acoustic consultants and manufacturers.

Coming in September. Peter George is the author of: "Focus on ceilings: a consultant's view."



Victoria Lefcourt

New products

For more information, circle
item numbers on Reader Service
Card, pages 181-182

Authentic American fabric reproductions: a new collection from Scalamandr 

Scalamandr  has embarked on a unique program of reproducing fabrics of American period styles as an aid for designers and historic preservationists interested in authentic period re-creation or decoration. This program of traditional weaves and prints has been selected from the Scalamandr  Collections by Berry Tracy, former curator-in-charge, Decorative Arts, Metropolitan Museum of Art. Mr. Tracy has selected the fabrics specifically for their accuracy of design, color and texture within the context of the historic period style. There is also a group of solid color weaves coded to complement the more elaborately patterned damasks, brocades, liseres, brocatelles, stripes and prints found in the master program. Six fabrics of the collection are shown here.

1. Pompeian Memories: pattern is from Adam document in the Neo-Classic style; damask; 70 per cent cotton/30 per cent silk; five colorways.

2. Diagonal Line: contemporary textured lisere weave; 56 per cent rayon/44 per cent spun rayon; four colorways.

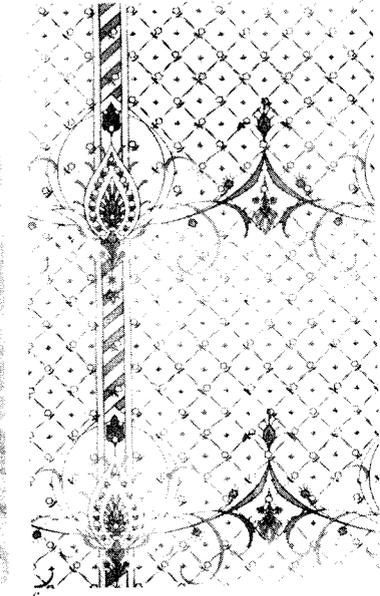
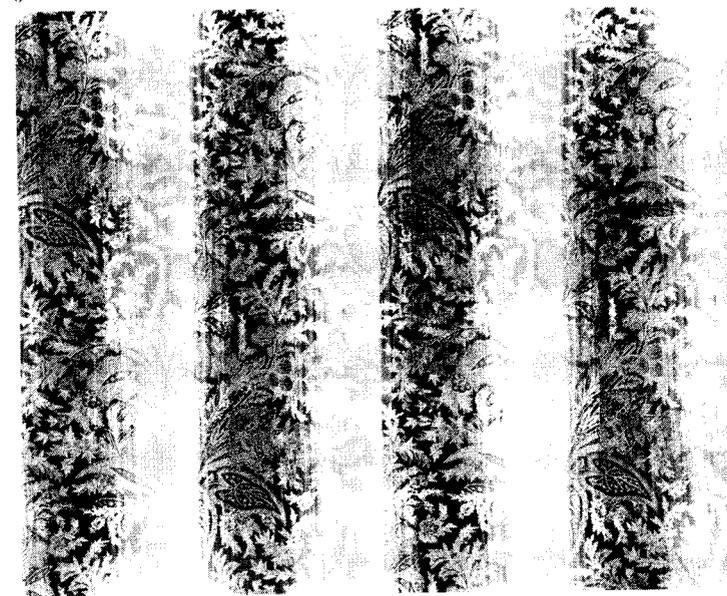
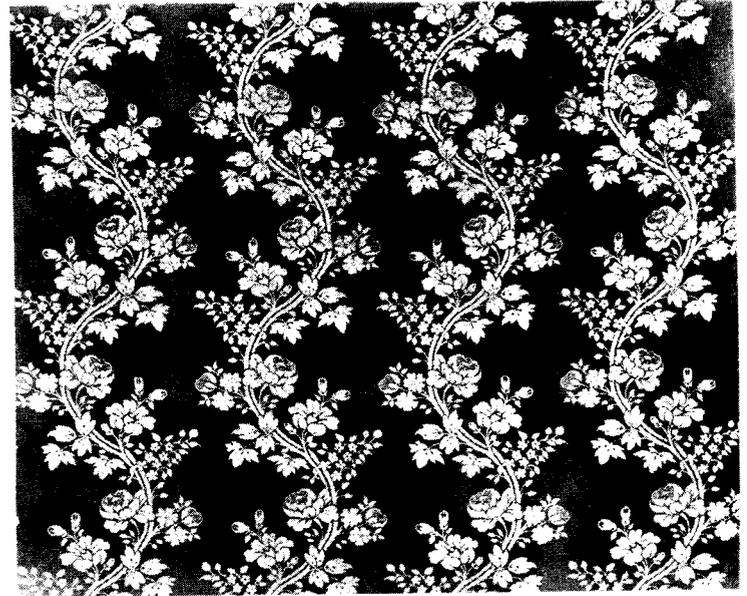
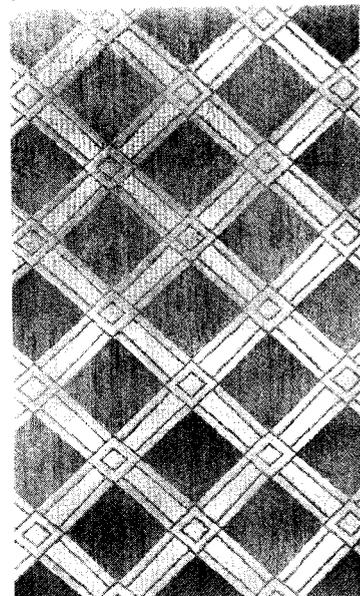
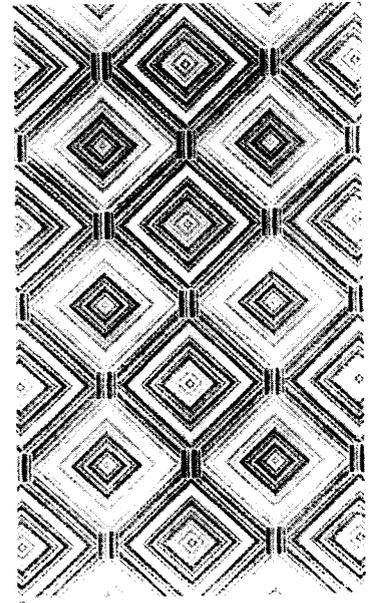
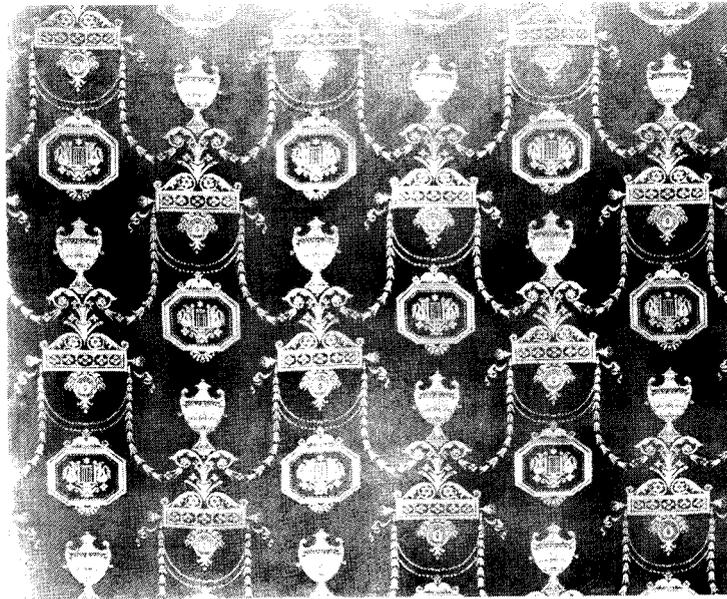
3. Palazzo Grill: originally devised to emulate 15th-century embossed leathers; brocatelle; 29 per cent silk/71 per cent cotton; one colorway.

4. Rambling Vine: a textured weave; damask; 84 per cent cotton/16 per cent silk; three colorways.

5. Jakarta Ombre: a discharge print with the ombre variations of color created by the use of multi screens; 100 per cent cotton; four colorways.

6. The Golden Age: comes from Caravan collection even though it has a distinct Art Nouveau feeling; 100 per cent cotton chintz; four colorways. Scalamandr  Inc., New York City.

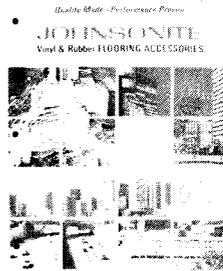
Circle 300 on reader service card
More products on page 143





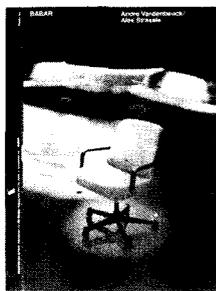
Roof insulation

A *Spec Data* sheet describes a roof insulation system for low-rise commercial, industrial and institutional buildings, designed to utilize the space between framing members in pre-engineered metal buildings and bar joints with standing seam roof systems. Construction Specifications Institute, Washington, D.C.
Circle 400 on reader service card



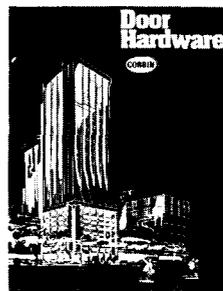
Flooring accessories

An 8-page color catalog features product selection tables of vinyl and rubber cove bases, stair treads, risers, edge guards, and corner bumper guards. All ordering information is included with color charts and section diagrams. The Johnson Rubber Co., Middlefield, Ohio.
Circle 406 on reader service card



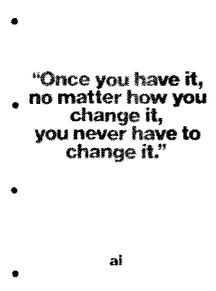
Chairs

A 6-page color foldout illustrates the Babar collection. Described are bucket seats with cores of steel and springs cast in polyurethane foam and the 5-foot base of welded steel. Atelier International, Ltd., New York City.
Circle 401 on reader service card



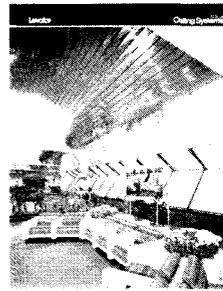
Door hardware

A 16-page catalog gives product information on high-security locking systems, cylindrical locksets, mortise locks, security deadlocks and door closers. Included is a lock function selection chart. Corbin Division of Emhart Industries, Berlin, Conn.
Circle 407 on reader service card



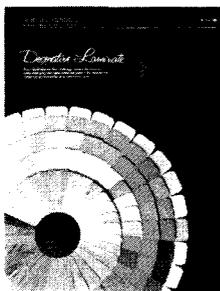
Furniture system

A 22-page brochure describes *Marcatre*, a system of industrially produced modular work stations, tables, desks and storage units, designed by Mario Bellini. Typical installations are shown with drawings to illustrate a variety of configurations. Atelier International, Ltd., New York.
Circle 402 on reader service card



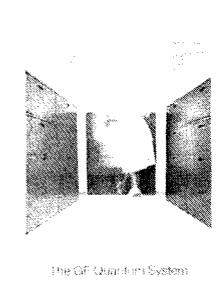
Ceilings

A 16-page brochure describes linear ceilings, screens and baffle systems. Also included is information on ceiling specifications and renovations systems. Levolor Lorentzen, Inc., Lyndhurst, N.J.
Circle 408 on reader service card



Laminates

An 8-page color brochure describes a line of decorative laminates and laminate-surfaced panels for residential, commercial and industrial use. The collection of 72 solid colors and 12 woodgrain patterns is presented with specifications on all of the finishes available. Wilsonart, Temple, Texas.
Circle 403 on reader service card



Filing

A 20-page color brochure features the *Quantum* system of lateral files. Photographs illustrate typical installations and options such as posting shelves, cross trays and removable tops. GF Business Equipment, Inc., Youngstown, Ohio.
Circle 409 on reader service card



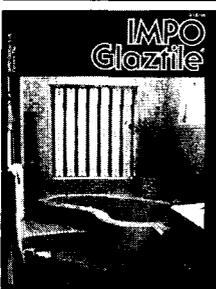
Nylon carpet

A brochure entitled "What Every Contract Carpet Specifier Should Know About Nylon," offers guidelines for selecting the proper nylon carpet for contract installations. The booklet discusses color, construction and maintenance. Badische Corp., Williamsburg, Va.
Circle 404 on reader service card



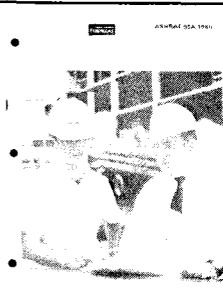
Drafting

A 32-page publication explains how draftsmen can substitute photography for redrawing. "A Window on Design. . . From Kodak" is divided into four sections: design shortcuts, films and papers, mechanized processing, and prepared chemicals. Eastman Kodak Co., Rochester, N.Y.
Circle 410 on reader service card



Tiles

A 16-page color catalog shows interior, exterior and decorative tile designs and colors. Material and size specifications are listed and photographs of installations are included. IMPO Glaztile, Markham, Ill.
Circle 405 on reader service card



Insulation standards

A 12-page brochure facilitates specifying building exterior envelopes, systems, service water heating systems and electrical distribution systems according to ASHRAE Standard 90A-1980. Owens Corning Fiberglas Corp., Toledo, Ohio.
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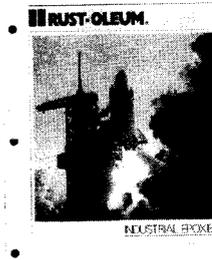
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Checkroom equipment

An 8-page catalog shows checkroom racks and accessories. Both stationary and electrically operated rotating models are diagrammed with charts listing the capacities of the various models. Railex Corp., Queens, N.Y.

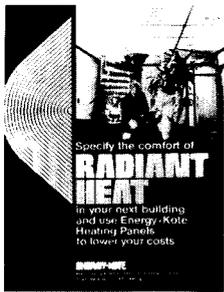
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Epoxy coatings

Three industrial, epoxy coating systems described in a 12-page color bulletin provide resistance to chemicals and corrosion in severe exposure. Technical data, recommended uses. Rust-oleum Corp., Vernon Hills, Ill.

Circle 418 on reader service card



Radiant heating

A 4-page brochure reviews a radiant heating system incorporated into ceiling panels. Included are details of panel construction, installation details, and product specifications. TVI Energy Corp., New Canaan, Conn.

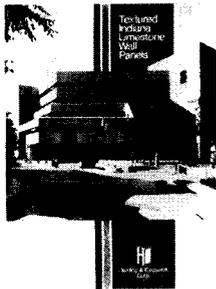
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Concrete

An 8-page color brochure describes three kinds of *Plastocrete*, a liquid additive used to reduce water and improve set control in the mixing and casting of concrete. Sika Corp., Lyndhurst, N.J.

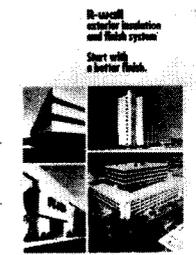
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Wall panels

A 12-page color brochure contains photos of 10 textured finishes and of buildings clad in various stones and finishes. Included are typical wall and spandrel section details, as well as anchoring and jointing information. Harding & Cogswell Corp., Bedford, Ind.

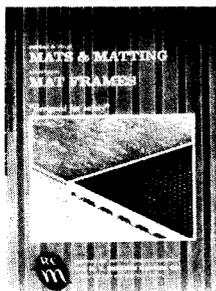
Circle 414 on reader service card



Insulation/finish system

A 16-page color catalog describes an exterior insulation and finish system. The system consists of four layers which may be applied on site, or come in pre-fabricated panels. ISPO USA, Inc., Mansfield, Mass.

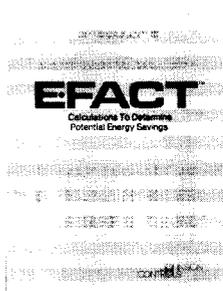
Circle 420 on reader service card



Mats and matting

A 12-page color brochure features detail drawings and applications of rubber and vinyl mats, matting and aluminum mat frames. Products from lobby entrance mats to industrial runner matting are described. The R.C. Musson Rubber Co., Akron, Ohio.

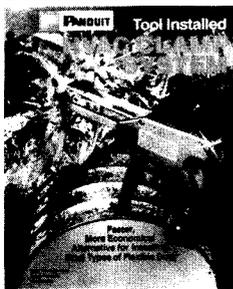
Circle 415 on reader service card



Energy savings

A 4-page brochure entitled "*EFACT*" describes a computerized program which determines potential energy savings by various control modifications to existing hvac systems. Johnson Controls, Inc., Milwaukee.

Circle 421 on reader service card



HVAC clamp system

An 8-page color bulletin describes a clamp system for the installation of hvac flexible duct. Shown are installation tools including one which automatically cuts excess clamp flush when preset tension is reached. Panduit Corp., Tinley Park, Ill.

Circle 416 on reader service card



Static control flooring

An 8-page color catalog describes vinyl flooring, claimed to control static electricity. Known as *Conductile*, it is used in electronics manufacturing areas, and in areas of computer installations. Vinyl Plastics, Inc., Sheboygan, Wis.

Circle 422 on reader service card



Water coolers

A 20-page catalog describing water coolers, chillers and non-refrigerated fountains provides information on additions to the line: modular water coolers, remote 8 gph chillers and drainless units. Ebco Manufacturing Co., Columbus, Ohio.

Circle 417 on reader service card



Tile/brick/stone

An 8-page four-color specifiers' guide describes ceramic tile, brick, and stone installation materials. Specifications, section details and charts are included. Laticrete International, Inc., Bethany, Conn.

Circle 423 on reader service card



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design that make them some of the longest running hits of all time in your town and world wide.

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Circle 53 on inquiry card



Silk wallcoverings

The 17th "Vescom" collection consists of 25 all-silk paper-back wallcoverings, all with a Class A flame spread rating for contract applications. The color range of the imported materials is mostly muted, but there are some deeper shades such as Cabernet Sauvignon. Gilford, Inc., New York City.

Circle 301 on inquiry card



Seating system

The *Bonte* seating system is constructed with polyurethane foam padding over a rigid molded foam structure. The seat is suspended on elastic bands. Cushions are filled with polyester fiber. Covers are removable for dry cleaning. Beylerian Ltd., New York City.

Circle 304 on inquiry card



Lavatory

An enameled cast-iron basin, the "Ellipse" features a new, larger size—33- by 19-in.—and elongated oval styling. It is available in all Kohler bathroom fixture colors. Kohler Co., Kohler, Wisc.

Circle 305 on inquiry card



Lockset

A lever handle lockset in a standard bore-in configuration, the "Lockwood 900" is operated with a key in the lever handle. The lock is said to be priced substantially lower than mortise levers. Lloyd Matheson Inc., Charlestown, N.H.

Circle 306 on inquiry card

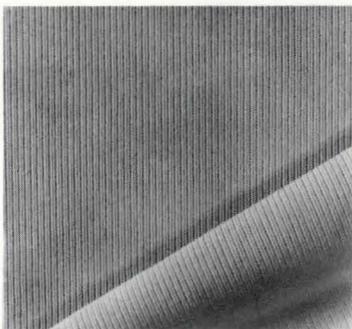
More products on page 147



Bookcase

Double Face is a two-faced rotating bookcase, built in two versions: open-front or with vertical sliding glass doors. Either is available in red or black lacquer or in walnut veneer with edges in solid wood of the same type. Every bookcase turns on a support which is connected to the others by an element which forms a single base. The shelves are of different depths on the two parts and at two opposite levels. The open front version has two drawers on one side. The glass door version is made so that a light can be installed in the upper part. Beylerian Ltd., New York City.

Circle 302 on inquiry card



Cotton velvet

Woven in West Germany with an all-cotton yarn-dyed pile, "Parade" velvet rib fabric complies with NFPA 701 when treated with a flame retardant finish. Gretchen Bellinger Inc., New York City.

Circle 303 on inquiry card



Girl Scout Council Hdqtrs., St. Paul, MN Bergstedt Wahlberg Bergquist Rohkol, Architects

Kalwall

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In addition to its practical contribution as a major design element of the Inn at Glade Springs, TCS will require no maintenance or painting and will weather to a warm, attractive gray. Serving its function as a remarkably beautiful roof, it will, as project architect Donald H. Stark remarked, "probably last the life of the building."

Call us toll-free 800-624-6906

The Inn at Glade Springs, Beckley, WV
Architect: Donald H. Stark Architects, Beckley, WV
Roofer: Harris Brothers Roofing, Charleston, WV
General Contractor: Radford and Farley, Beckley, WV



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Solar Architecture



Lord & Burnham
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Write Lord & Burnham, Dept. 2535, Box 255, Irvington, NY 10533 for the latest free literature and the name of the Representative nearest you.



Circle 56 on inquiry card



Refrigerator

The BDNT22AO-A model features black door panels, a "refreshment center" in the door (unusual in a refrigerator not a side-by-side model), and is equipped with energy-saving devices including a one-piece seamless cabinet liner to prevent cold air leaks. Magic Chef, Cleveland, Tenn.

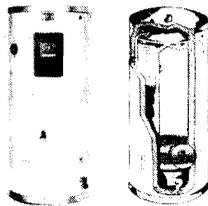
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Fan speed control

An electronic fan speed control that fully varies speed of paddle fans and most common exhaust and circulatory fans is now available with slide control. The Glyder Fan Speed Controls are exact look-alikes of the Glyder system of light dimmers, mounts and wall boxes. Lutron Electronics Co., Inc., Coopersburg, Penn.

Circle 308 on inquiry card



Water heater

A series of stone-lined, corrosion-resistant, internal heat exchange domestic water heaters compatible with any fluid solar collector system is available from this manufacturer. The Sepco SNR Series Solar Energy Water Heaters feature a seamless lining of Hydrastone and bronze fittings to prevent tank failure from corrosion. Vaughn Manufacturing Corp., Salisbury, Mass.

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Telex 951650

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Cambridge, Massachusetts 02138

Kroin Architectural Complements

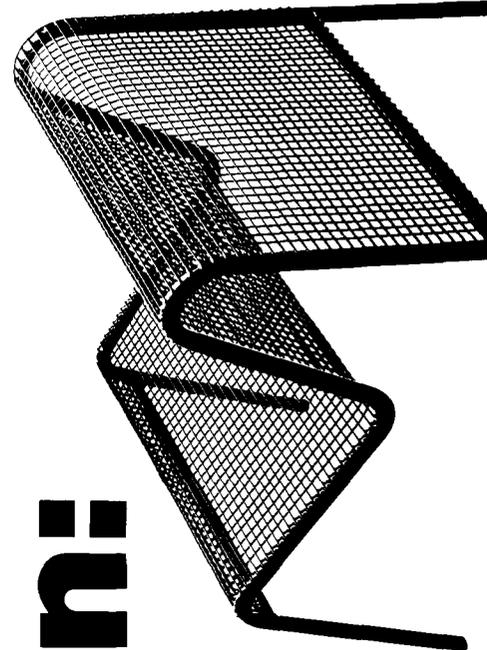
Kroin!

Mobil stationary and moveable outdoor seating is unique in its ability to conform to sharp angles and uneven topography. Unlimited seating arrangements facing inside or out are possible by altering the sequence of the three modules offered in this system. Simultaneous back-to-back seating is possible through the use of 2-sided Seat Bowls.

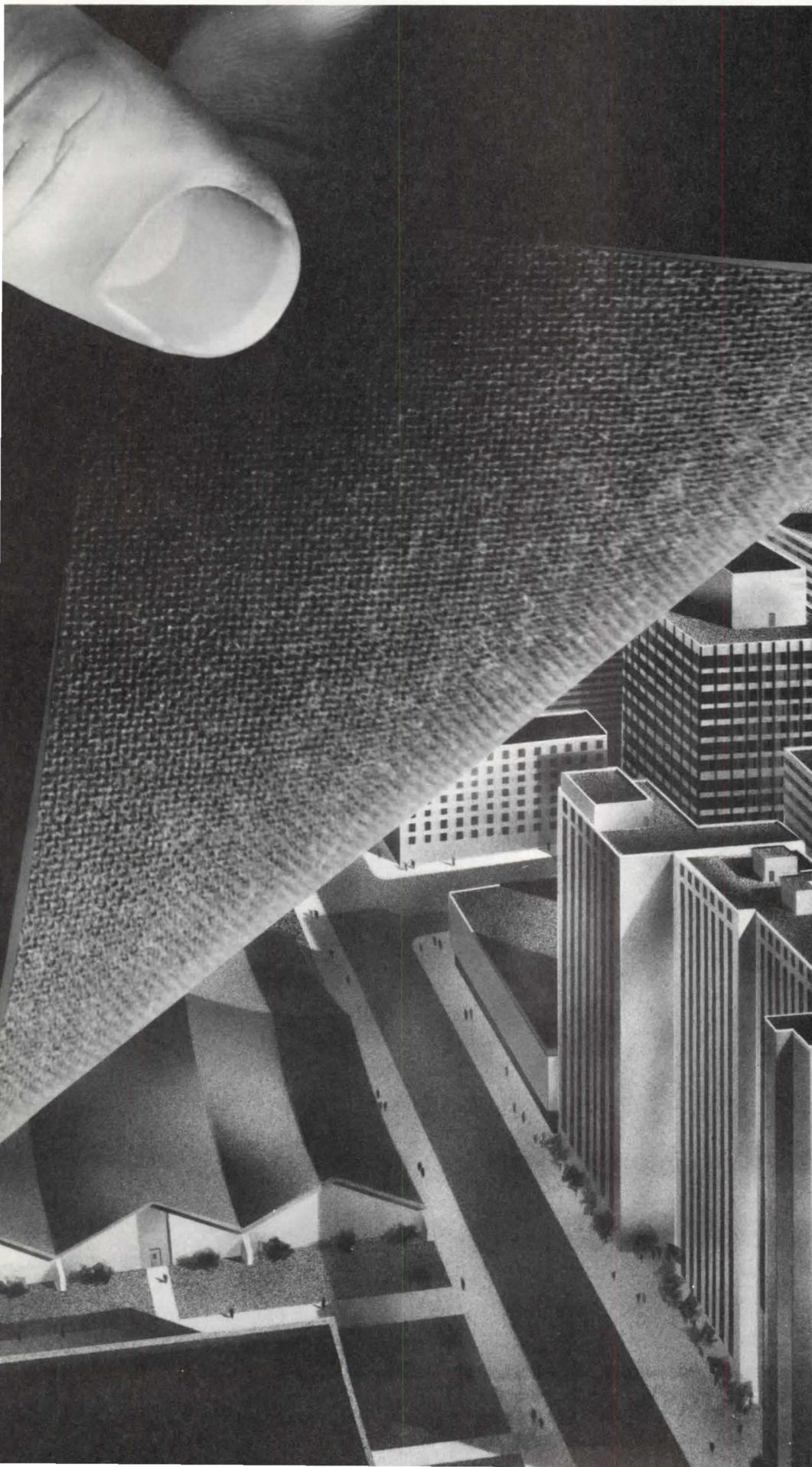
Anchors and ganging clamps insure configuration integrity and deter vandalism when moveable seating is grouped in sequence.

Mobil is part of a series of Park and Garden Furniture, manufactured in synthetic coated tubular steel and wire mesh, available exclusively from Kroin.

Circle 3 on inquiry card



Roof for roof, synthetic rubber sheeting is today's solid investment.



Single-ply synthetic rubber membrane roofing is only about 1/32" to 1/16" thick. But it packs all the long-term protective power and service life a heavy, labor-intensive conventional roof can deliver.

Experienced crews readily seam sheets to keep out water—and to conform to structural configurations and properly prepared substrates. The sheets handle easily and can be installed in marginal weather. And the potential hazards of on-site hot molten material and application are eliminated.

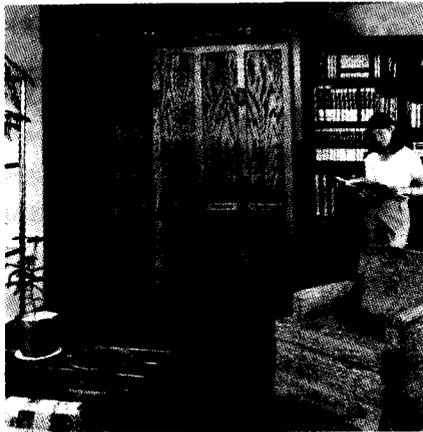
Compared with conventional roofs, tough synthetic rubber roofing systems stay flexible in extreme cold and don't turn soft or sticky in extreme heat. Because they are rubber, they stretch and return to shape. In fact, synthetic rubber roofing systems have withstood the test of time and weathering for over 20 years. And they are easy and inexpensive to maintain.

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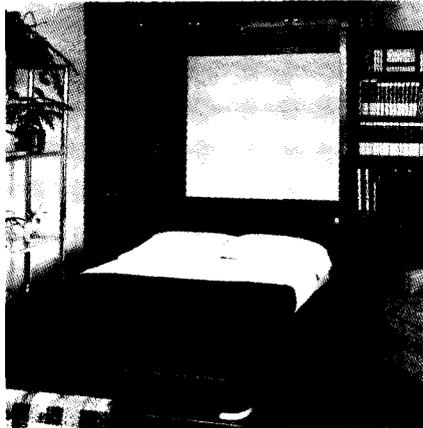


Circle 57 on inquiry card



Kitchen cabinetry

The "Americana" line of cabinetry features distinctive doors and drawer fronts laminated with *Formica* laminate. The cabinetry includes slide-out trays, adjustable shelves, and solid oak double dowelled frames. Merrilatt Industries, Inc., Adrian, Mich.
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Make the space you have into the room you need.

The SICO® Room Maker™ wall bed system opens up more usable space in the family room, den, bedroom or efficiency apartment. By day, it's a custom-designed wall system with plenty of storage. At night, a gentle pull reveals a comfortable bed in twin, full or queen size.

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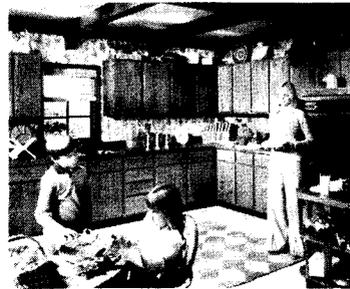
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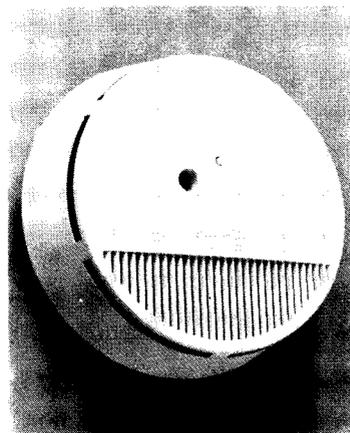
The Room Makers.

Circle 58 on inquiry card



Brass lamps

This manufacturer is the exclusive agent for Agusti of Barcelona lamps—contemporary designs with "high tech" or Art Deco appearances. The NESSEN/Agusti line consists of 25 lamps, each with a selection of different reflectors; all are made of solid brass with a polished brass finish. Nessen Lamps Inc., New York City.
Circle 311 on inquiry card



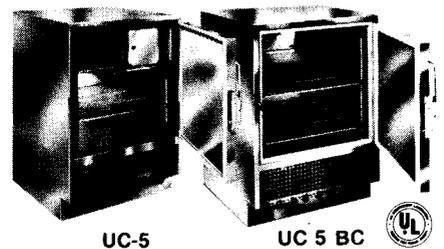
Smoke alarm

This manufacturer's new "300 Series" residential smoke alarm contains a photoelectronic detection chamber designed to virtually eliminate the occurrence of nuisance alarms. It is available in 120 VAC plug-in, 120 VAC hard wire, and battery powered models. Electro Signal Lamb, Inc., Framingham, Mass.
Circle 312 on inquiry card
Continued on page 163

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or WALL MOUNTED
STAINLESS STEEL
Refrigerators / Freezers**

UNDER COUNTER



The entire UC 5 series feature polyurethane insulated thin wall construction and airtight neoprene thermo-break door seals. The cooler section has 2 adj. s.s. wire shelves. Cap. -5.4 cu. ft. (155 ltr.)

UC 5 — two-tray ice cuber cooling system, manual defrost

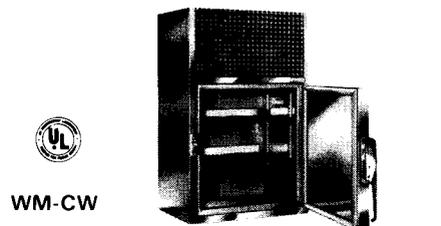
UC 5 BC — blower cooling system, auto. defrost

UC 5 CW* — cold wall cooling, auto. defrost

UC 5 CWE — *totally explosion-proof*, 4.9 cu. ft. (139 ltr.) cap.

UC 5 FBC — freezer, auto. defrost, 4.6 cu. ft. (130 ltr.) cap.

WALL MOUNTED



WM CW* series wall mounted refrigerators come in 4 sizes featuring cold wall cooling with auto. timer defrost. Two removable, adj. stainless steel shelves provided. Front grille removes for easy servicing.

WM 1 CW — Capacity -1.5 cu. ft. (45 ltr.)
WM 2 CW — Capacity -2.3 cu. ft. (65 ltr.)
WM 3 CW — Capacity -3.2 cu. ft. (95 ltr.)
WM 4 CW — Capacity -4.3 cu. ft. (125 ltr.)
WM 3 FCW freezer, man. defrost, cap. 3.0 cu. ft. (85 ltr.)

*With explosion-proof interior.

Jewett also manufactures a complete line of blood bank, biological, and pharmaceutical refrigerators and freezers as well as morgue refrigerators and autopsy equipment for world wide distribution through its sales and service organizations in over 100 countries.



Refer to Sweet's Catalog 11.20/Je for quick reference

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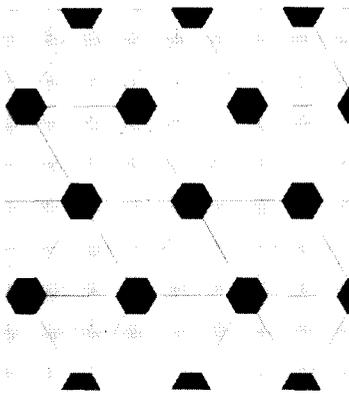
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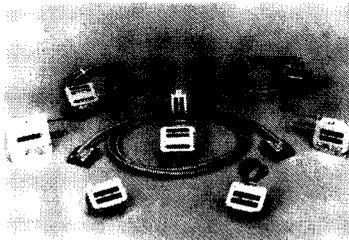
Italian tile

This dramatic geometric floor pattern is one of many manufactured in Italy by Technoceramica. "Esa T" tiles shown here come in ground colors of white and gray, with insert hexagons in white, black or gray. Agency Tile, Inc., New York City.
Circle 313 on inquiry card



Cabinets

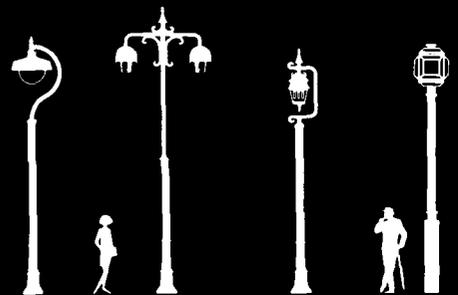
Mounted between poles on 32-in. centers, "Rakks System" cabinet modules have a depth of 13½-in. and a height of 24-in. to accommodate adjustable shelves behind surface-mounted doors or selections of 4-in. and 8-in. drawers. Cabinets and shelves are offered in white or black laminate or veneered oak, with uprights and other hardware of patented design in anodized aluminum. Rangine Corp., Waltham, Mass.
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