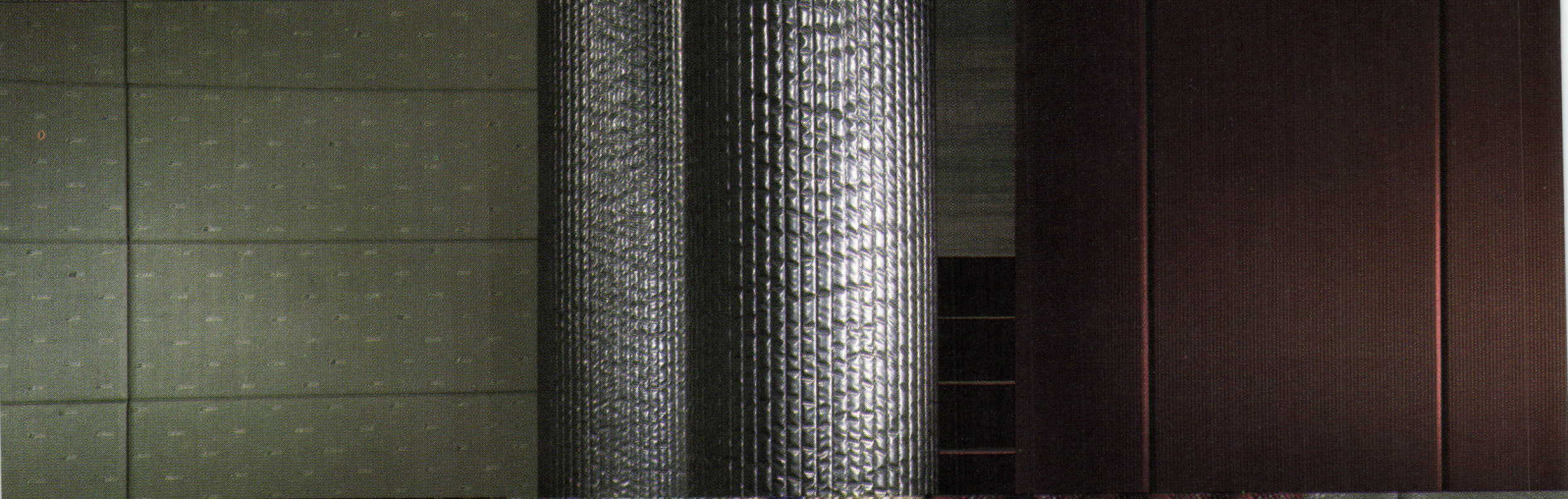


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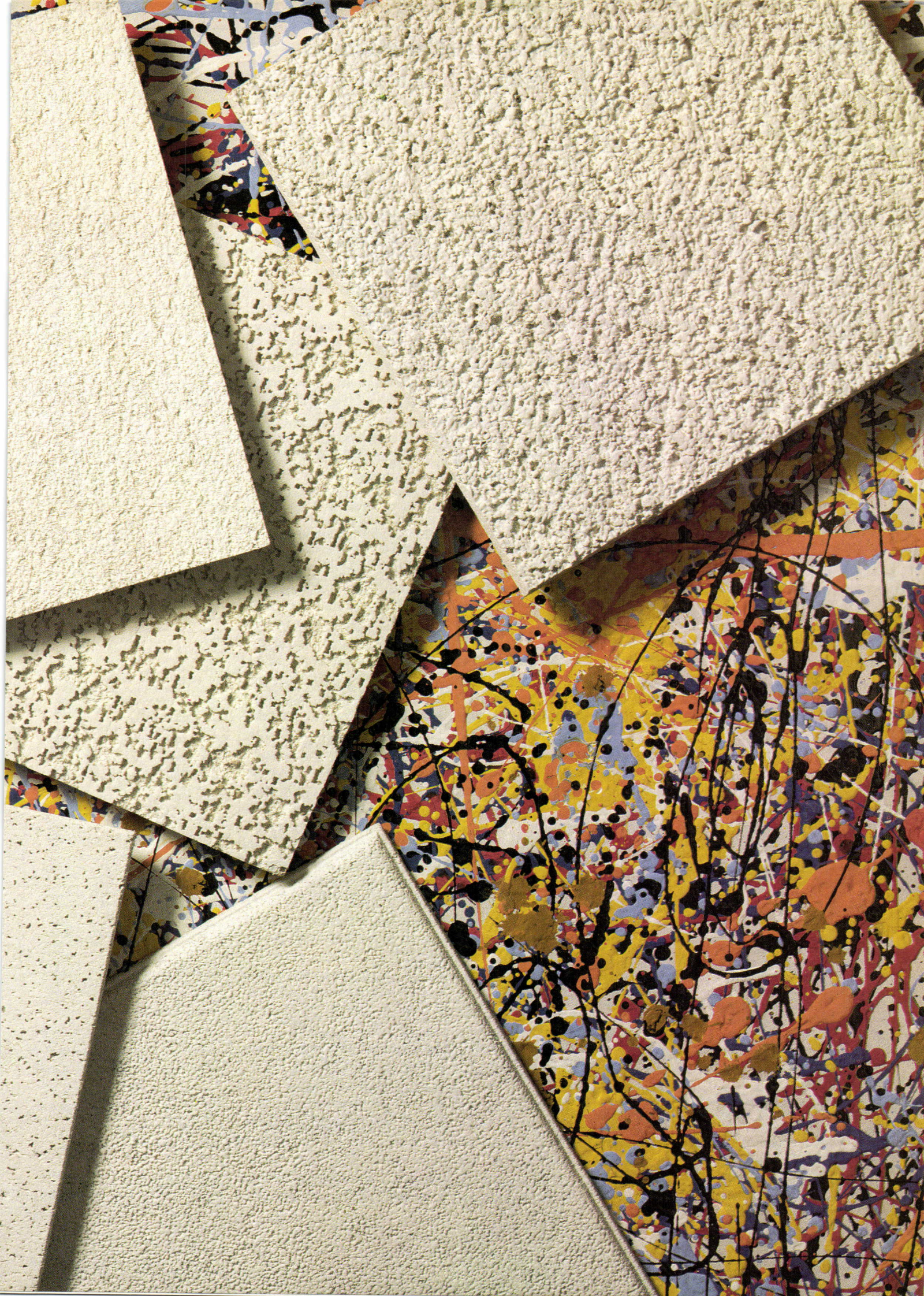
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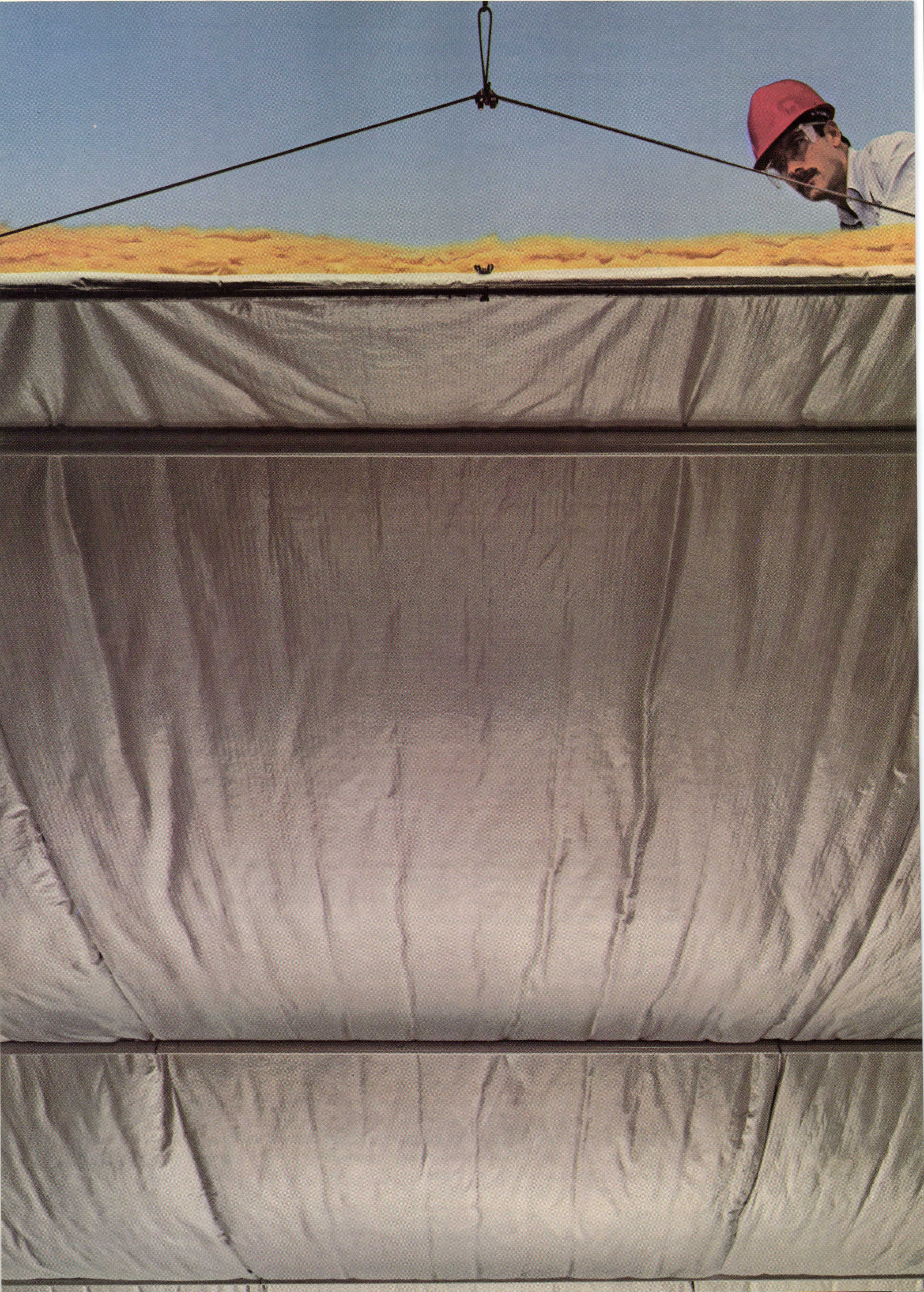
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The National Institute of Building Sciences late last month released its long-awaited model specifications for asbestos removal in buildings. NIBS vice president for program planning Steven Biegel, who oversaw the four-month effort, says the order of business was reversed: "The building industry needed some hands-on guidance on how to deal with asbestos quickly, rather than wait for a help with risk assessment, which normally would come first." Biegel says he expects the institute to draw up asbestos risk assessment guidelines as well.

The model guide's four sections deal with maintenance and repair, encapsulation, enclosure, and the removal of asbestos material. Developed under contract to NIBS by the environmental consulting firm, Environmental & Technical Services, Inc., the document synthesizes source material from the Association of Wall and Ceiling Industries, the Naval Facilities and Engineering Command, the General Services Administration, the Environmental Protection Agency, the Veterans Administration, and relevant codes from the states of New Jersey, Maryland, and Mississippi.

The volume describes in detail everything you need to know—applicable codes, descriptions of support facilities for decontamination projects, negative air pressure systems for ventilating work areas, respiratory protection procedures, test laboratory services, the decontamination of work areas, and more.

Biegel says that among last-minute criticisms was the assumption that the building to be decontaminated would be reoccupied. Buildings that are to be demolished would require a less elaborate, less costly system, he says, adding that the document would be modified to reflect this concern.

NIBS believes the document will be useful for three main user groups: architects and engineers; building owners; and contractors. The EPA has endorsed the report and plans to distribute it to regional offices and grant contractors. Both MasterSpec and the Construction Specifications Institute will include it in their subscription services, and it will be available directly from NIBS. "But," Biegel warns, "the guide specifications are just that—guides." NIBS will not be responsible for potential liability problems.

Still, institute president Gene Brewer hopes the existence of the specifications will help induce insurers to provide liability insurance.

Peter Hoffmann, World News, Washington, D. C.

In New York City on October 10 and 11, the AIA practice management committee staged an open meeting entitled "The Management of Creativity." In spite of its stated subject, the meeting addressed pressing business problems as well. Among them: fee negotiation and liability insurance.

A panel representing seven major brokers faced an audience representing firms that had, in the last year, seen one major carrier abruptly drop architects' liability insurance, two announce that they were phasing out, and none offer coverage for activities in asbestos or toxic-waste handling. Problems for those firms that could get coverage included drastically rising rates, higher deductibles, and lower limits. "It's getting to the point," observed one AIA staffer, "that insurance companies will determine who can practice." He was referring in particular to states, such as Kansas, that have tried to make liability insurance mandatory.

Of the seven companies represented, all agreed that they would still accept new applications. "But they would," summed up panel leader Roy Vince of Liability Brokers, Inc., "look much more closely at new clients for their ability to pay premiums and, in the event of a claim, the deductible."

More disturbing was the rate at which even these companies that thought enough of architects' business to show up at the meeting turned down applications. Their refusal rate ran from 25 per cent by the most active company in the field to 86 per cent.

Vince had worked with a panel representing several building-design professional organizations, including the AIA, seeking alternates to conventional insurance. Alternates include "going bare," or practicing without it; self insurance, which requires that a firm set up a special fund subject to state regulation in order to meet its potential liability needs; and mutual insurance, which can take many forms including a group of offices setting up their own "captive" company. "But," concluded Vince, "none of these are likely to meet most design firms' needs. For instance, captives don't have a broad enough base to succeed."

The first presentation was by Thomas Sheehan of Thomas Sheehan, Inc. He argued that the real crisis for architects' liability insurance had existed since 1965 and paralleled, in a slightly later cycle, the crises for doctors and then lawyers. He revealed that 40 out of every 100 architects he insured had at least one claim per year, a rate that was similar to that of the other six companies.

Sheehan recalled a trip to Japan on which he had asked a local broker how his premiums could be so much lower. The answer: "In the U. S., there are 44 times as many lawyers for the same unit of population as there are here." Sheehan noted that his company paid one dollar in legal costs for every one in benefits—a ratio the other companies confirmed as normal—and that the costs to defend just one case in which construction costs had exceeded the budget ran to \$2 million. He strongly urged a system in all states similar to that already in effect in Hawaii: that courts be reserved for only the most important cases, that what was important be decided by a panel of, say, two architects and a layman, and that unimportant cases be decided by mediation.

He was not sure about arbitration. "I've had one case that hasn't been decided in over seven years." (The opinion of the other companies ran from favorable to "we want our choice" to "the jury's still out.")

Douglas Bodnavich of Shand-Morahan said that there was a shift in the type of suits today—away from those based on such inadequacies of construction as roof leaks and toward those based on financial loss due to delays or product nonperformance. He also noted the trend toward lower limits that companies will pay on a given case. (The range of the companies here: \$5 million to \$25 million.) He saw an even tougher market coming, citing particular problems with certain building types, such as condominiums; certain clients, such as the government; and certain states, such as California where, he said, the courts tend to be more liberal in the amounts they will award. "Legal costs have killed us."

Victor O. Shinnerer & Company, the one company commended by the AIA, bills itself as the only resort for all size firms in all states. And it does have the lowest application rejection rate—25 per cent. Premiums in 1984 rose by 30 per cent and, not untypically, are expected to rise by 39 per cent in 1985.

And there was more on fees, contracts, and how to run an office

The opening session included addresses by John Burgee of Johnson/Burgee, and Peter Samton of Gruzen & Partners, two firms with very different management styles. What they imparted on such subjects as employee management, fees, and desired clients was as informative to attendees for its lack of accord as it was for agreement. *Continued on page 173*

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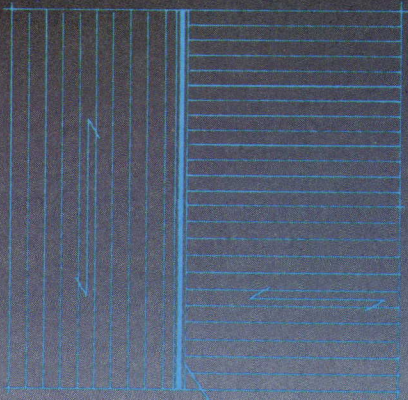
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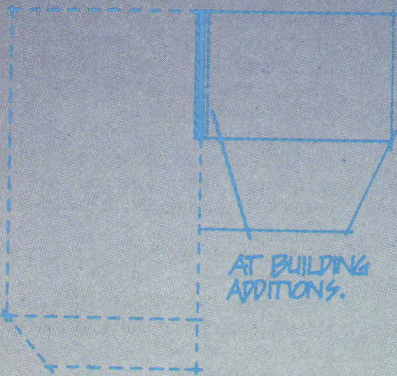
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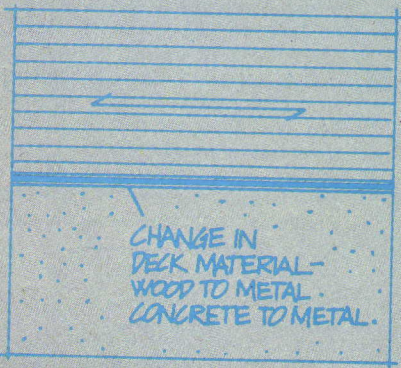
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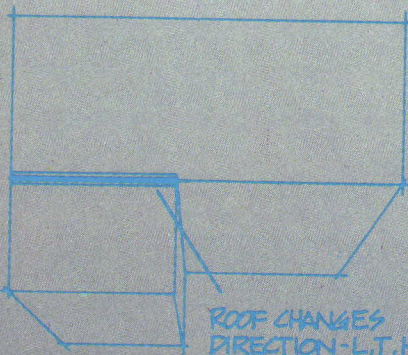
CHANGE IN DECK PANEL DIRECTION.



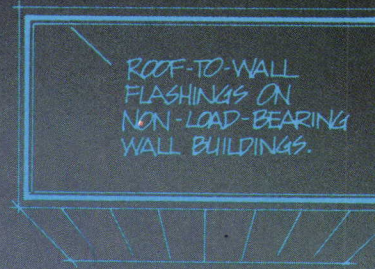
AT BUILDING ADDITIONS.



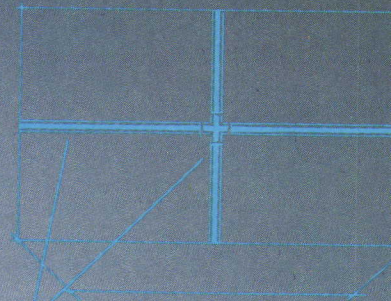
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Construction economy outlook: The economy is now in peak form, even while history teaches us. . .

By George A. Christie

With 13 quarters of expansion behind it, the construction market is showing renewed vigor at a time when most building cycles began to fade. No single event explains this late burst of contracting strength. It's more a matter of several things coming together in 1985: the fall of interest rates; the release of blocked highway funds; possibly even the anticipation of tax reform. As a result, no one category of construction is particularly "hot," but collectively the building market is sizzling.

The seasonally adjusted Dodge Index of construction contract value (1977=100) crossed the 160 threshold last March and seems to have taken up residence there. Mae West liked to say "Too much of a good thing can be . . . wonderful," but experience with the notoriously cyclical building market teaches that all periods of expansion have their limits. The point of departure for the Dodge/Sweet's Construction Outlook for 1986 is to determine just how vulnerable this three-year-old building cycle is.

The construction sector will be responding to more than the usual number of "issues" in 1986
The familiar ones—the economy's growth (or the absence of it), interest rates, the Federal/local tradeoff—will be making room for some newer ones: Congress's recent commitment to deficit reduction, and the Administration's commitment to tax reform.

Getting a fix on a few sensitive political issues takes a lot of the guesswork out of economic forecasting. Here are some critical assumptions about the political and economic environment for the construction/building materials industry for the near future:

1. *The economy will be mired in "growth recession" for another year.* Even discounting the trade gap, economic conditions are not conducive to strong growth. Greater emphasis on deficit reduction means that fiscal policy must become more restrictive. Interest rates are stabilizing (temporarily) at a level that remains uncomfortably high. The acceleration of the employment shift from manufacturing to services is depressing productivity by lowering the capital/labor ratio at a time when excess capacity already abounds.

Against this cheerless background, the recent widening of the trade gap and the stampede to protectionism are additional handicaps to renewed growth. The reversal of exchange rates suggests that our trade crisis may have turned the corner, but international competition will continue to be a drag on the manufacturing sector.

In 1986, real GNP growth is likely to plod along at close to the same 2 1/2-per cent rate as it has in 1985, with only an outside shot at 3 per cent. For the construction market, this outlook carries both negative and positive implications: there is little incentive for manufacturers to increase their capital spending in 1986; there is little justification for the Federal Reserve to tighten credit in 1986.

2. *Long-term interest rates are on a declining trend.* Interest rates are gradually winding down from their 1981-82 extremes toward a level that is more consistent with inflation. There is good reason to anticipate continued general movement in this direction: artificially high interest rates not only inhibit the economy's growth, but they contribute to the trade gap by sustaining the overvalued dollar. Inflation is no longer a serious threat.

Short-term cyclical behavior of the credit markets persists, however, and the sharp decline of mortgage rates since the Fed's year-ago easing is now stabilizing—a reflection of the Fed's more recent position of neutrality. In 1986, a combination of weak loan demand and central bank accommodation presents little risk of rising rates and leaves room for some further small decline before the next cyclical upswing.

From both a short- and longer-term viewpoint, the prospect of reduced volatility around a declining trend of interest rates is the best thing the construction sector has going for it.

3. *Government spending for construction will not increase beyond its current level for the next two years.* Commitment to the goal of deficit reduction will ultimately require more than just a "freeze" on Federal nonmilitary spending. For the next few years, however, austerity is the key to a deficit reduction program that calls for an initial shrinkage of \$55 billion in fiscal year 1986—without raising taxes.

A cap on Federal domestic spending implies outright cuts in construction outlays in order to offset the inevitable increase in entitlements. Higher state and local spending can be expected to fill the void, keeping total public construction outlays at least even with 1985.

4. *Tax reform is the biggest risk the construction industry faces in 1986.* The Administration's program for tax reform (or any of the various counter-proposals) could be the catalyst that ends the boom in commercial real estate development.

Several features of "Treasury II"—the loss of tax-exempt status

for industrial and mortgage revenue bonds, the treatment of the sale of depreciable property as ordinary income instead of capital gain, the repeal of the "at risk" rule—would detract from the current advantages of real estate as an investment. The greatest risk, however, is the lengthening of depreciation on commercial buildings from the highly favorable terms available since 1981 through ERTA.

Considering the President's personal involvement in the tax reform issue, it is safest to assume that a modified version of Treasury II (watered down by special interests) will surface early in 1986. For now, it is enough to expect that depreciation will be lengthened. Once it is, the office building market will no longer be the same.

On whether 1986 will be a turning point, there's a mixed environment in store

Two handicaps (a sluggish economy and the Federal budget freeze), one decided advantage (a favorable interest rate outlook) and one question mark (tax reform) constitute a mixed environment for the construction industry in 1986. The most vulnerable market—nonresidential building—will be considered first.

Nonresidential construction

Since early 1985, contracting for nonresidential building has soared above 1.3 billion square feet more often than it has fallen short of that lofty mark. As the market strives to reach 1.4 billion—the peak of the last building cycle—the realities of the mid-1980s are saying that it will be necessary to settle for something less this time around.

Although a few individual categories of nonresidential construction are currently breaking old records (office building is the outstanding example), neither total commercial/industrial building nor institutional building will achieve its former high before the next cyclical decline sets in. Stagnation of the economy's industrial sector has already reversed the recovery of manufacturing building.

Contracting for stores and shopping centers is being held back by a housing market that can no longer rise to its former heights. The scarcity of public funds for non-military purposes is inhibiting institutional building. Together, these constraints are preventing the full development of the nonresidential building cycle, and this market—currently stronger than at any other time in the 1980s—is beginning to lose momentum. After three years of cyclical expansion, total nonresidential contracting will peak

in 1985 at just under 1.3 billion square feet, a volume nearly 10 per cent lower than the last two highs.

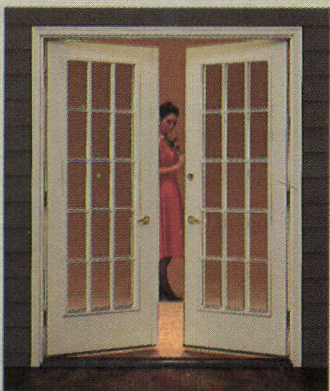
As commercial and industrial building wind down over the next several years, events are likely to provide some new variations on the "standard" cyclical decline. Initially, the downturn will be dominated by office building, as tax reform precipitates an overdue correction in this overstimulated market. And with the economy limping its way through a period of sluggishness that will extend through most of 1986, there will be little opportunity for the expansion of other commercial and industrial building activity to cushion an abrupt weakening of the vulnerable office market. Consequently, contracting for total commercial and industrial construction could drop off by as much as 20 per cent over the next two years—most of it confined to the office category.

Industrial construction

Of all the individual commercial and industrial building types, the one with the most potential for expansion is manufacturing building. In 1986, that potential will go largely unrealized.

Responding to the economy's vigorous 1983 recovery, and encouraged by ERTA's investment incentives, contracting for industrial construction surged 70 per cent between 1983's first quarter and 1984's fourth—from a record low of only 89 million square feet to a respectable 152 million. As it always does, contracting for manufacturing construction was tracking industrial capacity utilization closely. The rise of capacity utilization during 1983 and 1984, from 69 per cent to 83 per cent, easily explains the early strength of construction contracting. And since capacity utilization typically reaches 86 or 87 per cent at the peak of its cycle, there was, and still is, potential for further expansion of contracting to as much as 200 million square feet. But instead of advancing toward this potential, both capacity utilization and construction contracting have been slipping backward since mid-1984.

If the original reason why the industrial sector got off the fast track in the middle of 1984 was monetary restraint (the Fed tightened credit early last year in order to check runaway expansion), that explanation doesn't stand up in 1985. Credit has been eased, and a more fundamental issue has surfaced: the flood of imported goods that has put domestic producers at a competitive disadvantage for which there is no quick fix. Exchange-rate
Continued



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1986 National Estimates Dodge Construction Potentials

	1985 Preliminary	1986 Forecast	Percent Change 1986/85
Nonresidential Buildings			
Floor Area (millions of square feet)			
Office Buildings	310	250	-19
Stores and Other Commercial	548	507	-7
Manufacturing Buildings	140	145	+4
Total Commercial and Mfg.	998	902	-10
Educational	92	95	+3
Hospital and Health	70	70	—
Other Nonresidential Buildings	127	134	+6
Total Institutional and Other	289	299	+3
Total Nonresidential Buildings	1,287	1,201	-7
Contract Value (millions of \$)			
Office Buildings	\$23,075	\$19,400	-16
Stores and Other Commercial	21,475	20,300	-5
Manufacturing Buildings	6,900	7,525	+9
Total Commercial and Mfg.	\$51,450	\$47,225	-8
Educational	\$ 8,175	\$ 8,750	+7
Hospital and Health	7,450	7,675	+3
Other Nonresidential Buildings	10,200	11,125	+9
Total Institutional and Other	\$25,825	\$27,550	+7
Total Nonresidential Buildings	\$77,275	\$74,775	-3
Residential Buildings			
Dwelling Units (thousands of units*)			
One-Family Houses	1,005	1,075	+7
Multifamily Housing	720	650	-10
<small>(*FW Dodge basis)</small>			
Total Housekeeping Residential	1,725	1,725	—
Floor Area (millions of square feet)			
One-Family Houses	1,567	1,677	+7
Multifamily Housing	687	627	-9
Nonhousekeeping Residential	97	88	-9
Total Residential Buildings	2,351	2,392	+2
Contract Value (millions of \$)			
One-Family Houses	\$70,575	\$79,125	+12
Multifamily Housing	28,200	26,950	-4
Nonhousekeeping Residential	6,900	6,600	-4
Total Residential Buildings	\$105,675	\$112,675	+7
Nonbuilding Construction			
Contract Value (millions of \$)			
Transportation-related Construction	\$23,925	\$23,875	—
Water-related Construction	12,625	12,725	+1
Total Public Works	\$36,550	\$36,600	—
Utilities	\$2,000	\$2,000	—
Total Nonbuilding Construction	\$38,550	\$38,600	—
All Construction			
Contract Value (millions of \$)			
Total Construction	\$221,500	\$226,050	+2
Dodge Index (1977 = 100)	157	160	

intervention and interest-rate equalization are steps that will gradually ease the plight of U. S. manufacturers, but meanwhile, industry's conditioned reflexes—capital spending cuts and protectionism—stand in the way of the recovery of industrial construction.

Stores/warehouses

Because the demand for retail facilities is primarily a derivative of homebuilding, much of next year's contracting for stores, shopping centers, and warehouses is being determined in the housing market right now. The prospect for continued strong residential building (as long as mortgage rates remain at their current level) implies that the present volume of retail building (425 million to 475 million square feet) can stretch through 1986 before tailing off.

By the same token, housing activity serves as a limit, as well as a stimulus, to retail building. Housing starts, now in their third consecutive year at close to 1.75 million dwelling units, are heading for a fourth year of approximately the same rate of building in 1986. A similar steadiness can be seen in retail building, where volume remains solid at 475 million square feet, but isn't likely to go higher unless housing leads the way.

Because the current ratio of retail-to-residential-building square footage is only slightly higher than it was prior to ERTA, it can be concluded that accelerated depreciation has not been a major stimulus to store building (as it has been to offices). Even so, the proposed changes in tax regulations are likely to take some of the edge off this building market next year. A decline of about five per cent is a reasonable "discount" for the effect of tax reform on retail contracting, putting 1986 volume at an estimated 450 million square feet.

Offices

Will 1986 be the year when the office "bubble" bursts? Probably not. More likely, 1986 will be the beginning of a return to reality that could mean several years of reduced building ahead.

Evidence continues to pile up in support of the case for a major correction in the overextended office building market. Five years of building (1981 through 1985) at an average rate of 300 million square feet per year for a market that can digest—at best—250 million square feet annually has driven the vacancy rate up to three times its 1981 level. To sustain this volume of building, developers have shifted from Southwest to Northeast, from downtown to suburbia, from high-rise to low-rise. Rental offers for the accumulating vacant space look like distress sales, and many newer buildings are occupied by vacating older ones. Yet the boom goes on unabated: a near-record 310 million square feet of space is being added in 1985.

Obviously, it still pays to keep adding to the stock of office buildings which is already 15 per cent vacant. And it will continue to pay as long as the tax write-off

provided by 18-year depreciation fills the void left by uncollected rent on vacant space.

Tax reform could trigger an overdue adjustment of supply to demand. If tax reform reclaims some of the subsidy that ERTA made available, rents will have to rise, or building must be curtailed. And because rents are limited by the vast excess of empty space, the only short-run option is to reduce new construction until the vacancy rate falls enough to establish a new supply/demand equilibrium that is consistent with revised tax laws.

Although tax reform is still only a gleam in the President's eye, it is tentatively assumed that the passage (early in 1986) of a diluted version of the "Treasury II" reform package will bring the five-year office boom to an end. Any adjustment to tax reform has two elements: First, the need to reduce the rate of building from its current 300-plus million square feet per year to a rate that more closely matches the growth of the labor force and, second, the need to absorb the existing surplus.

Sustainable demand for new office space during the second half of the 1980s—taking into account the demographics of the labor force, its relocation, and the replacement of existing buildings—is estimated at an average of 250 million square feet per year (a five-year total of 1.25 billion square feet). It is also estimated that at least 200 million square feet of vacant space are presently available to meet part of this demand. Assuming that the forthcoming market correction will take place over roughly the same amount of time that was required to create the present imbalance (five years), these aggregates imply a net demand for new space of just over one billion square feet between 1986 and 1990—an average of only 200 million square feet per year.

Several scenarios can be developed from these numbers, ranging from crash to soft landing. (The "no change" option is available at no extra charge for those who refuse to take tax reform seriously.) A five-year adjustment—the soft landing—would take office building down to about 250 million in 1986, leaving the need for further reduction in later years.

Institutional buildings

Contracting for schools, health-care facilities, and other public buildings continues to reflect the financial condition of state and local governments—improved over what it was a few years ago, but still not up to the responsibilities being transferred to the states by the Federal government.

With more local funding becoming available, contracting for total institutional building—at just under 290 million square feet in 1985—has recovered by almost 15 per cent from its depressed 1982 volume. This improvement can be expected to continue in 1986, but at a slower pace as building activity aligns itself more closely with the demographic requirements of the second half of the decade.

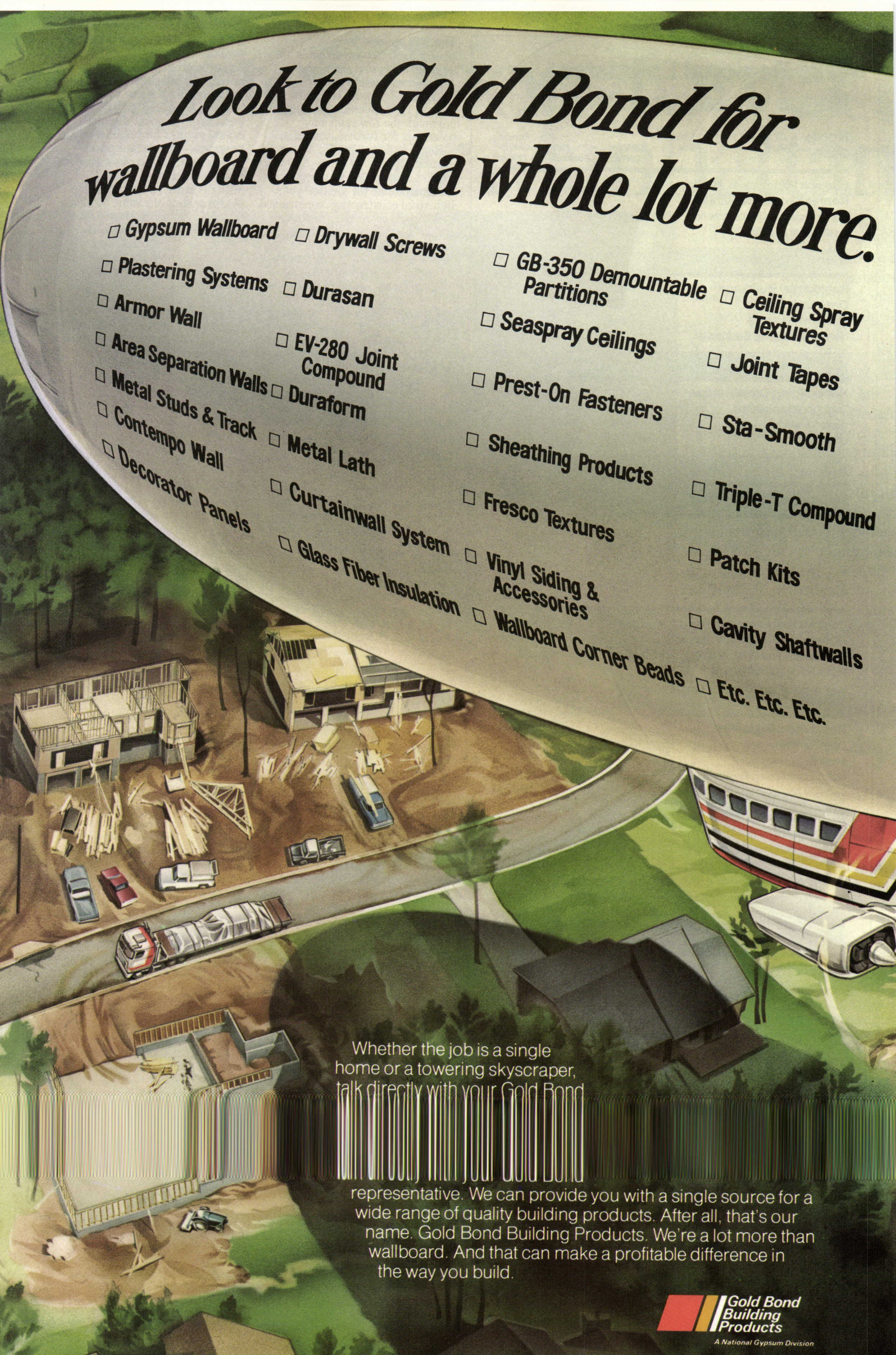
Continued

... constant dollars) have declined, while state and local government spending has increased, but the tradeoff hasn't been quite that tidy. On the Federal side of the ledger,

Architectural Record November 1985 37
... not exceed the 1985 amount (a 10 per cent holdback from the authorized 1986 level). Contract value (in current dollars)
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1986 Regional Estimates Dodge Construction Potentials

South	AL, AR, DE, DC, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV	1985 Pre- liminary	1986 Forecast	Percent Change 1986/85
Contract Value (millions of dollars)				
Nonresidential Buildings				
Commercial and Manufacturing		\$20,800	\$18,650	-10
Institutional and Other		9,950	10,350	+4
Total		\$30,750	\$29,000	-6
Residential Buildings				
One-Family Houses		\$30,850	\$33,825	+10
Multifamily Housing		11,700	11,250	-4
Nonhousekeeping Residential		2,875	2,800	-3
Total		\$45,425	\$47,875	+5
Nonbuilding Construction				
Transportation-related		\$ 8,500	\$ 8,400	-1
Water-related		4,750	4,825	+2
Utilities		700	750	+7
Total		\$13,950	\$13,975	-
Total Construction		\$90,125	\$90,850	+1

West	AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY	1985 Pre- liminary	1986 Forecast	Percent Change 1986/85
Contract Value (millions of dollars)				
Nonresidential Buildings				
Commercial and Manufacturing		\$12,825	\$11,825	-8
Institutional and Other		6,050	6,850	+13
Total		\$18,875	\$18,675	-1
Residential Buildings				
One-Family Houses		\$17,775	\$20,475	+15
Multifamily Housing		8,125	7,875	-3
Nonhousekeeping Residential		2,150	1,975	-8
Total		\$28,050	\$30,325	+8
Nonbuilding Construction				
Transportation-related		\$ 4,525	\$ 4,600	+2
Water-related		3,050	2,925	-4
Utilities		700	700	-
Total		\$ 8,275	\$ 8,225	-1
Total Construction		\$55,200	\$57,225	+4

of total transportation-related construction in 1986 is estimated at \$23.9 billion, unchanged from the 1985 amount.

Water-related construction

This group of public works construction categories includes everything concerning the nation's water resources: control, storage, transmission, treatment, and use. Water resource development has always been an almost exclusively Federal responsibility, while water supply is almost as much a local activity. Waste water treatment is an ambiguous mixture of Federal and local effort.

Each of these three aspects of water-related construction is reasonably predictable, although each will be determined separately. Spending by the Federal agencies, which contract for most of the nation's water resource development through the Corps of Engineers' Bureau of Reclamation, is likely to be held just where it has been, or perhaps reduced marginally in the spirit of deficit reduction. Contracting for water supply is largely a local option, usually geared to—but lagging—the volume of general building activity. With the building cycle now reaching its peak, water supply construction still has another year of expansion ahead.

EPA's construction-grants program is due to expire soon, and two options are available: to renew the Clean Water Act or to phase it out in favor of a revolving loan fund. Both Congress and the Administration incline toward phase-out, but differ on the length of time in which it should happen (Congress favoring a slower transition). Despite this difference, there seems to be little disagreement about 1986, when a modest further reduction of EPA construction grants is indicated.

The combined total of all water-related construction in 1986 is forecast at \$12.7 billion (in current dollars), little changed from this year's value.

All of these factors add up to a 1986 outlook of

a four per cent drop in volume
With domestic Federal spending being capped in fiscal year 1986, "controllable" budget items like public works construction will be restrained in order to offset unavoidable increases in the so-called "uncontrollables." Rising state and local government expenditures for public works will largely offset restraint at the Federal level, leaving next year's current dollar-contract value even with 1985's total of \$36.6 billion.

In constant (i.e., inflation adjusted) dollars, however, 1986 public works construction contracting will decline 4 per cent—the first setback since 1981.

Residential construction:

Whither went the housing cycle?
Two questions that are being asked about the housing market seem contradictory: Why aren't housing starts stronger than they are? Why are housing starts holding up as well as they are? If both questions can be meaningful at the same time,

it's a sign that this market is undergoing a transition.

The first question concerns the lack of response in 1985 to a significant decline of interest rates. Not long ago, falling mortgage rates would have triggered a surge of homebuilding. Suddenly, it appears that housing's hypersensitivity to credit conditions has worn off.

The second question concerns the recent departure of homebuilding from its familiar cyclical pattern. Since 1983, housing starts have settled into a remarkably steady groove at close to 1.75 million units per year. And there's a very good chance that this three-year stretch of strong housing activity will go to four in 1986.

Because the housing market was dominated by volatile interest rates and complex tax shelters during much of the first half of the '80s, the supply of shelter that was provided during that extraordinary era bore little relation to the demand for it. Some consequences: a carryover of pent-up demand for one-family housing from the extremely depressed early years of the 1980s when mortgage rates were prohibitively high; the accumulation of a modest surplus of multifamily housing due to the artificial stimulus provided since 1981 by ERTA. In 1985, the pent-up demand for singles is easing (which partially explains the unenthusiastic response to lower mortgage rates), but tax-sheltered apartment development continues to support the multifamily side of the market at an unrealistic volume.

During the second half of the decade, the forces responsible for the distortions of the early 1980s will be less influential. Mortgage rates are on a declining trend and are showing less volatility. Tax shelters will be losing much of their appeal, as the issue of tax reform is addressed in the coming months.

These are structural changes. They indicate that it is time to begin giving less weight to the variables which dominated the housing market during the first half of the decade. More consideration must now be given to the underlying determinants of the demand for shelter—demographics, affordability, regionality—as housing output reconnects with housing demand.

The rate of household formation, headship, age, and other dimensions of the demographics of the housing market offer a guide to what "should be" the appropriate supply of new shelter. Demographics (need) and housing starts (supply) rarely coincide on a year-to-year basis but, over longer periods, a failure to match demand with supply leads to a conspicuous surplus or shortage of housing, usually revealed by changes in the vacancy rate.

The housing demographics of the second half of the 1980s point to a "need" for approximately 10 million new shelter units (an average of two million per year). Shorn of its detail, this expression of the demand side of the housing market is derived in terms of primary (or net household formation),
Continued

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Computers: Evaluate your options

Following many articles in RECORD on advanced computer use, here, for the still-uninitiated, is the second part of a timely return to basics

By John C. Dill and Jon H. Pittman

Last month in RECORD, the authors talked about establishing goals. They urged you first to know your firm: establish who the hands-on people will be, the level of their support for computers, and what you want your system to do in general—graphics, including design and production; and/or information manipulation, such as word processing and accounting. They stressed the importance of your firm's organization and the type and location of the projects your firm does in influencing an appropriate systems choice.

Only after all this was known, did they feel that you were ready to get down to specific things the computer might do—such as quality control. Would computers help you produce better buildings? They said that, assuming a reasonable degree of capability, you would probably be able to produce better designs—that a system should allow you to work with better quality control, more accurate dimensions, and a more logical approach to the design process.

In this second and concluding part of their article, the authors tell you how to assure that your new system matches your goals.

Your system will likely change over time, just as your firm will likely change. Computer technology and the capabilities of your system will evolve. We may all have a vision of the ideal system to meet our needs. Unfortunately, in most cases, such a system has not yet been developed. (Or if it has, it is likely to be new and, as a result, too costly for your firm.)

While it may not be possible to achieve that ideal system today, it may be possible in time. It is certainly important to have a vision of what you want your capabilities to be in the future. This will allow you to make intelligent decisions about the computer you buy today—to make sure that any computer system you acquire will be capable of being upgraded to bring you closer to that vision.

As discussed last month, one way of looking at the choices for computer use in your firm is as a tree, with the main branches of graphics and word- and number-manipulation. The branch of the tree you choose will affect the kind of computer system you acquire. Of course, you may be interested in more than one branch. Some

systems will be capable of providing many branches.

If you opt for many branches, you will have to evaluate which are important to you now and which you are willing to defer. Build one step at a time. Develop a strategic plan and evaluate each piece of technology you might purchase against that plan. This will keep you on track toward your objectives.

You will need to measure what you wish you could have against not only what you can realistically afford but what you can learn all at once. If you know where you are going and try to reach that goal one step at a time, you will probably arrive sooner than expected.

And now we can get down to evaluating available computer systems for their capabilities. To evaluate a system, there is no substitute for actually working with it. See if it can do what you wish it to. Before you do that, though. . .

To get the most out of a system, you will need to know

what choices are available

These days, we are all inundated with advertising about computer products. The main task of making choices is not one of finding information but of sorting out what information is useful and what is not. Some good places to look for information are:

- **Publications.** Most architectural and engineering publications now carry advertisements for systems. There are also several publications available that are exclusively devoted to systems for architects. These publications usually have some means of requesting more information, such as reader service cards, as part of the ads.

Responding to these ads will result in anything from a brochure in the mail to a visit from a local sales representative. Collecting such material from publications is, at the least, a good way to survey the market for choices. It establishes an initial overview of your options.

- **Marketing materials.** The marketing materials that suppliers will send you in response to a request for information will give you some idea of what their products' capabilities are. Remember, though, that such materials are designed to cast the product in its best light. It is helpful to get marketing materials from several different suppliers and to compare them. Look for what they have in common as well as the difference between the products. Use the marketing materials to form an initial impression to test against the actual products. Read publications that list the specific characteristics of various systems for the most impartial view.

- **Conferences and trade shows.**

Many upcoming conferences for architects, such as the well-publicized AE Systems '86, BP '86, and Siggraph, now have demonstrations of systems. In addition, several conferences and trade shows target extensive CAD for architects. These conferences are helpful because many competing suppliers exhibit. This allows you to compare and contrast systems. You can always look at one system, then look at another, and return to the first to ask questions generated from looking at the second.

- **Supplier demonstrations.** If a supplier thinks you are a serious customer, he will be glad to demonstrate his product to you. This is your opportunity to make a serious evaluation of his product. You should ask the supplier to let you operate the system. If you are not the one who will be the principal user of the system, have someone who will be using it on a day-to-day basis come along with you.

Do some real work on the system that you want it to do when you buy it. See how easy or difficult the system is to learn and use. Don't be afraid to ask questions. It is your sales representative's job to make sure that you understand and are satisfied with their product. You will be making a substantial investment and you should be sure that you are getting what you want.

The four basic approaches to acquiring a system differ primarily in how the software is handled:

- Buy a computer system (hardware, software utility programs), and build (develop) the software.
- Buy a computer system and third-party software (software that is developed by someone other than your hardware supplier).
- Buy a developed system of both hardware and software.
- Buy or lease a graphics terminal and rent time and use of software from a time-sharing service bureau.

A good analogy to these options is that of acquiring a stereo system. The first approach is like buying the tape deck, turntable, and speakers, and building the amplifier. The result *may* be very good, but it will not be cheap; it takes a lot of dedicated, expensive talent to succeed with this approach.

The second approach is like buying mix-and-match components; you need some knowledge to select a system that will work, but you won't need extensive in-house expertise.

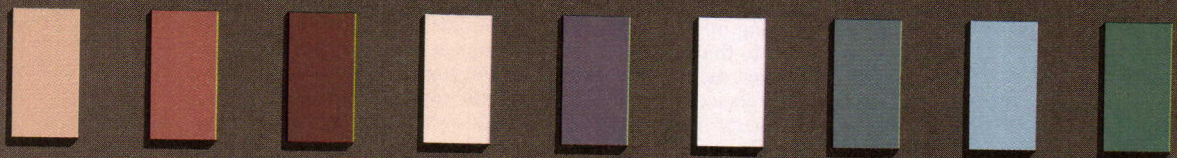
The third approach corresponds to buying a single unit containing all of the components; the impression the suppliers will give you is that you need only plug it in

Continued

Mr. Dill is a design systems manager with Microtel Pacific Research, Ltd., Vancouver, British Columbia.

Mr. Pittman is a vice president of the Computer Service Corporation, St. Louis, Missouri.

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"If a turnkey system will meet your needs and can be expanded along useful lines for you, that is the best choice"

and turn it on. In fact, it takes more than this to get the turnkey system to work properly; you may still need some programming resources.

The fourth approach is somewhat like listening to a friend's stereo over the phone. The sounds are there, but the result could be less than satisfactory.

Our view is that the more you can buy, the better. If a turnkey system will meet your needs and be capable of expanding along lines useful to your firm, that is the best choice. If you need more flexibility, the next choice would be to buy third-party "components" and stitch them together with in-house talent.

One of the best ways of narrowing the choices—after some initial self-education—is to ask the supplier for a list of firms using the system you are considering. Then *follow up*. Call them and visit their installation. Determine first, of course, if their use is similar to yours. Ask what their experience has been, what problems they have had. Remember, problems occur with all systems. Ask how they solved the problems. Ask if they would make the same choice or choices again.

One of the best ways to match your goals with a system's capabilities is a test drive You've educated yourself about what kinds of computers and capabilities are available, and you've reviewed your firm's activities and prepared a list of tasks you'd like your computer to perform. Now, how do you match those two?

The single most important aspect of this step is the *bench mark*, a test problem (or set of problems) to try on each of several systems. Just as you wouldn't buy a new car without test driving, you shouldn't buy a system without "test driving." Some points to remember in this process are:

- Make sure that you develop a *functional specification*, a list of those particular things you want the test systems to do related to your goals. It might help to divide this into two categories: necessary, and nice (i.e., what the system must do and what it would be nice if the system did).
- Narrow the number of systems to, say, two or three before establishing your bench marks, since each bench mark will take some time and effort to test. The larger the system the more extensive the testing should be.
- Have the people who will be using the system design the bench mark(s). After all, it is they who will ultimately determine the relative success of the system.
- *Attend* the bench mark exercise. Don't send a tape and list of

instructions to the supplier; you wouldn't send someone else out to test drive a car, would you? You would be surprised at the number of potential buyers who don't attend a bench mark exercise. "After all, travel costs a lot, and we can't afford the time just now. . . ."

- Make sure the bench mark includes a complete, typical (set of) task(s) that you have determined to be appropriate to your firm.
- If your supplier says you can't test it now, assume it is unavailable.

When making your final evaluation, consider, in addition to how well the system performed:

- The existence of other systems in the area. (It's nice to be able to call up and say "did you ever run into this one. . . .")
- Maintenance of hardware and software. If service people must come in from some other city, how long does it take and how much does it cost? Will the supplier guarantee a response time for a service call? Do they offer a choice of service-contract or time-and-materials billing? If the latter, you will be at a lower priority for service. Is this OK?
- Training programs offered by the supplier.

Finally, once you've tested the top systems and made your choice, and you're ready to write a purchase order, don't forget an acceptance test. The smaller systems that run on a PC or equivalent won't let you do this to the level that you should, but even in this case, try to get a written statement that says, in effect, if the system does not do what the supplier says it will, you can return it before paying for it, or at least get your money back. If you're buying one of the larger systems, you can exert considerable leverage to have an acceptance test run at *your* installation *before* paying for the system.

What characteristics should you look for in a system to minimize the obsolescence factor?

In general, the systems with the best database support and communications support are the ones that are going to last. These are the two most fundamental technical aspects of any system, and are important issues for even the smaller PC or PC-clone systems.

You *must* have good database support for a system to be useful, especially in production design or drafting. Without it, your system is no more than a toy. You must be able to easily store, retrieve, modify, edit, and archive the data that you derive from your designs. And you will want to manipulate it easily for future designs—to combine previous efforts and sort out the parts that will be useful.

All this should be quick and natural, if it is to be of real benefit.

The importance of communications seems to increase with the size of your system—though it can be crucial for even the small system. Can you or do you need to transmit your designs to a larger system when, for instance, you need a special analysis (e.g., a finite element analysis)? Can you transmit your CAD design to the system you use for word processing? (Now that combination is called document preparation or technical publications, and is a whole area of specialized graphics.)

We are seeing a steady decrease in the cost of entry level systems (and, correspondingly, an increase in the power of systems at constant cost). "Should I wait," you might ask, "for the next system?" The answer is emphatically *no*.

Examine your needs, and the list of equipment available *now* and, if there is a match, get the system. Though the "if you can buy it, it's obsolete" phrase is true, the applicable rule here is more like buying a home: the sooner you're in the game, the better. You will be gaining experience and be better able to make use of further technical advances.

If you have begun to look at computer aided design systems for your office, you will undoubtedly have come across single-user workstations (see *Computers: The single-user workstation*, RECORD, August 1983, pages 27 through 31). Within this category, you can have a large system with several terminals (a time-sharing system, albeit a small one), or one of several workstations, each supporting a single user. They may be connected with a high speed local area net. For the reasons outlined in our earlier article, we favor this configuration.

Areas of technology to be aware of include:

- **Disk storage.** The relatively new hard disks allow an increasing amount of economical storage. We would suggest that any system of interest must have, or allow the addition of, one or two of these disk drives at 20 to 50 MB each. *Don't* forget to get a cartridge tape unit for backup of these disks.
- **Memory.** The days of low memory capacity are over. Plus, with ever larger software packages, the notion of *virtual memory* becomes important. With this approach, the system lets a program make use of more memory than may be physically present. This is done with disk memory. We feel that all but the smallest systems should have an operating component that supports virtual memory.
- **Expert systems.** These so-called knowledge-based systems make use of sets of rules developed by an

expert in a given field to solve problems or answer questions in that field. While these systems will be of use to architects, their use now is a little premature.

Once you have your system installed, some unexpected issues may surface. For instance:

It may be difficult to get a corporate structure to change enough to make use of the time savings potential. For example, one firm, accustomed to hand drafting and design, had many levels of checks and review which became redundant using CAD.

The compartmentalized organization of many larger firms is anathema to CAD which cuts across divisions and departments.

Program documentation and file management can be a problem, if not carefully done. Often minor changes are made to a program without documenting those changes. Later, after the employee making the changes has left the firm, a problem arises that directly or indirectly involves them. Without careful documentation, this problem can be time consuming to solve.

We have discussed approaches to acquiring a computer system for your practice. To summarize the approaches, you should:

- Understand your firm and how it works.
- Understand what you want to do with computers.
- Understand what choices are available to you in computer systems.
- Try to match your needs to the available choices.
- Try to make your choice with an eye to the future evolution of computer technology.

Of course, there is no foolproof methodology to ensure that you will make the correct choice. We believe that following the method we described here will *help* you to choose a system that best fits your needs.

There is no question that understanding both computer technology and what your firm wishes to do with computers is a valuable aid to decision making. The better you understand your needs, the better able you will be to make a decision that could radically transform the way you practice architecture.

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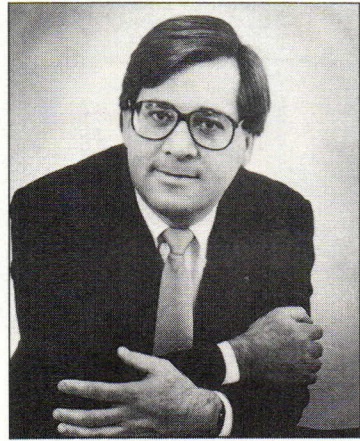
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Architectural education: Can schools span the gap to practice?

By Ron Filson



One of the most interesting debates current in the profession of architecture concerns the relationship between architectural education and professional practice. It is not simply the question of the standard "old saws" being recited over and over again. We are all aware of these positions. One, that architectural education should infuse the necessary professional, practical, and technical skills and abilities in students for them to productively join architectural practice at entry level positions (principally executing design, production, and managerial tasks organized by others). Or, on the other hand, that architectural education should be a truly liberal education in the traditional sense—and that "education for education's sake," while addressing professional issues, is the most productive preparation of young professionals in the long run. Of course both these positions have validity, however tiresome the proponents of either extreme may seem to each other. A broader discussion, I think, has the hint of a direction that may lead to a wider field encompassing both education and practice.

How did the idea of professionalism develop?

We must, first of all, look at the history and role of professional education in Western society—principally in the United States—in order to understand where we are. We should begin with the growth of the Industrial Age, and the subsequent rising concern for

Ron Filson, AIA, is professor and dean of the School of Architecture, Tulane University. He was previously assistant professor and director of the Urban Innovations Group at UCLA. Filson is a graduate of the Yale University School of Architecture and a fellow of the American Academy in Rome. He is also principal of Ron Filson and Associates, architects, and of the Architectural Coalition Research and Practice Arm of the School of Architecture, Tulane.

professionalism in general.

The major point is a simple one, I believe: that industrialization—with the development and spread of empirical knowledge, and the increasing complexity of social and cultural patterns—demanded the increased specialization of interests and capabilities (in more strictly defined areas of knowledge) than had been the case in the past. This is especially important when we understand that, for a good part of the 15th through the 18th centuries, a basic grounding in architectural history was considered one aspect of a classical education, and part of the formation of a "learned" gentleman. However, a more complex society, and the rising industrialization, began to demand that the serious practice of architecture become *more* than a gentlemanly, scholarly pursuit. It needed to be grounded in—or at least related to—the growth of scientific knowledge, especially in the complex relationship between architecture and engineering.

How does one define a profession?

In the late 19th and early 20th centuries, it became more and more necessary to distinguish the professions from other occupations. A physician, Dr. Abraham Flexnor, who was one of the first to write specifically about medical education, drew up in 1915 what have become the guidelines for discerning a profession versus an occupation. We shall use these in our discussions as the basic definition of all professions. They are: first, that a profession is intellectual, and requires a professional to exercise judgment and to deal with a substantial body of knowledge. It also requires a life-long commitment to learning, and creates a long and often arduous path towards becoming a professional. This has the indirect result of weeding out those less serious about entering a particular profession, because of the length and difficulty of the process.

Second, the profession must be practical—its knowledge needs to be applied to reality and real concerns.

Third, a profession has techniques and/or skills that can be defined, taught, and that serve as mechanisms for transferring and utilizing the knowledge of any particular profession. In a true profession, however, these techniques are secondary to the body of knowledge underlying their proper application.

Fourth, a profession must be organized into associations and/or groups of practitioners.

Flexnor added that a profession must be guided by altruism. This

Dean Filson has headed research and practice "arms" at both Tulane and UCLA. Out of these experiences—and his own practice and teaching—he explores here whether a post-first-professional-degree, "clinical" program can better lead to early competence in practice

may sound strange, but it hints at the most basic of distinctions between a profession and an occupation. Those within a profession must ascribe to the higher goal of the betterment of mankind—and not only to their own individual self-improvement, or the acquisition of either material or otherwise beneficial goals.

Specialization was an inevitable outcome

One interesting aspect of the rise of professionalism was that this definition created its own spiraling demand and that, as a profession defined for itself higher and stricter goals and purposes, society demanded increased levels of performance. The profession responded in turn by providing more people within these stricter guidelines. Thus we have arrived at levels of specialization within some professions, where the body of applicable knowledge is so specific and detailed, that even among those sharing the same general professional goals, the work is difficult to penetrate—no matter how useful it is to the larger professional scene.

Actual interest for professionalism in the United States came from a coupling of these concerns and goals with an increasingly difficult reality—which brought skepticism and scorn upon many so-called members of professional groups who did not adhere to the stricter criteria and higher motivation necessary for professional advancement.

Medicine, law, dentistry, veterinary medicine, and architecture—as diverse a group as they might seem—all developed, in the mid-19th century, specific professional associations with very strict and reasonably well-enforced codes of ethics and operations. The creation of the American Institute of Architects dates to 1847, when it was felt by many practitioners—especially those who received some education and almost exclusively in France—that there were those calling themselves architects and practicing architecture who were in fact builders, who operated for their sole benefit, and did not sense or ascribe to the higher goals of the profession.

Is architecture like the other professions?

The two principal professions that we can compare to architecture, I believe, are medicine and law. Medicine is perhaps the clearest example of a profession that has rigidly defined and related its parameters, its skills, its body of knowledge to the development of new knowledge, and its application to practice.

Much of the driving force behind the professionalism of occupations and knowledge in the United States obviously has to do with "territory" and the enumeration of what it is that a profession does, who may do it, and with what resultant economic and social-position factors. Again medicine clearly reflects this drive, and in order to comprehensively develop the profession, clinical education in medicine was formalized in the early part of the 20th century. Before that, and much similar to the profession of architecture, skills and other necessary knowledge of the practice of medicine were acquired through apprenticeship. The strive towards professionalism saw that this system needed to be institutionalized, and that a process of balancing traditional academic learning with professional development needed to be part of a common system. That system today is highly regimented, with the result that medical education includes both academic and professional components in its curriculum. Medical students move through the system from academic to professional, back again, and finally are prepared not to just execute mechanical skills (hopefully), but to practice medicine with a thorough understanding of the body of knowledge underlying the field, the manner in which new knowledge is developed, and the relationship of that body of knowledge to practice.

The legal profession is a little less crystalized, in my understanding, but it also offers an interesting premise for us to examine. From a brief review of the literature, I sense that education in the law is very similar to the way architectural education developed in the mid-19th century in the United States. Prior to that time, and in many later situations, preparation for the practice of law was based upon apprenticeship. A dual system of apprenticeship and academic training persisted, as it did in architecture, into the early 20th century. Since that time formal legal education has had to become highly organized and the predominant, if not the only, means of preparation for a career in the law.

This comparative analysis of the three professions is not without its faults, however. The kinds of skills necessary for the practice of medicine, the practice of architecture, and the practice of law are highly varied and radically different. Preparation for a legal career is, it seems, principally a preparation of a thought process—an understanding of a precedent relationship between type and form

Continued

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of the law (this was especially interesting to look into in Louisiana, where Civil Law based upon Napoleonic Code is still practiced)—and a development of necessary rigor in the preparation of arguments, researching legal issues, and bringing precedent and opinions together into a convincing whole. The professional skills required in law seem to be principally ones of organization of information, its manipulation, and use. Obvious advances in information and communications technology have influenced these patterns of education, but these skills, it seems, are not as refined, mechanical, and/or difficult as the technical and professional skills required in medicine, engineering, and architecture. I am sure that our colleagues in the legal profession would take issue with this.

What these professions have in common, however, is a structure of learning by doing, of knowledge and skills linked to their execution, and a body of knowledge inherent and clearly (to varying degrees) understood and shared by those participating in the profession.

In the case of medicine and law, the relationship of the body of knowledge underlying the profession, and the role of education in the development of new knowledge, is more clearly defined and understood than it is in architecture. This leads us to our current discussion.

How has architectural education developed?

As most of those active in the profession know, formal architectural education in the United States dates to the 1860s and 1870s at MIT, which was the first school of architecture offering a specific curriculum and degree in architecture—with the presumption that those completing this field of study were prepared to enter the profession of architecture.

Architectural education continued to parallel various forms of apprenticeship through the early part of the 20th century. The advent and implementation of licensing procedures in most states more rigidly defined the relationship between education, apprenticeship, and professional practice by establishing certain requirements—other than experience in the field or a degree—as necessary for the practice of architecture.

Looking back at the evolution of architectural education and its relationship to the profession, one might assume that the perceived current gap between practice and education is the result of new theoretical concerns that had evolved in the educational system, and the pressures and necessities of

practice. It seems that without an understanding of a full body of knowledge (read architectural theory) underlying the profession, and a system for the development and installation of *new* knowledge into the profession, that the gap between education and practice can only widen.

A major area of interest and concern current within architectural education is the emphasis on architectural theory and, secondarily, research. This is certainly attributable to the fact that—as the number of schools of architecture have increased across the country, and as the schools find themselves organized principally as departments, colleges, or schools within other university structures—pressures to conform to other academic models and general academic structures have influenced architectural education. It has been the expectation within our society that the principal role of university education, as opposed to vocational and/or para-professional training, is the search for *new* knowledge, and that architectural education should respond in ways fitting its situation. Schools of architecture now are attempting to define this relationship of knowledge to practice—and have been, I think, for roughly the last 30 years. Now there seems to be a clearer set of expectations. Among the dividing lines between younger scholars in the schools and older faculty members are the *academic* expectations laid upon younger professors of architecture. It had been assumed for many years that architectural educators were really practitioners with an interest in education. The commitment was to the transfer of ideas and attitudes deemed as appropriate and necessary for the practice of architecture.

Starting probably in the 1950s and 1960s, architectural educators began to be more concerned with underlying ideas, the rationalization of the design process, investigations into design methodologies, research activities (mostly technical), and the development of sets of attitudes and ideas that reflected broader cultural concerns than those traditionally addressed.

How wide is the gap in education and practice?

We are at a point, I believe, where the distance between architectural education and the practice of architecture is heightened. Educators and practitioners talk about it. A few see the gap as beneficial; others see it as leading to the decline of the profession. It seems to me time to address not only the narrow concerns of architectural education—all too

often expressed with such a lavish amount of freedom and independence, with no testing mechanisms or framework for evaluation, and no attention to the stated needs and disappointments of practitioners with the “failure” of the schools to produce skilled graduates who are immediately useful, productive, and profitable. Under the banner of the profession of architecture, we must look at it as a whole.

We recognize that education must combine traditional academic learning with a professional orientation. These two concerns are not at all incompatible, but do need ideological and organizational frameworks to allow them to coexist and enhance each other.

I find it hard to separate and distinguish formal education from professional experience—having done both concurrently for a number of years. I have had the opportunity to be involved in architectural education from a number of different vantage points: first as director of one of the very few functioning and professional research and practice arms of a school of architecture, the Urban Innovations Group at UCLA; and more currently, as dean of the School of Architecture at Tulane University, and heavily involved in our own research and practice arm, the Architectural Coalition. I believe that the establishment of such programs are critical steps in developing a comprehensive understanding for students preparing for the profession of architecture and, further, in developing mechanisms for bringing the opportunities and constraints of current architectural practice into the educational arena.

I believe that this has potential benefits for both architectural education and practice, but more importantly, for the profession of architecture, as a comprehensive set of educational and professional concerns with a burgeoning body of knowledge.

What directions should reform take?

We are at a point, however, where simply recognizing the problems inherent in the profession of architecture is not enough. There is, I believe, a growing frustration with the enumeration of ills. There have been enough declarations and partitioning of blame. Cries for reform seem to fall into two camps: the first is that, “Well, we should do more of what we think is ideal and right for the profession; and if we convince the consuming public that architecture is valuable, the profession will once again enjoy its proper status and reap its just financial rewards.” Or that “the

profession is hopelessly out of touch with the realities of the late 20th century—the social, cultural, and political systems operating in our times—and if it does not rationalize itself and adapt itself to mass consumerism trends within society, we will be considered hopelessly out-of-date, out of touch with reality, and no longer necessary—let alone desirable.”

I believe that efforts at comprehensive reform should address the nature of the profession itself. They should investigate the necessity of accommodating—within the educational and practice components of the profession—a functioning, understandable, and buildable body of knowledge that could both enhance and become part of the workings of the profession. The bridge between education and practice would then be strengthened.

The major attraction of the profession of architecture, at this time, is that it is really the last romantic outpost of creative and professional activity. We all want to guard and maintain intellectual and creative freedom—and it is ironic that such an important commodity, whose minimal manifestations in certain areas of cultural endeavor are rewarded with fantastic amounts of money and of prestige, is still relatively undervalued in the profession of architecture.

My own concern is—from the viewpoint of, principally, an architectural administrator and educator, but also of an architect—that the attitudes regarding the profession relate the role of the architect, and the significance of professionalism in our society, to the principal concern of the *education* of young professionals. I believe that to this end, and not simply through vocational training, the establishment of a viable research and practice component of architectural education is crucial—along with interim programs like the Intern Development Program and other steps being taken by the profession to bridge the gap between education and practice.

Educational components like these are the most important vehicles, in my mind, to extending the broadest intellectual, ideological, and theoretical concerns of education into a functioning professional context. If we can prepare students to see professional opportunity and the “doing” of architecture as a whole act—which requires of them not only the concerns normally associated with education, but the techniques, managerial and professional, necessary to implement them as a single area of effort—it will be harder for the two components of

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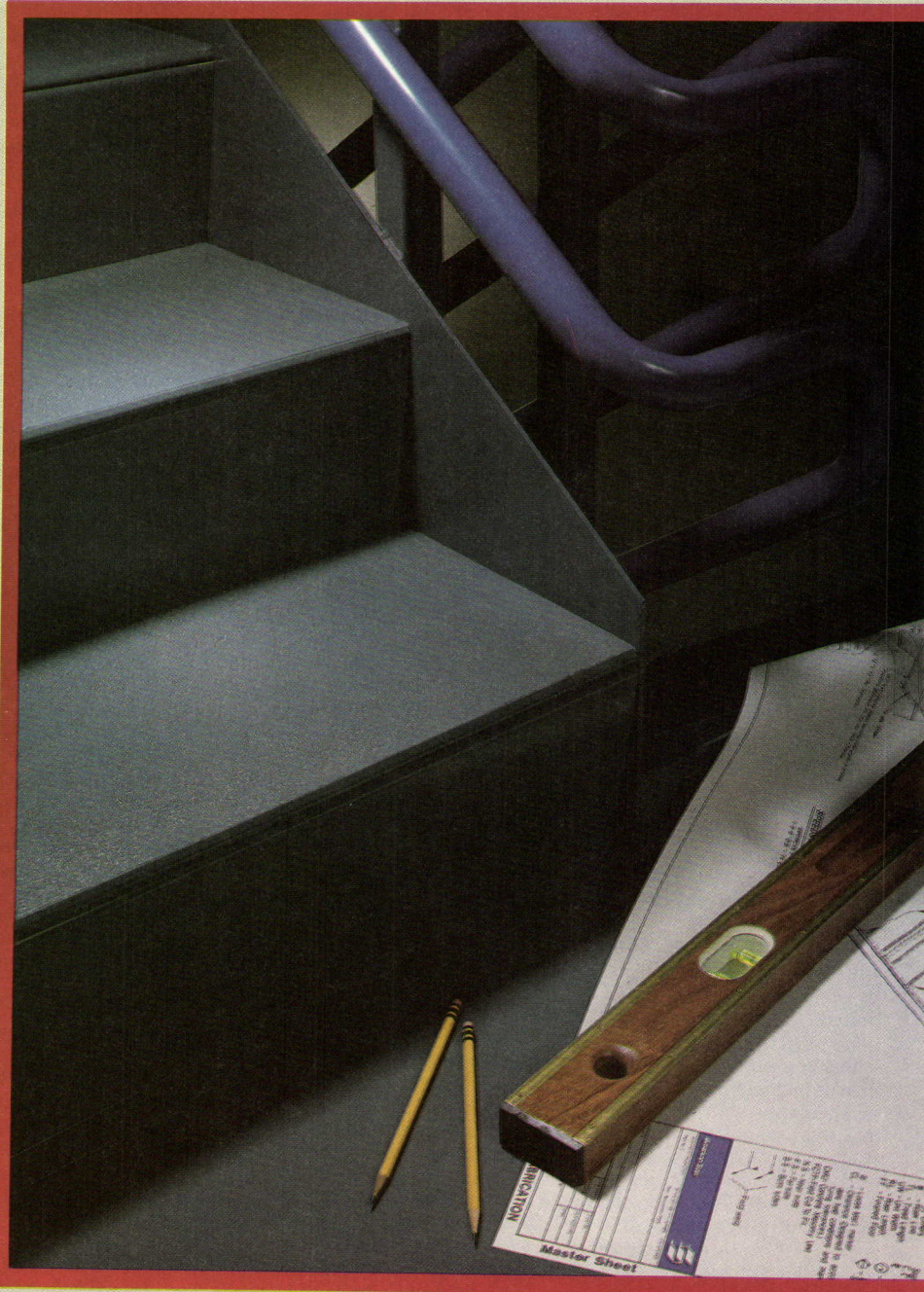
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Architectural education continued
architectural education and practice to remain separated. We would be admittedly fighting an educational, professional, and societal trend that is post-industrial and almost a century in age—but the necessity of doing so is clear. If we want the physical manifestations of our culture to be truly significant, we must find meaningful and comprehensive methods for producing them. Fragmentation is brought about by specialization, isolation of education from practice, and the perceived disregard for some of the basic values of the profession. These are very strong forces that cannot be dealt with successfully from the isolated positions of a practitioner or an educator. True professionals are needed.

A post-grad "clinical" program is one answer

The two experiences that I have had with clinical education have engendered a proposal that I am developing for expanded professional education. The reasoning behind this proposal is that the pressures on the profession, and subsequently on architectural education, to balance its broad cultural concerns—with its more specific professional and technical concerns and the subsequent schisms drawn between education and the profession—demand more of architectural education rather than less. I believe that the establishment of post-first-professional-degree, clinical educational programs leading to certification (perhaps even registration) improve and expand professional directions for education, and focus and improve levels of expertise and performance within the profession itself. A number of clinical education centers similar to "teaching hospitals" could be established around the country at schools interested in such activities, with a three-year curriculum involved specifically in professional development. This would parallel the internship period and requirements, and include such additional professional concerns as all ethical, legal, and others, dealt with in a professional but educationally-oriented environment. As has been established with the two research and practice arms with which I am familiar, actual architectural research and planning projects would be undertaken for a variety of clients, with the participants engaged in very thorough and introspective professional activities.

It is hoped that these programs would be led by many leading practitioners with an interest and involvement in architectural education. It is interesting to note that this is very close to the current reality, where many of the country's most interesting and active professionals involved in education often serve with their professional firms as, essentially, graduate schools for advanced design and professional preparation. The advantages of organizing these activities into institutional frameworks would be many. First, for many educators/practitioners, office

management systems, etc., could be streamlined on a larger scale, especially if these practices were essentially collective of a significant faculty. Institutional support would allow access to many emerging technologies, etc., unavailable to many practitioners. Perhaps the greatest benefit would be the stimulation and integration of research activities to address very specific environmental and architectural problems—such as housing in the United States. This obviously would require support, but more enlightened housing policies could, with a small investment, encourage the provision of high-quality housing—with links established to research efforts currently under way, and planned for the future, in an effort to improve the quality of housing overall. This would address a particularly shameful national

problem, and allow the development of a knowledge and research base in the profession that could be expanded to many other areas of concern.

Would clinical centers add undue competition?

The ever-nagging issue of competition with professional firms needs to be addressed head-on in any situation like this. My own experience is, for the most part, that professionals looking at clinical education understand that any expansion of the validity, credibility, knowledge, and comprehension of architecture in our society is ultimately good for the profession itself. The level of competition that would be created by research and practice centers, such as those proposed, would be small or outside existing market areas—and would, hopefully, in the increased

awareness and expansion of architectural concerns, more than compensate for any direct competition. Perhaps more importantly, participants going through structured programs such as this would be true professionals at the conclusion of this three-year post-professional-degree curriculum. They would move into the profession as productive, valuable individuals demanding and receiving adequate and actually professional compensation, rather than compounding the problem of sub-professional entry-level positions most commonly available to those who hold the first professional degree. The lasting benefit, I think, would be to truly raise architecture on a par with other professions in our society and give it a stronger internal base on which to grow.

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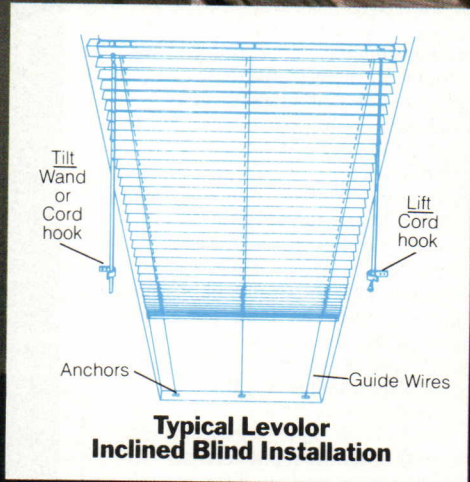
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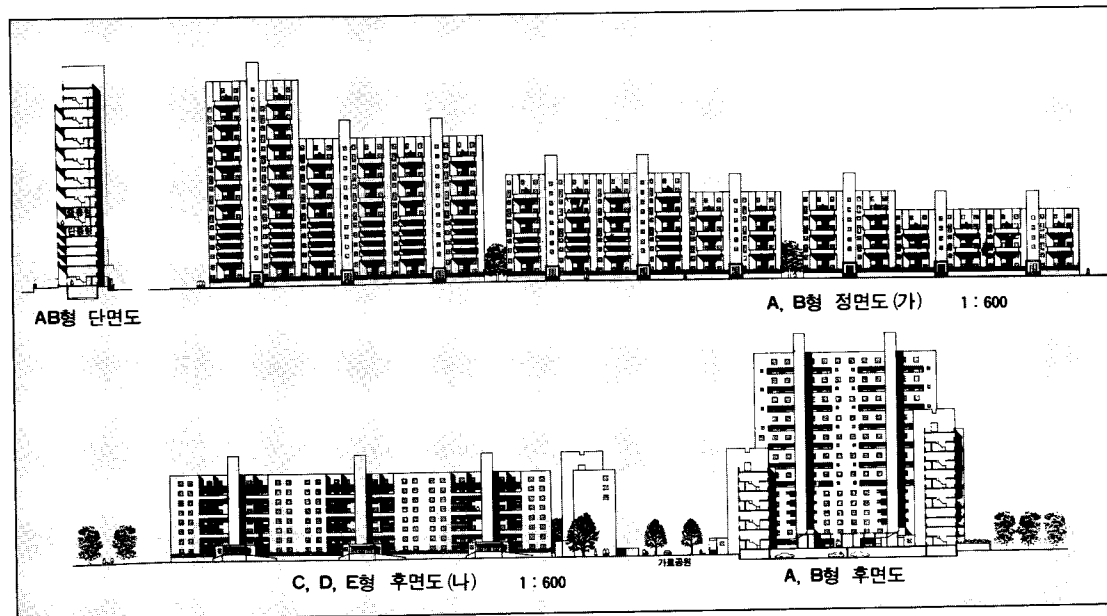
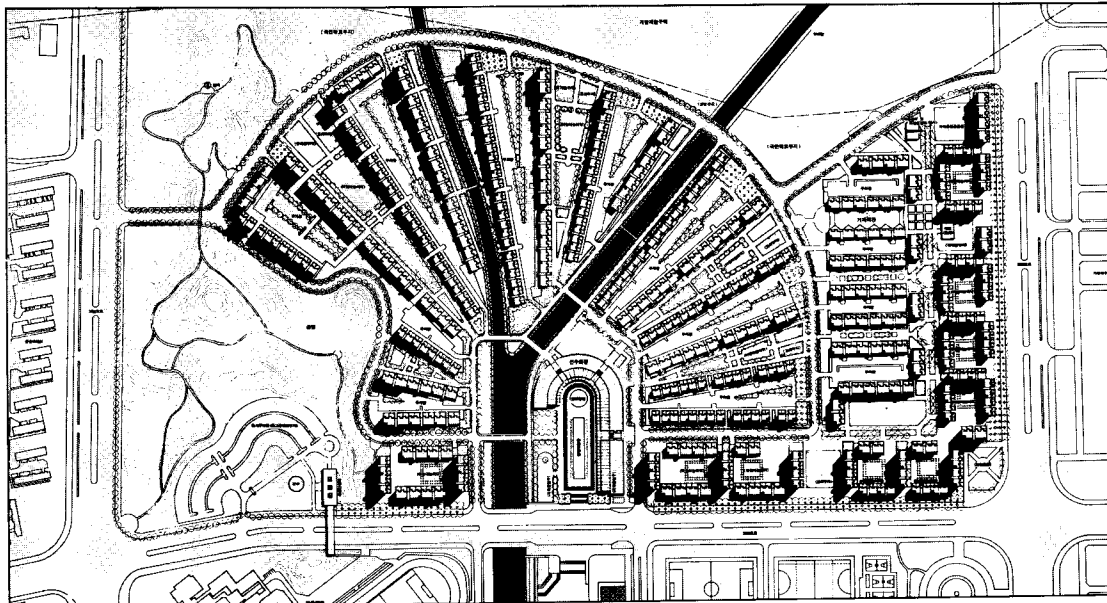
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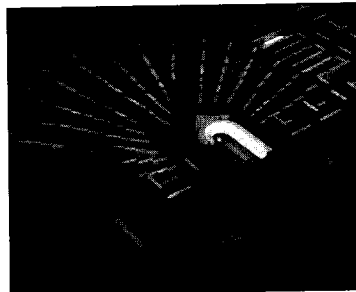
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Boston firm harvests an Olympian architectural plum

Design news



Every young architect dreams of the really big international commission—a world's fair pavilion, perhaps, or a major museum—that might catapult a modest local practice into global prominence. That dream has become a reality for Kyu-Sung Woo and John G. Williams, whose small Boston-area firm was recently selected to design the athletes' and reporters' village for the 1988 Olympic Games in Seoul, South Korea. Working in association with the Korean firm of Ilkun Architects, Woo & Williams prevailed over 38 rivals in a government-sponsored competition for the enormous building complex, which comprises a total of 5,700 dwelling units that will house 13,000 athletes and officials, 7,000 journalists, and 2,000 service workers. The village is nestled into the hills surrounding Seoul and is a short walk from the Olympic sports



complex, which is currently under construction. The athletes' portion of the over-all project (center in plan) is arranged in a fan shape focusing on a curving arcaded structure that encompasses a series of dining and recreational facilities. According to the architects, the radial organization helps resolve the odd geometry of a Y-shaped water course that flows through the middle of the site. The reporters'

section of the village, by contrast, follows the orthogonal grid of streets in the surrounding area. The outer edge of the athletes' village is delineated by 24-story towers, with other buildings decreasing in height as one moves toward the center (elevations above). In addition to permitting views of the mountains to the south, this plan is meant to recall the introverted organization of traditional Korean villages, which frequently focus on a central plaza. The individual units likewise look inward, in this case onto private balconies that cleverly satisfy the requirement that every Korean residence must have at least one southern exposure. The apartments, mainly three- and four-bedroom duplexes, will be sold by public auction for occupancy after the games are finished, and the glass-vaulted public building will be converted into a shopping arcade.

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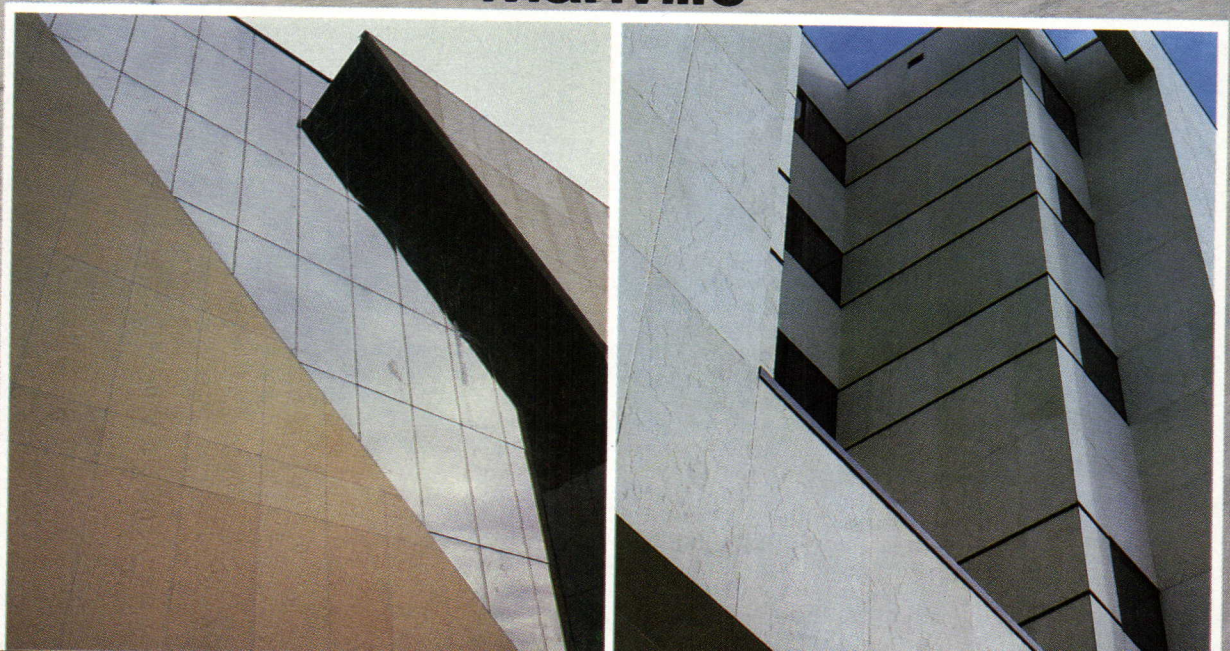
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News briefs

Chicago station to become mixed-use center

Herbert Bayer, one of the last surviving masters of the original Bauhaus, died at his home near Santa Barbara, California, on September 30. He was 85. The Austrian-born Bayer taught typography and graphic design at the Bauhaus until 1928, when he left Dessau to set up his own studio in Berlin. In 1938 Nazi pressure forced Bayer to emigrate to the United States. In this country he co-founded the International Design Conference at Aspen, and he served from 1966 until his death as art and design consultant for the Atlantic Richfield Company, where he was responsible for architecture, graphics, art acquisition, and office design.

Nine architectural firms from Great Britain and Canada have been selected to continue in a competition that seeks designs for a mixed-use office and retail structure, to be located at the southeast corner of London's Trafalgar Square. Although plans to redevelop the triangular parcel of land date back to the early 1970s, the Royal Fine Arts Commission has consistently opposed demolition of the existing buildings on the site. Those objections were overruled by Britain's environment secretary in 1983, thus paving the way for the competition. A winning design will be announced early in 1986.

The controversy over the Whitney Museum's plans to erect a major addition designed by Michael Graves refuses to go away. Over 600 people, among them such architectural notables as Edward Larrabee Barnes and I. M. Pei, have signed a petition urging the museum to abandon its plans for the Graves addition, which they say would destroy the integrity of the Whitney's present building, designed by Marcel Breuer in 1966. The proposal has sparked something of an esthetic war among some of New York's most prominent architects: while Barnes and Pei have made public their opposition to Graves's scheme, others, including Philip Johnson and Ulrich Franzen, have spoken out in favor of the design.

Meanwhile, the Metropolitan Museum of Art has announced its intention to build a new \$35-million wing to house galleries for its collection of European sculpture and decorative arts. Designed by Kevin Roche John Dinkeloo and Associates, the wing is the last unbuilt element of the master plan that the museum developed in 1970. Like its counterpart at the Whitney, the addition must meet with the approval of the city's Landmarks Preservation Commission.



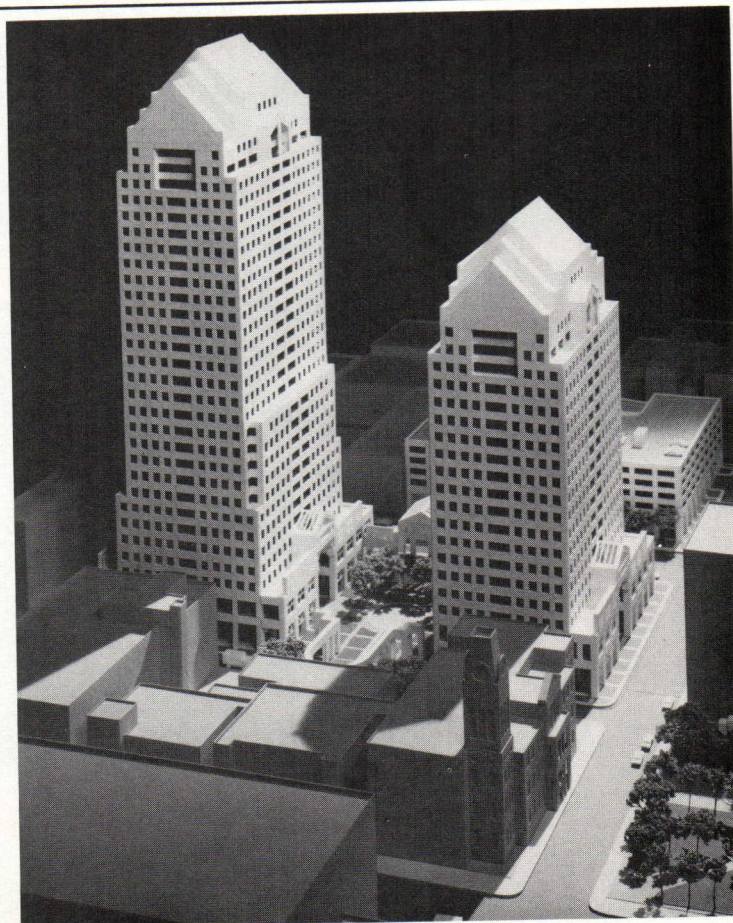
Designed in 1885, Dearborn Station in Chicago is one of the few works in the Midwest by Cyrus Eidlitz, the New York architect who is perhaps best known for his design of the original Times Tower in Manhattan. Although the general postwar deterioration of American passenger train service led to the station's abandonment in 1971, the sturdy Romanesque Revival building has remained a landmark

in Chicago's South Loop, the glory of its 138-foot-tall brick clock tower undiminished by the passage of time. Following four decades of decline, the neighborhood surrounding the station is in the midst of a modest revival, reflected in a rehabilitation and expansion proposal that will transform the National Register-listed depot into a 100,000-square-foot office and retail complex. In addition to repairing

the station's masonry exteriors and reconstructing existing interiors, plans drawn up by architects Kaplan/McLaughlin/Diaz call for the erection of a new two-level retail arcade and rotunda at the rear of the station, designed as glass-enclosed sheds that are meant to evoke images of 19th-century railroading. Associated architects on the project are Hasbrouck Hunderman.

The origins of inspiration

Now that the Humana Building has become a permanent fixture on the Louisville skyline, will other architects working in the Kentucky metropolis take their cue from Michael Graves's brand of post-Modernist classicism, or will they revert back to the flat-topped slabs that characterize the rest of downtown? Although a single project does not make a trend, a proposed office complex not far from Humana indicates that at least one firm—3D/International—has utilized peaked roofs, triangular pediments, and a three-story podium as conscious references both to Louisville's exuberant 19th-century City Hall across the street and to Graves's historicist icon around the corner. Or as the architects put it, perhaps a bit ambiguously, "the design features engage not only the viewer but also the rhetoric of nearby buildings."



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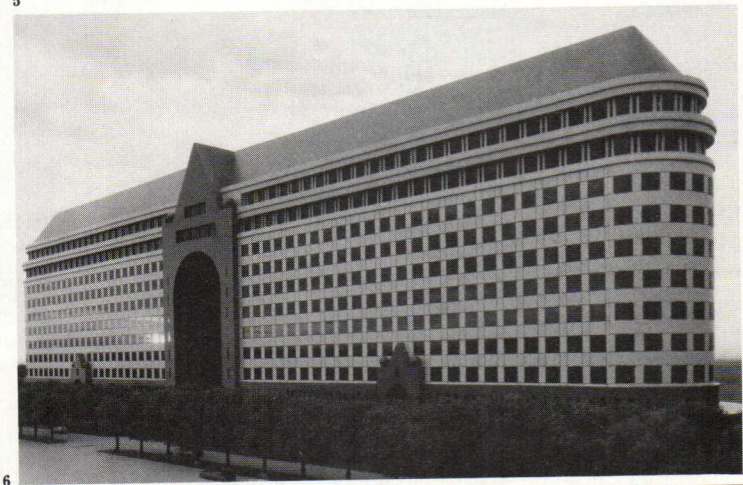
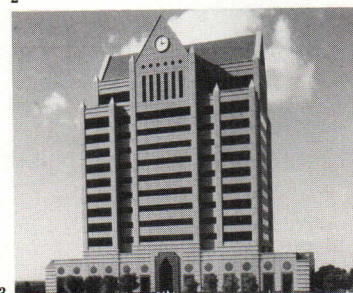
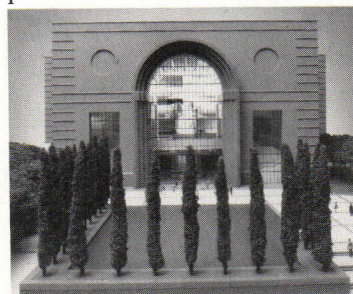
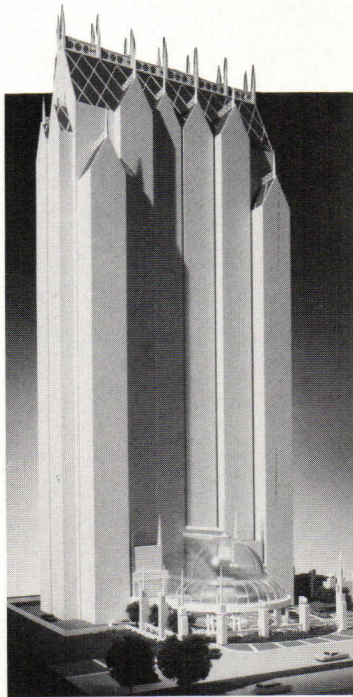
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One firm's revival: Six current projects by Morris/Aubry Architects

1. Windsor Court Hotel, Chicago
2. Gus S. Wortham Theater Centre, Houston, Texas
3. 5950 Sherry Lane, Dallas
4. Corpus Christi Central

5. One Peachtree Centre, Austin, Texas
6. Providence Towers, Farmers Branch, Texas

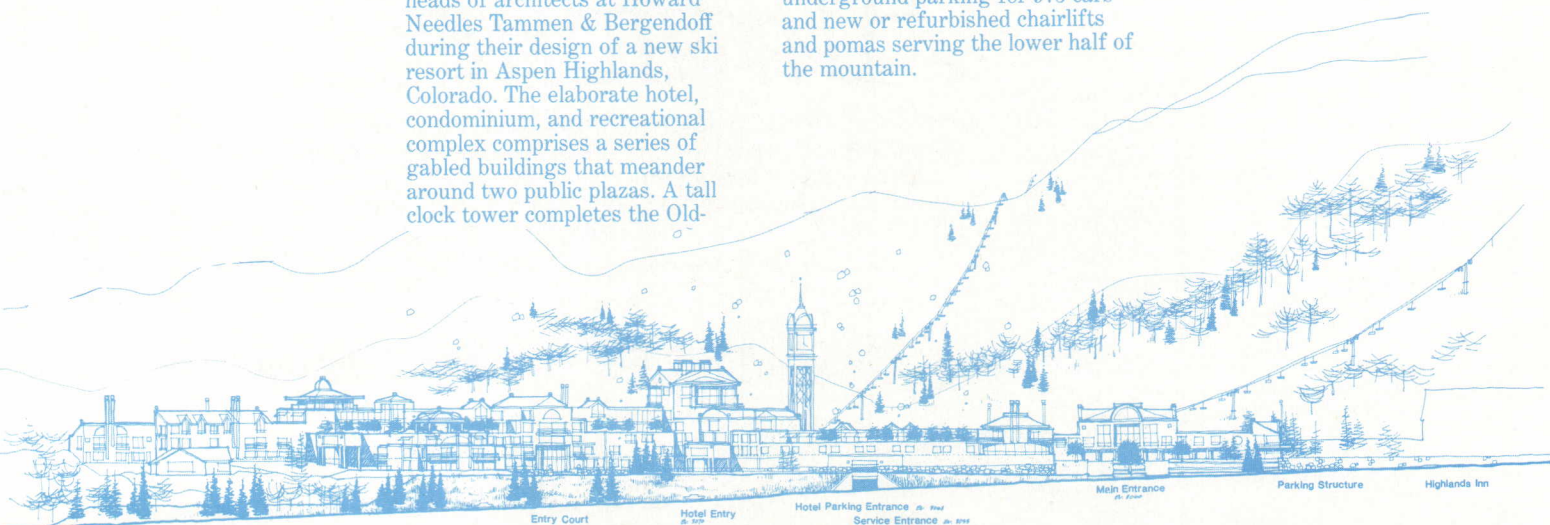
"We've come a long way in the last five years," says H. Davis Mayfield, partner in the Houston firm of Morris/Aubry Architects. And so they have. Five years ago Morris/Aubry was a 50-person "production-driven" office that was kept busy overseeing local projects designed by other, nationally more prominent architects for celebrated developer Gerald D. Hines. As Houston's building boom subsided, the firm decided to abandon its bridesmaid role and develop a new reputation as a practice dedicated to design, not just to the production of working drawings. To that end Morris/Aubry has hired such young, design-oriented architects as Pete Garrett, Jeff Ryan, and John Smart, and it has begun seeking commissions outside its hometown. The result of its efforts is a 180-member firm working on buildings in 27 cities across the country. While some of its current work exhibits a tendency toward the flamboyantly historicist—the multi-spired Windsor Court Hotel in Chicago is a striking example—other projects bespeak an understated urbanism. Among the six buildings shown here, the most visible is clearly The Wortham Center, a much-needed performing-arts center in downtown Houston that will comprise two major theaters. Other important inner-city buildings include the gracious Corpus Christi Central Library and One Peachtree Centre, a modestly scaled granite office structure in Austin. For two additional office projects—5950 Sherry Lane and Providence Towers—Morris/Aubry has tried to infuse urban dignity into suburban settings. "We're having a lot of fun," claims senior partner Eugene Aubry, discussing the firm's current portfolio. "And we're just beginning."



Alpine imagery

Visions of Tyrolean villages must have been dancing through the heads of architects at Howard Needles Tammen & Bergendoff during their design of a new ski resort in Aspen Highlands, Colorado. The elaborate hotel, condominium, and recreational complex comprises a series of gabled buildings that meander around two public plazas. A tall clock tower completes the Old-

World effect. Decidedly more contemporary amenities include underground parking for 975 cars and new or refurbished chairlifts and pomas serving the lower half of the mountain.



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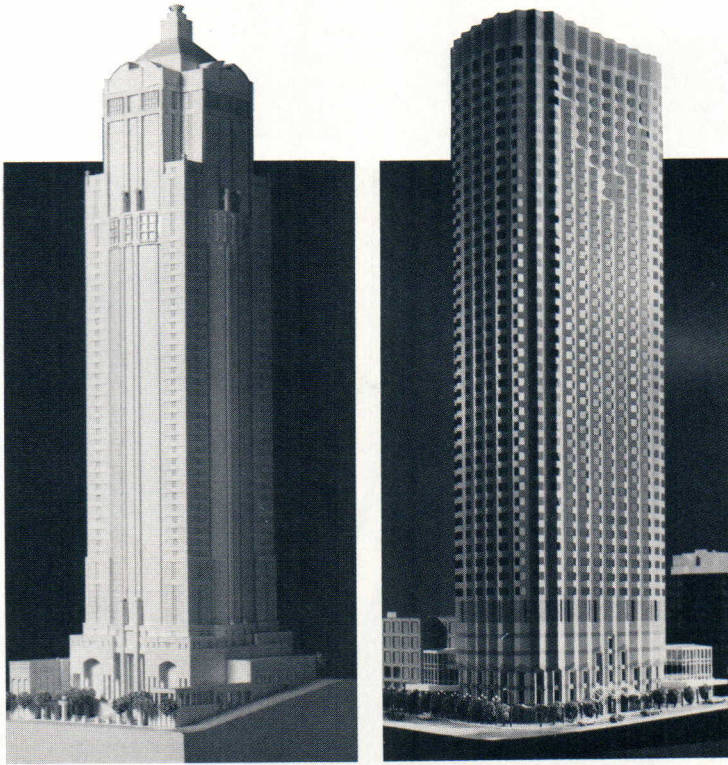
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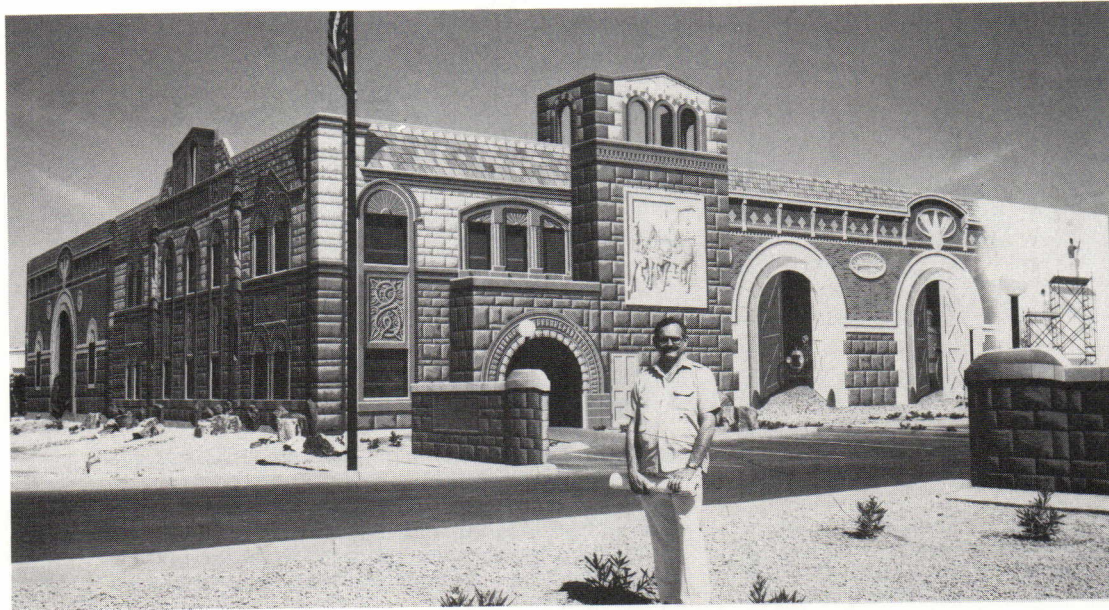
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Point counterpoint

Two proposed commercial towers in downtown Seattle underscore the diversity (some might say confusion) that characterizes architecture today. One of the projects, dubbed Stimson Center, incorporates office and retail space in a sheer 47-story tower (far right) whose faceted granite facade does not stray much from the kind of mainstream modernism that has characterized architecture for 25 years. John Graham and Company are the architects. On the other side of the esthetic coin, Kohn Pedersen Fox Associates recently unveiled plans for a 55-story office building that is being touted as Seattle's first classically designed building in decades. With its clearly articulated base, shaft, and top, the building is meant "to fit in with Seattle's urban context and to be reflective of the Northwest style," according to architect William Pedersen.



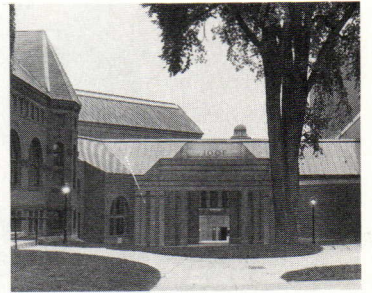
Bringing illusion to reality



In his latest bit of artistic wizardry, celebrated *trompe l'oeil* painter Richard Haas has transformed a new concrete industrial building housing the Thunderbird Fire & Safety Equipment Corporation in Phoenix (right) into a fanciful replica of—what else?—a Romanesque Revival firehouse, complete with vintage hook and ladder vehicles that seemingly emerge through open doors.



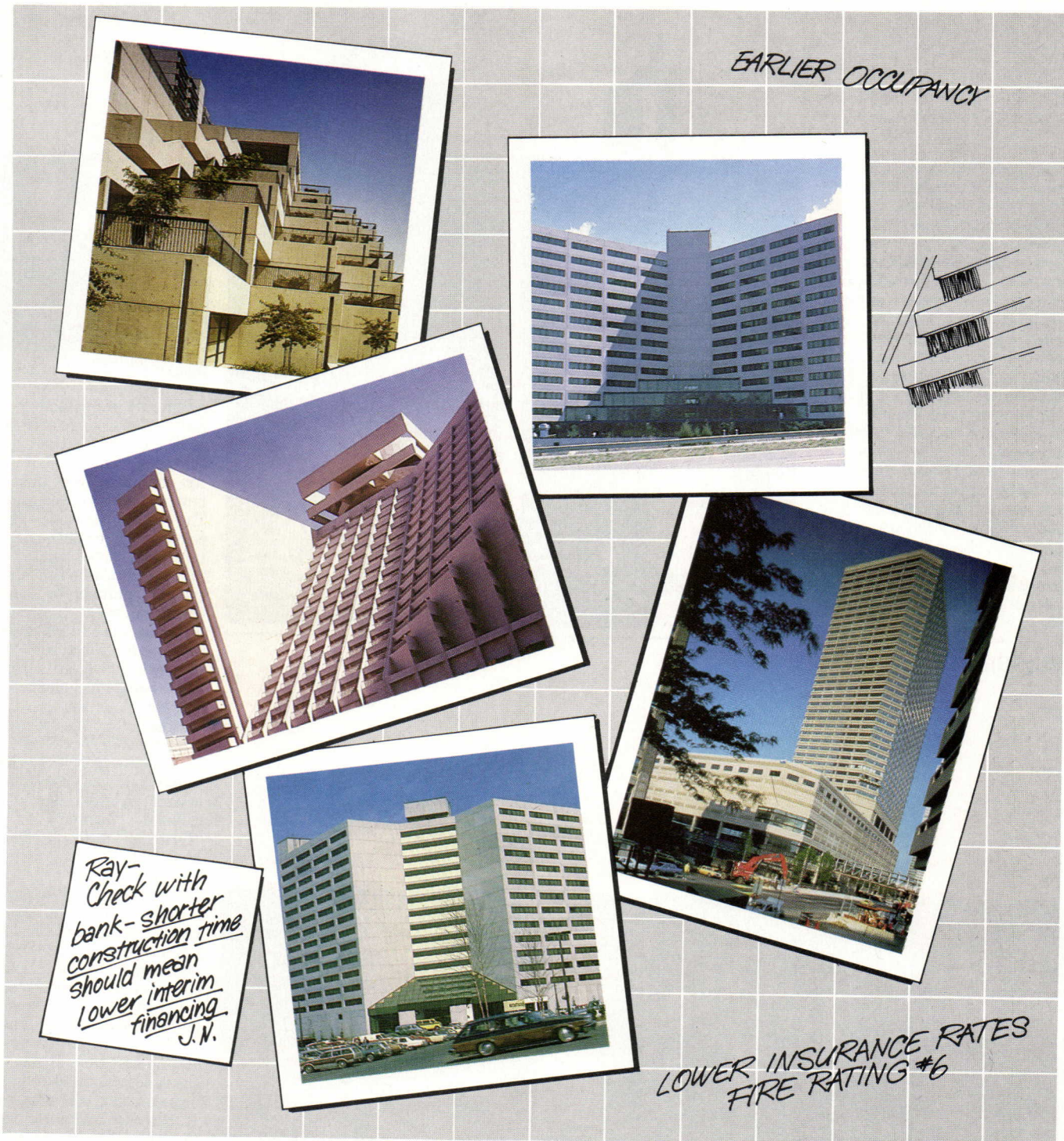
Dartmouth celebrates its new museum



At the end of September, Dartmouth College celebrated the dedication of its latest architectural showpiece, The Hood Museum of Art, with a series of talks, dinners, receptions, tours, and other events. The opening festivities began at the college's 216th convocation with a talk by the noted painter Frank Stella. Stella, who has lent the Hood several paintings for its opening exhibition, spoke in praise of the new museum and reflected upon the proper educational role of the small college or university art museum. Other events included a lecture entitled "Architecture, History, and Confusion" by the architecture critic for *The New York Times*, Paul Goldberger, whose topic, briefly put, was post-Modernism's attempt to undermine what he called the "dogmas" and "formulas" of Modernism in the hope of establishing a "sound, workable vernacular" in contemporary architecture.

The new museum, designed by Charles Moore and Chad Floyd of Centerbrook, brings the bulk of Dartmouth's rather disparate art collection—which includes a wide range of ethnographical and anthropological objects as well as works of fine art—under one roof for the first time. It also completes the college's visual and performing arts complex, connecting Wallace K. Harrison's 1962 Hopkins Center—a late-Modernist structure whose facade clearly looks forward to Harrison's slightly later Metropolitan Opera House at Lincoln Center—and Wilson Hall, a Romanesque Revival building that was completed in 1885. The two older buildings are bridged by an imposing, brick-flanked concrete gateway that announces the museum with copper letters quietly spelling the name "Hood." The museum itself, a tidy, copper-roofed brick structure deliberately reminiscent of 19th-century New England industrial architecture, stands poised behind and largely to the west of the gate, showing little more to the street than its roof, painted green cornice, and distinctive cupola.

The Hood was enthusiastically received by the Dartmouth community and a roster of guests *continued*



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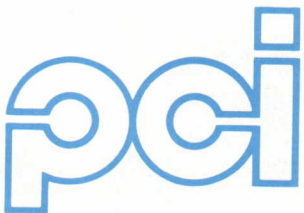
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Design news continued

invited to participate in its dedication. Fastidiously yet simply detailed, it epitomizes the low-key, genially allusive style of architecture that Moore championed in a talk and slide presentation he gave one evening as part of the dedication. Its nine galleries, which together comprise about 11,000 square feet of exhibition space, largely defer to the artworks on display, making the museum an inviting, comfortable place in which to view art. In addition, the building's brick-and-concrete construction communicates a sturdy, urbane elegance, yet manages to blend in pleasingly with the traditional New England architecture that populates the Dartmouth campus.

In his talk, entitled "The Future of Memory," Moore followed Goldberger in taking issue with the rigorous, aggressive tradition of Modernist architecture, a tradition that places a premium on originality and independence from earlier architectural ornamentation. He acknowledged that Modernist architecture had produced many stunning successes, citing Frank Lloyd Wright's Fallingwater as an example that he particularly admired. Still, Moore felt that the time had come to cultivate a less autonomous, more eclectic approach to building, an approach that, as he put it, was less "a whoopie creative act and more of a performing art." Thus he celebrated the "cheerful pretension" of false fronts, historically allusive ornamentation, and an architecture that unabashedly took its cue from the local stylistic traditions of the buildings that surround it. "Those of us who love the world and the places in it don't at all object to being reminded of it," Moore said in his concluding remarks. "That's what the Hood Museum is all about."

It was difficult not to be moved by Moore's appeal. After all, who could object to a commitment to making buildings that "are part of each other" and that consciously but unobtrusively attempt to evoke a familiar and comforting past? But while there was much to recommend the gentle, ecumenical sentiments that Moore articulated, one might well wish to ponder the implications of his celebration of the playfulness and "careful pretension" that increasingly have come to characterize recent architecture. As it happens, Moore himself rejects the label "post-Modernist"; but one cannot help but wonder whether the relaxed and accommodating view of the architectural tradition that he urged upon us in his talk can avoid allying him with the ethos and the defining impulse that have made many of the products of post-Modernist architecture so controversial.

Roger Kimball

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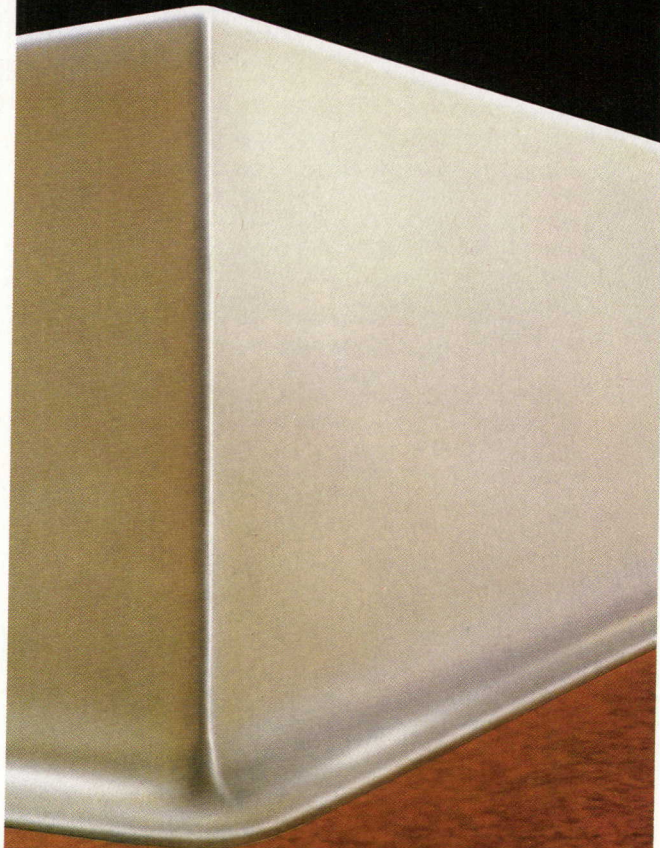
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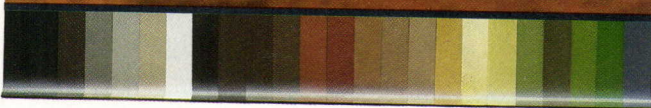
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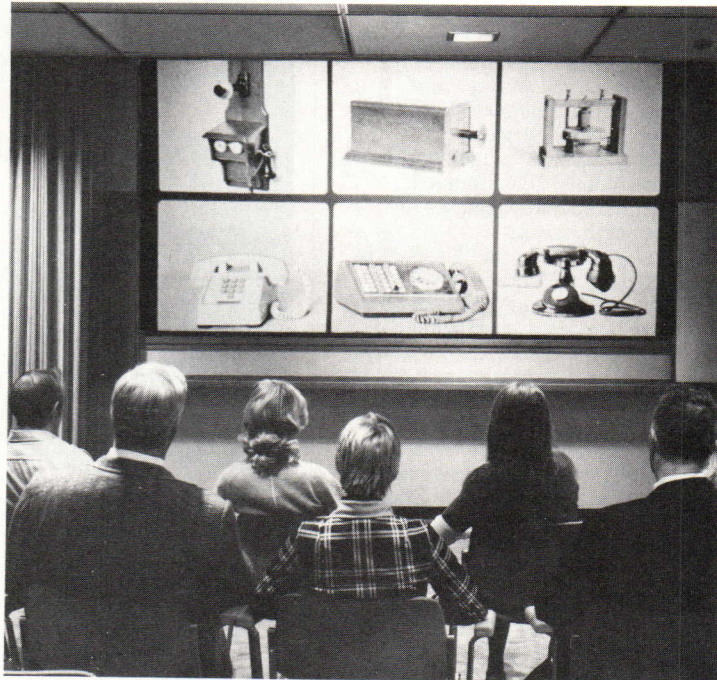


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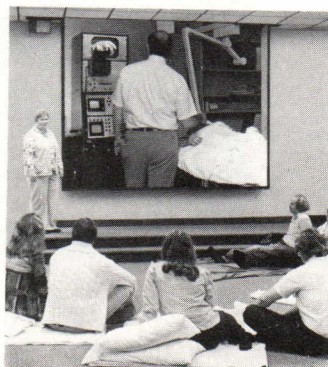


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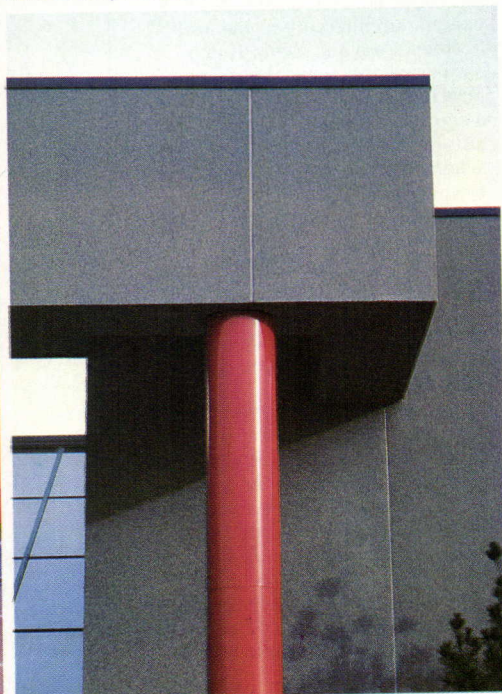
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Design awards/competitions: The Hillside Trust Housing Design Competition

Even though Cincinnati's fame as a city of hills might seem modest when compared with San Francisco or Rome, the Ohio metropolis boasts a pleasingly varied topography that consists of 23 major hills spread out over 78 square miles. In 1976 a nonprofit organization called The Hillside Trust was founded for the general purpose of promoting the preservation and wise use of metropolitan Cincinnati's hillsides and with the specific goal of either acquiring land outright or obtaining scenic easements, whereby the owner retains possession of his property but waives development rights.

1. Schwartz-Kinnard, Neil Payton, and Nelson-Byrd

The architects' solution calls for four buildings arranged around a public promenade that connects Boal Street with a scenic overlook above the site. Two street-facing structures with rusticated limestone bases and painted stucco upper stories encompass six town houses, while four additional dwelling units are located in two three-story garden pavilions situated on either side of a parking court. Although all five premiated submissions were judged equal winners, the jury cited this entry in particular for exemplifying those qualities—i.e., efficient utilization of the entire site, unobtrusive automobile parking, a strong pedestrian axis, and a logical hierarchy of public, semi-public, and private spaces—that it felt were most consistent with the goals of the competition and its sponsor.

2. Hokanson/Lunning Associates

The jurors praised this entry, an asymmetrically massed ensemble grouped along a new pedestrian passage, for the manner in which the buildings reinforce the street facade and for the unusually generous proportions of the individual living units. Their major criticism was that the proposal's brick-clad shed-roofed buildings do not relate as well as they might to existing architecture in the area.

3. Julie Gross and Kevin Kemp

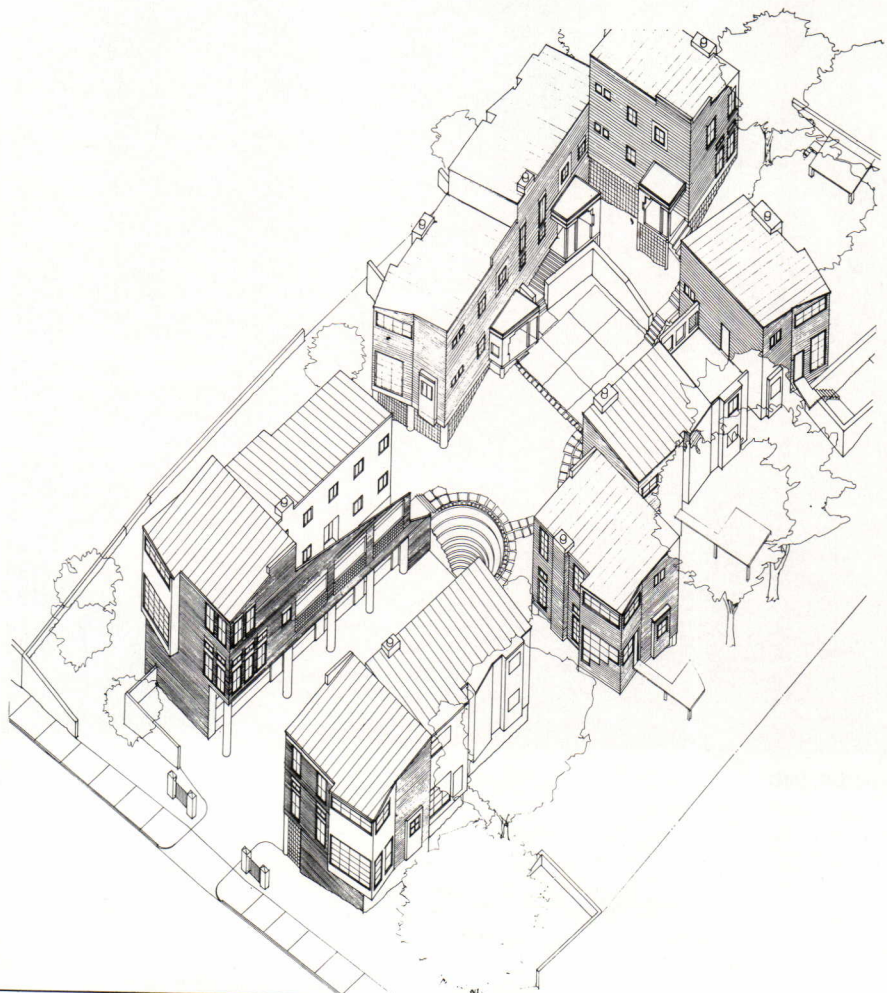
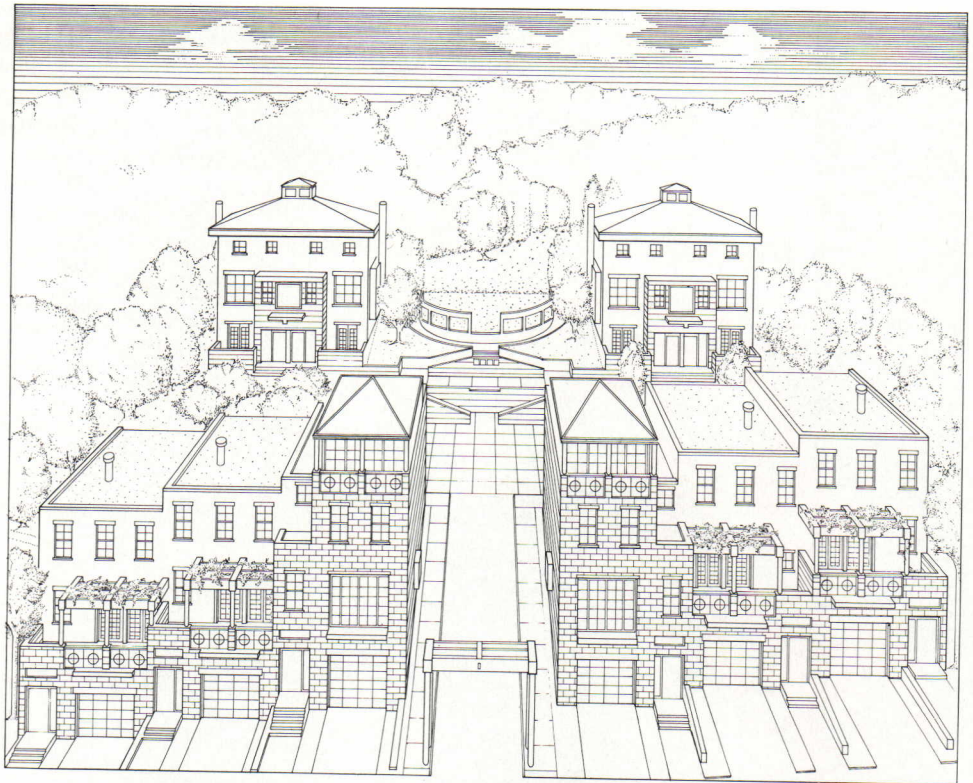
Two circulation cross-axes—one directing pedestrians up the hill and a second parallel to the street for automobiles—characterize this scheme, which calls for two rows of town houses whose stepped parapets and spare detailing recall the vernacular residential architecture of the 1920s. The jury praised the architects' sensitive provisions for parking and their inclusion of generous skylights.

4. Stanley D. Overton, Jr., and Katherine Setser

Eight town houses arrayed in three hillside tiers feature steeply pitched gable roofs—a consciously domestic element that refers to the neighborhood's existing residential architecture. By providing basement-level parking in the four houses facing Boal Street, the architects freed up space on the upper level for a central courtyard.

5. Charlotte R. Hitchcock and Arthur G. Selbert

An "urban village" consists of five stucco-and-brick-clad buildings grouped around a courtyard that covers underground parking. The jury noted: "This submission shows a clear sensitivity to the site, the need for a distinctive architectural character, and the necessity for views from a majority of the units. The plans of the individual houses are well-considered."



Recognizing that not all of Cincinnati's hills can be returned to their natural state, the Trust recently sponsored an architectural competition meant "to focus attention on the special considerations involved with hillside development and to set a new environmentally sensitive standard for the future." Architects were invited to submit designs for a 10-unit housing complex, planned for a 28,000-square-foot hillside site on Boal Street in the city's Mount Auburn neighborhood. The competition's obvious objective was to come up with a set of residential designs that are both

sympathetic with the distinctive configuration of the sloping site and marketable to potential middle-income buyers; less apparent, however, was the Trust's desire to develop a prototypical "Cincinnati House" that might be applicable to other hillside sites in the metropolitan area. Illustrated below are the five first-place schemes, selected from 101 competition entries by a jury comprising architects Bill N. Lacy (chairman), William Pedersen, Charles Moore, Steven F. Bloomfield, and Carl A. Strauss; and landscape architects William A. Behnke and Anne Whiston Spirn.



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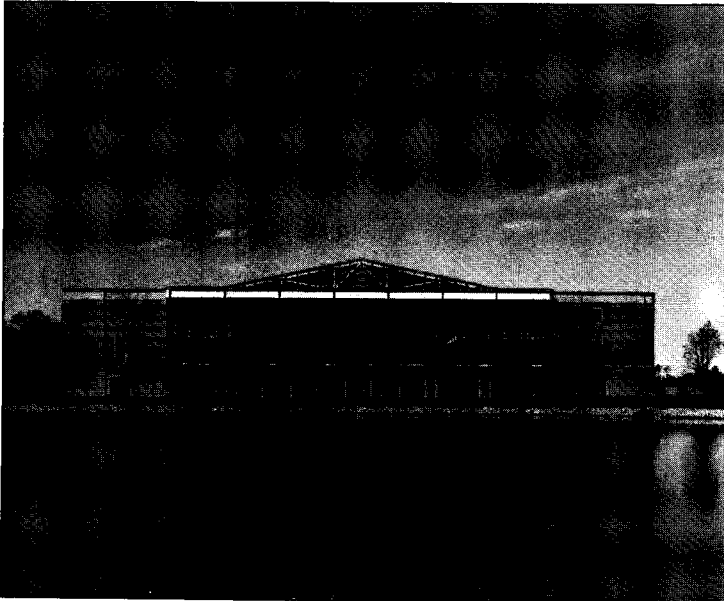


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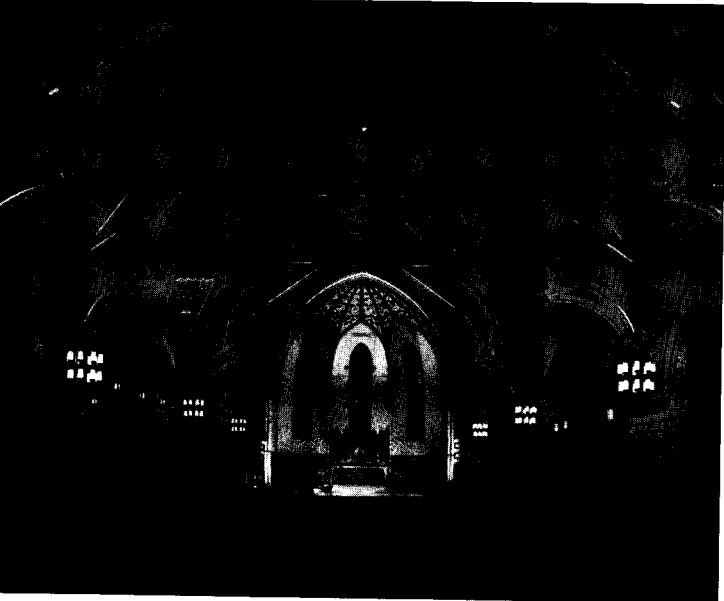
Chicago Chapter/AIA 1985 Distinguished Building Awards



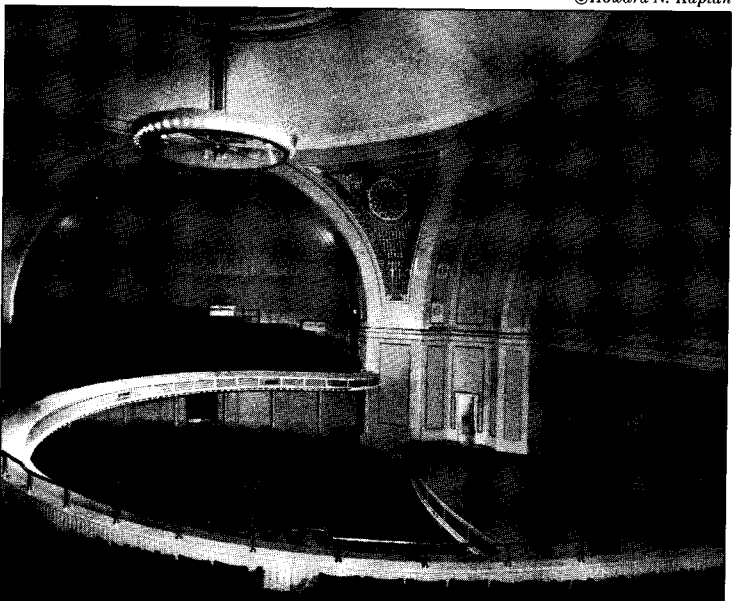
1 ©Tim Hursley/The Arkansas Office



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2 Russell Phillips



4 Russell Phillips

1. American Academy of Pediatrics Corporate Headquarters, Elk Grove Village, Illinois; Hammond Beeby and Babka, Architects (Honor Award). Through classical allusion the architects sought to create a highly identifiable image for a three-story suburban office building (RECORD, May 1985, pages 124-131). Located beside an expressway, the structure is organized around a semicircular, skylighted atrium overlooking a lake, and is clad in bands of brown and tan brick with gray limestone trim. Red-painted steel columns and cornice define an atrium colonnade. "This project has an impressive presence, a sense of pomp and ceremony . . . difficult to achieve in a small building," noted the jury. "The brickwork is nicely articulated, and there is Modernist detailing within a traditional form. It is a clear winner."

2. Cathedral of St. James Restoration, Chicago, Illinois; Holabird & Root, Architects. Erected in 1875, this cathedral had undergone extensive alterations over the years and bore only a shadow of its original elegance when the architects began researching the building's Arts-and-Crafts interiors. Work in the sanctuary included restoring 24 stencil designs originally painted during the 1880s, stripping and refinishing woodwork and pews, and upgrading the hvac, electrical, and lighting systems. Exterior rehabilitation involved the installation of a new shingled roof with copper downspouts, the replacement of deteriorated stone and mortar joints, and the repair of stained glass. "The architects have done a superb job of bringing back a vast richness and sense of exuberance," said the jury.

3. Private Residence, Northern Illinois; Tigerman Fugman McCurry, Architects. A single-family house exhibits what the architects characterize as opposing historic metaphors: an entrance based on "the classical, embracing terms of the villas Madama and Giulia," versus the more vernacular, village-like forms of 16-foot-wide gable roofs, "whose sacred forms are intersected by profane functional elements." Observed the jury: "The house is trying hard to be naughty, yet there is something appealing about the exterior and the concept of a family village. As a general strategy, the pavilion is a clever device. The project is nicely detailed: the downspouts are right out of Lutyens."

4. Foellinger Auditorium Restoration, University of Illinois, Urbana, Illinois; Holabird & Root, Architects. As part of the rehabilitation and expansion of a university theater, designed in 1905 by C. H. Blackall, the architects resheathed a deteriorated sheet-metal dome with copper, created new exterior lighting that focuses on the dome's perimeter rings and ribs, and designed a new 6,000-square-foot rear stage addition and semicircular entrance forecourt. Interior restoration included paint analysis, repair and recoloration of all plaster surfaces, and the installation of a new projection booth and updated hvac and lighting systems. The jury praised the project as a combination of "sensitive restoration and careful modification."

Although Chicago's preeminence as the nation's architectural center is no longer unchallenged, as it was during the late-19th and early-20th centuries, the city remains an intriguing showcase of current design trends. Witness the eight buildings illustrated below that have been cited in this year's Distinguished Building Awards program, sponsored by the Chicago Chapter of the AIA. Selected from a pool of 84 submissions, the projects exemplify Chicago architects' continuing fascination with the technical aspects of orthodox Modernism, their skill in preserving significant buildings

of the past, and their willingness to explore the esthetic potential of post-Modernist design. Jurors for the 1985 awards program were John Burgee, FAIA, of John Burgee Architects with Philip Johnson in New York City; Barbara Littenberg, partner of Peterson, Littenberg Architects in New York City; and Mark Simon, AIA, partner of Centerbrook in Essex, Connecticut.



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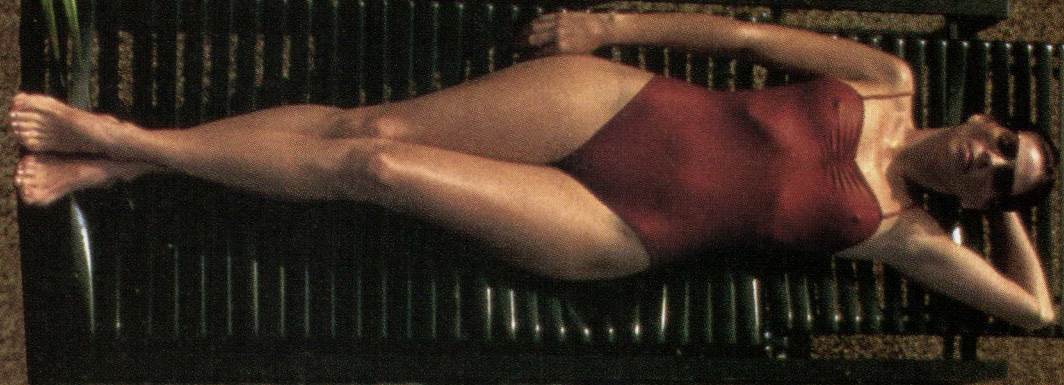
5. **Bannockburn Green Retail Center, Bannockburn, Illinois;** Hammond Beeby and Babka, Architects. Located in a wooded section of a suburb north of Chicago, this shopping center exudes the aura of an 18th-century mill—an effect that was attained through a palette of such traditional rustic and early industrial materials as rock-faced stone, cedar siding and roof shakes, brick, and stucco. Noting that a retail arcade is a difficult building type to design well, the jurors praised this effort for its craftsmanship and harmonious proportions. “The special elements are singular: they feel right, they look right. The use of stone in contrast to wood contributes weight and texture. [It is] a good model for strip shopping center design.”

6. **Catholic Order of Foresters Headquarters, Naperville, Illinois;** Holabird & Root, Architects. A freestanding brick colonnade and a long entrance driveway terminating in a landscaped cul-de-sac lend formal dignity to the U-shaped national headquarters of a fraternal insurance organization, located in a suburban office park. Exterior accents to the brick facade include bright blue mullions and tinted reflective glass. The jurors especially liked the structure's straightforward quality, and they praised the architects for achieving “maximum effect with economy of detail. The divisions created by the windows lend character. It's just enough, just right.”

7. **Boston Globe Satellite Printing Facility, Billerica, Massachusetts;** Skidmore, Owings & Merrill, Architects. This 201,000-square-foot building accommodates the *Globe's* production and distribution operations for its circulation area north of Boston. The existing forest on the site was carefully maintained to act as a visual and acoustical screen for nearby residential property. A tall circulation spine defining the building's main entrance is meant to symbolize the public aspect of the newspaper while functioning as a connection between employee support spaces and production areas. Clerestory windows and skylights illuminate much of the interior. The jury liked the plant's “sense of integration and careful detailing. [Although] the structure is built completely out of industrial materials, there is a feeling of grandness.”

8. **840 Michigan Avenue, Evanston, Illinois;** David Hovey, Architect. The program was to develop 16 town houses with private gardens and eight penthouses with rooftop terraces for a prominent corner in a densely settled Chicago suburb. The architect grouped the units along two sides of a landscaped courtyard meant to recall 19th-century English residential architecture. A pair of freestanding stairs, enclosed in glass and hung from bolts, serve as huge lanterns lighting the courtyard at night. Although the jury reserved its highest praise for the courtyard—“it is the essence of the building”—it also lauded the architect for “using industrial materials in a very human way by coloring them and breaking them into small pieces. The project has a '40s look; it's an Eamesian delight.”

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A History of Architecture: Settings and Rituals, By Spiro Kostof. New York: Oxford University Press, 1985, \$45.

Reviewed by Roger Kimball

In this ambitious and engagingly written history of architecture, Spiro Kostof, professor of architectural history at Berkeley, sets out to tell the "epic story of humans taking possession of the land and shaping communities through the act of building." Armed with some 800 photographs, 150 original line drawings by Richard Tobias, and upwards of 750 pages of text, he succeeds in providing a detailed panoramic review of our built environment from the remains of Stone-Age Europe to the dizzy multiplicity of contemporary, late-Modernist architectural efforts. Nor does his epic confine itself to the fate of architecture alone. Convinced that "the history of architecture partakes, in a basic way, of the study of the social, economic, and technological systems of human history," Kostof consistently turns to this broader historical milieu and writes that he "would not be at all unhappy if the book were to be seen as an offering of cultural history."

Although Kostof makes periodic excursions into the architecture of other cultures, he focuses largely on the Western tradition, and so much of the material in this book will be familiar. We once again visit the Egyptian monuments, the Greek temples, and the Roman city; we marvel again at Hagia Sophia, the Gothic cathedral, the decorous rationalism of the Renaissance, the expansive sensuousness of the Baroque; and we follow the course of modern architecture from its explosive beginnings in the Industrial Revolution through its Victorian embellishments, the chastening imperatives of the International Style, and more recent historicizing trends.

But if much of the material in this book is familiar, Kostof's sensitivity to the place of architecture within the total fabric of human life gives his chronicle a freshness and unifying perspective that make it more than just another synopsis of great buildings. Because he is concerned as much with "use and structure and urban process, with motivation and ritual sequence" as he is with style, Kostof is constantly at pains to show how interwoven architecture is with the vagaries of human aspiration—hence the "settings and rituals" that the author's subtitle announces. For Kostof the history of architecture is

revealed not by buildings alone but by buildings seen in context with their surroundings—natural as well as manmade—and the panoply of human uses to which they are put.

In emphasizing the "settings and rituals" that inform architecture, that imbue built structures with human meaning, Kostof hopes to arrive at a view of architecture that can do justice to its esthetic and spiritual importance without discounting the social, technological, and economic realities that impinge upon it. He thus wants to avoid the twin dangers of "technological determinism"—which attempts to explain stylistic advances in terms of current engineering capabilities—and what we might call esthetic preoccupation, which ignores everything except purely stylistic issues. Toward this end, he deliberately interweaves his account of the evolution of architectural forms with a good bit of social, political, and cultural reflection. In his discussion of the Gothic cathedral, for example, we find paragraphs on Augustinian theory of proportions in tandem with a technical overview of the load-bearing advantages of the Gothic arch and a consideration of the impact of Suger's loyalty to the French monarchy on the fate of St. Denis.

Kostof's purpose in this book is frankly didactic. The publishers express the hope that it will take its place beside Janson's classic *History of Art* as a standard reference. Certainly, Kostof has covered the requisite material. His prose is clear, and his interpretations, if never particularly original, are unfailingly responsible. In fact, the book is itself something of a monument, the result of years of gathering, distilling, and reformulating a vast amount of information. The captioned photos and drawings alone represent a notable scholarly effort. And even though Kostof's discussion of particular buildings and movements is on occasion somewhat briefer than one might hope, he brings as much erudition and depth to the subjects he treats as is practicable in such a wide-ranging overview.

While the book's scope, clarity, and comprehensiveness augur well for its future, it is not without problems. Most serious, perhaps, is Kostof's impatience with what he calls the "aristocratic view of architecture," a view that would have us distinguish—at least in principle—between architecture and building, between art and engineering. Attempting to "reconcile the traditional grand canon of monuments with a broader, more embracing view of

the built environment," Kostof lobbies for a view of architecture that he describes as more "democratic." Thus he writes in his introduction that "all buildings of the past, regardless of size or status or consequence, should ideally be deemed worthy of study." No doubt this is true. But by dismissing as "invidious" the distinction between architecture and building, Kostof at the same time renders himself incapable of distinguishing between good and bad, authentic and fraudulent. And that, in part, is surely what any genuine history must attempt. Kostof acknowledges that today we are "confused" about the tasks of architecture. "The best start," he writes, "is to observe and describe what has been happening: let stories overlap and contradictions go unreconciled. This is the way to come to terms with our confusion, and so consign these times to the embrace of history, where we too will find a measure of understanding." But suspending judgment is hardly a sage policy for "coming to terms" with confusion, especially in an art form that impinges so directly on our lives. Indeed, it is precisely because current architecture exhibits such confusion that we must resist the temptation to consign critical judgment to the capricious vicissitudes of history.



"I think we're beginning to get a grip on your new corporate image, Mr. Nicholls."

Roger Kimball writes art criticism for *The New Criterion* and other publications.

A freewheeling survey of 20th-century American design at the Whitney Museum

By Julie Iovine

While wending my way through the twisting venues of "High Styles: Twentieth-Century American Design," currently on view at the Whitney Museum of American Art in New York through February 16, 1986, a small, irreverent voice started to mutter in my ear, "Follow the yellow brick road." For this exhibition, says *The New York Times*, is "one of the most ambitious design shows held to date in this country," and I had come expecting the Oz of American design. Well, it is and it isn't. Certainly, architect Robert Venturi, who designed the undulating installation in close association with the six guest curators, has done everything in his wizardly powers to contrive a stylish rite-of-passage, where even the fabrics lining the vitrines contribute subtly to the experience of American design in the throes of defining itself. There is plenty to look at—over 300 objects—but don't expect any straight answers. The show fairly revels in its catholicity of taste: anything goes, just as long as it's American. According to Lisa Phillips, the associate curator at the Whitney who conceived the idea, the exhibition is meant not to present "a linear progression of vanguard styles," but rather to celebrate "the most important, the ultra-fashionable, the unusually

dramatic." Phillips's interpretation may not jibe with Whitney director Tom Armstrong's description of the show as a survey of "the best examples of furniture, industrial design for domestic use, and decorative art objects produced in America," but no matter. Even if the Whitney staff aren't quite sure what they mean, the guest curators, each allotted a 15-year time span, are all quick to define "high style" in their own ways. And that's where the fun begins.

The show certainly kicks off well, with the first public exhibition of a dining table and chairs designed by Frank Lloyd Wright in 1899 for the Joseph W. Husser House in Chicago. David Hanks, a design consultant specializing in American and European decorative arts of the 19th and 20th centuries, organized the 1900-1915 phase with an eye toward pointing up the uneasy flirtation in America with the curvaceous lines of European Art Nouveau and a more genuine enthusiasm for the ever-popular Arts-and-Crafts look, with predictable examples of each by Tiffany. Both of these modes, however, are anomalies in a still opulently late-Victorian realm that continued to cherish such pieces as the sterling silver rococo dressing table designed by William Codman.

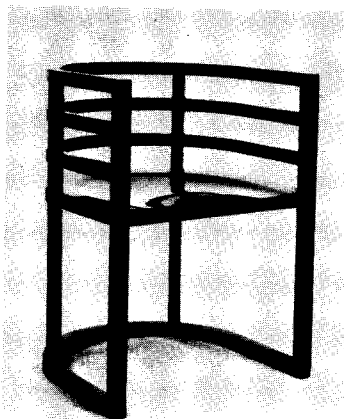
David Gebhard, professor of architectural history at the University of California in Santa Barbara and guest curator for the 1915-1930 section, formulates a scheme quite radical in its reactionary tendencies. While Bauhaus designers in Europe were grappling with ways of making a future fabricated of steel, in America, Gebhard says, "reed, rattan, and willow furniture was the modern furniture of the 1920s"—and for the same apparent reasons of cheapness, honesty, and flexibility. Gebhard expands his argument by claiming that the proponents of high style decided that the modern thing to do was to disguise the new domestic machinery in period dress, frequently American Colonial. Art Deco was dismissed as a mere European interloper, much too "smart" and urban for the new suburban elite. Gebhard has certainly assembled some freakish reproductions to make his point, notably a Shear-Maddox phonograph that looks like nothing so much as a Spanish Baroque reliquary. Unfortunately, the much-lauded garden furniture is represented only by photomurals, while emigré Joseph Urban's two lacquered chairs, upholstered in air-brushed striped cotton and silk, put the rest to shame.

The by-now-familiar dichotomy between a stripped-down and a natural look becomes an all-American debate between 1930 and 1945. Rosemarie Haag Bletter, a professor of art history at New York University's Institute of Fine Arts, presents her case with superb visual articulation. First comes the so-called streamlined, a style invented by industrial designers and launched as "the up-to-date look of the thirties." Here are the penthouse pieces—Norman Bel Geddes's skyscraper cocktail shaker, for example—that we love to identify in Fred Astaire movies. Artists and sculptors (and homeowners) were not as charmed as industrial designers and countered with the biomorphic look as "a corrective to the sentimentality and missionary zeal that had become associated with machine esthetics and the streamlined object." Thus, Noguchi's classic "1950s" amoeba-shaped coffee table was actually designed in the 1930s. Far above the fray stands the near-perfect desk chair that Frank Lloyd Wright created for the Johnson Wax Company.

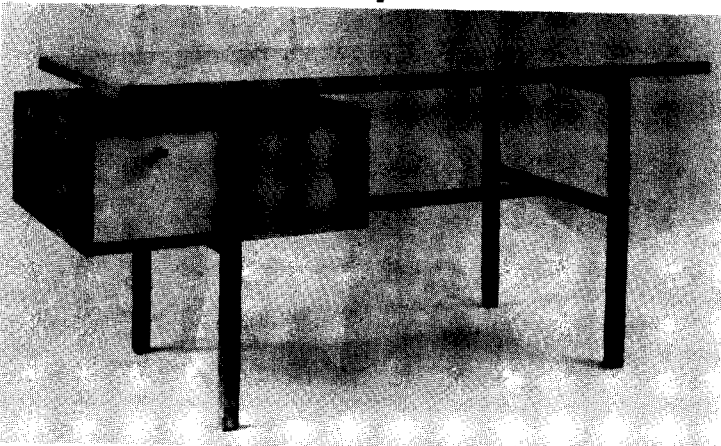
American supremacy during the 1945-1960 postwar period applied, for the first time, to design as well as to economics. One glance at the pieces brought together here by architectural historian Esther



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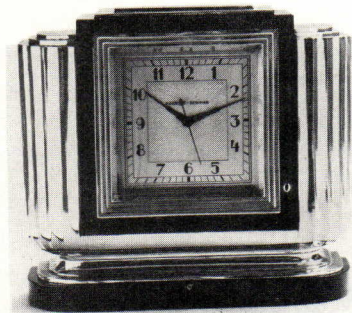
McCoy reveals a sharp break with the past and, I might add, a breakdown in the quality of materials used. Furniture is now more engineered than designed: witness the "zoned" kitchen. "Two characteristics of the period," says McCoy, "are a search for the prototypical and faith in a democratic ideal." If, in the entire show, there is a pioneering star, it is Charles Eames, the Chuck Yeager of American postwar design; and all his best pieces (many done in collaboration with his wife Ray) are concentrated in this section.

Robert Venturi told Martin Filler, editor of *House & Garden* and guest curator for the 1960-1975 period, that this segment of the show would be the most difficult, due to the emotional associations and fixed ideas about the 1960s that are so fresh in everyone's minds. Filler decided to jolt us to our senses with neon lights, supergraphics (recreated from originals by Barbara Stauffacher Solomon, Robert Venturi, and Hugh Hardy), and "violent-assault" green walls declaring the "pop revolution." This section features such objects as Frank Gehry's cardboard Easy Edge high chair, which exemplifies those heady days when design was "fun to draw up, cheap to build, and easy to discard." At the same time, the old arts-and-

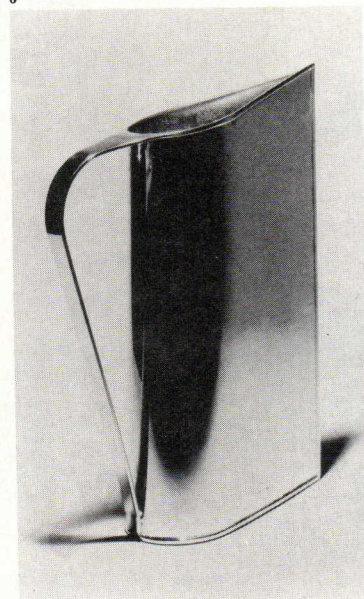
crafts ethic re-emerges with stunning virtuosity in such designs as Dale Chihuly's blown-glass wine bottle and Wendell Castle's music stand, aided and abetted by a "natural reaction" in the corporate world toward fiber wall hangings and blond-finished conference tables surrounded by William Stumpf's Ergon chairs.

When you finally emerge from the labyrinth into the exhibition's final section (1975 to the present), you will see numerous chairs by all the current names—Scott Burton, Michael Graves, Steven Holl, and Richard Meier, among others—which seem more appropriate for an art gallery than for any home or office. According to curator Lisa Phillips, "American designers of the '80s engage in a self-conscious play with style" that is light years away from the designs-for-living of past decades. If, up until now, you have had a little trouble shifting in and out of gears between the time periods, this one is guaranteed to boggle utterly any cohesive idea you might have nurtured during the exhibit with regard to the drive of American designers toward the natural, the useful, and the honest. If it prompts you to go back and start all over, so much the better.

Julie Iovine is a freelance writer who contributes frequently to RECORD.



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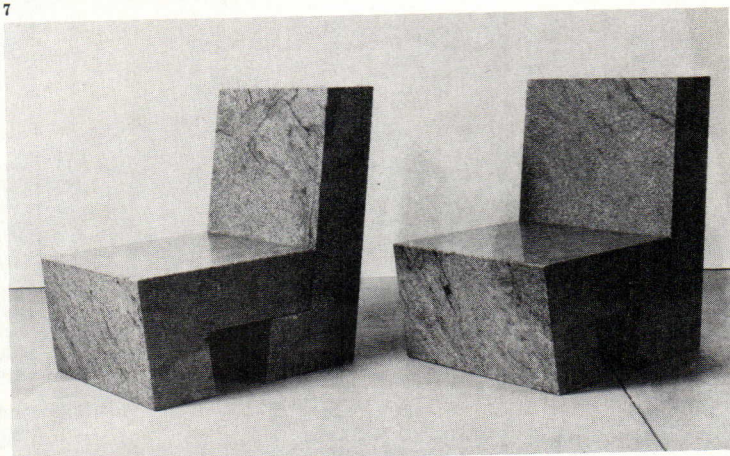


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1. George Ohr, speckle-glazed earthenware vase, c. 1900-10.
2. Richard Meier, lacquered wood chair, 1982; manufactured by Knoll International.
3. Milo Baughman, desk, 1948; manufactured by Glenn of California.
4. Charles and Ray Eames, animal skin and aniline-dyed birch plywood side chair, 1949; manufactured by Herman Miller.
5. Michael Graves, bird's eye maple veneer armchair, 1981; manufactured by Sunar.
6. Cast-metal mantel clock, designed and manufactured by the Manning-Bowman Clock Company, c. 1929.
7. Peter Müller-Munk, chrome-plated metal water pitcher, c. 1937; manufactured by the Revere Copper and Brass Company.
8. Scott Burton, two-part pink granite chairs, 1984.
9. Don Chadwick, foam modular seating units, 1974; manufactured by Herman Miller.



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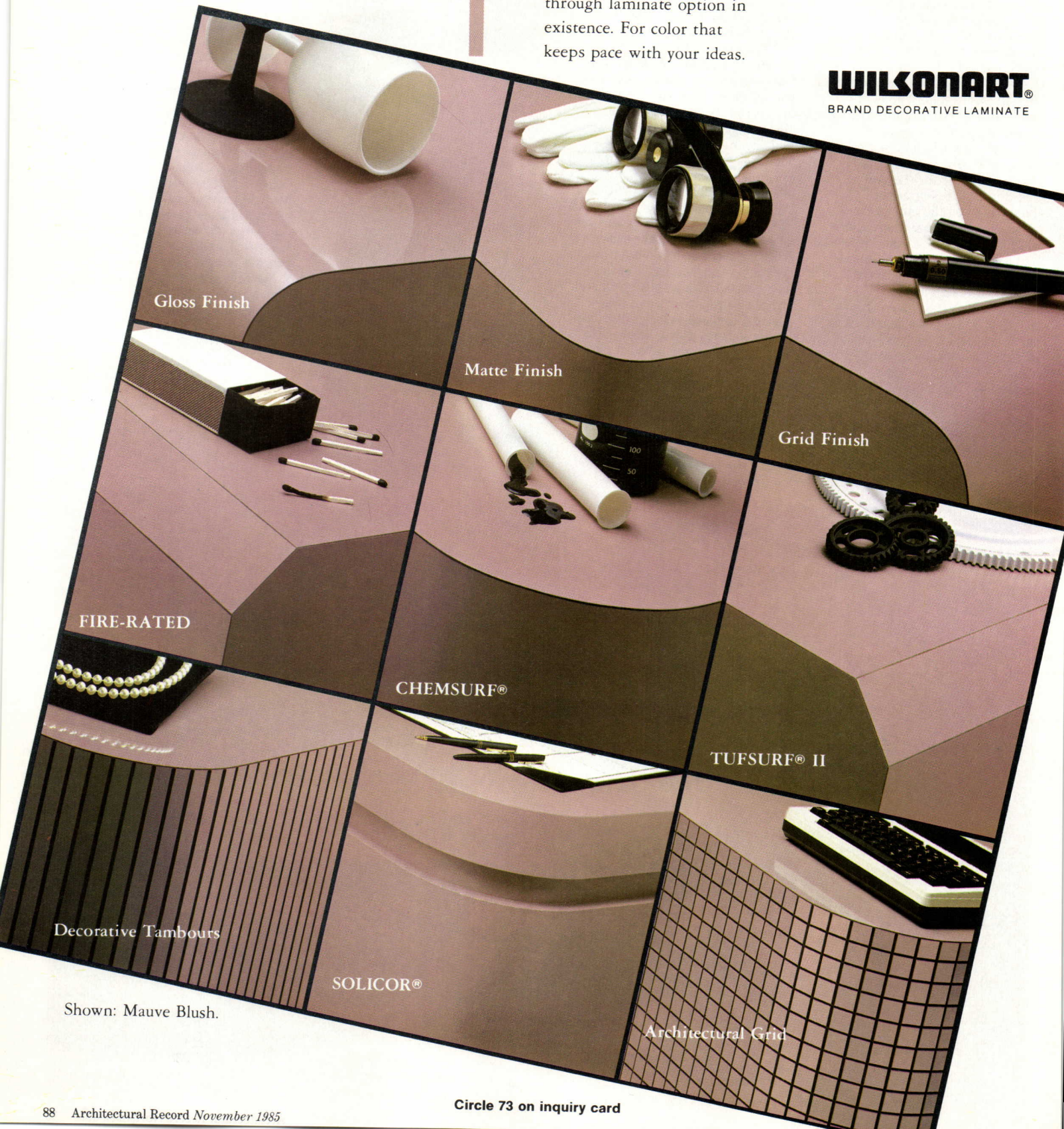
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Exhibition report: Collegiate architecture and the rise of American Modernism

By *Hélène Lipstadt*

In the short space of a year and a half, between February 1938 and June 1939, the Modernist movement in the United States was bolstered by a series of architectural competitions for an art center at Wheaton College in Norton, Massachusetts; a campus development plan and library design at Goucher College in Towson, Maryland; a festival theater and fine arts center at the College of William and Mary in Williamsburg, Virginia; and an art gallery at the Smithsonian Institution in Washington, D. C. Under the ambitious title of *Modernism in America, 1937-1941*, a traveling exhibition and catalog commemorate these events. Organized by the Muscarelle Museum of Art at William and Mary, the exhibit is currently on view at Goucher College through the end of the year, and it will be on display at Lehigh University during January and February 1986.

Although the single project actually built—the Goucher campus by Moore and Hutchins—is the least Modernist of the four winning designs, exhibit curator and catalog editor James Kornwolf claims that the four contests played a catalyzing role in the ascendancy of Modernism and, as such, they represent a significant chapter in American architectural history. The very organization of the exhibition is a remarkable achievement, for careless post-competition record-keeping has eradicated a good portion of the names of the 824 competing architects and almost 90 per cent of the projects. (Goucher proves the exception, for copies of all 35 projects for this invited competition were retained by the college.) Many of the drawings that do survive are premiated entries, and because Modernist designs predominate among them, Kornwolf argues that the “projects constitute the largest body of Modernist design produced in the country up to then and in so short a time.” Is this the case, and, if so, how did it happen?

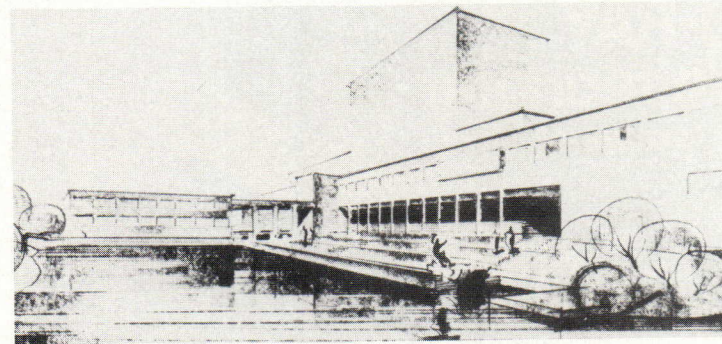
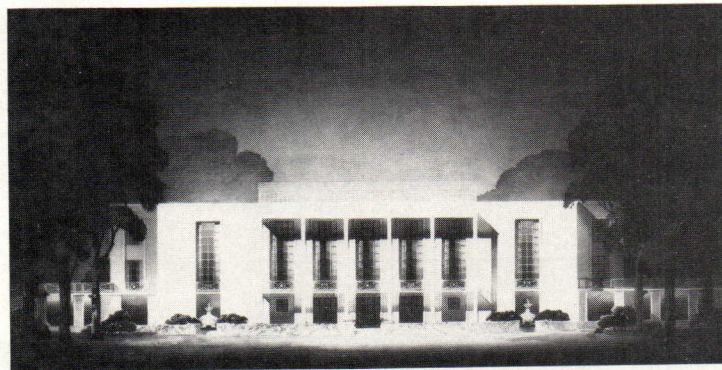
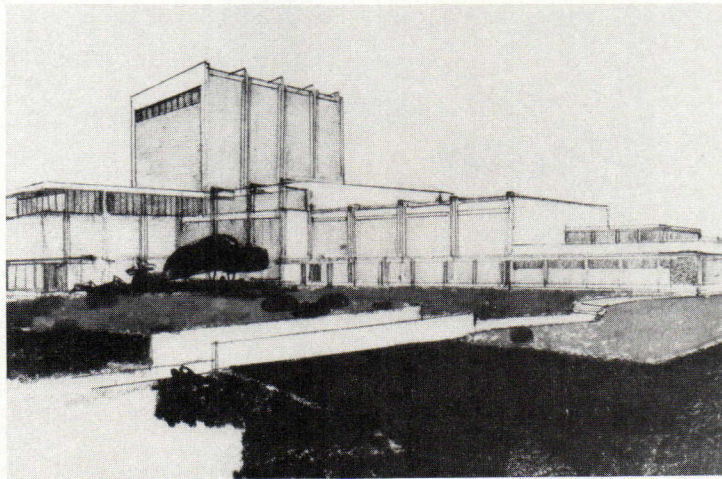
History from above has always favored winners, and architectural history is no exception, especially with regard to the exhibiting of competition entries. The Wheaton, William and Mary, and Smithsonian jurors preferred Modernist designs, and the archives and publications mirrored their selections. From the outset, moreover, the deck was stacked in favor of Modernists, but then with what cards! The Museum of Modern Art, for example, advised, organized, co-sponsored,

Hélène Lipstadt is a freelance writer who is currently curating a retrospective exhibit on architectural competitions for the Architectural League of New York.

Top: Richard Neutra's honorable mention design for an art center at Wheaton College, 1938.

Middle: Frost and Frost's third-place rendering for a library at Goucher College, 1938.

Bottom: The winning design for a festival theater and fine arts center at William and Mary, by Eero Saarinen, Ralph Rapson, and Frederic James, 1938.



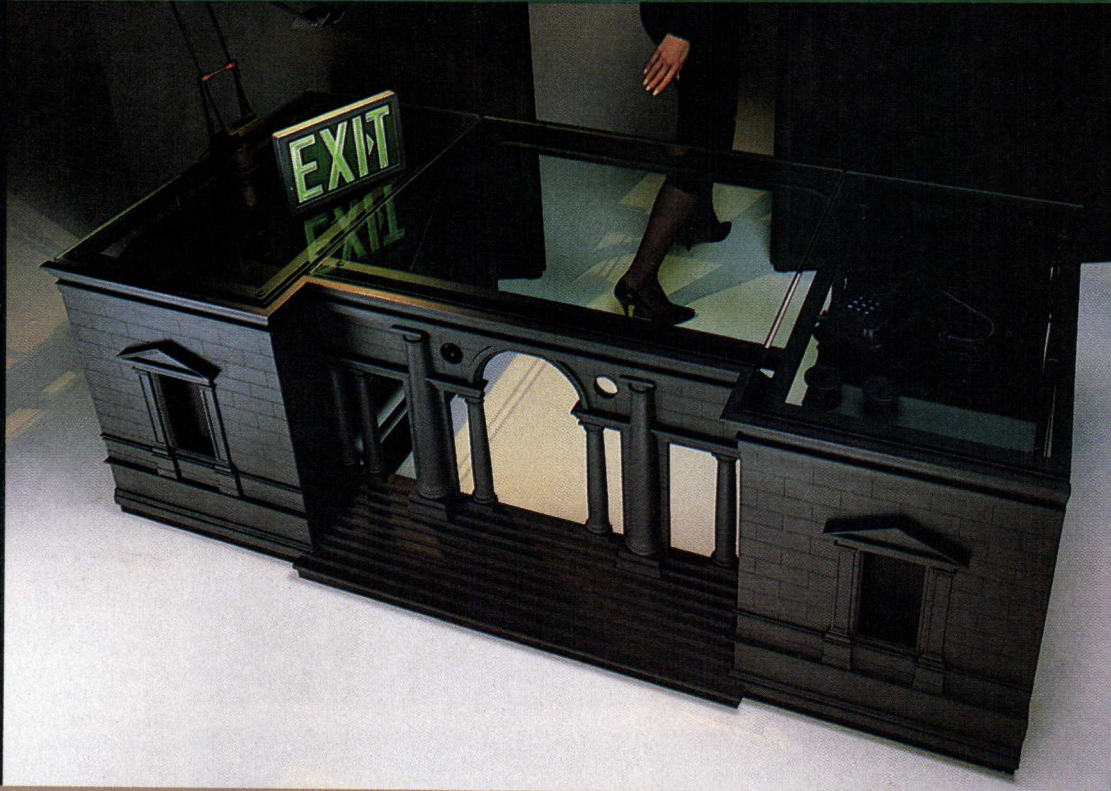
and acted as registrar at Wheaton and William and Mary. The museum exhibited the results of those and of the Smithsonian in New York and sent “MOMA men” as a juror to Wheaton and as invited competitors to William and Mary. Significantly, Walter Gropius was invited to compete at Wheaton, Goucher, and William and Mary, and he was a juror at the Smithsonian. Furthermore, the Tennessee Valley Authority, the evocation of modern technology at work for the New Deal, was present on two of the juries. And although John Holabird and John Wellborn Root II were summoned to represent a “traditionalist” point of view on three of the four juries, as a rule more Modernists were called on, more often. Even while emphasizing the need to harmonize with and respect the natural surroundings, the competition

programs stressed the demands of functional efficiency. The complex building programs for combinations of galleries, theaters, libraries, studios, and classrooms certainly lent themselves to functionally determined plans. At Goucher, where traditionalists predominated among the invited architects, jurors, and program authors, the need for an “informal rather than monumental or institutional plan” was also announced.

It is hardly surprising, then, that the awards came close to a Modernist full house, with first prizes given to emergent or heroic Modernists in all but the Goucher competition. Richard Bennett and Caleb Hornbostel, recent Harvard graduates, triumphed at Wheaton; Eero Saarinen, collaborating with Ralph Rapson and Frederic James, won at William and Mary; and both Saarinen, working with Robert

Swanson, were victorious at the Smithsonian after Eliel had gained a fifth place at Wheaton and father and son had earned a second at Goucher. Repeat premiated performances were made by Percival Goodman (a fifth place at Wheaton and a close second at the Smithsonian) and by Philip Goodwin and Edward Durell Stone (second and third prizes at William and Mary and, individually, a third each at the Smithsonian). Richard Neutra, a contestant in all four contests, gained an honorable mention in all but Goucher. Harrison and Fouilhoux, William Lescaze, Keck and Keck, and Hugh Stubbins all entered at least two of the competitions; among the well-known traditionalists, however, only the firm of Perry, Shaw and Hepburn was equally persistent.

The current exhibition represents an unequalled opportunity to view and compare projects for relatively similar programs by very different Modernists—or, in the case of Neutra and the Saarinens, by the very same Modernists. Backed by original materials from their abundant archives, they repeat their original victories, triumphing over the many entries known only from reproductions in the contemporary press. Yet one can question on at least one count the curator's stressing the importance of these competitions in particular as catalysts for the Modern movement. By this date other architectural competitions in which Modernists participated and triumphed had been published, and a number of small-scale domestic Modernist structures had actually been built. Moreover, the faculty at such architecture schools as Harvard and Columbia were, by 1938, totally converted to Modernism. What is perhaps most intriguing about these four competitions is where they took place. All the sites were indelibly historic, regional and American, if not hallowed: an old New England town, Maryland farmland, Colonial Williamsburg, and the Washington Mall. The readiness of administrators and sponsors to entertain the possibility of Modern architecture at these locations suggests an emerging cultural equation between university arts centers, teaching museums, and innovative architecture. The competitions for Wheaton and William and Mary bore fruit at Berkeley in 1965 and Ohio State in 1984. In the end, the choice appeared to lie between two programs and two typologies, each with an opposing political association: the aristocratic Academy and the democratic Bauhaus. In 1938, the example of the latter was both compelling and inspirational.



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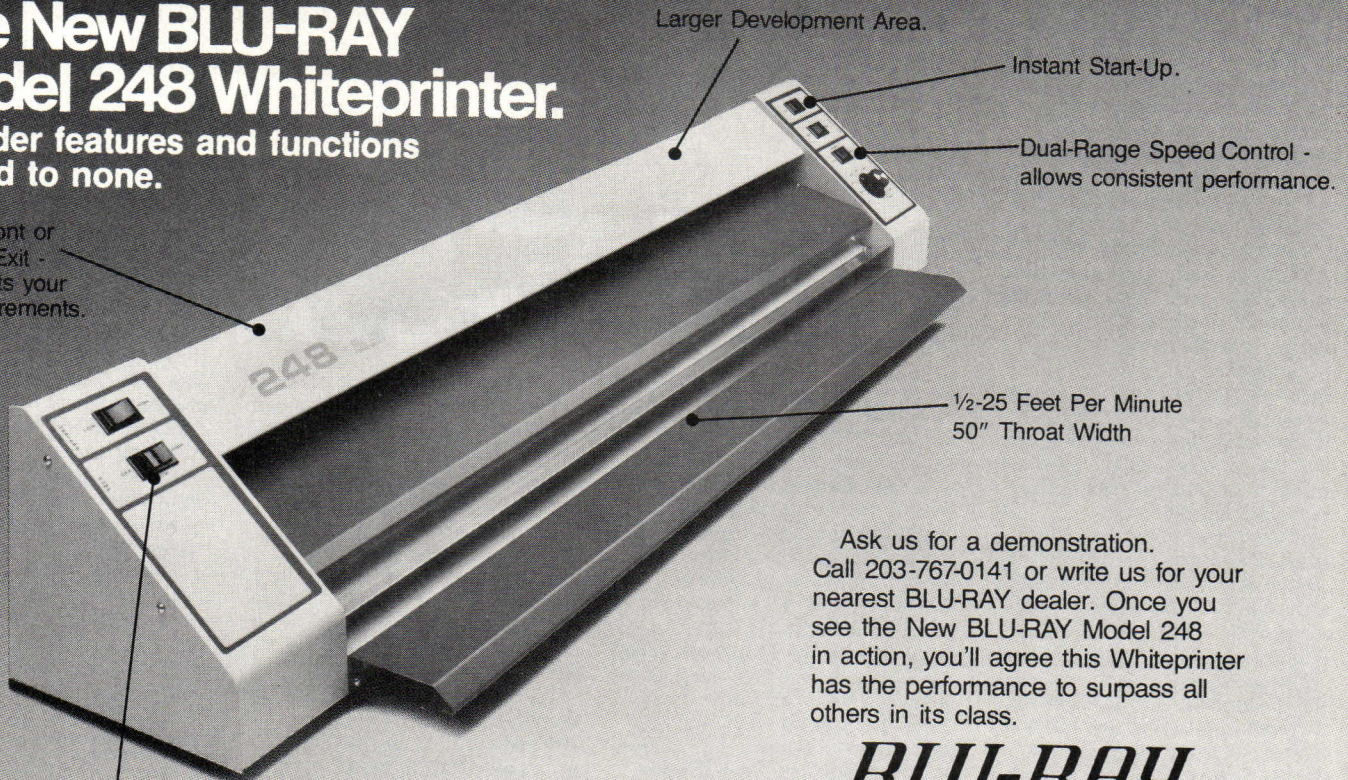
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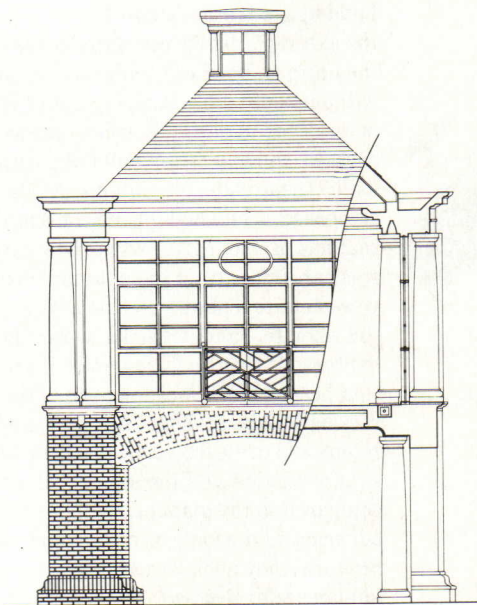
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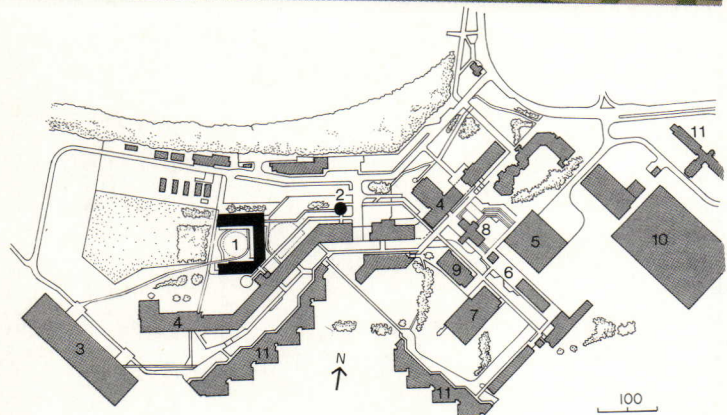
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History lessons

"In American architecture we have continually used the past to redefine the present, to make things that solve *our* needs, and to make an extraordinary dialogue with things that went before." These remarks from an address by Robert A. M. Stern to the 1985 national AIA convention describe a professional commitment to learning that also applies more broadly to education of any sort. No academy devoted to understanding contemporary values—whether they are expressed as palpable qualities of design or as abstract standards of behavior—can ignore the inherited myths and lore against which we measure our own modernity. No wonder then that so many colleges and universities in the New World have modeled their campuses on real or imagined antiquities of the Old, or that the pragmatic and symbolic attributes of modern architecture are debated by academic building committees with particular fervor. The path to new clearings in the groves of Academe was relatively clear when collegiate gothic and classicism were the only respectable guideposts, or when a sharp turn to international-style modernism came to indicate the only route to intellectual and social progress. The way is thornier now that stylistic pluralism prevails, and once-iconoclastic buildings and radical master plans have matured into campus classics (witness the recent controversy over an addendum to the Miesian precinct at the Illinois Institute of Technology). All too often exhortations to learn from history, distant or near, summon the architectural equivalent of literary pedantry, footnoting a cornice-line here, a brick bond there, but missing the larger ideas that informed the original composition. The result can be as glaring a lapse as the empty bravado of self-conscious novelty. If the projects illustrated in this academic building types study represent "an extraordinary dialogue with things that went before," it is because each reinterprets the spirit of an extraordinary place as inventively as program and budget permit, without shouting for praise. In two buildings designed for the English University of East Anglia, London-based architect Rick Mather confidently mediates between formidable antecedents, the brutalism of Denys Lasdun and the high tech of Norman Foster. Within view of the Acropolis, Hugh Newell Jacobsen takes up where city planner Constantine Doxiades left off, adding a new campus center to the American College of Greece. At the University of Virginia, Robert A. M. Stern affirms the adaptability of Jeffersonian classicism, with a passing tribute to Louis Kahn. In each instance a master has spoken but, in scholarly tradition, he has not had the last word. *Douglas Brenner*



Up against the wall



1. Schools of Education and Information Systems
2. Climatic Research Unit
3. Sainsbury Centre
4. Teaching wall
5. University House
6. Shops
7. Library

8. Restaurants
9. Lecture theater
10. Sports center
11. Student residences

As one of the “plate glass” universities established by the British government during the 1960s, the University of East Anglia outside Norwich, England aspires more to the American arcadian ideal of a suburban college campus than to its “red brick” city counterparts of Oxford or Cambridge. Its campus, however, remains a far cry from any picturesque vision of ivy-covered quadrangles. Designed by Denys Lasdun in 1962, the university’s linear, multilevel arrangement of brutalist terraces and low slabs exudes an urban compactness intended to promote the openness of its former golf course site along the River Yare. Its backbone is an elevated pedestrian walkway situated parallel to the main “teaching wall” that connects classrooms to centralized communal spaces, library, lecture theater and a string of ziggurat-shaped student residences, all situated at the southern end of the campus (site plan below and photo opposite page). Although the concrete of the buildings has grown grimy and stained with years of exposure to the rainy English climate, its campus plan has weathered well, notably expanding at its western edge to accommodate the award-winning Sainsbury Centre for the Visual Arts, designed by Foster Associates and completed in 1977.

More recently, the underutilized northern portion of the campus, formerly a parking lot situated behind Lasdun’s teaching wall, has received a new two-building addition that further enhances the original campus concept with traditional references to collegiate quadrangles and a bare-bones classicism. It has been designed by Rick Mather, an American-born architect whose London-based practice has produced many successful small-scale projects. “I tried to give more to the campus than just some buildings,” he explains of the sensitive integration of his complex into the geometry of the site by landscaping a path from the university entrance through his buildings to the Sainsbury Centre beyond.

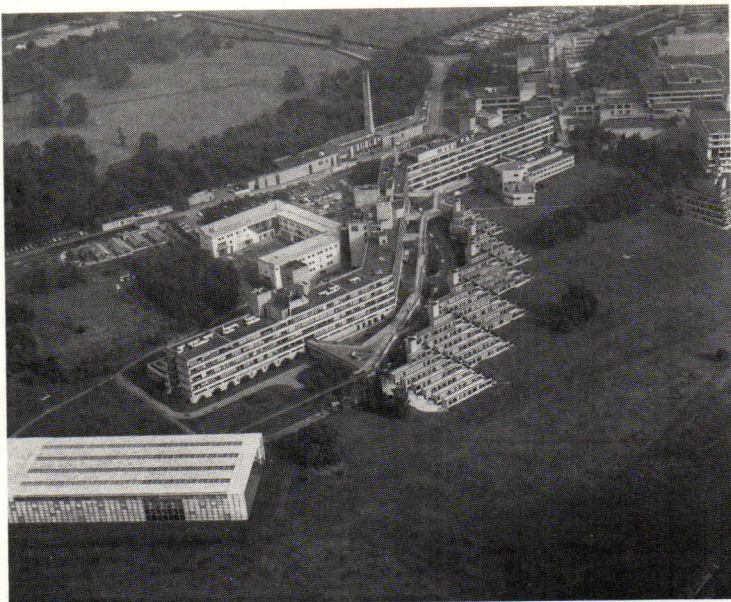
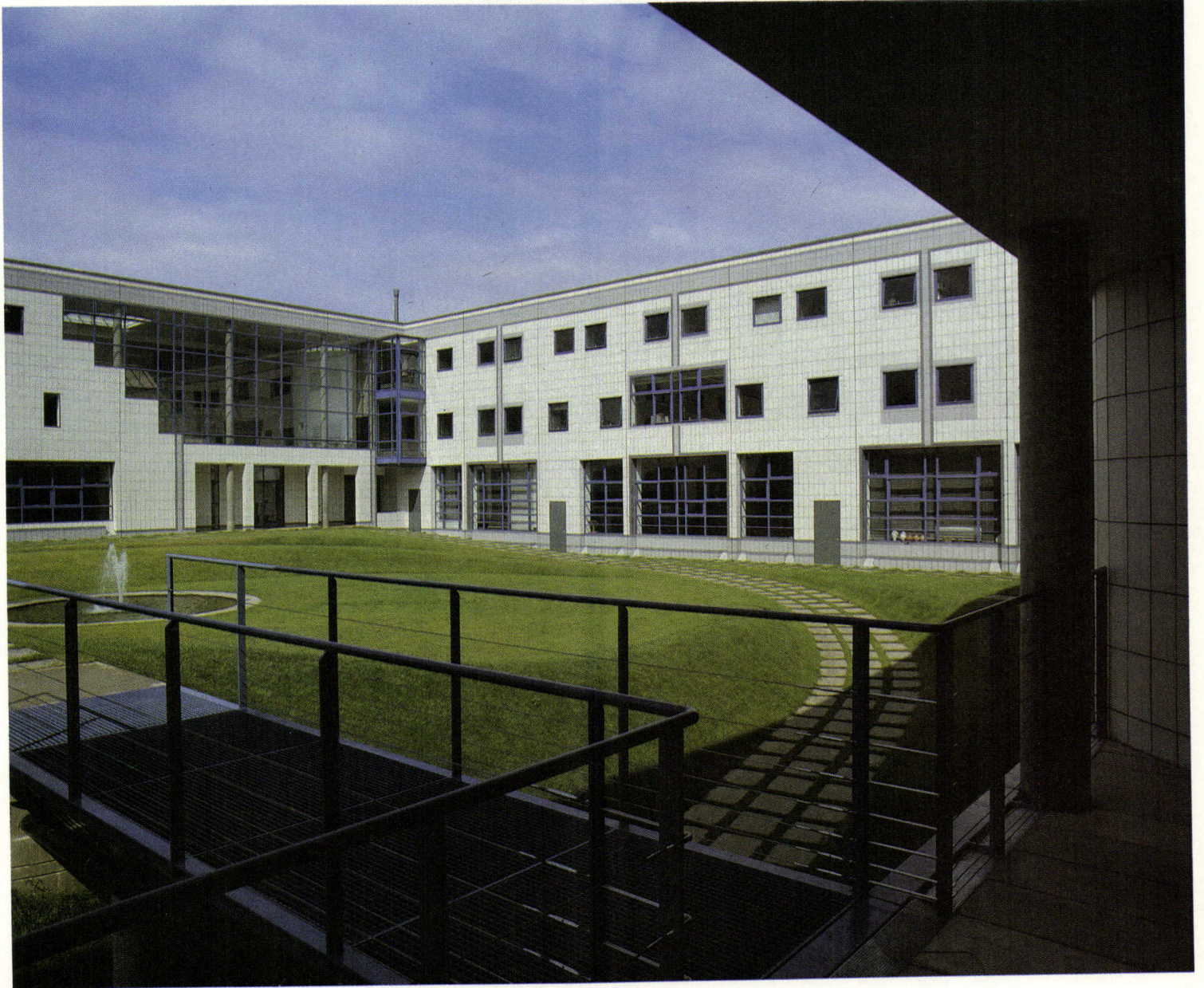
Originally commissioned to design a much smaller building, the architect subsequently adapted his initial scheme for a gateway, wall and garden into an expanded program. The gateway was enlarged into a gatehouse—a four-story cylinder to house the university’s climatic research unit—and the wall transformed into a U-shaped structure to contain the schools of education and information systems. The garden then formed the focus of the main building: a grassy courtyard enclosed at its far end by a sacrosanct grove of trees planted by the university’s school of biology. Both buildings were then linked back to the adjacent teaching wall via pedestrian bridges, a metal-trussed hint of Foster that extends Lasdun’s predilection for multilevel access.

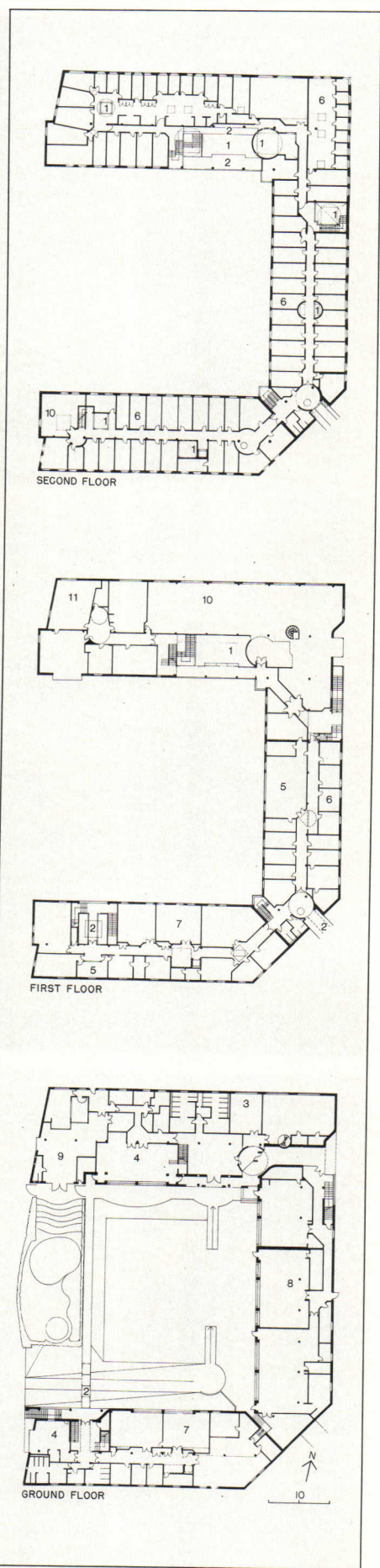
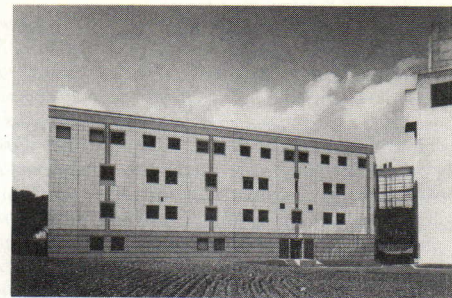
The clearest difference between the existing and new campus buildings is Mather’s effort to reflect changes in interior function on the exterior. His figural, graphic play of elements crisply deviates from the uniformity of Lasdun’s strip windows and Foster’s metal paneling without completely stepping out of their modernist bounds. “I was determined to design facades that would read at the large scale from a distance to balance my buildings with the larger mass of the teaching wall,” the architect maintains. As the field on which his elevations are composed, white end-glazed concrete block was chosen as “a material that has life no matter what the weather,” according to Mather, who was careful to avoid the potential discoloration of concrete. Recesses were kept to a minimum “since you can’t rely on shadowed moldings in this climate,” and instead a hierarchy of base, middle and top is expressed through flush bands of gray to suggest depth. And to prove that he’s as much inclined toward the romantic as toward the rationalist, the architect has projected bay windows out from the public rooms and centered vertical stripes between symmetrical groupings of square windows off the structural columns. “My buildings are small compared to the giants on campus,” he modestly admits. But by adhering to the logic of the campus plan with an injection of bright bravura, they achieve a stature no less distinctive, more in touch with a human scale. *Deborah K. Dietsch*

Attached to the north side of Denys Lasdun's concrete teaching wall (site photo and plan, below), the University of East Anglia's new building for the schools of education and information systems is approached through an arcade (photo top left, opposite page) into a quadrangle shared by both schools (photo below). The path continues under the school of information systems' pedestrian bridge to the

Sainsbury Centre (bottom left of site photo). Elevations of the new building are more indicative of internal function than modern campus precedents: stepped glazing over staircases, square windows over offices and bay windows projected out from common rooms. Windows of ground-floor art studios and children's center are recessed to imply an arcade with built-in seats (photo below).

Patrick Shanahan





"I like simple outside volumes with complex interiors," states Mather and the main building of his complex eloquently illustrates why. On the exterior, flush facades present a cool geometry of glazed block and window (photo top right) while the inside is carved, angled and sunlit to accommodate a diversity of program and users (plans at right). The school of education, housed in the L-shaped portion of the building,

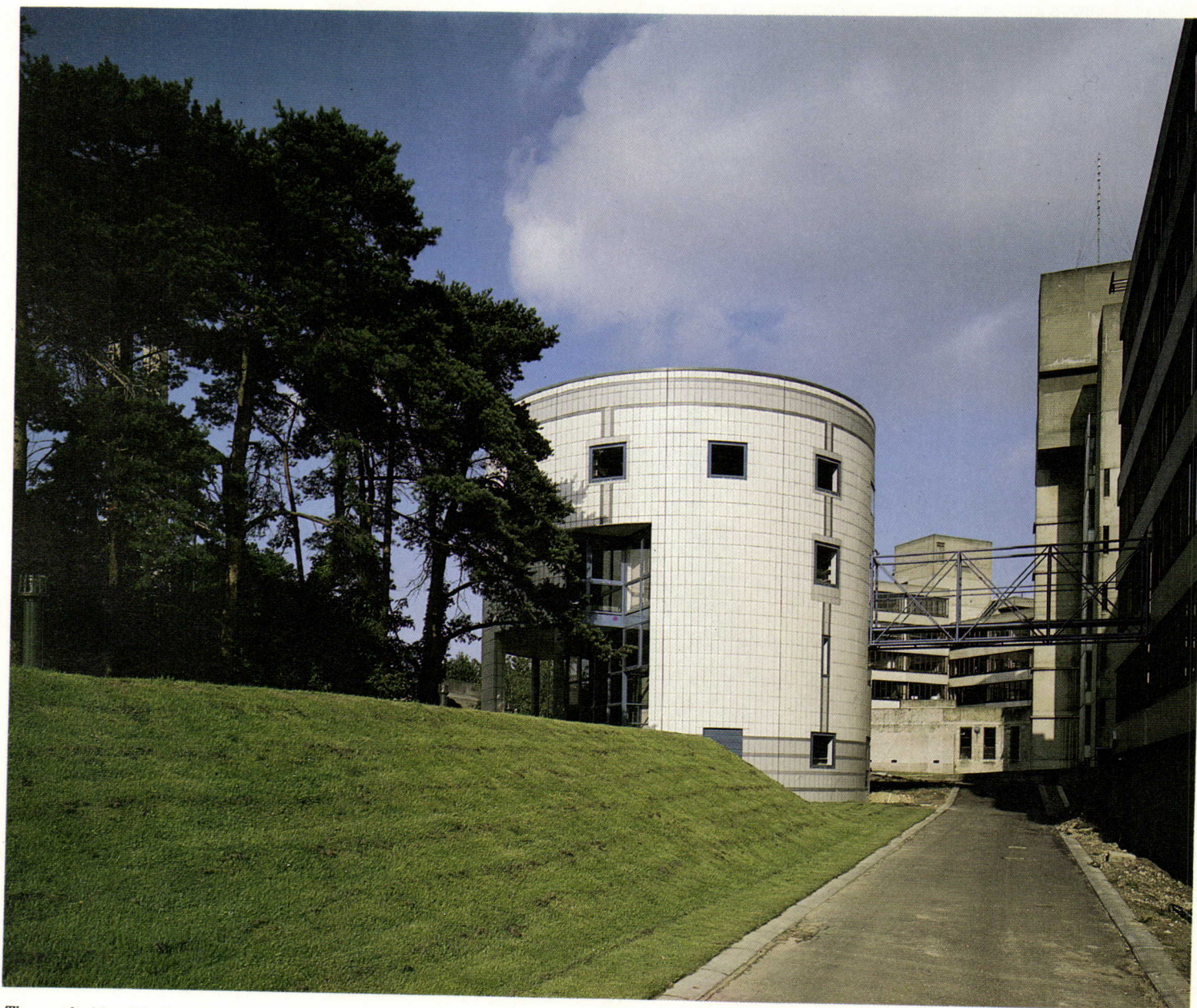
is connected to the school of information systems in the flanking wing on the first and second floors. Internal circulation junctures are marked by skylights to provide natural light in corridors and views between all floors. Exposed concrete block walls throughout the interior continue the campus esthetic in a warmer tone and are accented by white plaster ceilings (photo above and opposite page).

- | | |
|------------------------------|----------------------------------|
| 1. Void with rooflight above | 7. Computer teaching |
| 2. Bridge | 8. Arts and crafts center |
| 3. Conference room | 9. Children's center |
| 4. Common room | 10. Library and resources center |
| 5. Administration | 11. Science teaching |
| 6. Offices | |



"I wanted a building with a sense of community and an atrium like the Ford Foundation," says school of education dean Hugh Sockett whose request has been granted, albeit on a small scale, with a three-story entrance hall overlooking a communal courtyard. The half-cylinder containing the entryway to the school serves as a reminder of Mather's climatic research unit behind it (photo above). Its form is

oppositely retraced in the circular skylight reveal over the cascading stair (photo opposite page) and repeated in cylindrical floor wells in the corridors. From the stair, the omnipresent means of campus circulation—elevated walkways—are rendered in blue metal to connect the lobby to the school's library, located in the upper story of the cylinder, and offices in the adjacent wing.



The north side of the UEA campus is entered through the cut-out base of the climatic research unit (photo right), a four-story drum organized around a skylit central stair. Its shape, purportedly inspired by the occupants' study of tree rings to determine weather chronology, stands as a glazed punctuation mark against the concrete mass of Lasdun's wall (photo above). To strengthen the structure's presence

on the landscape "so it wouldn't look like a Crisco can," Mather articulated the entrance as a two-story opening and defined the boundaries of its volume with gray banding. Inside the building, the stair linking the basement archives to offices and common room is stepped back so that a view to the skylight above is always possible for predicting the weather (plans and axonometric opposite page).

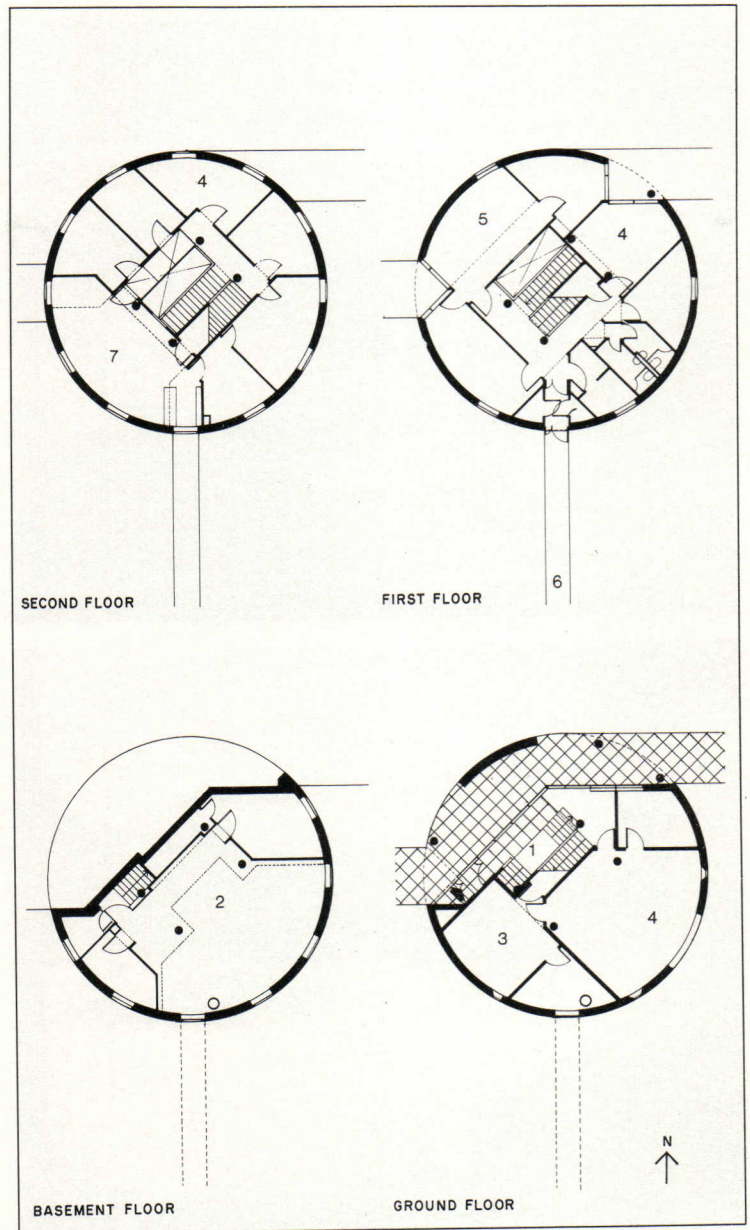
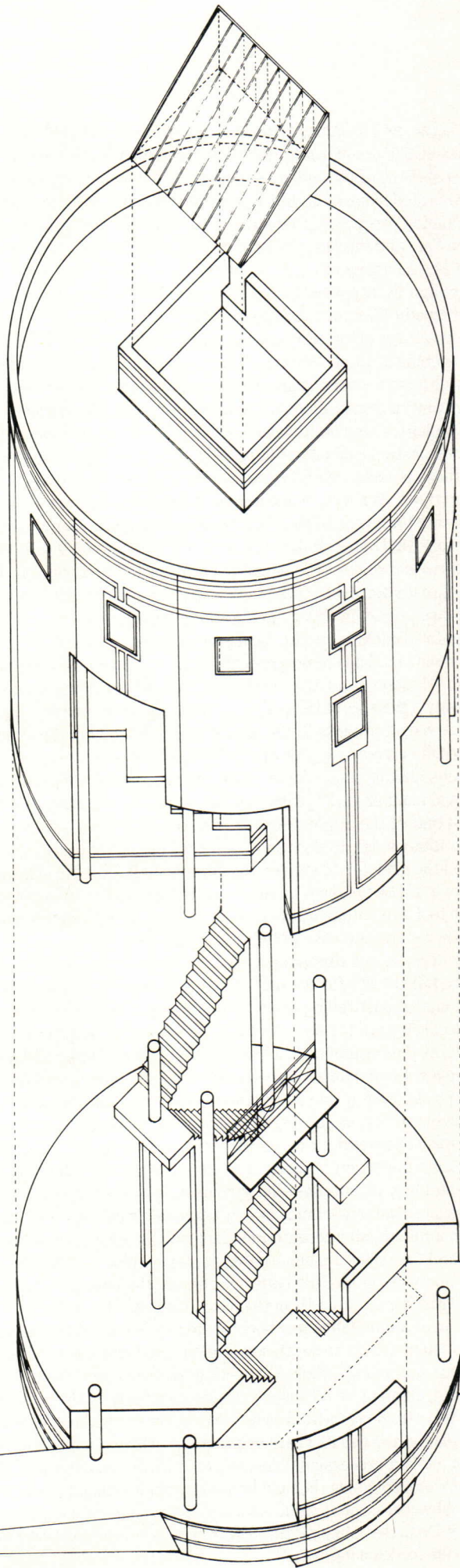


*Schools of Education and Information Systems, and Climatic Research Unit
University of East Anglia
Norwich, England*

Architects:
Rick Mather Architects—Rick Mather, Bill Greensmith, Mark Guard, David Naessens, Jim Conti, Edward Fynamore, project team

Engineers:
Alan Baxter and Associates—Martin Hargreaves, Jim Gardiner (structural); Helix—John Swaine, Mark Turner (mechanical/electrical)

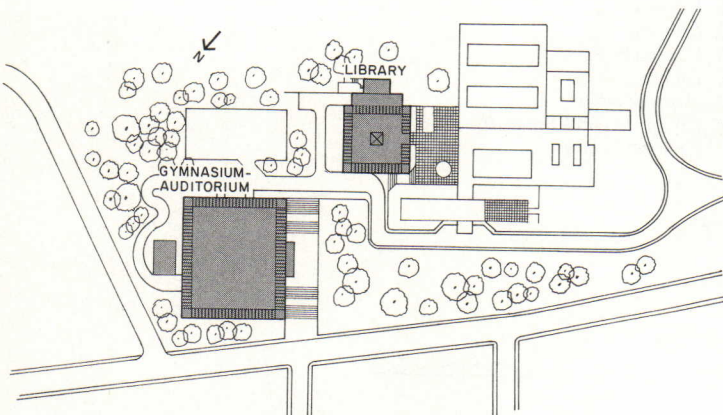
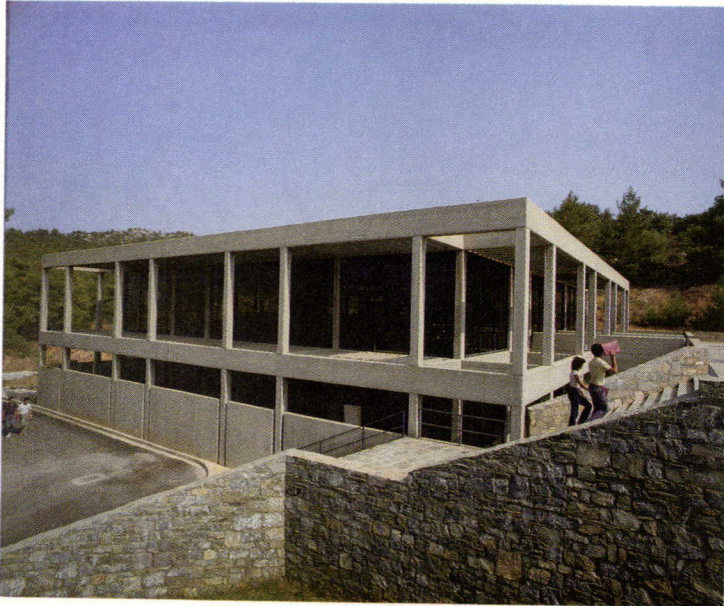
Consultants:
Stockings and Clarke—Mike Cable, David Francis (quantity surveyor)
General contractor:
R.G. Carter Ltd.



1. Entrance
2. Library
3. Computers
4. Offices
5. Central office
6. Bridge to teaching wall
7. Common room

Deree College Library and Gymnasium-Auditorium
 The American College of Greece
 Athens, Greece
 Hugh Newell Jacobsen, FAIA, Architect

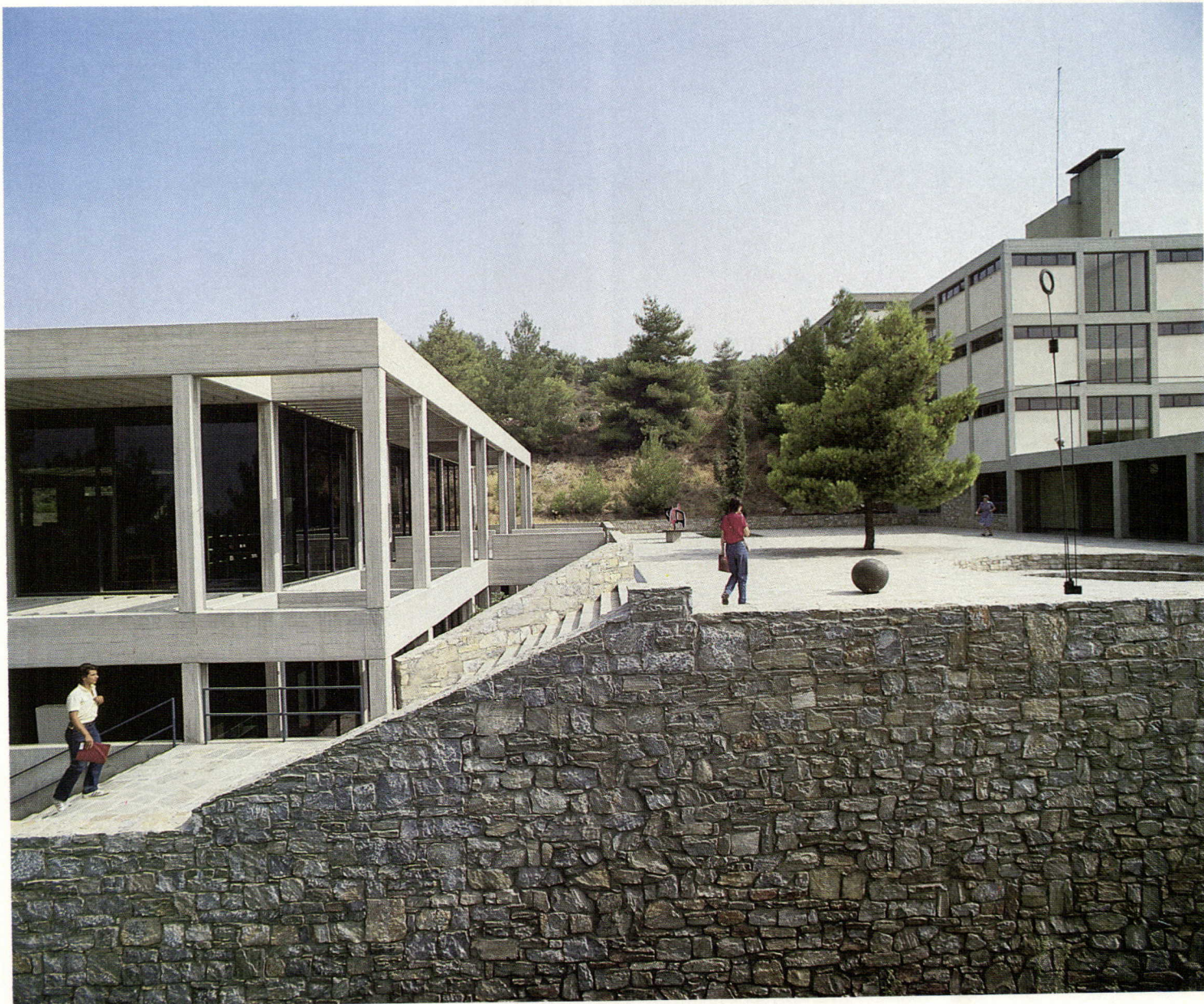
A modern translation



War, plague, and urban sprawl have sporadically uprooted the American College of Greece since it was founded in 1875. Happily, the serene pavilions of the college's present Attic home, perched on a thyme-scented slope of Mount Hymettos, belie this turbulent history. Commanding prospects of downtown Athens, the Acropolis, the Aegean Sea, and the Mountains of Argolis, the 65-acre campus embodies a harmony of classical and modernist order envisioned nearly 30 years ago by city planner and architect Constantine Doxiades. His phased master plan for the American College ranged concrete post-and-beam structures along terraces carved out of the rocky hillside, and linked them in a simple but dignified complex of stoas and garden peristyles (classrooms appear at right in photo opposite). Besides visually unifying the college's two divisions, a girls' high school and Deree College, a university-level academy for men and women, the treasured system lends itself to orderly and economical expansion.

For those reasons and because the sturdy international-style fabric has worn well over time, when architect Hugh Jacobsen received the commission for a new Deree College library and gymnasium, under a grant from the United States Agency for International Development, he chose to embroider on Doxiades's patterns and textures. Moreover, having already finished another school gym in Greece, and embarked on a library project in Cairo, Jacobsen was sensitive to the cultural pitfalls of radical breaks with local precedent, even when the "indigenous" model is of no great antiquity. "Above all," Jacobsen explains, "I didn't want any overt expression of American space-age technology—the sort of thing that would make everyone feel inferior, like some recent projects in the Middle East." Following the example of Doxiades, he erected regular grids of reinforced concrete, the ubiquitous building material of postwar Greece, and roofed them in the traditional manner with "plaka," or flat stone. The exterior palette matches that of the original American College facilities, as do general modular dimensions, though Jacobsen has varied bay widths and extruded the skeleton to enliven rhythmic articulation. He also enlarged windows to make the most of views and natural light ("things the ancients took advantage of though the modern Greeks hardly ever do"), and tempered the sun with tinted glass and brises-soleil.

Precipitous terrain dropping off below the Doxiades compound offered a difficult site for the pair of new buildings, and stringent legal prohibitions against felling trees further complicated the architect's task. Jacobsen gave the two-story library the most conspicuous location available, at the terminus of a through-campus axis, while tucking in the three-level gym more discreetly off to one side and downhill. The relative positioning of these structures adheres to conventional academic hierarchy; as Jacobsen observes, "The library houses the most precious possession any school owns, and therefore it should *look* like the most important building. Unfortunately, it's almost never the biggest building on campus—the gym usually is, even though, to my mind, it's the least important." A new plaza adorned with sculpture and a sunken amphitheater accentuates the symbolic eminence of the library, and furnishes a much-needed gathering place for an almost entirely nonresident student body. One enters the library on its upper level by crossing a bridge from the plaza. Contrary to one's first impression of a templelike pavilion, the library is not a freestanding glass box: annexes on its southeast flank house technical services and mechanical equipment, whose connecting ductwork is a highly visible, even grand, element of Jacobsen's design (overleaf). If the gym (pages 108-109) has also been treated as a "servant space" within the entire campus plan, it too has its share of grandeur. The pathway down to the gym is in effect a processional descent, culminating in a heroic 46-foot-wide staircase alongside the field house entrance. Echoed inside by concrete bleachers, these monumental steps continue the tradition upheld by Doxiades, shaping the requirements of academic routine into an acropolis for learning. *D. B.*



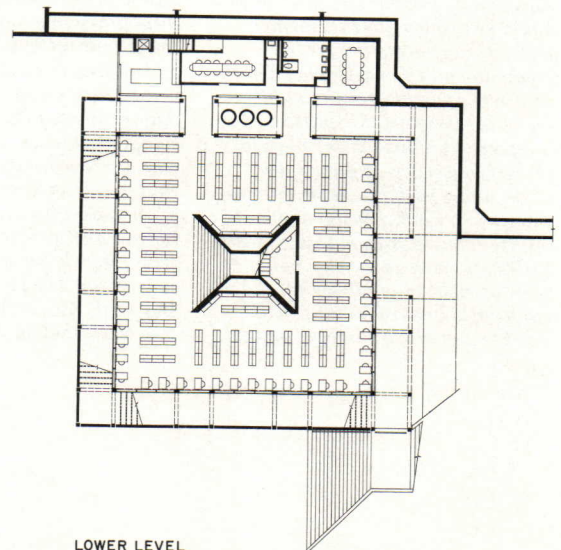
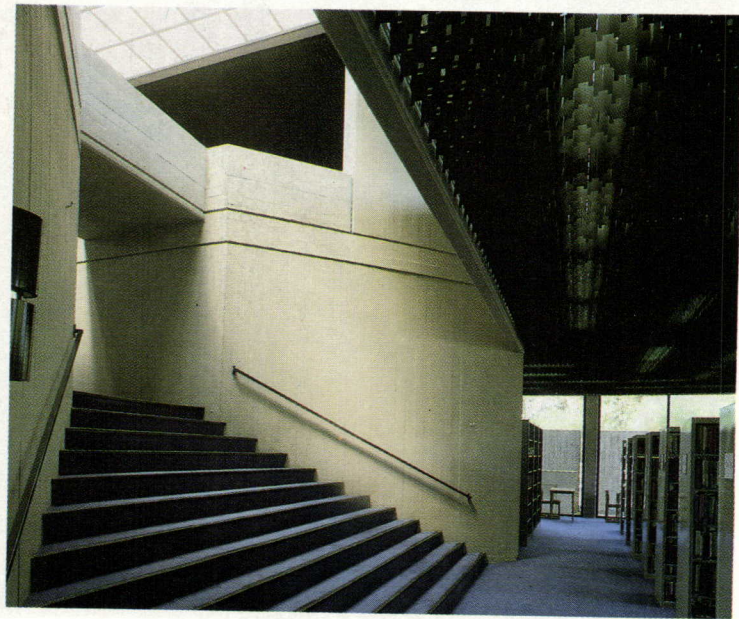
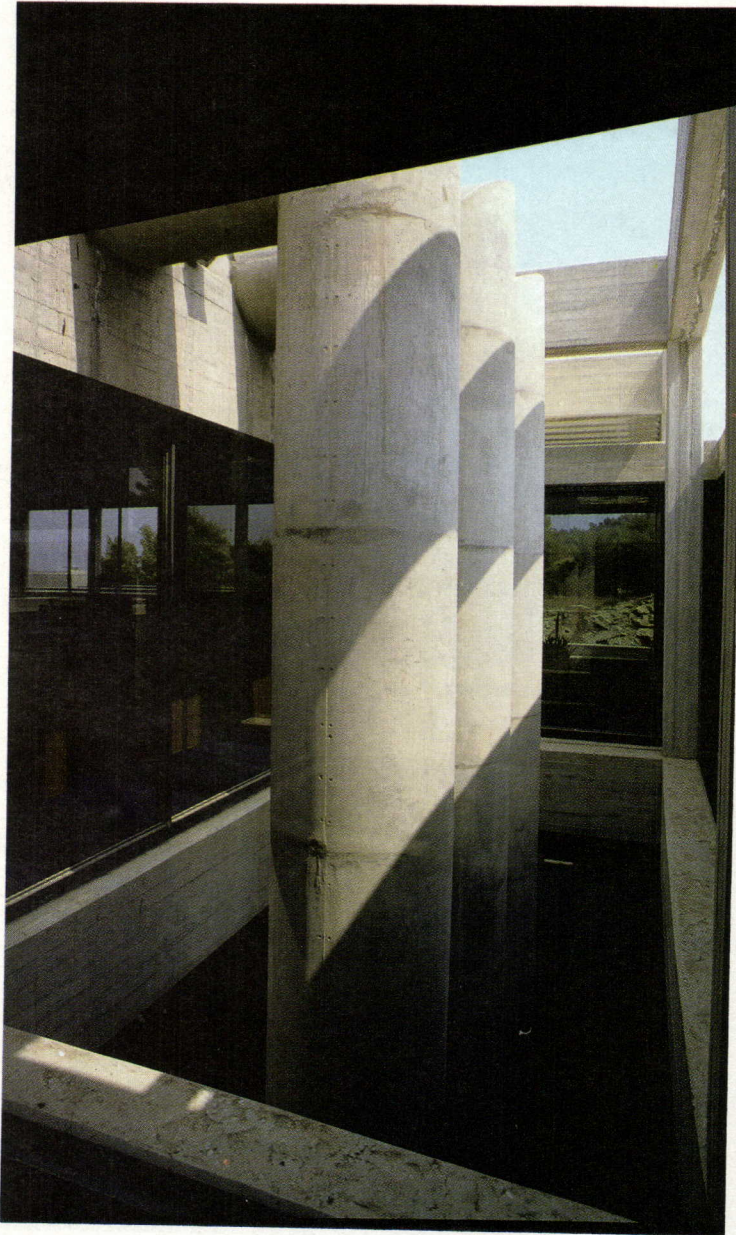
The American College of Greece moved to its present site in suburban Aghia Paraskevi after its former grounds were acquired for the expansion of Athens Airport. Greek architect and planner Constantine Doxiades designed the individual components of his master plan for phased construction during the 1960s, using post-and-beam frames with stucco infill. Clustered about interior courtyards, many of these buildings (such as the classroom block at right in photo above) are essentially inward-looking, with narrow clerestory windows on their

outer walls. Hugh Jacobsen has reinterpreted Doxiades's basic design vocabulary in a more extroverted spirit, enlarging window openings and adding a broad plaza outside the new library to form the college's first major community meeting place, complete with an amphitheater for outdoor teaching, in time-honored Hellenic tradition. The employment of an American architect for the library and gymnasium was stipulated by the primary funding source, the American Schools and Hospitals Abroad (ASHA) program of AID. Nevertheless, Jacobsen was

determined "to use only the palette available in the land, use only material I could buy off the shelf in Greece, and try to use engineering that has been around since the beginning of time." Plaza sculpture is by the Greek artist Takis. The 13,600-square-foot library shelters some 100,000 volumes and 140 readers in a glass box nesting inside a cage of sun screens. The brilliant sunshine of Greece also necessitated dark-tinted glazing. By night, though, when it glows from within, the library is the cynosure of the whole campus.

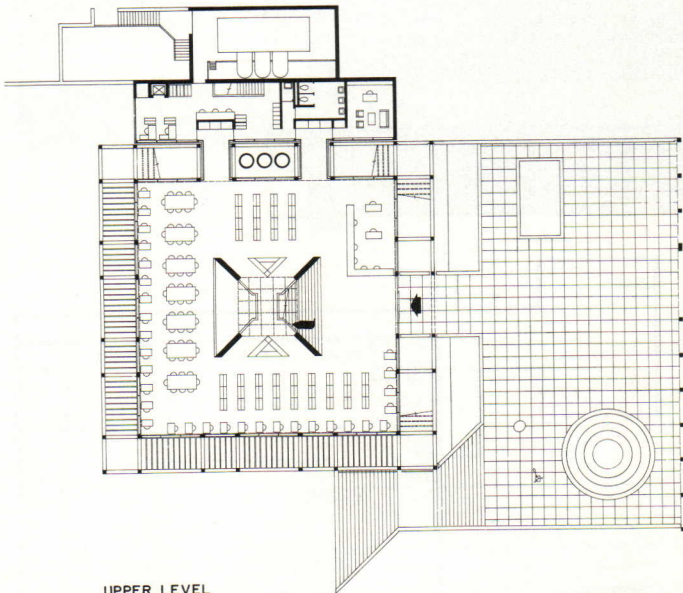
The library bridge and plaza-level entrance are directly on axis with stairs leading down to lower-level stacks and readers' stations (photo below right). To counteract the gloomy associations of descending into a basement, Jacobsen opened a skylight over the stairwell, dramatized the flights of steps with splayed walls and a central bridge, raised the downstairs ceilings a foot higher than those above, and

provided sliding glass doors and a graveled sculpture garden around the ground-floor perimeter. Along the southwest front, which looks into the dry moat spanned by the plaza entry bridge, canted retaining walls faced with bluestone plaka bounce daylight indoors. Staff offices and library technical services occupy their own distinct wing, linked to the library proper by two more bridges. Between these passageways rise three

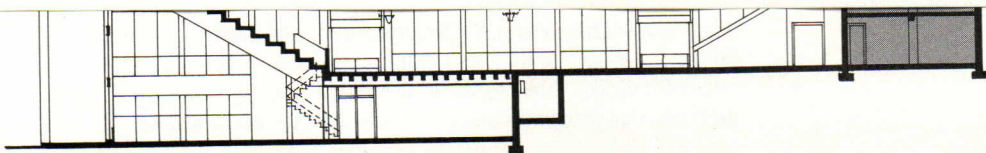


massive cylindrical ducts, dubbed by Jacobsen "the pharaohs' knees" (photo opposite left). The control center for the library's forced-warm-air system is a bunker uphill from the technical services wing (top in plan this page). Interior ductwork is concealed above hung ceilings, whose 30-inch-deep wooden "egg-crate" grid was painted black to convert overhead fluorescent lamps into glare-free down-lights. Oak furniture

was custom made in Greece to the architect's specifications. Card catalogs fit neatly into the angled niches framed by the stairs. The color of the carpet, Jacobsen says, was a foregone conclusion: "In Greece you use blue (Doxiades did, too)—the flag is blue, the sky is blue, even the shadows are blue."



UPPER LEVEL



Because it is embedded deep into the slope, the full magnitude of the 32,000-square-foot gym is not apparent from the main campus.

light and shadow and supports window sun screens. Primarily intended to serve the coeducational, university-level segment of the

trusses, conduits, and other mechanical elements, the main level can accommodate two basketball games at once, along with over 1,200

Observatory Hill Dining Hall
Alterations and Additions,
Sprigg Lane Dormitory
University of Virginia
Charlottesville, Virginia
Robert A. M. Stern Architects

A classical education

©Timothy Hursley, The Arkansas Office photos



Modernist shed-roofed wings of the 1974 dining hall (detail above) still rise behind new classical porticoes and door surrounds. The Tuscan order on molded brick plinths derives from The American Vitruvius. Besides adding room for 200 seats, the porchlike extensions formally relate the structure to the ranges of Jefferson's famous Lawn, over one-half mile away. "The symbolic focus of the University is the Lawn," says Stern, "but it's a little acknowledged fact that few students actually have to go there any more. One has to take the position that Jefferson could have imagined his scheme extended around the campus. The dining hall is then an intellectual but not a literal piece of the Lawn."

No locus classicus in the history of American architecture is cited more often, or more reverently, than Thomas Jefferson's "academical village" at the University of Virginia. Such is the iconic stature of this landmark that first-time visitors are apt to wonder at the seeming indifference to Jeffersonian precedent evinced by a number of modern buildings on the same campus. The esthetic disparity is all the more striking in modernist structures of the 1960s and '70s whose perfunctory "contextualism" stops at using red brick and white trim but patently lacks the Classical proportions and ornament that ensured continuity among earlier generations of university buildings, regardless of their individual merit. During his five years as dean of the University of Virginia School of Architecture, and chairman of the campus architect selection committee, Jaquelin T. Robertson has set himself the goal of once again "encouraging architects who are sympathetic to the Jeffersonian tradition to work here." The rewards and challenges implicit in this continuing mission are manifest in two recent projects, a 100-bed dormitory complex and a dining hall addition and remodeling designed by Robert A. M. Stern Architects.

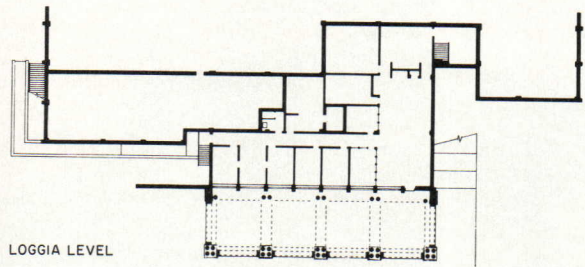
Responding to a request for proposals issued by the State of Virginia, the Sprigg Lane Dormitory (see pages 114-115) exemplifies the budgetary restraints that inevitably govern architectural patronage at a public institution. In this case, the terms of a two-stage design/build competition dictated construction costs of \$65 per square foot, thereby limiting the ornamental refinements of Stern's neo-Georgian scheme to little more than the skimpy repertoire of 1950s garden-apartment "colonial." To forge a link with Jefferson and his classical successors, Stern had to rely on kindred materials, hues, and massing. His parti divides the stipulated program area into two blocks flanking a courtyard, a strategy that enabled the hip-roofed buildings to respect the scale of a historic farmhouse and prewar dormitories nearby while, at least in spirit, evoking the intimate scholarly enclaves that border the great Lawn below Mr. Jefferson's rotunda. The interiors at Sprigg Lane are, in the architect's words, "bare bones" but the plan displays a variety of individual room types and gathering places uncommon in many dormitories elsewhere on campus—even those built during the era when classicism was still the only proper style in Charlottesville.

The programmatic impetus for expanding a barely 10-year-old dining hall on Observatory Hill was an urgent necessity to feed the residents of a new 600-bed dormitory. Just as compelling, though, in the minds of university administrators, was the need to camouflage an architectural embarrassment: a shed-roofed structure whose banal exterior and warehouselike interior ("a parody of a Howard Johnson's," says Stern) were ill-suited to lure student custom away from restaurants in town, or to convey a gracious welcome to the freshmen and parents who arrive here for orientation. Without totally masking the main structure (detail bottom left), Stern articulated its monolithic bulk—and added the space required—by extending porchlike pavilions to the north and south. Superimposed on brick arches where the hillside steps down, the four-bay classical porticoes recall the multilevel serial parti of Jefferson's academic townscape, a connection that is reinforced by specific references to columnar orders and Chinese Chippendale railings along the Lawn. "This is meant to be serious, scholarly classicism," Stern explains. "It is not to be confused with the cartoon classicism which we ourselves sometimes use for other purposes, and which many people now seem to use for any purpose at all." Inside, similar formal devices endowed the amorphous mess hall with as much decorum as a busy cafeteria can handle comfortably. Traditional civility is reaffirmed without cumbersome antiquarianism: witness the uncanonical steel-mullioned window walls, uplighted cornices, and free-plan dishwashing room. "Jefferson was an enthusiastic gadgeteer," Stern observes, "and he also believed that classicism was the modern way of building. I like to think he would have appreciated our attempt to make this project as advanced as possible—and classical." D. B.

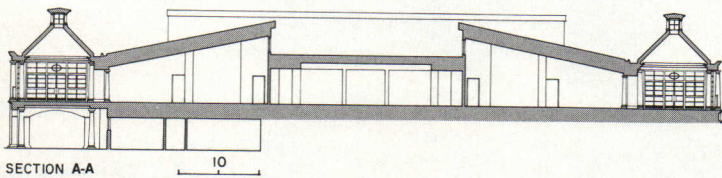




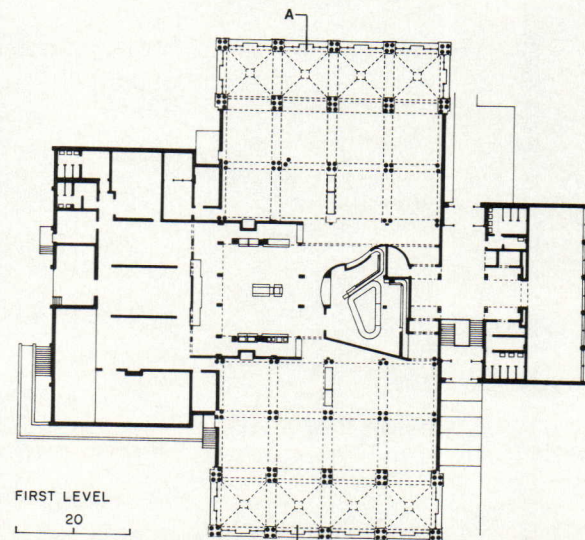
The section through the downhill loggia emphasizes Stern's use of a classical schema to rationalize irregular site conditions. It is hoped that the loggia may eventually become a terrace for fast food al fresco. Even the dining rooms upstairs suggest airy porches, thanks to steel-framed window walls, French doors, and roof lanterns. Stern carried his columnar order indoors to segment the barnlike volume into more intimate bays. The bay system is reinforced by pyramidal ceilings, vinyl-tile floors reminiscent of terrazzo paving, and trusses inset with overscale fretwork, a favorite Jeffersonian motif. While citing the influence of Jefferson's linked pavilions, Stern acknowledges another source: "The dining hall also goes back to my knowledge of Kahn's ideas about the space made by four columns and light from above, and about making a building out of series of smaller components." The curves of a new dishwashing room insert a free-plan element into the classical grid. "To me," Stern says, "the freedom of the free plan has always been the freedom of responding to the everyday, whereas classicism is the architecture of great occasions. We made a place where dining can be a great occasion but we also faced the reality of dirty dishes." Durably elegant "school marm" chairs reflect the same ideal.



LOGGIA LEVEL



SECTION A-A



FIRST LEVEL

*Observatory Hill
Dining Hall
Alterations and Additions
University of Virginia
Charlottesville, Virginia*
Architects:
Robert A. M. Stern Architects—
Roger H. Seifter, associate-in-charge;
Thomas A. Kligerman, assistant
Associated architects:
Marcellus Wright Cox & Smith, P. C.

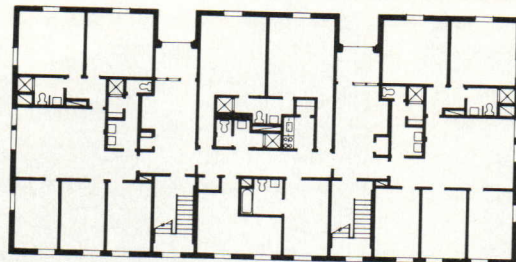
Engineers:
Harris, Norman and Giles,
Consulting Engineers (structural);
H. C. Yu and Associates (hvac/
electrical); Oscar Berninger (food
service); J. K. Timmons and
Associates (civil)
Lighting consultants:
Carroll Cline, Incorporated
Consultants Ltd.
General contractor:
Kenbridge Construction Co., Inc.



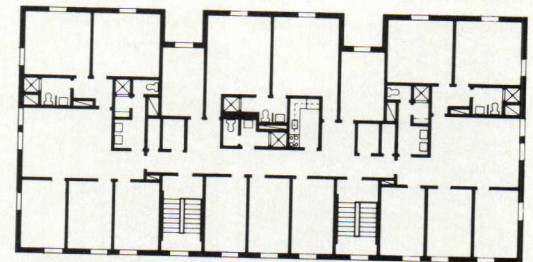
Initial proposals to build the Sprigg Lane dormitory (officially known as Hoxton and Lewis houses) stirred up local controversy over the threatened loss of specimen trees and encroachment on the grounds of Morea House, home of an early University professor. Stern's design attempted to minimize the visual intrusion by dividing the 22,500-square-foot program area into two blocks on either side of a courtyard.

The structures are oriented to preserve a venerable linden tree to the north and afford views of the surrounding arboretum. In their materials, color values, and basic neo-Georgian mien, the new buildings also respond to prewar dormitories next door (at right in photo below), although current economics forbade the repetition of stone belt courses and fancy millwork. Nonetheless, a pedimented

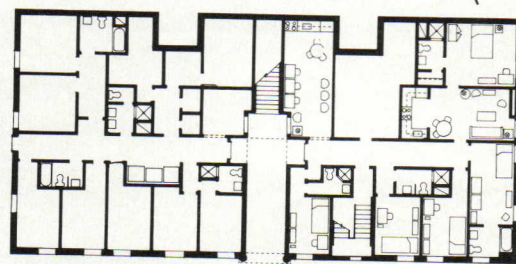
frontispiece, indented bays, garden gates, and arched chimneys lend Stern's design a modest but compatible dignity. The ground-level portal in the east range (flanked by rooms for handicapped students) starts a vertical entry sequence that breaks down each building into smaller "houses" accessible from doorways facing the courtyard. Ductwork and vents are channeled through the chimneys.



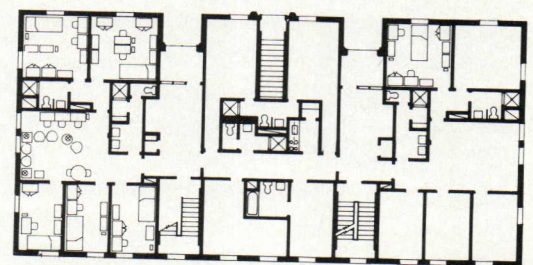
FIRST FLOOR WEST BUILDING



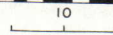
SECOND FLOOR EAST AND WEST BUILDINGS

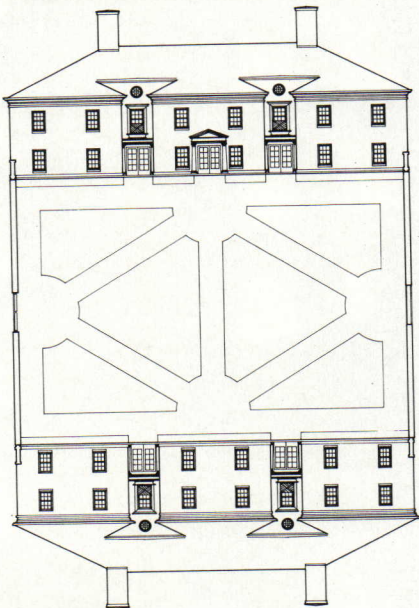


BASEMENT EAST BUILDING



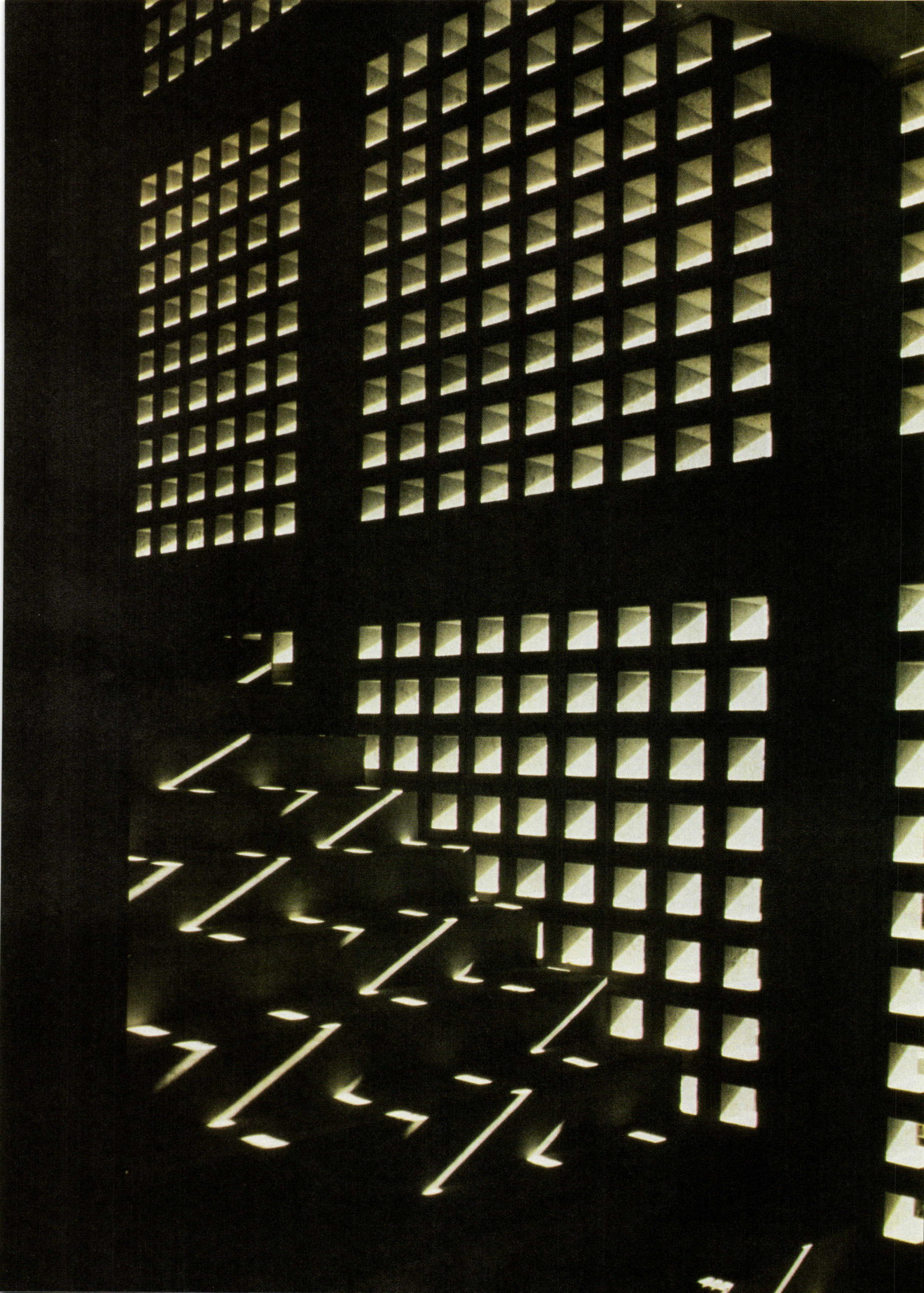
FIRST FLOOR EAST BUILDING





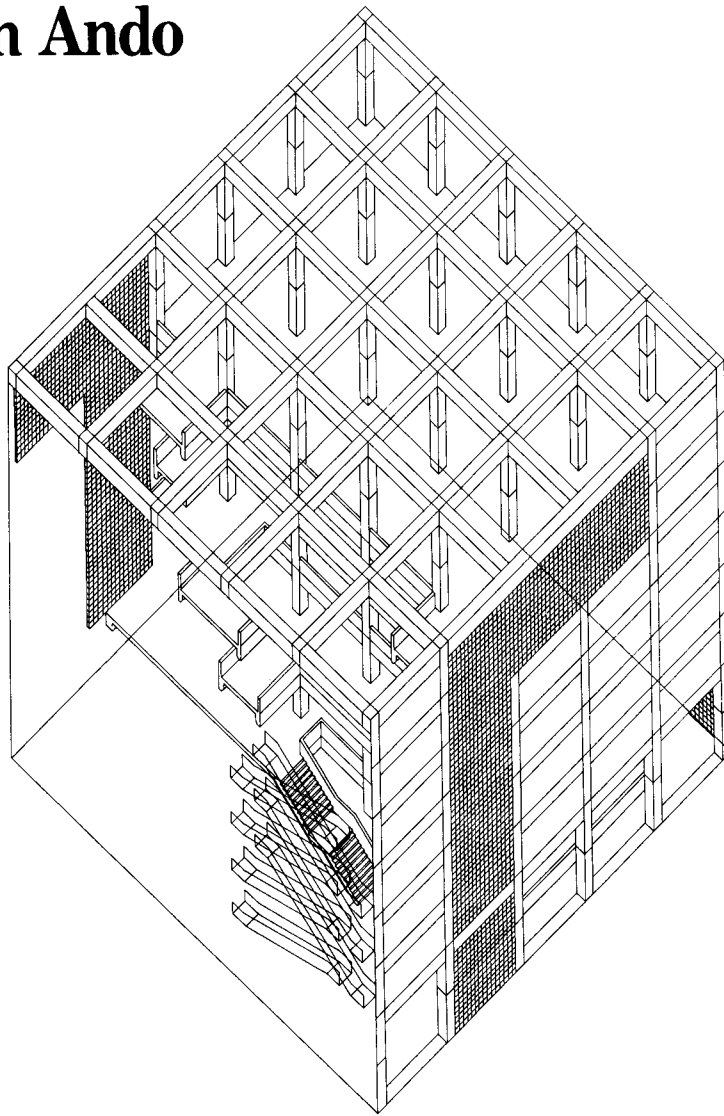
*Sprigg Lane Dormitory
(Hoxton House and Lewis House)
University of Virginia
Charlottesville, Virginia*
Architects:
*Robert A. M. Stern Architects—
Roger H. Seifter, associate-in-charge;
John Ike, assistant*
Associated architects:
Marcellus Wright Cox & Smith, P. C.

Consulting architect:
T. Randolph Wells
Engineers:
*Harris, Norman and Giles,
Consulting Engineers (structural);
H. C. Yu and Associates (hvac/
electrical); J. K. Timmons and
Associates (civil); Gary L. Clower
Associates (land planning)*
General contractor:
Heindl/Evans, Inc., Design-Build



Shopping with Ando

Two projects in Japan
Tadao Ando Architect & Associates

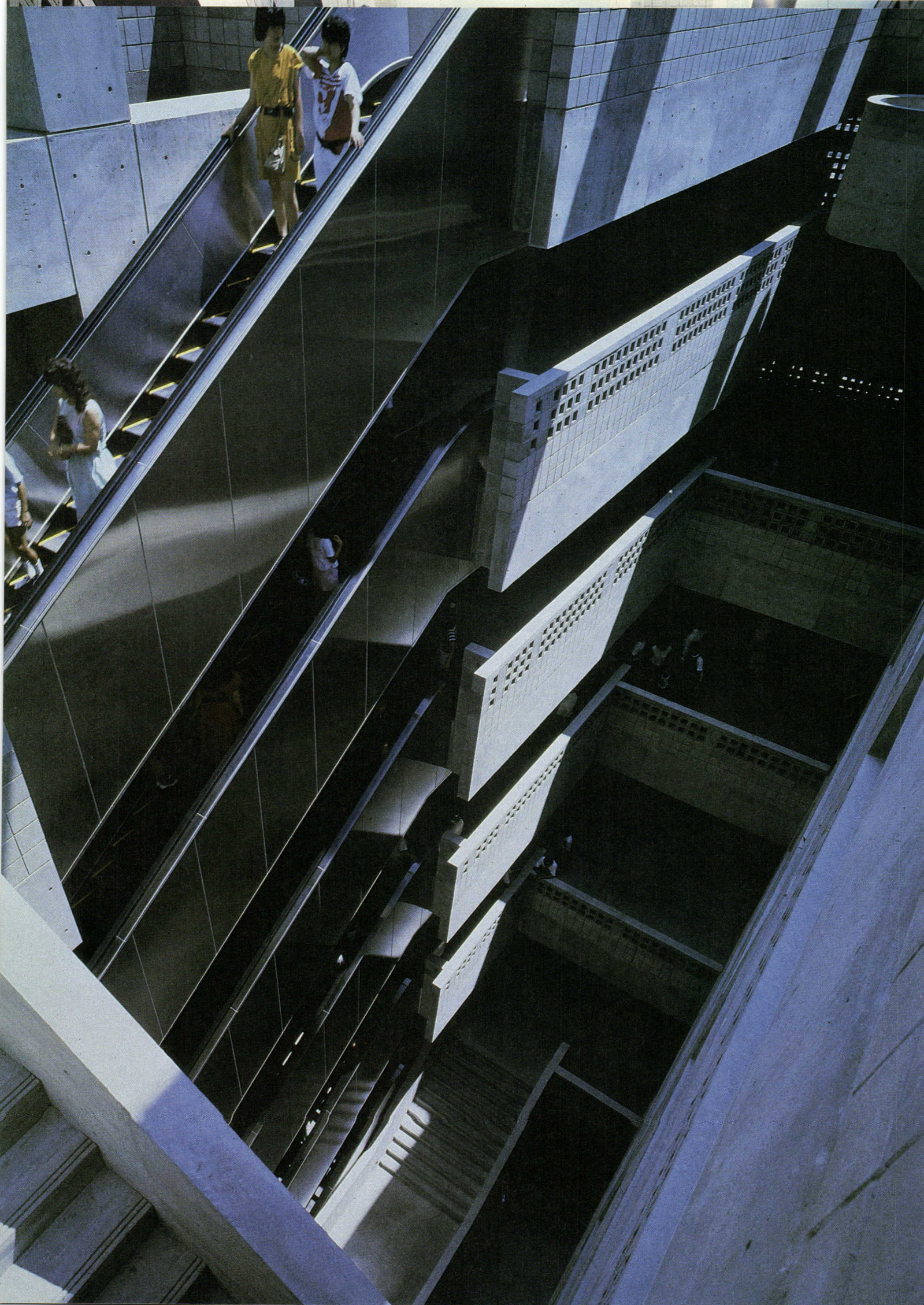


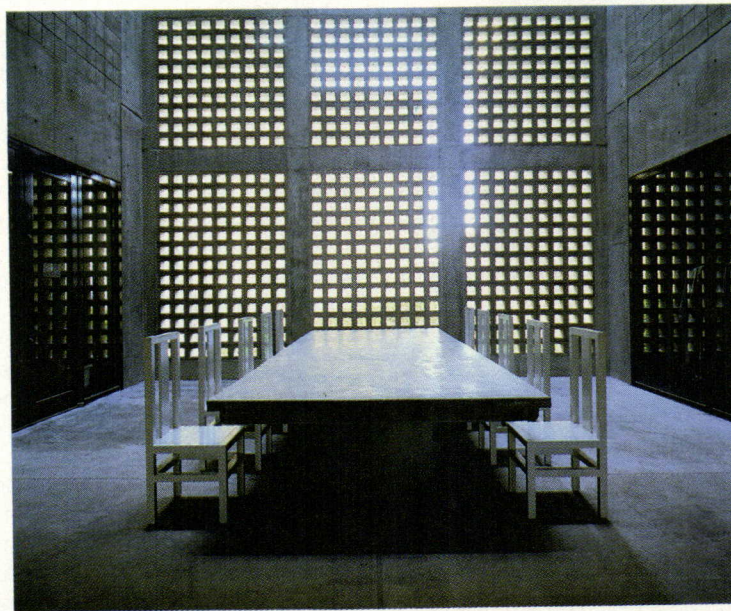
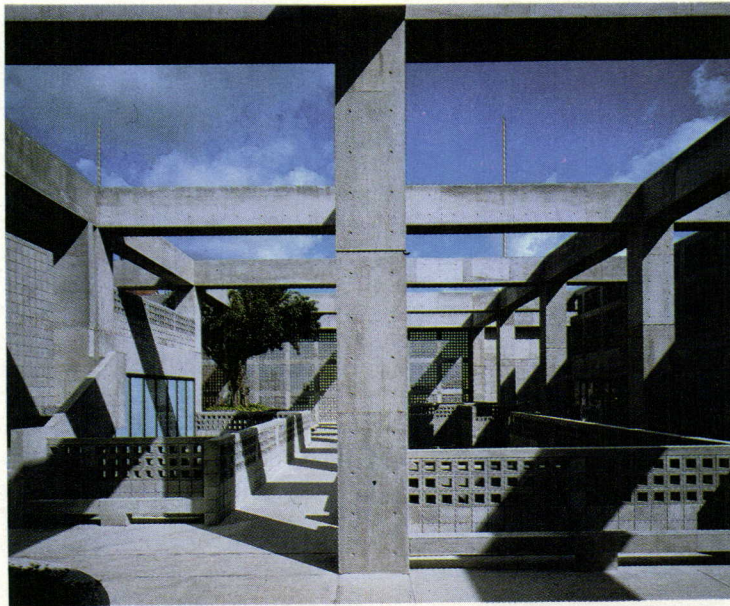
In the introduction to a recent monograph on his work, the Japanese architect Tadao Ando wrote, "I do not believe architecture should speak too much. It should remain silent and let nature in the guise of sunlight and wind speak." Ando expresses this laconic philosophy in austere, bare-concrete structures imbued with a singular, fundamentally Eastern, view of the natural world and man's relation to it. Like the classic Japanese garden, which encloses a microcosmic landscape, or the *sukiya* teahouse where, in Ando's words, "limitless extension is suggested by an extremely small space . . . eternity is represented by a moment into which everything is metaphorically compressed . . .," his architecture defines spaces whose internal purity implies oneness with a greater order beyond its walls.

This transcendental simplicity is most striking in the dour, monochrome houses that compose the bulk of the 44-year-old Osakan's oeuvre, if only because these dwellings seem so alien to conventional Western ideas of "home," and so thoroughly withdrawn from the modern cities or suburbs that surround them. The architect himself describes these courtyard houses as havens where contemporary Japanese can recover the sense of union with nature that was cherished by their ancestors but nearly lost amid postwar urban and industrial growth. Of a house he built three years ago Ando has written: "There is nothing in the present chaos and physical heterogeneity of the city that I want to acknowledge as a context. I want to build on the basis of geometric order, enclosing a void and introducing sunlight, wind and rain. I want to restore, in a manner of speaking, a sense of nature to a city from which verdure has nearly vanished." Though consciously rooted in his native culture, Ando is not chauvinistic. He relies exclusively on the standardized techniques and structural elements of international modernism, and avoids any formal reference to shapes or decorative motifs derived from indigenous pre-industrial prototypes. Self-taught by studying the work of many masters at home and abroad, he seems most akin to Louis Kahn—not only in his pursuit of elemental

geometry, or the transformation of finely honed concrete into a luminous spatial boundary, but in his ultimate search for an architectural language where functional, rational articulation matters less than a poetic, spiritual presence.

Can Tadao Ando successfully translate his reductive poetics from the subtle monologue possible in a house to the polyglot discourse of the public domain? Ando's desire to effect this translation, the obstacles he encounters in doing so, and the persistence of his original idiom are all evident in two of his latest projects, *Festival*, a shopping mall in Okinawa (opposite, above and overleaf), and *TIME'S*, a collection of boutiques in Kyoto (pages 122-123). Probably because it is by far the larger of the two buildings and the more programmatically complex, *Festival* shows a more obvious diffusion of the sculptural intensity that pervades Ando's houses. In both projects, of course, architectural focus is inevitably softened by visual messages beyond the architect's control. Ando still speaks of making a place for nature amid the megalopolis, but now, differentiating his commercial schemes from his residential work, he also voices an obligation to connect with the existing urban fabric, and talks of organizing buildings around interior "streets." The language is familiar, but the result is quite different from the studied complexity and contradiction Western (and many Eastern) designers have in mind when they recite these urbanistic shibboleths. Ando makes no gesture toward ornament or overt historical recall, and his sense of scale is stubbornly autonomous. The imprint of a single logo on *Festival's* exterior grid seems awkward and fussy. If panels of hollow concrete blocks on the mall facades bring any forerunner to mind, it is the grillework of a modernist parking garage. *TIME'S*, located beside a scenic landmark, is overtly unpicturesque. Yet both buildings frame glimpses of beauty that invite contemplation—sunbeams glancing across a staircase, leaves rustling in a roof garden, water shimmering below a windowsill. For a moment, quietly, architecture speaks of something that isn't for sale. *Douglas Brenner*





Beyond the sum of its various commercial functions—shops, restaurants, cafés, banks, and even a discothèque—Festival is meant (as its name implies) to provide a lively community gathering place. Ando describes his interior pathways, plazas, and roof garden, which stay open day and night, as helping to compensate for the dearth of parks in Naha—a common lack in crowded Japanese cities. What looks like a board room on the fourth floor (lower photo this page) is a public meeting hall where shoppers or casual strollers can pause to rest. Escalators gleam dramatically in the tropical sun against a shadowy backdrop of concrete balconies (roof-garden foliage will eventually create a natural parasol overhead). Ando achieves his most theatrical effects through the play of light and shadow across stairways. He stresses the importance of these alternative pedestrian routes as a means of conveying a sense of discovery and a kinetic experience of three-dimensional volumes.

Festival

Naha, Okinawa

Sponsor:

Hamano Institute

Developer:

Okinawa Sun-Rise
Development Co., Ltd.

Architects:

Tadao Ando Architect &
Associates—Tadao Ando, principal-
in-charge; Takao Shima,
project associate

Associate architect:

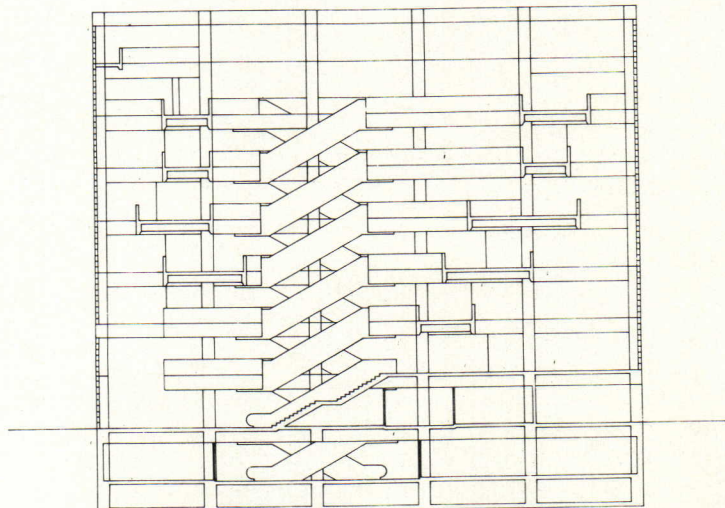
Kuniken Ltd.—Shunji Fukuda,
project associate

Engineer:

Kuniken Ltd.

General contractors:

Takenaka Komuten Co., Ltd., and
Kokuba Gumi Co., Ltd.

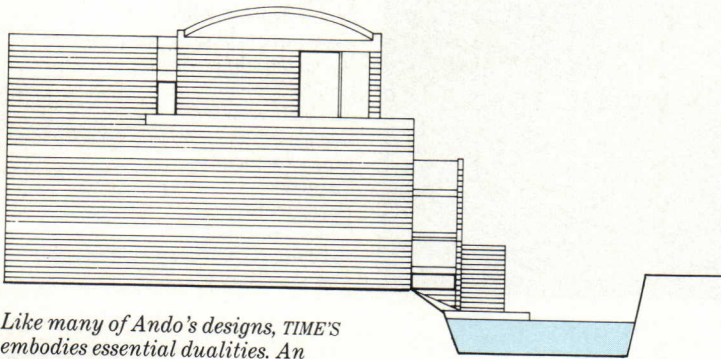


Borrowed scenery

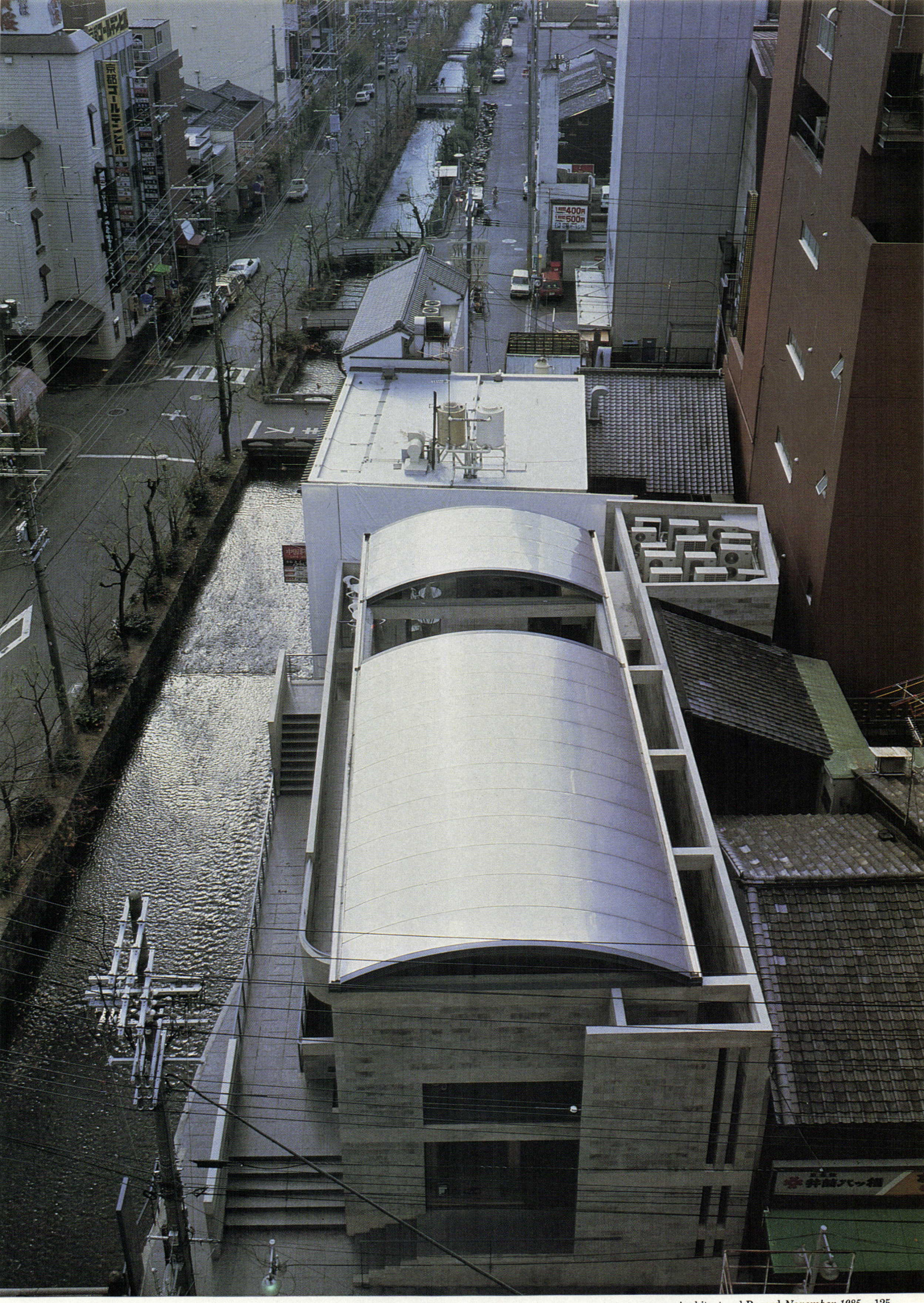


A conversation between proper Japanese businessmen might well commence with encomiums on the brilliance of this autumn's maple leaves in Kyoto and a polite comparison of plans to attend that city's plum-blossom festival next February. Worldly denizens of Tokyo and Osaka routinely extol communion with nature as a basic spiritual need, and are likely to regard an occasional pilgrimage to Kyoto as the most expeditious means to that end. The former imperial capital possesses an awesome array of gardens, temples, palaces, and villas that epitomize the exquisite attunement of architecture to connoisseurship of no-less-artfully-contrived landscape. Even the most obviously modernized quarters of workaday Kyoto, outside the bamboo fences of venerable shrines, resonate with unexpected ancient harmonies. Tadao Ando's cryptically named TIME'S building, for example, fronts onto one of Kyoto's busiest shopping streets, yet it also stands on a tree-lined bank of the scenic Takase canal, an offshoot of the Kamo river dug in 1611. Flowing over uniformly rectangular stones laid between walled embankments, the waters of the Takase are mechanically controlled to maintain a constant level. "The water looks so clear and cool that one is tempted to dip one's hands in it," Ando says. "I began with the image of people going down to the stream. I wanted to make people aware of forgotten ties to the environment."

Ando focused his parti on unobstructed access to the water, despite the essential exclusivity of his program: TIME'S is a complex of expensive fashion boutiques, including shops for internationally known couturiers such as Kenzo, Issey Miyake, and Yoji Yamamoto. Without entering any of the stores, or the stylish TIME'S coffee bar, passers-by can step downstairs from the public sidewalk, one full story above the Takase, to a gently curved quay at water level, or upstairs to outdoor promenades. For a relatively compact building—6,600 square feet in all—Ando's reinforced-concrete structure contains remarkably complex circulation. Behind the riverside decks are transverse passageways and tiny open-air courtyards linked to a narrow alley and stairs that separate TIME'S from its next-door neighbor. The circuit returns to the sidewalk from behind an L-shaped screen wall which, along with the alleyway and a visible segmental roof vault, implies that the structure is a freestanding pavilion primarily oriented towards the Takase and the multilevel pedestrian "streets" Ando has built alongside it. The display of merchandise is exceptionally discreet. Shop windows are positioned less for outward show than to connect interiors to the riverside, following a centuries-old principle called *shakkei*, or "borrowed scenery," that visually extends the perceptible limits of Japanese gardens by framing vistas of distant landmarks.



Like many of Ando's designs, TIME'S embodies essential dualities. An obvious contrast between the up-to-the-minute modes on sale inside and the historic waterway outside prompted the building's fashionably English (and oddly punctuated) name. Ando explains his architectural concept: "There are two basic levels to the scheme—the water level and the ground level—and these are connected by stairs. In this way human beings and nature were brought together and architecture was integrated with the environment."





Fringe benefits

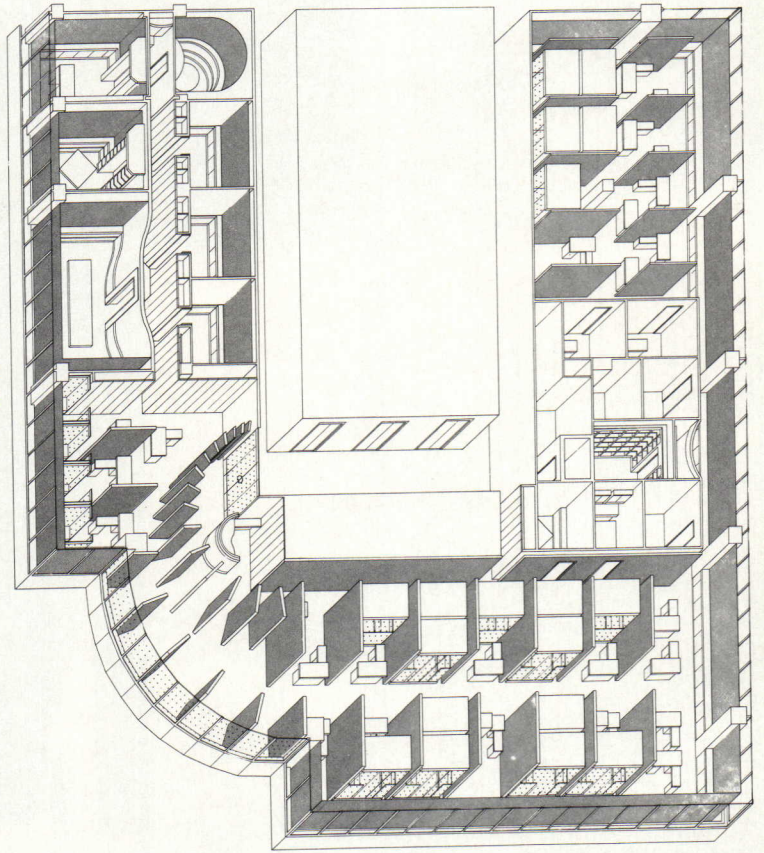
Financial Guaranty Insurance Company
New York City
Emilio Ambasz & Associates, Designers

A pioneer in the growing municipal bond insurance industry, Gerald L. Friedman is used to taking risks. So when he decided to create an image for his latest venture, the Financial Guaranty Insurance Company whose investors include the likes of J. P. Morgan & Company, Merrill Lynch and a host of other Wall Street heavies, he called upon the services of another risk-taker, Emilio Ambasz. "Hiring him wasn't the safest approach, but I knew that he'd give us a sophisticated interior that would stand out from all the Early American offices on Wall Street," he says. For Ambasz, the commission became a challenge to not only solve the usual trade-offs between open vs. enclosed, flexible vs. fixed corporate office space, but to invent a cohesive image for a new company whose perceived worth fluctuates within a fickle market. "The value of our highly specialized bond insurance depends on how investment bankers view us, and part of communicating that value is through the design of our offices," explains Friedman.

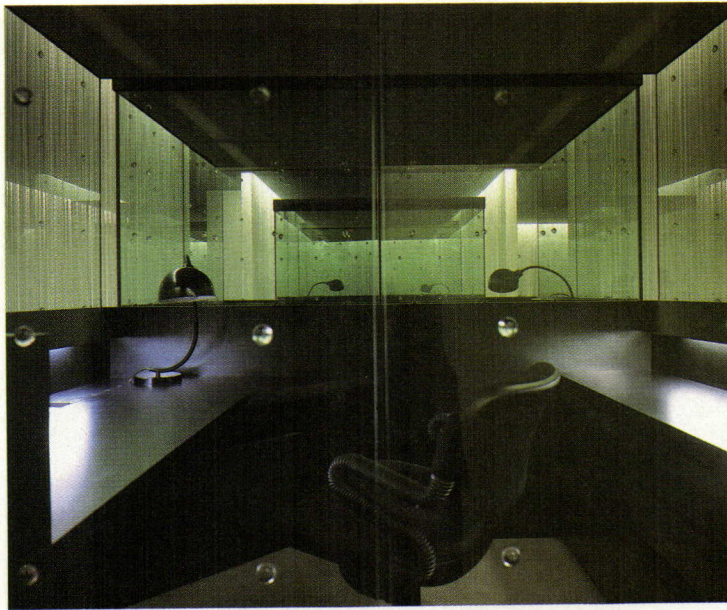
Rather than create a single grand gesture for the firm, Ambasz chose to underscore its changing and progressive nature through an equally ephemeral and unconventional approach. "The suggestion of richness, I believe, comes from that which cannot be measured," the designer maintains. To achieve it, he has returned to a beloved illusionary device—floor-to-ceiling silk fringe—and has combined it with custom-designed work modules to plant a new twist into the now familiar office landscape. Unlike his past interiors for Banques Bruxelles Lambert which utilized similar silk threads to weave contextual associations, the design of Financial Guaranty is stated through more straightforward, self-referential means, but evokes no less an aura of veiled mystery. In the conference rooms and executive offices (left in axonometric, opposite), the fringe is superimposed over blue walls, gradated from light to dark, to suggest the misty shimmer of a distant horizon and is reflected in the shiny solidity of black lacquered door surrounds and marble tables. In the reception area, the gauzy partitions fan out toward the real horizon, a sweeping, silk-filtered view of the South Street Seaport and Brooklyn Bridge from the windows of the waiting area (photo opposite). And in the work areas of the 15,000-square-foot office, a Cartesian grid of circular points serves to ground the gauzy planes of light and to enrich their surrounding surfaces: a modulated relief of sprinkler head discs on the midnight blue ceiling, pattern of circles on the perimeter windows and carpet, and clear hemispheres on the work modules' glass walls.

The work modules, an idea originally developed by Ambasz for his Schlumberger Research Laboratories project in Austin, Texas, were designed as a compromise between the movable flexibility of open office furniture and the acoustical privacy of a room. As discrete architectural elements, each is treated as an autonomous, 6-foot by 8-foot micro-environment with its own floor, desk, lighting, fabric-paneled roof, and fan for air circulation. Glass walls promote staff interaction and visibility, filtered by the silk curtains that hang between each cubicle. To change their configuration within the office floor, the modules are picked up by a forklift and regrouped in a new location (see axonometric drawings on following spread).

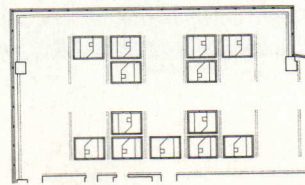
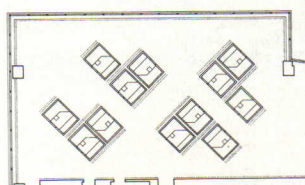
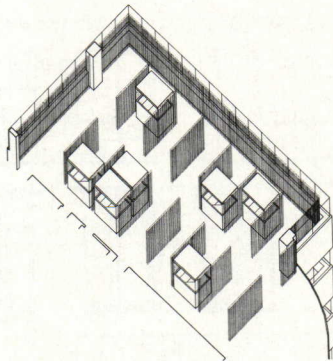
This quality of adaptability proved to be more important than anticipated as the functional and spatial requirements of the company constantly changed with its unforeseen boom in business. As an interim measure before moving to their future Ambasz-designed space on the remainder of the floor and the two below, several of the firm's traders have resorted to twisting, knotting or tying back the silken threads that divide their desks for face-to-face communication. "Like a tender pet, the material allows itself to be caressed without biting back or dying on you," Ambasz wryly observes. It also supplies Financial Guaranty a requisite air of elegance and newfound tradition without resorting to reproduction Chippendale or flying eagles. "The reaction to our offices has been mixed," admits Friedman. "But whether clients like it or not, they never forget it." *Deborah K. Dietsch*







Throughout Financial Guaranty's offices, strands of silk fringe are hung in two layers 6 inches apart and illuminated by recessed ceiling fixtures. The resulting shimmering planes of light are put to practical use in the workaday areas of the office, dividing desks from work modules and eliminating the need for glaring overhead fluorescents (photo opposite page). The work modules, offspring from an earlier prototype for the designer's Schlumberger Research Laboratories project in Austin, Texas, were developed as an ingenious compromise between office landscape and office privacy. Every unit is furnished with a carpeted floor, flanking work surfaces, task lighting and Ambasz-designed ergonomic chair (photo top left). As movable rooms, they can be fork lifted and rearranged into various configurations within the confines of the office floor (drawings below). All share the interior's common hvac supply, which is recirculated up through each module's fabric-covered ceiling by means of a fan. The glass walls of the modules are patterned with plexiglass hemispheres to ground them with a sense of scale within the office landscape (photo bottom left). "They enrich the surface of the glass and shrink it. It's an effect like getting cellophane wet," Ambasz notes. To economically achieve the surface decoration characteristic of the Islamic architecture that he admires, Ambasz has extended the grid of circles onto the custom-cut carpet and rows of sprinkler head covers on the ceiling (photo opposite). The black planes of the module workstations are repeated in the dark wainscoting around the perimeter of the larger room, emphasizing their "box within the box" nature.



The "well-heeled, top-notch" image sought by client Friedman is best displayed in his office, flanking meeting room and in the executive offices and conference room off the sensuously curved hallway (plan below). In a gesture of ceremonial pomp and circumstance, Ambasz framed the portals to these chambers with sculptural black lacquered surrounds (photos this page). Dark polished marble tables and other black furnishings complement the lacquer and reflect light. Blue painted walls, gradated from light to dark, are screened by silk fringe and illuminated behind lacquered wainscoting to give the trompe l'oeil effect of an expansive vista beyond the boundaries of the room. In the executive meeting room (photo bottom right), the fringe has been hung as circular poché in a square space. In the main conference room (photo opposite), the illusion of a vista beyond the fringe becomes reality with a view toward the Brooklyn skyline.



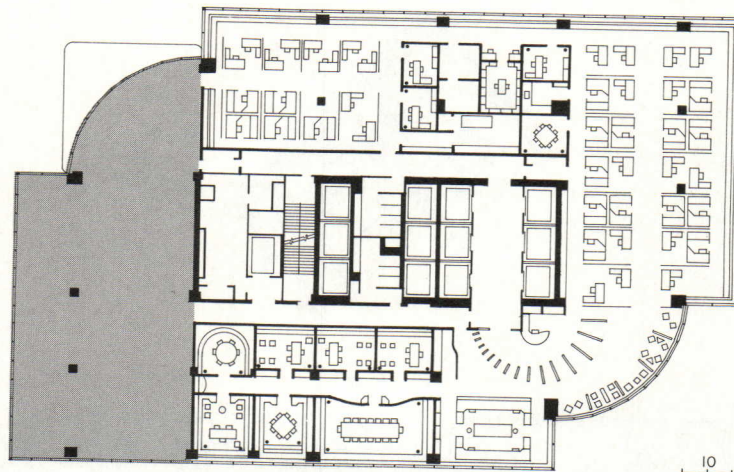
Financial Guaranty Insurance Company
New York City

Designers:
Emilio Ambasz & Associates—
Emilio Ambasz (principal);
Joan Blumenfeld (project
director); Ann Cederna,
Richard Rudman (project team)

Associated architects:
Larsen/Juster—Francine Alheid
(job captain); Carlos Alvarado
(project architect)

Engineers:
Cosentini Associates (mechanical)

General contractor:
George A. Fuller Company—
William Fitzgerald (project
manager); Rich Garbarino (job
supervision)





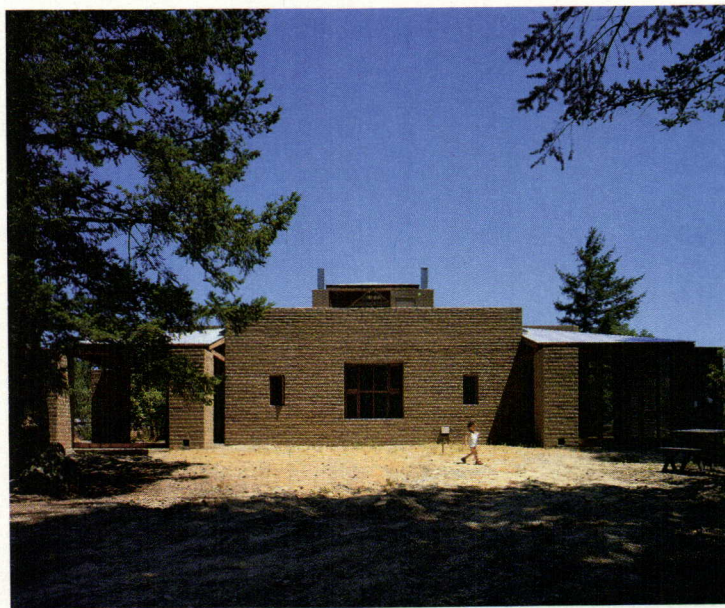




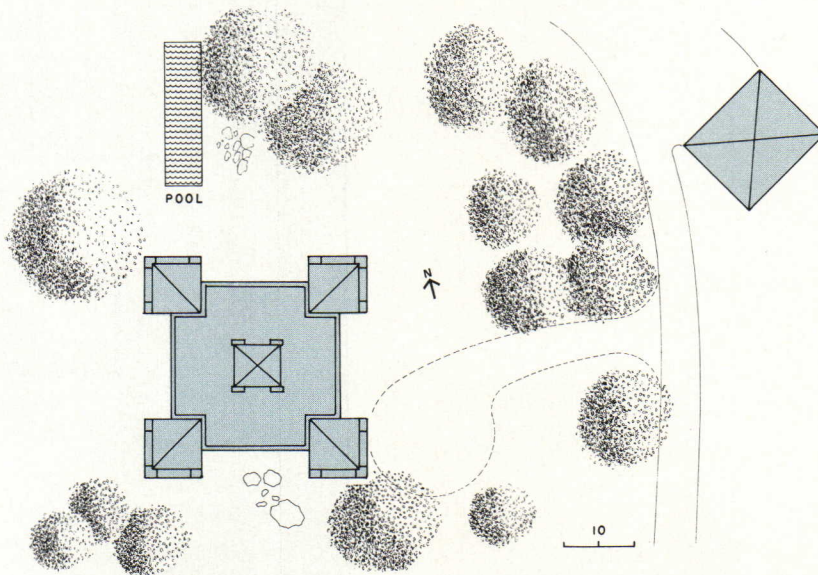
Hildebrandt House
Calistoga, California
Batey & Mack, Architects



© Timothy Hursley photos

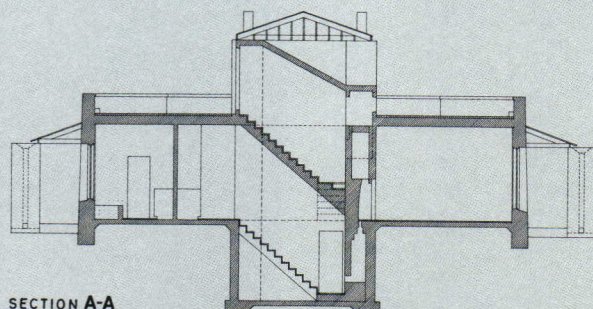


The Hildebrandt House commission arrived on Batey & Mack's San Francisco doorstep because it was the only local firm with a working knowledge of adobe construction, and the clients' "only criterion was that it be adobe," recalls partner Mack. After the initial interview, partner Batey conducted an in-house design competition for the project, and—as some have undoubtedly already noted—Louis Kahn won. For Kahn's Trenton Bath House is very much alive here on "Rattlesnake Ridge," high above the Napa Valley. Adapting the model to suit the architectural problem at hand proved to be easy enough, as not only was the clients' program almost rudimentary (living, dining, sleeping), but the Hildebrandts belong to that rare breed of client that comes unencumbered with strong esthetic predilections. They simply needed a house, and, providing their budget was honored (which it almost was), they preferred to let their architects design it. The result is a simple box with four porches shoved into the four corners (facing page). The insistent symmetry is somewhat countered by the irregular fenestration (photos left). "The basic idea of the house is simply rooms wrapped around a core of four fireplaces [actually three wood stoves and one fireplace]," provides Mack. The four chimneys emerge on the roof (photos left), where they act as columns supporting the corrugated metal roof of the roof pavilion. The aerial look-out was the product of a joint commitment—by architects and clients—to be as unobtrusive toward the site as possible. With the exception of a lap pool (previous pages), intrusions into the landscape were kept to a bare minimum. The Hildebrandts' landscaping plans call for nature to take its course.

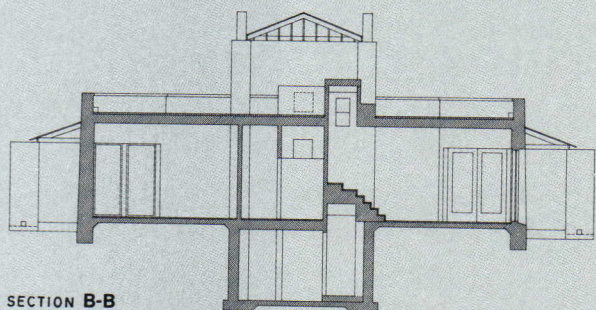


At the heart of the Hildebrandt House lies a tri-level stair tower that connects basement, ground floor, and roof pavilion (sections below). Like an axle holding a pinwheel together, this vertical spine serves as the pivot around which the house's four major rooms revolve (plan below). Though the individual rooms possess a more rugged than genteel charm, their generous proportions and texturally rich materials and

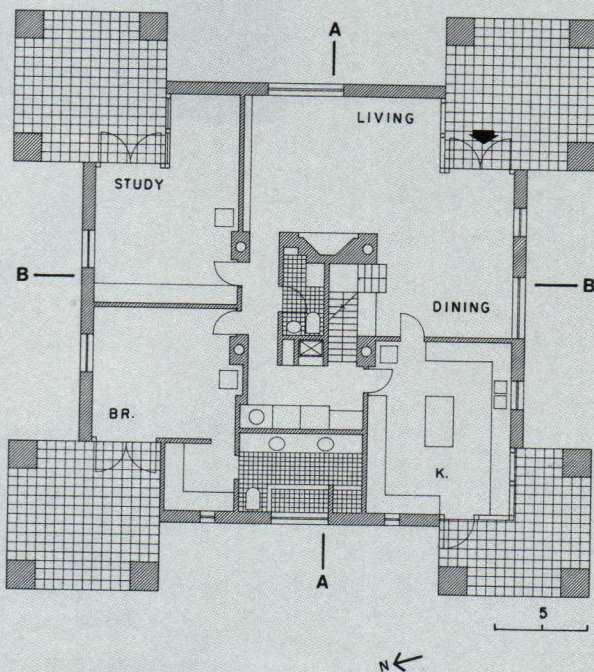
finishes imbue them with a sense of permanence and solidity. "We find it more rewarding to use the available money to make slightly bigger, and better-built rooms," supplies architect Mack, before launching into an attack against what he views as the all-too-popular post-modern predilection for "seductive, but skin-deep" surface treatments. A neutral shade of pale pewter washes the interior walls, which are sometimes



SECTION A-A



SECTION B-B



gypboard, other times adobe block (photos left); the monochrome reinforces Batey & Mack's affinity for "generic" rather than "specific" interiors, in which furniture "floats freely." The Hildebrandt House's oversized windows are oriented not only toward spectacular views of the Napa Valley, but toward such minor natural events as wildflowers and rock formations. In addition to the generous glazing which offers visual

release from the relatively small, 1,400-square-foot house, the four porches notched into the house's corners offer a spatial annex to the rooms they have been attached to: the screened porch off the bedroom, for example, is for sleeping; the one off the kitchen is for dining; the one off the study is for sitting; and the one off the living room is for entering. Up on the roof, of course, there is yet another escape (below).



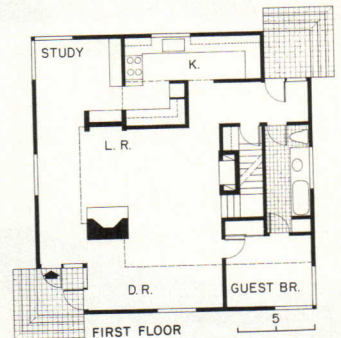
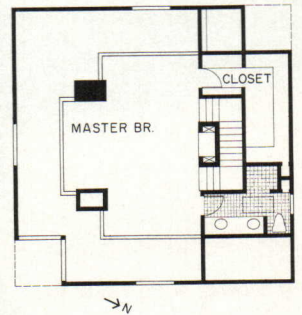
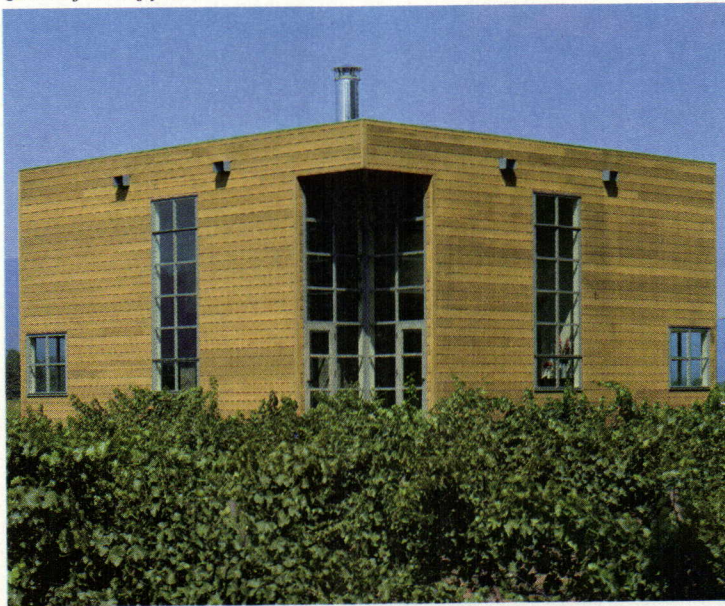
Hildebrandt House
Calistoga, California
Owners:
Jorgen & Marian Hildebrandt
Architects:
Batey & Mack, Architects—
Andrew Batey, Mark Mack, partners-
in-charge; Bruce Tomb, project
architect

Consultants:
Charles Cohen/Cohen & Bruce
(interior design)
Engineers:
Shapiro, Okino & Hom (structural)
General contractor:
Roy Beaman

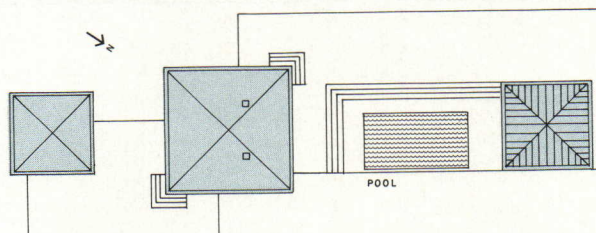


©Timothy Hursley photos

Designed in 1979, and then put on hold until interest rates dropped in 1983, the Rodeno House bespeaks Batey & Mack's quest for a pure and simple architecture. It appears, at least from across the vineyard it sits in, as nothing more than a scaleless box with a corrugated metal lid on it (facing page). At second glance, however, the geometry is revealed to be not quite so pure: two corners of the mustard-yellow cedar cube have been neatly eroded to allow for "front" and "back" doors (plan right). These somewhat dramatic incisions add a level of interest to each of the identical facades—all four of which come complete with one big and one small window. Though signature Batey & Mack, the Rodeno House is also a fitting response to the young clients' request for an affordable, "loft-like" house. While the exterior seems to hold little hope for the interior, visitors are pleasantly surprised—the Rodeno House is arguably, perhaps, the most spatially interesting of Batey & Mack's current house crop. High-ceilinged and flooded with light, visitors have a choice of discrete rooms or open spaces, and a host of intriguing perspectives. Assisting in the interiors' cause is the architects' palette of rugged materials. Though the split-faced concrete block columns supporting the master bedroom mezzanine may not be to everyone's liking, they are characteristic of Batey & Mack's penchant for leaving humble materials humble, and structural supports exposed (photo below). Because the house sits in a flood plain, Batey & Mack elevated it on a massive concrete block plinth; someday, that great masonry base will be extended out into the landscape (master plan below), where it will pick up garage and poolhouse pavilions.



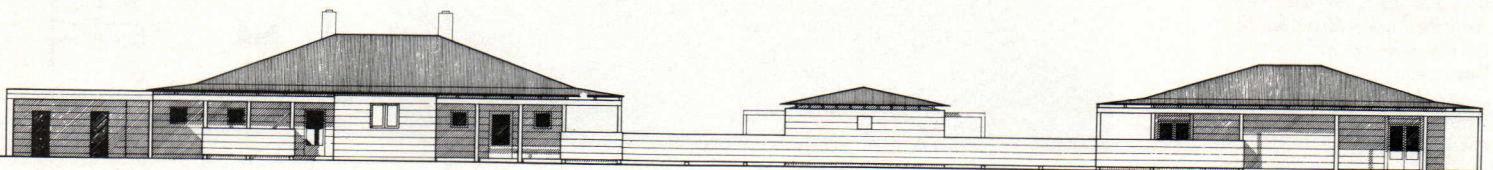
Rodeno House
 Oakville, California
Owners:
 Greg & Michaela Rodeno
Architects:
 Batey & Mack, Architects—
 Andrew Batey, Mark Mack,
 partners-in-charge
Engineers:
 Zucco Associates (structural)
General contractor:
 Friedrich Co.



© Timothy Hursley photos



As the most conventional of Batey & Mack's residential projects to date, the Lieff House is the consequence of a client who "didn't really buy our design idea. . . it was a little too barren," according to partner Mack. "It is less our philosophy and more his house," adds partner Batey. Apologies are unnecessary, however, for though the house may not be the most rigorous rendition of primitivism possible, the architects' variation on the classic California ranch house theme nonetheless addresses the specifics of the commission, as well as the predilections of the owner, with admirable diligence—which most people would argue is a worthwhile cause. Since client Robert Lieff has grown children, he asked for two houses—one for him and one for them. Batey & Mack added a third service building for the pool, and then strung the resultant three pavilions along a heavily-wooded knoll overlooking the 40-acre site. In contrast to the Hildebrandt, Rodeno, and Knipschild houses (page 133), the Lieff House does not stand quite so independently from the landscape. It is less of an object, which means that it is also less didactic (man vs. nature), with a more informal relationship between outside and in. Assisting in that perception is quasi-suburban landscaping (photo left), wooden fences enclosing open-air "rooms" (plan right), and stone terraces and retaining walls. The Australian farmhouse-inspired verandahs offer an intermediary zone between inside and out, which takes advantage of the Napa Valley's benign climate. Simple post-and-lintel construction, humble corrugated metal roofs, and a concrete base ensure that the large, 4,500-square-foot house not be a pretentious one. A muted pink-and-gray palette assists.



*Lieff House
Oakville, California*

Owner:

Robert Lieff

Architects:

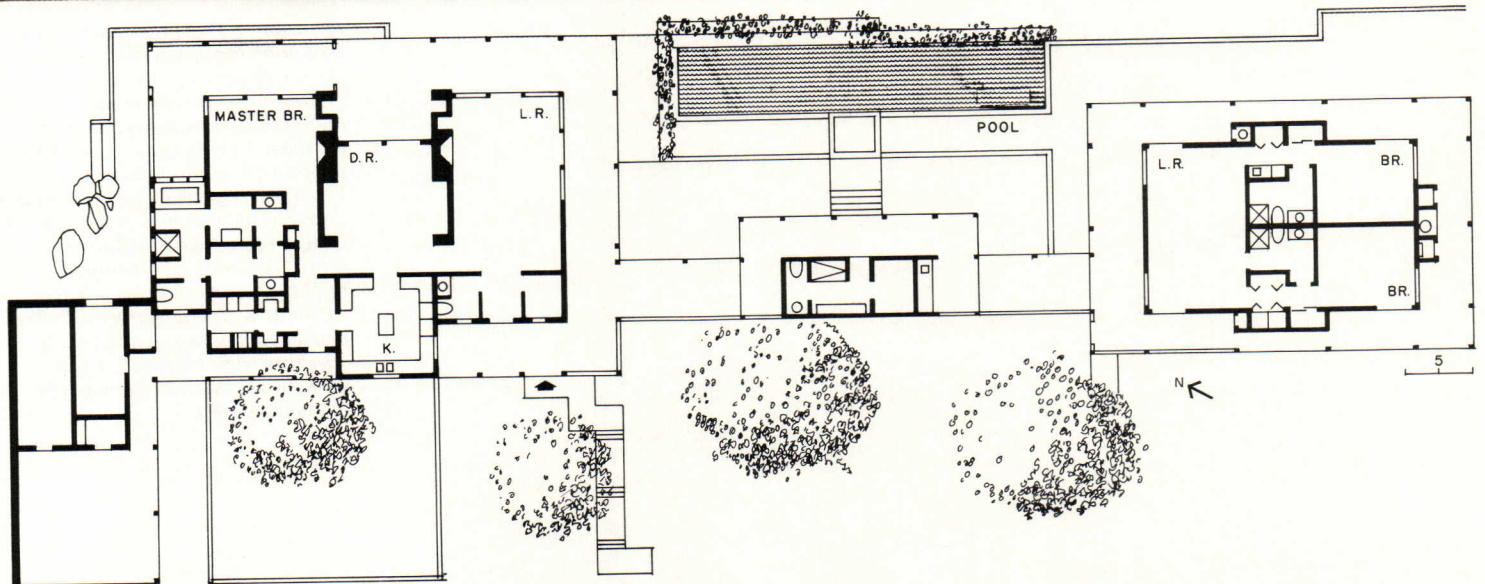
Batey & Mack, Architects—Andrew Batey, Mark Mack, partners-in-charge; Ajax, project architect

Engineers:

Zucco Associates (structural)

General contractor:

Friedrich Co.



©Steve Rosenthal photos



From one of the special tiered boxes that flank the proscenium (above), the privileged spectator commands a panorama of the rest of the audience, an indispensable part of the theater-going experience, in the opinion of architect Benjamin Thompson. Sparkle and richness are also part of the experience, supplied here by custom-designed glass lanterns, a profusion of brass brightwork, ornamented plaster balconies and mahogany walls. The plaster balconies and wood walls also have basic implications for acoustic sparkle and warmth (see following pages).

Technique made invisible



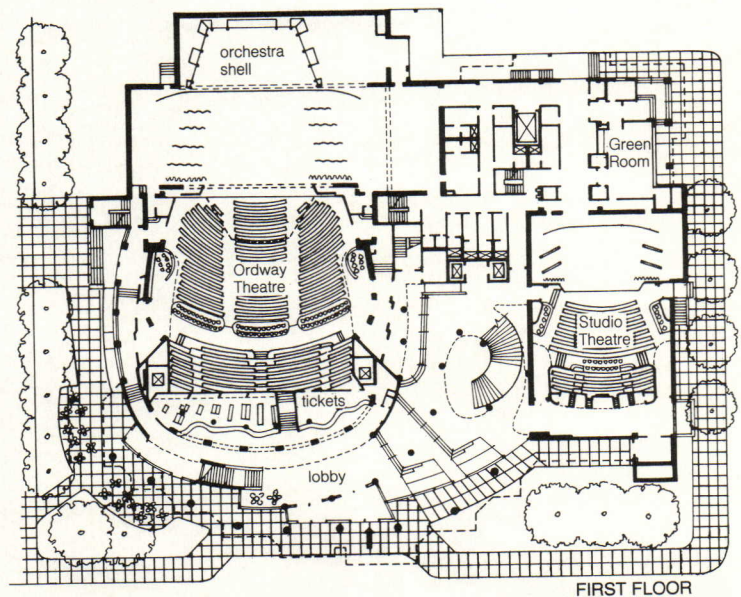
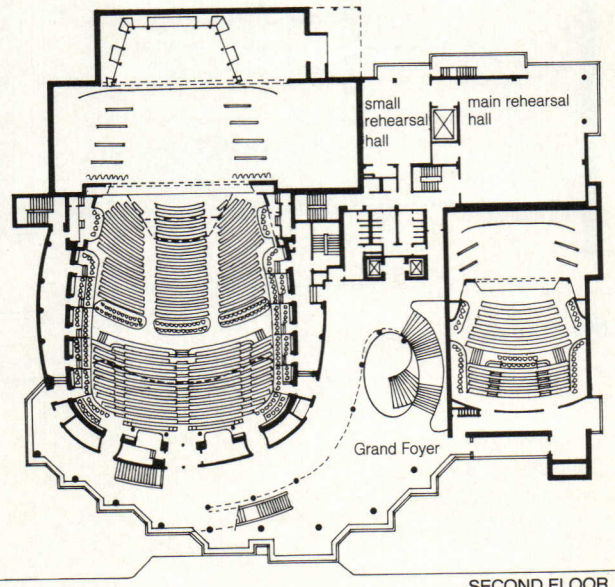
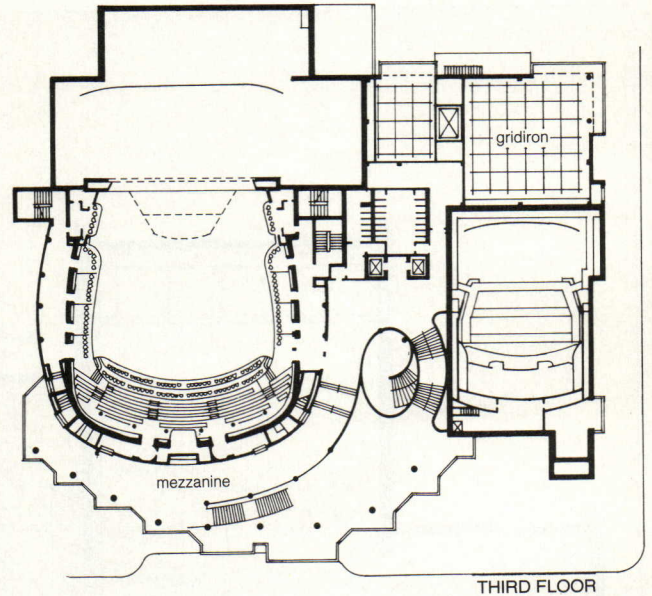
Architect Benjamin Thompson, rather romantically, thinks of an evening at the theater as an all-encompassing adventure. The memory, lingering over a stirring performance, recalls simultaneously and with equal force all the surrounding details—the lights, the colors, the sounds, the company, all having special luster in retrospect. Being a responsible architect, Thompson of course recognizes the technical underpinnings needed to support the magic, but he wants them out of sight and awareness. He does not, he says, want the audience looking at canopies and “clouds” and speakers and thinking about acoustics. He wants it drenched in sound and thinking about music.

Built as a home for the St. Paul Chamber Orchestra, the Minnesota Opera and the Schubert Club, which sponsors vocal and instrumental recitals, the Ordway Music Theatre also presents choruses, plays, musical comedies, ballets and jazz and pop concerts; moreover, the Minnesota Orchestra will cross the Mississippi River from its Minneapolis hall for 20 concerts this season. Beyond the variety of acoustics and lighting arrangements needed by this variety of tenants, the users also called for a variety of stage configurations: orchestras typically occupy a platform that is effectively part of the audience chamber, and drama traditionally wants a proscenium stage with fly space, while the Minnesota Opera, which used to perform in Minneapolis’s Guthrie Theater, had come to like that thrust stage. Thompson and theater consultant Leonard Auerbach provided a set of multisectioned lifts that rise to create a thrust stage or lower for a variety of orchestra pits when some seats are removed near the stage.

So as to ensure good sightlines from the rear seats and balconies to the front edge of the thrust stage, the seating level takes an unusually steep pitch. Since Thompson and Auerbach share a belief that a festive intimacy, both visual and aural, with the rest of the audience is an integral part of theater-going, this steep pitch played right into their hands and, along with the aisles and shallow boxes on the side walls, allows each spectator a view of his fellows. At the same time, seating is ordered in a diversity of discrete blocks—by longitudinal and transverse aisles on the lower level, by brass railings and armchairs in the boxes and in a special loge on the orchestra floor—giving each audience member a sense of place, even giving a lot of them a sense of special place.

Over the last 10 or 15 years, architects, owners, audiences and musicians have come to recognize that good acoustics is a sine qua non of music theaters, and technical expertness has grown apace. Acoustician Lawrence Kirkegaard calls his field “an increasingly refined science and the whitest of the black arts.” Technical sophistication notwithstanding, Thompson wanted the Ordway to look like a classic concert hall and asked that acoustical measures be invisible preferably, discreet at the least. Kirkegaard, who began professional life as an architect, understood and obliged. (Auerbach also started out as an architect, and Thompson called in both technical consultants at the very beginning.) For music, the acoustician’s basic skill is to control and balance sounds arriving at the listener’s ear: in addition to sound emanating directly from the stage, myriad reflections of the same sound reach the ear at minutely different times from many different directions. The listener perceives these reflections as one warm complex sound. The hard boundary surfaces that generate the reflections consist here of intricate plaster balcony fronts and undulating plaster walls behind sound-transparent wood grilles—all, as Thompson wanted, either out of sight or looking theatrically “normal.”

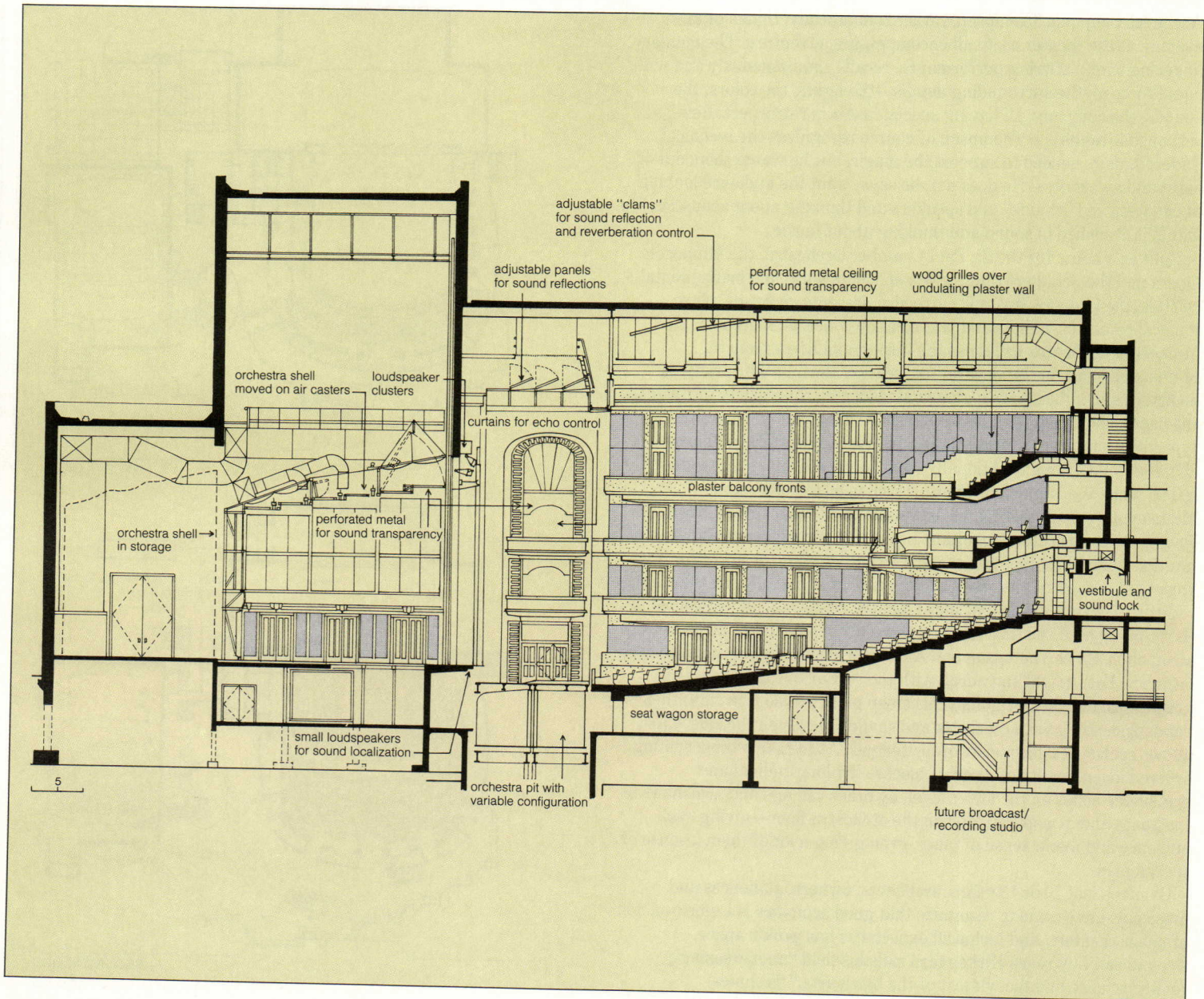
But as an all-encompassing theatrical adventure, the Ordway looks beyond its auditorium. Thompson also gave theater-goers a capacious Grand Foyer with elliptical grand staircase to match (above right). Even to non-theater-goers in St. Paul, the Ordway offers its prismatic glass and copper facade as a dramatic presence completing a civic quadrangle around Rice Park (top at right, with McKim, Mead and White’s library railing in the foreground). *Grace Anderson*



According to the analysis of acoustician Lawrence Kirkegaard, "Virtually every aspect of the design process requires acoustic guidance: volume, width/height/depth proportions, surface shaping, construction materials and details, finishes, relationship of audience-to-performer/performer-to-performer/audience-to-audience, mechanical and electrical systems." At the Ordway, these choices were made

complex by the variety of performances to take place here—orchestral music calls for warm reverberant sound and actors need "dry" clarity, while opera wants a little of both. To keep all the sound energy within the auditorium and to prevent the invasion of external noises, a double wall with sound locks surrounds the room, and necessary hvac equipment is made inaudible. Further, to increase

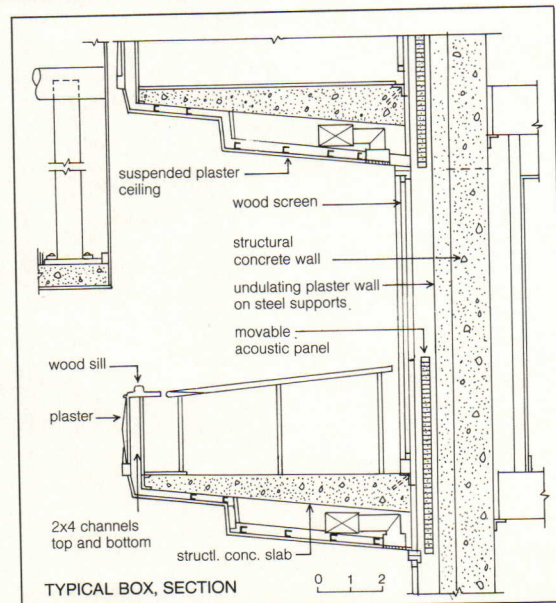
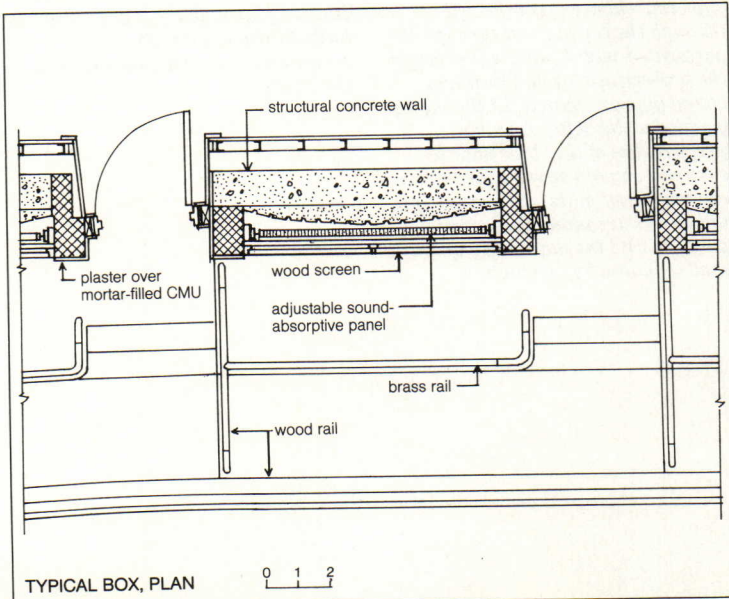
reverberation time, Kirkegaard reached out for as much spatial volume as he could find ("volume equals duration"). Thus sound penetrates the perforated metal coffers of the ceiling to reach up to and reflect from the concrete roof, and penetrates a similarly perforated surround at the proscenium boxes to reflect from plaster screens and curved vestibule walls. The auditorium can achieve a



2.2-second reverberation time but can also reduce it as low as 1.4 to 1.6 seconds, in conditions that require clarity of sound, by the motorized deployment of two major absorbent devices. The first of these is a system of velour-covered panels raised and lowered behind mahogany grilles along the walls in back of the side balconies (sections below). The second sound-absorbent device involves 27 acoustical "clams" arranged in

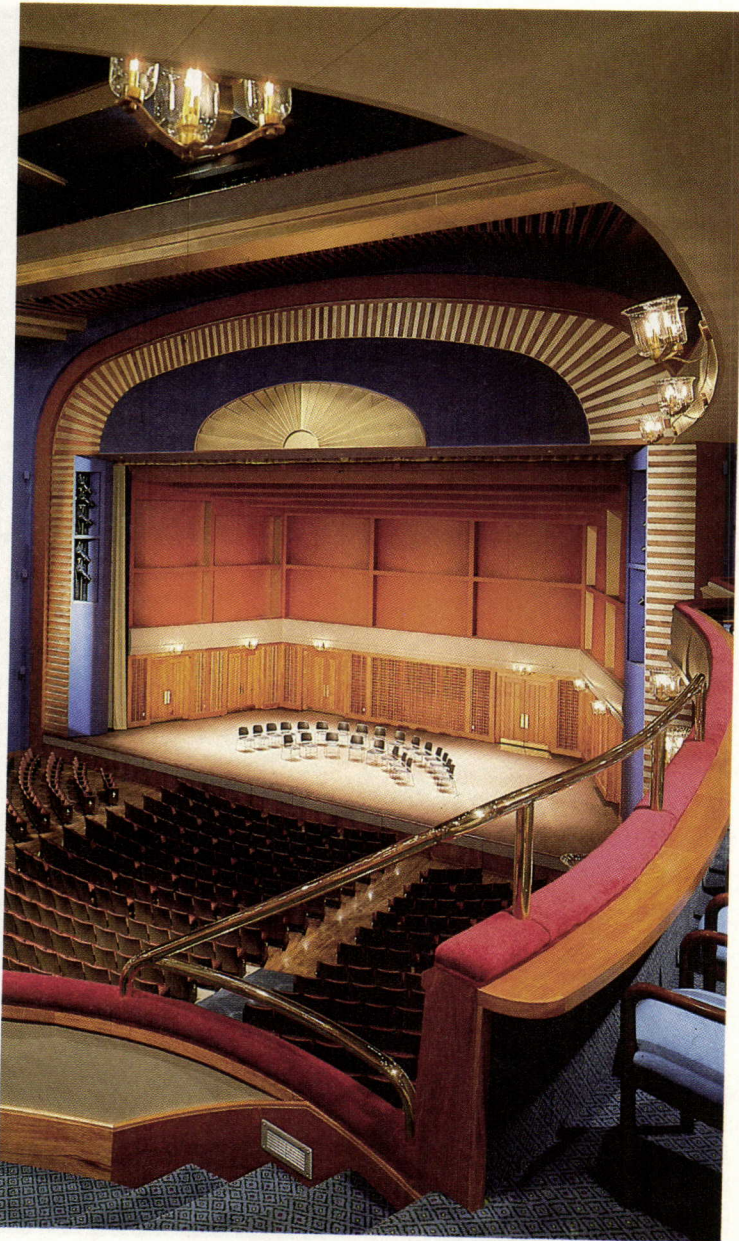
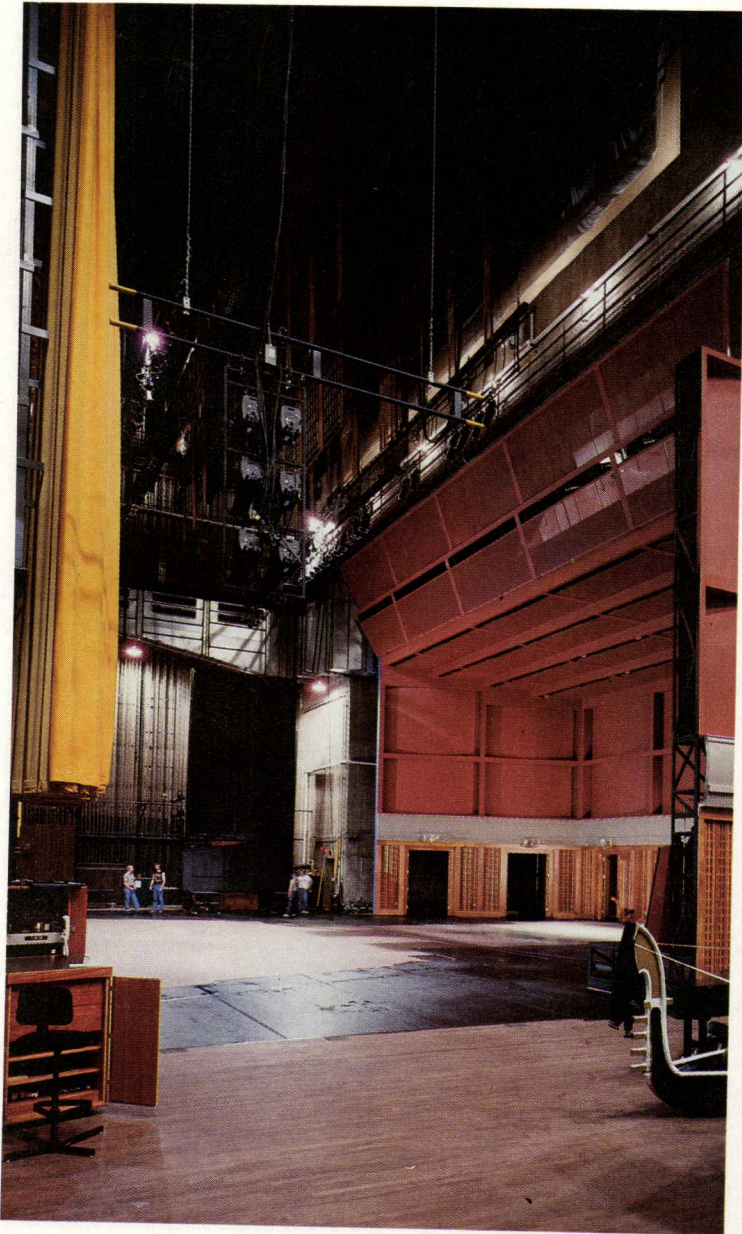
three rows beneath the roof. For maximum reverberation, the clams shut against the concrete roof to present their sound-reflective plywood covers to the sound-transparent ceiling, but for greater clarity the clams open so that their "mouths," filled with ordinary insulating material, absorb sound while their hard "backs" direct it where needed in the audience. Additionally, curtains stored in

vestibule closets can be manually disposed behind the proscenium boxes to prevent disagreeable echoes in the boxes for opera or vocal recitals. The tilted dentils and soffits along the curved plaster balcony fronts were carefully calculated to direct reflected sound; at the same time, they gave Thompson the kind of sculptured ornament he considers intrinsic to a proper theater.



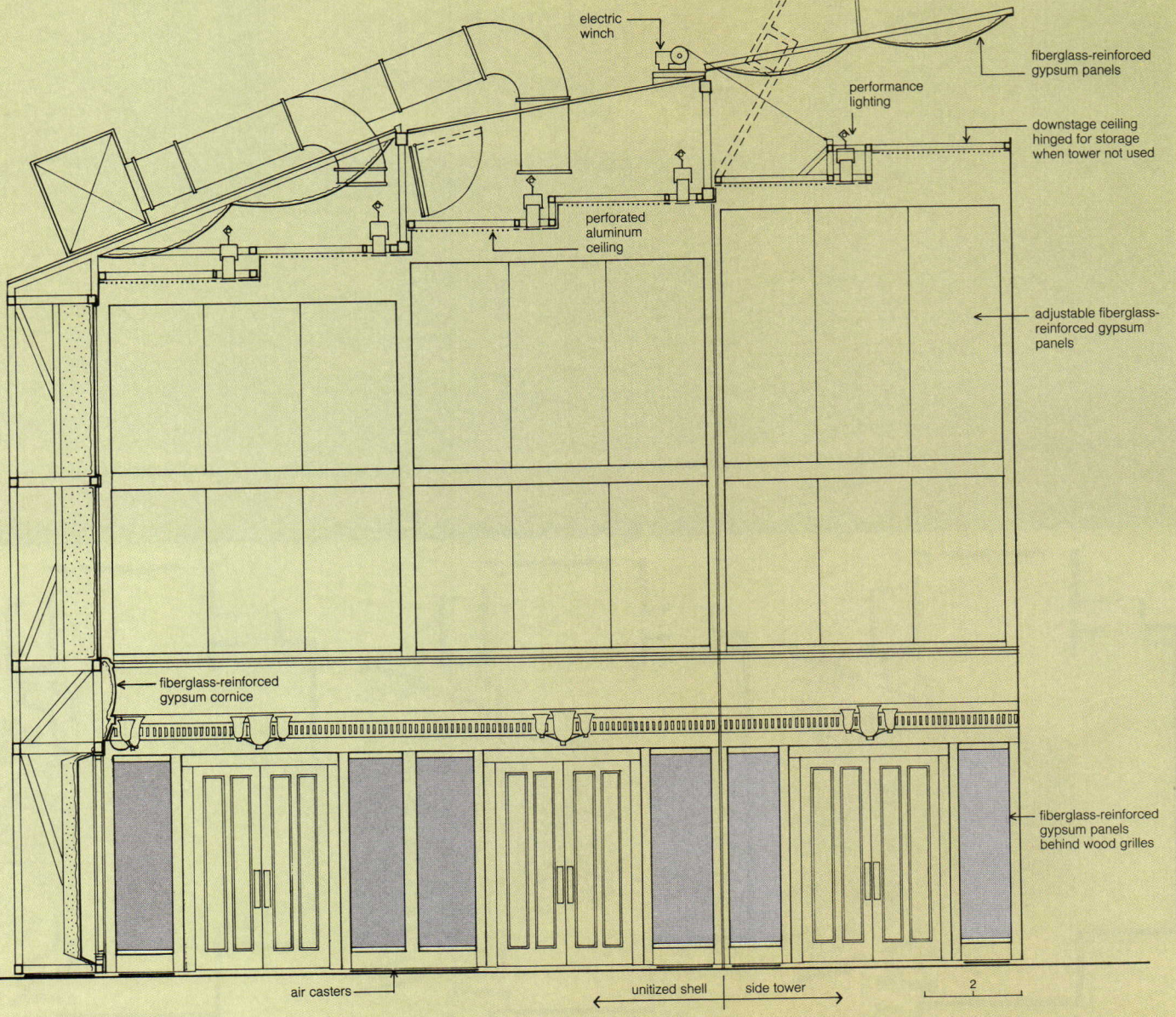
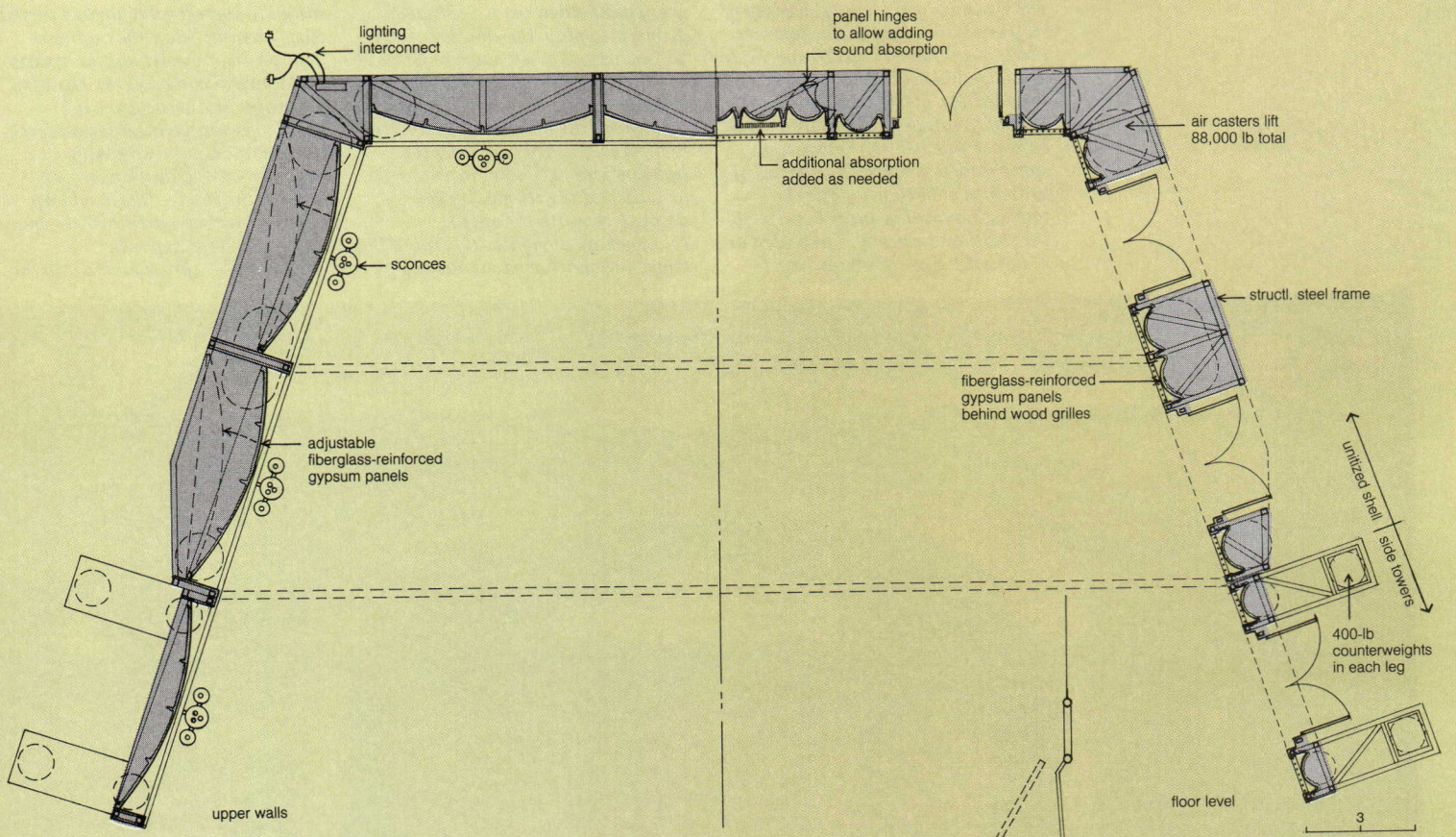
Thompson designed the interior of the orchestra shell as a room within a room, both to suggest to listeners a unity with the audience chamber and to give the orchestra an intimate sense of making music in a living room. The lower part of the shell is thus finished as the auditorium is, with plaster dentils, mahogany grilles, brass fittings and tulip-shaped sconces. Theatrically and acoustically, the shell fills a good

many other needs. The unitized shell, as well as a pair of towers, move on air casters to the front of the stage for orchestral performances. (The shell occupies its stored position at the back of the stage in the photograph at left, its concert position at right.) To maintain the illusion of shell-as-room, Thompson added a ceiling of perforated metal that allows sound to rise to bowed forms of fiberglass-reinforced



gypsum, whence it is reflected through the ceiling and through the perforated-metal lunette just below the proscenium arch. Similarly bowed gypsum panels fill the shell's gridded walls. After suitable preparation of the stage floor to ensure a smooth surface for the air casters (vinyl mats and heavy tape), the towers are manhandled into position and the main body of the shell is moved by two motors.

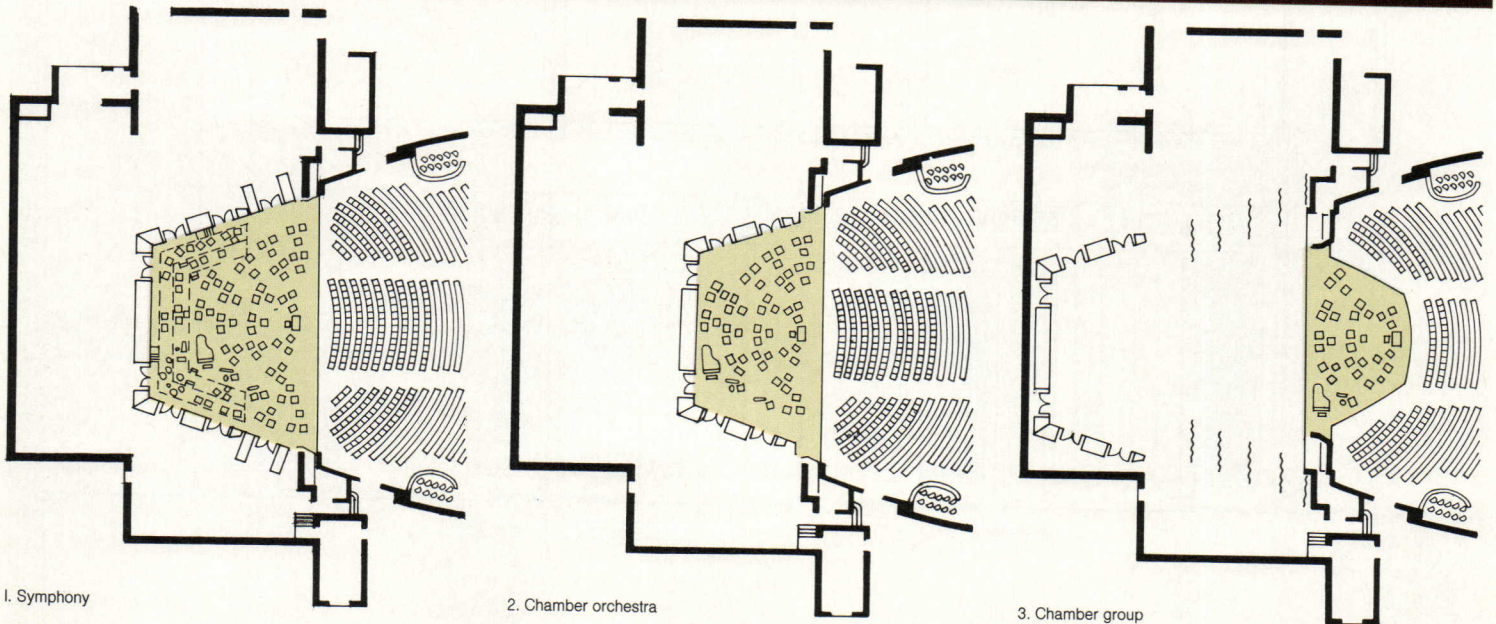
Halfway through the move, progress halts to allow connection of power and air-conditioning ducts for the stage.



The Ordway offers a great variety of stage sizes and shapes for different kinds of performances. The orchestra shell itself is available in two sizes: the addition of towers at the front edge of the stage enlarges it to three bays per side to accommodate a symphony orchestra (1, in series of drawings at bottom), while the towers' removal reduces the size of the shell for a chamber orchestra or recitals (2). Should an opera set

occupy the stage when a chamber group is to play, the smaller group can occupy a thrust stage in front of the rigid fire curtain, which is acoustically constructed (3). The opening of the proscenium can also be altered: pushed back past the lighting towers (photograph at left) or pulled out to its maximum decorative width for opera (photograph at right). In front of the stage, two platforms can also be

raised to stage level to form a thrust stage or sunk below the audience floor as an orchestra pit for operas and musical comedies (4). For very large operatic orchestras, the platforms sink to their lowest level; at the same time, a specially constructed openwork apron in front of the stage—like a subway grating covered with fabric or some other sound-transparent camouflage—allows music into the



1. Symphony

2. Chamber orchestra

3. Chamber group

audience chamber. To ensure good sightlines in the pit, the platforms are cantilevered from the back. For drama, a conventional stage allows seating to full capacity (5), while ballet requires both conventional stage and orchestra pit (6). The hall seats 1,815 in the concert configuration, plus another 75 seats on the stage; with both platforms in position for the largest thrust stage, it accommodates 1,690 seats.

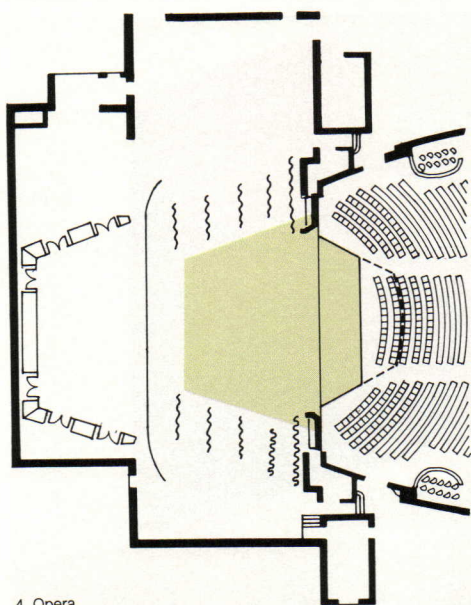
Ordway Music Theatre
St. Paul, Minnesota

Owner:
Ordway Music Theatre Corporation
Architects:
Benjamin Thompson & Associates—
Benjamin Thompson, principal;
Philip Loheed, senior associate; Jim
Van Sickle, Scott C. Wilson
(construction administration),
associates-in-charge; Marcus Rector,
Jane Thompson, program

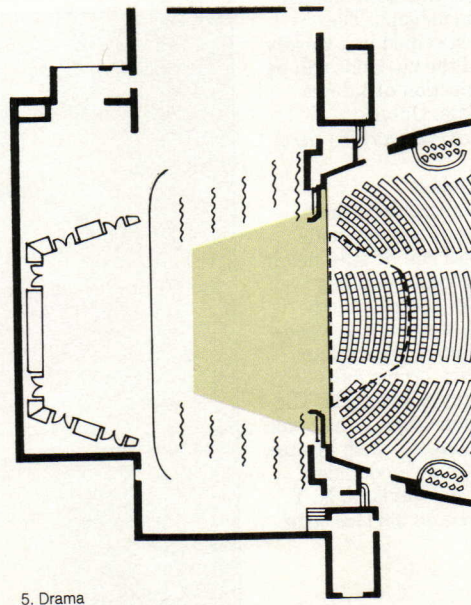
development; Peter Miner, Hank
Haff, Hans Strauch, John Shanks,
Art Dioli, Charles Crooks, Bob Lowe,
Joe Nicola, Krisan Osterby-Benson,
Nick Thompson (graphics), design
and production team; Herbert
Gallagher, George Bissell, project
administration

Engineers:
LeMessurier Associates (structural);
Ellerbe Associates (mechanical/
electrical)

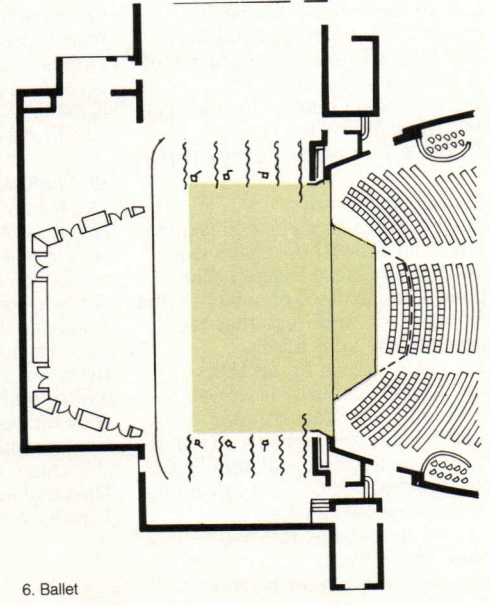
Consultants:
S. Leonard Auerbach & Associates
(theater); R. Lawrence Kirkegaard
(acoustics)
General contractor:
McGough Construction Company,
Inc.



4. Opera



5. Drama



6. Ballet

New products

Designer's Saturday 1985

During this year's Designer's Saturday, October 10-12 in New York City, the 56 participating manufacturers displayed their latest product introductions in their Manhattan showrooms, or in their soon-to-be completed space at the new International Design Center in Long Island City, or—in some cases—in both locations. Several such items are featured on these pages.

1. Chair

Vignelli Designs' new *Handkerchief* chair has a flexible, 23-in.-wide shell that comes in white, red, yellow, black, granite, or multi-colored speckles. The frame is available in polished chrome and a selection of painted finishes. The chair can be specified with or without arms, and is stackable. Knoll International, Inc., New York City.
Circle 300 on reader service card

2. Cabinet

The *Rosier* storage cabinet was designed by Leon Rosen. Its three compartments are veneered in bird's-eye maple with black ebony inlay, and the frame and base are finished in black lacquer. The cabinet is available in a variety of sizes. The Pace Collection, Long Island City, N. Y.
Circle 301 on reader service card

3. Chair

The *Homage to Man Ray* chair is part of the manufacturer's new seating series that also includes *Homages* to Gerrit Rietveld and Theo Van Doesburg. From the artist's fragmental sketches, Giandomenico Belotti designed the Man Ray chair with a backrest and triangular seat made of block polyurethane foam that can be covered in a selection of fabrics. The chair's frame is constructed of chromium-plated steel. International Contract Furnishings, Inc., New York City.
Circle 302 on reader service card

4. Table and chairs

The manufacturer's new hexagonal table and *Blackstone* chairs were designed by Ward Bennett. The table is constructed of solid ash and features 3-in.-wide legs that are joined to the table apron. The chair, named for an 18th-century British jurist is carved from solid ash. The 23 1/2-in.-wide by 22 1/2-in.-deep by 33 3/4-in.-high chair has an upholstered seat that can be specified in a selection of leathers and fabrics. Brickell Associates, Inc., New York City.
Circle 303 on reader service card

5. Cabinet

Le Stagioni display cases are constructed of tempered glass with a wood and lacquered aluminum structure. The cabinets are available in two different widths and heights, and all versions come with three shelves and a lockable door pull. Cumberland Furniture Corp., New York City.
Circle 304 on reader service card

6. Lighting

The new *Shogun* series of lighting includes table-top, standing, and wall-mounted (shown) versions. Designed by Swiss architect Mario Botta, the halogen fixtures feature adjustable diffusers constructed of perforated metal plate. Artemide, Inc., New York City.
Circle 305 on reader service card

7. Wall-mounted light fixture

Damocle is a new wall-mounted halogen light fixture designed by Mitchell Mauk. Flexible black metal rods connect the fixture's plastic diffuser to the mounting bracket. The fixture is 7 7/8-in. wide and forms an arc that is approximately 13-in. high. Artemide, Inc., New York City.
Circle 306 on reader service card

8. Fabrics

The new *Dana Romeis Collection* includes five different upholstery fabric designs. The fabrics are constructed of a wool, rayon, and nylon blend, and are available in a variety of colorways. Knoll International, Inc., New York City.
Circle 307 on reader service card

9. Seating

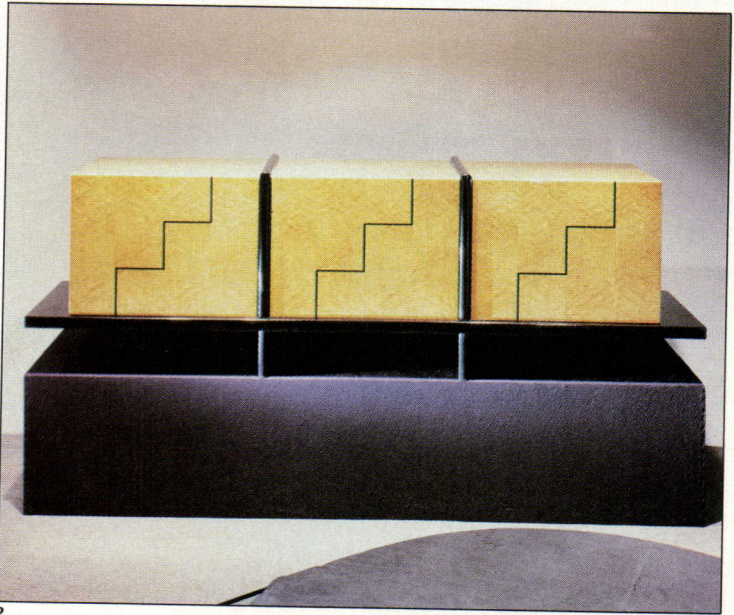
The manufacturer's new *200 Plus* seating series includes chairs and two-seat (shown) and three-seat sofas. Designed by James Haywood, the units feature tubular steel frames and injection-molded urethane foam cushions. The frames can be specified in a variety of finishes, and the cushions can be covered in a selection of fabrics. Kinetics, Rexdale, Ontario.
Circle 308 on reader service card

10. Conference tables

The tops of the manufacturer's *Director Series* of custom-made conference tables can be specified in a selection of woods, including bird's-eye maple, cherry, North American black walnut, rosewood, teak, French walnut, Australian lacewood, English brown oak, quilted mahogany, and sapele. The edge rails come in maple, white oak, walnut, and mahogany with bronze, aluminum, or wenge wood inlay. The Gunlocke Co., Wayland, N. Y.
Circle 309 on reader service card



1



2



3

For more information,
circle item numbers on
Reader Service Card



4



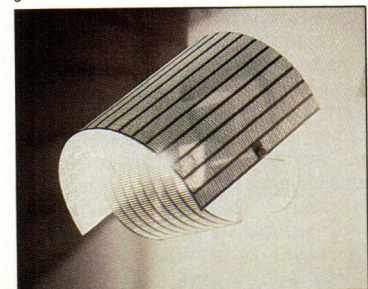
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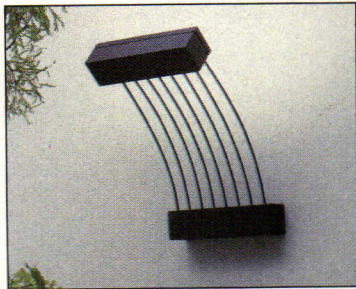
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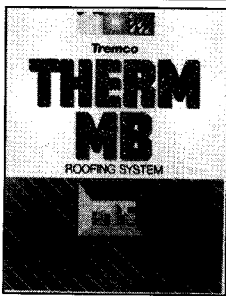
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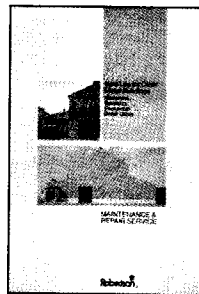
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Roofing system

The components of the *Therm MB* roofing system are reviewed in a 4-page color brochure. A diagram shows the composition of the membrane, which consists of a mixture of bitumens, modified with synthetic elastomers and woven fiberglass reinforcement. Tremco, Cleveland.

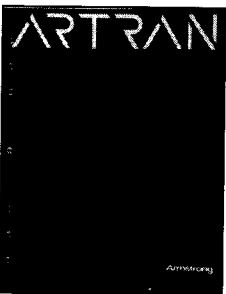
Circle 400 on reader service card



Metal maintenance

The manufacturer's maintenance and repair service for metal buildings is reviewed in a 6-page color brochure. Several case studies describe the rehabilitation of deteriorating metal walls, roofs, and ventilators. H. H. Robertson Co., Pittsburgh.

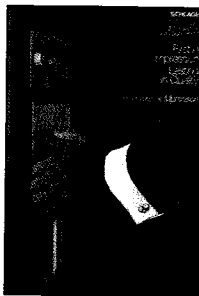
Circle 406 on reader service card



Acoustical ceilings

The *Artran* line of acoustical ceilings is reviewed in a 12-page color brochure. Photographs show a variety of ceiling panels that have a sound-absorbing core covered by an unperforated skin. Installation information is included in the literature. Armstrong World Industries, Inc., Lancaster, Pa.

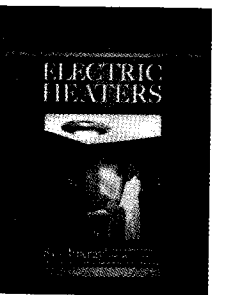
Circle 401 on reader service card



Handle set

The *Murchison F160* grip handle set is featured in a 4-page color brochure. The lock, which is intended for installation in residential entry doors, is shown in a variety of finishes. Schlage Lock Co., Sylmar, Calif.

Circle 407 on reader service card



Electric heaters

A line of auxiliary residential electric heaters is featured in a 12-page color brochure. Ceiling- and wall-mounted fan-forced and radiant heaters are reviewed in the literature. Duct accessories and timer switches are shown. NuTone Housing Group, Div. of Scovill, Inc., Cincinnati.

Circle 402 on reader service card

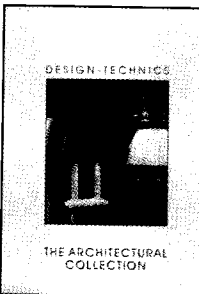
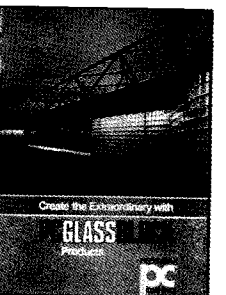


Table-top lamps

A collection of 11 table-top lamps designed by Peter Hamburger is featured in a 6-page color brochure. The ceramic bases are illustrated in a selection of 33 glossy, metallic, and satin glazed and unglazed colors, and the lampshades are shown in linen and handwound string. Design-Technics, New York City.

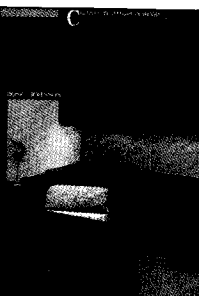
Circle 408 on reader service card



Glass block

The manufacturer's line of standard-shape glass block and its new *Hedron I* hexagonal units are featured in a 16-page color brochure. A selection of glass-block patterns is shown, and light transmission capabilities are reviewed. Pittsburgh Corning Corp., Pittsburgh.

Circle 403 on reader service card

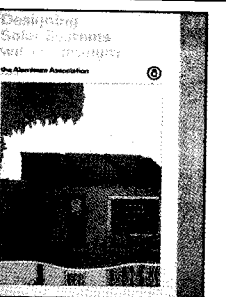


Office furniture

A 12-page color brochure features the manufacturer's *Progressions* line of office furniture.

Photographs show a variety of straight and radiused wood panels, offered in several sizes. Wire management and electrical bases come in chrome, baked enamel, and wood veneer-clad steel. Rose Johnson, Inc., Grand Rapids, Mich.

Circle 409 on reader service card



Aluminum

A 24-page manual describes the characteristics of aluminum as a support structure and as an absorber or reflector surface. Several tables that review the physical and material properties of aluminum are included in the literature. The Aluminum Association, Washington D. C.

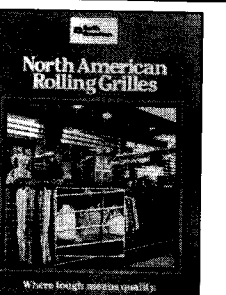
Circle 404 on reader service card



Kitchen cabinets

The manufacturer's line of compact kitchen cabinets, now available in several new wood and laminate finishes, is featured in a 16-page color brochure. The specifications for each kitchen line are included in the literature. Dwyer Products Corp., Elkhart, Ind.

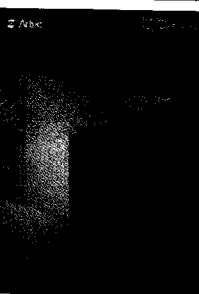
Circle 410 on reader service card



Rolling grilles

A line of rolling, scissor-opening, and side-coiling grilles intended for installation in storefronts and office buildings is featured in an 8-page color brochure. Standard specifications and optional features for each model are reviewed in the literature. Wayne-Dalton Corp., Mt. Hope, Ohio.

Circle 405 on reader service card




Office furniture

The manufacturer's new business furniture systems are featured in a 6-page brochure. Color photographs show oak, walnut, and mahogany components with beveled and radiused edges. Electrical cord management is reviewed in the literature. Artec, Div. of Kimball International, Jasper, Ind.

Circle 411 on reader service card

Continued on page 158

Karastan has ever woven.



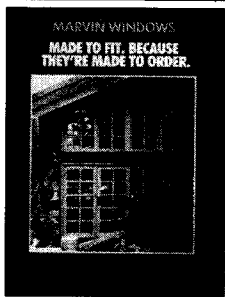
Karastan has woven over 119,000 tufts of yarn into each square yard of this extraordinarily dense new High Spec Series. The yarns used, DuPont ANTRON® and ANTRON® XL nylon, add static-control and soil-resistance to these outstandingly durable styles.

The rich, understated, coordinated colorings and tailored small scale designs work alone or with each other.

To put it more succinctly, never before has so much style been packed into so little space.

Karastan Rug Mills, a Division of Fieldcrest Mills, Inc.

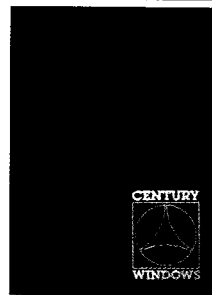
Karastan



Windows and patio doors

A 72-page color catalog reviews 5,000 standard shapes and sizes of wood and wood-clad windows, and sliding and hinged patio doors intended for use in new construction and renovation. The manufacturer's custom-made windows are also described in the literature. Marvin Windows, Warroad, Minn.

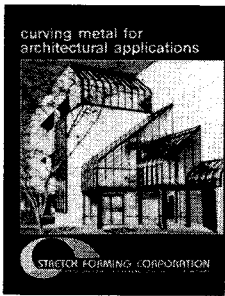
Circle 412 on reader service card



Windows

The *Century* line of windows and swinging patio doors is featured in a 14-page color brochure. Photographs show the manufacturer's *Evershield* frame made of wood fiber and resins molded under pressure. The insulating performance of the glass is reviewed. Century Windows, Mount Vernon, Ohio.

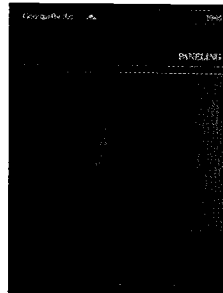
Circle 418 on reader service card



Aluminum curving

The manufacturer's new 4-page color brochure includes several photographs of curved architectural aluminum, an explanation of the stretch forming process, and a review of suggested forming applications. Stretch Forming Corp., Fountain Valley, Calif.

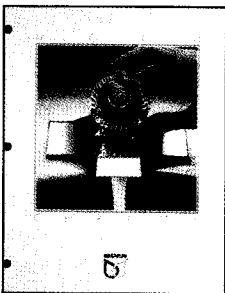
Circle 413 on reader service card



Paneling

A variety of hardwood face veneer and man-made paneling styles, textures, and colors is illustrated in a 32-page color brochure. The dimensions and finish of each type of panel are listed in the literature. Georgia-Pacific, Atlanta.

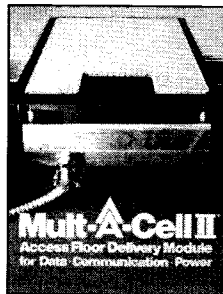
Circle 419 on reader service card



Faucets

The manufacturer's line of chrome faucets for the kitchen and bathroom is reviewed in a 22-page color brochure. Several features of the faucets, including washerless construction, temperature preselection, and *Flowrator* flow control, are described in the literature. Moen Group, Stanadyne, Elyria, Ohio.

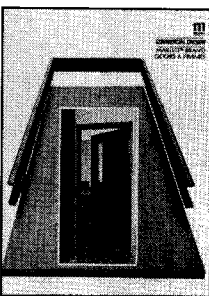
Circle 414 on reader service card



Access flooring

A 6-page color brochure describes the manufacturer's access flooring delivery modules that provide data/communication power service. Photographs show how the *Mult-A-Cell II* modules can be installed and relocated as service requirements change. Midland-Ross Corp., Pittsburgh.

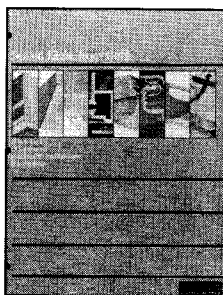
Circle 420 on reader service card



Doors and door frames

The newly expanded *Marlite* line of doors and frames is featured in a 12-page color brochure. The literature contains specifications for two adjustable aluminum frames and one adjustable steel frame, and has cross-section illustrations of such core materials as flakeboard, staved lumber, and lead shielded core. Masonite Corp., Dover, Ohio.

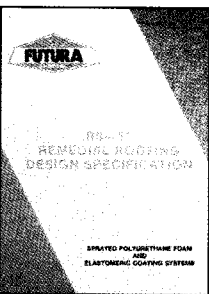
Circle 415 on reader service card



Clean-room lighting

A 12-page brochure reviews the difficulties in lighting clean rooms and other high-tech environments. Nine lighting fixtures designed for pharmaceutical, chemical, and electronic work areas are described in the literature. Guth Lighting, St. Louis.

Circle 421 on reader service card



Roofing

Elastomeric and urethane foam roofing products are reviewed in a 16-page brochure. The sprayed-in-place foam, which expands as it is applied, is intended to encapsulate vent stacks and skylight frames. Additional application details and specifications are included in the literature. Futura Coatings, Inc., Hazelwood, Mo.

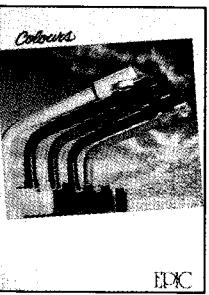
Circle 416 on reader service card



Anti-flood system

The manufacturer's new *Floodbuster*, which renders the flush valve inoperable whenever a near-overflow condition exists in the toilet bowl, is described in a 2-page insert. The system is intended for bathrooms subject to heavy use or vandalism. Bradley Corp., Menomonee Falls, Wis.

Circle 422 on reader service card



Faucets

A 4-page color brochure features the *Colours* line of kitchen and bathroom faucets and accessories, including soap dishes, soap dispensers, and towel bars. The fixtures are made of solid brass coated in acrylic, and are shown in a selection of colors. Epic Div. of Masco Corp., Indianapolis.

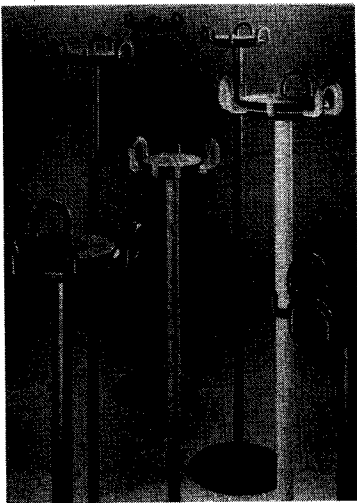
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Mobile storage

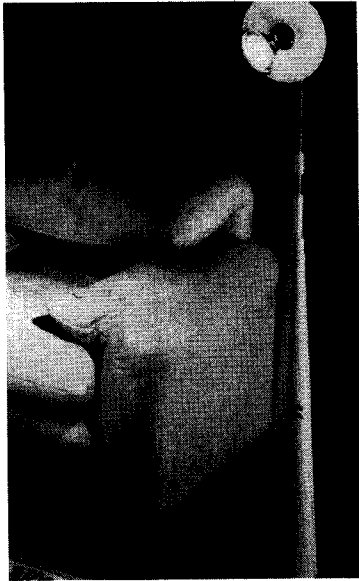
The manufacturer's specification data sheets review their *S* series of high-density mobile storage systems. Intended for office, institutional, and industrial applications, the 16 models range in size from three to several hundred feet, with load capacities of 5,000 lb to 250 tons. Spacesaver Corp., Ft. Atkinson, Wis.

Circle 423 on reader service card



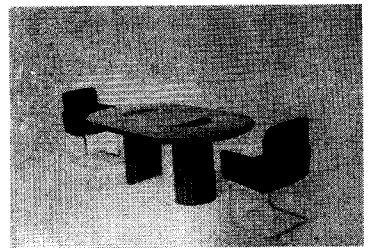
Office accessories

The *Rexite* line of Italian-made office accessories includes coat stands, umbrella holders, waste baskets, ashtrays, bookends, clocks, letter trays, pencil cups, and clip boards. The products are available in a variety of bright colors. Castelli Furniture, Inc., Bohemia, N. Y.
 Circle 310 on reader service card



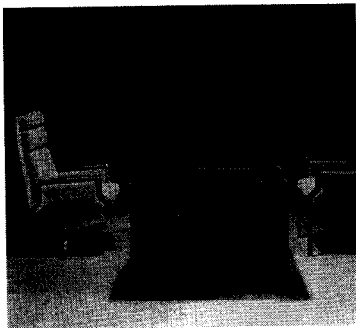
Lamp

The Italian-made *Club* halogen lamp was designed by P. G. Ramella. The lamp's frosted diffuser can rotate 330 deg, and the adjustable arm can be extended 11 in. The lamp is available with a gray base and a red arm and lamp head, or with a white base and a gray arm and lamp head. Atelier International Lighting, New York City.
 Circle 313 on reader service card



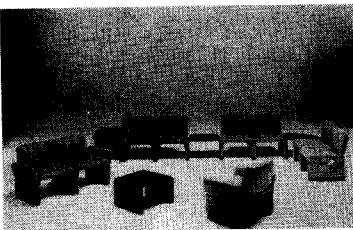
Table

The manufacturer's new racetrack-shaped, multi-veneered table is part of the *Twentyniners* collection of desks, conference tables, and dining tables. The table can be specified in a variety of finishes, including walnut, oak, mahogany, ash, rosewood, teak, cherry, brown English oak, and stump walnut. Intrex Furniture, Div. of Habitat International Ltd., New York City.
 Circle 314 on reader service card
 continued on page 163



Office furniture

The *Cadent* collection of desks, credenzas, and chairs was designed by William Sklaroff. The collection is available in oak, mahogany, cherry, and maple, and in a selection of 14 finishes. The seating is upholstered in the manufacturer's fabric. Modern Mode, Inc., San Leandro, Calif.
 Circle 311 on reader service card



Seating

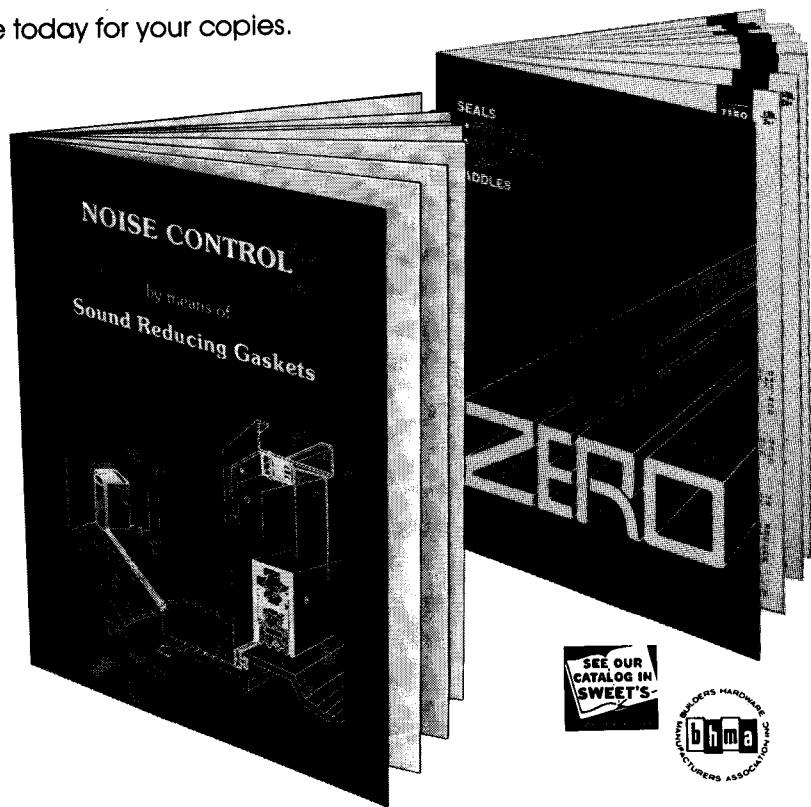
The new *A-T* seating series, intended for use in lobbies and lounges, includes modular components that can be assembled in a variety of configurations. Designed by Andre Vandenbueck, the seating features steel frames and quilted covers. Arconas, New York City.
 Circle 312 on reader service card

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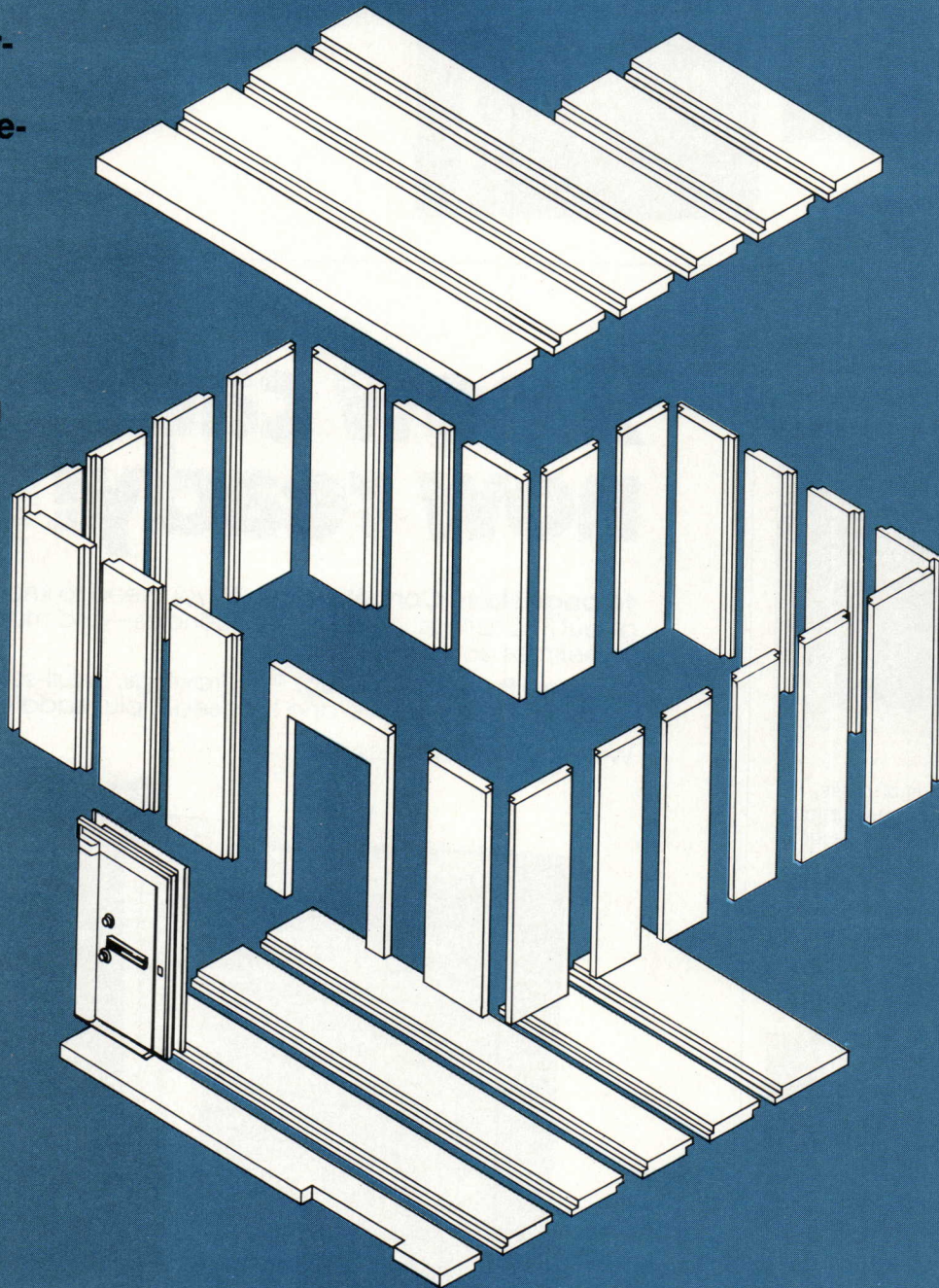
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94 lbs. per sq. ft. approximately 60% less than 18" poured-in-place

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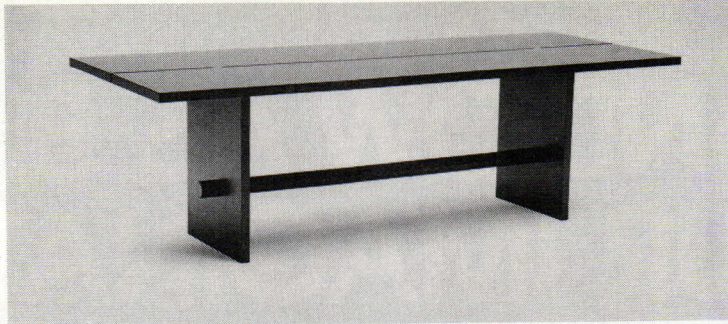


Coffee tables

The *6400* collection of coffee tables was designed by Brian Kane. The table tops come in round, square, rectangular, and oval shapes, and are held in position by 15 3/4-in.-high stainless steel legs.

Metropolitan Furniture Corp., South San Francisco, Calif.

Circle 315 on reader service card



Table

The *Stave* conference and dining table was designed by Ward Bennett. The 96-in. by 36-in. table top consists of two 1 1/2-in.-thick

planks of solid American white ash, separated by a 1/2-in.-wide space. Brickel Associates, Inc., New York City.

Circle 318 on reader service card

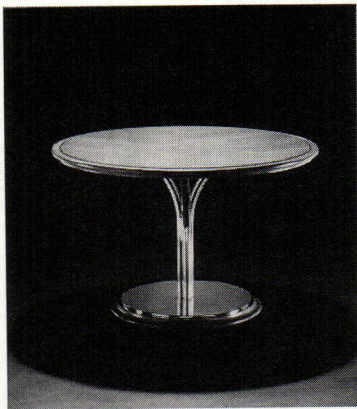


Sofa

The *Setsu* sofa was designed by Wolfgang Muller-Deisig and is available in two- and three-seat versions. The metal frame and aluminum legs can be specified in a variety of finishes. Castelli Furniture, Inc., Bohemia, N. Y.

Circle 319 on reader service card

Continued on page 165



Conference tables

The *Trilogy* collection of conference tables designed by Norman Cherner features round and racetrack-shaped table tops. The frame is constructed of polished stainless steel or bronze; and the tops are available in a selection of finishes including oak, walnut, mahogany, cherry, maple, and a variety of lacquers. Modern Mode, Inc., San Leandro, Calif.

Circle 316 on reader service card



Seating


The *L 600* seating series includes a flexible high-back chair and a medium-back chair that is available with or without armrests. Both versions come with a three-position tilt-lock mechanism. Cole Business Furniture, York, Pa.

Circle 317 on reader service card

SQUEAKY CLEAN

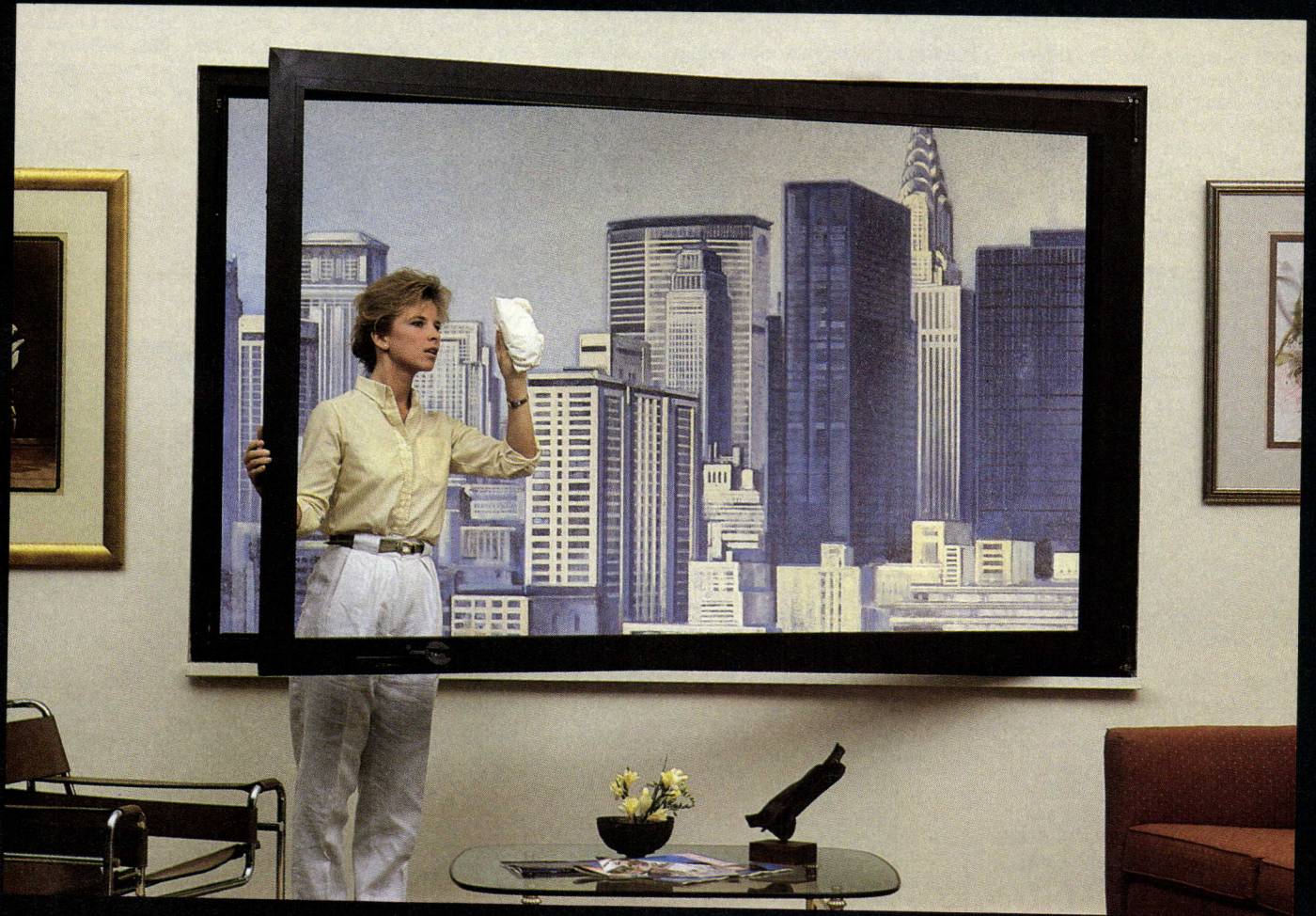
Finally, a rubber floor tile that's easy to keep clean... Roppe low profile. Just apply Roppe's simple Two-Step Floor Cleaner and Finisher at installation to reduce grit and dirt buildup and help eliminate footprinting. Dirt won't collect on Roppe's low profile design as it will on deeper patterns, so a broom and damp mop are all that's needed to keep your floor looking like new. Roppe low profile... the durable rubber floor tile that's easy to keep clean. For your nearest distributor, write Roppe Rubber Corporation, 1602 N. Union Street, Box X, Fostoria, Ohio 44830. Or call toll-free.

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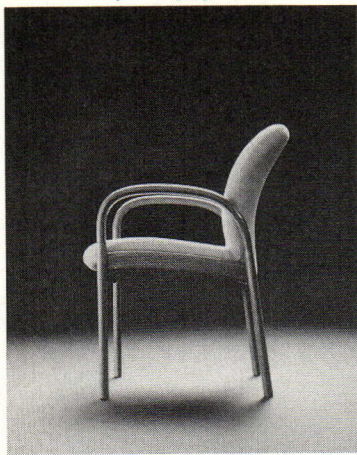
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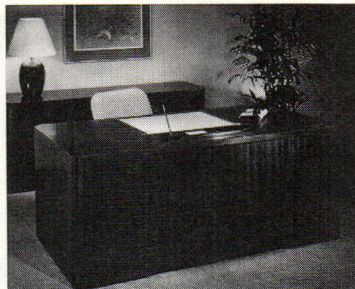
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Chair
The manufacturer's new *Contura* chair has a solid steambent oak or walnut exterior and a tubular steel and polyurethane foam interior frame. The chair is available in open- or closed-arm versions. The Gunlocke Co., Wayland, N. Y.
Circle 320 on reader service card



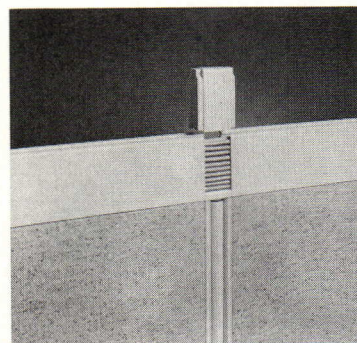
Desk collection
The *Insignia Collection* of desks and credenzas was designed by Gordon Kyle. The collection includes rectangular and L-shaped desks with full or 3/4 pedestal drawer units. A variety of wood finishes is available. Helikon Furniture Co., Inc., Taftville, Conn.
Circle 323 on reader service card



Office furniture
The *Cygnia Collection* of wood office furniture was designed to be compatible with the manufacturer's *UniGroup* open-office furniture system. The collection can be specified with light or medium oak and mahogany finishes. Haworth, Inc., Holland, Mich.
Circle 324 on reader service card



Bench
The *Museum Bench* was designed by Nico Zographos. The bench has a solid oak frame and legs, and its oak veneer top surface is available with a natural, medium, dark, or ebonized finish. Zographos Designs Ltd., New York City.
Circle 325 on reader service card
Continued on page 167



Cable management
Data-Trak raceways are located at the top of the manufacturer's *Wes-Group* office panels and are said to accommodate up to thirty 3/8-in. data and communication cables. Westinghouse Furniture Systems, Inc., Grand Rapids, Mich.
Circle 321 on reader service card



Electronic support furniture
The manufacturer's new *8800 Series* of electronic support furniture features adjustable curved-edge workstations. Storage units that can accommodate a variety of computer-related material—including printouts in binders, magnetic tape reels, disk packs, floppy disks, cassettes, and cartridges—are available. Steelcase, Inc., Grand Rapids, Mich.
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New
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Displawall™ 5000 and 6000 turn the grooves in slotted merchandising walls into refreshingly different visual delights. Grooves spaced the traditional 3" on center, or 2" and 4" as well, are filled with contemporary solid colors or bright metallics. Beautifully designed to accent or harmonize with 12 standard Displawall panel finishes. Count how many more standard ways Marlite® Brand Displawall can help you create retail environments that stand apart from the crowd.

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Displawall™ 6000: The toughest Displawall product ever introduced. Extruded aluminum groove inserts are available in two standard finishes—Bright Silver or Bright Brass Tone. Combined with 12 standard Displawall finishes, you have 24 different heavy-duty Displawall choices. And, with grooves spaced 2", 3" or 4" apart and carved either vertically or horizontally, your list of design options has grown to 144.

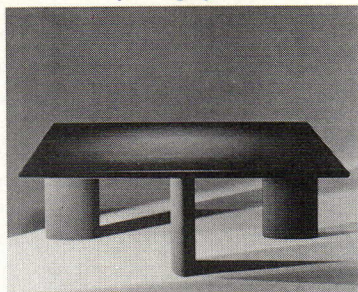
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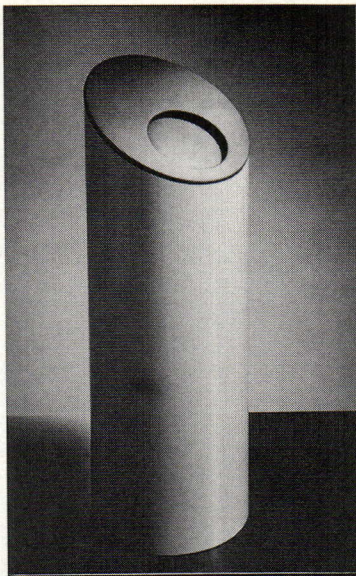
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Tables

The new *Mirage* tables designed by Piotr Sierakowski are available with slate or frosted-glass tops that are supported by aluminum extrusions finished in the manufacturer's *Nextel* suede. A variety of table shapes and sizes is available. Koch + Lowy, Inc., Long Island City, N. Y.

Circle 326 on reader service card



Trash receptacles

The manufacturer's new trash receptacles feature seamless aluminum tube bases with self-closing plastic flipper tops. The receptacles are available in diameters of 8 and 10 in. and in heights of 20 to 32 in. Smokador, Roselle, N. J.

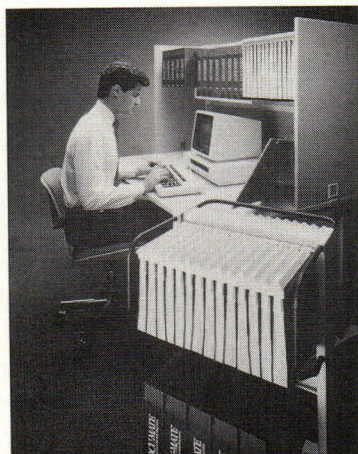
Circle 329 on reader service card



Office furniture

The *Serif* collection of office furniture includes seating, desks, credenzas, and shelving units. Designed by William Sklaroff, the collection is constructed of American cherry and French walnut veneers. A variety of finishes can be specified. Baker Furniture, Grand Rapids, Mich.

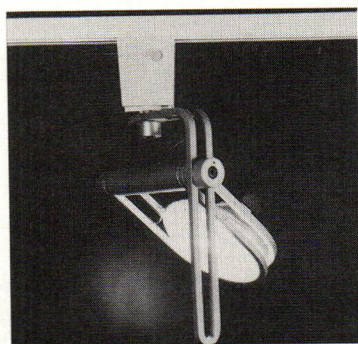
Circle 330 on reader service card
Continued on page 169



Media management

The manufacturer's *Documate* system is designed to organize a variety of information media, including printouts, microfiche, diskettes, and paper. A center-hook device allows different size folders to be suspended from hanger bars. Wright Line, Worcester, Mass.

Circle 327 on reader service card



Lighting

The new *Grip 36 Series* of lighting was designed by Gary Payne. Wrapped aluminum rods are attached to an adjustable arm that allows the lamp to slide up and down. Both track and surface-mounted units are available. Lazin Lighting, Inc., New York City.

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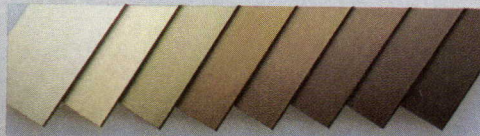
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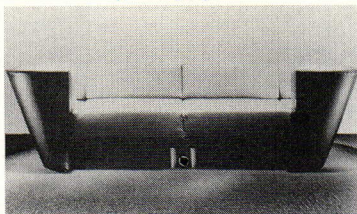
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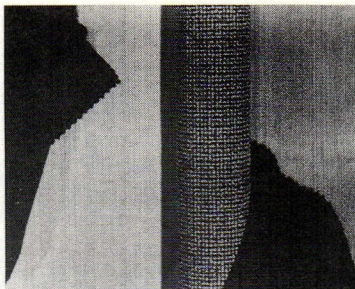
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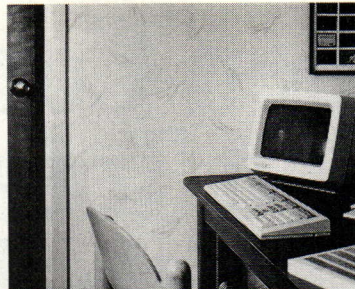
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Sofa
The *Shell* sofa designed by Stanley Jay Friedman features an exterior shell of dark leather that wraps around wool-upholstered seat cushions. The stainless steel legs can be specified in one of 125 opaque color finishes. Brueton Industries, Springfield Gardens, N. Y.
Circle 331 on reader service card



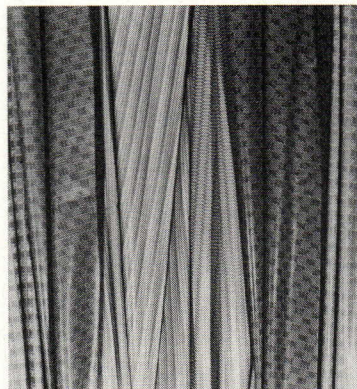
Wallcoverings
The manufacturer's new *Softech System* consists of seven paper-backed wallcovering patterns, four panel fabric patterns, and four seating fabric patterns. Each pattern is available in a variety of colorways. L. E. Carpenter & Co., Wharton, N. J.
Circle 334 on reader service card



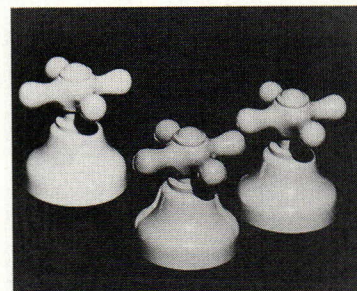
Wallcoverings
The new *Satinesque* line of vinyl wallcoverings includes a variety of geometric and small-scale patterns. The fabric-backed wallcoverings come in 27-in. widths, and are available in a selection of colors. Columbus Coated Fabrics, Columbus, Ohio.
Circle 335 on reader service card



Turnkey system
The *ArteMate* system has two- and three-dimensional computer-aided drafting and engineering and project management capabilities. The system features local area networking, a modem for long-distance communications, and a raster scan monitor for graphics. Artecon, Inc., Carlsbad, Calif.
Circle 336 on reader service card
Continued on page 172

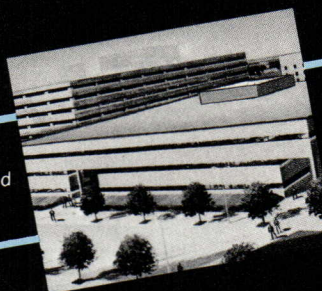


Fabrics
A new collection of small-scale fabric patterns are adaptations of the manufacturer's turn-of-the-century wovens. The fabrics are available in 53-in. and 54-in. widths, and come in a variety of styles and colors. Lee Jofa, Carlstadt, N. J.
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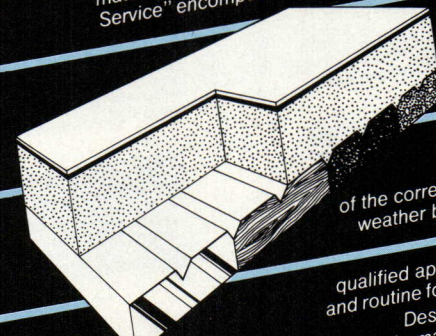
Kitchen and bathroom fittings
The *Colore* series of Italian-made kitchen and bathroom fittings are now available in several new pastel colors, including pink, gray, and light blue. The fittings feature a baked enamel finish that is said to be stain resistant. Watercolors, Inc., Garrison-On-Hudson, N. Y.
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On fees, Burgee said that negotiating an adequate total fee amount in the initial contract with a client meant more than any clauses for renegotiation, add-ons, or extra reimbursement. This did not mean that the fee would always be on the same basis: "It depends on the client, how much they will demand, what they really want of us." He noted that late payments were a problem with some clients, and said that "we would not be above adding interest after 60 days of hearing 'it's in the mail.'"

Despite his strong business role in his firm, Burgee said he did not go into architecture to be a manager. Commenting on the conference title, he said that he hoped that the next conference might better be titled "The Creativity of Management." Because he did not want to spend all his time managing or, for that matter, getting jobs, Burgee began some time ago to look for ways that he could streamline his firm's day-to-day business operations. He wanted to be able to look at a bottom line once a month, and not be bogged down in constant niggling detail.

He first looked for ways to weed out unnecessary expense, the fat that causes much of management's headaches that occur on a regular basis. One expense that he would have at least liked to cut down he found was fixed: liability insurance. His firm currently pays 30 per cent of its first \$1 million coverage in premiums each year. "Whatever happened to cause this," he said, "we have lost control."

Nonetheless, Burgee has been able to streamline the management process. Part of his success is due to shifting fiscal responsibilities for individual projects to those who design and produce them: "We bring designers into the management process, and expect them to control their budgets."

As a result, Burgee has been able to meet his original once-a-month-review goal. "I look at three things," he said, "expenses for the month, income, and next month's expenses. If these three items seem in balance, I go no farther."

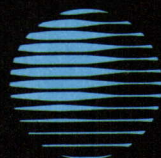
Peter Samton made a survey of Gruzen's staff five years ago, and concluded that "there was too much management"—that creativity and any sense of responsibility on the part of staff members was being stifled. In this, he seems to have foreseen a shift that is only now becoming generally recognized: because of the need for firms to produce first-rate design to survive, designers are taking a much more prominent role in running firms. Another finding that he wanted to attack was that, because each phase

Continued on page 175

Fast Forward.



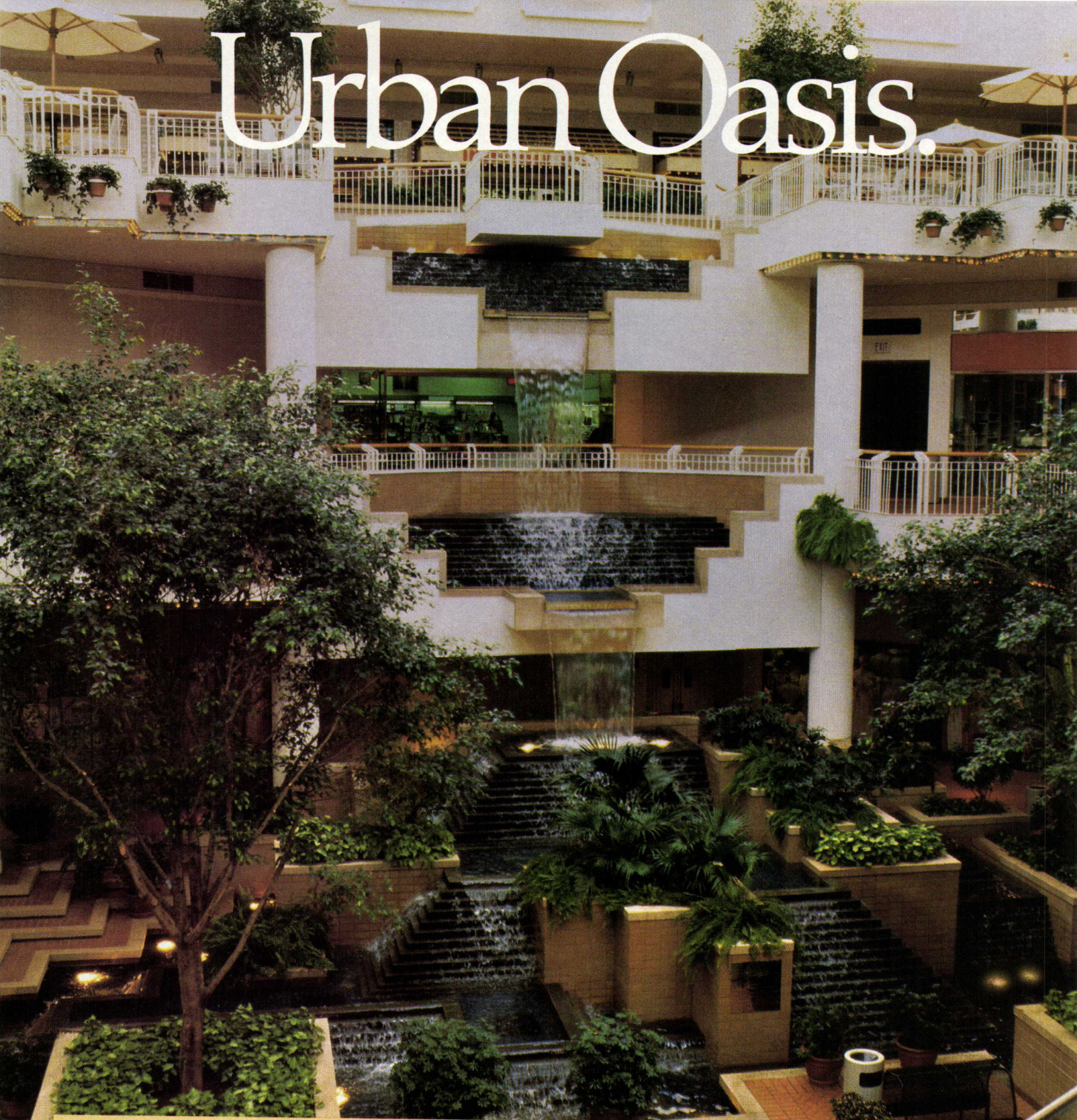
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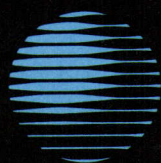


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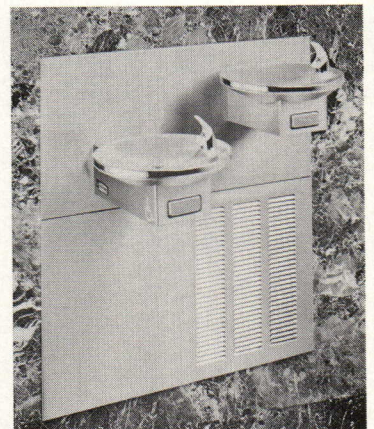
Project management system

The manufacturer's automated estimating system consists of the AT&T 6300 computer with a 10 mb hard disk, 256 kb RAM, a monochrome graphics screen, a 132-column dot matrix printer, an internal phone modem, and project management, estimating, and accounting software. The system's digitizer employs time-measured sound waves to plot locations in relation to known X-Y coordinates. ESTIMAGIC, Inc., Pasadena, Calif.
Circle 337 on reader service card



Chair

The *Apollo* conference chair has a chrome-finished tubular frame. The chair is 24 1/2-in. wide, 28-in. deep, and 42 1/2-in. high. Leather or fabric upholstery can be specified. Cy Mann Designs, Inc., New York City.
Circle 338 on reader service card



Water fountains

The manufacturer's new *SwirlFlo* double water fountains are designed to accommodate wheelchair users. The fountains feature recessed bowl and in-line water flow regulators. Elkay Manufacturing Co., Oak Brook, Ill.
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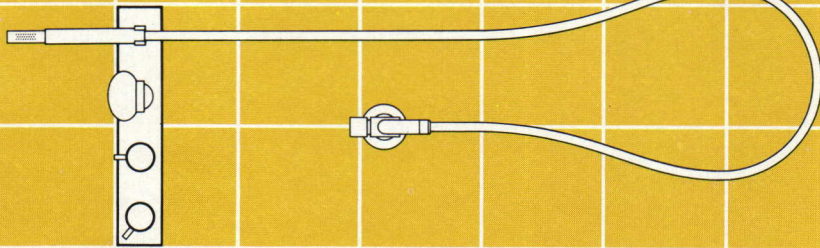
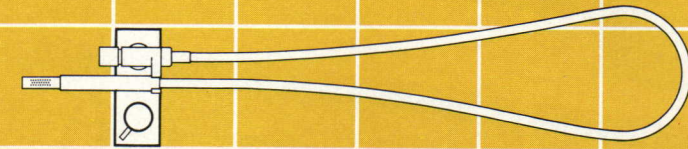
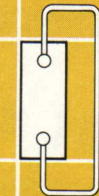
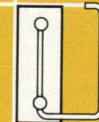
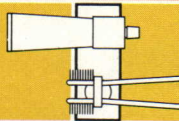
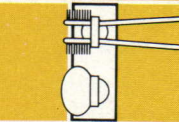
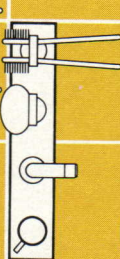
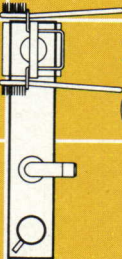
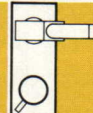
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of each job was run by a different group, there was no sense of responsibility for carry-through—to produce good design, and make sure that the building was built the way it was designed.

Samton also surveyed other prominent design firms to see how they were run. While he found no definite pattern, he did conclude that those in which the designers had a strong sense of identity with their work were indeed the happiest and potentially the most productive. "Those firms that, for instance, hung the design work of younger staff members on the walls and had programs to involve all the staff members in each other's work definitely had the best spirit."

Accordingly, he formed recommendations for his firm that, after some turmoil, were accepted and implemented. Among them:

- That his large office (currently numbering some 120 people) be restructured into "studios" to achieve, in effect, five smaller offices;
- That each studio would take all types of projects to provide for the varied interests of the members;
- That the teams on individual projects within each studio would carry their project through to the end, handling not only design, but working drawings, specifications, and construction supervision as well;
- That each studio would be run by both an administrative head and a design head, upsetting the old balance in which administrative project managers had sole responsibility for a job;
- That all projects, as design progressed, would be measured against design guidelines—both particular ones established at the project's inception and standard ones that would assure a consistent high level for all projects.

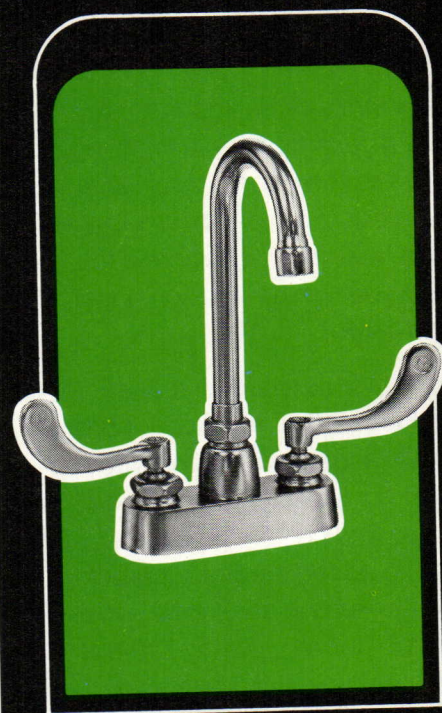
What has been the new organization's success? Samton is candid: "After we tried five studios, we consolidated them into four and then three." Currently, the office is organized into only two studios. "We had to keep making each studio larger to handle the size of projects that we do." And each studio became a group of specialists, handling, for instance hospitals in one and prisons in another. "It's the trend of the times to specialize." And besides, it became too complicated to have each studio master all the particulars of what are, these days, very complex and different programs for different building types. "The organization," he allowed, "is still in flux."

Samton said that not all offices can afford to be picky about the

Continued on page 181



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Manufacturer sources

For your convenience in locating building materials and other products shown in this month's feature articles, RECORD has asked the architects to identify the products specified

Pages 110-113

Alterations and Additions to the Observatory Dining Hall
University of Virginia

by Robert A. M. Stern Architects

Pages 110-111—Face brick: Old Virginia Brick Co. Formed steel framed fixed and operable windows: Hope's Windows.

Glazing (throughout): PPG.

Entrance: Kawneer Co., Inc. Mineral fiber roofing: Supradur Mfg. Corp.

Leaders and gutters: Revere Copper and Brass Inc.

Pages 112-113—Resilient flooring:

Armstrong. Gypsum plaster: U. S. Gypsum.

Acoustical ceilings: Armstrong.

Wood columns: A. F. Schwerdt Mfg. Co.

Paints: Benjamin Moore. Recessed

downlights: Edison Price.

Air diffusers: Anemostat; Titus;

Barber-Colman.

Chairs: Jasper Seating.

Sprinklers: Grinnell.

Door and window hardware: H. B. Ives Co.;

Corbin; Stanley.

Pages 114-115

Sprigg Lane Dormitory

University of Virginia

by Robert A. M. Stern Architects

Brick: Old Virginia Brick Co.

Roofing: Supradur Mfg. Corp.

Wood double-hung windows: Marvin.

Pages 126-131

Financial Guaranty Insurance Co.

by Emilio Ambasz & Associates

Page 126—"Garbo" lighting fixtures and

fabric strings: custom by architects,

fabricated by Sirrah. Paints and stains:

L&L Paint. Carpet: Stark. Chairs: Cassina.

Pages 128-130—Entrances: Elmont Glass

Co. Wood doors, cabinets and custom

woodwork: Creative Woodworking.

Decorative hardware: Hewi.

Wallcoverings: Variety Scenic Studios.

Plastic laminate surfacing: Formica. Tile:

Pirello. Lighting fixtures: O'Luce;

Artemide. Office furniture, tables: Simon

International. Office seating: Krueger.

Glass accessories: Venini.

Desk accessories: T. Anthony; Danese.

Page 131—Accessories: McDonald

Products.

Pages 134-139

Hildebrandt House

by Batey & Mack

Stabilized adobe block: Hans Sumpf.

Wood frame windows, doors and screens:

custom by architects, fabricated by Roy

Beaman. Tile flooring (interior/exterior):

Saltillo Clay Tiles. Drywall: U. S. Gypsum.

Recessed downlights: Halo.

Pages 140-141

Lieff House

by Batey & Mack

Wood framed doors and windows: custom

by architect, fabricated by Freidrich Co.

Continued on page 185

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types of clients they get. "It is part of the design professional's role to change bad clients into good ones," he noted. On fees: "We negotiate lump-sum amounts and renegotiate them as the job progresses. They are very tight, so we have to take care to stay on schedule. So are our construction budgets. We *try* to avoid clauses that state we will redesign if the costs run over." On fast-track: "There is no doubt you can design a better building in three months than three weeks."

Harvard economics professor David Maister was the final speaker of the opening session. He lauded two passages in AIA chief executive officer Louis Marines' opening address, approving Marines' switch in terminology from "management" to "leadership," and his statement "that managers don't manage creativity but people."

Maister went on to urge that "we get rid of the idea that managers only care about money." He said that creativity and productivity go hand in hand—that when we feel inspired, we have plenty of both, and our emotional environment is the key. Still, he pointed out, professionals revel in ambiguity. And some people think that creativity means reinventing the wheel every time you do something. "It is the manager's job to make the right emotional environment," he said. "Good managers give meaning."

He likened the role of a manager in a design firm to that of a coach—a good cheerleader and a good critic. And he likened the different types of design offices to three different types of sports that different coaches might direct: "Baseball is a sport for individuals; success here is being a good hitter, pitcher or catcher. Football is the execution of a predetermined strategy; success is being a team player. And basketball falls in between; no one player can win the game, but there's not that much management either."

In recognizing that there are different types of offices, he said, "There is nothing ignoble about taking on clients who are not looking for the architectural equivalent of brain surgery. The last thing I want when I have my tonsils out is a brain surgeon."

Charles K. Hoyt

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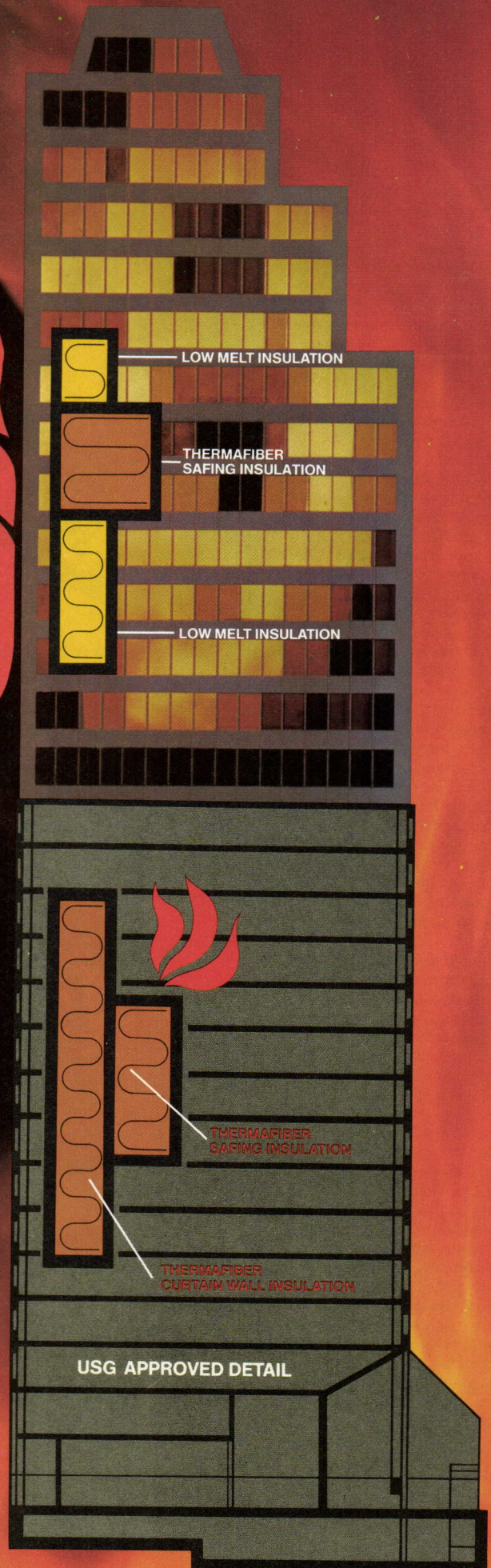
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Manufacturer sources

Pages 142-143

Rodeno House
by Batey & Mack
Doors and windows: custom by architect, fabricated by Freidrich Co.
Wall-mounted exterior light fixtures: custom by Shaper Lights.

Pages 144-151

Ordway Music Theater
by Benjamin Thompson Associates
Page 145—(top left) Brick: Kane-Gonic (Harvard Smooth Antiques).
Stone columns: Vetter Stone Co. (Northern Pink Buff).
Curtain wall: Kawneer (1600 Stick System).
Glazing: PPG/Cardinal.
Crimped sheet copper fascia: Custom by architects, fabricated by Gateway Glass and Glazing and Berwald Sheet Metal.
Entrances: Kawneer (1600); Custom mahogany doors by Aaron Carlson Co.
(top right) Chandelier and pole-mounted custom fixtures: Winona Studio of Lighting. Recessed downlights: Edison-Price. Sprinkler heads: Central Sprinkler Corp. Air grilles: Anemostat.
Architectural woodwork: Aaron Carlson Co.
Paint: PPG.
Custom carpeting: Mohawk Mills.
Wall treatment: U. S. Gypsum (Imperial System). Auditorium doors: Aaron Carlson Co. Pulls: Brookline. Closers: Norton.
Exit devices: Von Duprin.
Pages 146-151—Acoustical grilles: Aaron Carlson Co. Freestanding seating: Bernhardt. Row seating: Irwin Seating. Upholstery fabric: KM Fabrics (Woolevet).
Carpeting: Mohawk Mills.
Orchestra shell, curtain and theatrical rigging: T.R.S./Secoa.
Stage lifts: Grosh Scenic Studio/Zeller Techniks.
Theatrical lighting: Kleigl Bros.
Brass railings: custom, fabricated by Minnesota Fence and Iron.

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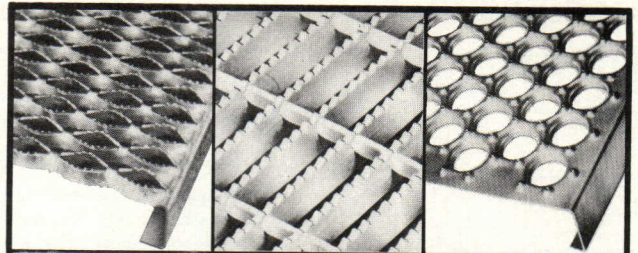
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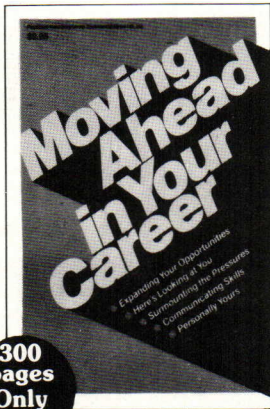
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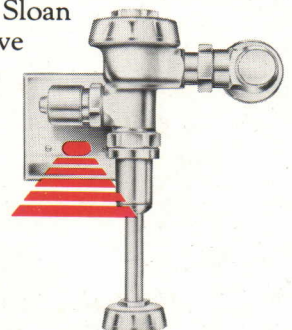
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