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For more information, contact Armstrong, Dept. 3CNAR, Box 3001, Lancaster, PA 17604.
We were pleased to see Architectural Record's coverage of the proposed bill for New York State that would exempt religious properties from landmark designation [September 1983-II, page 25]. The Preservation League of New York State is opposed to the bill, which could have disastrous consequences. We are joined in opposition by a broad-based coalition of nearly 100 not-for-profit and governmental organizations representing communities throughout New York State.

We would like to add that approval of the proposed legislation could jeopardize Federal certification of local preservation ordinances, which prevent owners of all sorts of properties—not only religious properties—from having to seek Federal tax incentives for rehabilitation under the Economic Recovery Tax Act of 1980. In 1982, New York State alone received nearly $1 million in tax revenues resulting from rehabilitation projects using the Federal tax incentive.

The League has long been concerned about the future use and architectural integrity of all types of religious buildings. In 1980, it presented the Historic Religious Properties Project, which has included not only publication of How to Care for Religious Properties, but also regional workshops on maintenance and reuse, a study of the attitudes of various denominations toward historic properties under their care, and a slide/tape program entitled “Stewardship: Responsible Care of Religious Buildings,” which is available for local screenings. This spring we plan to convene our annual conference in New York City to identify strategies for caring for our religious architectural heritage.

Diana S. Waite
Executive Director
Preservation League
of New York State, Albany

Nory Miller's article on the Pittsburgh History & Landmarks Foundation [Record, October 1983, pages 91-109] is excellent and we appreciate the accuracy of your coverage and its complimentary nature. Also, please thank the photographer—Timothy Hupfer—for his superb work.

May I make three small corrections? There are not 70,000 square feet of space in the older buildings at Station Square, as you indicated, but 70,000, and while I did assist in setting up Landmarks Design Associates, architects, I have no ownership interest in that firm. I do frequently use them because of their experience with both old buildings and new construction and their understanding of the complexity of large-scale mixed-use urban projects.

Also, you indicated that we are demolishing two theaters but saving the facades. We are only demolishing one theater and saving two theaters. The one has no architectural interest and has been vacant for some years. Of the remaining two, one will become the home of the “Kentucky Show” and the other will be for the performing arts.

Arthur P. Ziegler, Jr.
President
Cranston Development Company
Pittsburgh

Nory Miller’s article entitled “Big Business Preservation” [Record, October 1983, pages 91-109] was a splendidly written and strikingly laid out report on what the New York Landmarks Conservancy and other organizations in select cities in the United States are doing to promote the preservation and reuse of significant buildings. I would, however, like to add two points of information regarding the Conservancy’s projects. First, the magnificent full-page photograph [page 94] of the Frannces Tavern Block, which received no credit, was taken by Mr. Stephen Senigo. Secondly, it was the architectural firm of Mendel Mesick Cohen and Waite that completed the restoration plan for the Church of St. Ann and the Holy Trinity [page 93]. Hardy Holzman Pfeiffer developed the rehabilitation plan for the interior of the church.

Laurie Beckelman
Executive Director
New York Landmarks Conservancy
New York City

Corrections
Credits for Tampa Bay Performing Arts Center [Record, October 1983, page 69] should have included AROCP, Inc., as associated architects.

The original date of the Venturi, Scott Brown house, incorrectly given in Record Interiors 1983 [Record, September 1983-I, pages 108-119], was 1910.

January 21-24
National Association of Home Builders (NAHB) 40th Annual Convention and Trade Show; at the Astrodome Complex, Houston, Tex. For further information, contact NAHB (202)/822-0290.

January 24-27
Second Annual Interstate Solar Coordination Conference; at Arizona State University; sponsored by Interstate Solar Coordination Council (ISCC). To register, contact ISCC, 300 State Rd. 401, Cape Canaveral, Fla. 32920 (305)/783-0300.

January 30 to February 2

January 31 to February 15

February 3-5
Leadership and Conflict Resolution for Engineers and Technical Professionals; conference sponsored by the Engineers Leadership Institute; at Bergamo Conference Center, Dayton, Ohio. For information: Engineers Foundation of Ohio, 445 King Ave., Columbus, Ohio 43201 (614)/424-6645.

February 7-10
Infrared scanning conference course for detection of building energy losses and roof moisture, and inspection of electrical and mechanical systems; sponsored by Inspections Institute at the Econo-lodge, South Burlington, Vt. (802)/986-2500.

March 22-24

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Another New Year, some other new starts

The first month of each year always seems like a good time to embark on new projects—which is the way it should be if we are to continue to earn your respect and readership. It has not been so long (though it seems a long time) since the redesign/repositioning of RECORD—indeed, people are still volunteering that they “sure like our new look.” Editors Herb Smith and Charles Hoyt have, in the last year, made RECORD’s Business section into one of the best-read and talked-about sections of the magazine. It’s not got the razzle-dazzle of the more glamorous mid-book features, but it does have the kinds of information on building activity, costs and financing, construction and management, marketing, office management and computer use that an increasing number of firms increasingly understand they need to operate efficiently.

Editors Paul Sachner, Peg Gaskie, and Doug Brenner have built an equal loyalty for what I see as an increasingly lively Design news section providing “an early warning system” of what some of the bright and sometimes controversial designers have on their boards at project stage, and news of important exhibitions and happenings. And making an every-month feature of Design awards/competitions has, research shows us, created new insight into the emerging design trends across the country, not just in “the hotbeds.”

Similarly, with some help from his friends Grace Anderson and Jim Gardner, engineering editor Bob Fischer’s long commitment to covering the best and the brightest work in Engineering has added to the reader loyalty of not just our engineering readers but architects, for the simple and fundamental reason that those “architectural engineering” concepts are, of course, inseparable from the arts of design.

But this is a new year, a time for new starts. And in this first issue of the new year, we offer two:

On page 43 is the first article in what will be a continuing series on Architectural education, developed by editor Herb Smith. These new pages every month are a commitment to exploring with energy and the best thinking we can muster the concerns that a lot of us have about the education of future architects. Herb has written an introduction to the series—entitled “Architectural education’s year of challenge”—in which he outlines the areas that we’ll be covering. They range from practitioner’s concerns to the debates within the schools, to curriculum criteria, to discussions of the new licensing procedure, to student views and concerns, to the educational goals of various schools great and not so great, to internship, to accreditation—a mix of hard and vital news and philosophical writing on a most important subject. For sitting in the design studios and classrooms of those 100 or so accredited schools is 100 per cent of the future of the profession, and we must never forget that simple fact.

We are also inaugurating in this issue a new section of criticism, design theory and philosophy, championed by executive editor Mildred Schmertz, which will be called Observations.

It begins with one of the most thought-provoking and insightful articles that we’ve seen around here in years, entitled “The tall building artistically reconsidered: the search for a skyscraper style,” written by that most thought-provoking and insightful of critics, Ada Louise Huxtable. We think this article forms a splendid beginning for what we hope will be a lively and readable (and sometimes irreverent) addition to the magazine. In it each month will appear important book reviews, critical comment on what is happening in design, some re-examination of the role that historians have played (especially their penchant for picking and choosing the historical events to fit their arguments) and comment on almost anything else that strikes our fancy on the posturings and progress in the architectural community.

So, new year, new starts. We hope with both new sections of the RECORD to interest you—and make you think. Walter F. Wagner, Jr.
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In its third try in as many years, Congress just may be coming up with new legislation early this year to strengthen and rejuvenate the Public Building Service of the General Services Administration. A Senate committee issued proposed legislation S. 452 last February, but the full Senate had yet to vote on it by the end of its first term. A House subcommittee held three days of hearings on a similar bill, but the full Senate had yet to examine current practices. Emphasizing the possible need for even more major reforms than the legislation now encompasses, a court-system official told the subcommittee that autonomy of regional officers is causing "as much confusion as expertise." James E. Macklin, Jr., executive assistant director of the administrative office of the United States Courts, said GSA reacts slowly and expensively, and initial cost estimates are often higher than expected on large projects—such as the construction of new courthouses—regularly require many years.

Allyn Lite, Clerk of the United States District Court for New Jersey, who accompanied Macklin, related detailed instances of GSA overcharges and delay. Lite told the subcommittee: "The GSA charged $1,200 to estimate the enlargement of a jury box from 12 to 16 seats and then took a year to complete even that work. For the actual construction, the GSA proposed to charge $30,000, an offer turned down by the court."

Among the more bizarre space offers GSA came up with in response to the search for commercial quarters for the Newark Bankruptcy Court was space above a local fast-food restaurant. "To get to the space, you entered Kentucky Fried Chicken, made a right turn at the salad bar and went up the stairs," said Lite. "That is where they wanted to locate a United States Court." A subsequent GSA report said: "The court did not find the quarters unsatisfactory." Lite said: "It was abominable."

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

Federal pressures on tax breaks for real estate may continue

Partially because they have been unimpeded and even aided by FEDERAL legislation in recent years, tax laws favoring the real-estate industry and designed to promote increased activity and investment may continue to burn as a serious fire in the current scramble to balance Federal budgets. The most recent such attack (a House bill sponsored by representatives Dan Rostenkowski and Barber Conable, listed as H.R. 4170) was only narrowly defeated in the closing sessions of last year's Congress and—according to Merrill Bush, a speaker for the National Association of Industrial and Office Parks—will almost certainly be revived again in 1984, despite this being an election year.

H.R. 4170, a softened version of an earlier House bill introduced by Representative J.J. Pickle called the Industrial Development Bond Limitation Act of 1983, would have placed caps of $150 per resident and $40 million per user on the amount of tax-exempt private bonds each state could issue, it would also have restricted their use from the purchase of land or existing facilities as well as certain other purposes.

An earlier proposal by the Congressional budget office would have extended the depreciation-recovery period for buildings structures from 15 to 20 years. This was bitterly fought by the real-estate industry and the Association of Industrial and Office Parks in particular.

Member Thomas Schroyer estimated that the five-year extension would reduce the return to an investor in the first three and a half years by some nine per cent, and a National Realty Committee model prepared by the accounting firm of Coopers & Lybrand estimated that the result would be a $67.3-billion decrease in investment by 1986. While this proposal was also unsuccessful in 1983, it too can, according to Bush, be expected to resurface again this year. C.K.H.
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The profitable professional:
It pays to maintain good client relationships

By Barry B. LePatner, Esq.

As a design firm grows, it must pay increasing attention to developing new business. In recognition of this growing need within the design community, seminars, books and articles on business development have proliferated. Little, however, has been written on the subject of how to keep the new clients that a firm has labored so mightily to secure. In fact, it is generally assumed that professionals know how to maintain good relations with their clients to ensure repeat business. In reality, this is often not the case.

Why does repeat business mean more than just sure business?
To establish a client base of repeat commissions, a design firm must treat each project as if it were the first project for that client. From a business standpoint, new assignments from an existing client are substantially more profitable than developing a new assignment from a first-time client. The reasons for this are clear: Where a firm can begin services on a project with a defined understanding of an existing client's needs, less waste and more billable work can be produced than where a new client relationship has to be developed. Repeat commissions are important for another reason: They are a signal to prospective clients that you have won the trust and confidence of those who return for your advice and guidance whenever they need design services. Repeat commissions attest to the highest tribute a professional can have: a satisfied client who never thinks of looking elsewhere. Moreover, such clients are walking advertisements for your firm.

Developing such a loyal clientele is not easy; nor is it something that can be done in a short time. Yet each professional has as his or her greatest asset a reputation forged by the many relationships and interrelationships that develop over the years. Repeat commissions result from Mr. LePatner has law offices in New York City, where he specializes in the representation of architectural and engineering firms. He is co-author with Sidney M. Johnson of Structural and Foundation Failures: A Casebook for Architects, Engineers and Lawyers, published in 1981 by McGraw-Hill. Portions of this article appear in the "Le Patner Report," a newsletter published by the author. Copyright ©1984 by Barry B. LePatner, Esq. All rights reserved.

nurturing a reputation for honesty, integrity and the delivery of a constantly high level of work product. Maintaining mutual trust with a client requires that a professional promise and deliver to that client the best that he can give. If that promise is kept, it will result not only in repeat business but in new business that flows from a satisfied client's recommendations. And it will also result in a sense of personal pride, for providing a quality work product to a client in need of those services is to fulfill the ultimate goal of a professional in our society.

Keeping clients relates closely to how you got them in the first place, but... Maintaining a close and supportive working relationship with a client over a period of time requires an entirely different application of energies than you would use to develop that same client as potential new business. This difference becomes evident when you consider a general methodology for developing new clients:
1. In order to realistically approach prospective clients, you first must define the market for your firm's services.
2. Once the market has been defined (e.g., hospitals and medical groups for a firm that designs for the health field), you must determine who, within the potential market, is in need of your firm's services.
3. Direct communication, both written and oral, must be made with prospective clients to inform and advise them of the services available to them.
4. Prospective clients must be convinced as to how your firm's services can fulfill their needs.
5. The contract must be closed in a formal agreement so that the project can proceed.

It is only after this last step has been completed that a firm has developed a "new client."

Keeping clients requires more than just personal delivery
Once a contract has been closed, a design professional should focus on two goals equally: ensuring the satisfaction of the client on the initial project and developing a close personal working relationship that will avoid any perceived need for that client to look elsewhere for future design services. All too often, the selling and public relations techniques (used here in a positive sense) that enabled a firm to secure a new client are summarily halted after the project has begun. In many firms, the principals who so actively pursued, cultivated and won over the client, turn the project over to a project manager or project director without maintaining a continuing presence for follow-up work. Often, assurances of personal service and promises of performance are not assiduously passed along to those who manage the new client. These broken promises often "litter the landscape" when the new client is asked why another design firm is being considered for future business.

Often, too little recognition is given to the fact that client communication must be continuous, albeit modified, in order to assure that the "new" client does not become a "former" client after one project. In truth, a firm that fails to extend its fullest attention to each of its clients risks losing those clients to a competitor who is prepared to expend an even greater degree of energy to woo that client away.

In counseling numerous newly organized design firms, I am frequently asked how to build upon an existing client base. I often answer this question by referring to the way in which real-estate developers select and price a parcel of real estate by "location, location and location." For architects, engineers and all other professionals, the three essential criteria for clients' sustained enthusiasms are "service, service and service."

Much as there are specific reasons why a client selects one firm over another, there are good reasons why clients look elsewhere for future needs rather than merely returning to the designer who served them in the past. To prevent such a loss of business, it is important to...
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The profitable professional continued

understand the reasons why a client will continue to provide commissions to one design firm rather than go through the time-consuming effort of seeking out new firms for its work.

1. The client must believe that he or she is satisfied with the talents and services of the firm and that they were both timely and cost-effective.

2. A personal relationship coupled with mutual respect must have been nurtured that precludes any emotional need for the client to change in selection of design firms.

3. The design firm must offer a special expertise essential to the client’s business that cannot be easily replaced.

4. Or, simply, the client may be unaware of any other firm that can do the job better, faster or cheaper.

If one were to look closely at the above criteria, it is readily apparent that if the first three were addressed by the design professional through a conscious plan of action, there would be no logical reason for a client to seek out another firm on future work.

It thus follows that those firms that want to establish a long-term client relationship will do everything possible to nurture a warm personal and business relationship that encourages candid interchanges that can adapt to changing situations over a period of time.

Canny use of money and keeping clients posted contribute to satisfaction

Building a close working relationship with a client must begin with the initial project. Every client who entrusts his or her financial assets to a designer is looking to maximize that investment. One of this country’s largest private developers recently told me that the architects he will use on future projects are those who “spend my money as if it were their own.”

Being alert to the most cost-effective ways of spending a client’s money does not necessarily mean finding the cheapest way. Developers appreciate suggestions on how to achieve long-term cost savings, even at a greater, initial up-front cost. Staying abreast of such innovations thus becomes of paramount importance to the forward-thinking architect and engineer.

Another important element in building a long-term commitment from a client is to get the client into your office for a detailed explanation of how his or her project will be handled. Walk the client through the different departments of your office and introduce those who are preparing schematic design drawings for a current work in progress. Show your client the difference between schematics and design development drawings; explain the details required to ensure coordination of mechanical, electrical and structural drawings so that the working drawings will be ready for bid and ultimate construction.

It is startling to many architects and engineers to learn of the impact that can be made by providing such a tour to one’s clientele. For far too long, architects have been unable to explain why they are entitled to their fees when clients believe they merely draw “pretty pictures.” Sadly, many designers have failed to articulate to their clients the complicated role they play in the design/construction process.

By involving the client in the work of the design process, you demystify the work itself and it becomes more understandable and “valuable” in the eyes of the client; most importantly, it becomes a means to a larger end, i.e., the client now is a participant and thus is more willing to pay for services he has come to value.

Copies of sketches, drawings, and other instruments of service might regularly be sent to the client. Instead of shaking their heads with disinterest, most clients will place them on their desks, discuss them, and become even more enthusiastic about the evolving project. More importantly, those sketches and drawings should have the designer’s identification to reinforce the role of the designer by continued presence in the client’s office or home.

Too often, designers fail to recognize that the sketches and drawings they prepare are viewed by clients with great interest. In truth, these drawings are the first manifestation, the “oncoming of life,” of the abstract concepts which the designer has been discussing for weeks and months. The excitement thus generated works to the benefit of the design professional.

A by-product of providing clients with drawings and sketches (all of which should include a copyright notice—see “Protecting Ownership and Use of Plans,” ARCHITECTURAL RECORD January 1983, pp. 47-49) is that it is quite common for clients to show them to friends or colleagues who will then be familiar with your work and the professional approach it exhibits. Thus, the standard operating procedure of a given firm can be used to promote good will with existing clients and generate future business with potential new clients.

After “service, service, service” come “follow-up, follow-up, follow-up”

Even after a project has been completed, it is helpful to keep in contact with one’s clients. Don’t hesitate to send along articles on the project, if any. Related projects that were built in the client’s vicinity which complement or reflect upon your project should also be sent along with an appropriate note of recognition.

Keep abreast of new business ventures your clients have developed and, if they relate to projects that are within the province of your firm, do not hesitate to have them discuss with your client to discuss the prospects for development of these ideas. A sincere interest in the world of your client will enable you to better serve that client when you are called upon to perform your services.

Finally, when you receive recognition for other projects, win awards, or make news that is flattering to your firm, a pleasant announcement to your clients allows them to share your good fortune and the recognition that they too were wise enough to retain a designer who has been awarded an accolade for excellence.

In short, maintaining a long-term relationship with a client is not unlike developing a warm, working friendship—it requires a commonality of interest, a sincere mutuality of shared concerns and a respect for each other that will endure beyond any single project.
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Economics:
A healthy year for us all

By Phillip E. Kidd

Throughout 1983, the economic recovery progressed at a rate far more robust than had been thought possible. Significantly, that stunning performance has generated the momentum to keep the economy advancing, despite abnormally high interest rates, enormous Treasury borrowings, and sluggish money growth.

Entering 1983, monetary policy was in the midst of an aggressive easing. With money more available, nominal interest rates, mainly reflecting the decline in inflation over the previous year, had fallen precipitously from their exceptionally high mid-1982 levels. Credit-sensitive housing and automobile sales rapidly accelerated, while businesses started rebuilding inventories. More and more unemployed and new job entrants found work. Personal incomes rose, unleashing even more of consumers' pent-up demand for goods and services. Economic activity flourished without interrupting the downward drift of inflation. Nevertheless ...

Several long-term problems surfaced to cloud the upturn

The financial markets became increasingly alarmed that a continuation of substantial money acceleration would re-ignite inflation. Interest rates rose during the summer in response to those misgivings. In addition, the Federal Reserve nudged them even higher when it tightened monetary policy to calm the fears of institutions and investors. As these jitters quieted down, rates showed signs of dropping in early fall.

Abruptly, rates were sent higher when Congress dawdled over raising the debt ceiling, forcing the Treasury to crowd into the money and bond markets to borrow sizable amounts in a six-week span during the fourth quarter.

Those rising interest rates arrested the startling ascent of housing and automobile sales and made businesses more cautious about enlarging inventories. In turn economic growth slowed in the second half, but still is expected to post an impressive 6.5 to 7 per cent real gain during the July-to-December period.

Housing starts, and automobile sales sparked the 1983 recovery Importantly, starts and sales only leveled off, but did not fall, in the face of those higher long-term rates during the second half. Both will move up under the encouragement of somewhat lower rates this spring, as interest rates inch upward. Now, however, growth is occurring in other sectors, providing the needed thrust to keep the economy on the upswing.

Even though the deficit will be a little smaller than in 1983 ...

Rising Federal expenditures will still be a major stimulus to economic activity

State and local governments, which through most of the early 1980s were curbing purchases and raising taxes to balance budgets, are currently experiencing improved revenue flows and expanding surpluses. They will spend these dollars to upgrade services and to begin modernizing roads, bridges, and water/sewer systems. That will furnish another lift to the economy.

In the private sector, as sales strengthened last year, manufacturers pulled more of their idle plant and equipment back into production. Slowly businesses began investing more in the latter part of 1983. With capacity utilization rates crossing over the 80 per cent barrier, manufacturers will increase investment steadily throughout 1984, reviving industrial building. In addition, this sector will benefit from the gradual improvement in exports, as the economies of our major trading partners recover.

As more of the economy expands, credit demands will intensify

By the second quarter, interest rates will be feeling the pressure. However, as the economy continues to advance, employing more workers for longer hours and boosting personal income, domestic savings will rise. That will more than compensate for any drop off in the inflow of foreign savings, which was a vital source of funds in 1983.

Moreover, monetary policy, after three quarters of firmness that yanked the money supply back within targets, is positioned for some degree of easing.

Mr. Kidd is a prominent economic consultant and former director of Economics Research for the McGraw-Hill Information Systems Company.
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ARCHITECTURAL RECORD
Management: Reduce your liability exposure in contracts

In this fourth part of a series, a manager from the CNA Insurance Companies offers a checklist of ways you can decrease your exposure.

By Michael Silchuck

These recommendations have been developed by the research department of Victor O. Schinnerer and Company, Inc. Schinnerer is the underwriting manager of a design-professional liability program commended by the AIA and offered for more than 25 years by the Continental Casualty Company, one of the CNA Insurance Companies. The recommendations were derived from examination of actual contracts used by professionals insured in the CNA/Schinnerer program. C.K.H.

As a design professional, your services embody certain performance expectations as expressed by clients and as determined by common-law legal standards. A CEdCo contract, which ruled against an attempt to hold an engineer to a standard of strict liability, stated:

"The services of architects are sought because of their special skills. They have a duty to exercise the ordinary skill and competence of members of their profession and failure to discharge that duty will subject them to liability for negligence. Those who hire such persons are not justified in expecting infallibility, but can expect only reasonable care and competence. They purchase service, not insurance."

One will find such broad concepts behind every service contract between a professional and his client, according to Arthur T. Kornblut, in one of his many roles as consulting attorney to Schinnerer.

"Yes," states Kornblut, "much of the professional liability litigation in which architects and engineers find themselves today turns on the terms of their contracts rather than on general legal principles."

Concerned about the insurability of various contract provisions, many architects and engineers have submitted their contracts for review to the office for professional liability research at Schinnerer. The contract office has identified a number of common problems and evolved the following recommendations:

Standard contracts should be used instead of nonstandard ones

Excess standard professional service contracts, available from the American Institute of Architects and the Engineers' Joint Contract Documents Committee, are the product of extensive deliberations among various professionals—architects, engineers, owner's representatives, contractors, legal counsel and insurance experts—and reflect experience everyone benefits by.

When confronted by nonstandard contracts prepared by the client or his attorney, the design professional should attempt to convince the client that it would be to their mutual advantage to use the standard documents, incorporating whatever modifications are deemed appropriate for the project.

If the client insists on using a nonstandard contract, the design professional should ask his own legal counsel to perform a careful review of the client's document, and to compare and contrast its provisions with those found in the standard forms. In addition, insurance counsel should be sought if there are any questions about the insurability of nonstandard contract language under the terms and exclusions of the architect's or engineer's professional liability insurance policy. Nonstandard contracts should be looked at by everyone with the following points in mind:

All contract language must be clear and understandable, and mean what's agreed on. Quotations, nonstandard contract provisions lack clarity of purpose and intent and receive inadequate attention to grammar. Unclear and expanded liability exposures result from unclear contract provisions, because the parties cannot fully comprehend their rights and responsibilities.

The following actual provision illustrates this problem:

"The Architect shall not be liable...for defective workmanship, labor, installation or material that is the responsibility of the General Contractor, Bond Contractor, any subcontractor, or any other person, firm or corporation, unless the Architect is negligent or inexcusable in furnishing and said responsible person, firm or corporation to correct such defects in the building and/or property damages resulting therefrom, or if same is duly reported as required...above."

Although this had been drafted by an attorney, there is no way that anyone, let alone the contract parties, can interpret what is intended.

When faced with unintelligible contract provisions, insist that they be redrafted. Regardless of who drafts the contract, each provision should be completely comprehensible so that all rights, duties and obligations are clear to contract parties. Otherwise, if a dispute arises at some point in the future, a judge, jury or arbitration panel will be faced with the task of interpreting the contract provisions in light of the ensuing facts—and the result may be far different from what anyone thought was intended when the contract was signed.

Even something as basic as correct word usage can play an important role in this regard. In one contract reviewed by Schinnerer, an architect was required to perform certain services "on sight"—rather than "on site" as was intended—and this misspelling obviously changed the sense of the contract.

Make sure a clear definition of professional responsibilities is included

In outlining the design professional's services, the contract should emphasize the distinction between the professional's services and the work to be performed by the contractor. The architect or engineer should not assume the contractor's responsibility for construction means, methods, techniques sequences or procedures.

A significant number of legal cases in recent years have involved suits by injured workmen brought against architects and engineers. Barred from suing their employers, who enjoy statutory immunity from litigation by virtue of the workers' compensation laws, these workers have filed against design professionals in the hope of recovering additional compensation for their injuries.

In many of these suits, the courts have found that contract language created a duty on the part of the architect or engineer running to the plaintiff workman—whether or not any such duty had been contemplated or intended when the contract was drafted. Problems of this sort can be avoided by including a disclaimer in the contract, as is found in the standard AIA and ACEC forms.

Job-site safety, therefore, should not be a responsibility assumed by the design professional. Safety is the responsibility of the contractor. Yet key phrases such as "supervision" and "right to stop work"—when included in the professional's contractual responsibilities—imply that the design professional has a responsibility to control the construction operation, and thus has construction phase liability.

Do not overlook the obligations of the client/owner

Every client has a responsible role in the design and construction process. A client should anticipate rather than avoid involvement in his project, as his investment is quite large. Among the client's obligations normally included in the contract are:

- Providing a program that states the project requirements and design objectives.
- Establishing the budget.
- Providing legal, insurance and accounting services insofar as they are needed to protect the client's interests.
- Retaining the services of surveyors and soils engineers (although occasionally these services are provided by consultants to the design professional).
- Being responsible for technical testing of the work required during or after construction.
- Making decisions during the design and construction process and giving approvals required at the end of each phase of the design professional's services.
- Paying for the services rendered.

Beware of contracts requiring "perfection," express guarantees or warranties

In an extension of the principles of clear language discussed before, design professionals should recognize that nonstandard contracts can create severe liability exposure by the usual use of many common words. Although the law does not hold architects and engineers to a standard of perfection in performing professional services, applicable legal standards can be unintentionally but dramatically altered by the terms of the professional's contract.

Every word in a contract should be read and interpreted literally—and not according to the custom, usage or slang of the construction industry. Therefore, architects and engineers should avoid contract terms that are superlative and absolute in their meaning—"highest quality," "most efficient/econmical," "best," "assure compliance with (e.g.) OSHA, local codes," "as necessary" and so forth. Design professionals also should take care with express warranties (e.g., "the basement will not leak, "the foundation will never fail.

Architectural Record January 1984
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MAKE IT WITH ALUMINUM
Management continued

from a contract: drawings and specifications that dictionary definitions of guarantees (e.g., "complete,"
clauses should be avoided contract as any respect; i.e., they must be according to the profession's only requires design
requirements would obligate the design professionals retained for the unexpected
build."

Contingency clauses are often inserted into contracts when one party may be prepared for
future liability if there is deviation from the spec. It is the contractor's responsibility to record such minor deviations on
project specs, and to notify the design professional of any design or material changes so that a clean set of "record drawings" may be prepared for the owner.

Remember that contingencies breed contingencies; such clauses should be avoided
Contingency clauses are often inserted into contracts when one party is uncertain about what his position will be at some point in the future. In design-service contracts, such clauses often relate to the client's obligation to continue with the project or to pay for professional service rendered. If contingency clauses appear in a contract, recognize that the ability to enforce the contract when the unexpected occurs may be beyond the design professional's control.

For example, the following is found in many nonstandard contracts:

"It is further agreed that the owner is not liable for any deviation from the terms of this Agreement until Project financing has been arranged by the owner."

Thus, the prime professional must be confident in the technical capabilities of each consultant and his ability to work with the other project members. If any consultant fails to perform properly, the prime professional should be able to terminate the consultant's services because of the ultimate exposure to liability for any inadequate performance.

In addition to the right to select consultants, the prime professional should have the contractual right to hire and fire them. Of course, all consultants and subcontractors under the design professional's control should have their own certificates of insurance with proper limits.

If the client insists on selecting the consultants, and the consultants are not fully acceptable to the prime professional or if he is unwilling to assume contingent liability for their performance, it may be appropriate to suggest that the client himself enter into direct contracts with those consultants. Then, it should become the client's responsibility to see that their services are properly administered and coordinated. If it is not possible to utilize separate contracts, the prime professional should proceed only with a full awareness of his liability exposure.

Use insurance exclusions in your policy checklist of what to watch out for
Either prior to drafting a professional service contract or Altering one of the professional societies' standard agreement forms, it's important to become familiar with available professional liability insurance coverage. A copy of the exclusions contained in the professional liability insurance policy can be a convenient checklist for the professional service contract.

Except in rare cases, contract terms including items excluded from insurance coverage are not in either party's best interest. For the design professional, such provisions could leave him without the proper insurance coverage in the event of a claim, and he then will have to assume personal responsibility to pay for the defense costs and any judgment rendered against him.

Some of the more frequent contract clauses that create liability insurance-coverage problems are:

- Stringent provisions attempting to impose financial liability on the architect or engineer in the event construction costs exceed estimates provided by him.
- Hold harmless or indemnity provisions running to the owner.
- Requirements that the design professional give advice on insurance or surety bonds.
- Imposition of liquidated damages on the design professional.
- Establishment of deadline dates for performance.

In addition, contracts calling for the architect or engineer to participate in a joint venture, assume an equity interest in the project, or retain survey or subsurface soil consulting services create professional liability insurance problems. For each of these, competent insurance counsel is mandatory if the contract is to be prepared in a way that does not jeopardize insurance coverage.

While insurance is not a panacea for every ill that can befall a design professional or his client, it can provide a reasonable measure of financial protection to both parties in the event of an allegation of negligent professional performance. The proper preparation of the professional-service contract can do much to assure that the design professional limits his liability up front to only those areas that are appropriate, and that his insurance, to the extent of the coverage it provides, will be available if needed.
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Circle 22 on inquiry card
Summary of Building Construction Costs

<table>
<thead>
<tr>
<th>Districts</th>
<th>Eastern U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>7/83</td>
</tr>
<tr>
<td>Metro NY-NJ</td>
<td>18</td>
</tr>
<tr>
<td>New England States</td>
<td>33</td>
</tr>
<tr>
<td>Northeast and North</td>
<td>120</td>
</tr>
<tr>
<td>Central States</td>
<td>106</td>
</tr>
<tr>
<td>Southeastern States</td>
<td>277</td>
</tr>
<tr>
<td>Average Eastern U.S.</td>
<td>505</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Metro</th>
<th>Number of metro areas</th>
<th>7/83</th>
<th>10/83</th>
<th>1977*</th>
<th>10/83</th>
<th>10/83</th>
</tr>
</thead>
<tbody>
<tr>
<td>NY-NJ</td>
<td>18</td>
<td>-0.16</td>
<td>5.20</td>
<td>1548.57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New England</td>
<td>33</td>
<td>1.40</td>
<td>5.03</td>
<td>1537.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>120</td>
<td>0.87</td>
<td>4.04</td>
<td>1586.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central</td>
<td>106</td>
<td>1.04</td>
<td>6.02</td>
<td>1629.40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southeastern</td>
<td>277</td>
<td>0.93</td>
<td>4.99</td>
<td>1594.42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>505</td>
<td>0.91</td>
<td>4.24</td>
<td>1605.80</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Costs: To be a useful estimating tool, these cost indexes require knowing how to apply them.

Regular business first: Based on a survey by the McGraw-Hill Cost Information Systems Division for the period of July 1983 through September 1983, the following changes from the prior period are reported: Concrete costs are up 1.2 per cent; concrete block, up 1.4 per cent; plywood, up 1.1 per cent; sheet metal, down 0.3 per cent; gum board, up 0.6 per cent; asphalt shingles, down 1.8 per cent; reinforcing bars, up 1.8 per cent; structural steel, down 0.4 per cent; conduit, down 0.3 per cent; and copper, up 0.1 per cent.

Judging by the number of requests for information on the use of the cost indexes shown at left and below and appearing on these pages each quarter, it is once again useful to explain how they work.

The indexes are compiled by survey and reflect costs for buildings of all kinds, materials available from local suppliers, and workers' locally prevailing wages. The carefully selected respondents are believed to be knowledgeable and reliable, with their accuracy and therefore the resulting indexes cannot be guaranteed or warranted. Further, these data are weighted to produce the cost of a "typical" building that is a composite of residential and nonresidential construction.

These factors do not lessen the use of this series, but should be noted cautiously.

These indexes do exhibit considerable sensitivity because of the many cities polled; the inclusion of 10 widely used material prices and 20 basic labor rates and the formula by which they are weighted. Because they are based on the availability of supplies, labor, conditions, contractor bidding practices, etc., they are broadly applicable.

To obtain the percentage increase or decrease in costs for any city, take the difference in the second period cost and the current period, and divide that by the earlier period. Multiply the resulting decimal quantity by 100 to obtain the percentage change.

James Stewart Cost Information Systems McGraw-Hall Information Systems Company

An example: If the index for one period was 1187.6 and the current index is 1307.2, the percentage increase is the following:

Current index—earliest index = 100 — per cent increase

Earliest index

1187.6

1307.2

x 100 = 0.90

0.290 x 100 = 29 per cent

0.290

505

1605.80

Historical Building Costs Indexes

<table>
<thead>
<tr>
<th>City</th>
<th>1977 average for each city = 100.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta</td>
<td>1171.5</td>
</tr>
<tr>
<td>Baltimore</td>
<td>1018.4</td>
</tr>
<tr>
<td>Birmingham</td>
<td>1029.7</td>
</tr>
<tr>
<td>Boston</td>
<td>1038.4</td>
</tr>
<tr>
<td>Chicago</td>
<td>1007.7</td>
</tr>
<tr>
<td>Cincinnati</td>
<td>984.9</td>
</tr>
<tr>
<td>Cleveland</td>
<td>1034.4</td>
</tr>
<tr>
<td>Dallas</td>
<td>1042.4</td>
</tr>
<tr>
<td>Denver</td>
<td>1038.8</td>
</tr>
<tr>
<td>Detroit</td>
<td>1018.1</td>
</tr>
<tr>
<td>Kansas City</td>
<td>1025.5</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>1025.5</td>
</tr>
<tr>
<td>Miami</td>
<td>1004.5</td>
</tr>
<tr>
<td>Minneapolis</td>
<td>1006.2</td>
</tr>
<tr>
<td>Milwaukee</td>
<td>1001.3</td>
</tr>
<tr>
<td>New York</td>
<td>1005.4</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>1013.8</td>
</tr>
<tr>
<td>Pittsburgh</td>
<td>1016.1</td>
</tr>
<tr>
<td>St. Louis</td>
<td>1039.1</td>
</tr>
<tr>
<td>San Francisco</td>
<td>1062.2</td>
</tr>
<tr>
<td>Seattle</td>
<td>1142.5</td>
</tr>
</tbody>
</table>

Costs is a given city for a certain period may be compared with costs in another period by dividing one index into the other; if the index for a city for one period (200) divided by the index for a second period (150) equals 33.3% the costs in the one period are 20% higher than the costs in the other. Also, second period costs are 20% of those in the first period if 150/100 = 75 or they are 25% lower in the second period.

Architectural Record January 1984 37
new sophistication for low-cost ceilings

panels suspended by shadow

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Old style grids are flat and wide. Give ceilings a boxed-in look.

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Circle 23 on inquiry card
Legal perspectives: Approving payments can be risky business

The eminent attorney-architect explains why approving payments to contractors for materials they store off-site can create a serious problem

By Arthur Kornblut, Esq.

"Stored materials" intended for construction projects create a special set of problems for the architect and his client. Under standard general conditions, the architect reviews the contractor's applications for payment, makes a judgment about the work done to date, and passes the payment application on to the owner with an analysis of the content. Contractors, understandably, are inclined to request payment also for stored materials intended for the project.

The standard AIA General Conditions (subparagraph 9.3.2) states:

Unless otherwise provided in the Contract Documents, payments will be made on account of stored materials or equipment not incorporated in the Work but delivered and suitably stored at the site and, if approved in advance by the Owner, permanently be made for materials or equipment suitably stored at some other location agreed upon in writing. Payment for materials or equipment stored on or off the site shall be conducted upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner to establish the Owner's title to such materials or equipment or otherwise protect the Owner's legal interest in the materials and equipment stored off site.

Subparagraph 9.3.3 provides for title passing to the owner when the owner makes payment or when the materials and equipment are incorporated into the construction, whichever occurs first. But...

Here's where the owner takes a risk by paying before delivery.

For the owner, making payment for materials stored off-site can create a substantial exposure. Even though with such payment title to the materials normally passes to the owner, the owner may be in no position to recover the materials if proper attention has not been paid to insurance, bonds, transportation requirements, protection while in storage, and identification of the owner's legal interest in the materials as would all be covered by a title policy.

And, even when proper attention is paid to concerns that normally are recognized, other pitfalls exist which might not be properly anticipated and hence planned for.

A recent case shows how the design professional may get caught in the middle

A case decided by a Federal court illustrates some of the risks associated with paying for materials stored off-site. (The Travelers Indemnity Co. v. Ewing, Cole, Erdman & Eubank, U.S. Court of Appeals, Third Circuit, June 22, 1983.) In this case, the architect was retained by a public agency in New Jersey to serve as the "executive architect" for a student dormitory project at a state university. The architect performed the normal range of professional services, including the preparation of the bidding documents.

The owner then awarded a contract to a manufacturer of prefabricated housing. The manufacturer proposed to manufacture the housing modules at its factory rather than use conventional on-site construction methods. After the units were produced, they were to be shipped to the site for assembly into dormitory facilities.

Following the award of contract, the architect authorized five progress payments to the contractor for materials purchased and work completed at the contractor's plant. After each request for payment, a representative of the architect visited the plant to conduct spot checks to determine if the materials existed, were segregated and identified as belonging to the owner, and were insured by reasonable precaution and care against theft, fire, and vandalism.

After the fifth payment, the contractor went bankrupt. A trustee in bankruptcy appointed the architect to honor the contract in the bankruptcy court. The court found the value of the undelivered work and materials was $441,374.

On appeal, the architect claimed the trial court had made an error of law by holding the architect liable for paying off-site work and materials that the architect had believed to have been paid. The appellate court noted that the architect had been negligent because he had failed to inform the owner about "any method whereby it could exercise control over its property." The trial court found that the architect could have suggested to the owner that the use of bonded warehouses would have increased the protection against the possibility of the contractor going bankrupt. Where a professional is involved, the architect has a duty to inform the legal counsel of its client about such matters. It seems a particularly inefficient allocation of professional responsibilities to have architects liable for not alerting lawyers to the legal ramifications of the bankruptcy of a contractor. Neither the government attorney nor the owner was in a position to recover the materials under such circumstances.

The trial court reversed. The court recognized that architects have a duty to communicate information to their clients, but such information is limited to factors about which design professionals are expected to have knowledge (or unusual facts that warrant special treatment). The court would not, however, extend this general principle to hold an architect liable for failing to exercise caution in an area in which the owner's legal counsel should have taken cognizance.

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

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Circle 25 on inquiry card
1984: Architectural education’s year of challenge

The mystique of teaching and learning architecture has always been a wondrous and debated proposition. Of all the vast quantities of skills, knowledge, and areas of understanding that must be imparted, which ones should be stressed—and what proportion? How, where and when should it be learned? Is there time enough in the few years of professional school to cover it all—or should some areas be left for the years of internship, or apprenticeship as it used to be called?

As noted, these questions and debates are not new. And there have been many answers and responses—from the Beaux Arts to the Bauhaus, Cranbrook, Taliesin, Schools of Engineering. And from the magazine articles over practical approaches of the Post World War II era to the social revolts of the ’60s.

Yet there have been a couple of nagging constants in all the foment. Fledging architectural graduates and hiring practitioners alike have felt a certain inadequacy in the learning and abilities that have been imparted. And there have been many graduates, sensing less than stellar design talents, left wondering what alternative paths are open to them in architecture. For design and creativity are universally conceded to be the dominant goals and requisites for significant achievement and recognition in architecture. But can they be taught—simply nurtured and brought to flower when discovered? And are not other mentalities and motivations equally vital to good, sound and useful building? Are they being accommodated?

These quandaries are probably endemic to a profession in which art is meant to serve. But right now, amidst all the brouhaha relayed by the media about the questionable state of education in general, it is only natural that architecture, in all its facets and related stringencies, come under renewed scrutiny. Considering that the National Council of Architectural Registration Boards has long had an obligation to good, sound and useful building. Are they being accommodated?

There have been numerous seminars and conferences fairly recently at a lot of schools: Harvard, University of Pennsylvania, MIT among them—on education and the future of the profession; and there are more to come—as such as one at Penn State next spring on "The American Academy in Rome and its impact on architectural education." All impinge on this era of re-analysis. Many feel that today's students are more "business-career minded"—so some schools have been beefing-up courses on business and practice. The Association of Student Chapters/AIA shows signs of more involvement in the architecture degree from an accredited school. And, of course, there is the whole busines of computers! In addition to a few schools that have long had architectural computer courses (such as Cornell), many are quickly adding them (as at Mississippi). And now there is a computers in architectural schools group, called "ACADIA," which reportedly already has some 150 school members and has generated numerous scholarly papers on how to use and teach the computer. But, lest all this lead to over-conformity, there are some strong voices among the Association of Collegiate Schools of Architecture urging care in preserving some vital diversity in educational approaches and schools. And all this interest is not just in the United States: The RIBA has launched a new quarterly, "Architectural Education," in Britain—covering such topics as education "After Beaux Arts" and "For Developing Countries."

The Intern Development Program is strengthening Long, perhaps, the weakest link in the progression toward registration and becoming a fully-fledged architect—added learning through internship—the 14 criteria of the formalized IDP program have reportedly now been mandated by nine states, with others to follow. In addition, some schools include work in an architectural office as part of their teaching program; and some firms (such as SOM) have established their own intern programs, in which partners canvassing and visiting schools for candidates. Prescribed work requirements for registration by state registration boards are, of course, under usual. But increased cooperation by practitioners to help the graduates is still needed.

A new NCARB exam and grading is now accepted by all states The National Council of Architectural Registration Boards has evolved a new licensing examination and grading system after several years of soul-searching debate, a survey of about 12,000 architects, and a round table of 40 major architectural clients to find what they expected of an architect. The exam was put into use in the most recent exams last year, and the results are being carefully analyzed. And an even more recent development is the addition of a mandatory requirement of an architectural degree from an accredited school. A special committee has been established to set up new "alternate education criteria" for those already in the pipeline with special circumstances. And

Concurrent with today's ferment in design is new questioning about how to teach architecture—and what subjects, what goals—plus important changes in accrediting schools, internship, licensing and continuing education: RECORD launches this series to explore, report, and stir some healthy debate.

Continuing education and public education grow apace There is a seemingly wild proliferation of seminars, panels, conventions, correspondence courses and books by all sorts of professional organizations, manufacturers and suppliers, and even entrepreneurs, to help fill the obvious need for information on new developments—especially in the areas of computer practice and of computers. Some architectural schools are also setting up special programs for active practitioners—such as the "Architectural Extension" one at Oklahoma State.

Efforts to fill the similar need for educational programs aimed at public schools and the general public has been an off-and-on proposition. But there seem to be more and more newspaper and magazine articles about architecture—and even more architectural criticism. And the national aia and local chapters have on occasion done some quite innovative things—such as a recent tri-state "Architectural Drawings as Communication" competition held by the Memphis Chapter, and an on display with the cooperation of a local gallery for the general public and, best of all, with school children bussed in, part of the part of the needed educational scenario—not only for more and better clients, but to interest some of the younger minds in architecture.

In the months to come RECORD will cover all this

Although RECORD has long covered periodically the major concerns and developments in architectural education, starting this month in the following pages, we will present a monthly series of articles—both informational and philosophical—on all the areas noted above, and others as they arise. We start with a very thoughtful piece by Dean Copeland of the University of Pennsylvania, reminding us that education to be a concerned and whole person is an important corollary to that of a skilled professional. It is a fitting beginning to a series we first thought of as "What’s Wrong With Architectural Education?" Theirs is certainly very right. I think it’s one of the best types of education there is; if you have strong opinions pro or con, let us know from you.

Herbert L. Smith, Jr.
Architectural Record January 1984 43
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Circle 26 on inquiry card
Architectural education: Balancing the practicalities with the humanities

By Lee G. Copeland

An eminent educator stresses that an architect should be trained not only to be a skilled, reliable practitioner, but to be a creative, contributing and necessary member of society—and, conversely, that a liberal education should include an appreciation of architecture.

University faculties of professional schools share the goal of all colleges: to prepare students to assume their responsibilities in their communities. From the very beginning, and throughout their formal education, the child, youth and then young adult is provided with the learning environment for developing values, a sense of morality, the ability to decide between right and wrong and to make critical judgments of an increasingly knowledgeable and complex nature. The knowledge gained through education and the experience gained through socialization prepare the young student and future professional to fulfill the first of two major responsibilities. A generation ago the first responsibility was termed “being a good citizen,” and report cards contained a space for grading our citizenship performance. As we matured we were taught to cooperate, to interact and work with others, and to be sensitive to the needs and values of others while at the same time developing our own identity and sense of place in our community. We were being prepared to contribute to our culture and to determine our own destiny.

The second responsibility is that of contributing one’s expertise as a professional. Communities have always relied on having a varied and complete array of skills and experience available to ensure their well-being, viability and continuity. Each member contributes a particular expertise. Professional education, whether offered at the undergraduate or graduate level, should provide a curriculum that integrates general education and knowledge with training for a profession.

Students should be urged to build bridges between their liberal arts education, the values that they have developed throughout their earlier lives and their newly acquired professions. It is important for the student to associate their professional practice with their culture and its values, to interpret and respond to societal needs, and to apply a fit between their professional actions and perception of a good society. Too often professional education is conceived of as highly specialized and focused. Students entering after two or four years of undergraduate studies are thought to have completed their liberal education and expected to focus entirely on training for their profession. On the contrary, it is important to provide the opportunity to continue to develop students’ general knowledge while providing training. Both should be conceived of as a part of professional education.

Architectural education should provide a balance between training—that is the imparting of necessary skills—and the acquisition of knowledge, that component enabling the student to make proper use of the skills that she or he has acquired. I agree with the remark that Mies van de Rohe made that “… training has practical purposes in view, but education emphasizes values. It is the business of education to implant insight and responsibility in the developing professional.”

The University of Pennsylvania, where I am Dean of the Graduate School of Fine Arts, was founded on an unusually easy and interactive relationship between training for the professions and liberal education. The University’s founder, Benjamin Franklin, in his “Promulgate Botany to the Education of Youth in Pennsylvania,” spoke to the necessity of combining both as a part of education in the University when he said: “… as to their studies, it would be well if they could be taught everything that is useful and everything that is ornamental, but art is long and their time is short. It is therefore proposed that they learn those things that are likely to be the most useful and the most ornamental, regard being had to the several professions for which they are intended.” He also charged in an economy of means and went on to say, “but while reading natural history, might not a little ground be given for drafting, planting, grafting, and inoculating be taught and practiced?”

The development of the professional programs within the School depend on and supported this premise. Initially training was offered to the undergraduates but later it was transferred to the graduate level. This concept applies to both. The bulletin of the School of Fine Arts for 1962 described the School as “… founded on the conception that art is essential to life; that in its various manifestations in music, painting, architecture, and to have completed their studies, it is too often true that the artist, regarding himself solely as a craftsman, neglects the claims of general education and so comes to lack those correctives of imagination and taste and the human sympathy, power of insight and intellectual grasp that come with mental discipline and breadth of knowledge.” Therefore, in describing the scope of work within the School, “two types of instruction are offered, professional and general; first providing vocational training combined with the essentials of a liberal education, and the second giving a liberal education in which the history and appreciation of art and its technical expression in drawing and design form the major interest.”

Like many design and planning programs today, the school includes professional studies in planning, design and the fine arts in architecture, city and regional planning, energy management, government, landscape architecture, urban design, painting, sculpture and modeling. Our array of programs provides us with the opportunity and responsibility to develop interrelations between complementary aspects of our curriculums, but we must also nurture the uniqueness of each of our programs, as their quality and rigor depend also on recognizing and supporting the special characteristics and needs of individual programs. While the School promotes a community of concern and respect for diversity, it also serves to clarify the focus, integrity and uniqueness of each discipline by promoting an environment of organization for constructive debate and confrontation.

Like most graduate schools, we offer first professional degrees to students with undergraduate liberal arts degrees and advanced masters and Ph.D. degrees to those with undergraduate and graduate professional training. Our students arrive well educated in general, and with well-developed value systems, but they usually have very little understanding of the environment. While most are literate, few are able to visualize the world around them. This is usually true too in undergraduate professional programs. In general our students should develop both breadth and depth and learn to see the environment. Our painting and sculpture faculty put this objective well, stating their purpose is simply “… teaching people how to see” and that the works of their students “… have the general validity and the essential significance of vision informed by understanding and expressed with integrity.” Hundreds of undergraduate liberal arts students arrive at our school to learn to draw per se, but to learn to see, though it is also a valuable means of communicating.

To build on our students’ previous education, encourage them to construct bridges between their past experiences and their professional training and extend their general knowledge while also developing skills in their chosen profession, I have proposed to conceptualize our curriculum and organize our educational programs around three areas: knowledge, training and practice.

Not all of our courses need fit into this organization or any one of the parts, but this provides a way of organizing our curriculum.

Knowledge

This area provides the student with the breadth and his knowledge while focusing on areas relevant to his profession. It involves learning about society and the environment, about the relationship between the natural and the built environment, about ways of knowing, representation and modeling in the environment, about theory building, and it includes learning from history.

One particular responsibility and characteristic of environmental design and planning, as positioned within a larger university is that they must understand the environment, to gain knowledge about the ways and whys of the natural and built environment and the urban phenomenon, and to understand...
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the relationship and the interdependence between the environment and people. We want to understand how the lives of people and societies are facilitated and supported by the environment and how behavior affects the environment. This is a specialized area of knowledge that our graduates contribute as members of their community. Students must gain knowledge of the resources or palette with which they will work. In landscape architecture resources include plant materials, the form and geology of the land and the ecology of the environment. In planning it includes the physical, economic, social and political situations of cities and regions. And in architecture the student should learn about materials, structural, HVAC, and electrical systems, construction methods and the craft of making architecture. The application of this technical knowledge to developing design concepts, while taken for granted by the experienced architect, is a particularly difficult hurdle or association for students to make. They are able to conceive well-organized plans and develop "literary" concepts (assuming they are well-read) with symbolic, historic, metaphorical or semiotic basis, but they find it hard to perceive spatial relations and the potential determination of esthetic opportunities of the technology and craft of making buildings. The liberal arts basis for design is an easy extension of their liberal arts education that they can apply early in their professional education with some confidence. Seeing and visualizing space and learning the resources applied to making architecture is a new experience unique to their professional training and requires time before enough knowledge is acquired to apply it to the design of architecture with confidence and understanding.

Additionally, one should develop an understanding and advocacy for quality. We educate our students not only to facilitate, but also to enhance the lives of people in communities. We strive to achieve a congruence between the activities to be housed, the attitudes of society and the form of the environment, and to extend the general state of our culture.

Today, in the period of pluralism in design when no one dogma reigns, the opportunity to develop designs truly congruent with the people and activities they support, and to achieve a fit within their context whether historical or contemporary, presents exciting opportunities and responsibilities. This attitude has supported the development of historic preservation in practice and education, and a richer, less abstract and more contextual approach to contemporary design. Romaldo Giurgola, a complexity of this architectural synthesis: "A building is a fragment of the larger environment which includes other continuously growing structures and the natural landscape. As a meaningful fragment it should have its own inner order to be able to relate to others."

We should be attentive to beauty and esthetics as an integral part of our concerns for perceptible, rich, functional, comfortable and stimulating environments. With the increased concern for social utility, economics, and sophisticated, reliable and new energy-efficient technology, beauty and esthetics and the art of architecture have been submerged or taken for granted. Most recently, the backlash has catapulted formal design concepts and the art of architecture into too overriding a position in some instances. However, the architect, the landscape architect’s, and urban designer’s concern for beauty and esthetics is a distinguishing quality and the one that attracts most to practice these professions.

Training
We organize portions of our curriculum around training and the development of skills—skills aimed at the ability to define problems and opportunities and to create solutions. There is a strong emphasis on planning and design processes and methods of analysis and synthesis.

If I were to make a certain distinction when it comes to concern for processes and methods of analysis and synthesis, I would say that the design disciplines—architecture, landscape architecture, and urban design—tend to emphasize synthetic skills, while city and regional planning tends to place greater emphasis on analytic skills and on process. We must facilitate a greater interaction between analysis and synthesis in education and practice.

There has been an increasing concern for sharpening our analytical abilities over the past 20 years caused by the need for a greater understanding of the complexity of issues we face in the environment. This was caused by our own sense of responsibility and the fact that we were being held more accountable for our actions. Now we have developed a greater and more sophisticated understanding of the nature of our environment, our culture, and our society and its relationship to human activity.

One aspect of training is the nurturing of creativity in our students, a subjective and important skill critical to the practice of most professions, certainly to architecture. To be creative requires a mind that is disciplined, objective, rational and rigorous and also open, free, unrestricted, and intuitive. George Rouault said: "In truth I have painted by opening my eyes day and night on the perceptible world and also by closing them from time to time that I might better see the vision blossom and submit itself in orderly arrangement." To be objective, intuitive in creating requires making leaps of faith. Kenneth Boulding describes creativity in science as "...the product of organized fantasy about the real world."

An educational environment, where a variety of disciplines coexists and interacts, can contribute to the student’s potential for creativity. It facilitates the development of minds that are enriched by exposure to a wide range of subjects and concerns and encourages one’s thought processes to cross between fields of knowledge, to make bridges, to make connections, to perceive and create patterns, while also comprehending details and focusing on synthesis.

Certainly in a professional school, a school that is activist oriented, we must pay attention to processes and methods of analysis and synthesis. We should encourage students to engage in intuitive and patient searches on the one hand, and in rigorous and objective processes in methods in planning and design on the other. Attention to creativity and process become intermeshed.

Practice
The ways in which the knowledge acquired and the skills developed are brought to bear on addressing issues in the environment are through courses and activities that facilitate the synthesis of the two—that is, through practice. The issue of practice, the bringing together of knowledge and training, is the purpose especially of planning and design studios. But it is also important in courses addressing case studies through thesis and independent studies, and through research activities where faculty and students work together to develop new knowledge, or to demonstrate the applicability of new theories to solving problems.

Historically, in architecture, the design studio has provided a vehicle in which the student’s general knowledge and understanding of culture has been joined with his professional skills in creating proposals for fitting designs. Leechester B. Holland of the Class of 1904 in architecture at Penn wrote in the Book of the School 1874-1934 that "...professional studies be not allowed to distort a balanced attention to community life and to intellectual and artistic activities," and he went on to say that "the study of design inculcates the orderly intellectual technique of investigation, apprehension, analysis, logical deduction, and imaginative synthesis in the solution of all sorts of unfamiliar problems. It provides a repeated drill in philosophical exercise."

To sum up my philosophies—professional education should emphasize fundamentals, but above all it should strive to understand the humanistic commitment: a concern for creating plans, designs, buildings and environments that have as their primary purpose the support and enhancement of human aspirations, social cohesion, and individual behavior.
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Located on 4.2 acres adjoining the John F. Kennedy School of Government at Harvard Square, Charles Square is one of the most ambitious development proposals in the history of Cambridge. The multiple-building, mixed-use complex has been designed in red-brick and granite to harmonize with the nearby architecture of Harvard and comprises 86 condominium residences in six interconnected structures overlooking the Charles River. A 330-room luxury hotel faces Brattle Square, while 115,000 square feet of office space and a gallery of 30 retail shops and restaurants are all grouped around a landscaped courtyard that covers a 700-car garage. Architects for the project are Cambridge Seven Associates.

Big doings in Dallas

Dubbed locally as "a celebration of art, history, and architecture," The Crescent is the latest foray by Philip Johnson and John Burgee into the freewheeling Dallas construction scene. The design of the 1.6 million-square-foot office, hotel, and retail complex stems from "a conscious idea that Texas in the late 19th century was very glamorous," according to Johnson. The development consequently features such architectural elements as crested slate mansard roofs, limestone facades, and lacy wrought-iron trim—details that may harken back to the "fin de siècle" elegance of Galveston or San Antonio, but in their lavish application and grandiose scale constitute a style that can only be called "Texan." Shepherd & Boyd/USA is the associated architect.
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Design news continued

Competition

The Boston Redevelopment Authority is seeking entries in a competition to select a design for the reconstruction of Copley Square in the city's Back Bay. Cosponsored by the National Endowment for the Arts and the Copley Square Centennial Committee, the competition will award a $30,000 cash prize to the winning firm or individual. Deadline for registration is January 20; deadline for submitting visual and written materials is February 3. Write Kenneth W. Paolini, Copley Square Design Competition, Boston Redevelopment Authority, One City Hall Square, Boston, Mass. 02201.

The Butler Manufacturing Company has announced the first annual Butler Architectural Design Competition for architecture students in the United States and Canada. Entrants are sought to submit designs for a new town center complex using metal building systems. Winning students and their schools will receive cash awards totaling $5,250. Deadline for entry is May 1. For further information contact the Butler Architectural Design Competition, P.O. Box 32314, Washington, D.C. 20007.

The City of Louisville and the Iroquois Civic Club are sponsoring a national competition for the design of a new entrance to the city's Iroquois Park, originally laid out by Frederick Law Olmsted. Deadline for registration is March 15. For further information write or call the Louisville Community Design Center, 306 Speed Building, 333 Guthrie Green, Louisville, Ky. 40202 (502/589-0343).

Com in g full circle

TampaSphere is a two-million-square-foot mixed-use project located midway between the city's downtown and Tampa International Airport. The geometry of the circle appears to have inspired such architectural features as the round end walls of five 21-story office and hotel towers, spiraling ramps that lead into a 6,000-car garage, and a distinctive ten-story glass barrel vault over the 600-foot-long shopping arcade. Clad in alternating bands of green glass and precast panels of concrete and marble-quartz aggregate, the complex is a joint project of Skidmore, Owings & Merrill (New York office) and Robbins & Company. The first phase of construction is scheduled to begin in March, with occupancy set for October, 1985.

Cranbrook: the first 25 years

The Cranbrook Academy of Art and its role in the development of modern design in America are explored for the first time in a major exhibition currently on display at the Detroit Institute of Arts. Organized jointly by the Institute and the Metropolitan Museum of Art in New York, "Design in America: The Cranbrook Vision 1925-1950" consists of some 240 architectural drawings, models, photographs, textiles, ceramics, furniture, metalwork, sculpture, and paintings that trace the influence of the Academy from its beginnings in the 1920s through the death in 1950 of Eliel Saarinen, the Finnish-born architect who founded the institution. Among the noted Cranbrook-trained designers whose work is on display are Ralph Rapson (his 1942 sketch for a lounge chair is illustrated right), Charles and Ray Eames, Florence Knoll, Harry Bertoia, Harry Weese, Carl Milles, and Jack Lenor Larson. The exhibit will be on view at the Detroit Institute through February 19 and at the Metropolitan from April 20 to June 17 before traveling to Helsinki, Paris, and London later in 1984-85.

A new Jewish center for Yale

The Hillel Center at Yale University will include a five-story, classically inspired building and an existing Federal-style town house that will be retained as the rabbi's residence. The new structure is to be built on a tight 35-foot by 35-foot urban site across High Street from Louis Kahn's Center for British Art and will incorporate a library/living room, a multipurpose room, a dining facility with two kosher kitchens, a chapel, a cafe with adjoining terrace, seminar rooms, and administrative offices—all occupying 16,000 square feet of space. The design by Roth and Moore Architects features a one-story rusticated limestone base, alternating courses of 8-inch by 8-inch and modular brick, carved stone ornamental details, and a slate roof.
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Arkansas arcadian

Although Fay Jones's much admired Thorncrown Chapel in the Ozarks is a hard act to follow (see RECORD, May 1981, pp. 88-93), the Arkansas architect appears to have come up with an equally striking design for a chapel and living quarters for the Little Portion Franciscan Hermitage, a secular order of Catholic monks. Situated in the center of a manmade lake near Eureka Springs, the chapel is a 12-sided wood-and-glass building lighted by clerestory windows and a conical lantern over the central pulpit. Six concrete residential structures along the water's edge are built into the side of a hill to take advantage of the ground's stable temperatures—a bit of down-to-earth architectural pragmatism for an otherwise ethereal project.

“Architecture in Silver,” an exhibition of tea and coffee services designed by 11 internationally known architects, is currently on view at the Max Protetch Gallery in New York and at the Renaissance Society in Chicago. Architects Michael Graves, Hans Hollein, Charles Jencks, Richard Meier, Alessandro Mendini (1), Paolo Portoghezi (2), Aldo Rossi (3), Stanley Tigerman, Oscar Tusquets, Robert Venturi, and Kazumasa Yamashita were commissioned by Alessi Fratelli, an Italian housewares manufacturer, to design the sterling services, each of which consists of a coffee pot, tea pot, creamer, sugar bowl, and tray. Ninety-nine numbered editions of each set will be handmade by Italian silversmiths and are for sale at prices from $12,000 up. The exhibition is accompanied by an illustrated 92-page catalog and will remain on view in Chicago through February 5 and in New York through June 30. The show will also travel to the San Francisco Museum of Modern Art (February 17-April 11), the La Jolla Museum of Contemporary Art (April 28-June 3), and the Renwick Gallery in Washington, D.C. (mid August-mid November).

Derby doffed for a glass box

It is called, with characteristic southern California hyperbole, “the ultimate retail location in the world.” But to anyone nostalgic for Hollywood’s Golden Age, the corner of Wilshire Boulevard and Rodeo Drive will always be remembered as the site of the Brown Derby, for years a glamorous symbol of Beverly Hills, Hollywood, and the movie business lunch. No more. The famous architectural hat has been razed to make way for a three-story retail structure sheathed in double-glazed tinted glass and aluminum panels that is called, with uncharacteristic southern California restraint, One Rodeo Drive. The 17,000-square-foot building will feature a two-story foyer clad in white marble and a rooftop garden “for special events, fashion shows, and high teas,” according to its promoters, and will be, at a proposed rental charge of $1 million a year, “the most expensive retail location in the West.” Architects for the project are Lomax Rock Associates.
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Energy Conservation Awards

1. Chatham County Social Services Building, Pittsboro, North Carolina; Burnstudio Architects. Designed in the form of a large gabled shed to blend in with nearby farm structures, this 9,600-square-foot county-owned facility was praised by the jury for such "human" qualities as interior courtyards, a central atrium that serves as a waiting room, and tree-like structural steel columns. The building's energy-saving features also impressed the jury: A double envelope design provides heating and cooling only for the 40 individual offices, while ventilation of the larger structural shell is by means of exhaust fans in roof monitors. Positioned on an east-west orientation, the architect maximized solar gain to warm the large southern exposure during the winter. Daylighting and direct-gain heating are achieved through 1,100 square feet of skylights, 228 south-facing windows, and 53 clerestory openings in the roof monitors. Noted one juror, "The building's design creates a structure that could be comfortable no matter what the energy future is."

2. IBM Information Products Division, Charlotte, North Carolina; Thompson, Ventulett, & Stainback, Architects. This ten-building manufacturing and research complex has consumed 40 per cent less energy annually than comparable IBM facilities that were built before the company made conservation a goal in 1973. Light-saving features head the list of innovative technologies. A perimeter system of glass-enclosed corridors eliminates the need for artificial illumination in hallways except at night when lights are activated by photocells. The architects further reduced lighting costs by specifying high-pressure sodium lamps and by using reflective ceiling and wall paint. An energy management system consists of two computers that receive input from over 1,000 monitor points and ensure that lighting, air-handling units, chillers, and cooling towers operate efficiently. Finally, a fluidized-bed boiler system generates steam by burning virtually all available fuels—"anything from natural gas to garbage," noted one juror.

3. Carver-Hawkeye Arena, University of Iowa, Iowa City; Caudill Rowlett Scott, Architects. By choosing to build this 13,200-seat athletic facility into a natural ravine, the architects took advantage of the earth's insulating potential—a decision that is expected to conserve an estimated 7,900 gallons of oil per year. The jury praised this below-grade configuration as "an extremely logical and effective approach to utilizing stable ground temperatures." Placement of the structure's roof at the bottom of a lightweight steel, skew-chord truss reduces the interior volume and provides an additional saving of fuel. A 42-foot by 25-foot Teflon-coated fiberglass lantern in the roof emits natural illumination onto the arena's playing floor and creates a beacon signaling that an event is taking place.
It was state-of-the-art energy considerations, the integration of mechanical and architectural design, and a harmonious relationship between the building and its environment that characterized the winners of the 1983 Owens-Corning Fiberglas Energy Conservation Awards, according to jury chairman Vivian E. Loftness. She added that the six cited designs illustrated below exemplify "the crucial balance of team decision making—the professional symbiosis of architecture, engineering, owner, site planning, interior design, construction and user sensitivity." This year's jurors were Larry W. Bickle, Ph.D., president of The Bickle Group; Helmut Jahn, AIA, president of Murphy/Jahn; Ms. Loftness, principal at VLH Associates; George M. Notter, Jr., FAIA, president of Anderson Notter Finegold, Inc.; William Turnbull, Jr., FAIA, principal at MLTW/Turnbull Associates; August J. Vercruysse, P.E., chief mechanical engineer at Daniel, Mann, Johnson & Mendenhall; and Barry L. Wasserman, FAIA, former California State Architect.

4. Burnet Civic Center, Burnet, Texas; Lawrence W. Speck Associates, Architects. This 28,000-square-foot complex will house the City Hall, a recreation center, and the police and fire departments for a town of 4,500 near Austin. The jury was impressed by the way the structure responds stylistically to the community's indigenous architectural tradition while integrating a variety of natural cooling methods and modern mechanical principles that are expected to reduce energy costs. Because cooling needs will comprise 45 per cent of the center's total energy budget, the City Hall and council chambers face north to minimize exposure to the sun. Trees provide shading, while a deep arcade shelters the south facade. The passively cooled recreation area is designed to catch breezes off a nearby creek and filter them through the building into clerestory vents. Six-inch-thick limestone walls further repel the sun's heat in summer and minimize thermal loss in winter.

5. Horticultural Education Center, New Canaan, Connecticut; Buchanan/Watson, Architects. "This structure shows what can be done in an inhospitable climate with some careful energy considerations," observed one OCF juror. Taking into account New England's cold winters and hot summers, the architects integrated a variety of energy systems into the passively conditioned, 4,000-square-foot greenhouse and classroom facility, including different types of heat storage (concrete blocks and calcium chloride cells), aluminized night curtains, solar hot water, and high levels of insulation. The greenhouse faces south and has 45-degree sloped glazing for maximum winter heating and light. A roof skylight adds illumination on cloudy days, and solar gain captured in the greenhouse heats the entire building. The whole energy program, in fact, is intended as an instructional laboratory for visitors to the center and is expected to reduce fuel consumption by 70 per cent.

6. Ventura Coastal Corporation, Ventura, California; Rasmussen & Ellinwood, Architects. The energy-saving properties of daylighting dictated the architectural form of this 30,000-square-foot West Coast corporate headquarters. The challenge for the architects was to come up with a design that would eliminate the need for any artificial daytime illumination and at the same time provide the shading mechanisms so essential in the hot southern California climate. The ingenious solution involved creating two different facades. Window overhangs on the south facade restrict heat gain, while light shelves placed above the line of sight direct daylight deep into the building. The upper portion of the facade's glass is clear, and the lower part is tinted—an arrangement that maximizes lighting and minimizes solar gain. The north facade, by contrast, has flush-mounted windows to increase exposure to the sky. The OCF jury praised the conception as "a pragmatic solution and a progressive example of energy-efficient design."
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The tall building artistically reconsidered: the search for a skyscraper style

By Ada Louise Huxtable

The skyscraper and the twentieth century are synonymous; the tall building is the landmark of our age. As a structural marvel that breaks the traditional limits on mankind's persistent ambition to build to the heavens, the skyscraper is this century's most stunning architectural phenomenon. It is certainly its most overwhelming architectural presence. Shaper of cities and fortunes, it is the dream, past and present, acknowledged or unacknowledged, of almost every architect. From the Tower of Babel onward, the fantasies of builders have been vertical rather than horizontal. Frank Lloyd Wright, caustic critic of skyscrapers, when the Futurists proclaimed an energetic new world it was in the form of streamlined, soaring visions, full of pride and prejudice, that released architectural talents and egos from the rule of reason and responsibility.

But the question of how to design the tall building has never really been resolved; it continues to change, disconcert, and confound theorists and practitioners alike. The answers were first sought in models of the past, which were later rejected and then still later rediscovered, carrying reputations up and down with vertiginous regularity. At any point in the cycle, the arguments have an air of messianic conviction fueled by equal amounts of innocence and ignorance. In the final analysis, the results are controlled less by any calculated intent than by those subtle manipulators of art and ideas—taste, fashion, and status.

The cycle of taste and the evaluation of the product are complicated further by the fact that architecture, like other arts, has not been free from the ideological politics, cliches, and skilful and often veninous ad hominem attacks that are a curious and constant part of the art world. This fact has never been more obvious than it is in architecture today. There is a kind of guerrilla intellectual warfare operating from academia to the media, motivated by something that is unique to architecture—the direct connection between the bases of power and extremely lucrative work. Nowhere are the battles lines more clearly drawn than on the skyline. The modernist-postmodernist camps are in hand-to-hand, building-to-building, polemic-to-polemic combat on a huge scale, the postmodernists as intent on breaking rules and heads as on pursuing artistic frontiers. The script is familiar. Heroes are turned into villains, and the overthrow of the old regime is accompanied by the savaging of its leaders and the ravages of cultural revolution. The sound of smashing idols is everywhere.

All this is not news; the swings of art and taste are as certain as the tides, and men with ideas who hope to change the world tend to behave no better than those who merely suffer the consequences. But in this hostile intellectual and artistic atmosphere, the skyscraper is being discussed and dissected with more intensity than at any time since the name was coined for the multistoried office building some time around 1890. The revisionists are busy rewriting history in terms of omission and rediscovery, which is fine, and they are also rewriting the rules of skyscraper design, which is not quite so acceptable or admirable. In the process, the right lessons are often being discarded for the wrong ones.

In its most familiar and exhilarating aspect, the skyscraper has been a celebration of modern building technology. But it is just as much a product of zoning and tax law, the real estate and money markets, code and client requirements, energy and aesthetics, politics and speculation. Not least is the fact that it is the biggest investment game in town.

With all of this, and often in spite of it, the skyscraper is still an art form. The tall building has that in common with all major works of architecture consciously conceived in aesthetic terms. Every radical advance or conservative retreatment that has been proclaimed as the latest revelation of truth and beauty has actually been devoted to a single, unchanging, unifying idea and purpose: the search for a skyscraper style. The tall building has been designed well, and even brilliantly, in many different ways, and the exotic variety that marks the best of the tall buildings is inconsistent and irreconcilable in theoretical or doctrinaire terms. There are not, and never have been, any immutable rules; there is more than one way to skin a skyscraper. Contrary to accepted opinion and the respected critical texts, there have been many appropriate and legitimate responses to the conflicting cultural forces of our time.

This reality—the doctrine of irreconcilability—has never been accepted. We are edging toward it with talk of diversity and pluralism. As time passes and towers multiply, it is increasingly clear that skyscraper design has been motivated, above all, by an unresolved search for style, which is its only esthetic consistency. No matter how revolutionary the rationale, how startling the claims of esthetic breakthrough, how great the debt to advances in engineering, or how many times the old is discarded for the new, the objective has been the same. Proclamations of innovation and reform and protestations of use and suitability have all served the same end. That there has been this overriding, esthetic preoccupation should not be surprising. Architecture, admittedly, an extremely complex and pragmatic art, but it is an art nonetheless, and one which endures on its final quality. Only when a building transcends its inconvenient marriage of esthetics and economics does it become convincing, and even great, architecture.

It is the rare architect who does not hope in his heart to design a great building and for whom the quest is not a quiet, consuming passion. Architects talk about little else to their peers; they seem obsessed with the esthetic implication of their designs in word and print. A good deal less is said about this in the client boardroom, where the architect tells it not the way it is but the way it sells. There are some extraordinary reasons given for some extraordinary stylistic flourishes. But because architecture is a practical art, and practical men pay the bills, the search for style has been rationalized and camouflaged, not only to suit the prevailing intellectual fashion but to provide client reassurance that nothing so arcane is influencing efficiency and the financial bottom line. It is the singular architect, in fact, someone like Philip Johnson, who can walk in and tell corporate directors that they are getting art and get away with it. But in his case personality and product together constitute the art form.

The architecture of the tall building has never been more on
Observations continued

people’s minds, if one judges by public and press attention to the subject. Beyond esthetics, however, there are serious questions of cause and effect, propriety and propriety, atmosphere and style, that are not being addressed. There are pivotal issues of enormous importance to the design of the tall building, both subtle and complex, from the humanitarian to the historical, that need careful scrutiny. There is an incredible lack of critical distraction, where it counts, and where it hurts, in the lives of cities and people.

The most obvious blind spot comes in the failure to recognize the fact that the skyscraper itself — still on the rise and increasing spectacularly in number and size — may have overreached itself, and may even be nearing the end of the line. There is both irony and tragedy in the realization that this is happening at the same time that the question of design has been creatively re-opened by the loosening of modernist structures, and at the moment when the exploration of the tall building’s inherent power, drama, and beauty offers greater options than ever before. We are seeing some spectacular new building, but we are also seeing signs of a disturbing dead end in scale and impact, and a frivolous dead end in style. While the esthetic debate becomes more recondite and self-serving, the effect of the tall building on our overcrowded, malfunctioning, and deteriorating cities has become disturbingly demonstrable and destructive.

Today architects are looking at some very big buildings in some very small ways. The larger the structure, the less inclination there seems to be to come to grips with the complexities of its condition and the dilemma it creates. It is no longer considered necessary to look beyond the street facade. The examples of history, respectable again after half a century of denial, are being mined for nostalgia, novelty, and innuendo. But history should teach reasonable and profound lessons about the uses of purpose. It should not be used to supply obfuscations or decorative ready-mades. An increasingly limited preoccupation with surface appears to be coupled with a sheer, stubborn disregard for the people and the cities the structures serve. The awe and wonder that architects first felt about the technological breakthrough and the new esthetic limits of the tall building, and their expressed desire to integrate these innovations into the social and urban fabric, have been replaced by a narrow vision in which formal effect, novelty, and obsessive self-expression are primary concerns.

One does not expect the larger contextual vision from builders and bankers, for whom investment is primary. But one does expect it from architects, as part of a responsible design process. Certainly we have long passed the point where anyone believes that the architect can solve the ills of society or remake the environment, or even that he should try. But there is still a responsibility to incorporate into design solutions considerations of the real world and humanistic and environmental values and goals that go beyond scenographic fun and games. If the architect has erred in the past by claiming powers beyond his art, he has now reversed himself and is diminishing that art. He has no one to blame but himself if he finally makes his work seem marginal. The latest esthetic trend seems to be toward a kind of monster picturesqueness, an approach that subverts and denies the real scope and purpose of building. If it is possible to trivialize anything as large as the skyscraper, that process is taking place now. This default of intent and meaning diminishes all architecture in a very real sense.

But the immediate casualty has been in critical standards of judgment. What is characteristic of architecture for art’s sake are broad, objective criteria by which all styles and approaches must properly be judged. These are the enduring principles that relate the problem to the solution; what is involved is the creative fusion of function and structure and meaning in the service of utility and profit that has informed the best tall buildings.

That these principles of skyscraper design are being attacked as part of the well-publicized rejection of modern architecture is deeply disturbing, because they have been thought about carefully and well during the last hundred years, and they have a lot going for them as the appropriate and sometimes inspired translation of technology and market forces into art. A successful skyscraper solution, and the art of architecture itself, depend on how well the structural, utilitarian, environmental, and public roles of the tall building are resolved. Style — any style — must be intrinsic to, and expressive of, these considerations. Architecture is, above all, expressive art.

The success or failure of a building is ultimately measured by how well these factors have coalesced into a unified, expressive whole. When the result adds a special dimension to personal and urban experience, when that expressive object forever transforms the concept or vision of the environment, when it alters the popular received image, it is proper to say that a major architectural contribution has been made. The proof, of course, is that after certain buildings have appeared — the Parthenon, the Pazzi Chapel, the Villa Savoie — the world has been altered in a subtle and substantial way; cities never look the same again.

Surely that is true of the tall building; the skyscraper has totally changed the scale and appearance and concept of cities and the perceptions of people in them. The public has always loved these architectural aberrations — like freaks of all kinds. The title of the world’s tallest building has a fleeting but special cachet; it is a favored setting for publicity stunts and self-celebrations, media events, and cinema mythology. But if the status and drama of the tall building, its engineering and architectural achievements, its embodiment of superlatives, are universally admired, the philosophical questions that it raises continue to be disturbing: its symbol is complex, its role in the life of the city and the individual is vexing, and its impact is shattering. The skyscraper is Orwellian or Olympian, depending on how you look at it.

For the skyscraper is not only the building of the century, it is also the single work of architecture that can be studied as the embodiment and expression of much that makes the century what it is. Today’s tall building is a puzzling and paradoxical package. Its standardized, characterless, impersonal space creates the recognizable, charismatic monoliths of the enduring image of twentieth-century cities. For better or for worse, it is measure, parameter, or apotheosis of our consumer and corporate culture. No other building type incorporates so many of the forces of the modern world, or has been so expressive of changing tastes and practices.

It romanticizes power and the urban condition and celebrates leverage and cash flow. Its less romantic side effects are greed and chaos writ monstrously large. The tall building probes our collective psyche as it probes the sky.

In sum, the skyscraper — in terms of size, structure and function, scale and symbolism, and, above all, human and urban impact — remains the single most challenging design problem of our time. The other definitive architectural challenge, housing, will continue to lack patronage and priorities because it answers to social rather than to business needs. The twentieth-century architect’s most telling and lasting response to his age is the topless tower of trade.

The tall building today is also an enormous and cautionary symbol of the changes taking place at a rapid rate in the philosophy and practice of architecture, changes that have polarized the profession. It serves as both standard-bearer and whipping-boy for modernists and postmodernists of every persuasion. Today’s skyscraper...
stands at a crossroads between a new and an old vision—between architecture as mission and architecture as style—in one of the most significant transitional periods in the history of art.

Louis Sullivan, whose early skyscraper solutions have still not been surpassed, discussed its esthetic and philosophical aspects in an 1896 article called "The Tall Office Building Artistically Considered." Like the tall building itself, the essay is an uneasy synthesis of poetry and logic. The questions Sullivan raised about the design of the tall building remain pertinent, unsettling—and unsettling today. They are, in fact, more pressing than ever.

I have entitled this essay "The Tall Building Artistically Reconsidered" in homage to Sullivan, and because I believe the time has come for a critical reevaluation beyond what is currently passing by that name. The history of the skyscraper to date is incomplete and misleading. Like a Rashomon account, it has been told from a number of restricted and subjective points of view which still need to be brought together in a unified whole. Until now, the perception of the design development of the tall building has been tailored to suit those who have made taste and written history in this highly polemical century. We have the brilliant, insightful, and carefully selective version by Sigfried Giedion, in the mainstream of modernist doctrine. Winston Weisman's researches have dealt authoritatively with definition and chronology. The technology of the skyscraper has been thoroughly documented by Carl Condit. But the concepts are as important as the inclusions, and the story is just beginning to be rewritten, along with much nineteenth-and twentieth-century history. The result, however, is a kind of imbalance that may be the modern price of radical revisionism, and even with the gaps being filled distortions continue. If the architectural deck has been stacked unfairly in the past, it is being shuffled and restacked just as erroneously now, with the "outs" replacing the "ins" and one set of prejudices, or prejudices, being substituted for another.

Esthetic interpretations of the design of the tall building have always absorbed architects and critics. But the basic questions remain the same. How to clothe the new, naked skeleton? How to make this attenuated giant fit into existing architectural conventions? How to deal with a setting totally alien to its scale, structure, and use? The answers, as before, have come mostly from much of temperament as from art. From the start there were the conservatives who were sure that the only safe, sanctified solutions must come from tradition, and the radicals who believed that a leap of faith into the future must be made through a brave break with the past.

Today, curiously enough, those who have written the ins and those who have written the outs are quite similar. They both have a sense of the possibilities of architecture. But they have different approaches and different aims. The radicals, it is true, are attempting to revolutionize architecture, but they are doing it by working on the agenda of the conservatives, who are still trying to impose the old standards on the new, to make the new fit the old. The conservatives, on the other hand, are attempting to preserve the old standards and the old ways of doing things, but they are doing it by working on the agenda of the radicals, who are trying to break with the past.

What Schuyler was attacking and Blackall was defending at that time was the increasingly popular idea that the tall building should be treated as a classical column, an analogy that yielded a tripartite division into base, shaft, and capital. To Schuyler this was the kind of "arbitrary assumption" that could "obstruct the detailed expression in design of structure and function." But it had enormous appeal for Beaux Arts trained practitioners, and for all those who subscribed to the popular Aristotelian principle that a work of art should have a beginning, a middle, and an end. It evoked the mysteries of trinities in nature. It suggested golden proportions and the beauties of organic form.

Blackall referred to the work of Louis Sullivan with faint praise and little sympathy as the "extreme impressionistic school." To Schuyler, Sullivan's buildings were the admirable aberrations that broke new ground. Sullivan himself, in "The Tall Office Building Artistically Considered," took issue with the classicists. "Form ever follows function," he wrote in his famous statement that has since been stripped and sanitized of all of Sullivan's lyricism by the literalness of later generations. He spoke not of classical analogies but of the intrinsic and expressive relationships of form and structure in nature and in art.

Looking at the whole historical spectrum of skyscraper design, we can identify four significant phases: the functional, the eclectic, the modern, and the postmodern—the last more of a continuum of evolution of its practitioners than of any real success in cutting the modernist umbilical cord. It is significant that all these important structural solutions came early in the development of the tall building, in a remarkably short space of time. Because these structures were concentrated in Chicago in the two decades at the end of the last century, other burgeoning cities quickly acknowledged the "Chicago style" in their commercial construction. It has been customary, or one might say mandatory, in the right art history circles to draw a straight line from this early Chicago School to the fully developed modernism of the twentieth century, dismissing everything in between as unacceptable architectural behavior. This has consigned a large body of significant work to a kind of limbo. As a result, both our perception of the time frame within which important stylistic changes occurred and our evaluation of their worth has been faulty and self-serving. The eclectic and modern phases—or modernist, as the latter is now called—were actually of about the same duration, and both lasted much longer than the initial period of innovation. There was a significant, unacknowledged overlap, with the modern phase moving into ascendency only after the Second World War.

The modernist skyscraper, however, has been endorsed by scholars and critics in terms of an "authenticity" that the eclectic work has been denied. That is a defensible, if currently unpopular, position. Style is creative change in response to cultural change; it is the way in which that culture expresses the conditions of a particular society and time. This creative process inevitably produces the most original and interesting results. Defining the creative force in these terms has worked very well for the rest of art history. An innovation inevitably produces the imagination more than a polished practitioner of tradition, even when the experiments are flawed or the outcomes impecable. It is the uneven frontiers of creativity, with their disturbing and energizing combinations, that yield the insights and inevitable judgmental errors.
Observations continued

that reveal new aspects of humanity and the physical world and map new esthetic territory. The tall buildings that espoused Classical or Gothic or Renaissance sources over "l'esprit nouveau" or "form follows function" they muddied the radical modernist line. The idea of esthetic coexistence had no meaning at all for the theorists of the early twentieth century, who were single-mindedly focused on sweeping revolution in everything from art to the human condition. We are only beginning to understand and accept the artistic and cultural complexity of a century that has been vastly oversimplified. We are shortchanging our own art when we deny its contrasts and contradictions. The search for consistency and conviction is one way of trying to pull back from the threat of chaos and the loss of traditional beliefs and values that characterize our time. And we fail to come to terms with the difficult meanings of this turbulence when we dismiss it with the bland put-down and cop-out of undifferentiated "pluralism."

Except for popular mythology and a totemic fascination with the skyscraper, its history has been too narrowly focused. There is general agreement on the significance of certain structures and events, such as those innovations that had their roots in many places and flowered in Chicago in the late nineteenth century. At that time, and in that place, a unique combination of industrialization, business, and real estate came together for the development of a new and distinctive building type: The American office building.

In the first, or what might be called the functional, phase of this new structural phenomenon, architecture was the servant of engineering. Rapid increases in building height were made possible by advances in fireproofing, metal framing, and the passenger elevator, as well as by less glamorous improvements in footings and foundations, plumbing, heating, lighting, and ventilation. Much larger buildings were encouraged by the rapid erection of the metal frame and curtain wall, the growth of office and industrial businesses, and the need and desire to house commercial operations that employed many people on increasingly congested and expensive urban sites. Essentially, the early skyscraper was an economic phenomenon in which business was the engine that drove innovation. The patron was the investment banker and the muse was cost-efficiency. Design was tied to the building's economic role and style was secondary to the primary factors of investment and use. The structural systems devised were not original and replicable. Esthetic considerations became a subordinate function of the profitable development of land encouraged by advances in steel manufacture, skeleton construction, and mechanical services. No one was concerned with landmarks, or milestones, or icons, beyond the obvious identification of profit and prestige—least of all, with the stylistic resolution of a new building type. The priorities of the men who put up these buildings were economy, efficiency, size and speed. With the later emphasis on artificial light and climate control—both a function of cheap American energy—all serious limitations were eventually removed from how the building could be and the way it could be designed.

The pragmatism that controlled this first phase of the American skyscraper is usually laid to the philistinism and hard-nosed economic practices of the late nineteenth-century Middlewestern entrepreneur. But enthusiasm for the new Chicago building was shared by bankers and businessmen from the cultural centers of the Eastern establishment, who also knew a good thing when they saw it. These early structures are as handsome as they are utilitarian. They possess a great strength and clarity that gives them remarkable expressive power. We are as pleased by their art as their builders were by their technology. But we can also see that it is precisely the linkage between the two—art and technology—that is the secret of their distinctive and superior style.

In 1931, the building generally believed to be the first example of true skyscraper construction was demolished in Chicago. The Home Insurance Building of 1884-85, by William LeBaron Jenney was dismantled with great care by a special investigating committee of the Marshall Field estate, which determined that the building's cladding of taffeta, the modern city were true; a metal skeleton frame supported both its inner weight and outer walls. That fact was recognized, the first building to reach for the sky hit the dust to make way for another—a gesture in the true Chicago spirit. From the Home Insurance Building on, the height and appearance of the tall building were to be controlled only by engineering ingenuity and economic formulas.

But the design debate about the skyscraper's artistic problems grew as quickly as its size, and as soon led to the invocation of traditional models. The second phase of skyscraper design sought solutions through academic sources and historical precedents. This eclectic phase, which was fueled by the ascendance of the Academy and the popularity of the Beaux Arts in this country, continued well into the twentieth century, until both debate and construction were stopped by the Great Depression. The eclectic phase produced some of the skyscraper's most remarkable monuments. The raids on the past ranged from banal to brilliant; the Gothic reached for the heavens as never before; assorted versions of the Mausoleum of Halicarnassus, Greek temples, and Italian campanili raised their heads repeatedly in the sky. There were stretch-Renaissance palazzi and ziggurat towers. The size and style of these buildings made them spectacular and recognizable monuments, but their unique and unreproducible features are their sophisticated ingenuity, drama, and, occasionally, real beauty to the totally new needs and aspirations of the twentieth-century city.

Although the elite position has been to act as if they are, at best, paragonade eccentricities, or, at worst, giant blots on the skyscape, they took their place instantly in the history of architecture. The modernists have always read the academic victory as an architectural defeat. The characteristic of the eclectic phase that seemed like the cardinal architectural sin was not that its practitioners failed to seek new forms, which was bad enough, but that they placed such heavy emphasis on romantic recall and ornamental embellishment. After a long, austere diet of rationalism, however, younger architects are again delighting in this eclectic and exuberant excess and even an older generation is seeing these buildings with new eyes.

The tall building that was considered an exemplar of the eclectic mode at the end of the nineteenth century was Bruce Price's American Surety Building of 1894-96 in New York. Its classical, tripartite division was widely discussed and approved, and it easily drew as much attention as a trend-setter as some of today's more eccentric towers. It is still a substantial and handsome structure, recycled in 1975 by The Bank of Tokyo. In the 1890s, Louis Sullivan produced a series of masterful, original tall buildings, at first with his partner, Dankmar Adler, and later alone, that created what everyone was looking for: a skyscraper style. Running as a counter-current to the rushing rivers of eclecticism was Sullivan's less-than-popular insistence that form followed function, not academic precedent. He believed that the design of the skyscraper was the creative translation of structure and plan into appropriate cladding and ornament, and that the answers were not to be found in the rules and practice of the past.

5. Chicago Board of Trade Building, by Murphy/Jahn, Searl, Hayden Connell, Shaw Associates
6. IBM Building, New York, by Edward L. Barnes and Associates
7. Trump Tower, New York, by Swanke Hayden Connell Architects
8. Humana Building, Louisville, Kentucky by Michael Graves

Sullivan was a difficult case, because no matter how much his critics condemned what they considered his decorative backsliding, the logic, beauty, and originality of his solution was always clear. Like the modernists, he dismissed historical models. In “The Tall Office Building Artistically Considered” he warned that the skyscraper should not “be made a field for the display of architectural knowledge in the encyclopedic sense.” But while he rejected the idea of scholarly sources, he did not deny the traditional architectural values and relationships of the decorated form.

Sullivan’s highly personal search was soon eclipsed by the academic avalanche. The successful eclectic skyscraper, however, never actually violated Sullivan’s insistence that form follows function in the broader sense, or Schuyler’s conviction that the design of the tall building must be founded on the facts of the case. These structures take learned liberties, but they are still recognizable as the thing itself. Their indulgence is academic, rather than poetic, license. Cass Gilbert’s French Renaissance West Street Building of 1905 and Gothic Woolworth Building of 1913, both in New York, state the facts of the case with superb visual richness and a masterful handling of the special problems of unprecedented size. These and other examples deal, if not directly, at least metaphorically and ornamentally, with the limited realities of structure and scale. Style, whatever its source, was used as an instrument for dramatizing the facts of the case.

By 1922, the famous international competition for the Chicago Tribune Tower demonstrated the full strength and range of the eclectic phase. This competition, which called for “the most beautiful and distinguishable building of its own time in the world” and drew more than 200 submissions from 23 countries, was one of those benchmark developments in the arts: it crystallized a unique moment in architecture when the long, classical tradition was poised on the edge of the unknown abyss of modernism. The entries were a startling mix of the adventurous and the retardataire, but what is particularly interesting is that so many of the designs were so very good; the massing, scale, and detail of the tall building were well understood in any number of guises.

The subsequent bitter debate between those who championed the Gothic revival of the winning tower by Howells and Hood and those who stood against the romantic Finnish modernism of Eliel Saarinen’s second prize design or the radical modernism of Walter Gropius’s submission from the Bauhaus is in perspective, quite beside the point. Just as provocative today, and also impressive, are such less familiar entries as a surprising number of Dutch examples that fall stylistically between Berlage and De Stijl. There were even submissions of a type now called “commentary,” for example Adolf Loos’s enormous classical column, which could be conscious, or unconscious, irony; for all we know—and some scholars surely do, or will—he may have been playing it straight.

The Tribune Tower competition has been held up by the modernists as a sad and ludicrous example of what went wrong with skyscraper design after Sullivan—a fall from esthetic grace. From today’s perspective, however, it forms a remarkably accurate historical document of the state of the art of the skyscraper at the end of the first quarter of the twentieth century. What seemed improbable at that moment was that modernism would supplant eclecticism as the architecture of the establishment in another twenty-five years. But the route of tradition and the acceptance of the new was neither quick nor clear; the course of true modernism did not run as smoothly as historians have chosen to tell it. Until recently, it has been inadmissible in proper intellectual and artistic circles to point out that there was a “modern-modernistic” dichotomy rather than the direct revolutionary line to which all the faithful immediately adhered. The conventional and respectable architectural wisdom has treated this outcome as a split between good and bad design, between serious and frivolous art, between esthetic enlightenment and vestigial, uncomprehending vulgarity—in short, between virtue and sin.

The modern phase of skyscraper design actually embraced this dual esthetic in
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two separate but parallel strains. "Modern" was radical, reductive, and reformist; "modernistic" was richly decorative and attached to conservativistic values. "Modern" was the austere, abstract, elite, avant-garde work of the European school of Gruppius, Mies, and Le Corbusier. New York's Financial District. New York Daily News social change.

"Modernistic" was seductive skyscrapers are although the complex's critics. The modern - modernistic, including Holabird and Godley and Fouilhoux, is a number of pre-Crash towers in "Modern" was despised by the avant-garde as fussy, reactionary, and, of course, bourgeois-decadent. Now called Art Moderne or Deco, it is having a trendy revival, but "modernistic" was the name used at the time—infinitely by its admirers and scathingly by its critics. The modern-modernistic split was more than style-deep, however; the reformers saw modernism as both moral and important, and influence of the 1920s. At first, it was a showcase style of the avant-garde. Much later, in an even greater transformation, it became the architecture of the establishment. By mid-century, the revolutionary ideal and esthetic had been turned into slick, profitable formulas that had lost an enormous amount in the translation from the European originals to American commercial practice.

The leaders of early European modernism were in the transition from the lu x urious, exotic combination of form and function to the avant-garde as fussy, reductive International Style. The lead of early European modernism was the name used for such buildings as Ely Jacques Kahn's new skyscraper at Two Park Avenue with its brightly colored bands of geometric terra-cotta ornament, praising its integration of mass and decoration as "the boldest and clearest note among all our architectural expressions," and it is over for such buildings as Kahn's. Mies's seminal skyscraper architecture, as [Here] structure and feeling are at last one.

The early modern, or International Style, skyscrapers are few in number; they required clients with cash, courage, and a highly developed sense of esthetic mission. Theoretically, the combination of form and function of these buildings endorsed was supposed to be beyond style; actually, style was their most enduring product. The McGraw-Hill Building of 1931, constructed in midtown Manhattan by Mies, Godley and Fouilhoux, is a notable example, and the Philadelphia Savings Fund Society Building of 1930-31, by Henry-Russell Hitchcock and Philip Johnson in 1932 and in 1933, is another. Mies's seminal skyscraper architecture, as Kahn's. Mies's seminal skyscraper architecture, as Kahn's. Mies's seminal skyscraper architecture, as Kahn's. Mies's seminal skyscraper architecture, as Kahn's.
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was a great enough artist to compensate a number of times; he produced buildings of sustained beauty and elegance. But like Sullivan, Mies has been misunderstood. It has been pointedly significant that the glass towers that never reach the ground and corner details that deliberately short-circuit literal structural truth speak of that his functionalism was faulty. Today’s critics are quick to attack the fallacy of his search for universal solutions; his ideal space and modular systems are seen ironically, as a hopeless Procrustean bed. They deny him his poetic license.

But if the lyricism was lost, a vernacular was gained. I have never shared the view of critics who claim that the glass box is an icy cure visited upon us by the distortion of Mies’s “failed” vision. The failed vision is theirs. The Miesian skyscraper is a super vernacular, probably the handsomest and most useful set of architectural conventions since the Georgian row house. Its rejection is ludicrous and unrealistic. The Miesian art has produced an eminently suitable twentieth-century vernacular style for this century’s unique and overpowering scale—a fact that has yet to be fully realized or appreciated by critics or historians. Vernacular art grows out of the high art of the time and is applied to its common needs and purposes. As with all vernacular architecture, it is the standardization and anonymity of forms reduced to a rational, useful simplicity—here the sleek, reflective surfaces and facets of glass and steel—that have universal application and appeal. The result is as right for today’s cities as Georgian detail was for the scale and purposes of the eighteenth century. This vernacular accommodates inhuman size, mass, and bulk with an appropriate and saving simplicity. Glass towers, whatever their drawbacks—and most of their faults are independent of aesthetics—make a magnificent street architecture.

The offspring of those two Mies drawings are legion. The standard for quality and control was the work of the firm of Skidmore, Owings and Merrill, which became the chief interpreters of the Miesian esthetic and the most prestigious practitioners of the High Modern Corporate Style. These are the skyscrapers of the Fortune 500—suave, skilled solutions on the themes of structural rationalism, machine-age luxury, and institutional status. They are the buildings that anchor the state of the skyscraper art at mid-century—a quarter-century after the Chicago Tribune Tower competition—and in the decades that followed. These skyscrapers are long on understated splendor and structural panache but short on poetic license.

While business and builders were busy exploiting the modern style, another, more subtle, kind of exploitation was being carried out by the architects themselves. Straining at the straitjacket of rigid modernist principles, while giving lip service to them, they found ways to stretch the rules. The sacred dictum that form follows function was being turned into the pursuit of form for its own sake. Structure became sculpture; sometimes the whole building was transformed into a sculptural or decorative object. Or it was conceived as a provocative, abstract play of light, planes, and reflections, a trick done with mirrors, as the glass box gave way to the mirror glass building, a development of considerable esthetic subtlety and intricacy.

The modern skyscraper, once devoted to a Euclidian simplicity, began to display a far more complex geometry. Very quietly, the rules of rational cause and effect were reversed, and structure became a tool for creating abstract, idiosyncratic, and arbitrary form. Function followed form. Less became quite a lot more. The results ranged from macho contortions to sophisticated experiments aimed at the expansion of the relationships of function and form and the deliberate transformation of the whole building was transformed into a sculptural or decorative object. Or it was conceived as a provocative, abstract play of light, planes, and reflections, a trick done with mirrors, as the glass box gave way to the mirror glass building, a development of considerable esthetic subtlety and intricacy.

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preferably those bluntly deposed by the modern movement, and to the rediscovery of periods and practitioners that were declared the enemy by its leaders. The singling out of the classical, academic designs that Sir Edwin Lutyens produced for the British establishment in the early years of the century, for example, has become nosebly obsessive and redundant. A highly arbitrary return to history, often inadequately digested and purposefully misconstrued, is commonly coupled with a warped and disingenuous view of the errors of the modern movement, which, in any event, is considered hopelessly misguided and old hat.

This process only repeats history, of course; the modernists’ well-publicized lack of esteem and understanding for the Victorian Age led to the uncomprehending loss of many of its monuments and documents, and in the difficult problems of assessment and appreciation that face scholars now. That same danger is very real and diametrically favorable to the survival of the monuments and documents of the twentieth century. For those of us who are more concerned with history than with polemics, or perhaps one should say the history of polemics, the aesthetic significance of the moment is marred by the sabotage of self-serving short-sightedness.

One interesting and insidious aspect of the postmodernists’ use of the past is a current phenomenon that goes considerably beyond its architectural manifestation. Today’s preferred styles are more than the customary reversals of taste; they are revolutionaries. They seem to express a social and political neo-conservatism that goes beyond the admiration of more conventional and traditional esthetic values to a kind of longing for the traditional social order and practices those values have served. This attitude runs from simple nostalgia for a more gracious and well-embellished era to something somewhat nastier—a parvenu old-tie, antiliberal snobbism of the new, and young, far Right. But postmodern radicalism is an odd creature since it is very much the opposite of being a traditionalist. Its political bias tends to be architectural monarchists, regardless of background or training, with the legendary preference for cake over bread. The leader of this skycraper-division of this kind of postmodern eclecticism is acknowledged to be Philip Johnson, a man whose social and esthetic credentials are impeccable and whose mercuorial pursuit of a fast-moving avant-garde keeps the profession on its toes—or, at least, off balance—much of the time. His own work has moved from a sculptural abstraction to a picturesquely eclectic in which absolutely anything that can be copied or adapted is used, as long as it offers a constantly changing spectrum of sensations to an extraordinarily keen, responsive, and easily bored sensibility and mind.

The Johnson/Burgee firm, from which Johnson has recently officially retired (although he will continue to act as consultant), offers a wide choice in its skycraper line: the notorious Chippendale model for AT&T in New York, which was the cover of Time, has been followed by medieval battlements in Lower Manhattan; a pinnacled mirror-Gothic high-rise is nearing completion for PPG Industries in Pittsburgh; a curvilinear modernistic tower is rising aggressively in San Francisco; and an angular modernistic tower serves as Transco’s headquarters in Houston, where Republicbank will be served by a gargantuan gingerbread guild hall.

Instead of cookie-cutter modern, we are getting cookie-jar monuments. All are eye-catching and mind-boggling, and all raise serious architectural issues, as is clearly the intention. But this work is no more than clever costume design or scenography; it is much too facile and empty to be called architecture at all. Even more curious than Philip Johnson’s present production is the estheticism of this early and ardent champion of the modern movement’s revolutionary morality. These buildings embrace the kind of style that Le Corbusier condemned as “the feather on a woman’s head” in Vers Une Architecture, the slim volume of 1923 that was a battle cry for a generation that hoped to change the world. If irony is what the postmodernists want there is plenty of it around; not least are these immense, stand-up architectural jokes that have much more to do with fashion than with architecture. The joke is turned on the client and the rest of us. This is a high-building act that manipulates art, history, and the environment for very high stakes and a very dubious product.

Still another aspect of postmodernism is far less of a break with modernism than an extension of it—it might more correctly be called neo-modernism. Like neo-classicism, it reworks an established vocabulary. This trend emphasizes a geometric abstraction based on the esthetics and details of early modernism; it manipulates these details with as much regard for what is as for abstraction, but even more significantly, its practitioners are moving the use of these elements to a handling and perception of space far beyond earlier modernist practice. The complex uses of transparency and reflection, an increasing ambiguity of open and closed elements, a layering of levels, combine for a conceptual and physical breakthrough with enormous esthetic consequences.

This can be seen and experienced in Richard Meier’s carefully selected elements of the early modernist vocabulary, which advance that vocabulary through a new interpretation to a new kind of art. Similarly nostalgic reference are used in a hard-edged and highly sophisticated work of Graham-Signon Associates. Among the most complex and virtuosic interpretations is the intensely individual, trend-setting work of the Japanese architect Arata Isozaki.

Interestingly enough, this development is less a continuous and natural evolution of modernism than the result of a younger generation’s fascination with the formal elements of early modernism as it looks back at it as an historical phenomenon. They see its vintage components as a set of appealing forms and symbols that intrigue them far more than the message those forms were originally meant to convey.

Perhaps what is most significant for architecture today is the fact that virtually everything is seen as history now—even that most recent event of the historical past, the modern movement. Distance has lent not only enchantment but also a totally changed vision and point of view. Until recently, the architecture of the twentieth century was conceived as something that existed only in, and of, the present, for the present. The new attitudes turn its back on the present, and even on the immediate past, as if that aberrant revolution called modernism had never occurred. It is this abrupt change of position that is the most important, and radical, aspect of current philosophy and practice. The fallacy of this attitude is the belief that something new can be created by rejecting those conditions and contributions that are necessary for the transformation of any art form. An even more basic fallacy is the idea that those conditions can be rejected by choice, or at all. There is absolutely no way to purge today’s building of the revolutions in the social order and technology that are intrinsic to the modern movement; they are embedded in the way buildings are constructed and used for contemporary life. Denouncing them will not remove them from either history or reality. The most impressive and valid developments in the architecture of the present moment are those that build on the unique achievements of the twentieth century rather than attempt to deny them; the best work is that which carries modernism to revealing and greatly enriched new dimensions.

Reference is made to the incorporation of a new and more permissive architectural vocabulary, simply make the challenge, and the potential, greater.

There are hazards involved, however; the pursuit of what is essentially a formal approach can lead to some exquisite dead ends. The theoretical projects of Peter Eisenman, for example, have the precise and immutable elegance of mathematical equations whose intractable perfection is highly resistant to the realities of living. The challenge is building them as something more than abstractions; the danger is the suggestion that abstractions are enough. The formal fantasies of John Hejduk are cut-out poetic license, combining literary and esthetic references in a haunting series of lyrical images. These exercises are often so uniquely beautiful, extraordinarily moving, and intellectually seductive that their execution is almost beside the point. Both represent exceptional talents, devoted to the exploration of the limits of architectural response. We do not live by buildings alone.

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better, he believes, when they are consistent with the way something is actually built, and those ideas that are common to a time, he feels, provide the best opportunities for art. Pelli consistently proves his case by designing some extraordinarily sensitive skyscraper skins. If he cannot make excessive size or bulk acceptable, he ameliorates it by turning oversized towers into objects of remarkable refinement and beauty. He divides, frames, and color-codes the thin, light, vitreous surface to reflect the modern technical miracle of skyscraper engineering; he treats it as a taut, enveloping membrane or as a smooth aggregate of discreetly designed panels and subtly graded parts. For the towers of New York's Battery Park City—which will be the city's most monumental building group—Pelli's skins are a graduated mix of masonry and mirror glass designed to recall and relate to the existing Manhattan conventions of street scale and architectural detail at their lower levels, while they become dazzling compositions above.

This is Sullivan “up-to-date,” as Montgomery Schuyler would have put it. The finest and most erudite of Pelli's intricate, reflective expressions of use and context would have intrigued and pleased Schuyler. Since the 1960s these solutions have been increasingly liberated by changing architectural attitudes. But Pelli's considerable poetic art is still based on the facts of the case. In none of this work is scale ever divorced from context would have intrigued and pleased Schuyler. Since the 1960s these solutions have been increasingly liberated by changing architectural attitudes. But Pelli's considerable poetic art is still based on the facts of the case. In none of this work is scale ever divorced from context would have intrigued and pleased Schuyler. Since the 1960s these solutions have been increasingly liberated by changing architectural attitudes. But Pelli's considerable poetic art is still based on the facts of the case. In none of this work is scale ever divorced from context would have intrigued and pleased Schuyler. Since the 1960s these solutions have been increasingly liberated by changing architectural attitudes. But Pelli's considerable poetic art is still based on the facts of the case. In none of this work is scale ever divorced from context would have intrigued and pleased Schuyler. Since the 1960s these solutions have been increasingly liberated by changing architectural attitudes. But Pelli's considerable poetic art is still based on the facts of the case. In none of this work is scale ever divorced from context would have intrigued and pleased Schuyler. Since the 1960s these solutions have been increasingly liberated by changing architectural attitudes. But Pelli's considerable poetic art is still based on the facts of the case. In none of this work is scale ever divorced from context would have intrigued and pleased Schuyler. Since the 1960s these solutions have been increasingly liberated by changing architectural attitudes. But Pelli's considerable poetic art is still based on the facts of the case. In none of this work is scale ever divorced from context would have intrigued and pleased Schuyler. Since the 1960s these solutions have been increasingly liberated by changing architectural attitudes. But Pelli's considerable poetic art is still based on the facts of the case. In none of this work is scale ever divorced from context would have intrigued and pleased Schuyler. Since the 1960s these solutions have been increasingly liberated by changing architectural attitudes. But Pelli's considerable poetic art is still based on the facts of the case. In none of this work is scale ever divorced from context would have intrigued and pleased Schuyler. Since the 1960s these solutions have been increasingly liberated by changing architectural attitudes. But Pelli's considerable poetic art is still based on the facts of the case. In none of this work is scale ever divorced from context would have intrigued and pleased Schuyler. Since the 1960s these solutions have been increasingly liberated by changing architectural attitudes. But Pelli's considerable poetic art is still based on the facts of the case. In none of this work is scale ever divorced from context would have intrigued and pleased Schuyler. Since the 1960s these solutions have been increasingly liberated by changing architectural attitudes. But Pelli's considerable poetic art is still based on the facts of the case. In none of this work is scale ever divorced from context would have intrigued and pleased Schuyler. Since the 1960s these solutions have been increasingly liberat...
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this seems like belaboring the obvious; as its basic fact and most critical element, it is structure that is at the very heart of the tall building's design. It becomes the architect's most powerful expressive tool, by the very nature of the constructive art.

But structural innovation and aesthetic preference can expand choices only as long as the real estate and investment numbers work out. Today's large commercial structures, like those that came before them, are essentially an economic formula. The modern office building has been standardized as a central service core surrounded by 15,000 to 25,000 square feet of space, or multiples of those figures. This standard has been set by business itself as the optimum work floor for a large corporation. The tower shape is also dictated by the investor's belief that ground floor retail space is best concentrated for the largest possible working population that can be channeled through it each day. Even the tall building's almost uniform four- or five-foot design module has evolved out of another economic consideration, the minimum office size.

Since almost anything is possible technologically today—the architect designs and the engineer makes it stand up—even the basic structure is subject to economic determination. Within these market calculations the modern skyscraper is squeezed into the mold made by zoning laws and building codes. Ultimately, the design of the tall building is a product of investment economics and urban politics.

But there are other, less pragmatic factors that influence the decision to build tall, of which much is usually made. The desire to convey image, status, power, and prestige, to signal economic or cultural dominance, is universally acknowledged. Not least—although it is seldom discussed in the corridors of corporate or political power—is the architect's desire to create a museum-worthy object, usually against considerable odds; it is the artist's ego-play against the builder's. The drive for immortality, at least for the accolades of the art establishment, is always present. There is, finally, in the words of The Council on Tall Buildings, the basic human desire "to build to the very limits of strength and knowledge... to achieve the limits of the achievable." This is the ultimate, eternal, and irresistible challenge.

The catalyst and unifying force for all of these conflicting concerns has been the search for style. The enormous rational and romantic diversity of skyscraper design makes this increasingly clear. It has not been the race for height that architects have cared about nearly as much as finding suitable and memorable ways to enclose the structure that makes that height possible. In an article that appeared almost forty years ago in The Architectural Forum, the editors made the telling observation that the structural principles of the tall building, developed by the turn of the century, have remained essentially unchanged. That fact, they noted with acerbic disapproval, "throws into harsh relief the vacillations of the functionalists.

Ah, those vacillating facades, shivering in the hard, cold light of structural reason and editorial censure. But if we look at those faces without supposition or prejudice, they tell us more about architecture than many people really want to know, or the experts find acceptable. The variety of those facades gives the lie to ideologues, who like their style straight, conforming neatly to the party line. The variety makes pluralism a fact, not just a passing fancy. The facades separate the artists from the hacks, the radicals from the conservatives, and the poets from the hired guns. They show us that the history of the skyscraper, which is also the history of this century—and which is like so much of that history—is a search for identity.

In the end, however, a building is only as good as its resolution of the complex structural, social, and symbolic factors involved. Style is the result of the architect's most concentrated and comprehensive efforts to resolve those often irreconcilable factors in an expressive synthesis at the level of art. But he has never had an easy job or a clearly defined role in dealing with the tall building. The choice has been between two conflicting and ideal choices: one that carried the special freight of responsiveness to people and the environment, or he could dismiss any power to make architecture less than its resolution.

Most architects have opted for the first course; those who simply settled for being the developer's drafting arm have traditionally been scorned. But today attitudes toward skyscraper design are changing. Many postmodernists prefer to consider the skyscraper just that—an enormous package that can be decorated for status, symbolism and style. This is done, as a rule, through a hierarchy of historical symbols, an elite checklist of aesthetic references. Rejected from any other concerns about the behemoth he is designing, the architect plays to the press and his peers. He is free to be erudite, nostalgic, or droll, and, if he can carry it off, fashionably outrageous. The layman may not always recognize the source, but it is clear that the architect is a very clever fellow. Whether this attitude toward design is a breakthrough or an abdication is open to serious debate. But to say that the skyscraper is no more than a package of standardized space to be gift-wrapped to the architect's or the client's taste is to make architecture less than an art or a profession.

There are some who believe that the skyscraper has reached the end of the line; that it has become too large, too frivolous, too destructive of people or places. Although it remains the most stunning architectural challenge of our time, one can no longer escape or deny the fact that the newest towers, larger and more impressive and more over-reaching than ever, are just as stunning exercises in the violation of cities. One cannot turn one's back on the fact that the skyscraper is being so patently and flagrantly abused, and is so abusive of everything around it.

Cities like New York, synonymous with the big building, encourage their own exploitation. In recent years, New York has been aiding and abetting more massive construction than that which sparked the horrified reaction that led to the original zoning law of 1916. The revision of that law in 1960 led to unprecedented building size and encouraged the tall tower surrounded by open space in that can hardly have been the modernists' dream. A series of innovative bonuses and special permits were devised for the development of public facilities such as plazas and arcades. This kind of incentive zoning, which had many admirable urbanistic objectives, including the preservation of theaters and neighborhoods, was skillfully manipulated by builders and their lawyers. Its subjective, permissive approach encouraged speculation, which led to inflated land values, which, in turn, required ever larger structures; this was followed by claims of economic hardship due to high land prices and requests for variances for still larger buildings. It was catch-22 at the highest exploitative level.

Recent downzoning in midtown Manhattan has been aimed at correcting the most obvious abuses, but even with the setbacks the buildings still allowed are bigger than those permitted by earlier laws. And the revisions often rely on a clever shuffle of sun and shadow criteria using calculations so complex that only a computer can deal with them. In a kind of fast-building monte, the architectural shell game, being played from New York's East to West Sides, the offending densities are shifted from one part of town to another, while residential neighborhoods, still over-zoned, remain open season for developers. The destructive aspects of this kind of zoning have no computer calculations, only human ones.

Do the arguments of economic development justify this degree of overbuilding? Is there a line where economic destiny can no longer be distinguished from pure greed? Is the skyline enough? At what point do the urban and cultural assets that are the city's great draw lose out to a painful and abrasive environment? At what moment does the city cross that line where it ceases to be magnificent and becomes unsupportable? Can a city invite its own decline?

Finally, how much, if any of this, must the architect answer for? New York's bumper crop of new skyscrapers vie with each other in the uniqueness of their design, as well as their shattering scale. Other cities follow where New York leads in architectural excess. After many years of New York-watching, and many battles with developers dedicated to the lowest formula of commercial design, one must come to the reluctant conclusion that at this level of overbuilding and permission, the art and the economics cancel out. Architecture simply doesn't count. As an observer and critic devoted to the quality of art and life, I never thought that I would make that statement. It is particularly ironic to have to make it now, in view of the fact that these blockbusters are...
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among the best of the breed ever built in New York. With pitifully few exceptions in the past, New York's skyscrapers have never reached for anything but money. Many of these new buildings are the work of architects of reputation. But to anyone who believes that functions of density and avarice are alien to the art of architecture—that what buildings do is as critical as how they look—these structures make architecture unimportant and even worse, the effect of their style debates about them make architecture ludicrous. To judge these buildings in esthetic terms is absurd.

In New York, the impact of these concentrated super-skyscrapers on street scale and sunlight, on the city's antiquated support systems, circulation and infrastructure, on its already tenuous livability, overrides any esthetic. As bulk and density increase, they crowd and close in; shadows lengthen and blowouts multiply; winter sun becomes a fleeting penetration of cold concrete and glass, leaving neither warmth nor cheer. The city's oppressive impersonality increases, while services suffer and crime disproportionately disappear or are traded off for questionable substitutes.

Architectural, in this context, is only a game architects play. Art becomes the most thoroughly city brutalized by over-development.

The last to know, or admit this, are the architects themselves. They are offering us a select-a-style skyline, as if that were the only thing that mattered. They keep company with city officials who see nothing but the beauties of the tax base and lawyers who see nothing but the beauties of the legal loophole. Developers are having a wonderful time rearranging the deck chairs on the Titanic.

Some, of course, are of course, are intrigued today, Montgomery Schuyler's observation of 1899 is still valid. "It all depends," he wrote, "on the architect. A meric architecture is a mere caprice of the designer, or an attempt to come closer to reason and reality." Today's architectural enterprise, as Brion has said, is more and dangerously close to mere caprice. But the design process is also becoming much more diverse and open, with all that implies for good and bad building as is the real sources of style—are being subverted by a public and profession more addicted to publicity and novelty than to reason and reality. A lot of fashionable intellectual understanding is being wiped out hopelessly confusing the rational priorities of a utilitarian approach, we will go out in a blaze of style.

Admittedly, the tall building program—"warped" and "futuristic" as our old cities are savage and deteriorating, and our new cities are ignoring the lessons of the past and the needs of the future, even as familiar problems have been added to their list. The urban political score is one of its most ingenious today, Montgomery Schuyler's observation of 1899 is still valid. "It all depends," he wrote, "on the architect. American architecture is a mere caprice of the designer, or an attempt to come closer to reason and reality." Today's architectural enterprise, as Brion has said, is more and dangerously close to mere caprice. But the design process is also becoming much more diverse and open, with all that implies for good and bad building as is the real sources of style—are being subverted by a public and profession more addicted to publicity and novelty than to reason and reality. A lot of fashionable intellectual understanding is being wiped out hopelessly confusing the rational priorities of a utilitarian approach, we will go out in a blaze of style.
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Profiting from the past

From city boutique to suburban mall, the Ghost of Christmas Just Past pursues us into the new year. What better time than this season of post-holiday sales, and bills come due, to reflect on the role of shopping in our lives. For many consumers, the selection of merchandise is a creative act, the only process through which they design their own environment, choosing the colors, textures, and shapes that surround them. Buying and selling are social exchanges, too, and it is no wonder that the shopping center has become the forum, the town common, and the Main Street of modern America.

From the architect’s vantage point, design for retail use has never been more attractive. Once the uncoveted domain of a few specialists, dismissed as hacks by “serious” professionals, retail commissions are now eagerly sought by many. Financial incentives in an uncertain economy have no doubt affected this change of attitude, but so has the enthusiasm for applied ornament, stylistic diversity, interior design, and yes, fashion—perennial concerns of the shopkeeper—that marks the work of so many contemporary architects.

The architect’s current preoccupation with context and history also meshes neatly with the retailer’s growing interest in mixed-use projects and recycling. Merchants today not only see the romance and prestige of distinguished older buildings as valuable “image”—they also appreciate a solid commodity of proven worth, especially as eligible sites for development become ever more scarce in populous areas.

If there is a single common theme that connects the very different ventures included in this Building Types Study, it is the marketability of America’s architectural “back stock.” The incentives for the entrepreneurs behind our examples range from the obvious dollars and cents to the less readily quantifiable returns of urban renewal and landmark preservation. The public’s gain is clear, for each of these projects has created a place where people like to gather—even if they’re “just looking.” Douglas Brenner
It is debatable whether one should include New York City's South Street Seaport in a collection of retail buildings, even though the $351-million waterfront development inaugurated last summer includes over 11,000 square feet of shops and restaurants—with more on the boards. One could no less accurately categorize the entire 11-block enclave near the southern tip of Manhattan as an historic district, a mixed-use complex of museum, wholesale and retail trade, offices, and apartments—or even as the newest kind of urban park. In any case, buying and selling have been the lifeblood of the seaport since it rose from mud and landfill in the 18th century, and it is the realities of the marketplace that, in large part, have governed its fate ever since. Until the Civil War, the South Street harbor was the center of New York's flourishing maritime commerce. Merchants surveyed their empires from counting houses such as the row on Fulton Street built by Peter Schermerhorn in 1811 (at left in lithograph below, see pages 100-101), and tall ships lined the nearby wharves. Ferry service to Brooklyn started in 1814, and the first Fulton Market, a general emporium for provisions and drygoods, opened in 1822 (at right in lithograph). The port's prosperity began to wane in the 1860s as steamships replaced clippers, and trade shifted to deep-water piers on the Hudson River. The subsequent decline of South Street excluded this area from further large-scale development, preserving it as a rare assemblage of low-rise 18th- and 19th-century architecture in the shadow of downtown skyscrapers.

In the 1960s, a Lower Manhattan building boom threatened to engulf these precious relics, impelling the rescue campaign of a group called the Friends of South Street Seaport. Their foundation in 1967 of the nonprofit South Street Seaport Museum launched a major effort to acquire historic buildings and ships, and make their significance known to a wider public. Among the Museum's early achievements were official New York City landmark designation of the 11-block Historic District, inclusion of the Seaport on the National Register of Historic Places, and the assembly of one of this country's most extensive collections of old ships. Even with a membership that grew to 10,000, and the arrival of a million visitors a year, it was apparent that major new funding sources were essential for continued survival of the Seaport, restoration of its properties, and expansion of its cultural programs. In 1976, the Museum asked The Rouse Company, the developers of Boston's Faneuil Hall Marketplace (RECORD, December 1977), to assess the feasibility of retail installations at the Seaport. A series of studies culminated in the 1980 Seaport Development Plan, prepared by the Museum and Rouse, with assistance from the City and State of New York. A year later, the project received a $20.45 million UDAG for improvements to the historic district's infrastructure, rehabilitation of the Museum's buildings, and construction of a new pier platform. The New York City Board of Estimate subsequently approved a lease agreement between the City and the Museum and, in turn, a sublease between the Museum and The Rouse Company.

The Seaport master plan devised by Benjamin Thompson & Associates (also the architects of Faneuil Hall Marketplace and Harborplace, a later Rouse Company development in Baltimore; RECORD, October 1980) outlined an intricate patchwork of buildings, ownership, and uses. This densely woven fabric comprises the so-called Museum Block, a cluster of 18th- and 19th-century commercial buildings restored by Beyer Blinder Belle, Architects & Planners, and infill designed by the same firm (photo center right); the new Fulton Market (upper right), a retail complex designed by BTA; the wholesale Fulton Fish Market, built in 1907, and its fish stall annex, incorporated into the South Street side of the new Fulton Market; the State-owned Schermerhorn Row Block (opposite top), restored by Jan Hird Pokorny, Architects & Planners; adaptation of Piers 16 and 18 for outdoor museum functions, and construction of Pier 17, now underway, for retail and restaurant use; and the 34-story Seaport Plaza, a privately owned office tower with two retail levels at its base. Converted to a pedestrian thoroughfare, Fulton Street serves as the primary circulation spine, linking South Street to the neighboring business district, and joining the Seaport's landmark components to the waterfront beyond an elevated expressway. Pier 17 and the ships...
moored nearby are year-round magnets drawing visitors down to the strand. (Still under review is a proposed pilot house under the expressway which would also animate the water’s edge.) A later phase of improvements, to be developed and operated by the Museum, would restore another group of old commercial buildings to the northeast of Beekman Street. This development would combine retail, restaurant, office, and museum functions.

An undertaking of this scope, with such complicated boundaries of jurisdiction, and such diverse physical components, inevitably provokes controversy. New Yorkers with a sentimental bent, who had treasured the unrestored Seaport like a dusty trunk in the family attic, have been saddened to find ramshackle buildings done up with fresh paint, scrubbed brick, and Laura Ashley prints (even if the fish market aroma is intact). Schermerhorn Row has been the main focus for this disappointment. For example, critics have accused the restoration architects of sandblasting the patina off old brick. In fact, Jan Pokorny and his team washed the facades with water. Much of the “newness” of the masonry comes from pointing required by project engineers. Critics also take Pokorny to task for homogenizing a picturesquely varied aggregate of individual structures (photos overleaf). This censure ignores the fact that the architect was engaged to restore the historic character of a group of buildings designed as a single composition. Convinced that the salient architectural aspect of the Row was the formal coherence of the block-long hip-roofed Federal-style terrace, Pokorny initially proposed removing a mansard-roofed attic on the South Street corner building in 1868, as well as a 1900s flat-roofed attic on Fulton Street, and restoring arched doorways, shutters, and even exterior wooden stairs, in order to return the block to its original appearance. Pokorny’s client insisted, however, that the mansard and other later 19th-century alterations represented an important phase in the development of the Seaport and must be preserved. Hence, it was decided that the entire group of buildings should be restored to their post-Civil War condition, which meant that Greek Revival and Victorian storefronts that had obliterated ground-floor Federal archways would also be retained (somewhat arbitrarily, the 1930s addition was deemed unworthy, on historic and esthetic grounds). Pokorny has nevertheless succeeded in part of his scheme, having won permission to retain a badly altered building on the South Street side of the block to its early 19th-century form.

No less problematic than the restoration of Schermerhorn Row was the design of infill buildings. All parties involved in the Seaport project agreed that these addenda, while compatible in scale and materials to existing structures, should not be “Williamsburg” reproductions of antique prototypes. “This isn’t a stage set,” says Christopher J. Lowery, president of the Museum. “We deliberately didn’t put a bubble around this place or hide it in a marble columned temple. It’s a thriving part of New York City.”

Even though the Seaport master plan has closed off Fulton Street and several cross streets to vehicles, the new stone-paved precinct creates the rare (for Manhattan) amenities of a lively pedestrian plaza overlooked by restaurants and cafes, and direct access to the waterfront. Schermerhorn Row, the Museum Block, and Fulton Market frame what is in effect no longer a street, but a public square, at once imposing and hospitable. (It is particularly unfortunate that one gatepost to this agreeable piazza should be the 34-story granite-clad shaft of Seaport Plaza which, despite perfunctory gestures towards contextualism at its base, seems to enforce a division between the waterfront and the rest of Manhattan.) Some visitors complain that only the towering masts of the vessels docked at South Street keep the Museum from disappearing amidst the profusion of retail merchandize and food. To some extent, this is exactly what the Museum hoped for, since it has striven to bring back the hustle and bustle of commerce that pervaded the old port and its markets. South Street Seaport is intentionally not the sort of museum whose collection can be confined to galleries. Christopher Lowery observes, “Museum development hasn’t kept pace with retail—but we anticipated this, and it is only a temporary condition. We decided when we set out that the preservation of the place should build a foundation for the museum’s growth. Once all of our own projected facilities are in place, the retail element will simply enhance its historic context.”
Providing 32,000 square feet of retail space was one of the simplest tasks Jan Pokorny faced in his restoration of Schermerhorn Row and the other buildings that make up the block south of Fulton Street. From the outset of Pokorny’s involvement in the $5.8-million project nine years ago, when his firm was hired to reconstruct and stabilize only the facades of the block, this undertaking posed a formidable technical challenge—beyond the thorny methodological issues discussed on page 99. Work began with an exhaustive graphic survey and inventory of existing conditions, recording the many changes wrought by subsidence of 18th-century land fill, structural failure, and successive architectural alterations. Seven test borings investigated the underpinnings of the Row, a stone-and-log substructure on plank spread footings. Happily, submersion in salt water had “pickled” the timbers, preserving them in sound condition. Handmade water-struck bricks, brownstone trim, and roof slates were assessed for replacement. Chemical analysis of old mortar revealed that 19th-century masons had used a lime compound that gave remarkably well during settling. Pokorny’s team then located brickyards and quarries that could supply similar materials for reconstruction (the surrogates for now unobtainable brownstone were English sandstone and cast stone). Facades were washed gently with water and repointed (Pokorny affirms that exposure to city air will soon put back their patina). Inside the Row, the architects found ancient floor joists, attic framing, and even scraps of wallpaper. Hoist wheels, for hauling goods to storage lofts, still survived in several garrets.

Given the later 19th century as the historic moment to which the block was to be restored, Pokorny and his staff used photogrametry to trace detailed elevations. Since few Victorian storefronts survived, the architects resorted in many cases to “modern referential” installations that echo the proportions of period models without imitating specific ornamental details. Behind the reconstituted facades is a complex interlocking of functions: museum, shops, restaurants, a pub, offices, and housing for residents whose tenancy predated construction. The vacant southeast corner of the block has been designated as the site for a major museum facility.
The "before" view of Schermerhorn Row (left) shows the accretions and losses that transfigured the classical symmetry of the 12-building Federal terrace. As shown in the lithograph on page 98, the facades originally had arched doors at ground level that vanished as storefronts were remodeled. Jan Pokorny’s team discovered a fragment of one 1811 arch, which they "completed" in bronze (photo bottom left). Another find was a piece of early 19th-century wooden gutter, with wrought-iron brackets still in place. Missing chimneys that had blown down were rebuilt with high-tensile mortar (facsimiles of old tie rods were put back between the stacks). The same caliber of painstaking research and resourcefulness distinguished Pokorny’s approach to the rest of the block, which includes buildings of various styles (e.g. the Front Street elevation, opposite). Utilities were introduced through a rear courtyard under a paved deck and amphitheater. For the museum infill project at the southeast corner of the block, Pokorny has proposed a modern structure whose massing would approximate that of counting houses similar to Schermerhorn Row that formerly graced this site.
The exhibition on view in the Seaport Gallery at 213-215 Water Street is called "The Secrets of South Street." It is a title that might well be applied to the Museum Block, which contains several of the Seaport's most intriguing architectural puzzles. As an artifact, the block encompasses a varied assortment of specimens, the oldest of which is 207 Front Street (partially visible at right in photo opposite top left), a shop and residence built in 1797 that now houses part of the Museum offices. The block also includes Greek Revival storefronts (207-211 Water Street, now a museum store and printing shop), fish dealers' lofts turned into a multimedia theater, an 1868 warehouse with limestone carved to resemble cast iron ornament (213-215 Water Street) and, no less curious, a 1983 steel-frame structure designed by Beyer Blinder Belle that mimics Victorian ironwork in its own way (photo above right; see pages 114-117).

Beyer Blinder Belle's role in the Museum Block began with a contract to restore the exteriors of the 13-building cluster and subsequently expanded to include the design and construction of infill to mask a subway ventilation shaft on the then vacant corner of Fulton and Front streets. Besides covering exterior restoration, a $4-million grant from the Federal Economic Development Administration allowed for basic rehabilitation to prepare interiors for improvement by the Museum and tenants. In later phases of the project, the architects received commissions from The Rouse Company for retail spaces, and from the Museum, for its own shops and offices.

Serendipity supplied the premise for Beyer Blinder Belle's most original contributions to the complex: the Bogardus Building and Cannon's Walk, a crooked alleyway of shops (photos opposite). The architects carved this meandering court out of a jumble of sheds and back yards, but rather than tidying up the resulting passage, they glorified what John Beyer calls its "leftover quality." The leavings are not only a picturesque hodgepodge of materials, unmatched windows, and crazed wall surfaces, but the fortuitous traces of new construction work, too. Here one can savor the gritty charm of the found object and the romance of exploration that has always lured the adventurous to waterfront byways.

Gianni's, the restaurant that occupies two levels of the Bogardus Building, at the corner of Fulton and Front streets, offers northern Italian food and an excellent view of the passing scene. Visitors in search of more thrilling spectacle can walk north on Front Street to the Trans-Lux Seaport Theater (design of which was not included in Beyer Blinder Belle's contract). Housed in the former Inter-City Fish Building, the theater regularly presents "South Street Venture," a multimedia extravaganza that recreates sights and sounds of the seafaring past. "If you didn't lose your life on board," says the advertisement, "you might lose your soul in port." Now, it is one's money that is most imperiled, in cozy shop interiors such as the Museum-run Edmund M. Blunt Book & Chart Store (above), designed by Beyer Blinder Belle.
The Museum Block comprises some 106,000 square feet, 20,000 of which are devoted to museum exhibit space and administrative offices, storage of the collection, a library, and a curatorial laboratory. Over 29,000 square feet are given over to commercial use, with approximately 35,000 square feet for office rental. A diverse set of goals called for an imaginative approach to reuse—and complicated the problems of infill. Design of the Bogenius Building confronted Beyer Blinder Belle with knotty questions of historical and aesthetic appropriateness. The creation of Cannon's Walk began as selective demolition of one-story rear sheds. In several instances it was necessary to rebuild walls, leading to discoveries such as a bannister arch of cast iron and steel at the rear of 265 Front Street.

Workmen were cautioned against chipping off the crusty patina of old cement. Where cement had to be cut away to replace rotted windows, the architects installed new ash without purging over the ragged edges around them. In order to minimize the intrusion of storefronts, display windows are built-glazed, with reglets of black saw-cut steel set into the surrounding masonry.

Conventional retailing would argue against having shops open off an alley entered through relatively inconspicuous doorways. Nevertheless, on weekend afternoons, the narrow stone-flanked space is as crowded as the aisles in Bloomingdale's uptown.
Benjamin Thompson & Associates compiled copious graphic records of the previous Fulton Market halls—the neoclassical pavilion of 1822 (see page 98) and its eclectic Victorian successor, built in 1883 and demolished in 1951 (engraving opposite)—and there are fond reminiscences of both structures in the $15.8 million market they designed. In no way, however, is the project an antiquarian reconstruction. The architects sought instead to build what Ben and Jane Thompson call "a hardworking, shirtsleeves sort of place," an active center in the ongoing life of the city that coexists comfortably with the legacy of its past. Design was complicated by all too present obstacles: rigid height and FAR limits, obligatory landmarks commission review, treacherous site conditions, and the need to build over and around existing wholesale fish stalls along South Street (see section; plan overleaf).

Appropriately, the structure that satisfies these demands also obeys a centuries-old formula for market buildings: an open public hall with adaptable shed extensions ("Mother hen architecture," Jane Thompson calls it). A cable-hung corrugated metal canopy does more than relate the new building to tradition. Along with set-back dormers and mullioned windows, the canopy minimizes the apparent height and mass of the 60,000-square-foot brick and granite structure, an important consideration in the low-rise historic district. The canopy also masks the blank sides of the fish stalls, offers shelter to pedestrians, gives the building a strong presence on all four facades, and curves upward to announce the principal corner entrance.

Broad expanses of glass on the first two stories give passers-by a glimpse of the teeming vitality within. Upon entering the ground-floor market hall, the visitor also becomes aware of attractions on the upper level through vistas afforded by open light wells and stairways. The shedlike interior (overleaf) forms a backdrop for the sensual appeal of goods and food, and the drama played out by vendors, shoppers, and diners. Architect Laurin B. Askew, Jr., director of design for The Rouse Company, aptly characterizes Fulton Market as "a comfortable and forgiving building, not precious or fussy, capable of graciously coping with frailties of human behavior or the occasional speck on the floor."

Besides being a generic element of market design, the corrugated steel canopy realizes the architects’ vision of a "building in the round" that reaches out to the street. A glass strip inset where canopy meets wall allows daylight to reach mezzanine windows, and night lighting to wash up the facade. The exaggerated dimensions of the continuous cable-hung roof (14 ½ feet wide, it projects 15 feet from the wall), the oversized granite-framed windows above it, and the dormered roof help to create the impression of a two-story building keyed to the almost domestic scale of its neighbors on Fulton and Front streets. Brightly colored awnings extend from the canopy as though they were later additions to a building that grew over time.
Site work accounted for over $2 million of the building cost. As at the Bogardus Building site, aqueous landfill, subway tunnels, and the threat of vibrations to fragile historic relics made it necessary to bore foundation piles. Above ground, erection of the steel-frame superstructure was complicated by the need to build around a fish market annex (plans overleaf) without interrupting daily trade. Since no columns could penetrate the annex, the architects spanned it with 100-foot transfer trusses. The resulting building section raised the second floor 25 feet off the ground, enabling the insertion of a mezzanine. Exterior massing was partially determined by 40-foot cornice and 85-foot building height limits, but the silhouette and articulation of the 1883 Fulton Market also derive from the High Victorian edifice that opened here a century earlier (engraving above). Benjamin Thompson & Associates consciously emulated the 19th-century practice of designing commercial buildings as prominent civic landmarks. This regard for enrichment of the public domain extended to the quality of adjacent streets, which was specified in B.T.A.'s Seaport master plan. As designed by the architects, these pedestrian ways are laid with salvaged Belgian blocks, and bordered by granite-paved crosswalks and bluestone sidewalks.
The interior responds to the client's desire for a "working environment" that is also festive in spirit. To that end Benjamin Thompson & Associates produced shelllike spaces with the studied utilitarianism of exposed steel beams, columns, and decks (requiring a "creative" approach to fire code compliance). Low tiled partitions and a suspended ceiling grid hung with domed lamps compose an orderly yet flexible framework for the contrasting signs, displays, and task lighting of individual tenants. Installations are reviewed against detailed design criteria established by B.T.A. As on the exterior, interior materials honor generic precedent: glazed ceramic tile, painted beaded boards, water-stripped brick. Pier 17 (rendering below), another major component of B.T.A.'s work at South Street, is now raising on the waterfront. Modeled on Victorian recreation piers, the steel and glass structure will enclose 125,000 square feet of space. Specialty shops and restaurants will adjoin viewing decks on the East River.
Main Street Revival

When skiing was still a novelty in the United States, shopkeepers in American mountain resorts lent romance to their wares with the borrowed local color of cuckoo clocks, dirndls, and half-timbered chalets. There is still plenty of gingerbread below the slopes in Aspen, Colorado, but the appeal of ersatz Tyrolean decor has staled of late as retailers have warmed to the more indigenous fare of mining camp or hunting lodge Victoriana. Though often no more than an applique of geegaws, this vogue reflects the genuine interest in vernacular architecture that has inspired the preservation of Aspen’s still considerable 19th century heritage, and spurred the recent designation of a downtown historic district. The first new building to be erected within this district is Mill Street Plaza, a shopping complex whose corner site (formerly a lumber yard) adjoins the 1890 Wheeler Opera House (far left in large photo opposite). Now that this Richardsonian Romanesque landmark is being restored as a performance hall, it is especially important that the shops next door be worthy neighbors.

In any event, the budget of $54 per square foot prohibited an archaeological approach to neo-Victorian detail. Hagman Yaw Architects aimed instead at a kinship of scale and materials between past and present, keeping their 28,000-square-foot building low and installing windows with the proportions of old storefronts. The chamfered corner shop entrance repeats a common element on Aspen’s turn-of-the-century commercial blocks, while cornices, window frames, banding, and polychrome brick also evoke early models. The only genuine antique elements are two terra-cotta reliefs purchased from an Omaha wrecker that were installed above the corner door.

Hagman Yaw’s plan respects the client’s desire for a large number of small shops, none farther than 40 feet from the sidewalk. “Finger malls” converging on a bi-level courtyard not only ensure adequate display exposure for retailers, but entice the shopper to wander through in quest of discoveries. A fountain in the central patio also acts as a lure for passers-by. Windows trimmed in green and plum frame an array of staples for mountain living: hand-knit sweaters, books on fly fishing and the Old West, and panels of Victorian stained glass.

Mill Street Plaza
Aspen, Colorado
Hagman Yaw Architects, Ltd.
During the summer, the courtyard (left) is an occasional band shell for musicians from the Aspen Music School. Overlooking the plaza from the upper level are employee apartments required by local zoning, a dance studio and gym, and The Ritz, a restaurant. Around the perimeter of the building, awnings afford sun and snow protection and help to enliven flat facades.

Mill Street Plaza
Aspen, Colorado
Owners:
Frank Woods and Tony Mazza
Architects:
Hayman Yaw Architects, Ltd.—Tim Hayman, principal-in-charge; Michael Thompson and John Cottle, design team
Engineers:
Anderson & Hastings (structural); McFall-Konkel & Kimball

(mechanical); The Engineering Partnership (electrical)
General contractor:
Hunter Construction Corporation
“Win your pot of gold today,” reads a placard in the window of Joseph Tomo’s candy store, where stevedores and housewives line up to buy New York State Lottery tickets. Tomo, who has lived and worked in the Red Hook section of Brooklyn for over half a century, shrugs when asked about the odds of hitting the jackpot. As president of the neighborhood chamber of commerce, he prefers to talk about his hopes for new market sheds and pushcarts on the next block, the products of a joint venture by New York City’s Office of Neighborhood Economic Development and Department of Housing Preservation and Development. The project is a key phase in a broad renewal scheme that also includes units of three-family housing now under construction.

Until well into the 1950s, this was a tough but vigorous ethnic community, with a busy cluster of shops and sidewalk hucksters centered on Columbia and Union streets. Rapid deterioration followed the digging of an expressway cut that isolated the area geographically and caused widespread structural failure. Blasting for sewer construction in the ’70s only hastened the abandonment of buildings and arson. In the hope of stemming further erosion of the commercial core, Joe Tomo approached the Brooklyn Chamber of Commerce and Planning Board, who assisted him in gaining an ear at City Hall. Everyone liked the idea of bringing pushcarts back to Columbia Street as an inexpensive way to start up business. Aside from the carts (custom-built in New Jersey from a model made by Tomo) the basic program component was storage space, so that vendors could avoid daily trips to wholesale markets. Architect Lee Weintraub’s solution is ingeniously simple: a series of fiberglass shipping containers from the nearby docks, turned on their sides and fitted with aluminum-laminated plywood doors, afford durable shelter for carts and refrigerated storage. An aluminum skin, painted on site, and a stepped-gable trellis present distinctive facades to the street.

The project cost $145,000, with most of the budget allocated for site clearance and parking lot construction. Dormant this winter, the market is expected to reopen next spring, although it will really start to serve its purpose only next summer when the new housing opens.
Nearly every building along Columbia and Union streets was cracked by tremors from highway excavation and blasting for sewer lines. Many of the stores and houses now propped up with 12-by-12s will be salvaged as part of a New York City community renewal program. It is still possible to buy fresh ricotta, mozzarella, and scungilli here, but the present group of merchants is only a fraction of what once existed. It is hoped that inexpensive pushcart produce will also draw business to local shops. According to present plans, the entire market operation will be leased to a single broker, who will rent carts and stalls to individual vendors. As business grows, the market can expand by extending the row of containers and trellises (a linear system that architect Lee Weintraub compares to the agora of ancient Greece). The fiberglass storage containers tilt forward slightly for easy cleaning with a hose. The market's architectural character depends on the simplest means: a cut-out gable that turns the corner, applied moldings, color, and a photomural at the end of the portico showing the block as it was in the 1940s (opposite bottom; detail this page).
New light on an old subject

It was location and demographics, not a New Wave taste for 1950s design, that led Equity Properties & Development Company to buy Miami's Mall at 163rd Street three years ago. Built in 1956, the mall was still a typical retail center of postwar vintage (small mall was still a typical retail three years ago. Built in 1956, the mall was still a typical retail center of postwar vintage (small photo this page): two parallel rows of one-story shops flanking an open-air pedestrian strip, with department stores lined up along one side of the mall and at either end. The population of the surrounding neighborhood had increased 37 per cent during the 1970s, yet during the same decade the mall had deteriorated physically and merchants lost customers to newer enclosed climate-controlled shopping complexes. By the time Equity Properties engaged Charles Kober Associates to draw up plans for remodeling, one of the major department stores at 163rd Street, Richards, stood vacant. A drastic overhaul was needed, but Kober's options were limited: a tight budget, the presence of underground delivery tunnels, and the owner's reluctance to displace any tenants precluded massive shifts of structural loads.

What Equity now calls "The Miracle on 163rd Street" began with one bold stroke. By covering the mall's 60-foot-wide center strip with a tensile fabric roof, Kober Associates transformed it into an up-to-date galleria. The canopy of Teflon-coated glass fiber fabric panels and intersecting steel-tube arches rests on transfer beams mounted above the remodeled storefronts. This luminous, lightweight vault not only imposed architectural coherence on a previously haphazard string of buildings, but gave the mall a distinctive image. By reflecting solar heat while admitting glare-free daylight, the self-cleaning roof reduced cooling, lighting, and maintenance costs. At its western end, the 1,000-foot-long galleria opens onto a three-story atrium in the former Richards (photo above left), created by removing floor slabs from the center of the store. The atrium has its own fabric skylight.

Though fabric roofs had already been used in department stores, this is the first adaptation of this technology to mall circulation areas. Most energy efficient in warm climates, such roofs potentially have widespread applications, now that enlargement or renovation of extant facilities accounts for close to half of all shopping center construction.
The case of the purloined building

By James Marston Fitch

The building that has just been completed at the corner of Fulton and Front streets in lower Manhattan (Figure 1) is a lineal descendant of another iron building constructed 134 years ago right across town (Figure 2). One survives, the other is gone, but a long, involved, sad and yet comic story connects them. The intertwining of their histories began just a decade ago, when the battle to save the Laing Stores from the ravages of urban renewal seemed securely won, and when, at just the same time, the South Street Seaport Museum asked the architectural firm Beyer Blinder Belle to design an infill building in that historic district. At the beginning, no one could have foreseen any connection between the two.

The Laing block had been erected in 1849, at the northwest corner of Washington and Murray streets, for a wealthy merchant named Edgar H. Laing. A conventional four-story-and-basement block like hundreds of others going up all over the five boroughs, its single claim to fame was literally only skin-deep—i.e., its panelized, prefabricated curtain wall of cast iron and glass (Figure 3). With its repetitive use of a very simple set of components—half-round hollow iron columns, beams and spandrels and wood sash—the wall can be said to be the prototype of today's non-loadbearing curtain wall. Even the ratio of glass to solid surfaces was thoroughly modern. But this was not a skyscraper: the avant-garde skin concealed a completely traditional structure of loadbearing brick masonry walls and wood-framed floors and roof.

But if few people in 1848 understood the long-range implications of prefabricated metal structural systems, the inventor of the Laing Stores, James Bogardus, was not among them. This extraordinary 19th-century entrepreneur, so characteristic of his times, described himself as the "Builder of Cast Iron Houses and Manufacturer of the Eccentric Mill." He was not backward in advancing his claims for the system:

These buildings will sustain greater weight and are put up with less inconvenience than brick buildings, being cast and fitted so that each piece may be put up just as fast as it is brought on the ground. They may be taken down, removed and put up [elsewhere] in a short time.... In their mode of construction, nearly three feet of room is gained over buildings put up with brick. They admit more light, for the iron columns will sustain the weight that would require a wide brick wall in ordinary buildings. They combine beauty with strength. (Evening Post, New York, May 3, 1849)

So strong was his system, Bogardus claimed, that its structural integrity would be maintained with even half of it shot away!

In any case, the Laing Stores were continuously used for the next century, slipping slowly into shabby anonymity as the commercial center of New York moved steadily north along Broadway toward midtown Manhattan. They did not surface in the news again until the mid-1960s, when the Washington Market urban renewal scheme was announced. Typically, in the slum-clearing spirit of the times, the scheme called for the complete demolition of a huge tract running 10 blocks north along the Hudson River from behind St. Paul's Chapel. Although this involved the demolition of hundreds of historic buildings (and not a few historic institutions, such as the famous old market itself), it did not evoke much protest. How, after all, could Manhattan not profit from the Phoenix-from-the-ashes, the twin-towered 100-story World Trade Center?

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No protest, that is, except for the band of preservationists organized around the then (1965) newly formed New York Landmark Preservation Commission. Within the year, the commission began to explore the possibilities of saving some of the fine Federal houses scattered through the district and the long-forgotten Laing Stores, by now recognized as being the oldest of Bogardus's buildings and the only one to survive. In 1966, the always perceptive Historic American Building Survey

Dr. Fitch, an architect and a historian, is presently Director of Historic Preservation for the New York City architectural firm Beyer Blinder Belle.
surveyed the buildings in drawings that revealed the elegance and refinement of the design (Figure 4). And just about that time the Landmark Preservation Commission began to seriously consider saving the Laing Stores, either in situ or as a reconstituted part of one of the new complexes scheduled for the area.

By late 1968, the commission had drafted a contract for the disassembly and storage of the cast-iron facades and was looking for a suitable host institution in which to reconstitute them. It decided that the new Manhattan Community College, whose campus was to include the old Laing site, would be the obvious host. The whole project was given new substance when it was designated as a landmark in February 1970 and the city's Housing and Development Administration made a grant to cover the cost of preservation. The agreement with HDA covered three points: 1) the disassembly and conservation of the cast-iron facades would be done under careful supervision; 2) the disassembled parts would be stored under "secure" conditions pending their reconstitution; 3) the architects for the new college, Caudill Rowlett & Scott, would incorporate them in their designs for the new campus.

To assure that the whole process would be adequately documented, Dr. Winston Wiseman, then head of art history at The Pennsylvania State University, was commissioned to prepare a history of Bogardus and of the Laing Stores. And the present author, then director of the Department of Historic Preservation at Columbia University's Graduate School of Architecture and Planning, assigned a team of students to prepare measured drawings and maintain a daily photographic and written log of the disassembly process. The actual work of demolition began on a cold winter's day in February 1971 and was successfully completed in less than a month.

This was the first disassembly of a cast-iron building on record, though of course hundreds have been knocked down by the wrecker's ball. It raised a number of ticklish technological questions. Would the brittle, 132-year-old fabric survive any intervention? Would the wrought-iron bolts that held it together be irreversibly rusted in place? If an electric arc was required to cut off the bolt heads, would the old cast-iron members survive the unequal thermal stresses? As it turned out, the fears were groundless. By careful sprinkling around the bolt heads, overheating and unequal expansion were minimized (Figure 5). The entire fabric was disassembled without the loss of a single element (Figure 6).

As disassembly proceeded, each element was stencilled according to a locational code to permit easy identification when time came for reconstitution. Following their disassembly, the prefabricated components were moved to a nearby open site, already cleared in the urban renewal process. Here they were cleaned of accumulated paint, rustproofed and then stacked in the sequence in which they would be needed when time came for reassembly (Figure 7). Having thus been mothballed on a "secure" site (i.e., behind an 8-foot-high hurricane fence with locked gates and barbed wire topping), they were left to await their resurrection.

Initially, Caudill Rowlett & Scott, designing the new Manhattan Community College, had some difficulty in accepting HDA's stipulation that the old facades be incorporated in the new complex. However, CRS—a large Houston-based firm, famous for its hard-edged functionalist designs—finally turned out a design in which the two antique curtain walls would be reconstituted as a freestanding screen in one of the college courtyards (Figure 8). This proposal met some resistance from purists on the landmarks commission. The then-chairman, Harmon H. Goldstone, said flatly that the walls were "never designed to be reassembled as a screen or freestanding (sculpture) but as the front of a modern building, and I will fight for that." And John Boogaerts, principal designer for the Housing and Development Agency, said that "we expect it to be treated as a facade, not as an openwork trellis."

This disagreement might well have been amicably settled had not one of the CRS staff—sent around in late June 1974 to the storage site to check the dimensions of the component parts—unlocked the gates to discover that two-thirds of the components...
were missing! Three men, “who thought the iron pieces were just junk,” had carted them off and sold them for $97.00 to a scrap metal dealer in the Bronx. By the time the components were discovered, the dealer had cut them up into “easily handled bits!” Nonplussed by this debacle, the landmarks commission hurriedly had the remaining pieces trucked up to a West Side warehouse where, once again, they were “securely” locked away. Caudill Rowlett & Scott were thus freed of the embarrassment of having to incorporate a foreign body into their pristine new fabric. But the *opera bouffe* tale of the Laing Stores was far from ended.

For, while this tale was unwinding on the Hudson, right across town on the East River another building project was starting up that was ultimately to become intimately involved in the cops-and-robbers Laing Stores plot. The South Street Seaport Museum had begun to wrestle with the knotty problem of designing a satisfactory infill structure for a vacant lot in its historic district (Figure 9). The architectural firm of Beyer Blinder Belle began working on the assignment, turning out a whole series of alternative designs. It had proved to be anything but a simple task. Aside from a straightforward program calling for a four-story commercial building, the museum’s own Preservation Committee insisted that, esthetically, the new building had to be congruent with its neighbors—a block of counting houses dating from the early 18th century. At the same time, the committee insisted that it did not want a Williamsburg-type replica of these old neighbors.

Easier said than done: The old buildings were unadorned functional expressions of the mercantile activities of the day. Any form simpler than the loadbearing brick walls, regularly capped by slated gable roofs, would be hard to imagine. After a number of tries, in which the design oscillated between a too-literal and a too-free echo of its brick-and-granite neighbors, an acceptable variant was arrived at (Figure 10). While this design offended no one, it did not much excite anyone either. And while the museum’s decision hung fire, a totally new possibility appeared.

Like most of the New York preservation community, the museum had been following the long-drawn-out battle to save the Laing Stores. Even before the theft, when it seemed as if both Manhattan College and its architects might finally reject them altogether, the museum’s Preservation Committee had discussed the possibility of offering the orphaned prefab a home. It was found that the reconstituted building would fit very neatly onto the museum’s vacant lot. The exterior angle of Fulton and Front streets was not identical with that of the original Washington Street site, but the discrepancy could be compensated for by modifying the rounded corner panel. The number of bays on the two facades would have to be reversed. But the modularity of the wall panels would not only make that simple, it would also dramatize the flexibility of the system of which Bogardus had boasted. As to the historical propriety of placing an iron building where once a brick one had stood, committee members pointed out that this part of Manhattan was the original habitat of the species. And the demolition of 18th-century brick houses to make way for cast-iron commercial buildings was the typical history of the area. Indeed, the museum’s historic district included two cast-iron facades of slightly later date.

Acting on this off-hand chance that it might fall heir to the Laing Stores (even before there was any reason to suppose that the legal owners might agree), the museum asked the architects to prepare designs for their reconstitution. The architects came up with an ingenious scheme: the old panels would be hung from a fully exposed modern steel armature of the same modular dimension (Figure 11). This scheme was favorably received by the museum’s preservation committee. But before negotiations on this proposition could even begin, the theft of the originals was discovered, taking all parties back to square one! Half in jest, the exasperated architects knocked out a quick sketch that showed the unstolen fragments mounted like a kind of shattered abstract sculpture on the steel armature.

Nothing daunted, the architects came up with an alternate solution. Since the thieves had left at least one piece of each of the component parts of Mr. Bogardus’s system, why not replicate
the stolen portions in either cast iron or recycled aluminum? The outer face of the patched curtain wall could be finished in typical Victorian fashion—i.e., in "stone colored" oil paint, spattered with sand while still wet. The inner surface would be painted in two colors so that, from inside the building, old and new could be readily distinguished from one another.

This proposal met with approval from the museum staff but raised a storm of controversy among the preservationists on the landmarks commission staff. They took the orthodox conservationist position that a clearly visible distinction should always be maintained between original and replicated tissue in any restoration of an old artifact. They further argued that, by extension, it would be "dishonest" to paint cast iron and aluminum so that they looked alike. Both points, in principle, were valid. But it so happens that, historically, both arguments were weak when it came to cast iron—a material that had never had an independent esthetic identity. The Victorians had always painted it—to look like wood or stone, nymphs or antelopes, St. Bernards or morning glory vines. In fact, it was the very chameleon-like versatility of cast iron that had so enraged Ruskin in his battle for truth and beauty in architecture.

The argument was further confounded by the fact that Bogardus had employed cast iron precisely because it could be readily and endlessly replicated. To demonstrate that very property, he had published the famous engraving showing that, even with half the curtain wall removed (by war? fire? earthquake?), the building would still stand up and could be easily repaired with replicated parts (Figure 12). These arguments for cast iron in general and Bogardus cast-iron systems in particular, seemed to offer sound ideological support for the Beyer Blinder Belle proposal. They might well have won the day and, in anticipation of such a victory, some of their staff went up to the warehouse to check on the number and condition of the parts in storage. And that was when it was discovered that, "secure" storage to the contrary notwithstanding, the remaining fragments of the Laing Stores had been stolen!

The proposed steel-and-glass armature, stripped bare of its historic cast-iron skin, was thus left standing "naked in the light of day." What was to be done? By this time, everyone involved in the project had become quite fond of the scheme. Thus, when the architects made the radical proposal to go ahead without the Bogardus skin, it was accepted by all concerned—the museum, the Community Planning Board, the Fine Arts Commission, and the landmarks commission. With comparatively little structural modification, that design has been built (Figures 1 and 13).

Thus, despite the torturous battles fought by many devoted partisans, the old Bogardus building was lost. And yet, in a very real sense, it survives as a kind of phantom abstraction of its former self. One cannot help feeling that the final design, if not the mad comedy of the design process, would have met with James Bogardus's approval.

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1 It was not until 1883-86 that William LeBaron Jenny completed the Home Insurance Company in Chicago, with its three-dimensional articulated steel skeleton. This was the true progenitor of the skyscraper, but though it had a complete prefabricated metal skeleton, it did not yet have a prefabricated glass-and-metal skin. In fact, it was not until a century after the Laing Stores that the first skyscraper combining the metal cage with the glass-and-metal skin was perfected in Pietro Belluschi's Equitable Savings Building in Portland, Oregon (1948).

2 Already in the 1920's, the significance of cast-iron architecture had caught the attention of such preeminent American historians as the late Turpin Bannister, who celebrated it in several pioneering papers in the Journal of the SAH and the Architectural Review. Meanwhile, the New York architect Knight Sturgis had served on the Laing Stores as being one of the few, if not indeed the last, of the surviving buildings by Bogardus.


4 Harvey Ellis was arrested on June 25, 1971, and charged with grand larceny. He pleaded guilty to criminal trespass charges in the New York City Criminal Court (P.G. 144.10) and was given a sentence of "time served"—i.e., 23 days (Case No. N24186).

5 The perpetrators of this second theft have never been apprehended. In view of the uproar over the first theft, the thieves would have known the potential value of the remaining fragments. They may even have been able to have sold them on the black market as authentic antiques.
Atlanta high

The High Museum of Art
Atlanta, Georgia
Richard Meier & Partners, Architects
Its white porcelain panels shimmering against the cloudless cerulean sky that graced its dedication, Atlanta's new High Museum was proclaimed by Mayor Andrew Young "a great jewel in the artistic crown of Atlanta"—a verdict echoed not only by the proud Atlantans present but by an ecstatic local press and an only slightly less enthusiastic cadre of critics nationwide. The High is undeniably a jewel and arguably the finest work to date in the distinguished canon of architect Richard Meier. But the excitement generated by the building as "a work of art in itself" tends to obscure what may be its more significant and lasting value: that Meier has here reconsidered to great effect the very concept of what a museum should be.

Recalling that the museum originated in grand residences or palaces where art was seen in natural light and a natural setting, and contrasting this with the recent wave of museums whose striving for flexibility and a controlled environment has too often led to an atmosphere of sterility and "placelessness," Meier has at the High combined the best of old and new. The High Museum is an introverted building (Meier's first) focused on a skylit atrium rimmed by galleries that, while light-controlled to conserve the objects displayed, are enriched by their communication with the luminous space of the atrium and the incidental light from side glazing and clerestories.

Three years ago when the High Museum was commissioned, a stroller along the pleasantly mixed streetscape of northern Peachtree some two miles from downtown Atlanta could scarcely have envisioned a less probable occupant for the gently sloping corner lot, carpeted in grass and furnished with stately old trees, tucked between the bland concrete bulk of the Atlanta Memorial Arts Center (then the home of the High collections) and the handsome red brick First Presbyterian Church.

That it is now hard to imagine any other presence on the site than the exhilarating crystalline assembly of the new museum is a tribute to Meier's understanding that the true context of the building went well beyond that of physical adjacencies to encompass also the city's sociopolitical and economic climate. In this view, for example, context is not defined merely by the building's location in a pedestrian-oriented neighborhood well-served by public transport, but by the fact that this now peaceful neighborhood lies squarely in the path of Atlanta's northward development. Most important, Meier correctly perceived the broadest context of the museum to be the hunger of a self-consciously progressive city for a validating symbol of urbanity and cultural maturity—as the fund-raising slogan for the building trumpeted, "a museum big enough for Atlanta." It is the genius of the High to transcend, without condescension, its immediate surround and to anticipate its future.

The beguiling complexity of the curved and faceted building volume derives from a deceptively simple four-quadrant parti. Here, though, one quadrant is disengaged from the main building and pivoted to create an independent but linked auditorium, and the "missing" element is replaced by a fan-shaped atrium whose arcing glass wall dominates the museum's principal facade as the atrium itself dominates the space within. The four-square plan is further inflected by a corner entry—"a crack," says Meier, "through which the world rushes in"—that diagonally bisects the building, throwing into tension its classical balance. Entry begins, however, not at the building but at the street, where a long ramp beckons the visitor through a near-triumphal progression to a piano-curved reception lobby whose enclosure explodes inward to the dramatic central space.

The atrium of the High, with its double ramp climbing to surrounding galleries, conspicuously invites comparison with the Guggenheim Museum, and indeed Meier refers to the new museum as a "commentary" on Wright's seminal design. It is, however, enlightened commentary in that the circulation and display functions are here clearly differentiated. By "straightening out" the Guggenheim scheme, Meier has circumvented its awkwardnesses—the lack of a right-angle datum for display of art, the impelling motion that discourages contemplative viewing—while preserving the inspired notion of a referent central space. Like the Guggenheim, the High offers tantalizing panoramas across the atrium and from exhibit to exhibit, but here the vistas are enlivened by framed outdoor views through the glazed atrium wall.

Glass walled and celled, the atrium is but the most evident manifestation of what Meier acknowledges to be "a constant preoccupation with light," which elsewhere is expressed through skylights and clerestories, ribbon glazing and unexpected perforations of the museum's outer wall. Nor is the emphasis on light a solely functional concern, but rather the key to the architectural conception. It was Meier's intent to present as the heart of Atlanta's cultural life a building both physically and metaphysically "radiant." It is. Margaret Gaskie
Despite the building's apparent intricacy of form, the High Museum is based in plan on the device, often used by architect Richard Meier, of square rotated within square, a geometry that here becomes one of three cubes plus the quarter cylinder of the four-story atrium around which the galleries revolve. The "absent" fourth cube, a 250-seat auditorium, is detached from the main mass and rotated 45 degrees. The basically classical plan is further elaborated by a corner entry ramp that pierces the building diagonally and by a piano-shaped foyer that plays its curves against the over-arching sweep of the atrium wall. Though firmly rooted on a granite base that reaches out to the sloping lawn and nods to the masonry of the neighboring church, the museum's multifaceted "superstructure"—clad in gleaming white porcelain-enamel panels almost translucent in their ever-changing reflections of sun and cloud, and lightened by expanses and ribbons and perforations of glass—lends the volume a buoyancy and vivacity wholly suited to its real and symbolic roles in Atlanta's cultural life.
In presenting the design for the High Museum to its board of directors, architect Meier emphasized that the building “is not intended to awe or overwhelm” but “to welcome the visitor and to evoke a desire to enter.” To this end, in addition to opening the transparent facade wide, he has made of the entry experience from the street a celebratory processional via a long sloping ramp, along a side wall, through a freestanding portico, past the revetments of the auditorium, and on to a curved porch and the reception lobby leading into the great skylit atrium. The welcoming ramp, a gesture to street and city, also anticipates the quarter-circular interior ramp that is the museum’s principal formal and circulatory element.
The rotated cube of the auditorium, an intimate space designed for lectures, small performances, films, and meetings, is separated from the main building mass so that it can be operated independently of the museum although the two are linked at the second floor level. Main-level access is through a partially sheltered plaza (photo opposite) between the convex wall of the atrium and the correspondingly curved inner facade of the auditorium, which thus becomes a reinforcing element in the entry sequence. Clerestories in the tall appended volume defining the stage area introduce natural light.

For all its present air of inevitability, the High Museum underwent a number of subtle refinements between presentation of the original scheme (axonometric above) and construction in its final form: A fussily eccentric volume over the stage area of the auditorium was straightened, a bus stop pavilion omitted, the entry portico simplified, and the exterior stair semi-enclosed by an L-shaped wall. Most important, the orthogonal configuration first proposed for the atrium skylight was transformed to a more appropriate spoked support system radiating from the apex of the quadrant.
Although the reference to the Guggenheim Museum is obvious in its focus on a monumental central space and curved-ramp circulation, Meier's scheme for the High Museum overcomes the original's shortcomings as a place for the display and viewing of art by making a clear distinction between path (the ramp) and destination (the galleries). The singular qualities of the Guggenheim—the experience of viewing art from long range as well as close up and from constantly changing vantages, and the pervasive presence of the atrium as referent—are recaptured in the High, however, and enhanced by the opening of the atrium wall to permit outdoor views and admit natural light. The sense of event that accompanies upward movement through the building is further heightened by the enticement of yet-unseen art glimpsed around the only-partial screening of the gallery walls overlooking the atrium.
A major impetus behind the construction of the new home for the High Museum was the frustration of city-proud Atlantans with the museum's inability in its former cramped quarters to mount "blockbuster" travelling shows—a deficiency answered by tripling the museum's size to provide ample exhibition space for permanent collections, only 20 per cent of which could formerly be displayed at any one time, as well as up to 15,000 square feet of space for special exhibits. In addition to the atrium court, the main level houses administrative functions, with educational spaces on the floor below. Second-level galleries are organized for applied art; third-level galleries for painting, prints, and photographs. The top floor is shared by loan exhibits and 20th-century art.
The High Museum's fine collection of decorative art objects is largely housed in Meier's thoroughly contemporary version of the traditional museum with its planned progression through discrete rooms. Here, though, the independent spaces are merely indicated, by lowered or latticed ceilings and pierced or absent walls that afford multiple vistas and cross references through the large corner galleries and their smaller connecting links and always turn back to the inner space of the great hall. Meticulously detailed cases and cabinets display pieces of art against rich backdrops—sometimes reflective, more often textured in luxuriant fabrics whose vivid or subtle hues bring welcome splashes of color to the pristine whiteness of their surround. Surprising—even shocking—islands of color are also found in the third-floor painting galleries, which include a room walled in vibrant magenta (photo below right).
The High Museum of Art
Atlanta, Georgia

Owner:
The High Museum of Art and the Atlanta Arts Alliance, Inc.

Architects:
Richard Meier & Partners—Richard Meier and Gerald Gurland, principals-in-charge;
Philip Babb, Susan Borrman, Michael Palladino, associates-in-charge; Stanley Allen, Andrew Buchbaum, Steven Forman, Hans Li, George Kevin, Richard Morris, Vincent Polsinelli, Patricia Supinski, Greta Weil, project team

Engineers:
Severud-Perrone-Szegedy-Sturm (structural); John L. Alteiri (mechanical/electrical)

Consultants:
Office of P. DeBellis (landscape); Claude Engle & Associates and George Sexton Associates (lighting); Whitehouse & Katz (graphics)

General contractor:
Beers Construction Company

Exhibition contractor:
Rathe Productions Inc.

More flexibly designed than the lower-floor galleries, the 20th-century art galleries on the museum’s top level can be combined with the generous loan exhibition area as necessary to accommodate even the largest traveling shows. At the inner perimeter of the display space, light from the glass-roofed atrium is supplemented by the glow from seven pyramidal skylights that can be shaded to diffuse and control natural light in accord with the requirements of the art works displayed. Over-all illumination levels in all the galleries are maintained by a combination of recessed and track spot fixtures.
Closed and forlorn for nearly a decade, the Natchez Eola Hotel once again glimmers with a glow of Southern comfort. Part restoration, part adaptive reuse, the revitalized scheme makes the most of the quietly eclectic elegance of its 1927 design by Weiss, Dreyfous and Seiferth, and exuberantly paraphrases its leitmotifs of arches and fanlights—often enlarged, fragmented or lightly distorted in a fresh postmodernist manner—to underscore its design virtues and, oddly, to add a recall of even earlier images and memories of "Ole Natchez." Perhaps this is a real and valid precinct for postmodern allusion.

After its original opening, the hotel soon gained renown as the center of regional social activity, and as the most modern and tallest (as it still is) building among the unassuming two- and three-story structures in the historic downtown area. Tourism and the famous Natchez Spring Pilgrimage to the local antebellum houses and gardens kept it prosperous through the Depression. But by 1974, its fading, "outmoded" charms and competition from fresher chain motels along the highways brought about loss of favor and its doors were closed.

Nowadays—what with preservation fervor, nostalgia, and the re-establishment of Natchez as a major focus of Mississippi River steamboat and bus tours—a quality hotel with personality seemed viable, indeed needed. Associated architects Perez Associates and Urban Innovations Group (Charles Moore and Ronald Pilson) have brought back the Eola’s distinction with a verve, and with charms it never had.

A three-story corner building, around which the brick hotel was built, was included in the renovation for extra "social," mainly restaurant, space and (by demolishing part) to create a new canopied entrance through a courtyard set in a white-walled niche. The Main Street facades of both buildings (drawing bottom left, opposite) were retained under Federal tax incentive guidelines for historic preservation. Pleasant, if somewhat strait-laced, balconies for river views were added on the court and back facades, as were necessary fire-stair towers.

The most visually dramatic change, however, is the transformation of its seventh-floor roof deck and adjoining "Top of the Town" lounge into a new mansard-roof-enclosed floor of special suites and a revamped lounge, all punctuated by bold, arched dormers and other fanciful fenestration to create a new skyline interest that—for all its innovation—seems to have always been there. Herbert L. Smith, Jr.
The Natchez Eola Hotel Restoration
Natchez, Mississippi
Perez Associates, Architects
Urban Innovations Group, Associated Architects
To help re-establish the hotel’s role as a center for social activities, the dining areas have been greatly expanded. In addition to the original dining room (now called Cafe La Salle), a new casual garden restaurant and bar (Julips) overlooking the courtyard has been created in the added property (photos below and right). High ceilings, tile floors, bentwood chairs, ceiling fans and banks of fanlighted windows all contribute to a general Southern ambience. Even Peacock Alley is now used as a “Dining Alle,” with tables set in its windowed and mirrored niches (photo below left). And high under the mansard roof, a many-windowed lounge (Moonflower) overlooks the surrounds (photo bottom).
The Natchez Eola Hotel
Natchez, Mississippi

Owner:
The Natchez Hotel
Company

Original architects (1927):
Weiss, Dreyfous and Seiferth

Restoration and renovation
architects:
Perez Associates, Architects—R.
Allen Eskew, project architect;
Stephen Perkins, project
coordinator and designer; Anthony
G. Styant-Browne, Robert
Schroeder, Edward Moya, project
designers

Associate architects:
Urban Innovations Group—Charles
W. Moore, Ronald C. Filson

Engineers:
Warren G. Moses Engineers
(mechnical/electrical); Morphy
Makefsky and Masson (structural)

Interior designer:
Deborah Lloyd Forest, ASID

Lighting consultant:
Richard Peters

General contractor:
Sherman Construction Company
The Eola Hotel's renovation preserves the most opulent of its 1927 details, often pointed up by soft new colors—archways, registration desk, elevators, columns, marble trim, chandeliers. The original street-to-lobby entrance has been changed to fan-lighted windows flanking a new tea and drink dais reached by circular steps through one of the arches, and featuring piano music from a mirrored and latticed pergola (photo right). Now, one enters through a zigzag canopied way overlooking the courtyard carved from the added building (photo below) and into a newly created vestibule (bottom photos). The original, secondary, Main Street entrance has been retained through "Peacock Alley" for ambling through in one's fine feathers. A new motor entrance has been added.
at the back. Thus, in the revived Eola Hotel, the strangely contradictory formal architecture which pervaded most "Roaring Twenties" hotel design has been tempered with an aura of a more relaxed and leisurely era of sugar and cotton planters of the Delta. The evocation is achieved more by suggestion than by any real attempt at historical accuracy. Though Natchez, along with New Orleans and Saint Louis, was an early French 18th-century settlement along the river highway, its periods of greatest prosperity (and sallies into "timely" architecture) were those of the pre-Civil War 19th-century, World War I's end to the Crash and, perhaps, now. In its new postmodern finery, the Eola Hotel alludes to them all.
Daylighting cuts energy use to 19,600 Btu per sq ft per year

“If we could design a building for you that would use half as much energy as the one you’re planning to build, would you be interested?”

Three years ago, that was exactly the question that the San Francisco office of Leo A. Daly posed to Lockheed Missiles and Space Company. Though 25 per cent of the working drawings for an in-house-designed five-story 600,000 sq ft office building had been completed, Lockheed said, “Yes. How?”

The answer was daylighting, a subject that had particularly interested Daly architects and engineers for years. Their analyses showed 40 to 50 per cent of the total energy consumed in office buildings to be directly attributable to electric lighting and to removing the heat that lights generate. By designing for maximum use of daylighting, and integrating an efficient hvac system into the design, the architects/engineers argued that the substantial energy savings they spoke of could be realized.

In addition to savings from the reduction in energy use, they postulated that a daylit environment could increase workers’ comfort and productivity. The Lockheed executives liked Daly’s “bottom-line” orientation and awarded them a contract to develop a preliminary design.

From the experience of daylighting schools in the 1950s, the designers knew that by maximizing north and south exposures and floor-to-ceiling heights they could, on seasonal average, get between 25 and 30 footcandles of daylight (enough to effect most of the proposed energy savings) roughly 30 ft into the building.

The plan, therefore, was elongated along the east-west axis.

By locating core elements on the east and west ends of the building and placing a daylighting atrium in the middle of the five-story plan, the designers lessened the width that would have to be daylit by more than half and nearly doubled the amount of light entering the building.

Fifteen-ft floor-to-ceiling heights were selected as an optimum to aid daylight penetration into the middle of the 90-ft-wide sections created by the atrium. Tests with scale models showed that by sloping the ceilings to face the two main daylight sources, the perimeter and the atrium (see drawings on page 142), a 41 per cent increase in illumination could be achieved over a design using flat, 12-ft ceilings.

Daylight is reduced at perimeters—
to moderate brightness throughout the space

To moderate the negative effect of solar radiation at the perimeters, light shelves and solar glass were used. The light shelves (again see drawings) are suspended 7 ft 6 in. above the floor and project 13 ft into the space from the window walls. Clear glass above the light shelves permits all available daylight to enter the building. As it does, the reflective white ceilings and the top surface of the light shelves diffuse and soften it.

Brightness, glare and heat gain beneath the light shelves are reduced with tinted glass. For the south side of the building a reflective coated glass is used, reducing transmitted light to 17 per cent and providing a shading coefficient of 0.44. On the north side, tinted glass transmits 41 per cent of the daylight, with a shading coefficient of 0.69. This zone of reduced illuminance creates a more even, comfortable brightness throughout the space.

On the southern exterior of the building (photo opposite) the light shelves project 4 ft 10 in. to shade the glass beneath from high summer sun.

Scale models helped the architects/engineers to select and refine the light shelf’s shape, positioning and finish. The models also provided the data used to create lighting profile curves across the 90-ft sections of the space (see Figure 1 on page 142). A composite of these profiles which was generated for different times of day and year, and included both clear and overcast conditions, indicated that for this design daylight would displace more than 70 per cent of the electricity required to maintain the 30 footcandles level established as a minimum ambient light level.

Supplementary electric light (0.9 watts per sq ft) is doled out to F40 cool white lamps via high-frequency dimming ballasts controlled by photocells and a microcomputer. Task lighting is still necessary in the building and it was incorporated into the open-plan work stations. The designers felt that a motion-sensing system to turn task lights off when workstations were unattended would be a cost-effective part of the design, and this option was left to Lockheed to be exercised when a commercially available system is perfected.

Hvac is carefully designed—and carefully integrated with the daylighting

To minimize the impact of the solar heat gain and the energy necessary to neutralize it, the designers developed some ingenious ways of integrating it with the rest of the daylighting design. Knowing from the geometry of their building that most of the heat would collect in the spaces above the light shelves, they made these areas part of the return air path (again see sections, page 142) and temperatures here are allowed to exceed the 75 F design temperature by 20 F. The sloped ceilings were utilized as a natural extension of the return air system: they collect and conduct hot air to the top of the light shelves. A similar stratification of hot air occurs in the atrium, which is exhausted by fans at the top of the atrium.

The building, located in the mild climate of Sunnyvale, California, enables its variable-air-volume fan systems to use outside air for makeup during 97 per cent of normal working hours.

The performance of the air distribution, lighting and acoustical systems was tested and refined with a prototype of a section of the building constructed at the Owens-Corning Fiberglas technical center in Granville, Ohio. The prototype aided in the development of performance-type specifications which became the basis for construction bidding documents.

Energy-use projections for the Lockheed building are 19,600 Btu/sq ft/yr—45 per cent of what California’s codes allow—for a projected 10-year savings of $3.5 million compared to a conventionally lighted building.

Projections were based on the DOE II computer program, which the designers used at many stages of the design along with the scale models to test basic assumptions and optimize the design.

In discussing the completed building with its somewhat unconventional design features, Lee Windheim, a Daly principal, points out unabashedly that some of the techniques were used 20 years ago in the designs of California public schools. Indeed, the basic plan of the building was used 50 years before that in Frank Lloyd Wright’s Larkin Building.

The Lockheed building resurrects some of those tried and true daylighting principles and combines them skillfully with advanced energy-efficient lighting and hvac designs, demonstrating what Windheim thinks most owners and architects either forgot or never knew: Daylight can be the primary source of light in large multistory office buildings, not just at perimeters, but across their entire floor area.

James B. Gardner
With expansive north- and south-facing facades, outboard fins and variously tinted glass, this 600,000 sq ft building in Sunnyvale, California harnesses and distributes daylight for 3,000 Lockheed workers. Stair towers, mechanical spaces and other core services placed on east and west ends block morning and evening sun and open the center of the plan for a huge daylighting atrium. The 300-ft-long atrium (see plan) works as a huge light well, dividing floors into halves that are lit bilaterally. To boost the levels of daylight reaching the center of these “halves,” reduce contrast across the floor area, and overcome glare and heat gain, a number of design devices were necessary. In southern exposures above the atrium, for instance, diffusing glass scatters direct sun rays creating softer, more even illumination. Tinted and clear glass in the curtain walls work in tandem with light shelves to fashion raw daylight to suit the sensitivities of workers’ eyes. Solar cool glass, which transmits 17 per cent, is used on the south and solar gray, which transmits 41 per cent, is used on the north.
The light shelves protrude 13 ft into the space along north and south perimeters and are positioned 7 ft 6 in. above the floor. On the south facade, the light shelves jut outward almost 5 ft from the building to shade glass beneath, while their angled top surface (Figure 2) directs additional light into the spaces. The tinted glass beneath the light shelves not only creates more even illumination across the space but, by its design, improves speech privacy for persons working beneath the light shelves. The glass panes are offset from the vertical to reflect sound to an absorbent acoustical tile installed on the bottom of the light shelves, or to the carpeted floor. Daylight illumination is depicted by the shaded areas on the fourth floor of the large drawing below. Scale models showed that 85 per cent of daylight reaching interiors from the north and south perimeters comes from above the light shelves. A lighting profile curve (Figure 1) was one of dozens the architects and engineers produced—for a variety of conditions—from tests using 1/8- and 3/8-in. scale models to predict daylight contribution. From this, both hvac and electric lighting systems were developed. The electric lighting design consists of...
eight zones across the 90-ft sections (from atrium to either north or south facade). Each section (see third floor in large drawing) is controlled by a photocell located in the ceiling. In seven of the zones, luminaires face the 85 per cent reflective ceiling and light is mixed with the daylight before reaching work surfaces. The eighth zone consists of two luminaires installed in the bottom of the light shelves which face work surfaces. The dimming range of the system is 100 to 10 per cent and power density at 100 per cent is 0.92 watts per sq ft. The hvac system utilizes the chimney effect created in the atrium and above the light shelves to exhaust hot air. Variable-air-volume fan systems supply air through linear diffusers located in the ceilings. An imaginary horizontal line (see fifth floor of drawing) separates the return air "plenum" from the comfort zone. An air diffusion performance index, or ADPI, greater than or equal to 80 was achieved. (ADPI measures the quality of the air conditioning within a space. The number is derived by analyzing a series of measurements of air temperatures and velocities. These determine the "draft" temperature—similar to a wind-chill factor. The percentage of draft temperature that meets an established comfort criteria established by ASHRAE is the ADPI. A number of 80 or above is considered acceptable.)

Building 157
Sunnyvale, California
Owner:
Lockheed Missiles and Space Company, Incorporated—Arthur L. Hubbard, vice president—operations
Architect/engineer:
Leo A. Daly
Consultants:
Richard Hamme (acoustics);
Richard M. Patton (fire protection);
Owens-Corning Fiberglas Corporation (prototype development contractor); Interior Landscape Design (interior landscaping)
Product literature

Play equipment
An 88-page catalog features 136 predesigned timber play areas, along with 150 modular components for the fabrication of individual systems. The literature includes an explanation of MaxTreat, a preservative for timber elements. Columbia Cascade Timber Co., Portland, Ore. Circle 400 on reader service card.

Blinds
A 4-page color brochure describes and illustrates a line of narrow-slat mini-blinds. Blinds are made of 1-in.-wide slats of heat-tempered aluminum alloy finished in baked acrylic colors. Photos show blinds in 18 available colors. Ohline Corp., Gardena, Calif. Circle 401 on reader service card.

Paneling
The Profilewood paneling system is described and illustrated in an 8-page color brochure. Photos show installations and 5 available wood species. Details illustrate a number of installation methods. Specifications and technical data are listed. Ostermann & Scheiwe, U.S.A., Inc., Tacoma, Wash. Circle 402 on reader service card.

Exterior finishes
The Finisher collection of textured acrylic finishes is featured in a 4-page color brochure. Samples of the 21 available colors and 3 available textures are shown. Suitable substrates and substrate preparation are described. Dryvit System, Inc., West Warwick, R.I. Circle 403 on reader service card.

Acoustical ceilings
Premier ceiling tiles and panels are described and illustrated in a 6-page color foldout brochure. Tables list acoustical properties, fire-ratings and specifications; photographs show sample installations. Conwed Corp., St. Paul, Minn. Circle 404 on reader service card.

Ceramic tile trim
Glazed, scored, and quarry tile trim as well as ceramic mosaic trim are featured in a 20-page color brochure. Diagrams with dimensions show various pieces, and renderings of installations illustrate where pieces may be used. Installation photographs are included. American Olean Tile Co., Lansdale, Pa. Circle 405 on reader service card.

Armchairs
A 6-page color foldout brochure illustrates upholstery colors and hardwood frame options of the 080 Armchair Group. A specification page shows options and lists over-all dimensions, as well as seat and arm heights. Tuhy Furniture Corp., Chatfield, Minn. Circle 406 on reader service card.

Stair and floor coverings
Vinyl and rubber stair and floor coverings, including the Disc-o-tile safety series, are illustrated and described in a 12-page color brochure. Diagrams of trends with dimensions and available colors are shown, and specifications are listed. The R.C. Musson Rubber Co., Akron, Ohio. Circle 407 on reader service card.

Industrial doors
A 6-page color foldout brochure features a line of industrial-grade swing doors. Pneumatic, electric, and manual opener styles are described, along with actuator systems that include push-button, lanyard, induction floor loop, photoelectric, and radio-controlled types. Kelley Company, Milwaukee, Wis. Circle 408 on reader service card.

Architectural ornament
A collection of cast plaster ornamentation for interior and exterior applications is described in a 24-page color catalog. Featured products include medallions, brackets, friezes, cornices, and columns. Photographs illustrate each item and depict sample installations. Dovetail, Inc., Lowell, Mass. Circle 409 on reader service card.

Receptacles
Special-purpose duplex electrical receptacles are described in a 4-page brochure. Isolated ground, hospital-grade, illuminated, corrosion-resistant, tamper-proof, and ground fault circuit interrupter models are covered. Technical data and specifications are included in the literature. Hubbell, Inc., Bridgeport, Conn. Circle 410 on reader service card.

Replacement windows
Photos and line drawings illustrate an 8-page brochure on replacement windows for any type of contract installation. Specifications are included for double-hung, single-hung and horizontal slider series. Louisiana-Pacific Commercial Products, Barberton, Ohio. Circle 411 on reader service card.
Exterior insulation
Circle 142 on reader service card

Handicapped accessibility
A 16-page brochure discusses codes and regulations for accessibility to public buildings and describes the manufacturer's line of door control products for the handicapped. Featured items include the Auto-Equalizer automatic door operator and the Sentronic safety closer/holder. LCN Closers, Princeton, Ill.
Circle 414 on reader service card

Hospital carpeting
Bioguard is a 100 per cent nylon carpet treated with an antimicrobial agent for use in hospitals, nursing homes, and other health-care facilities. A 6-page color brochure describes how the carpet suppresses many bacteria, fungi, and other microorganisms. Lees Carpets, King of Prussia, Pa.
Circle 415 on reader service card

Adhesives
A 2-page data sheet features Scotch-Grip 2226, a water-dispersed, nonflammable adhesive for bonding headboard, plastics, wood, rubber, plywood, wallboard, canvas, plaster, and cardboard. A chart also describes the manufacturer's other contact cements. 3M, St. Paul, Minn.
Circle 416 on reader service card

Electrical systems manual
This trade association has published a 16-page manual aimed at improving productivity. The literature divides its suggestions into the four building phases of design, bid development, contractor prequalification and construction. National Electrical Contractors Assn., Bethesda, Md.
Circle 417 on reader service card

Lighting control
A 6-page color brochure features the ZoneMate system of lighting management for a variety of building types. The series includes multiple-zone dimming with HID sources and automatic energy control with photosensors that adjust illumination levels to compensate for daylight. Wide-Lite Corp., San Marcos, Texas.
Circle 418 on reader service card

Chimney liners
A 4-page color brochure describes and illustrates a 2-step poured chimney liner system said to prevent acid, moisture, and creosote build-up in flues. The literature also contains data on the manufacturer's line of caps, tops, clean-out doors, and appliance thimbles. Ahrens, Sioux Falls, S.D.
Circle 419 on reader service card

Commercial doors
A 28-page catalog provides information on a series of commercial sectional doors, electric operators, and controls. In addition to product descriptions, the literature includes sections on framing details, tracks, chain hoists, and weatherseals. Overhead Door Corp., Dallas, Texas.
Circle 420 on reader service card

Glass
Numerous installation photographs illustrate the manufacturer's 29 coated glass products, as well as clear, green, gray, and bronze float glass. Included is general information on uniform load strength, thermal stresses, and glazing guidelines. Ford Glass Division, Detroit, Mich.
Circle 421 on reader service card

Furniture
Omaha is a new line of wood furniture that features half-round pedestals combined with rectangular work surfaces and storage areas. An 8-page color brochure illustrates the series, which is available in 13 wood veneer finishes and 14 high-gloss polyester colors. Habitat International, New York City.
Circle 422 on reader service card

Polyurethanes
A 10-page color brochure outlines the performance characteristics and color options of Endura-Shield aliphatic polyurethane coatings. A specification chart matches products to various substrate materials. Photos illustrate sample applications. Tnemec Co., Kansas City, Mo.
Circle 423 on reader service card

More literature on page 155
Since these Victorian townhouses were constructed in the late 1800's, windows have undergone a lot of changes. Not all of them for the better. Many manufacturers have substituted snap-in plastic grids for authentic divided lites. And many of the ornate, old styles have been abandoned for simpler, more easily mass produced windows.

IN SOME WAYS, MARVIN WINDOWS ARE 100 YEARS BEHIND THE TIMES.

Marvin is the only major brand that can offer you exact, yet affordable, reproductions of an old building's original windows, so its historical value can be preserved.

That's why Marvin Windows were chosen for this renovation project at George Washington University in Washington, D.C. Marvin offers over 2,000
standard shapes and sizes. And
we’re adding to that number
all of the time.

We not only offer authentic
divided lites, we offer extra wide
jambs, round tops and other
special shapes.

We even offer replacement
sash for old double-hung
windows. They let you keep the
original frame and trim to
help reduce renovation costs.

WE STILL MAKE 'EM LIKE
WE USED TO.

The frame, sash, and casing are
made of fine-grained Ponderosa
pine, still the best insulator of all
the window materials. And the
most beautiful.

All exterior wood is deep-
treated to protect against rot
and decay. The hardware and
weatherstripping are the best
available. And the components
are carefully assembled by hand.

OUR PRICES ARE ALSO
BEHIND THE TIMES.

In an age of standardization and
cookie cutter, mass production
techniques, Marvin Windows are

virtually in a class by themselves.
But their prices aren't.

Despite all of their advantages,
Marvin Windows cost no more
than other well-known brands.

You get made-to-order
windows at ready-made prices.

OUR DELIVERIES ARE NEVER
BEHIND TIMES.

Even though our windows are
made to order, we can deliver
most shapes and sizes within
two weeks of the time we
receive your order.

So, if you’re operating on a
tight schedule, it should be com-
forting to know that we can, too.

For more information, consult
Sweet's General Bldg. File No.
8.16 MAR. Or for a free catalog,
write Marvin Windows, Warroad,
MN 56763 or call 1-800-346-
5128 toll-free. In Minnesota, call
1-800-552-1167.

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Sixty years at V’Soske

"We want to take the medium as far as it will go," notes Roger McDonald, director of design at V’Soske, "and we see our work as part of the architecture, not just an accessory." Those two premises sum up the basic philosophy of a venerable rug and carpet maker that was founded in 1924 when Polish emigre Stanislav V’Soske perfected a way to hand-tuft wool yarns with a special needle that could produce various pile heights and densities. Since that time experimentation in both hand- and machine-tufting techniques has resulted in the company's current range of textural variations, including loop, full or partial shear, combinations of looped and sheared pile, overtufting, carving, embossing, and incising.

Throughout its 60-year history V’Soske has collaborated with some of this country's leading architects and interior designers, especially in the realm of postwar office design. Installations at SOM's Connecticut General Insurance Company headquarters in 1957 (1) and at Eero Saarinen's CBS Building in 1965—both carried out in conjunction with the Knoll Planning Unit—remain enduring examples of classic corporate modernism. The firm also worked with Warren Platner at the Ford Foundation in 1967 to produce a brushed gold-beige carpet set into oak parquet floors—a texture and technique that Platner later specified in such projects as the Mortgage Guaranty Investment Corporation Building in 1973 (2). More recently, when Bartholomew Voorsanger and Edward Mills were designing a new board room for New York University, they developed a carpet color scheme that V’Soske has incorporated into its Lyle machine-tufted texture (3).

V’Soske’s relationship with architects has not been limited to specific interior jobs; on the contrary, the company is now associated with several noted young architects—Tod Williams, Roger Ferri, Lee Mindel, Peter Shelton, and Henry Smith Miller, to name a few—who are designing rugs and carpets for a variety of commercial, residential, and institutional applications. Particularly significant are recent commissions to Michael Graves and Charles Gwathmey. Graves's Rug #1 exhibits colors and forms that intentionally lead the eye from the floor to the surrounding architecture (4).
Wash in gton
O.C.'s Crystal City
residential and commercial complex was designed by Weihe, Black, Jeffries, Strassman & Dove of Washington D.C., and is managed by Charles E. Smith Building Corporation.

How Laminated Glass handles noisy neighbors at Crystal City.

To keep noisy neighbors like cars, trains—and 150 jet takeoffs from nearby Washington D.C. National Airport—from disturbing Crystal City tenants, laminated glass with a Saflex® polyvinyl butyral interlayer by Monsanto was the ideal, cost-efficient solution. The Saflex interlayer is only 0.030-inch thick—but it is the key sound-reducing component, thanks to its acoustical damping characteristics. In fact, laminated glass alone stops noise more effectively than monolithic or air-spaced glass. And using laminated glass in an insulated, air-spaced configuration, further improves acoustical and thermal performance.

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Library storage systems
A 24-page guide to planning library space with high-density mobile stacking systems covers floor loading, security, preservation, and budgets. Schematics show how stacking systems can save up to 50 per cent of floor space for other library functions. Spacesaver Corp., Fort Atkinson, Wis.
Circle 424 on reader service card

Office lighting
A 16-page color booklet describes the Lite-A-Part and TK systems of task and ambient lighting for use with office workstations and video display terminals. Photographs and drawings show sample installations. Elliptipar, Inc., West Haven, Conn.
Circle 427 on reader service card

Office chairs
The Encore series of office seating comprises five chair styles available with a variety of posture control mechanisms. A 10-page color brochure describes the seating and includes data on base, upholstery, and finish options. Westinghouse, Grand Rapids, Mich.
Circle 428 on reader service card

Masonry preservers
Conservare is a line of two stone strengtheners and two water repellents recently introduced in the United States. The stone strengtheners are designed for surface application to deteriorating older masonry by spray, brush, or roller without changing the building's appearance. The water repellents are similarly applied and are said to protect against moisture penetration and acid rain. A 6-page color foldout brochure describes the products and illustrates sample applications. ProSoCo, Inc., Kansas City, Kansas.
Circle 425 on reader service card

Thermal windows and doors
Installation photographs and section drawings illustrate an 8-page color brochure on a line of insulated double-hung, tilting, sliding, and fixed aluminum windows and patio doors for residential use. The literature also outlines the safety advantages of Shatterproof View-Safe tempered glass. TRACO, Warrendale, Pa.
Circle 426 on reader service card

Shingle panels
A line of 8-ft cedar shingle and shake panels for residential and commercial use is featured in a 12-page color brochure. Photographs depict sample installations, and a technical section includes specifications and a panel selection chart. Shakertown Corp., Winlock, Wash.
Circle 429 on reader service card

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Keyboard file cabinet
The KB 6000 series of file cabinets is designed to accommodate computer terminals and features a sliding hideaway keyboard shelf that is adjustable for heights of 26½ in. to 29 in. The keyboard also has a forward-backward adjustment of 2½ in., in addition to the capacity for a 10-deg tilt. Contemporary and traditional styles are available. Jofco, Inc., Jasper, Ind.
Circle 301 on reader service card

Blinds
Four small prints from Boussac, the French fabric house, are offered as laminate finishes on this manufacturer’s aluminum mini-slat and vertical vane blinds. The prints are available in 6 colors and may be specified for either the convex or concave side of the blind. Levolor Lorentzen, Lyndhurst, N.J.
Circle 304 on reader service card

Flat files
Three lines of flat files are available in unfinished particle board, oak plywood (shown above), and finished particle board painted in one of 6 high-gloss colors. A variety of metal, nylon, and wood hardware options are offered for the units. Pacific Filing Concept, Atascadero, Calif.
Circle 305 on reader service card

Deflection calculator
A slide rule deflection calculator is said to provide complete materials specifications for roofing systems that incorporate truss tee subpurlins with gypsum, lightweight concrete, or structural wood fiber roof tiles. Keystone Steel & Wire Co., Peoria, Ill.
Circle 306 on reader service card
Continued on page 167

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Skylight
The Skydome is an acrylic sealed double-dome skylight. It features a vinyl curb with fused corners, a condensation gutter and an elastomeric gasket. The vinyl curb, called Permatherm, is said to be superior to aluminum for its thermal properties. Wasco Products, Inc., Sanford, Maine.
Circle 302 on reader service card

Play centers
Playscapes recreational units are two-level children’s environments designed for installation in medical clinics, hospitals, day care centers, doctors’ offices, stores, and institutions. The basic center provides 72 sq ft of play space within a 6-ft by 6-ft floor area, while a deluxe model offers 96 sq ft within a 6-ft by 8-ft area. The units are constructed of plastic laminated particle board and are equipped with interior carpeting and upper windows of Lexan sheets. Options include low-voltage lighting and a variety of play equipment. Playscapes, Madison, Wis.

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Continued on page 167

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For nearly a hundred years, the Statue of Liberty has been America's most powerful symbol of freedom and hope. Today the corrosive action of almost a century of weather and salt air has eaten away at the iron framework; etched holes in the copper exterior.

On Ellis Island, where the ancestors of nearly half of all Americans first stepped onto American soil, the Immigration Center is now a hollow ruin.

Inspiring plans have been developed to restore the Statue and to create on Ellis Island a permanent museum celebrating the ethnic diversity of this country of immigrants. But unless restoration is begun now, these two landmarks in our nation's heritage could be closed at the very time America is celebrating their hundredth anniversaries. The 230 million dollars needed to carry out the work is needed now.

All of the money must come from private donations; the federal government is not raising the funds. This is consistent with the Statue's origins. The French people paid for its creation themselves. And America's businesses spearheaded the public contributions that were needed for its construction and for the pedestal.

The torch of liberty is everyone's to cherish. Could we hold up our heads as Americans if we allowed the time to come when she can no longer hold up hers?

Opportunities for Your Company.

You are invited to learn more about the advantages of corporate sponsorship during the nationwide promotions surrounding the restoration project. Write on your letterhead to: The Statue of Liberty-Ellis Island Foundation, Inc., 101 Park Ave, N.Y., N.Y.10178.

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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 96-101
Schermerhorn Row Block
by Jan Hirsh Pokorny

Pages 100-101—Masonry: Kane Granite

Pages 102-103
The Museum Block
by Beyer Blinder Belle


Pages 104-107
Fulton Market
by Benjamin Thompson and Associates

Page 104—Granite: Bussiere Granite


Pages 108-109
Mill Street Plaza
by Hagman Yaw Architects, Ltd.


Pages 110-111
The Columbia Union Market
by Lee Weintraub


Pages 112-113
The Mall at 163rd Street by Charles Kobert Associates and Wolfberg/Alvarez/Taracido & Associates


Pages 118-131
The High Museum of Art
by Richard Meier & Partners


Page 130—(top) Seating: Carpenter Unlimited, Inc. (wood frame), Citron Upholstery Co. (upholstery).

Page 130—(bottom) Seating: Carpenter Unlimited, Inc.
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Paul B. Beatty, Publisher

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SUBJECT: A $20 MILLION COMMITMENT. We're proud to announce that American Olean has embarked on an important mission—the construction of a totally new, $20 million ceramic mosaics plant in Jackson, Tennessee.

The plant will incorporate the most modern manufacturing technology available anywhere. And it will usher in a whole new era in ceramic mosaic tile production.

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The Jackson plant will also provide American Olean with the ability to create an entirely new, exciting and innovative line of ceramic mosaics—new colors, new textures and new sizes—to provide even more versatility to our ceramic mosaics line and to stimulate the imagination of tile specifiers, installers and users.

In the months ahead, we plan to share with you our progress on American Olean's new ceramic mosaics plant at Jackson. This project underscores our deep commitment to and confidence in the ceramic tile industry and its future.

AMERICAN OLEAN

American Olean Tile Company, Executive Offices, 3079 Cannon Avenue, Lansdale, PA 19446-0271

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Interior Design. Faculty position, rank and salary commensurate with qualifications and experience, available Fall 1984. M.F.A. or doctorate required. Professional affiliations and competency in institutional and residential design desired. Send letter of application, vitae, three letters of recommendation, transcripts, portfolio and self-addressed, stamped envelope for return of portfolio, postmarked no later than January 31, 1984, to Dr. Betty D. Copeland, Chairman, Search Committee, Department of Art, Texas Woman's University, P.O. Box 22995, T.W.U. Station, Denton, Texas 76204. Equal Opportunity, Active Equal Opportunity Employer.

UNCC's architectural program, which is dedicated to addressing major architectural issues, seeks faculty committed to working together to provide innovative, holistic and rigorous architectural education. Desire persons to teach in first/second, third/fourth, and fifth year studios, and conduct a lecture or seminar courses in an area such as: fundamental visual design, architectural structures or ECS, site design, environmental behavioral design, interior design/planning, design theory or construction materials. Prefer persons with M. Arch. or equivalent including prior teaching and/ or practice experience. Long term tenure track and one-two year visiting faculty positions are available, including position of Distinctiveness, Visiting Professor. Salary and rank commensurate with qualifications. Forward letter describing teaching and design thoughts with vita to Dean, Charles C. Hight, College of Architecture, UNC-Charlotte, Charlotte, N.C. 28223. Affirmative Action/Equal Opportunity Employer. Deadline for receipt of applications is March 1, 1984.

Iowa State University Faculty Positions in Architecture are available starting in mid August 1984. Several positions are anticipated being available in the following areas: Architectural Design, Behavioral Science, Building Science (construction systems), Computer Aided Design, Graphics, and Management. Full time teaching responsibilities include a studio and lecture course or two lecture courses each semester. All faculty are expected to further develop their professional expertise and to participate in research and/or creative activity plus committee service. These positions (subject to mutual agreement) may be full or part time, tenure track, adjunct, or temporary. Salary and rank will be commensurate with qualifications. The deadline for applications is February 15, 1984. Please send a letter of application, resume and the names of three references to Ken Carpenter, Chairman, Department of Architecture, Iowa State University, Ames, Iowa 50011. Iowa State Univ. is an Equal Opportunity-Affirmative Action Employer.

INFO WANTED

Author wishes to contact former students of The University of Texas School of Architecture 1950-1960 who had as instructors Bernard Hoesli, Colin Rowe, John Hejduk, Robert Slutzky, Lee Hirsche, John Shaw, Lee Hodgden, or Werner Seligman. Please reply to Alex Caragone, 235 East Commerce, San Antonio, TX 78205.

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The competition is open to all Registered Architects or teams headed by Registered Architects. Seven finalists of the first stage will be given an $8,000 participatory fee to further develop their entries in the second stage.

To register and receive a registration kit, send a non-refundable check for $85.00 U.S. funds made payable to the City of Newport News by February 15, 1984 and send to:

Kenneth W. Paolini, Competition Adviser
City of Newport News, Department of Development
2400 Washington Ave., Newport News, Virginia 23607

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The Design Challenge
The State of Minnesota, the Capitol Area Architectural and Planning Board, and the Minnesota Historical Society announce a national competition for the design of the new Minnesota State History Center. To be located in the Minnesota State Capitol Area, this project presents a major design challenge. The winning design must incorporate the existing 1917 Historical Society Building with new facilities on the adjacent site immediately to the east. The project includes renovation of 175,000 GSF and 350,000 GSF of new construction. The new History Center must enhance the architectural character and quality of the Capitol Area.

The Competition
The requirements for the submission of credentials will be sent to all registrants. Upon evaluation of all credentials submitted, the Competition Designer Selection Panel will select six firms or teams as finalists, who will be invited to prepare design submissions. The competition jury will select the winning design from the submissions of the finalists.

Compensation and Awards
Each finalist will be provided $12,500 to prepare its submission; $5,000 at inception and $7,500 upon acceptance of the submission. The winner of the competition will be awarded a prize of $50,000. Upon funding of the project by the Minnesota State Legislature, the winner will be designated the Architect for the project and the prize money would be considered an advance payment on the commission to be awarded.

Designer Selection Panel
The Competition Designer Selection Panel will be chaired by the Professional Advisor to the Competition and will consist of the following members: William Sanders, A.S.L.A., Valerius Michaelson, F.A.I.A., Advisors to the Capitol Area Architectural and Planning Board; and the following State Officers or their designees: the Chair of the State Designer Selection Board, the Chair of the Capitol Area Architectural and Planning Board, the President and the Director of the Minnesota Historical Society, and the Commissioner of Administration.

Eligibility
Initial registration is open to any firm or team which includes personnel with NCARB certification or architectural registration in Minnesota, and with principal offices in the United States. Eligibility is limited to firms that have a record of gross receipts for architectural services of at least $300,000 per year for each of the last three years. For teams, this requirement must be met by the lead firm. Inquiries regarding eligibility should be submitted by letter to the Professional Advisor at the address provided for registration.

The Jury
Members of the Competition Jury will be:
ROBERT L. GEDDES, F.A.I.A. Geddes Brecher Qualls Cunningham: Architects. Kenan Professor, School of Architecture, Princeton University
DONLYN LYNDON, F.A.I.A. Lyndon/Buchanan Associates: Professor, School of Architecture, University of California, Berkeley
ELIZABETH CLOSE, F.A.I.A. Close Associates Minneapolis, Minnesota
HIDEO SASAKI, A.S.L.A. Landscape Architect
DR. JAMES MARSTON FITCH Architectural Historian
Professor Emeritus Columbia University New York, New York
PRESIDENT, Minnesota Historical Society
CHAIR, Capitol Area Architectural and Planning Board
Member of the SENATE, Minnesota State Legislature
Member of the HOUSE, Minnesota State Legislature

Professional Advisor
JOHN G. NAUMA, F.A.I.A. Griswold and Rauma, Architects Minneapolis, Minnesota

Competition Schedule
February 17, 1984 — Registration Due
March 16, 1984 — Submission Due
April 2, 1984 — Finalist Selection
April 9, 1984 — Finalist Site Visit and Orientation
May 16, 1984 — Question Period Closes
July 16, 1984 — Design Submissions Due
July 25, 1984 — Jury Award and Recommendation

Registration
Registration will be by letter, accompanied by a check in the amount of $50 made payable to The Minnesota History Center Competition. Registrations should be addressed to:
Minnesota History Center Competition
Capitol Area Architectural and Planning Board
Room 122, Capitol Building
St. Paul, Minnesota 55155

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Grant Jones, ASLA
Nathaniel Owings, FAIA
Paul Rudolph, FAIA
Hideo Sasaki, FASLA

ELIGIBILITY: Architects, Engineers, Landscape Architects, Planners
REGISTRATION DEADLINE: February 15, 1984
REGISTRATION FEE: $45.00
SUBMISSION DEADLINE: April 20, 1984

To receive competition program, send self addressed 12" x 16" envelope to:

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For information about Hartco Impregnated Solid Oak Parquet, see Sweet's 9.22/Hat. Call Sweet's Buyline toll-free 800-447-1982.

Or contact Tibbals Flooring Company, Oneida, Tennessee 37841. 615-569-8526.

Blue Ridge Mall, Kansas City, MO
Project Manager: Louis A. Di Bitonto
Project Architect: Dennis Varble, AIA
Fullerton, Carey Architects, Inc.
Flooring Contractor: Beeler & Associates
Floor: Hartco Impregnated Solid Oak Parquet, Cambridge color.
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Pulsar.
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