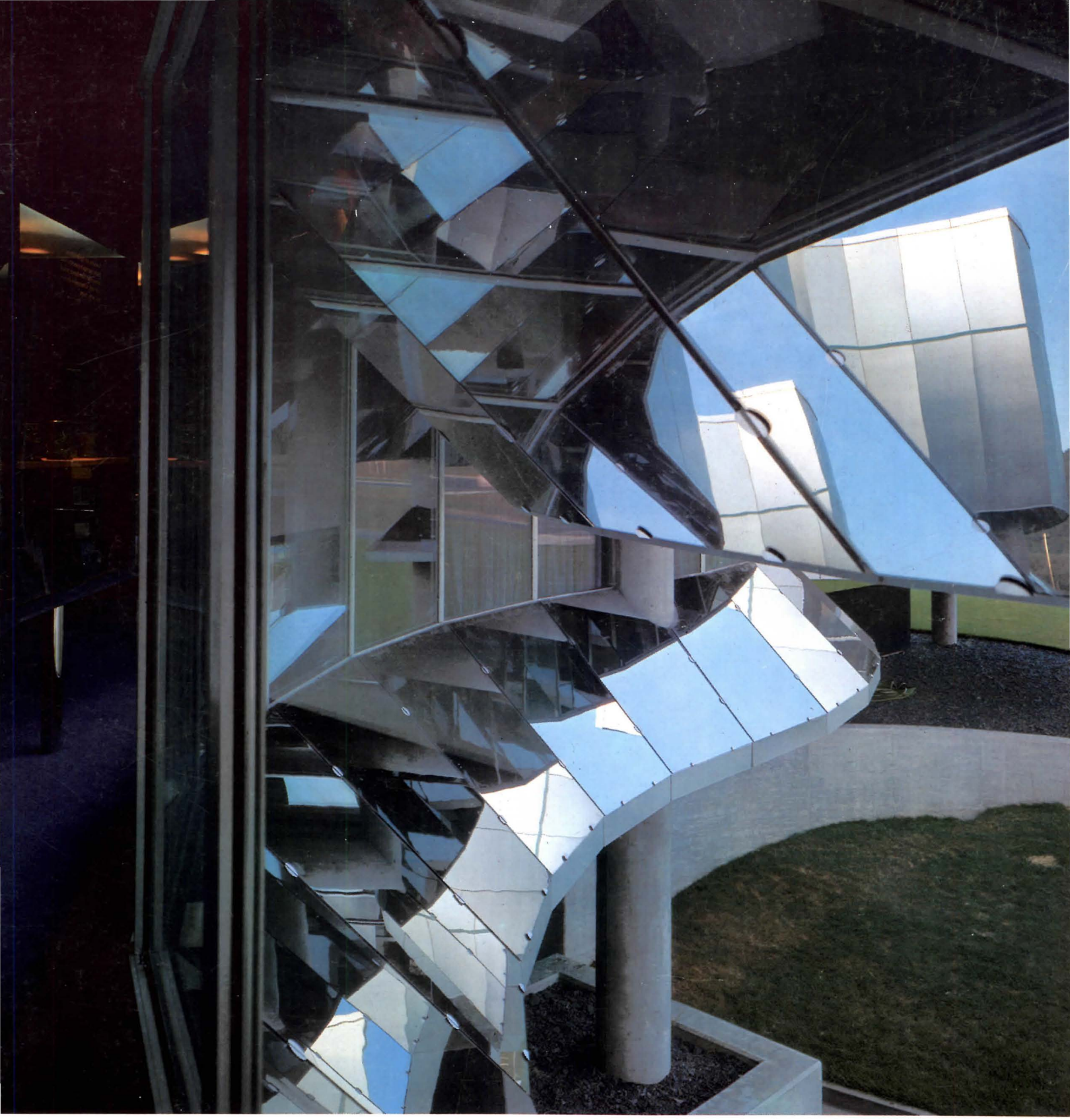

CORNING MUSEUM OF GLASS IN CORNING, NEW YORK, BY GUNNAR BIRKERTS

A CAMPUS-LIKE MANAGEMENT TRAINING CENTER FOR IBM

NEW LANDMARK FOR M.I.T. BY DAVIS, BRODY & ASSOCIATES

TELETRACK: A UNIQUE THEATER OF RACING BY HERBERT S. NEWMAN ASSOCIATES

BUILDING TYPES STUDY: URBAN HOUSING

FULL CONTENTS ON PAGES 10 AND 11

ARCHITECTURAL RECORD

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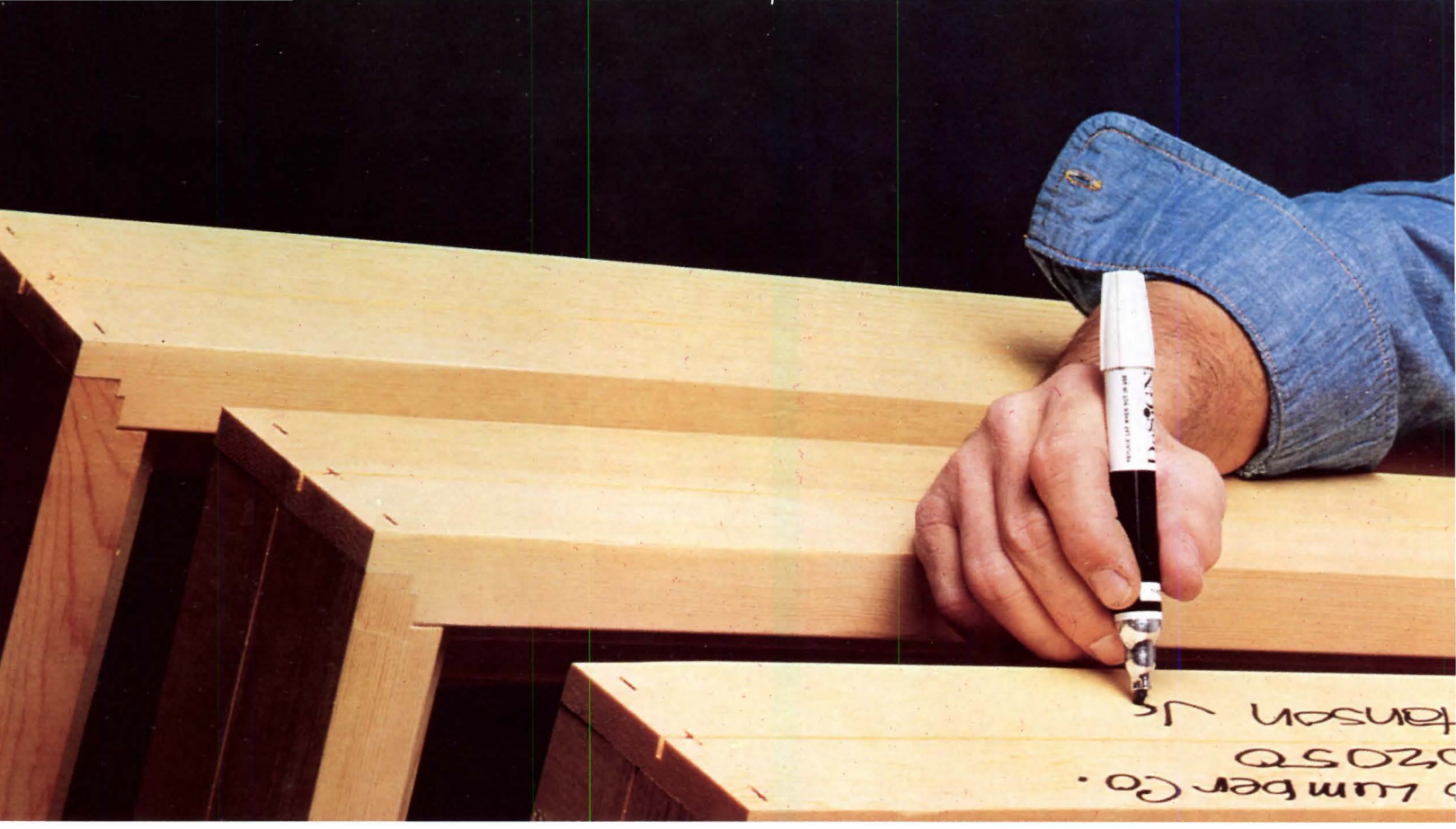

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And because our windows are made to order, they're easy to install without fooling around with a lot of shims, extenders and the like.

STEEL: the first choice for Seattle's newest office tower.

The new 25-story Fourth & Blanchard Building in the Denny Regrade district is the most ambitious project conceived by Seattle office-space developer Martin Selig —a name synonymous with first-class planning design.

It was decided that steel design would best provide the freedom to incorporate all the proposed architectural features. Several designs were presented, the final choice being a parallelogram floor plan with angled upper stories. The steel design also helped keep the weight of the structure to a minimum. This was important for the design in seismic Zone 3. A glass curtain wall was dictated by the form of the building which demanded a clean, smooth, flush, monolithic surface—in no way competing with the upper lines.

Maximum usable space

The $33-million building has two interconnected towers with 45-degree angled roofs. The roofs—a striking design feature —offer prime office space with spectacular views. A minimum of interior columns helps maximize use of the 531,000 sq. ft. of floor space, including the 3-level garage.

Conservation of energy was a key consideration, and an electric-hydronic heat pump system connected to a main circulating water pipe provides heating and cooling which is both energy efficient and economical to install. In addition, the roofs were designed to accommodate solar panels in the future.

Steel speeds construction

The new building was erected on a narrow site—just half-a-block—and over 2,650 tons of A-36 and A-572 grade 50 steels were supplied by U.S. Steel. The fabricated steel was trucked from Portland at night and erected during the day using a single truck crane having a 280 ft. tower topped by a 170 ft. boom. This eliminated traffic congestion in a busy downtown area with a minimum of storage space. And the structural framing was completed one month ahead of schedule!

This handsome structure, incorporating the latest in building systems technology, is one more example of the design flexibility and practical economy of using structural steel.

To find out more about this building, and for information regarding the many applications for structural steel, contact a USS Construction Representative through your nearest U.S. Steel Sales Office. Or write for the USS Building Report (ADUSS 27-7642-01) to P.O. Box 86 (C-1208), Pittsburgh, PA 15230.

USS TRADEMARK **United States Steel**

Circle 2 on inquiry card

Letters to the editor

I share your concern for the declining situation with respect to architectural internship and licensing as presented in your October editorial ("Internship and licensing: Let's think about it from the student's point of view," October 1980, page 13). Since you indicated you would welcome comments from any interested reader, may I offer the following observations?

In 1954 I wrote the four-hour closed-book Mechanics of Materials portion of the California State Board Examination, and the four-hour open book Structural Engineering portion. After reading and grading 300 papers, I was appalled at the lack of knowledge of construction materials and the limited understanding of structural analysis.

I will concede that lateral-force legislation in California may require a more thorough testing of an applicant's knowledge of structural design than other states with fewer earthquake faults. I will also concede that my undergraduate curriculum at the University of California (except for a short material-testing course in the engineering lab) was deficient in the nitty gritty of architectural practice. An additional year of graduate courses in construction documents, estimating and specifications helped some, but a four-year internship in an architect's office should always be required before an intern is eligible to take a licensing examination.

While I hold an NCARB Senior Certificate and licenses in several states, I still feel that the NCARB examination is inadequate, especially in view of the increasing proclivity toward lawsuits and the high cost of professional liability insurance, plus the resultant damage to the reputation of the architectural profession when publicity accompanies litigation, even on occasions when the architect is exonerated.

The status of our profession in California is being attacked by an uninformed Governor who has proposed the elimination of the Board of Architectural Examiners and the repeal of the Architectural Practice Act. Governor Brown naively maintains that the consumer is sufficiently sophisticated to continue using qualified architects, and he is being encouraged in pursuing this ill-advised proposal by an over-eager Consumers Services Agency. Additional inroads into the profession in California are these so-called *building designers,* who are licensed by the board, who were grandfathered in large numbers, and who offer architectural services to a gullible public. Even the majority of the current Board of Architectural Examiners are not registered architects, so enforcement of architectural licensing is almost ignored.

The California Council, American Institute of Architects, is vigorously opposing the Governor's proposal, and has wisely adopted a "Registration Assessment" to support its steering committee on registration issues.

To conclude with a less negative comment, may I recommend the Berkeley YMCA-sponsored Father and Son dinner, where high school seniors interested in a field requiring further study are dinner guests of a man in that particular occupation, who acts as a hypothetical father and answers the student's questions and describes the potential for a career in that area?

Many members of our Fresno AIA Chapter also speak to high school and junior college classes, and often we invite student groups to visit our offices, where we can show them the various activities in the practice of architecture.

Walter E. Wagner, FAIA
Walter Wagner—Martin Temple, Inc.
Architecture-Enginering-Planning
Fresno, California

Your comment that "the client deserves the very best that the architect can deliver" ["One more time: Why are there still so few good houses?," August 1980, page 13] stirred me to write this letter.

In Santa Fe, Richard Ansaldi has tested the premise "why can't I use all the things I have found delightful?" His completed design borrows such devices as high French doors to a small court from New Orleans, attic spaces from New England, and other feelings, all woven into an "adobe" custom home. The owners will never see the "architect's single major idea." But they will wake to a new morning each day.

Please, leave room for the gentle nuance that doesn't dominate or dull-en, but is as varied as a summer day.

Cabell Childress, AIA
Childress Livaudais Architects
Denver

Calendar

FEBRUARY

3 Exhibition, "Regional Architecture," including original drawings and photographs focusing on regionalism in historic and contemporary architecture; Cooper-Hewitt Museum, 2 E. 91st St., New York City.

18-20 Renovating Buildings: Seminar on Rehabilitation and Remodeling for Extended Life or New Life; at the Center for Continuing Education, the University of Chicago. Contact: Mrs. Elsie Newton, Program Consultant, Center for Continuing Education, 1307 E. 60th St., Chicago, Ill. 60637.

MARCH

Through 31 "Holabird & Roche and Holabird & Root: The First Two Generations," architectural exhibition at the Chicago Historical Society, Clark St. at North Ave., Chicago. Contact: Diane Ciral at 312/642-4600.

1-3 The 1981 Annual Construction Industry National Legislative Conference, at the Hyatt Regency Hotel, Washington, D. C. Contact: Construction Industry Legislative Conference, 5530 Wisconsin Ave., Suite 750, Washington, D. C. 20015.

3 through May Oakland Museum Council on Architecture call for entries for the exhibition "Solar Age Architecture," at the Museum's Natural Sciences Gallery. Contact: North California Chapter/American Institute of Architects at 415/788-2644.

10 through May 24 Exhibition, "Innovative Furniture," including pieces by Thonet, Belter, Eames, Josef Hoffmann and Frank Lloyd Wright; Cooper-Hewitt Museum, 2 E. 91st St., New York City.

22-25 The 68th annual meeting of the Association of Collegiate Schools of Architecture, with the theme "Teaching Architecture"; at Asilomar, Monterey Peninsula, Calif. Contact: ACSA, 1735 New York Ave., N.W., Washington, D.C. 20006.

23 through April 1 "Batimat," the 1st North American Construction Show, at the Olympic Stadium, Montreal, Que. Contact: Intercommunica, 2050, rue Mansfield, Montreal, Que. H3A 1Y9.

26-27 The ninth annual Federal Programs Conference on engineering/architectural concerns, sponsored by the Committee on Federal Procurement of Architectural/Engineering Services; held in Orlando, Fla. Contact: COFPAES Federal Programs Conference, c/o National Society of Professional Engineers, 2029 K St., N.W., Washington, D. C. 20006 (202/463-2340).

APRIL

28-30 Lighting World International, exposition and conference, sponsored by the International Association of Lighting Designers and the Northeast Regional Section of the Illuminating Engineering Society; at the New York Statler Hotel. Contact: Robert A. Weissman, National Expositions Co., Inc., 14 W. 40th St., New York, N.Y. 10018 (212/391-9111).

ARCHITECTURAL RECORD (Combined with AMERICAN ARCHITECT, ARCHITECTURE and WESTERN ARCHITECT AND ENGINEER) (USPS 132-650)
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Interior and Architectural Design: Hunter/Miller + Associates, Alexandria, Virginia
Consulting Engineer: Syska & Hennessy, Inc., Washington DC
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Now is the time to enlist more of our soon-to-be-professionals into the IDP—and to start calling them "intern architects"

Back in 1974, on this page, I reported on (and cheered for!) a program proposed by the NCARB to be called IDP—the Intern Development Program. And a year later, I cheered the fact that "NCARB and AIA, in an unprecedented cooperative effort, have resolved 1) to enlist the full resources of the profession to enrich the training experience, 2) to assure that every intern architect will be the beneficiary of a major program designed to . . . produce the best qualified candidate ever to enter architecture."

In the years since, NCARB has worked hard to establish the IDP program, which (wildly oversimplified) gives each young person a professional sponsor (an architect in the firm where he or she works), professional advisor (another local architect) and establishes formal and specific guidelines for the minimum work exposure in each of 14 training areas before the candidate may sit for the professional exam—for example, 130 days (or value units as they are called) in construction documents, and 30 days of experience in specifications and materials research.

The "complete" IDP program is now mandatory in six states, and according to NCARB is under consideration by registration boards in a number of other states. But it needs to be said that so far the program as developed by NCARB—with the general approval but sporadic support of AIA—has scarcely caught on like wildfire. But . . .

Two things have happened recently that should speed the development of IDP

- NCARB, the originator and so far the biggest supporter of the IDP concept, has just hired a full-time Director of Internship Programs. He is Robert A. Rosenfeld, who comes to his new job with a great deal of experience in IDP as AIA's assistant director of Professional Development Programs. His new job will involve working closely with AIA, the student chapters, NAAB and ACSA, as well as the 54 registration boards, "in clarifying IDP training requirements, and assisting the schools of architecture and AIA components with the implementation of IDP on a local and statewide basis."

Three cheers to the NCARB for this new commitment.

- The AIA has just conducted an evaluation of IDP. The AIA Task Force, with some (but not fundamental) criticism of the NCARB approach, strongly encouraged AIA's continued—indeed, strengthened—participation in IDP. And the AIA board has just endorsed the Task Force recommendations, reportedly "with enthusiasm."

Here are the key recommendations of the AIA Task Force that should reinforce the IDP program:

- "While recognizing the merits of a record-keeping service, the Task Force does not feel that initiating a [NCARB] Council Record should be required to participate in IDP. . . . The IDP should be open to all students and intern architects and should not be based upon any kind of official enrollment process—e.g. initiation of a Council Record, becoming an AIA Associate Member, etc . . .
- "The AIA, with the advice of the NCARB and the active support of ACSA and ASC/AIA, should develop basic informational documents . . . to serve as orientation information and be easily understood as a 'navigational tool' by intern architects. . . ."
- In its strongest stand (and one which will no doubt require considerable debate between NCARB and AIA), the Task Force recommends that "AIA urge NCARB to eliminate the specific Value Unit internship requirements for certification." Instead, the Task Force recommends that exposure gained during internship be allocated on a broader, more flexible and perhaps less demanding schedule:

"1. At least 18 months in [NCARB's] Category A: Design and Construction Documents." This is the category including construction documents, construction drafting, and the other essentials of working drawings and specification.

"2. At least four months in Category B, Construction Administration, and

"3. At least two months in Category C, Office Management.

"The remaining portion of the intern's durational training requirements [that is, three years] should be in any of the four IDP Training Categories, representing the acquisition of broad range of professional skills."

- As an alternative to the Council Record, the Task Force also recommended that "AIA develop a flexible instrument to assist the intern architects in recording experience required in the recommended IDP training areas in time units which 1) can be easily recorded, and 2) can correspond to a firm's own timekeeping system."

There were other recommendations, but those seem the most important—except that the AIA "should reinstate an Institute vice president as a member of the IDP Coordinating Committee [with NCARB]."

And three cheers to AIA for this considerable commitment.

What's needed now is to get more young people into IDP

It wouldn't take much. As suggested in last month's article on students, surely it is not too much for the schools to inform—via a series of lectures—every student nearing graduation of the requirements he or she will have to meet to become eligible to take the professional examinations for licensing; and to urge them to participate in the IDP program as the most reasonable course for developing (and demonstrating) the required experience. And surely it is not too much for someone in each firm to act as sponsor to the young people in the office and make sure they are properly on track to registration.

One final point: surely it would help to formally adopt the title "intern architect"

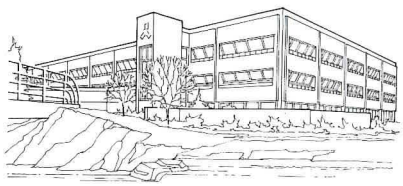
It seems simply ridiculous that literally thousands of young people actively on track towards registration have no clear and descriptive title. One of NCARB's recommendations on forming IDP back in 1974 was that "Appropriate nomenclature, designating with dignity the status of the trainee, should be established." It sure should. Graduate architect? That leaves the considerable number of associates who are working towards registration without having graduated out in the cold. And it suggests, at least, that the intern is in fact an architect, which is not the case. Architect-in-training? A student is that. Name them by their work function—designer, or draftsman? That has no clarity for a person engaged in, by definition, a period of work in which function varies all the time. Architect? That is, purely and simple, illegal under the laws of each and every state. Call them architects, and then call architects "registered architects?" A confusion in terms; and, again, illegal.

Simple answer: Intern architect. That is, given its common use in another distinguished profession, surely "appropriate nomenclature, designating with dignity the status of the trainee." It is clear, and would be clearly understood not just within the profession but by the public. It is already accepted by NCARB, and AIA uses the term all of the time in all of its literature. Why don't we simply all use it? Starting now.

—Walter F. Wagner, Jr.

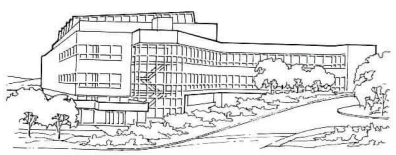
1980

OWENS-CORNING ENERGY CONSERVATION AWARD WINNERS.

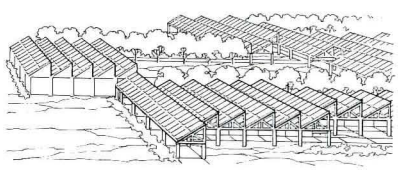


OFFICE

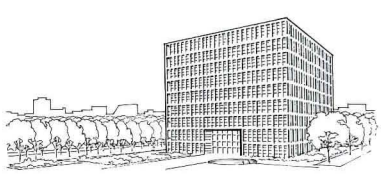
WAREHOUSE



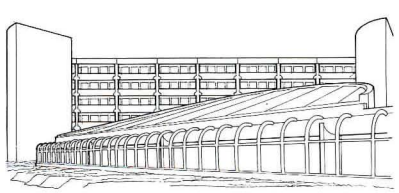
LABORATORY



PRISON



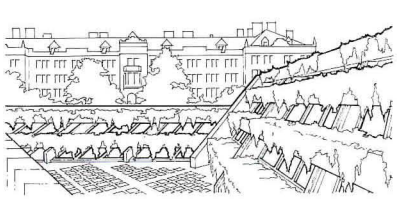
HEADQUARTERS



OFFICE

• *The ninth annual Owens-Corning Energy Conservation Awards honor those who have proved, once again, that there are always new, ingenious and elegant ways to conserve energy.*

• *1980 Judges:* C. William Brubaker, FAIA, Perkins & Will, Chicago, Ill., Ezra D. Ehrenkrantz, FAIA, The Ehrenkrantz Group, P.C., N.Y., N.Y., Masao Kinoshita, AIA, ASLA, AIP, Ohio State Univ., Columbus, Oh. William J. Coad, PE, Charles J.R. McClure & Assoc., Inc., St. Louis, Mo., John K. Holton, AIA, PE, Office of Bldgs. Mgmt. GSA-PBS, Washington, D.C., Arthur E. Wheeler, PE, Henry Adams, Inc., Baltimore, Md.



COLLEGE

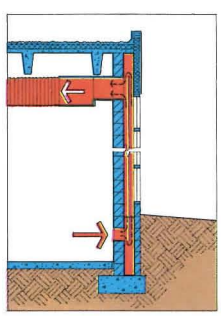
percent. And these a real numbers—not guesses. They used a v efficient light source: high pressure sodium lighting./ A 200,000 gallon storage tank saves the excess heat generated during the day to warm the building at night."

• *Exterior: Note the angled windows with stainless-steel window sills that reflect diffused light into the building and eliminate the need for artificial lighting within 20 ft. of the perimeter.*

WILLOW CREEK OFFICE BLDG./IDAHO FALLS, IDAHO

• *Architect, Engineers and Owner:*
Max Flatow, FAIA, Pres., Flatow Moore Bryan and Assoc., Frank Bridgers, PE, Prin., Bridgers & Paxton, Consulting Engineers, Albuquerque, N.M. Ronald W. Kiehn, Gen. Mgr., EG&G, Idaho, Inc., Idaho Falls, Id., Joseph Lopez, PE, Prin., Uhl & Lopez Engineers, Inc., Albuquerque, N.M.

• *Judges' comments:*
"In moving to a new building twice the size of their old one, they reduced their actual out-of-pocket energy costs by 21.4



• *Cross section of the modified Trombe wall: Sunlight passing throu windowed wall heats stainless-steel collector plate. Ductwork above brings heated air back into building.*

SPORT OBERMEYER/ASPEN, COLORADO

• *Architects and Engineer:*
Tim Hagman, Prin., Copland Hagman Yaw Ltd, Aspen, Col., Bob Clarke, Prin., Solar Pathways Assoc., Glenwood Springs, Col., Larry Yaw, Prin., Copland Hagman Yaw Ltd, Aspen, Col.

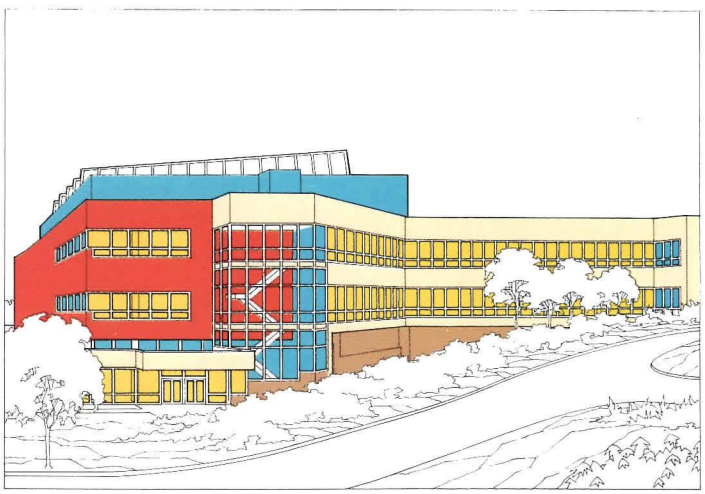
• *Judges' comments:*
"What is attractive here is that they took a simple building—the walls are concret blocks—and integrat ed a solar air-heating system: a Trombe wa It is worked in very well with the overall appearance of the building./ It's basical an inexpensive solution. A working, economical use of solar energy for ware house heating."

SMITHKLINE PHARMACEUTICAL RESEARCH LAB/UPPER MERION, PENNSYLVANIA

• *Engineer and Architects:* Russell M. Keeler, PE, Dir. Mech. Engineering, Louis deMoll, FAIA, Prin. and John B. Di Ilio, RA, Proj. Designer, Ballinger, Philadelphia, Penna.

• *Judges' comments:* "This is a laboratory with very demanding environmental criteria and intensive energy use. The designers have tried very hard—and succeeded—in recovering much of this energy./ They've used special air-conditioning concepts, a high temperature heat pump and active solar systems. They even have a system for reclaiming the heat from the water they use to wash down the cages. Many designers would have avoided this issue and wasted the heat. But they didn't here."

• *Architect's model: Note how the glazed corridors light both the hallways and the interior offices. This saves energy by reducing the outside fenestration.*



FEDERAL CORRECTIONAL INST./BASTROP, TEXAS

• *Architects and Engineer:* Franklin D. Lawyer, FAIA, Sr. VP, Paul Kennon, FAIA, Pres., E. Bruce Appling, PE, Sr. VP, Caudill Rowlett Scott, Houston, Tex.

• *Judges' comments:* "This building was designed with a full sense that an active solar system was going to be a major part of the design—integrated into the project rather than being added on./ The solar collectors come out higher than the building next to them. They are used for shading both walkways and buildings./ Even the pipes and ducts are handled in a straightforward way that enhances the design of the building and the atmosphere within it."

• *View of a dining area.*

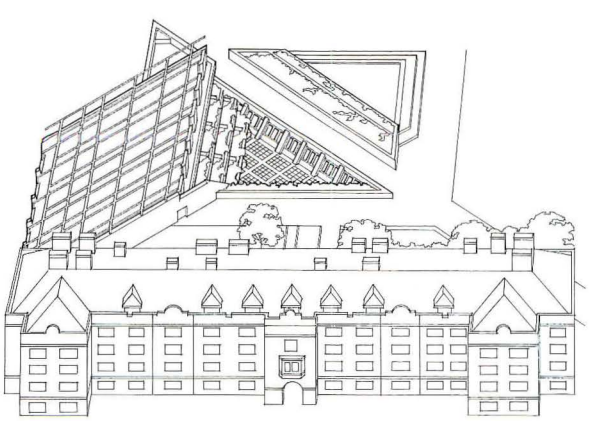
• *Model (at right) shows the double wall of windows. The site (above) overlooks Niagara Falls. The building (still under construction) can be seen above the Falls.*

• *Owner, Engineer and Architect:* Marvin W. Voelker, VP, Hooker Niagara Office Corp., Niagara Falls, N.Y., Alan M. H. Sloan, VP, Engineering and Mark R. Mendell, AIA, Sr. VP, Cannon Design Inc., Grand Island, N.Y.

• *Judges' comments:* "We have here a highly innovative, highly technological solution./ Essentially, it's two walls of glass four feet apart. In between there are adjustable louvers and moving air, so when the sun moves around the building, goes up and down, or goes behind the clouds, the building adjusts to the changing climate./ The double wall is key to keeping unwanted heat out and letting wanted heat and light in.

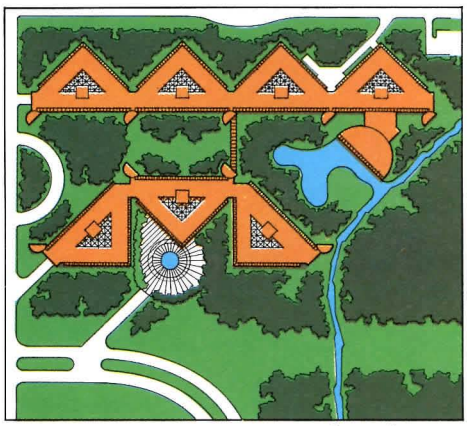
"One of the things that's very attractive about this building is that in a time when we often find ourselves going to smaller window areas and less glass to save energy, this building has a total glass envelope and is still energy-efficient./It means one does not have to sacrifice a view, daylight, the interaction between inside and outside space for energy efficiency.

"One good idea, from an engineering standpoint, is that they've decentralized their domestic hot-water heating system. We've found that if you have a central hot-water heating system in an office building, your efficiency is about five percent. You keep the whole system hot 8,760 hours a year and all you do is occasionally use a little hot water in a washroom. Instead of putting in a central system, they use small hot-water heaters all around the building.



• *An energy-efficient building in a crowded area: The right side of Williamson Hall is set into an earth berm. The active solar collector system is at left. A cross-campus walkway forms part of the roof.*

SHELL OIL CO. OFFICES/HOUSTON, TEXAS



• *Owner, Architect and Engineer:* Edmund V. Pearson, General Mgr., Shell Oil Co., James B. Gatton, AIA, Sr. VP and John Kettleman, PE, VP, Caudill Rowlett Scott, Houston, Tex.

• *Judges' comments:* "The Shell project is extremely interesting in that it was designed with the basic building structure itself acting as a major element in the day lighting system./The mechanical ductwork enclosures were located on the perimeter wall so they would act as a reflecting element to bounce light back into the rooms./The inside corridors are lit by the office lighting and by daylight bounced off the mechanical enclosure ducts. The result is very efficient lighting —only 1.3 watts per sq. ft. installed, with annual operations projected at less than 1 watt per sq. ft."

• *Triangles and atriums. The company needed a large number of small offices. The solution: Closely grouped triangular buildings with central atriums for an efficient combination of light and shade.*

WILLIAMSON HALL/UNIVERSITY OF MINNESOTA

• *Architect, Owner and Engineer:* David J. Bennett, AIA, Prin., Myers and Bennett Architects/BRW, Clinton N. Hewitt, Asst. VP Physical Planning, Univ. of Minnesota, Max Oftedal, PE, Prin., Oftedal, Locke, Broadston & Assoc., Inc., Minneapolis, Minn.

• *Judges' comments:* "This is a building that is largely underground. It is worked very nicely into an old part of the campus, a crowded area./ The architects recognized what we call the soil temperature. If you go down so far, the earth has a constant temperature. Utilizing that as a base, they organized the design concept to use that temperature for more efficient heating./ This is really tied into the urban environment—into the many different walkways that cut across the campus./ If you look at it from the side, it's something like a terrace walking into the ground./ They used natural plants in a very imaginative way for external shading—the leaves providing added shade in summer, the bare branches letting in more light in winter."

THE RIGHT GLASS CAN HIDE, HEAT, DRAMATIZE

The right glass.

More than ever, PPG glass is an indispensable tool for architects who wed energy efficiency to aesthetic power.

And one strength these three diverse buildings share—besides recognition of their design excellence by the AIA—is the choice of PPG glass to bring the architects' visions to life.

Look, for example, at the imaginative use of PPG's high-efficiency reflective Solarban® 550-8 (2) glass in the handsome, five-stepped international headquarters of Gelco Corporation outside Minneapolis.

Combined with an ingenious heat recovery system, the insulating power of Solarban glass helps minimize heat loss—and gain— even in the extremes of Minnesota's climate. It's also the right glass to help the building meld with and mirror the peaceful, wooded lakefront landscape.

In warmer Charlotte, North Carolina, "solar belts" using alternating panels of aluminum and PPG clear glass gird Equitable Life's clean-cut regional headquarters. "A slick, brilliant use of glass in a simple but innovatively planned building," said the AIA jury.

The panels combine with a low-velocity fan system to capture and channel hot or cool air to where it's needed most, summer or winter. So energy costs are held down dramatically.

And even in the forward-looking architectural environment of Columbus, Indiana, the high drama created by PPG's reflective Solarcool Bronze glass helps set Bell of Indiana's switching station apart.

The original building is hidden behind a handsome structural silicone curtain wall system. And the new addition sparkles with a combination of opaque and transparent

Winner, 1980 national AIA Honor Award plus two regional AIA Merit Awards in 1978, Equitable Life's regional headquarters in Charlotte, North Carolina, was designed by Wolf Associates, Charlotte.

Winner, 1978 AIA Component Award, Minnesota Society of Architects, Gelco Corporation's headquarters in Eden Prairie was designed by Parker-Klein Associates, Minneapolis.

A surge of commercial and industrial building projects in November brought the construction industry its first double-digit gain in an otherwise depressed year. Paced by a 50 per cent increase in contracts for offices and manufacturing buildings, November's total of newly-started construction reached $13.3 billion, a 13 per cent gain over the November 1979 figure. November's nonresidential building ($5 billion) registered a 34 per cent increase over the comparable 1979 amount, while residential building ($5.8 billion) registered a 24 per cent gain. The cumulative total of all construction begun in the first 11 months of 1980 was $134.7 billion, down 15 per cent from the comparable 1979 period.

Applications for the Arnold W. Brunner Grant will be available until March 1 from the New York Chapter of the AIA. A 12-member jury will award the $10,000 grant to an architect—or a professional in a related field—for a study that "effectively contributes to the practice, teaching, or knowledge of the art and science of architecture." The deadline for proposals is April 1. For an application contact: New York Chapter/AIA, The Urban Center, 457 Madison Avenue, New York, New York 10022 (212/838-9670).

Hardy Holzman Pfeiffer Associates (HHPA) has been selected to receive the AIA's 1981 Architectural Firm Award. The award is the highest honor the AIA can bestow on an architectural firm. For details see page 35.

The Michigan-based manufacturer Herman Miller Inc. has been selected to receive a 1981 Medal from the American Institute of Architects for "technical innovation in woodworking, rigid plastics, foams, metals and fabrics." Herman Miller Inc. is especially well-known for manufacturing the innovative furniture designs of Charles and Ray Eames, George Nelson, and Alexander Girard, among others. The AIA Jury on Institute Honors noted: "The dedication to design excellence at Herman Miller is expressed not only in its furniture, but also in graphics, advertising, film programs and the exemplary quality of architecture in its showrooms, offices and manufacturing plants. . . ." The medal will be presented during the 1981 AIA National Convention in Minneapolis, May 17-21.

The New Orleans firm of Perez Associates has been named master planner of the 1984 New Orleans World's Fair. The selection was made after a three-way competition between Perez Associates (architects for the Piazza d'Italia), DMJM/CD (of California), and the New Orleans office of Ellerbe Associates (with headquarters in Minnesota). The Perez office will lead a team of to-be-selected architects, planners, and engineers, brought together to define the exact site, and design and build the fair facilities. Construction will begin on the $80-million, 750,000-square-foot Convention and Exhibition Center this spring. The 1984 fair will feature exhibits from 25 nations; the expected total cost is $150 million.

Irvan F. Mendenhall has been voted chairman-elect of the American Association of Engineering Societies (AAES), succeeding H. Arthur Nedom who became AAES chairman January 1. Mr. Mendenhall is president of the American Society of Civil Engineers, and chairman of the board and a founding principal of Daniel, Mann, Johnson & Mendenhall (DMJM). The AAES represents 38 engineering societies with nearly one million members.

22-year-old John A. Spotorno has been named the nation's top undergraduate architecture student and will receive the $6,000 Paris Prize for overseas travel and study. Mr. Spotorno is a senior architecture major at California Polytechnic State University. The Paris Prize (also known as the Lloyd Warren Fellowship) is open to architecture students in their final year of study. This year's entrants were given six weeks "to provide an original design for a convention center to be located in the midtown Manhattan area of New York City."

Jack Lowery, FASID, was installed as the seventh president of the American Society of Interior Designers (ASID), during the Society's annual meeting in December. Mr. Lowery succeeds Wallace R. Jonason, FASID, in the two-year post. Martin Elinoff, ASID, was elected first vice-president.

"Innovative Furniture In America"—a major exhibition developed by the Smithsonian Institution Traveling Exhibition Service (SITES)—will begin its two-year, national tour at New York's Cooper-Hewitt Museum, March 10. According to SITES, the exhibition "concentrates on those singular achievements in 19th and 20th century American furniture-making where inventive technology is particularly noteworthy. It focuses on furniture design and production in terms of technological changes, uses of newly discovered materials, approaches to comfort, and concerns for portability, efficiency, and cost." Decorative arts historian David Hanks will serve as curator for the exhibition, and author of the accompanying catalog to be published by Horizon Press. For further information, and an itinerary, contact: Eileen Harakal, Public Information Officer, SITES (202/357-3168).

The Industrial Designers Society of America (IDSA) announces a major exhibition of representatives in the design support fields "to bring industrial design leaders together with manufacturers representing the designer's tools, materials and equipment, in order to explore the latest trends, innovations, and uses. . . ." The exhibition will be held in conjunction with the IDSA Annual Conference in Los Angeles, from October 3rd to November 2nd. For further information contact: Brian J. Wynne, IDSA, 1717 N Street NW, Washington, D.C. 20036 (202/466-2927).

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Hardy Holzman Pfeiffer Associates selected to receive the AIA 1981 Architectural Firm Award

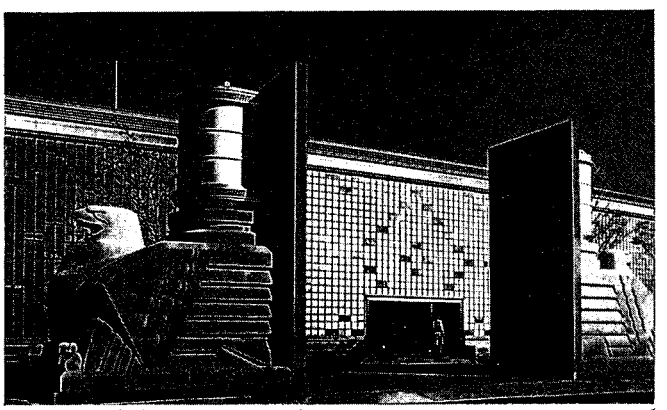
The New York City firm of Hardy Holzman Pfeiffer Associates (HHPA) was founded as a partnership in 1967 by Hugh Hardy, Malcolm Holzman, and Norman Pfeiffer. Principal Hugh Hardy, FAIA, recalls the early days of HHPA in Barbaralee Diamonstein's *American Architecture Now* (Rizzoli New York): "We're very fortunate that we got together when we were young. I don't know that you could forge such a thing out of the kinds of beings we now are. We are probably too protective and too self-aware. But we really grew up together and did the thing that kids do with their parents. We rejected everything. We rejected the fifties, we rejected the AIA, we rejected midtown, we rejected contracts, we rejected working drawings. We rejected everything but clients . . . the surprising thing is that the partnership has survived."

HHPA has not only survived but flourished: 15 years later, the firm has 20 registered architects and an impressive practice, marked by its diversity. Their work includes museum planning, civic design, housing, and commercial development, and facilities for health-care, education, and the performing arts. They have received AIA Honor Awards for the Columbus (Indiana) Occupational Health Center (1976), the Cooper-Hewitt Museum in New York City (1978), and the St. Louis Art Museum (1979). In 1978, HHPA received the New York Chapter/AIA Medal of Honor. In 1974, the National Institute of Arts and Letters presented them with the Brunner Prize in Architecture "for their work which is civilized and urbane, and which has a full awareness of the past, a firm grip on the technology of our time, and something which has long been lacking in architecture—a sense of humor. Yet it is executed with a seriousness of intention and a social awareness which are the marks of good building and great architecture."

In selecting HHPA for the AIA's 1981 Architectural Firm Award, the jury noted that "by giving new meaning to the familiar—the traditional, the vernacular, the industrial—Hardy Holzman Pfeiffer Associates [has] produced a stimulating architecture that has its roots in what is unique in built America. HHPA rises above the merely fashionable to a firm that produces work of creative significance to us all."

HHPA is especially well-known for their adaptive use projects: Newark Community Center on the Arts (New Jersey); Dance Theater of Harlem School (New York City); Madison Civic Center (Wisconsin); Spirit Square Art Center (Charlotte, North Carolina). Their most recently completed projects range from corporate headquarters for Best Products in Richmond, Virginia, to the Dance Studio and Music Performance Hall at St. Paul's School in Concord, New Hampshire. Hardy Holzman Pfeiffer is currently involved in restoring and expanding the historic Willard Hotel in Washington, D.C.

The Architectural Firm Award is the highest honor the AIA can bestow on an architectural firm. HHPA will receive the award during the AIA's 1981 National Convention in Minneapolis, May 17-21.



Norman McGrath photos except as noted 1

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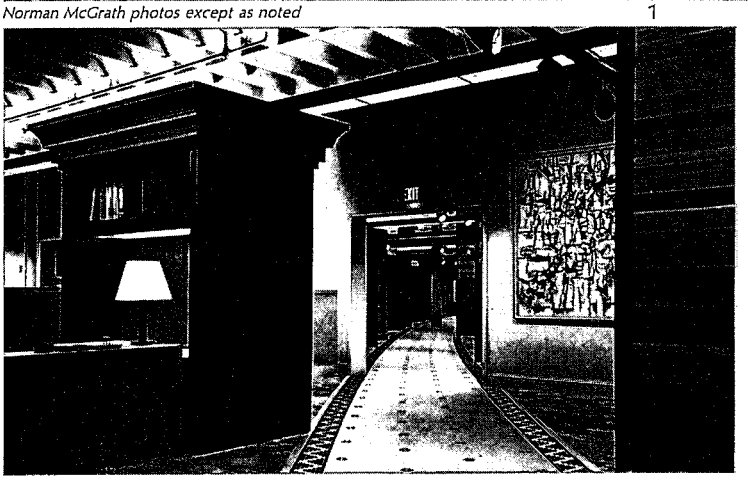
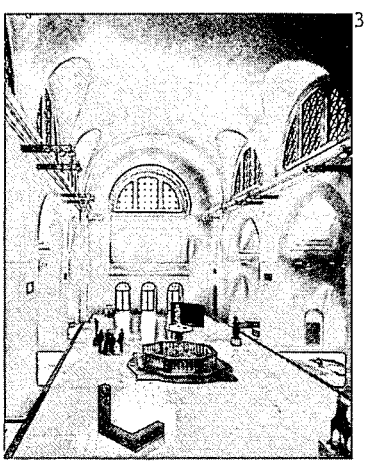
1. Corporate headquarters for Best Products/Richmond, Virginia.

2. Madison Civic Center/Madison, Wisconsin (RECORD, July 1980).

3. St. Louis Art Museum/St. Louis, Missouri (RECORD, October 1978).

4. Boettcher Concert Hall/Denver, Colorado (RECORD, March 1979).





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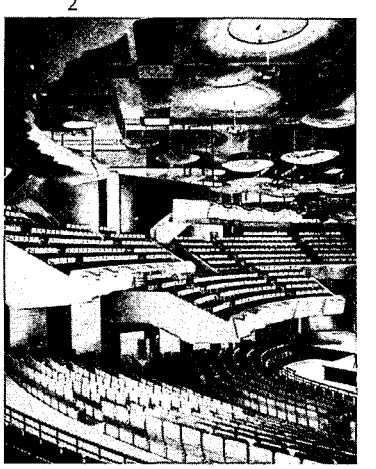

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The General Accounting Office advises re-evaluation of Building Energy Performance Standards

According to a panel of Federal analysts, the Department of Energy (DOE) should take another look at the economic consequences of implementing the Building Energy Performance Standards (BEPS), and take into account voluntary energy-efficiency improvements already occurring.

The analysts, from the General Accounting Office (GAO), worry that the development process for the controversial BEPS "has not been smooth, and problems have surfaced with respect to completeness and ease of implementation."

Over the vigorous objections of the American Institute of Architects, Congress has delayed implementation of BEPS for at least three years; just as it should be, says GAO, because there are several areas that require more work "before a sound energy conservation standard is possible." According to the GAO, the BEPS writers should:

- Use minimum life-cycle costs as the base line for considering standards for commercial and multi-family structures.
- Consider climatic conditions in the more than 28 cities originally involved in arriving at savings goals for single-family houses.
- Shift weighting factors used for determining the over-all impact of the Standards to a regional rather than a national basis.
- Develop computer programs, manuals, and model building codes for use by local officials in determining compliance with the Standards.
- Consider recent improvements in building design practices already taking place, when updating the estimate of expected energy savings from the Standards.

The BEPS, the product of a 1976 Federal Law, specify that Energy Department officials should develop maximum energy budgets for various classes of buildings in various climates; these budgets are design goals expressed in Btu's per gross square foot per year. They are further complicated by the weighting factors intended to measure the impact of alternative energy sources on society as a whole.

Generally speaking, organizations representing contractors, engineers, building owners, and lenders favor a major overhaul in the standards that have been proposed by the government. The AIA and several consumer groups are pushing for early implementation of the government standards. —*William Hickman, World News, Washington.*

End of an era in client billing.

Keeping track of client phone charges by manual logging is notoriously ineffective. In fact, industry estimates show that the average architectural or engineering firm absorbs 10 to 15 percent of those charges—simply through doubts about their proper allocations. There's another loss, too—of professional and clerical time spent in the month's-end allocation process.

Now the Bell System can provide electronic-age assistance for this chore, with precision and speed that pays off every month. You'll save time, be certain of collecting a far higher percentage of billable phone charges, and look more professional doing it.

A variety of Bell products and services can be applied, depending on the scale and complexity of your firm's needs. The answer could be as simple as having one line dedicated to long distance. Or you might need a system that automatically records and allocates charges.

Your Bell System Account Executive can analyze your operations, and bring you a new, more profitable era in client billing. It makes very good sense to put our knowledge of advanced communications to work for your business.

The knowledge business

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continued from page 35

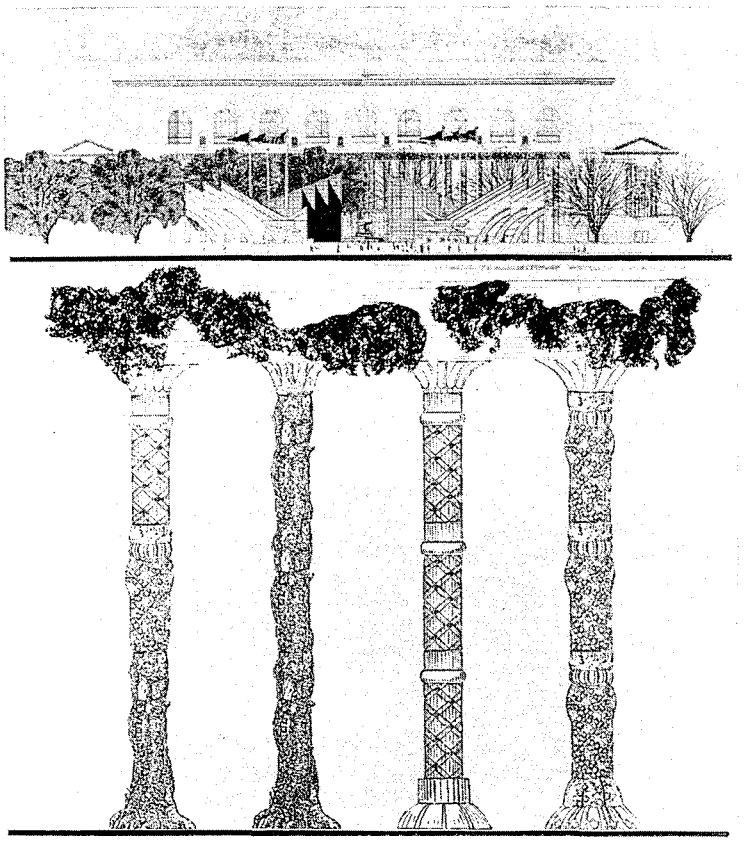
"Collaboration: Artists & Architects"

To celebrate its 100th anniversary, The Architectural League of New York commissioned 22 American artists and architects for an "experiment in collaboration." The 11 teams were asked to select a project that addresses "the most significant architectural problems of the decade ahead," and to resolve them in a collaborative way. The results of these collaborations form the exhibition, "Collaboration: Artists & Architects," which will open at the New York Historical Society on March 6, before starting a three-year, 15-city tour across the United States.

The exhibition will include scale models, paintings, drawings and renderings, and facsimiles of component parts, and will be accompanied by explanatory text panels—written by the collaborators—describing the genesis and evolution of their projects. Each project will be executed within an eight-foot cube.

Barbaralee Diamonstein, curator of the exhibition and editor of its catalog (published by the Whitney Library of Design) notes: "The exhibition is an experiment in collaboration. It also serves as a means of assessing the process of collaboration between architects and other artists, and exploring how such collaboration can be enhanced in the future."

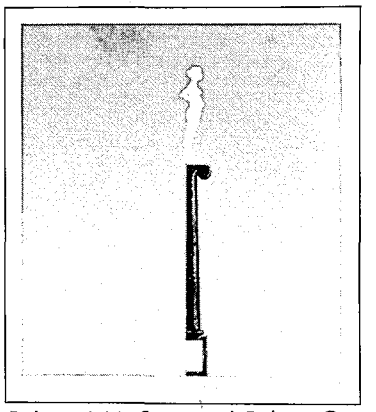
As a prologue to the exhibition, Vincent Scully has contributed a historical survey of collaboration between painters, sculptors and architects. Paul Goldberger, architecture critic of *The New York Times,* has provided an overview of collaboration from 1945 to the present. Additional essays by Stephen Prokopoff, Jonathan Barnett, and Jane Livingston will be included along with an introduction by Ms. Diamonstein. The essays will be part of the exhibition, taking the form of illustrated text panels. The design of the exhibition and the catalog is by Massimo Vignelli.



Hugh Hardy and Jack Beal/Sondra Freckelton: Restaurant Pavilions for Bryant Park: Musing on Variety—"An eating pavilion for Bryant Park, New York, in the American Renaissance Tradition including murals, columns, carpeting, stained glass and place settings whose design reflects different aspects of the park and illustrates ideas from William Cullen Bryant's poems."

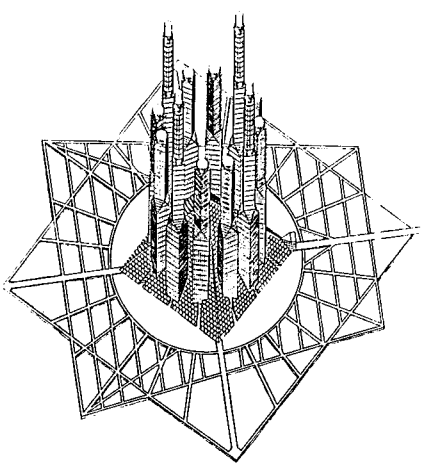
The 11 teams include: Emilio Ambasz and Michael Meritet; James Freed and Alice Aycock; Frank O. Gehry and Richard Serra; Michael Graves and Lennart Anderson; Hugh Hardy and Jack Beal/Sondra Freckelton; Richard Meier and Frank Stella; Charles Moore and Alice (Atkinson) Wingwall; Cesar Pelli and William Bailey; Robert A. M. Stern and Robert Graham; Stanley Tigerman and Richard Haas; and Susana Torre and Charles Simonds.

The exhibition has been sponsored by Philip Morris Incorporated, the National Endowment for the Arts and the New York State Council for the Arts. The 1981 itinerary includes: New York, Texas, and California. For a complete itinerary, contact: The Architectural League of New York, 457 Madison Avenue, New York, New York 10022 (212/753-1722).



Robert A.M. Stern and Robert Graham: Human Scale at the End of the Age of Modernism—"A bronze sculpture of a female nude on a base provides an allegory of the current state of architecture where modernism and classicism co-exist in easy proximity."

Stanley Tigerman and Richard Haas: The Great American Cemetery—"The collaboration resulted in two different projects—one is a city of the dead with grave-marking monuments taking the form of miniaturized suburban houses, the other is a giant necropolis whose form echoes the imagery of the city's skyscrapers."



The AIA wants a stronger international voice

The AIA has decided to join the International Engineering and Construction Industry Council (IECIC)—an organization dedicated to better understanding and cooperation between business and professional groups, and government and lending institutions. The charter members of the 14-year-old IECIC are the American Consulting Engineers Council, the National Constructors Association and the Associated General Contractors.

The AIA feels that affiliation with the IECIC liaison group will mean a stronger voice in the international marketplace for American architects. IECIC is seeking liberalized tax and regulatory treatment for U.S. firms working in other nations. Annual meetings by the organization—one is scheduled for this October—are intended to provide an opportunity for the exchange of ideas between international businesses and the agencies and lenders with which they deal.

IECIC has no separate staff, but the function of secretariat is passed from one member organization to the next. The Consulting Engineers group is presently in charge of council activities. —*William Hickman, World News, Washington.*

Building owners granted veto power on historic designation

The Federal law fostering the historic preservation boom was significantly revamped by the last Congress just before its adjournment; now the owners of private property have the option of keeping their buildings off the list of historic structures.

The old law did not require an owner's consent for inclusion on the National Register of Historic Places, and designation was seen as a mixed blessing: it entitled the owner to certain tax and loan benefits, but it also severely curtailed possible uses of the structure and any modifications which might be made.

While some preservationists argued that giving owners veto power on historic designation would undermine the system, the lawmakers were persuaded to make the change in light of Federal tax laws that penalize owners who want to tear down their Register-status properties.

Some of the more ardent advocates of modifications to the basic law also wanted to give cities and states veto authority over historic designation. This was dropped in the spirit of compromise, and because the same tax argument had no validity for the public bodies.

Another compromise in the new law authorizes the keeper of the Register to designate a building eligible for listing without an owner's consent. But this only means that a Federal project which may harm the building is outlawed.

The legislation also authorizes the spending of $150 million annually, for fiscal years 1981-87, and increases the role of local officials in the preservation process by allowing them to review Register nominations.

The funds provide 50-50 matching grants to states for restoration work, and 70 per cent matching funds for survey work. Additionally, a loan insurance program has been created to encourage banks to make loans on historic properties.

The lawmakers went on to trim—from 29 to 18—membership on the Advisory Council on Historic Preservation, which reviews Federally-licensed or -funded projects for potential harm to Register properties. —*William Hickman, World News.*

There's a lot worth saving in this country.

Today more Americans who value the best of yesterday are working to extend the life of a special legacy.

Saving and using old buildings, warehouses, depots, ships, urban waterfront areas, neighborhoods and Main Streets is more than just a sentimental gesture. Economically it makes good sense to restore and revitalize quality structures. Preservation saves energy and materials at a time when our resources are limited.

We can also appreciate the artistry and design of these many old structures, which are as much a part of our unique culture as the art and music we have given the world.

The National Trust for Historic Preservation—in cities, towns and neighborhoods—helping to keep our architectural heritage alive for us and for our children.

Help preserve what's worth saving in your community. Contact the National Trust, P.O. Box 2800, Washington, D.C. 20013.

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Preservation builds the nation

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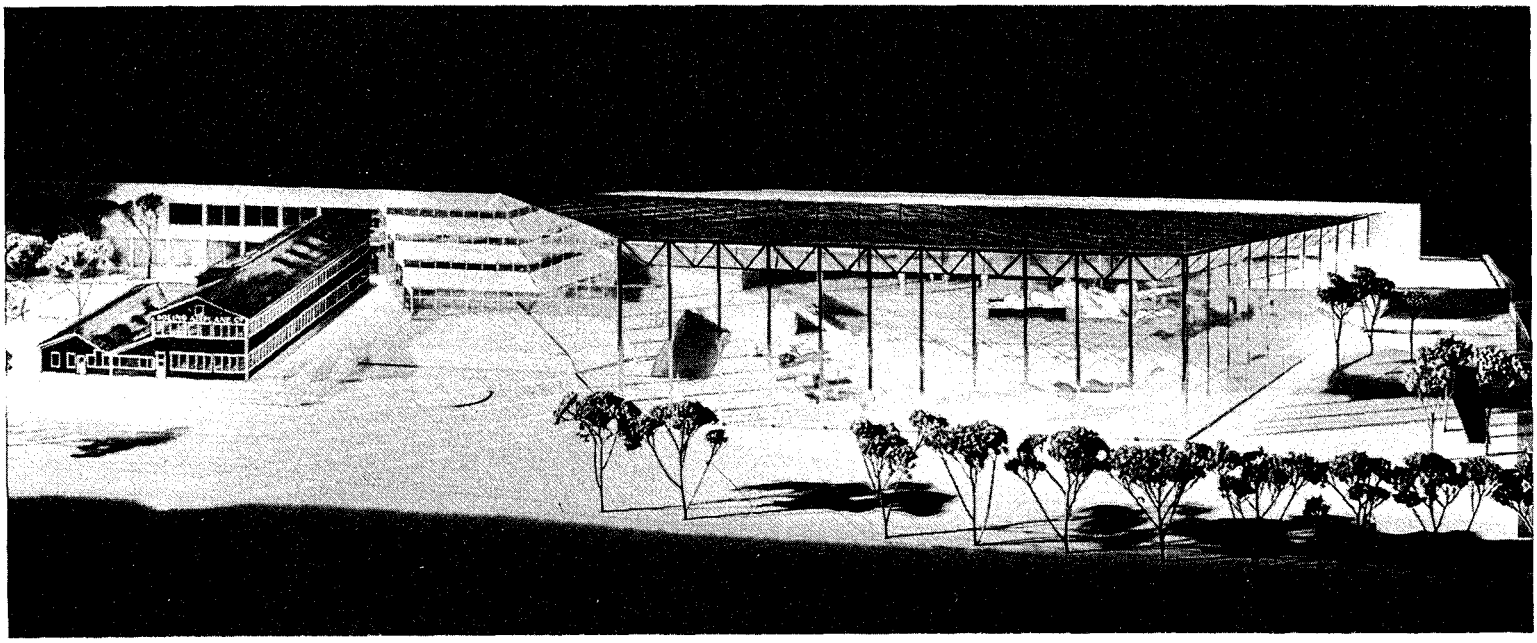
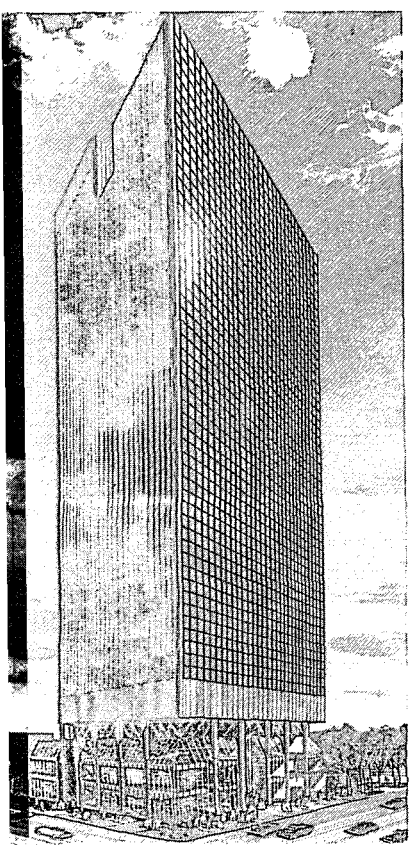
ARCHITECTURAL RECORD

$18-million aviation museum includes restoration of a 1900 "red barn"

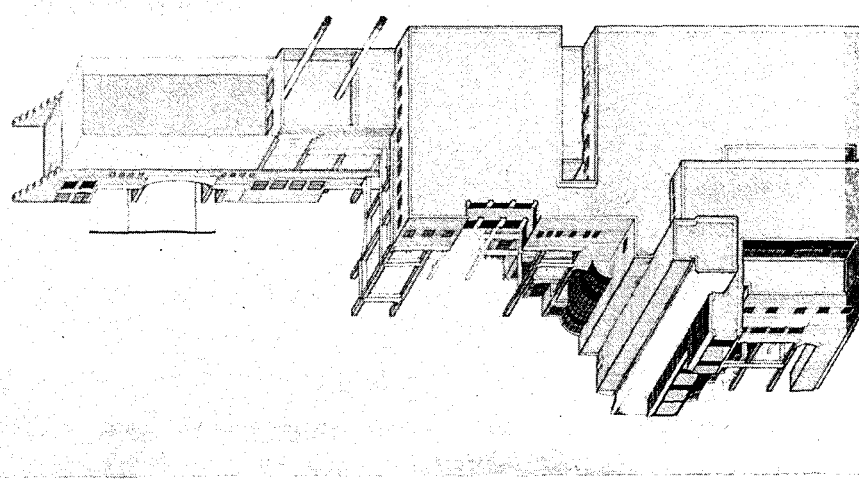
The Boeing Company's "Red Barn" (far left)—the corporation's first airplane manufacturing facility—is being restored in the $1.2-million first phase of development of the $18-million Pacific Museum of Flight in Seattle, Washington. The 80-year-old barn was moved to the site, and then elevated 13 feet for one month while a new foundation was prepared. The second phase of development calls for a three-story 12,000-square-foot administration building that will include facilities for classrooms and outdoor exhibits, and a theater, restaurant, library, and archives. Shown at the right is phase three, the 90,000-square-foot main body of the museum. The six-story space frame and glass gallery will house full-size aircraft, and artifacts detailing the history of aviation technology in the Pacific Northwest. Ibsen Nelsen & Associates of Seattle is the project architect; the San Francisco office of Syska & Hennesy has prepared the mechanical engineering drawings, and Skilling, Helle, Christiansen & Robertson of Seattle is the structural engineer.



A "Crystal Pavilion" for New York City

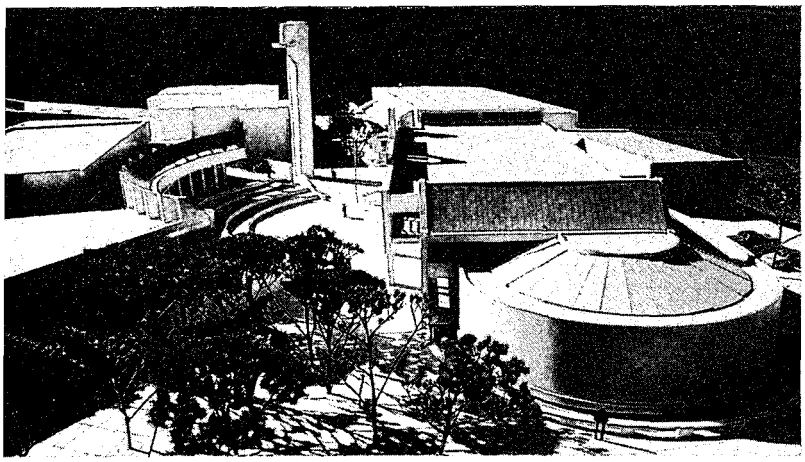


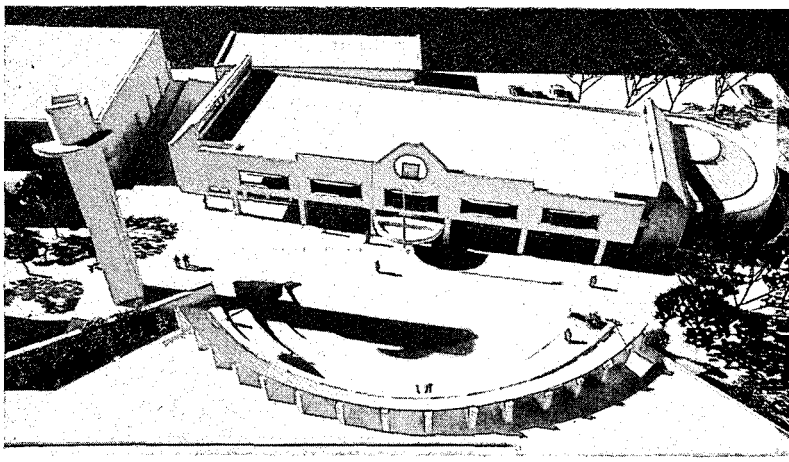
A 31-story office tower, now under construction on Third Avenue at 49th and 50th Streets in New York City, will contain what its sponsors call "the Crystal Pavilion, Manhattan's first 'urban mall' for shopping and community events." Along the tower's base, a 45-foot atrium will house restaurants, retail spaces, and service and convenience shops. The three tiers of the atrium will be linked by glass-enclosed escalators and elevators. Along the street, a clear glass facade will open views to the two waterfalls and "flowing river" of the landscaped atrium/mall. The project is scheduled for completion this fall. Emery Roth & Sons are the architects, and Bromley/Jacobsen are the atrium design consultants.



Rossetti Associates' latest addition to Detroit medical complex

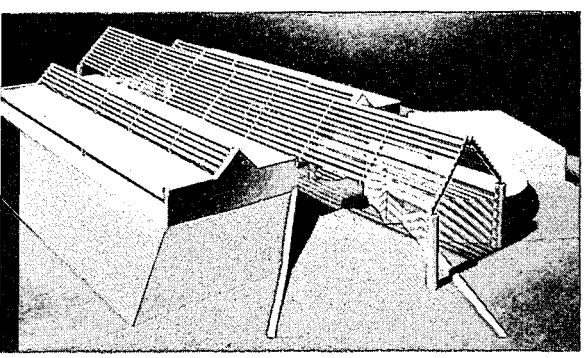
Detroit's Henry Ford Hospital is the largest non-government private hospital in the world. The summer of 1982 will bring to completion a new 225,000-square-foot facility that will serve as a central location for several critical hospital services—pharmacy, emergency, radiology, surgery, pathology, and intensive care. The now-under-construction West Clinical Services Building, designed by Rossetti Associates, will gather together from the entire complex "those facilities which demand functional interaction and which have common staffing and equipment requirements."





enriquez & Partners' lunicipal Hall for aney Town Center

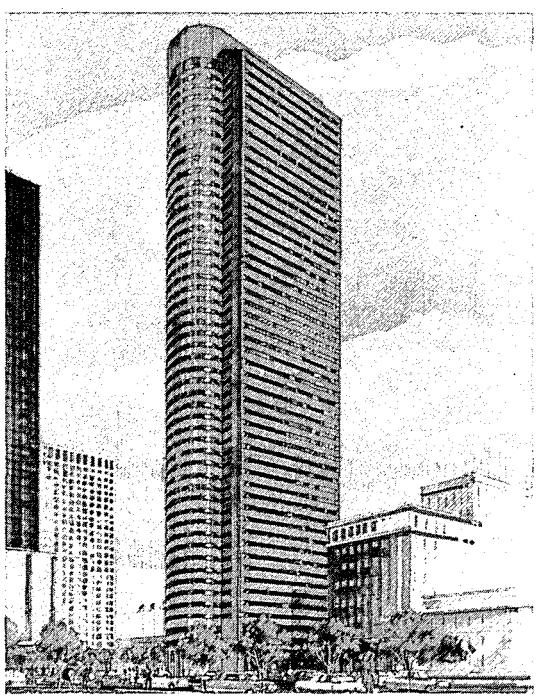
Thirty miles from downtown Vancouver, a public and private redevelopment effort (boosted by a proposed shopping center) is underway for the Haney Town Center in Maple Ridge, British Columbia. Henriquez & Partners' Municipal Hall will be a major element in the redevelopment effort. The $2-million facility includes a semi-circular council chamber along the north end; the main floor of the hall is recessed to produce a covered arcade opening onto a terraced plaza. According to the architects, the design of the plaza—along with the proposed bell tower—"attempts to instill a sense of urbanity to the new town center." Construction is scheduled to begin this October.



he U.S. Air Force's Energy Showcase Building

ne Energy Showcase Building r the U.S. Air Force will eadquarter the Energy Showse program at McClellan Air orce Base in Sacramento, Calornia. The 7,600-square-foot ructure will contain an audirium, engineering and graphs staff areas, and a display rium as the circulation spine. ne $950,000 building will utie passive and hybrid technologies applied to produce a state-of-the-art energy conserving design. Computer simulation—of hour-by-hour performance—estimates energy consumption of 80 per cent lower than average. SOL-ARC, an architecture and energy consulting firm in Berkeley, has designed the facility; construction is scheduled to begin this spring.

A 52-story corporate headquarters by Welton Becket Associates

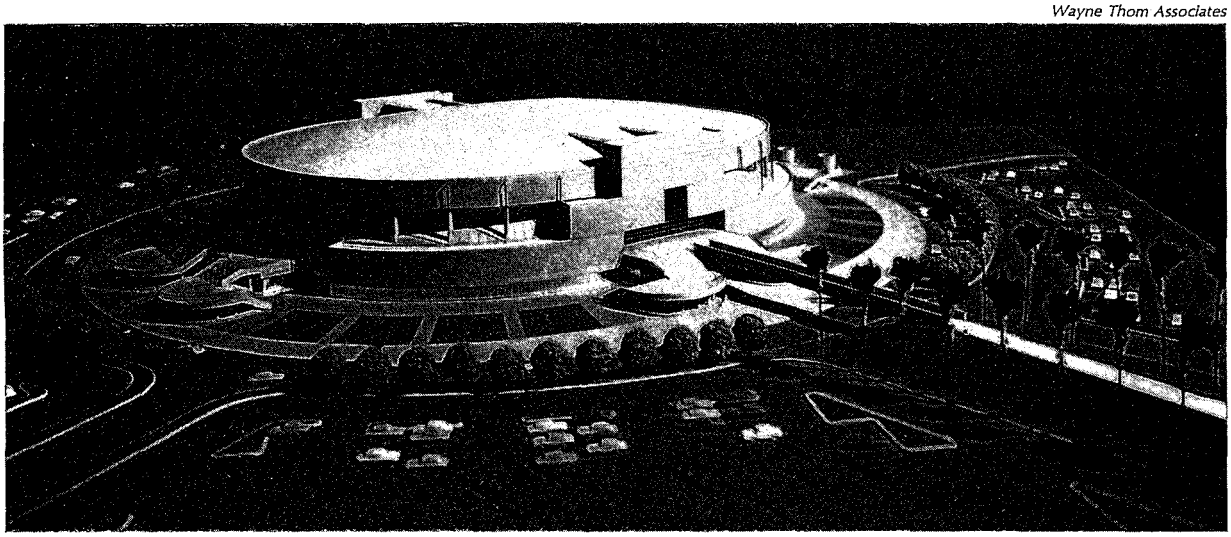


A $150-million office tower and four-level ancillary structure will serve as the new corporate headquarters for worldwide operations of the Cities Service Companies. The 1.8-million-gross-square-foot project will be located on a 4.2-acre site in downtown Tulsa, Oklahoma. According to the architects, the rounded ends of the office tower will "reduce the visual impact" of the large floor area (a typical floor contains approximately 30,000 square feet). An atrium lobby—with employee shopping on the lower level—will be located between the tower and the ancillary structure; a second atrium, at the 50th floor of the tower, will provide amenity for the executive levels. The granite and bronze-glass structure is scheduled for occupancy mid-1983.

homas-Mack Center for Continuing Education and Special Events by W2C Architects

ne University of Nevada's homas-Mack Center for Conuing Education and Special ents is scheduled for cometion in 1982. The $26.5-illion facility includes an ,000-seat sports arena and ,000 square feet of additionspace for a restaurant, fices, and the Center for ontinuing Education. The oured-in-place concrete ructure will be wrapped in a htweight metal skin with a and of reflective glass at ound level. Architects for e project are W2C Architcts (Arturo Cambeiro, Domgo Cambeiro, John Carl Varnecke).

Wayne Thom Associates



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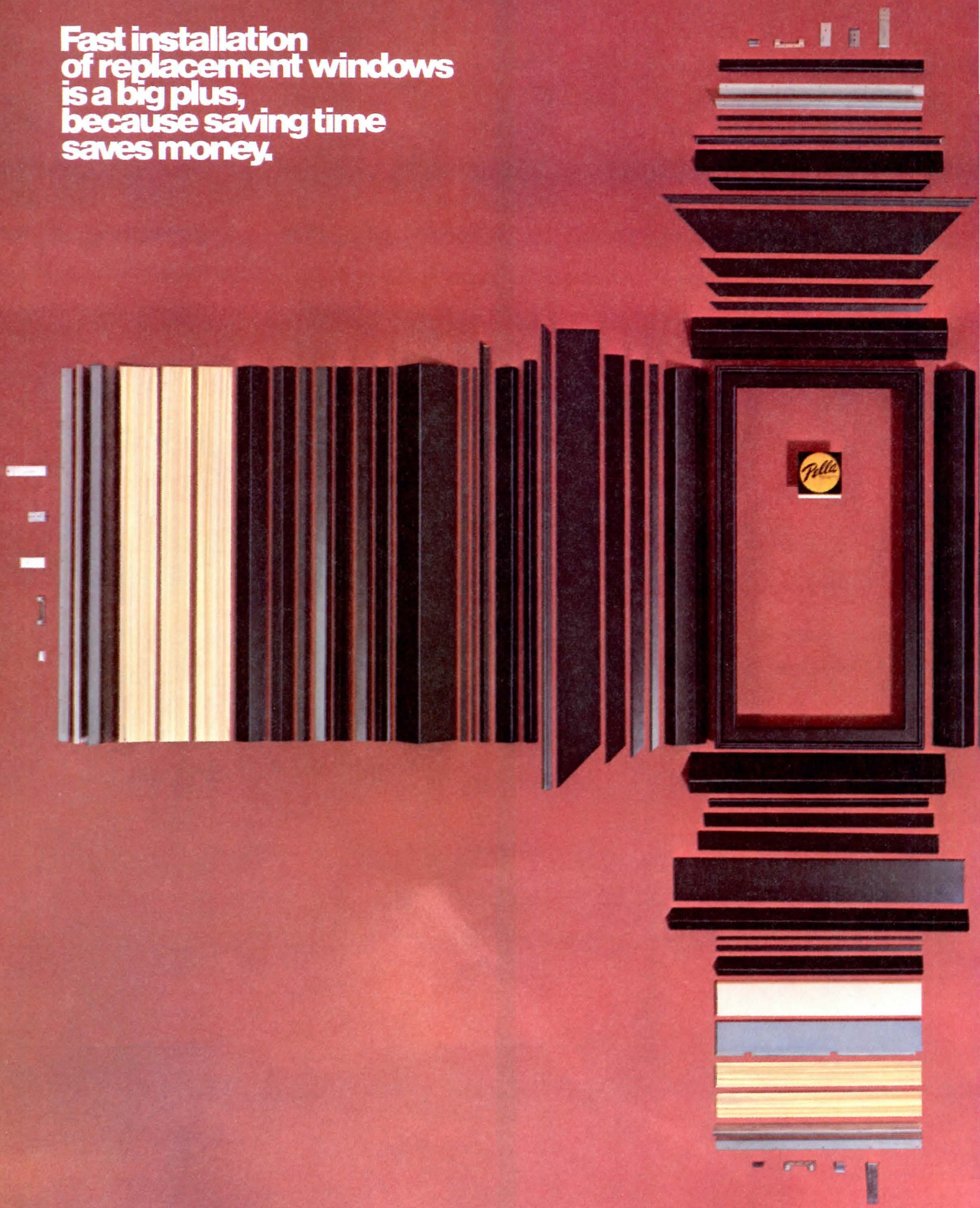

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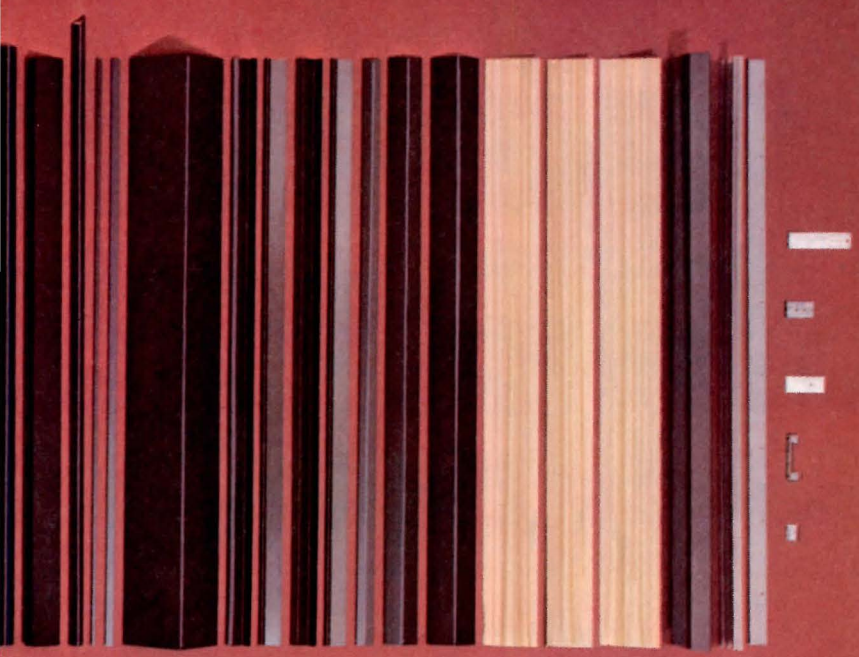

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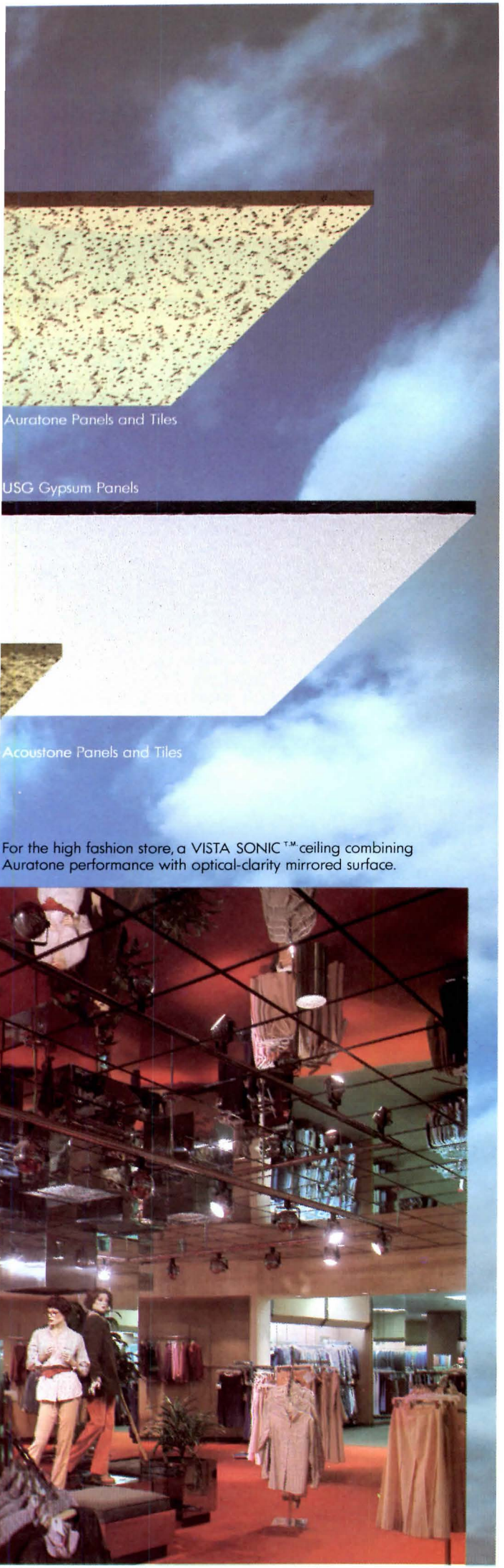

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OFFICE NOTES

Offices opened

Thad A. Broom and Andrew S. Fink have opened an architectural firm at 900 Commonwealth Place, Suite 200, Virginia Beach, Virginia.

Thomas H. Elting, AIA and Harold C. Recer, AIA announce the formation of Elting and Recer Architects Planners, Inc., 6633 Grapevine Highway, Fort Worth, Texas.

Myrick Newman Dahlberg & Partners, Inc. and Patrick J. Buckley, P.E. announce the establishment of MND-Buckley Engineering Inc. Civil/Structural Engineers, 5207 McKinney Avenue, Dallas, Texas.

Alexandr Neratoff Architect announces the opening of his new office, located at 57 Prince Street, New York, New York.

James W. Rhodes, AIA is opening an office for architectural design and consultation, to be located at 45 East 51st Street, New York, New York.

Stastny/Graham Architects, P.C., is the new name of an architectural and planning firm located at 813 Southwest Alder Street, Portland, Oregon.

Richard George Wheeler and W. Gayne Wimer, Architects, are now doing business as Wheeler/Wimer, Architects. They are located at 3276 Rosecrans Street, San Diego, California.

Firm changes

John D. Anderson and Associates, Architects, P.C. announce the new corporate name will be Anderson Architects and that Curt F. Dale, CSI is now vice president/director and Martha Bennett-Powell, AIA is an associate.

Bull Field Volkmann Stockwell, Architects and Planners announce the appointment of Richard M. Brayton and Yui Hay Lee as associates of the firm.

Campbell & Wieland, Inc. Engineering/Architectural/Planning announces the addition of David D. Shepherd as project architect and Mark W. Birchler as senior civil engineer.

Sally Schultz has joined Campbell-Yost-Grube P.C. as marketing manager.

Environmental Planning & Research, Inc. (EPR) announce the promotion of Harold C. Kallaway to senior vice-president, and David B. Mourning, AIA, Warner H. Schmalz, AIA, Ralph Frischman and Larry Pond to vice presidents and officers of the firm.

Guillermo Trotti has been named project architect for Jason Frye and Associates.

Geiger Berger Associates, P.C. and Tor, Shapiro Associates, P.C. announce their merger under the name of Geiger Berger Associates, P.C., with the division of Tor, Shapiro Associates. Offices are in New York, New York, New Haven, Connecticut and Vancouver, British Columbia.

Harold F. Van Dine, Jr., FAIA has joined Harley Ellington Pierce Yee Associates as firm executive and director of design.

Kruger Lake Hutchinson Brown, Inc., an Albuquerque, New Mexico-based architectural firm announces the following changes: Ron L. Hutchinson, AIA and James T. Brown, AIA, have been elected president and vice president; Ron Burton, AIA and David Werner, AIA associate partners; William Oberdorfer, CSI, Steven Kells, RA and George Sanders, AIA, associates. N. John Kruger, NSPE and Gerald H. Lake, AIA have retired from active practice but remain as emeritus members of the firm.

The Oglesby Group Architects announce that Diane Linn and Paul Dickel have joined the firm.

PMB Systems Engineering Inc. announce the promotions of Robert G. Young to manager of quality assurance and William P. Dasher to manager of construction administration, both within the structural design division, San Francisco.

REQUIRED READING

Visual control and continuity

CHARLES RENNIE MACKINTOSH: THE COMPLETE FURNITURE, FURNITURE DRAWINGS & INTERIOR DESIGNS, *by Roger Billcliffe; Taplinger, $60.*

Reviewed by Joseph Rykwert

photo courtesy of Atelier International Ltd., ai

Just after World War II, Thomas Howarth began working on a biography of Charles Rennie Mackintosh—at the time, a very unfashionable subject. There had never been a book on Mackintosh, only small-part appearances in, among others, Nikolaus Pevsner's *Pioneers of Modern Design* and Siegfried Giedion's *Space, Time & Architecture: The Growth of a New Tradition.* Ironically, the first monograph was by Pevsner, (in Italian); appearing in 1950 to announce Howarth's major work which followed in 1952. But there was a long interlude before this advocacy had any effect. I remember a Glasgow family—for whom Mackintosh had done some interior work—marveling at my interest in the "rubbish" of which they had disposed, partly to the trashman, and partly (as far as the papers were concerned) to Glasgow University; only a Margaret Macdonald embroidery panel remained, given as a memento to the old governess.

It was therefore all the more extraordinary, that before the whole Art Nouveau bandwagon really started rolling, that maverick Scots-Neapolitan, Filippo Alison, persuaded a local joiner to make replicas of Mackintosh furniture; this, while Glasgow University was pulling down Mackintosh's own house (preserving, it is true, some interiors), and the same city's fathers were proposing to knock down the Scotland Street school to enlarge a traffic roundabout.

Mr. Billcliffe is less than generous to Mr. Alison—treating him as the minion of the manufacturer, (Cassina of Bologna, who launched Mackintosh replicas commercially), whereas he had been a lone, obstinate enthusiast.

But this is the most serious reproach of detail I shall make against Mr. Billcliffe, since he has provided the fullest possible catalog of Mackintosh furniture and interiors. He has listed the holdings in the public collections—mainly in Glasgow, but also at the Victoria and Albert, the RIBA in London and Northampton—and those in private hands—mostly in Professor Howarth's collection. Mr. Billcliffe—who before moving to the Glasgow City Art Gallery was responsible for the University's holdings, and for the restoration and installation of the interiors I mentioned—was well-placed to provide a full account of the material, and his book will remain the standard book of reference. I even wondered whether he had traced all those drawings that the senior partner in the old Honeyman and Keppie office (where Mackintosh did practically all his work) threw into the street in a fit of piqué at the unwanted, rising fame the unruly junior partner, now long dead, was acquiring.

The rejection of Mackintosh in Glasgow, and his fellow artists, the "Spook" group—whose members started their careers in an atmosphere of near-apocalyptic hope of the early 1890s—coincided with the decline of the whole Art Nouveau phenomenon all over Europe. Its principal protagonists took various ways out of the impasse which the speed of this decline presented: reversion into a bare classicism, lapse into stiff grandiloquence, or tentative approaches to the "international architecture" of the post-war years. The climax of the movement was reached too quickly.

continued on page 57

Joseph Rykwert is professor of art at the University of Essex, and, during 1979-80, Slade Professor of Fine Art at Cambridge University. Mr. Rykwert is a frequent contributor to numerous architectural journals, including *Lotus International, Architectural Design,* and *The Journal of the Society of Architectural Historians.* His most recent book, *The First Moderns,* was published last year by MIT Press.

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Management pathology: biopsies on common causes of failure

The architectural press almost invariably describes how design firms have risen from obscurity to prominence. But few articles address the equally instructive, if less popular, subject of why firms fail. There are, of course, many types of failure: failure to achieve the principals' major objectives; failure to achieve a firm's full potential; failure in the form of complete organizational collapse; or just plain going broke. Applying the techniques of management pathology, it is possible to trace the causes of most failures to one or more flaws in the leadership of a firm. Some of these flaws are noble ones, worthy of a Greek tragedy; but most are petty or avoidable. Both the noble and the petty are discussed in the following article by Bradford Perkins, with examples of the basic pitfalls presented as a series of brief case studies. All are composites of real situations—sufficiently disguised, it is hoped, as to be unrecognizable.

by Bradford Perkins, AIA

Case one: Halley's Comet
Probably the commonest failure is the firm that has a brief run of luck and then disappears. Firm A spent ten years building a reputation for consistent quality on a series of small commissions. The three principals all worked directly on each project and developed a growing list of happy former clients. Then they obtained a "dream" commission: a major project for a client willing to support an innovative design solution. The architects made the most of the job and, with the resulting favorable publicity, rapidly became a "hot" firm. As more big projects came their way, the office grew from 10 to 60 people in two years—but then the problems began.

Too soon the principals began believing their own publicity and playing the role of gurus. At the same time, they spread themselves too thin—a problem that was aggravated by their lessening interest in the details of new projects. More and more time was spent enjoying the fruits of their prosperity. Quality became inconsistent and client loyalty weakened. No organized business development program was created. As a result, when a recession hit, their work dried up, they shrank quickly back to a 10-person firm, and eventually faded into obscurity.

Case two: buggy whips and Pharaoh's dream
Architecture is a cyclical business which never lets a firm rest on its laurels. Firm B built a strong practice in educational and other public building types. The principals were confident of their continuing prosperity and regularly spent the firm's profits. Unfortunately, school populations began to decline, the economy slumped, and Proposition 13 applied the coup de grâce to their traditional markets. The firm suddenly found itself without work and without the financial staying power to rebuild in another area of practice.

Case three: the grass is always greener
Unlike Firm B, many firms are never satisfied with their current areas of practice. This too can lead to problems. Firm C acquired a strong reputation for planning studies, which occasionally led to architectural commissions. Even though the firm's finished buildings never matched the quality of their pre-design studies, the principals felt that they wanted to be architects, not planners; so they ignored their study work and put their efforts into getting design commissions. The basis of their reputation soon shifted from excellent planning to mediocre architecture. With this shift came the beginning of their decline.

Case four: cannon fodder
It is good advice to anyone who thinks himself irreplaceable to observe what happens when he withdraws his finger from a bucket of water. Unfortunately, this lesson has often been translated into blind belief that no one is irreplaceable—a statement which, in the short term, is not necessarily true. Firm D prospered for years under the leadership of a man who made it clear that he believed in this "no one is irreplaceable" axiom. As is generally the case today, the firm's reputation became more and more dependent on the principals who were actually carrying out the projects. But when a crisis came, the key principals felt no loyalty to the top man and left the firm, taking their clients with them.

Case five: Joseph's brothers and the captainless ship
A variant on the loss of key personnel is the forcing out or failure to replace the person or persons who built the firm. Firm E's younger partners breathed a sign of relief when their concerted efforts finally compelled the domineering founding principal to retire. In reaction to his autocratic approach, they decided to manage by committee. All of the committee members were "inside" men who frowned on the founder's "egomaniacal" and "wasteful" interest in speeches, parties, travel, and other "nonproductive" efforts. Eventually, though, the committee found that, in the name of prudent management, they had performed a lobotomy on the firm. Devoid of its personality and constipated in its decision-making, the office muddled its way into mediocrity.

Case six: Peter Principle by primogeniture
Like many parents, architects often want to pass on what they build to their children. The desire to hand down the leadership of a firm is understandable, but often a disservice to both the child and the parent-architect's colleagues who helped create the legacy. Firm F—with the insistence of its founder—promoted the founder's son to fill his father's place upon retirement. The merit of this promotion was not convincing to either clients or key staff, and both soon departed.

Case seven: swollen heads, upturned noses, and feet of clay
"No one person is a complete architect" is far truer than "no one is irreplaceable." Firm G, for example, built itself upon the sales skills of its principals. Unfortunately, it never matched sales ability with comparable skills in design, production, and the many other capabilities necessary to serve a client properly. The principals ultimately ran out of new people to sell to. Firm H, in contrast, built its reputation on design expertise, but, like Firm G, never balanced its forte with other requisite skills. Tough competition and bad references cut short their moment of success.

Achieving balance has never been easy for most architectural firms, because of big egos and misguided snobbishness. Too many firms have been led by individuals who could not tolerate equals or, when they could, had too little respect for skills other than their own to tolerate full partners in balancing capability areas.

Case eight: financial management according to Wagner, Lindsay, and Beame
The financial rewards of the design profes-

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continued from page 59

sions are rarely comparable to those of other professions and businesses. Regrettably, this fact is not recognized by many architects. Firm I grew and prospered—and its principals' ability to spend grew with it. Staff was hired in advance of need, offices were outfitted in a manner consistent with the firm's design tastes, and personal spending by the principals began turning to slow whisky and fast cars, sailboats, and women. This expensive lifestyle was financed with borrowed money and a failure to pass on funds owed to consultants. In time, Firm I's credit ran out; its creditors forced it into near bankruptcy; and it suffered a general dissolution of its reputation and practice.

What generic causes of decline can be found within this compendium of failure?

A full list would require a book, but the more important ones and their management implications can be summarized as follows:

1. For a firm to achieve and maintain success it must recognize that it has to be good at every component of both the profession and the business of architecture. Put in the simplest terms, a firm has to sell well, provide consistently good service on the projects it sells, and manage both the projects and its own office in a way that generates a profit. There is no significant margin for error in today's competitive, demanding-client, low-profit-margin world.
2. To do all the basics well, the firm should have a plan that establishes goals, realistically assesses its own strengths and weaknesses, and then outlines logical steps to build on those strengths and overcome the weaknesses in the pursuit of the goals. This is not as easy as it sounds because it requires honest self-appraisal—an unusual gift.
3. Successful business development is usually directly related to a realistic plan, a strong reputation in a good market or markets, and constant efforts to develop new leads and sales. It is important to remember that once reputation or momentum has been achieved, it must never be lost. Few firms are ever given a second chance. In addition, as illustrated in Case three, a firm should not abandon an area of strength or even dilute its impact. Any expansion into new areas must be governed, as already noted, by a realistic plan to eliminate weaknesses while building on existing strengths.
4. A realistic plan and effective business development program must also recognize that the market is not static. No firm can depend on one building type or a long-standing reputation to carry it through the future. Today, the pace of change in all things is accelerating and firms must change, too, if they are to stay viable.
5. The firm's organization must be structured to respond to the new work produced by business development. This means not only having the full range of technical skills required for excellent service, but also an organizational structure that permits these skills to be focused on the right problems. In Case one, for example, the firm did not build a structure—one with new partners or a strong middle management—capable of accommodating the additional load created by growth. The one- or two-leader firm is particularly vulnerable today as clients become increasingly demanding of personal and error-free service.
6. Any firm seeking to grow must create a structure that can attract and hold the best available person in every key position. Somehow the principals of the typical architectural firm are going to have to take a lesson from leading attorneys, accountants, advertising agencies, investment bankers, and other service firms. In such firms there is room for more than one "star," and in the best of them each major position is held by a specialist whose reward and status are based more on his contributions to the firm's success than on some arbitrary professional caste system.

   There should be no fear about taking on additional partners, officers, or principals. As service firms in other professions have repeatedly shown, the proper choice of additional partners to fill leadership openings can expand both the financial pie and the quality of the service. Any partner in any category who pulls his or her weight costs nothing.

   Partnerships and other principal ties are primarily business relationships—hopefully, but not necessarily, strengthened by personal ties of friendship and respect. Because they are business relationships, they can be severed with far more ease than most people assume. But these relationships should be made or severed principally for business not personal reasons. When personal jealousies, father-son loyalty, or other emotions interfere in such decisions, the results rarely benefit of any of the parties involved. As a result, one of the primary roles of the leader(s) of a firm must be to minimize the inevitable jealousies and petty personal differences that can sow the seeds of destruction.
7. Probably the most dangerous period for any existing firm occurs during the transition of leadership from the founder(s) to the next generation. It is at this point—more than at any other—that a realistic plan and assessment of strengths and weaknesses must be made. What should be identified are the real holes left by the departing leaders, and the actions necessary to fill these holes.
8. The principle of "why not the best" should be applied to all positions. Failure to weed out dead wood is almost as serious an error as neglecting to keep staff levels closely related to the volume of work available. Given the limited fees which architects receive, it is imperative that funds be spent on productive personnel. This does not mean, however, that a hire-and-fire philosophy should apply. With such policies it is impossible to form the mutual bond of loyalty and respect between principals and staff that is essential to the building and maintenance of a productive, stable staff of quality personnel. It should always be remembered that the best staff have the most options and, without some bond to their present office, will be the first to exercise them.
9. Because salaries constitute almost two-thirds (and the most readily adjustable segment) of most design firms' expenses, they must be the focus of financial control. Most firms—with or without such controls—make money during periods of rapid growth because personnel and other expenses usually do not catch up with volume. With controls applied to personnel, however, the other easy time to make money is when month-to-month volume remains steady and relatively little effort is required to keep all technical personnel billable. Unfortunately, few firms ever enjoy such conditions. Most experience wild swings in volume and need to expend a growing percentage of their resources on securing new work. These conditions, combined with narrow profit margins, leave no room for error or waste.

Now more than ever, it is essential that design firms observe the most basic principles of financial control:

- Above all, a firm must make money if it hopes to grow and prosper.
- To make a profit, the first effort must always be directed to keeping volume and expenses in balance. This requires coordination of business development, project scheduling, and staffing. The closer a firm comes to achieving a consistent balance, the more likely it is to make a profit.
- Financial management must, of necessity, be conservative. Owing to the cyclical nature of the building industry, it is essential that a firm accumulate cash reserves to weather the inevitable crises. There is no room for "big shot-itis" that wastes the firm's (and its creditors') resources on personal expenses. Too many people are hurt by such actions.
- Effective financial management is impossible without some formal controls on volume, expenses, and cash flow.

Of course, even the strictest adherence to all of the above precepts cannot guarantee that a firm will either achieve success or avoid failure. After all, management alone is hardly the raison d'être of a design firm. As the case studies illustrate, a weakness in any management area can cause failure, but only superior professional capability can ensure success.

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Statutes of limitations for claims against architects

In the past 20 years almost all states have enacted a special statute of limitations for claims against architects and others involved with the design and construction of "improvements to real property" (see *Statutes of Limitation: an overview,* RECORD, August 1975, page 49). Many of these statutes have required extensive legal analysis when challenged in the courts. Although often helpful to an architect's defense, statute of limitations issues can add considerably to the complexity of a professional liability claim. A recent Federal court decision illustrates how differences between Federal and state courts and between the laws of various jurisdictions can affect the outcome of a case.

by Arthur Kornblut, Esq.

An often confusing aspect of the American judicial system is the relationship between state and Federal courts, each with its own set of procedures and legal precedents. Because differences exist between the laws of various states, and between state and Federal law, it is not uncommon for a plaintiff to "forum shop"—to seek a court having jurisdiction over the case which might give it more favorable treatment than some other court. This maneuvering can occur when a statute of limitations in one state is longer than in another, and the claim would be barred if brought in the latter state.

This situation arose recently in a case involving an architect. In *Georgetown College* v. *Madden et al.* (1980), a college in the District of Columbia had constructed a dormitory between 1963 and 1966. The surface brick spalled, cracked, and bulged, resulting in a lawsuit being filed in August 1977 against the architects, contractors and others.

Because of the 11-year gap between completion of construction and the filing of the lawsuit, the college sued in the U.S. District Court in Maryland in an attempt to take advantage of a long statute of limitations. The State of Maryland had enacted a special 20-year statute of limitations in 1973 for "defective" improvements to real property. Congress, however, had enacted a somewhat similar statute in 1972 for the District of Columbia—but with a 10-year limitation period. The architects, claiming that D. C. law applied to the case, promptly moved to dismiss the suit because it was not brought within the 10-year period.

The court began its analysis by noting that the conflicts of laws rules of Maryland would apply because it was the "forum" state—the state in which this court was located. However, the Maryland rules require the court to apply the substantive law of the place in which the injury had occurred. The court, therefore, had to look to the substantive law of the District of Columbia.

Recognizing the 10-year difference between the Maryland and D. C. statutes of limitations, the court articulated three issues: 1) is the D. C. statute substantive or procedural law; 2) if it is substantive, is it applicable to this case; and 3) is the statute constitutional? Despite the highly legalistic nature of these issues, their resolution was very important for the architects in this case as well as for architects generally who are concerned about the validity of these statutes.

The court first dealt with the issue of whether the D.C. statute of limitations is substantive or procedural. It noted that statutes of limitations normally are considered to be procedural, but there is an exception to this rule. Relying on this exception, the court determined that these special statutes of limitations grant the defendants an *immunity* from suit rather than simply barring the plaintiff's right to bring suit. The court said: "Immunity from suit is substantive law for choice of law purposes." Under conflicts of laws rules, the court concluded that the Maryland courts would apply the D. C. 10-year statute to this case.

The college contended that even if the D. C. statute applied, it would not bar the lawsuit because the college was seeking damages for the design and construction deficiencies themselves rather than for "injuries" "resulting from" those deficiencies; that the injury was suffered when the deficiencies were incorporated into the building (during the 10-year period) even though not discovered until later; and that the college's cause of action was based on contract and thus not covered by the statute.

The court quickly disposed of these arguments. It said the college's claims were precisely of the type encompassed by the District of Columbia statute, irrespective of whether the action is based on a contract between the owner and the architects. The court refused to create a "discovery" rule to enable the owner to bring a malpractice action after the running out of the statute of limitations. The court said: "If the mere incorporation of a defect constitutes an injury for which plaintiff need not claim within the time limits [of the statute], even though the resulting damage is not discovered until many years after the ten-year period . . . then the whole purpose of [the statute] and similar statutes—to provide builders and design professionals with a finite period of risk for any one project—would be vitiated."

The court likewise dismissed the owner's argument that the suit was based on contract and thus not within the purview of the statute. The statute would be meaningless, the court said, if the mere existence of a contract were equivalent to a suit "based on contract" because virtually all relationships between owners and architects are founded on express or implied contracts.

Having found the District of Columbia 10-year statute applicable to the case, the court then shifted to the constitutional issue raised by the owner. The college claimed the law violated the equal protection principles embodied in the U. S. Constitution because it gave special protection to architects and other design professionals. The court recognized that several state courts had ruled that similar statutes violated their state constitutions on equal protection grounds. However, Federal courts that have considered such statutes in the context of Federal constitutional attack have rejected these challenges. In 1971, the U. S. Supreme Court specifically rejected an appeal from the Supreme Court of Arkansas which attacked that state's special statute on equal protection grounds. It dismissed the case "for want of a substantial Federal question." Lower Federal courts are bound by the precedent of this type of dismissal. The architects' motion for summary judgment was granted.

More and more courts are beginning to recognize the inherent fairness in these statutes of limitations to alleviate the otherwise never-ending threat of liability hanging over architects and others simply because they were involved with a project many years earlier in their careers.

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

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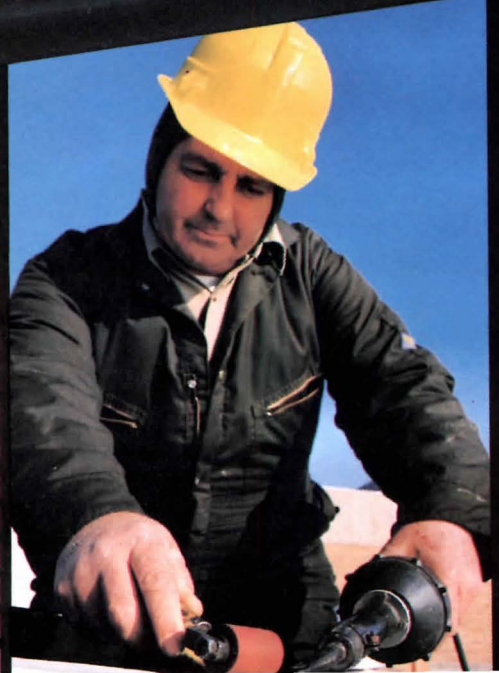

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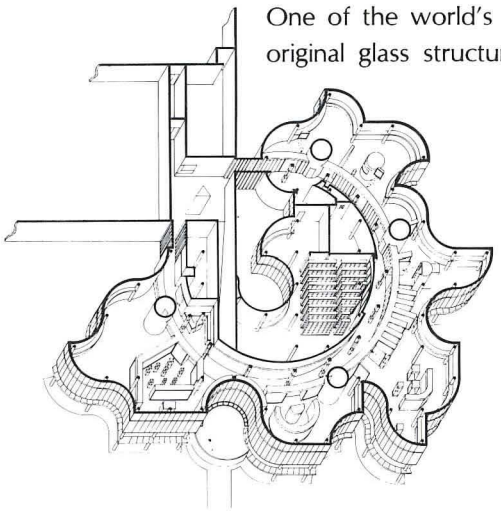
Reflections on a glass museum



One of the world's great collections of the glassmaker's art has been installed in a strikingly original glass structure. The Corning Museum of Glass in Corning, New York, designed by architect Gunnar Birkerts, is an impressive demonstration of the properties of glass. From a powerful scheme that arranges the displays around the library like the petals of a flower, Birkerts has created an environment in which the collection constitutes the principal form and internal source of light, and the undulating surfaces of the building play a vital supporting role, reflecting and transmitting light everywhere. —*Roger Yee*

The sun appears to dance across the fascia of a remarkable new building in Corning, New York, highlighting a billowing curve or throwing a recessed cove into deep shadow. At night, the brilliant prism of the day becomes a lustrous pearl when the lights of the city ricochet off its many facets. Light seems irresistibly drawn to the Corning Museum of Glass by architect Gunnar Birkerts.

Within the undulating glass walls suspended over a forest of concrete columns is a well-ordered 47,483-square-foot building. The two-story structure that resembles a flower in plan is also the concise statement of the needs of a client that knew exactly what it wanted. Thomas S. Buechner, president and director of the Museum, expressed the desire for a building that unfolded like the petals of a flower, one for each major period of glassmaking, around a center whose pollen was the library. It is Birkerts's gift as a form maker to have transformed this vivid concept into a striking visual solution.

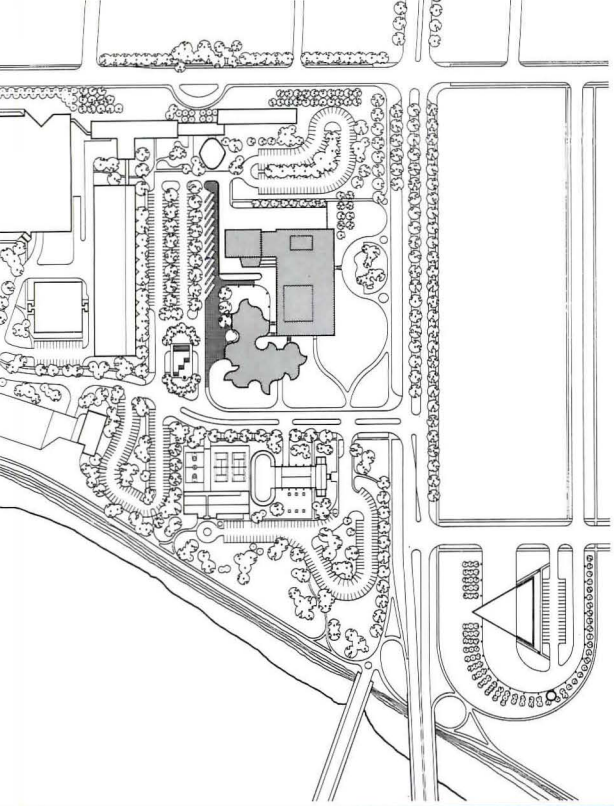
Birkerts's Museum is the second home for a unique institution. The original Museum of Glass was incorporated within the Corning Glass Center, designed by Harrison, Abramovitz & Abbe in 1951, which included a Hall of Science and Industry, the Steuben factory, and recreational facilities for employees of the nearby Corning Glass Works. As a separate legal entity dedicated to the art and history of glassmaking, the Museum has grown steadily in size and stature. A 1951 collection of 2,206 objects and a library of 1,493 books serving an attendance of 320,303 has matured into a collection of 19,177 objects and a library of 24,260 books with a total year-to-date attendance as of August 1979 of nearly 17 million.

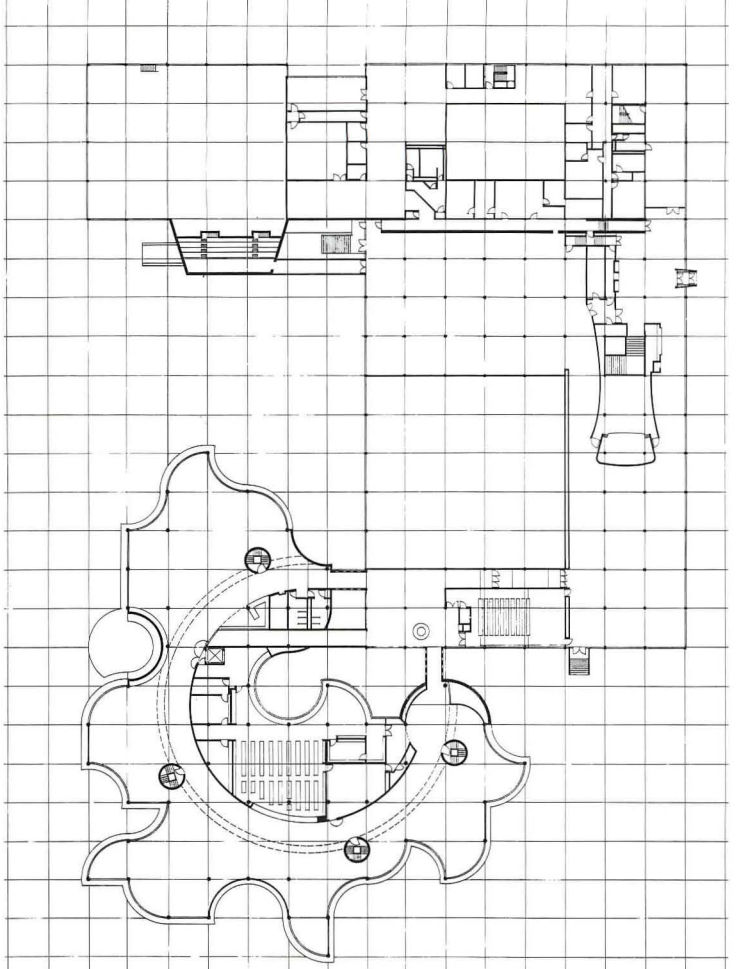
Like many another institution, the Museum proceeded to "burst at the seams," in the words of its director. Additional space was found both on premises by exhausting all available options and off premises by appropriating whatever was expedient. As Buechner recalled, some 3,500 years of glassmaking were compressed into "so much bric-a-brac," and many visitors confused the collection for a "huge product line of replicas" whose accession numbers were "prices."

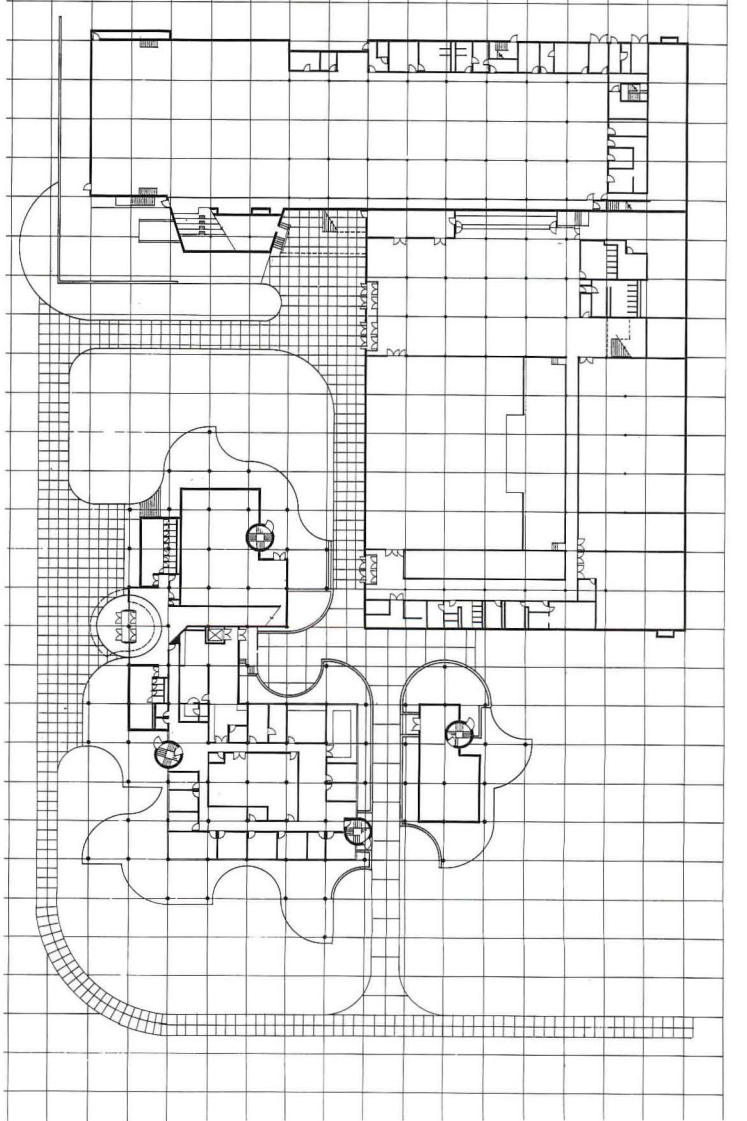
Push came to shove when Hurricane Agnes flooded the Chemung River Valley in June, 1972. The river overflowed, and the Glass Center, situated on the flood plain close by its north bank, was inundated by 60 inches of water. A new facility on higher ground was imperative.

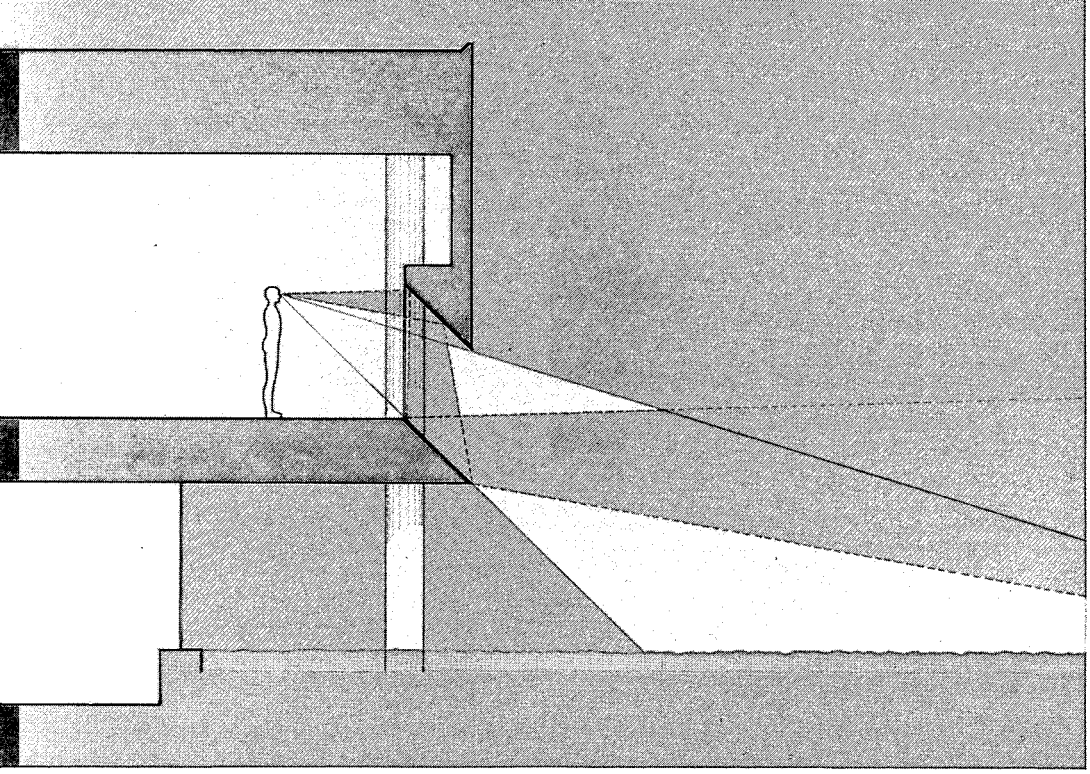
Five basic ideas set forth by a museum planning team informed the over-all design. First, the galleries would be experienced chronologically to address both the technical and the artistic evolution of glassmaking. Central to this evolution would be the recorded history of glassmaking as embodied in the library, making it the literal as well as metaphoric core of the building.

Since the Museum's visitors range from families hurrying with young children to scholars and connoisseurs with time on their hands, the displays would present the entire history of glass at multiple levels of compre-



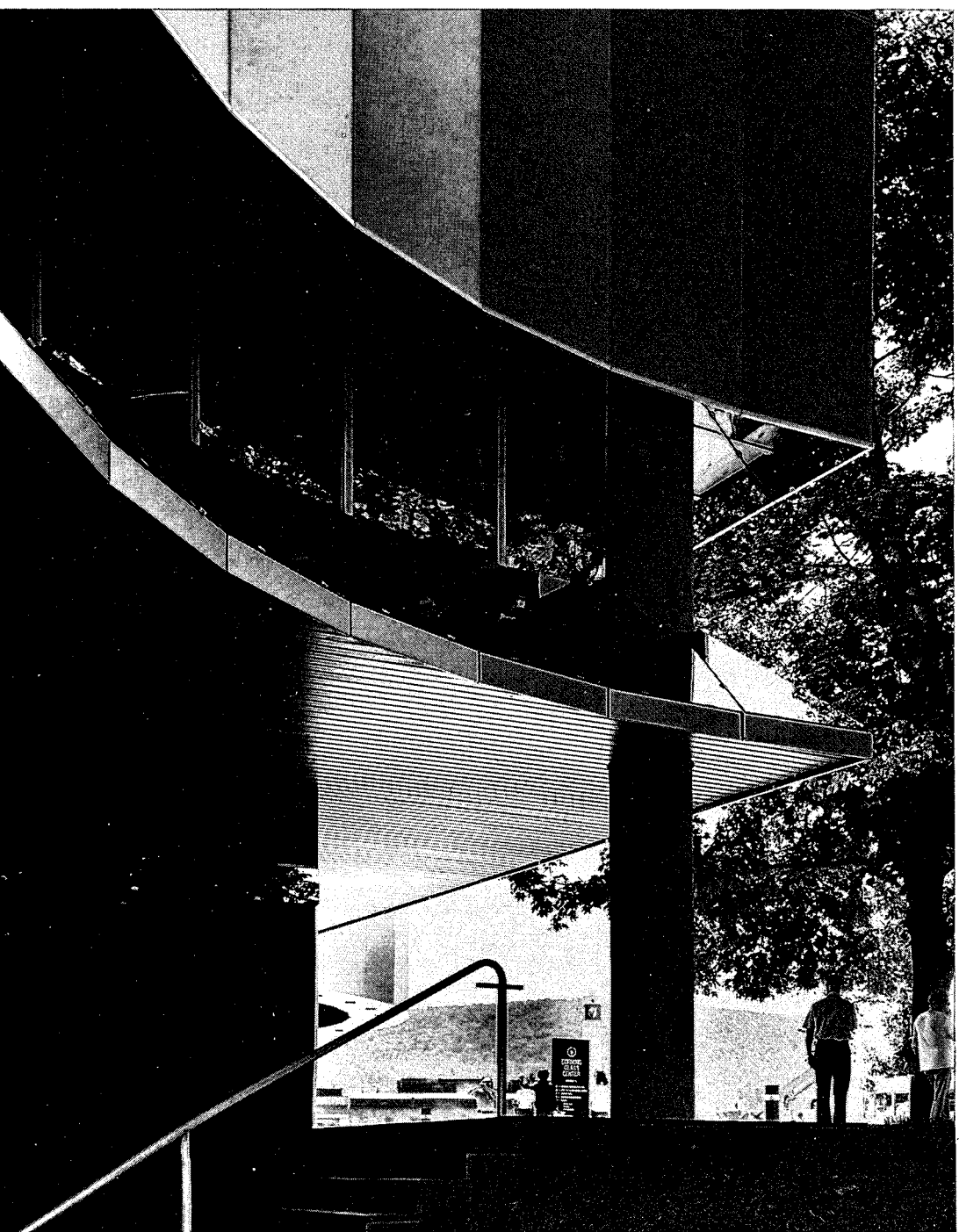






CORNING GLASS MUSEUM

Gunnar Birkerts's careful studies for the Corning Glass Museum included an inquiry into the way light would penetrate the glass curtain wall. The section (left) shows a limited field of vision that cuts off the sun's rays and simultaneously reflects distant views inside. Birkerts refers to this detail as a "periscope" (below left). Other signs of thoughtful detailing are the bridge to the Glass Center (opposite), and the soffit under the main entrance (below right).



hension. The factories, laboratories, and offices nearby would be visible from within to communicate the continuity of this history. Lastly, the Museum would look distinctly different from the Glass Works as a reminder of its separate legal status.

From a program developed around these ideas Birkerts created a powerful scheme. The galleries were placed on a second floor level, atop administrative offices and safely beyond the reach of the flood plain (see page 69). Visitors begin their tour of the Glass Center at the ground floor entrance to the Museum, ascending a long ramp that ends at the crossroad between the Glass Center and the Museum (see page 73). They can proceed from here into the Museum galleries, arrayed in a broad circle around the library, or into the Glass Center.

A tour of the galleries reveals an interior like the growth rings of a tree, with four layers of display that increase in the density of objects shown as they move from the center. The first objects encountered are contained within 12 "masterpiece columns" ranked in stately cadence along the circular corridor or Grand Gallery. Each column houses a superior achievement in the glassmaking of its time.

A visitor having 20 minutes to spend can see these 12 columns and peer into the seven doorways leading from the Grand Galley to the display galleries representing the great ages of glassmaking. Of these ages, namely Egyptian-Mesopotamian, 1500 B.C.-A.D. 100; Roman, A.D. 100-600; Islamic, A.D. 600-1500; and the periods 1400-1800; 1800-1850; 1850-1900; and the 20th century, four feature short films. The columns and films form the first layer of display.

The second layer occurs along the outer wall of the Grand Gallery near each of the columns, where display cases house approximately 130 additional objects that illuminate the periods exemplified by the masterpieces (see page 72). Here are most of the Museum's prizes. Visitors with perhaps 40 minutes available can readily glance at all of them and

CORNING GLASS MUSEUM

Birkerts's Museum interiors respond closely to their purposes. Library readers are seated along a counter that gracefully follows the perimeter (left). Galleries contrast the curving outer wall with the rectilinear display cases to dramatize the collection (below). Visitors at the top of the entrance ramp enter an ethereal world of glass in the Glass Center remodeled by Birkerts (opposite). The sculpture is by artists Stanislav Libenský and Jaroslava Brychtová.

the central displays in each of the seven galleries.

The third and fourth layers fill the seven galleries within the great petal-like forms. Besides the central displays, the third layer comprises the objects displayed in window cases built in the building's outer wall. The fourth layer, including some 17,000 objects, is stored within study cases installed behind the Grand Gallery wall. Visitors need a good 90 minutes to cover the third layer. The study cases are clearly for serious students.

Impressive though the collection is, it is immeasurably enhanced by the building and its interior design. Birkerts and Paul Seiz, designer of the exhibition, have created a dark, mysterious environment that is interrupted at critical points by flashes of reflected light from the objects themselves in their crystalline display cases. In its handling of space and light, the Museum feels surprisingly Baroque in spirit.

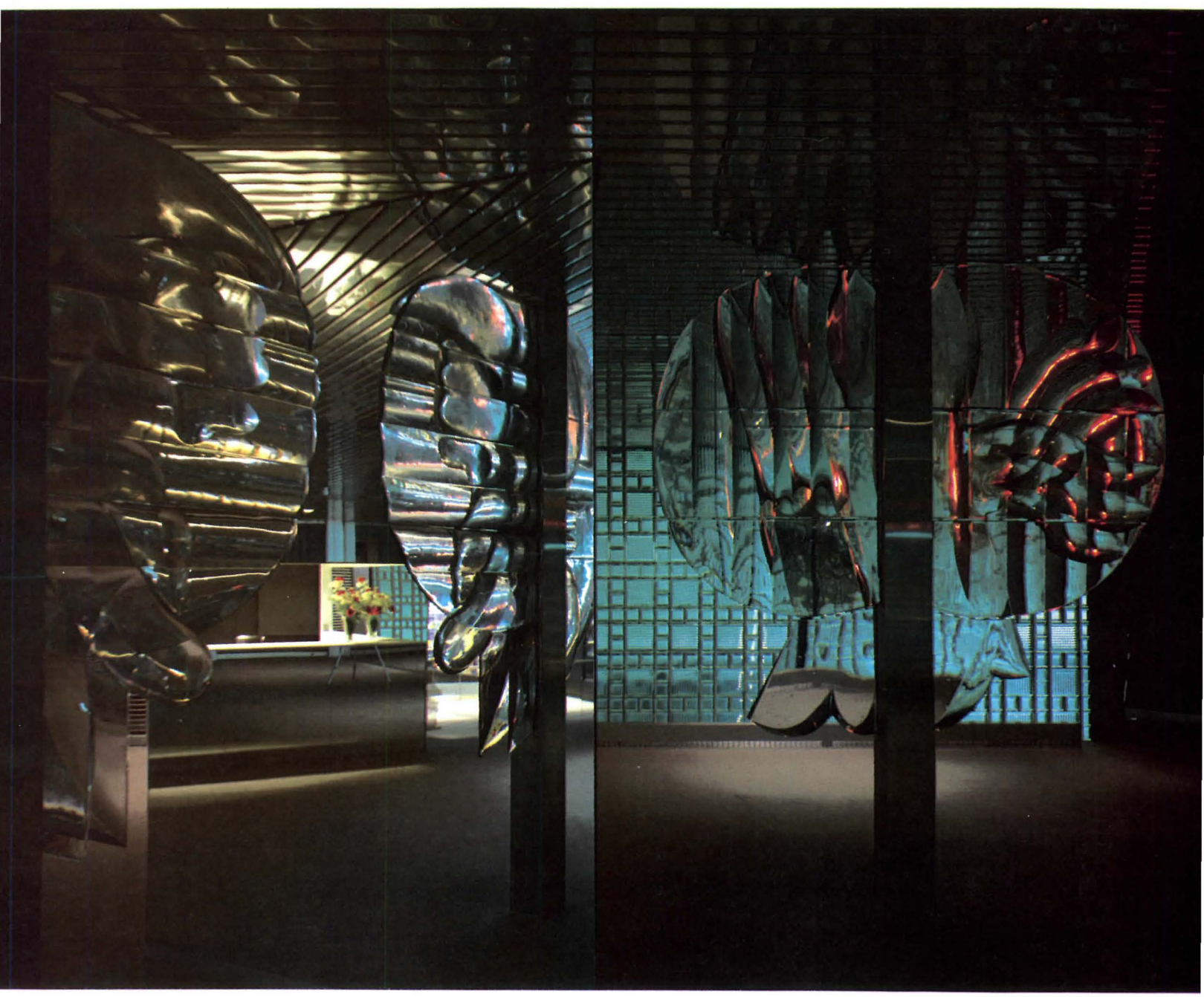
Yet even in its most exuberant flourishes, the Museum is decidely rational. The over-all flower-like form corresponds precisely to the spatial needs of the collection. Each petal is sized according to its quantity of objects.

Likewise, the design of the curtain wall reconciles both the internal need to conserve energy while admitting a limited amount of light and view, and the external need to enclose the structure in a form symbolic of the Museum's unique mission. A typical section of the glass curtain wall is rendered opaque with a coating of stainless steel foil on textured glass to deflect the sun's rays.

To back-light the perimeter display cases and to maintain visual continuity with the Corning complex, Birkerts opens the wall just enough to create what he calls a "periscope." This continuous horizontal reveal, consisting of a vertical glass plane from which two mirrored glass surfaces slant down and away at a 45-degree angle (see page 70), permits the viewer to look directly outside in a narrow field of vision while clipping off the sun. The viewer sees more than this, however. Since the glass overhang is mirrored, it reflects distant views into the building. The cumulative effect of these compound views is dazzling and kaleidoscopic.

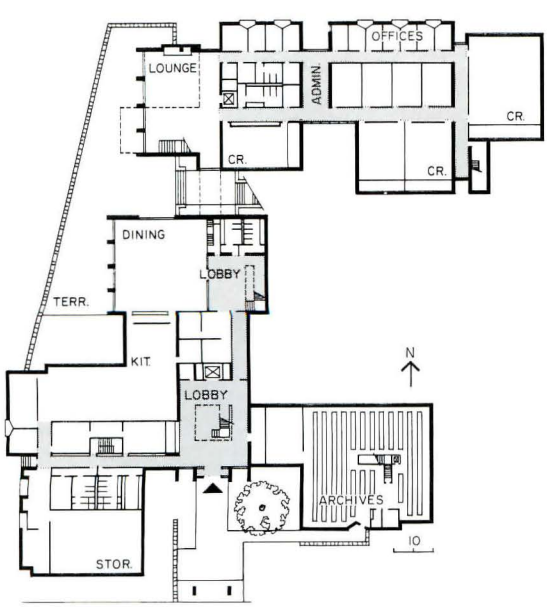
It would be impossible to mistake the Museum for the orthogonal shapes of its neighbors in the complex. Birkerts's highly original conceptual solution transcends the current soul-searchings of the Modern school; form and function are inseparable here. Birkerts has held a glass to our eyes. We see through it to the world beyond—and ourselves reflected in it.

CORNING MUSEUM OF GLASS, Corning, New York. Owner: *Corning Glass Works.* Architects: *Gunnar Birkerts and Associates—Charles Fleckenstein, principal-in-charge; Anthony Cholz, Kenneth Kemp, William Wolfe, project team; Barbara Bos, interior design.* Engineers: *Skilling, Helle, Christiansen, Robertson* (structural); *H.C. Nutting* (foundation); *Syska & Hennessy* (mechanical, electrical, lighting). Landscape architect: *Peter G. Rolland.* Exhibit design and graphics: *Paul Seiz.* Cost consultant: *Wolf & Co.* Contractor: *McGuire & Bennett.*



IBM CAMPUS FOI

Norman McGrath photos



MAIN BUILDING GROUND FLOOR

MAIN BUILDING FIRST FLOOR

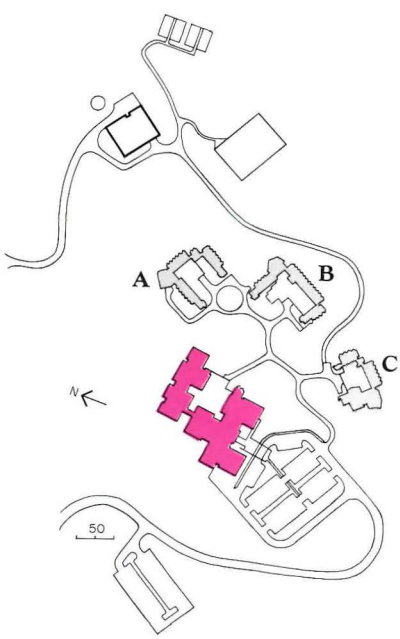
The largest structure within this five-building campus is the main educational center (photos and plans above, left and opposite page), three sides of which surround a central courtyard. The sculpture is by Noguchi. The administration offices and main lobby are adjacent to the entrance portico (photo right). Parking lots for the students of management are located on the lower portion of the site. A glass-enclosed pedestrian bridge (top photo, far right) leads from this administration section with its secondary lobby (middle photo, far right) and dining hall (third photo from top, far right), to the classrooms. Where possible, views are oriented to the courtyard from the perimeter corridors.

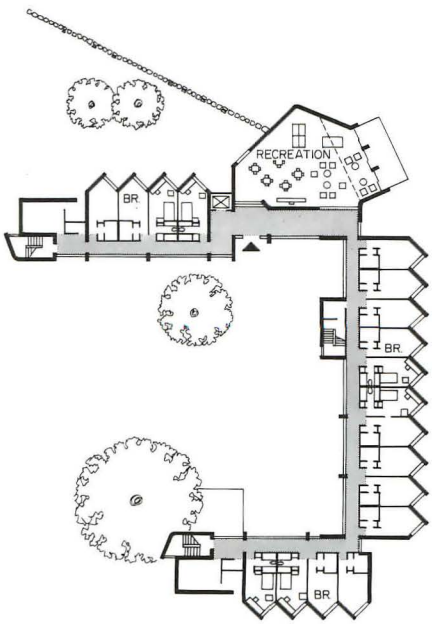
BACK-TO-SCHOOL MANAGERS

Nestled into a densely wooded 26-acre site in New York State's Westchester County, 35 miles north of New York City, this IBM Management Development Center does not express its corporate identity as such but instead appears unassuming, because of its low-profile, campus-like design. "The major goal," says Alan Goldberg, principal-in-charge for Eliot Noyes and Associates, "was to create an environment where teaching and living would be informal, in a place totally different from the usual high-sheen office building." The design of this collection of small buildings was shaped by the architects' wish to achieve a suburban scale. Native fieldstone, taken from the old boundary walls of former farmland and hand laid in a random rubble pattern gives the complex an almost rustic quality.

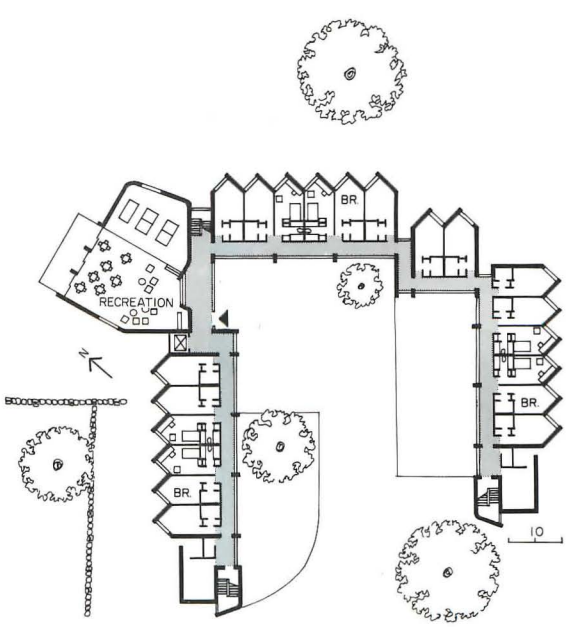
The serene outward appearance of this campus belies the bustling activities within. The building group consists of the main administration/education building (photos and plans left, right and below); three residential units (overleaf), and a gymnasium (part of a recreational complex, which includes outdoor tennis and paddle courts, jogging trails and picnic areas). While the buildings' configurations were influenced by the shape and contours of the site, and relate to the surrounding woods and meadows, the individual elements were also arranged in small units to diminish the apparent size and bulk of the complex. By this means the architects have created a business training facility with the atmosphere of a small, friendly—and exceedingly handsome—college.

IBM MANAGEMENT DEVELOPMENT CENTER, Armonk, New York. Owner: *International Business Machines Corporation.* Architects: *Eliot Noyes and Associates (now Alan Goldberg/Eliot Noyes Associates)—Alan Goldberg, principal-in-charge; Boris Pogacnik, project architect for documents; John Hordyk, field architect; Molly Noyes, interior furnishings.* Engineers: *Arne Thune Consulting Engineers* (structural); *John L. Altieri Consulting Engineers* (mechanical/electrical). Consultants: *Sylvan R. Shemitz and Associates, Inc.* (lighting); *Wolf and Company* (cost); *Jerome Menell Associates* (audio-visual); *Philip C. Antico* (food service). Landscape architects: *Peter G. Rolland and Associates.* Art: *Isamu Noguchi* (courtyard sculpture). General contractor: *E.W. Howell Co.* Stonework: *Bergen Bluestone Company.*



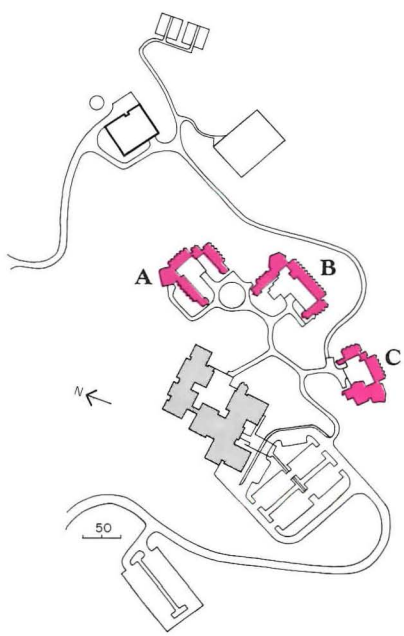


MIDDLE MANAGEMENT HOUSING FIRST FLOOR PLAN B



NEW MANAGEMENT HOUSING FIRST FLOOR PLAN A

Three residential units (photos and plans this and opposite page) have quite a different character from the main building (shown on preceding pages). The unit that houses middle management students (photo left, floor plan far left, and building designated "B" on site plan) is typical—U-shaped with a large courtyard entrance oriented towards the main building. All bedrooms are located on the non-courtyard elevations, angled at 45 degrees for privacy while keeping the view (photo above). This floor plan, varied slightly in other housing units, is easily stacked, as seen in the new management quarters (photo below, floor plan opposite page and "A" on site plan). The Executive Development Center ("C" on site plan, exterior not shown) is like the other residences but with an additional conference room and lounge (photos right).

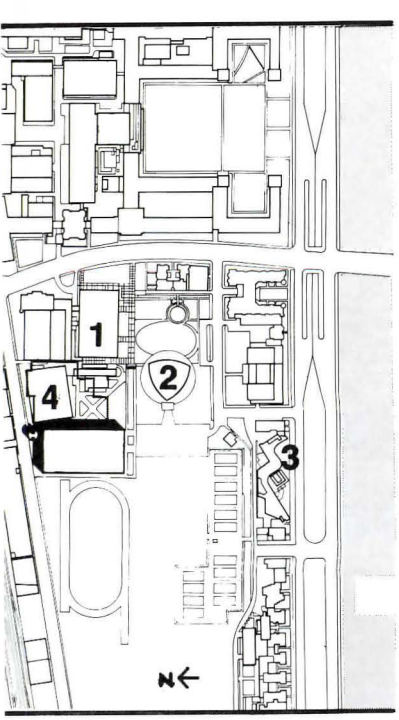


NEW LANDMARK FOR M.I.T. DAVIS, BRODY & ASSOCIATES' HOCKEY RINK AND FIELD HOUSE

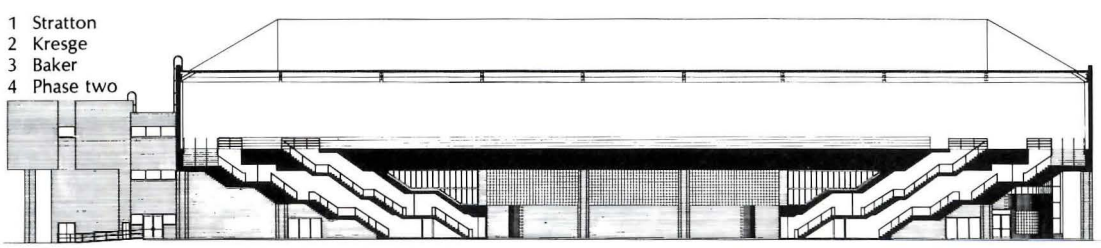
It would be difficult to find a denser concentration of landmarks of modern architecture than exists at M.I.T. In the background of the photo (bottom right) appear I.M. Pei and Associates' Earth Sciences tower (1963) and nearby Eero Saarinen's domed Kresge Auditorium (1955). As seen in the site plan, the immediate campus includes Alvar Aalto's Baker dormitories (1947) and Eduardo Catalano's Stratton student center (1965). Each of the buildings was on the leading edge of architectural thought at the time that it was built—just as the new athletic facility is now, precisely because of its significant difference from them. The older landmarks were conceived as semi-isolated events, but the Davis, Brody building expresses the current interest in paying attention to context.

First the architects placed the building in a way which enhances the setting for Saarinen's auditorium by completing the quadrangle that frames it (as can be seen in the site plan). Then they considered massing and scale. "We worked the program and context from opposite ends of the design process," says Lou Davis, referring to his concern for the over-all campus form on the one hand and for meeting the client's program on the other. "Since the program called for nearly 100,000 square feet of space with limited fenestration, there was every opportunity to create a scaleless box." But by treating each facade differently, the archi-

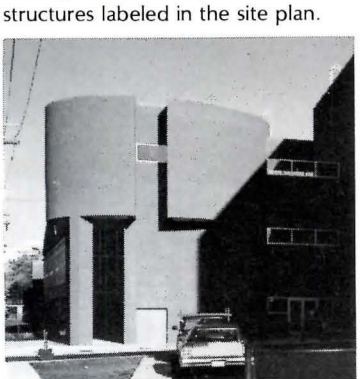
Nathaniel Lieberman photos

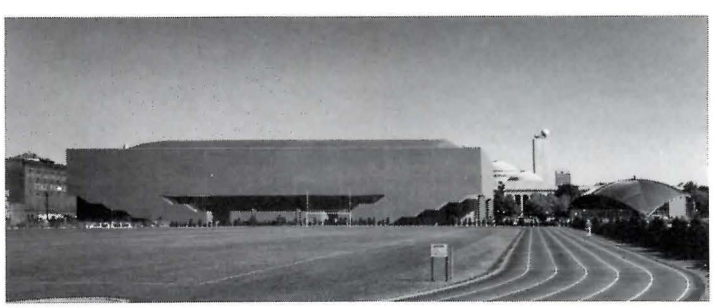


1 Stratton
2 Kresge
3 Baker
4 Phase two



The monumentality of the field side elevation is necessary but deceptive. The building with very different sides really plays a sympathetic role in relating to the many other notable structures labeled in the site plan.

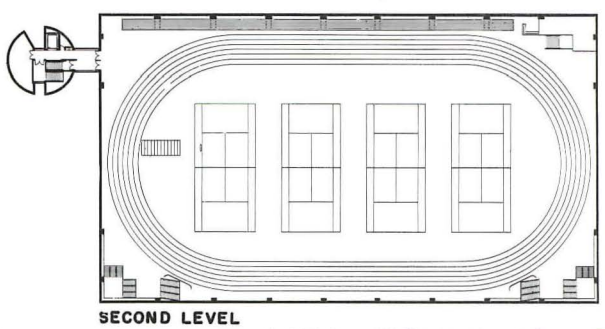




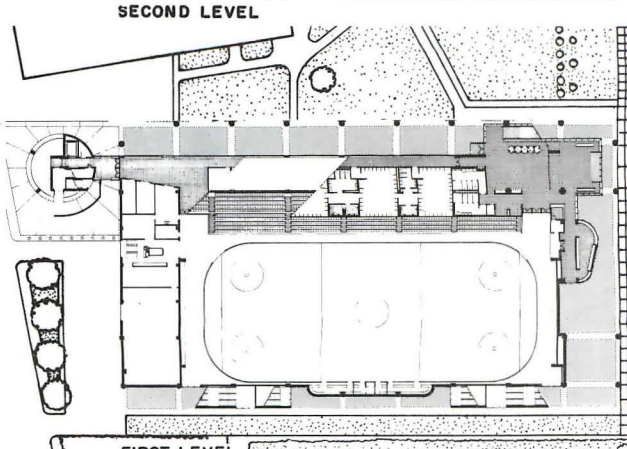
tects have managed to bring their building into scale with Kresge and Stratton. The small scale of the projecting round tower (opposite page, bottom) relates well to the residential street on the north. The heroic facade, which forms a strong edge to the open playing fields, incorporates a pair of dramatic stairs that complement those of Aalto's adjacent dormitories.

The architects chose brick cladding for this athletic building because it has been widely used on the buildings nearby. Selecting the brick that Saarinen used for the base of his auditorium, they carefully tested its compatibility with the color and texture of each of the surrounding brick buildings. Twelve-inch bricks were used throughout except at the columns where eight-inch bricks (producing a greater area of light mortar) give a subtle gradation, and express the structural module. The steel-frame building has two main levels. The larger column-free floor area of the fieldhouse was placed on the second floor because the long span of the overhead structure would thereby carry only roof loads. The space, which measures 170 feet by 320 feet, accommodates four basketball courts, field events like track, shotput, pole vault, long and high jump, and even a kind of no-fly-ball baseball.

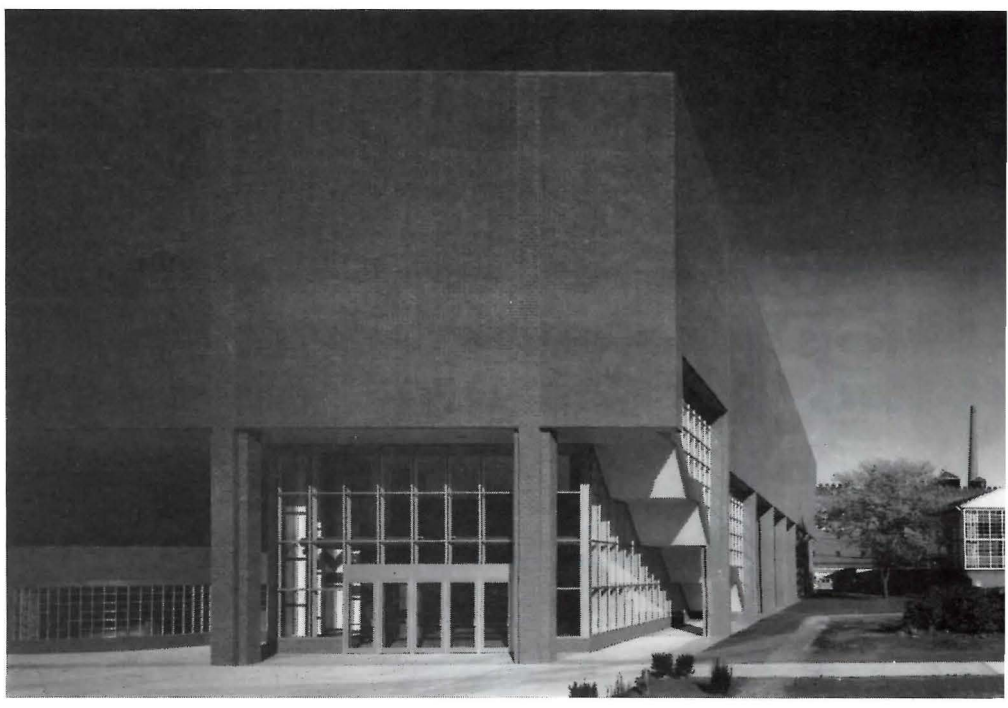
A skating rink, lobbies and dressing rooms are on the first level. The rink measures 110 feet by 200 feet, and is 20 feet high.



SECOND LEVEL



The facade oriented toward the Stratton student center (top photos) is designed to match Stratton's proportions, and to receive the next phase of construction (recessed brick walls on far right). A different facade (photo right) faces Kresge. The enormous second-floor fieldhouse (photo above) is windowless because of program requirements.

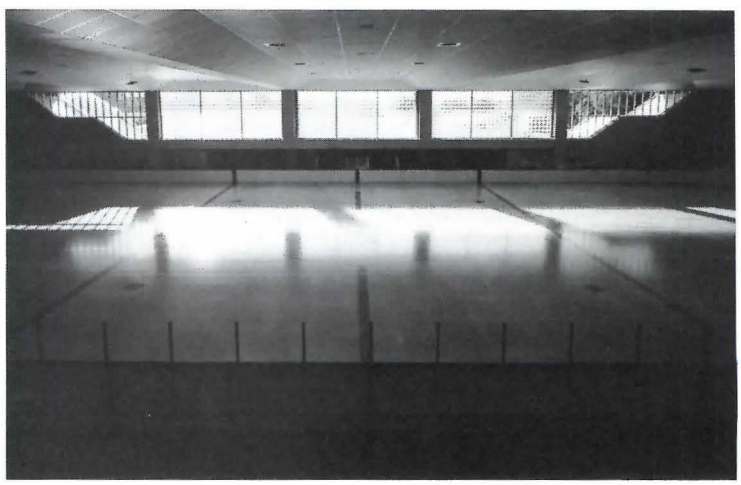


As this space is also used for tennis courts and such events as commencement exercises, it requires extreme flexibility. As neither of the major spaces will be used to capacity at the same time, the greater volume of air conditioning can be shifted to the area of maximum use. The next phase of construction will fill in part of the area between the current $6.6-million building and Stratton.

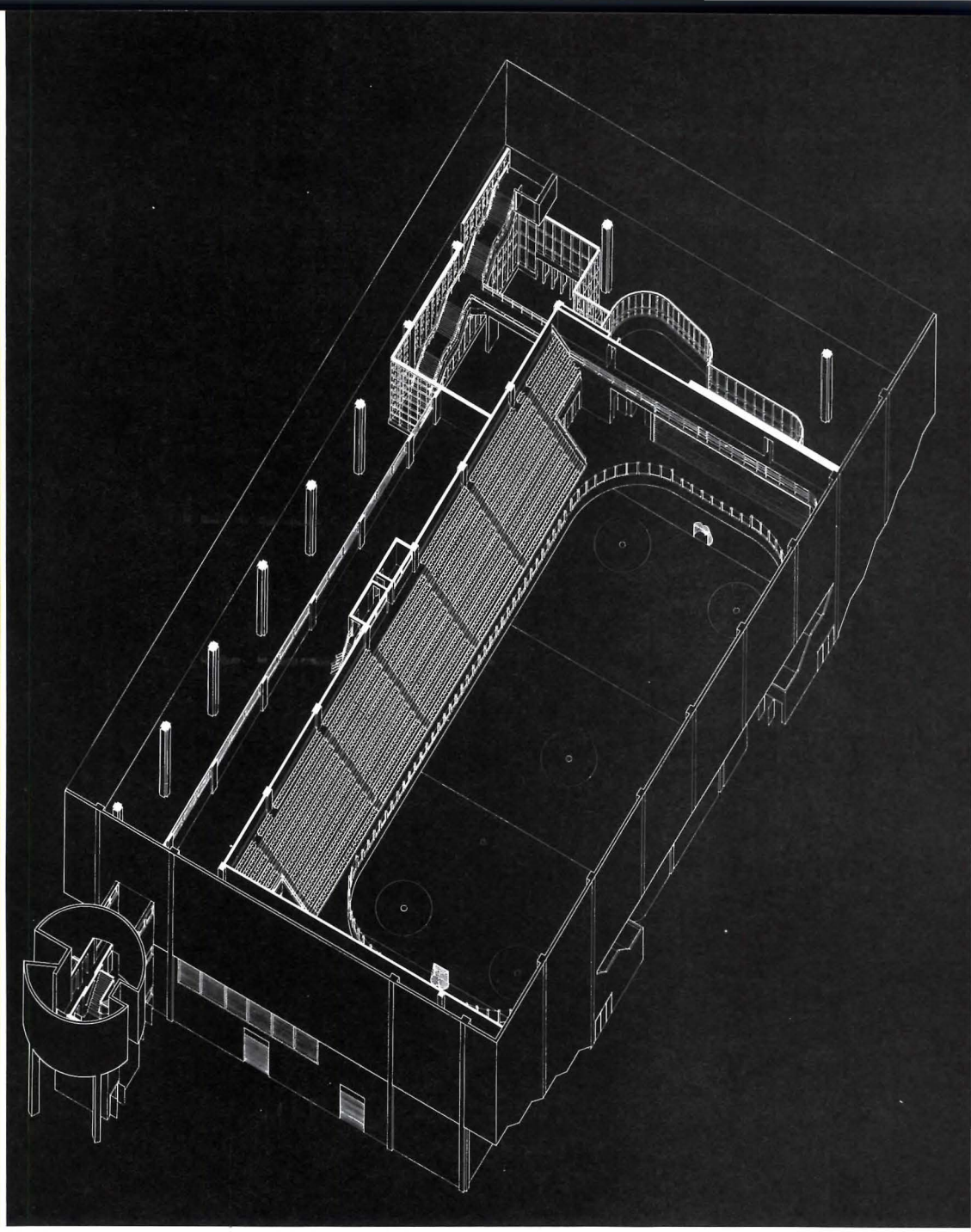
Architect Harry Portnoy directs new development for M.I.T. and served as the client for Davis, Brody & Associates. He is especially pleased with Davis, Brody's ability to fulfill the program, yet remain sensitive to the over-all campus—which is of course one of his strong concerns. He adds that the new facility is a winner in more ways than one. M.I.T. won its first home game in its new athletic quarters. Since M.I.T. is scarcely generous with athletic scholarships, could it have been the building? He thinks so.

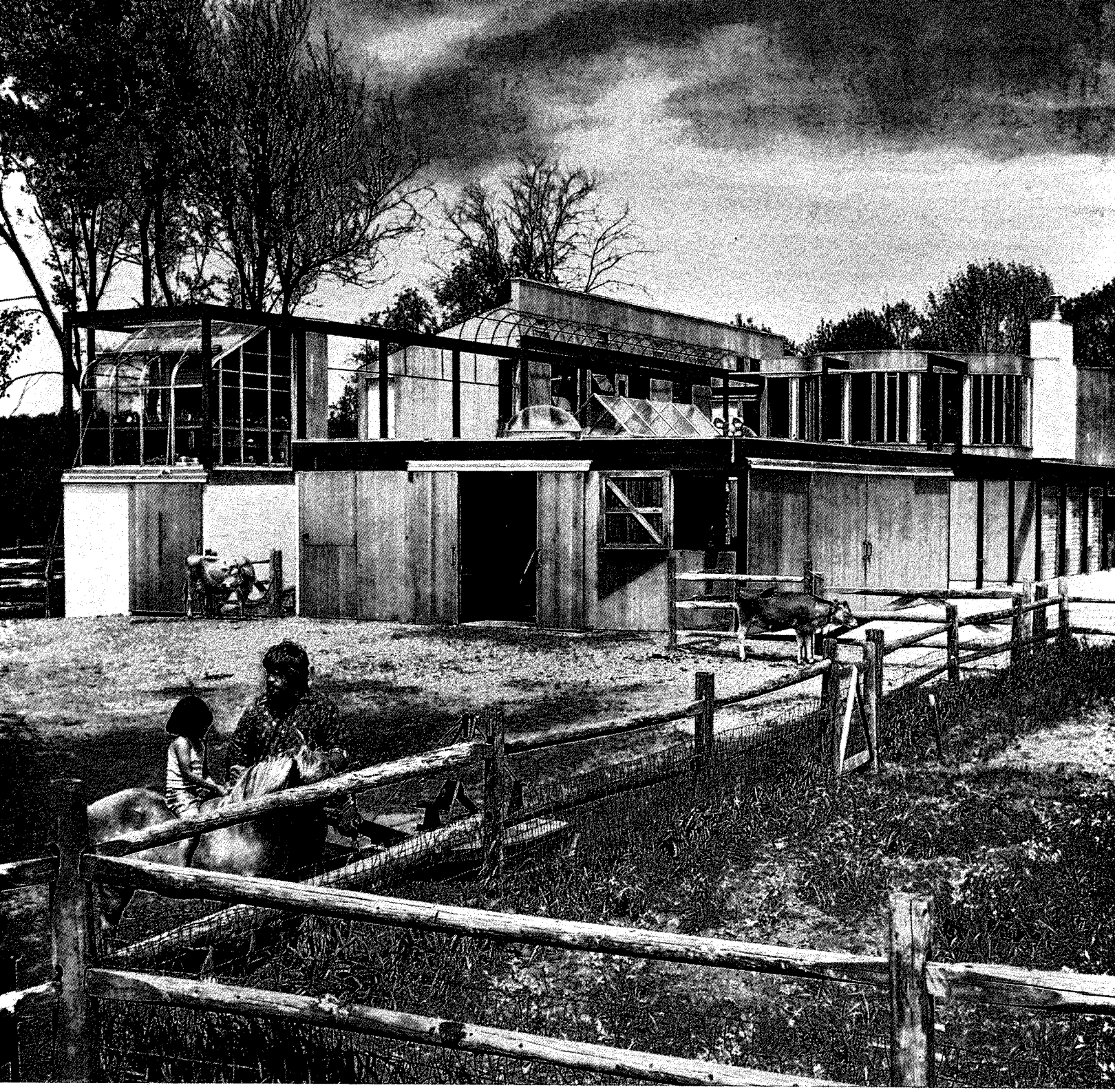
—Charles K. Hoyt

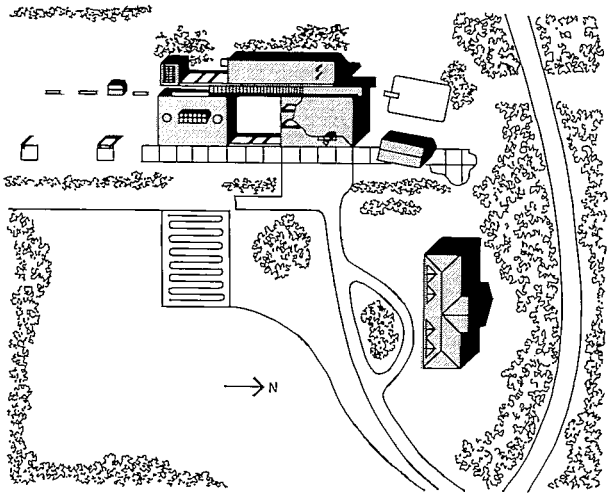
M.I.T. ATHLETIC FACILITIES, PHASE I, Cambridge, Massachusetts. Architects: *Davis, Brody & Associates—project team: Anthony Louvis, Alec Purves, Ian Ferguson, Wendy Main Anderson.* Engineers: *Geiger Berger Asociates, P.C.* (structural); *Segner and Dalton, P.C.* (mechanical/electrical). Landscape architects: *Peter G. Rolland & Associates.* General contractor: *Turner Construction Company.*



The ice skating rink is adaptable to many different functions, and replaces the previous outdoor facility. The projecting form of the stairs in the glass-walled entrance lobby echoes the sculptural solid forms on the building's opposite side (see exterior views on previous pages).

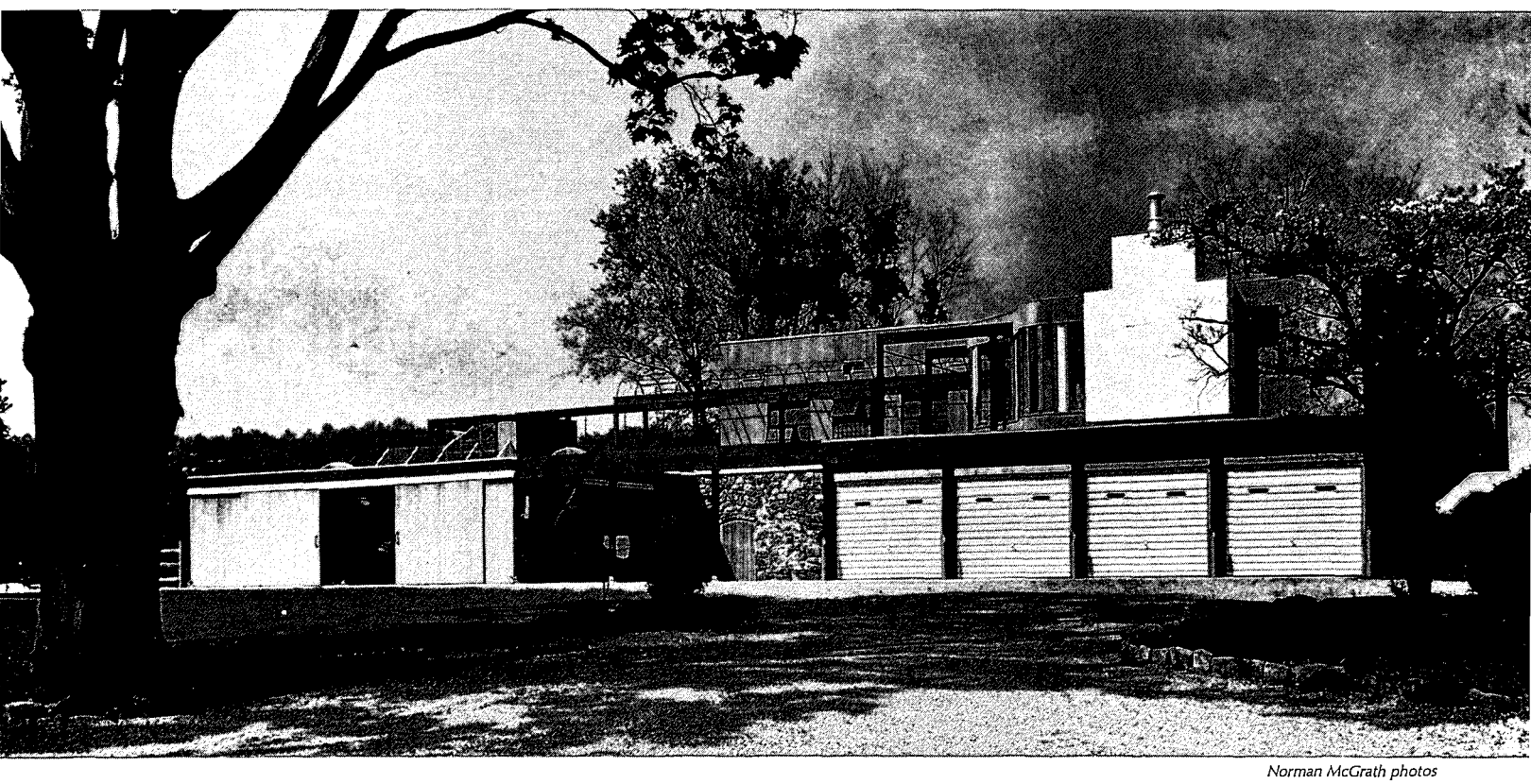




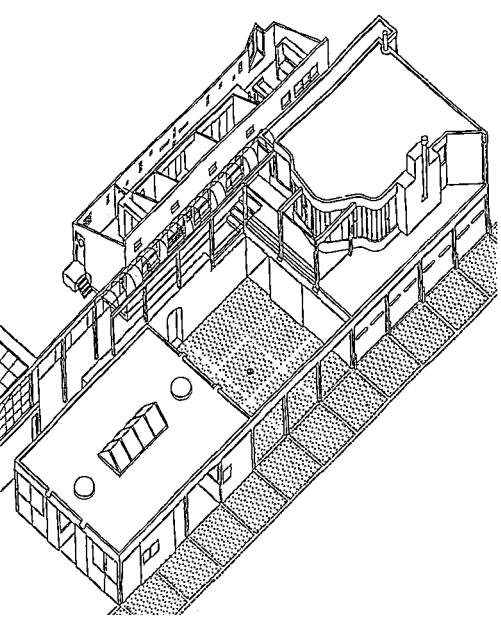


Mixed-use down on the farm: a barn-house which shelters both animals and people

Architects Paul Segal Associates took an unusual program calling for a barn, a garage, and a house for a caretaker and his family and integrated it into the ground slope of a former barn to create a multi-purpose structure that clearly separates yet links the living spaces and the maintenance and stable areas. The living quarters on the upper level are above the garage and look out over the scenic countryside. The stables on the ground level are easily accessible but distinct from the house. —*Katy Koontz*



Norman McGrath photos



This house, built on the site of the farm's original barn that burned down, fits neatly into this quiet, rural section of Westchester. It sits, with pasture bordering one side and forest wrapping around the rest (see site plan, far left), south of a pool house and within view of the owner's three-story colonial home.

The architects used the existing stone retaining wall—the only thing left after the fire—as a spine to link the living areas to the barn (see plan overleaf). The section of the building to the east of the wall—the stables and garage on the lower level, and living/dining area on the upper level is built of heavy wood posts and beams. The west wing—the bedrooms and the kitchens—are stud wall construction. The entire house is sheathed in vertical wood siding.

The lower level is used exclusively for farm maintenance with a four-vehicle garage and four-stall stable separated by a cobblestone courtyard (see isometric, left). The cobblestones blend well with the exposed retaining wall at the back of the court and provide an interesting contrast to the surrounding natural wood walls. The stable roof is low, keeping the view from the living room unobstructed and also permitting the low winter sun to heat the room. Only three projections—one tent-shaped skylight and two dome-shaped ones—pop above the surface of the roof.

The small, square greenhouse (top pho-

tos) rises like a tower above the hay storage area. It is reached by a stair adjoining the sloping, gravel walkway under an arched trellis (above) leading from the living room.

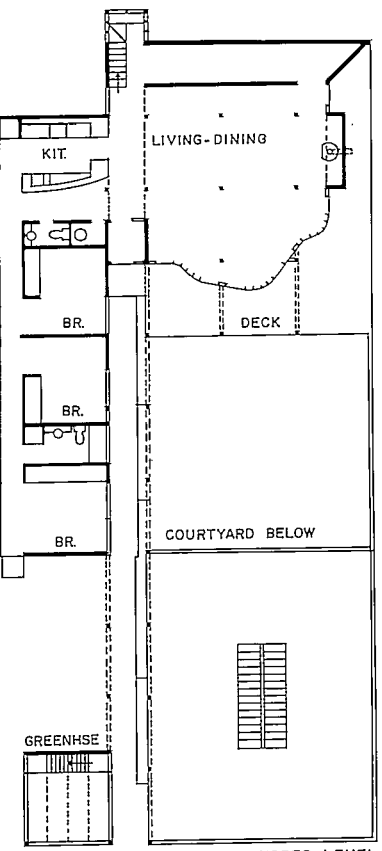
The living room's undulating wall of long, narrow windows faces the courtyard and views beyond. The room's posts and beams (above) extend outside, to the edge of the wooden deck forming a trellis and subtly uniting the indoor and outdoor space.

Barn imagery is created by standard barn hardware, exposed wooden floors, industrial lighting fixtures, and sliding doors on rollers. The interior also features a niche for a wood burning stove (top right) and a wide kitchen counter space (far right) which defines a passage to the bedrooms.

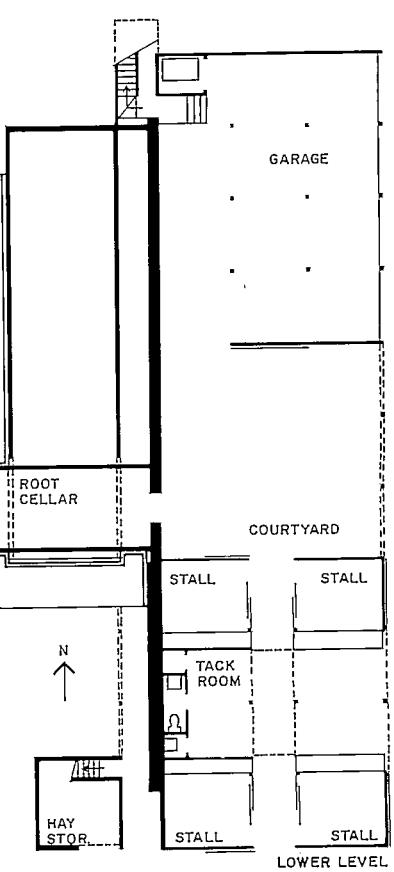
The two smaller bedrooms have sliding doors as well, expanding the space when they are rolled back. The hallway connecting them (right) has small cast-glass windows arranged in a random pattern using different rectangular shapes at different heights. This modest fenestration—providing an episodic view of the hills and trees beyond in contrast with the living room's wide expanse of windows—protects that side of the house from winter winds and summer afternoon sun.

PRIVATE RESIDENCE, Westchester County, New York. Architects: *Paul Segal Associates, Architects—James R. Biber, project architect.* Engineers: *Robert Silman* (structural), *Flack and Kurtz* (mechanical/electrical).

PRIVATE RESIDENCE

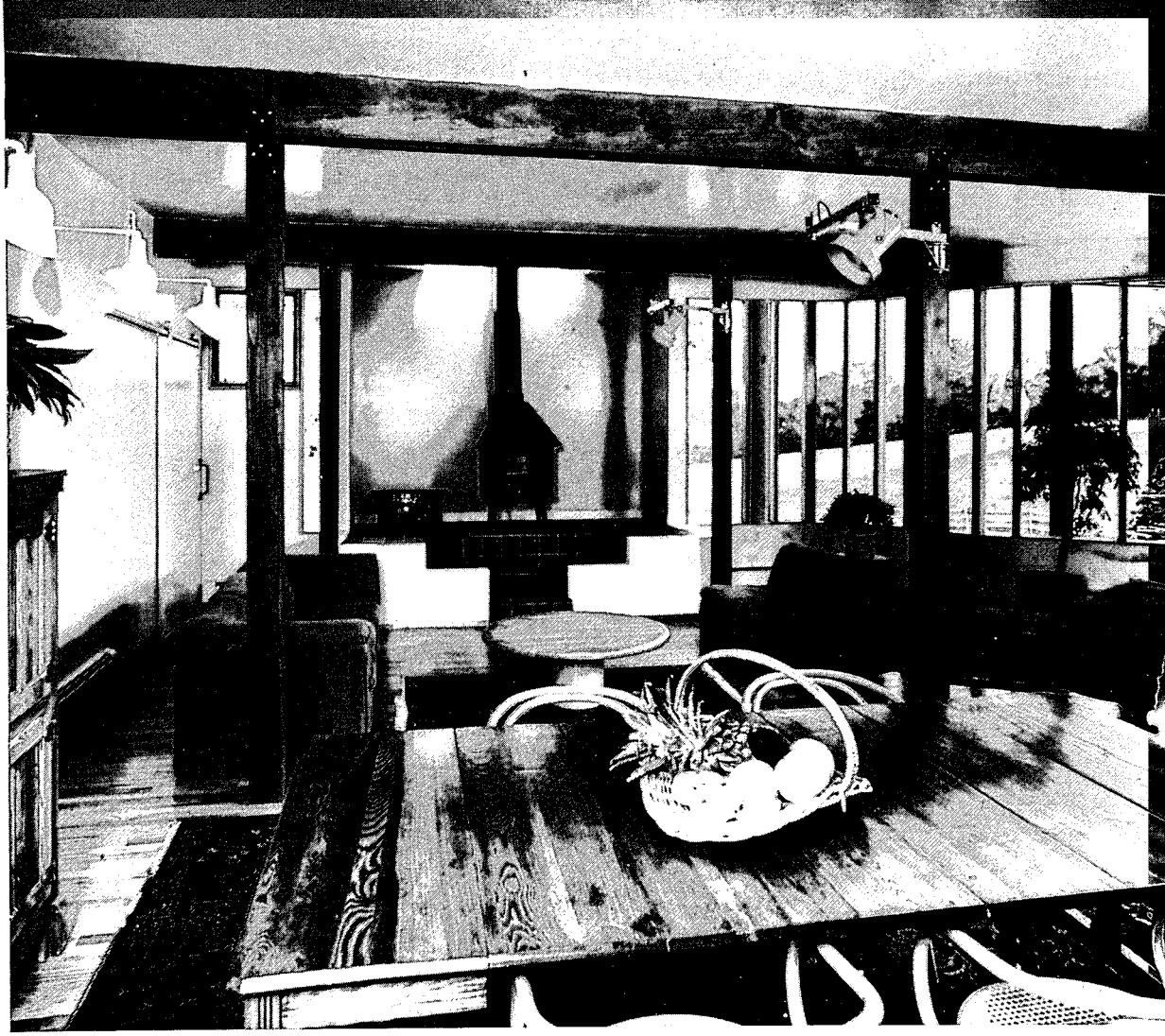


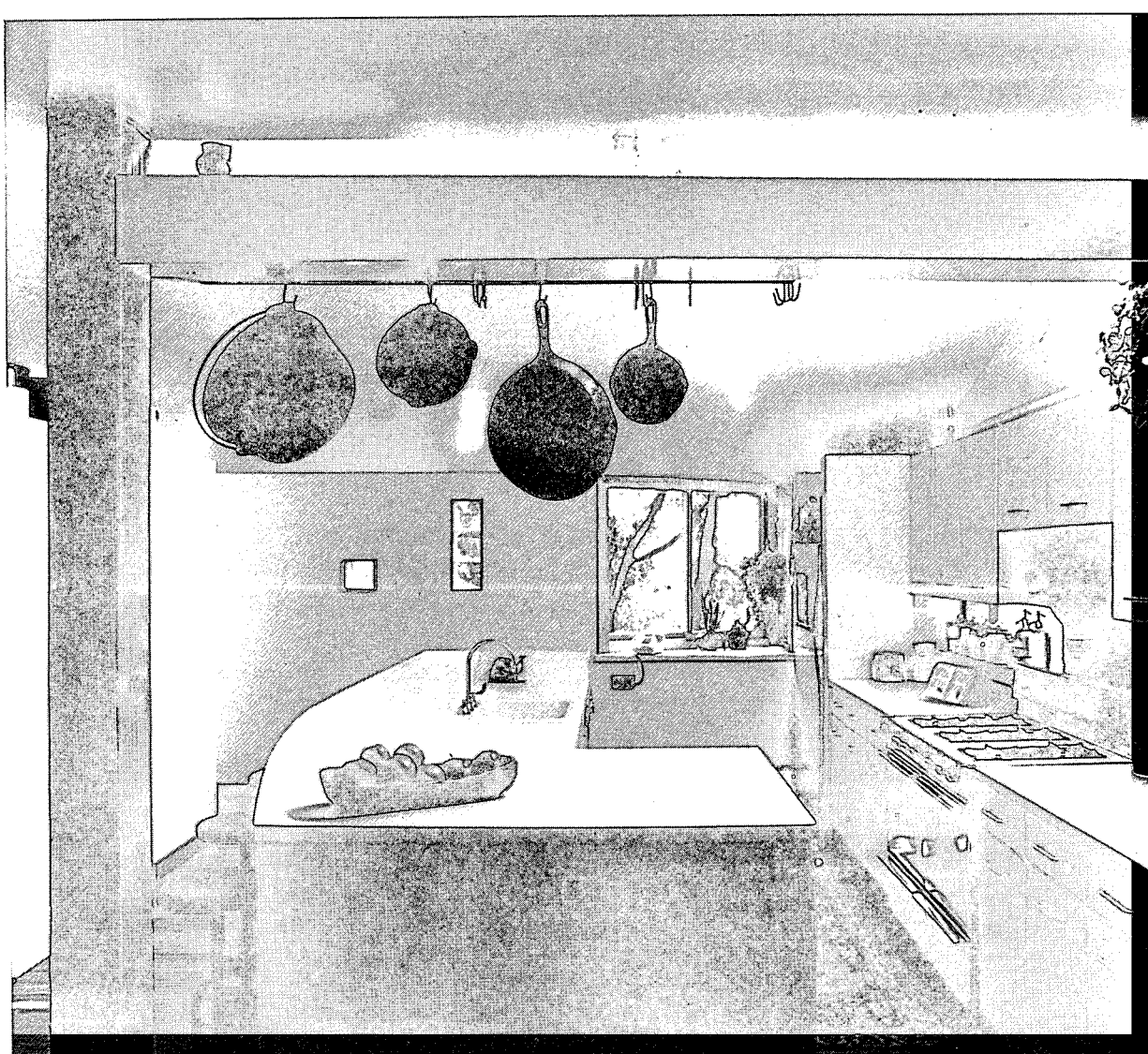
UPPER LEVEL



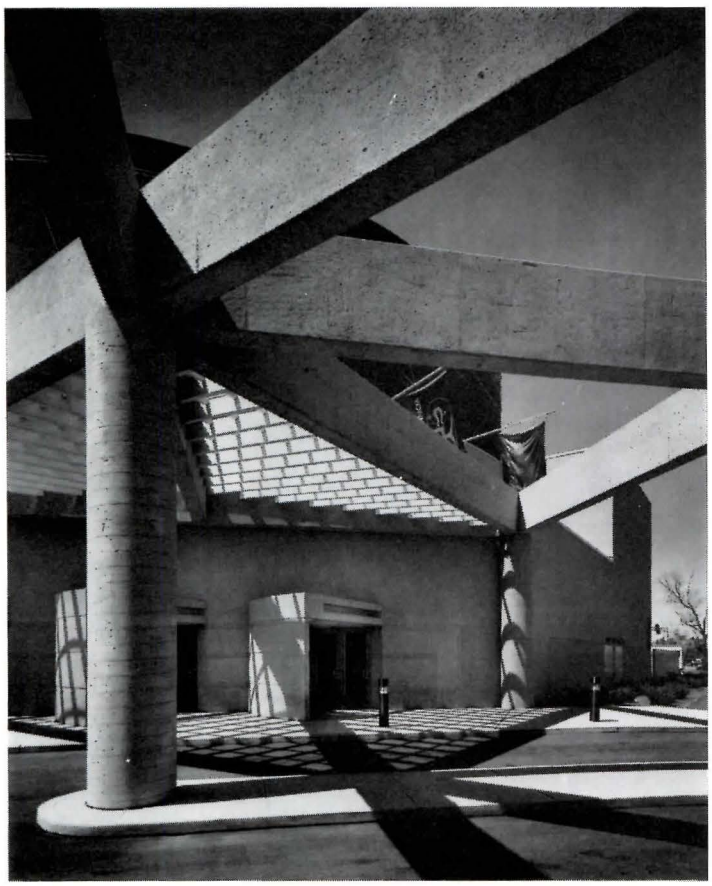
LOWER LEVEL

5





Teletrack: the Winner's Circle in New Haven

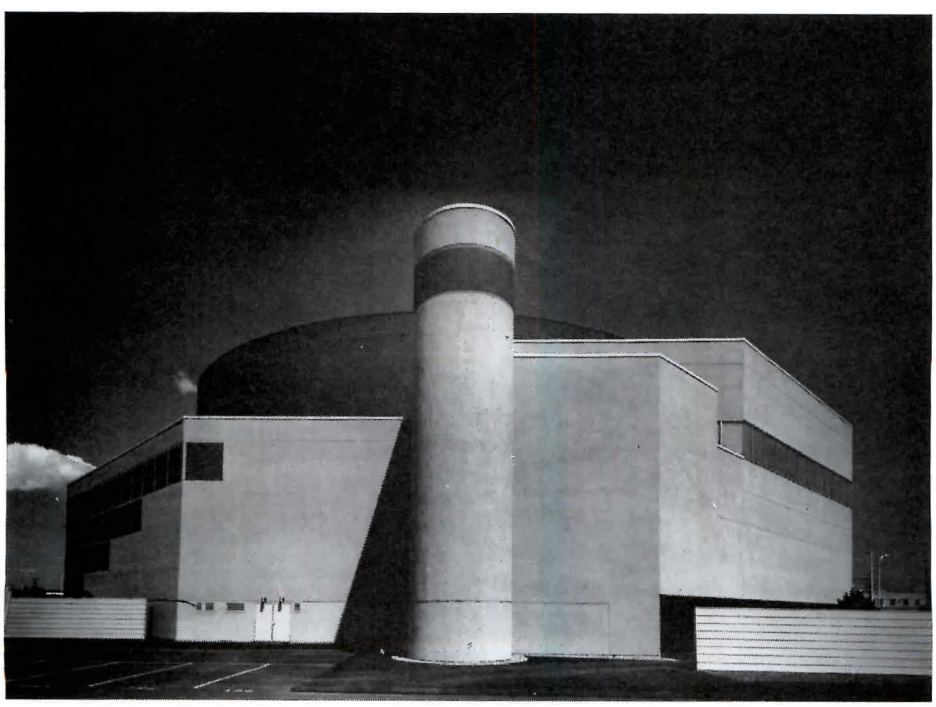


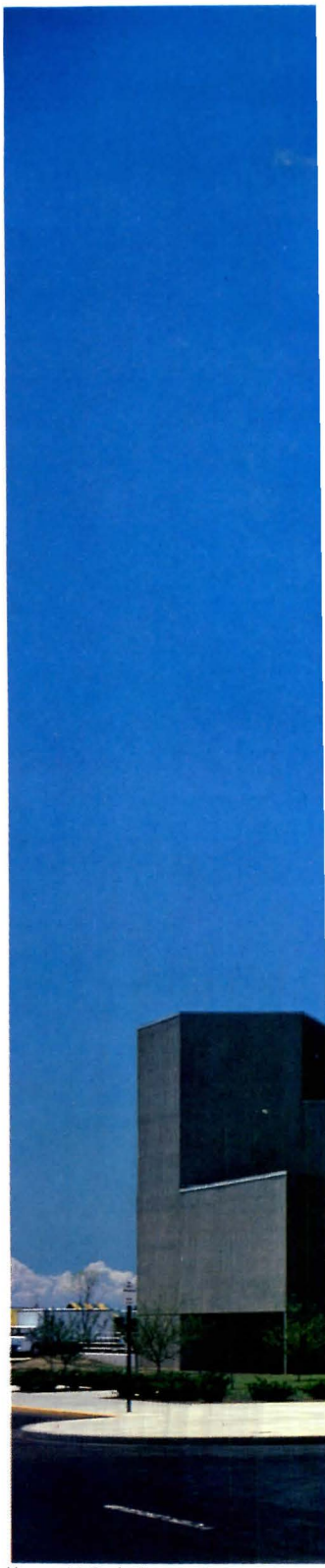
"I am not such a guy as you will expect to find in New Haven at any time," declared one of Damon Runyon's Broadway horse players, a serious betting man who preferred to stay within easy reach of Aqueduct and Belmont Park. Times have changed, though, and New Haven is no longer terra incognita for followers of the sport of kings, thanks to 1976 legislation permitting pari-mutuel betting in Connecticut and the recent completion of Teletrack, "the world's first Theater of Racing."

Glimpsed from a car on the nearby Connecticut Turnpike, Teletrack's cylindrical amphitheater might briefly be mistaken for one of the oil storage tanks that dot the surrounding flatlands. But there's no chance of confusion as soon as one sights the flourish of neon graphics and festive signage that announce the building's horsy theme. Inside, a combination of closed-circuit television and computerized off-track betting enables 2,200 spectators to place wagers with Connecticut's OTB system while watching live thoroughbred racing—transmitted via microwave from five New York tracks and projected in full color on a 24- by 32-foot screen.

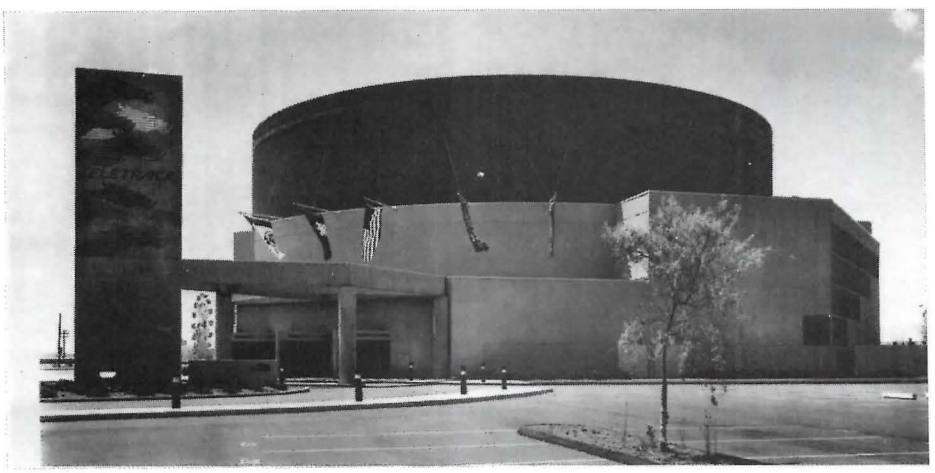
From the outset of the project, when his firm won a closed competition staged by the General Instrument Corporation (manufacturers of OTB and TV equipment), architect Herbert S. Newman conceived Teletrack as "a place where spectators can share their enjoyment of the event." The drama begins at the entrance canopy, where racing fans arrive in style under multicolored flags, and continues into a lobby whose sportive tone is set by neon horseshoes on the ceiling, photomurals of the track, and banners cut from jockeys' silks. Glass-brick "starting gates" house ticket booths and turnstiles.

Spectators are offered the choice of



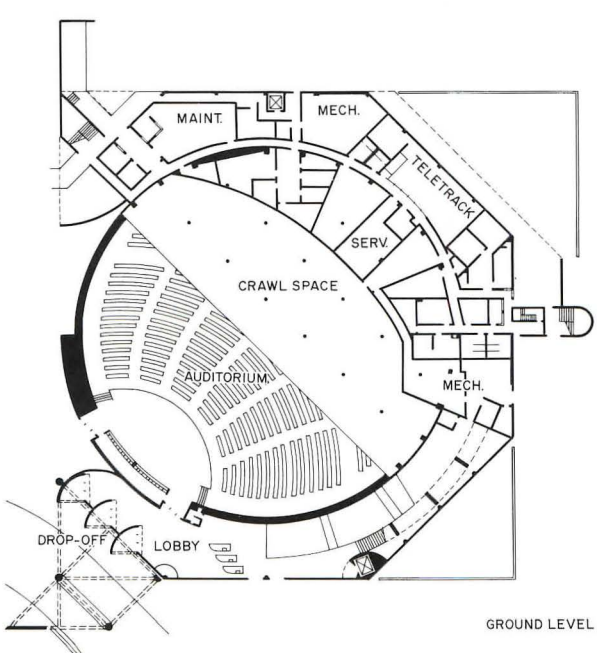


Norman McGrath photos

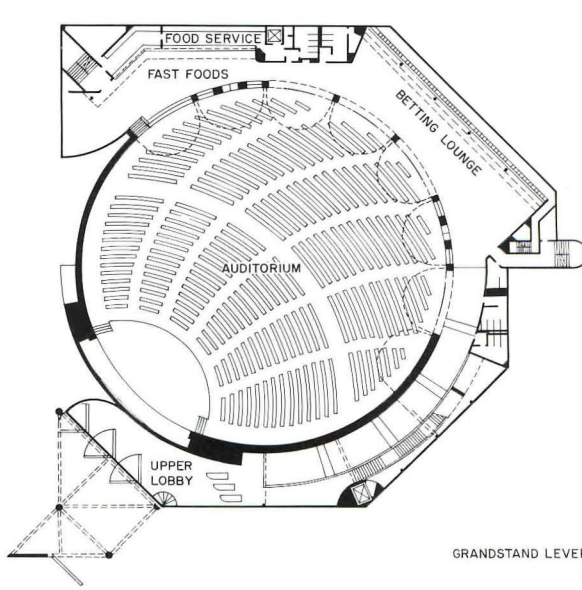


At New Haven's $8-million Teletrack, video simulcasts of thoroughbred racing beamed in from New York State add a new dimension to offtrack betting. Supergraphics scaled for long-range visibility guide motorists to the porte-cochère (detail, upper left). Shallow "rustication" and a stepped grid of blind windows (photos left and right) articulate the geometric massing of betting lounges, restaurants, and circulation areas clustered around the drum-like amphitheater.

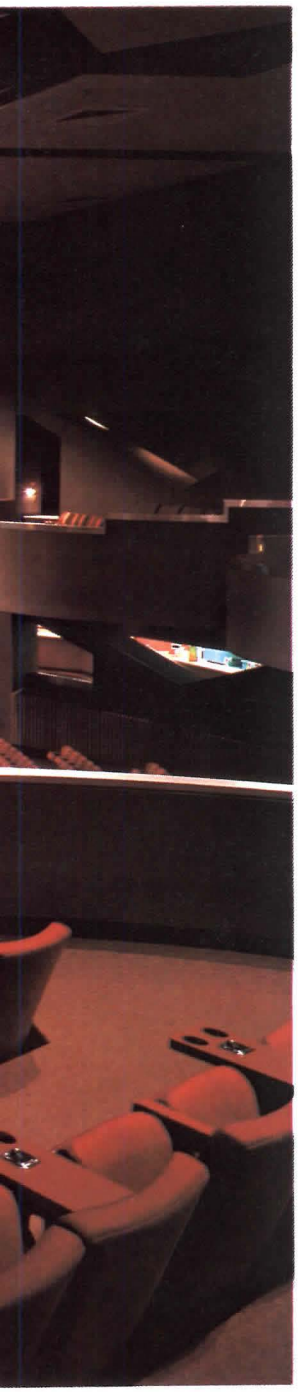
A 24- by 32-foot screen is the focus of the 1,800-seat grandstand, seen (above) from one of eight balconies in the second-tier Clubhouse. Plans of the three main levels show how the lobby, ramp, and stairway (photos right) wrap around the amphitheater to compose a dramatic entrance. Grandstand seating is aligned along an asymmetrical, fan-shaped layout that echoes the curve of the foyer—and points spectators in the direction of the betting lounge. A separate circulation system behind the auditorium ensures the security of money-handling operations and Teletrack offices (see ground-level plan).



GROUND LEVEL

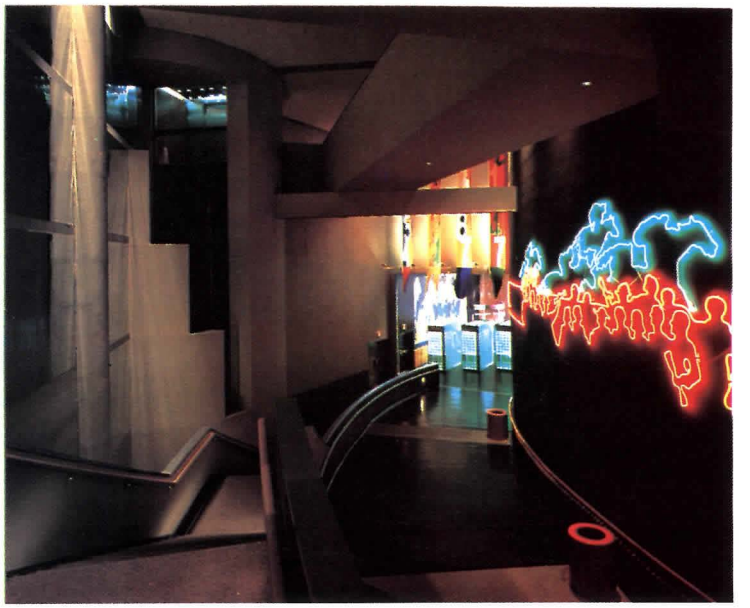


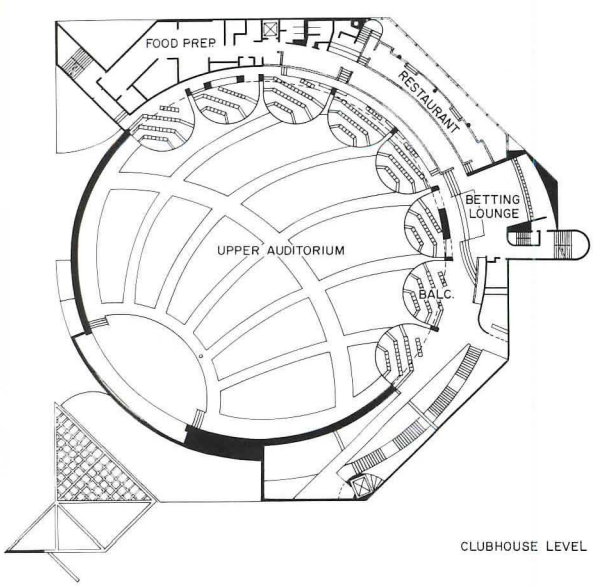
GRANDSTAND LEVEL



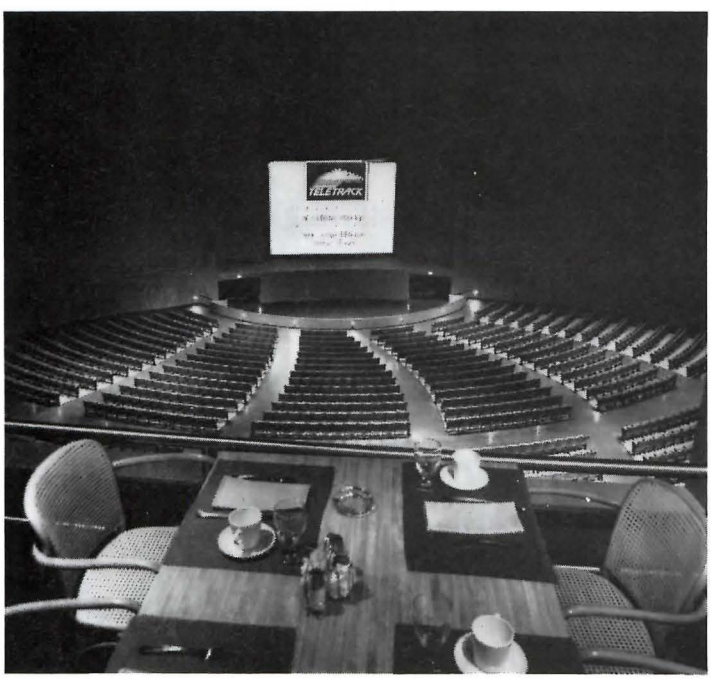
admission to an 1,800-seat grandstand, equipped with 29 betting windows and a fast-food counter, or the swankier—and more expensive—400-seat "Clubhouse" upstairs on the second tier. Clubhouse amenities include balconies overlooking the grandstand, the Winner's Circle restaurant, a separate betting lounge, and a panoramic view of New Haven harbor. Another story up, on the third tier, four private VIP Rooms flank the central projection booth. The electronic equipment that masterminds Teletrack's technical wizardry is tightly guarded in a ground-floor control area, with its own circulation system.

The ramp and stairway that lead the public along a ceremonial route from the lobby to the amphitheater make for a lively "post parade" before the main event. Like a pre-race warm-up, this carefully paced entry allows spectators' eyes to adjust gradually from daylight outside (most races are run in the afternoon or early evening) to the relative darkness required for film viewing—preventing a condition that project lighting consultant Sylvan R. Shemitz calls "Saturday matinée blindness." For maximum visibility within the theater, house lights are programmed to dim when a race is about to start, the screen is recessed to obviate glare, and an ingenious ventilating system keeps the projected image clear of smoke (used air is extracted under grandstand seats and recycled to HEPA filters and ceiling diffusers from a sub-floor plenum). The diehard traditionalist might insist on binoculars, but they are hardly necessary here: the circular plan brings most seats within comfortable viewing distance, and a clear span of steel beams (seven-foot-deep built-up plate girders) mounted on peripheral steel columns opens up a remarkable range of unobstructed sight-lines. Structural cross-bracing, which could have been a handicap to visibility, is put to





CLUBHOUSE LEVEL



good use as a frame for unexpected diagonal vistas from the VIP level and the fast-food bar. Acoustically efficient non-asbestos mineral fibers, sprayed onto the light steel-stud walls, help to temper the echoes of cheers—and groans—as the horses enter the homestretch.

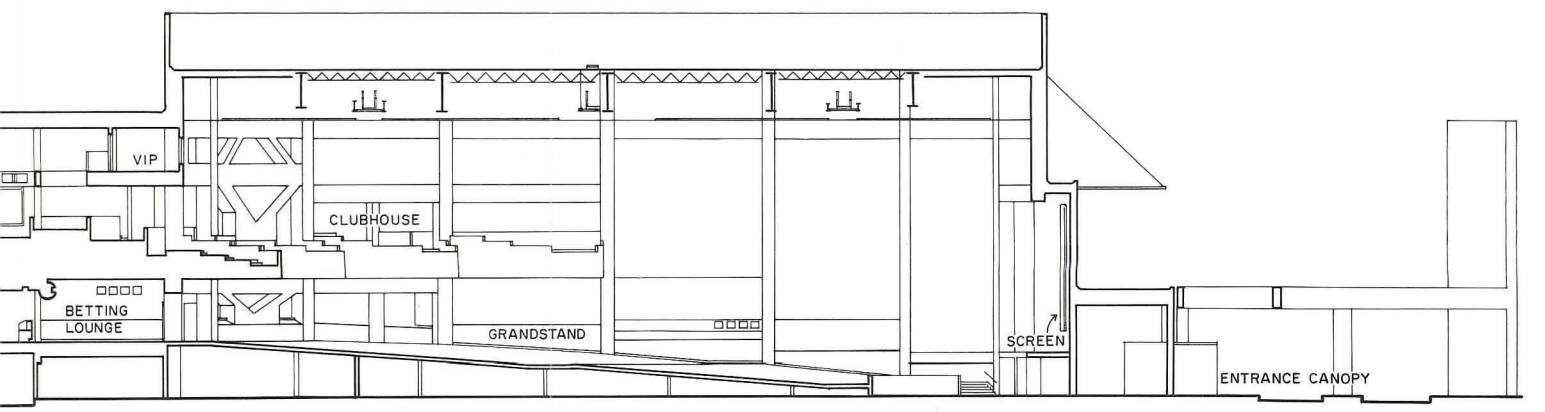
Audience participation is the essence of pari-mutuel betting, and Herbert Newman believes that the bold geometry of Teletrack's central rotunda evokes "an archetypal sense of space that all sorts of people respond to with wonder and excitement." Between races, the warm russet of grandstand seating (repeated in the fabric covering of Clubhouse walls), the sweep of bow-front loges, and the jazzy zigzag-patterned ceiling create a vibrant background for trackside activity. The over-all effect is an amalgam of gaiety and monumentality, much as though a 1930s movie palace had been installed within a Roman arena. It's hardly a setting for the Ascot Gavotte, but judging by the enthusiastic crowds that keep Teletrack busy six days a week, this video hippodrome has captured the high spirits of the turf with a panache all its own.

—Douglas Brenner

TELETRACK, New Haven, Connecticut. Owner: *General Instrument Corporation.* Architects: *Herbert S. Newman Associates, AIA, PC—Herbert S. Newman, architect-in-charge; Don Cosham, associate, project manager; Bob Godshall, job captain; Hugh Sullivan, assistant.* Engineers: *Spiegel & Zamecnik, Inc.* (structure/foundations); *Helenski Associates, Inc.* (mechanical/electrical); *Bolt, Beranek, and Newman, Inc.* (acoustics); *Sylvan R. Shemitz & Associates, Inc.* (lighting); *James Skerritt/Lawrence Appleton* (landscaping); *C. E. Maguire, Inc.* (site engineers). Interior design: *Herbert S. Newman Associates—Herbert S. Newman, Glenn H. Gregg, Edna Newman.* Graphics: *Mary Ann Rumney.* General contractor: *E & F Construction Company.*

Architect Herbert Newman's design is calculated to appeal to a broad range of users, "so that racing fans on a tight budget won't be put off by too-rich surroundings, and the better-heeled won't feel they're slumming." From the colorful grandstand betting lounge (top left) to well-appointed VIP Rooms (above), Teletrack's amenities enhance the pleasure of anyone's day at the races. Diners in the Clubhouse restaurant can keep an eye on the horses—either on the big screen or on overhead monitors—without putting down their forks. The section (opposite) reveals the steel column-and-beam structure that encloses the arena's wide-open spaces (155 feet in diameter at the base of the grandstand).


BOX C


VIP
CLUBHOUSE
BETTING
LOUNGE
GRANDSTAND
SCREEN
ENTRANCE CANOPY

URBAN HOUSING

Design innovation and a willingness to accept risks still continue to be keys to providing good urban housing.

San Francisco architect Rodney Friedman (Fisher-Friedman) devised the basic outlines of what would be required to make Golden Gateway Commons a success long after others had given up finding a suitable use for the site. The key, says Friedman, was not the high-rise design that others before him had proposed, but a low-rise, mixed-use project that could be built at less expense and could be made attractive enough to command absolutely top dollar. He achieved these things with the lively design shown in the photo at right and in the pages that follow.

For developer Bob Gladstone and architect David Specter, the site was a 33-foot-wide brownstone multiple in the heart of New York's East Side. Here, where the depth of the lot was severely limited and where only a really distinctive design could hope to attract the kinds of rents required to make the project successful, Specter developed the innovative one-of-a-kind, mid-rise solution shown on pages 100-101.

Portland architect Robert Leeb's graceful design (pages 102-103) took shape in the aftermath of angry community protest and on a site "rescued" from a non-conforming use, while Seattle architects Olson-Walker, serving as their own developers, produced the condominiums shown on pages 104-107, condominiums that offer a drama and a choice in lifestyles seldom encountered in urban housing.

Though their sites and circumstances vary, all four of the designs reflect a boldness and an unwillingness to compromise away the amenities traditionally associated with urban life, amenities that a luxury market—with the choices available to it—are by no means ready to surrender. Just as visibly, these projects have been designed to strengthen the urban fabric of which they are part, and that, regardless of market level, may be the ultimate test of good urban housing anywhere. —*B.F. Gordon*

Joshua Friewald

GOLDEN GATEWAY COMMONS SAN FRANCISCO

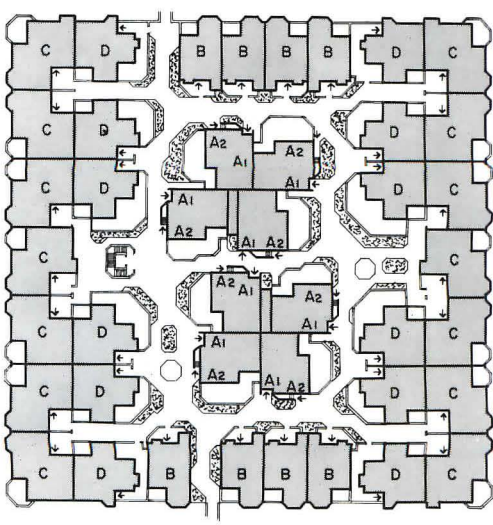
This mixed-use development, one of the most significant projects of this type built to date, rises in a section of San Francisco's Golden Gateway Redevelopment Area on one of three blocks that remained unbuilt after the rest of the area had been heavily developed. Numerous high-rise schemes for these blocks had been proposed, studied, and finally rejected. All failed for economic reasons and because residents of nearby Telegraph Hill objected vehemently to having their views to the Bayfront abruptly closed off. By 1975, nearly $2.5 million had been invested in these proposals with no very satisfactory result.

Not until real estate values in the area rose and until Fisher-Friedman tackled the problem with a low-rise proposal that obviated the need for enormously expensive pilings (the block is on 90-130 feet of mud and silt), could developers make the numbers come out right. Design began in early 1977 and the first block is now complete. It includes about 85,000 square feet of residential space (50 condominium units) over another 85,000 square feet of mixed office and commercial space. Parking for 137 cars is drawn in under the podium.

In looking for a market-wise imagery, the architects turned to Jackson Square, a nearby low-rise block of brick structures built after the San Francisco fire and long popular with the city's citizens. From Jackson Square, they found clues not only for the mix of shops, offices and apartments, but also a sense of appropriate scale and of animated brick facades rich in variety and elaborate in cornice detail. These elements were successfully reblended into the lively forms shown on these pages, though Golden Gateway Commons uses brick only as a veneer and its condominiums, which command top dollar, are designed with contemporary standards of comfort and convenience very much in mind.

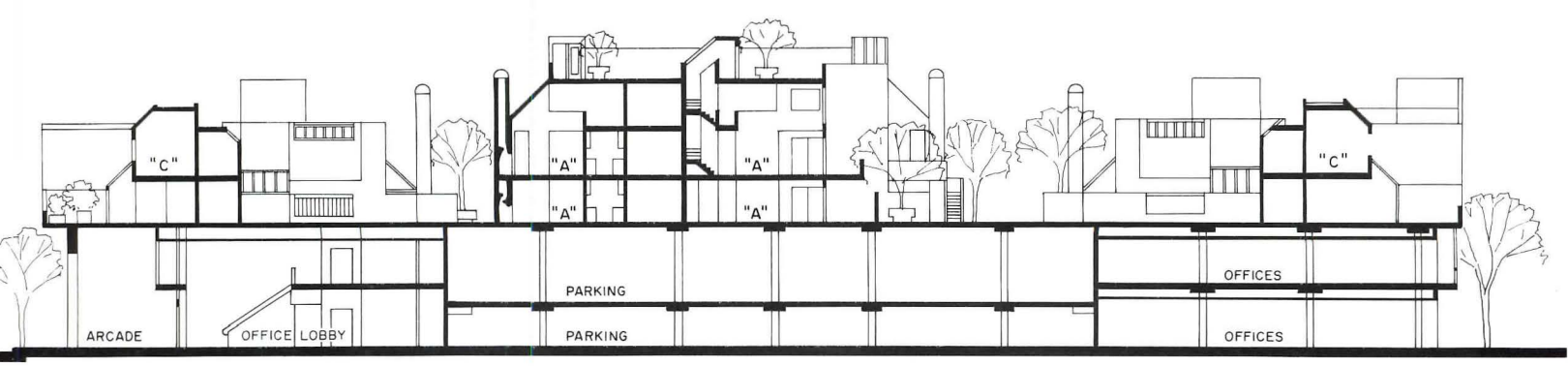
Two new blocks of similar design will follow. When complete, the project will include about 150 apartment units varied in size and plan that will extend their low-rise character to the city's core, and test mixed use at a scale where many of its potentials may, happily, be realized.

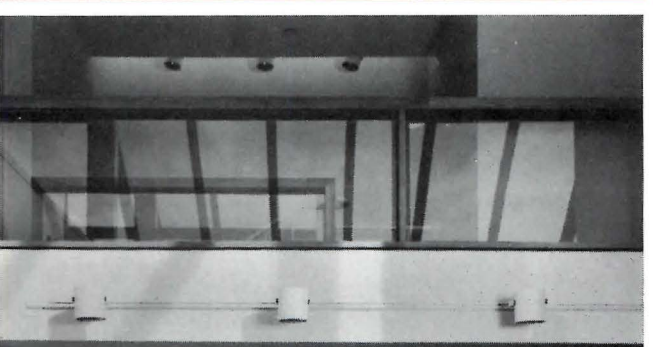
GOLDEN GATEWAY COMMONS, San Francisco, California. Architects: *Fisher-Friedman Associates.* Owner-builders: *Golden Gateway North (developed with the cooperation of the San Francisco Redevelopment Agency).* Engineers: *Robinson-Meier-Juilly* (structural); *Montgomery & Roberts* (mechanical); *Darmsted-Parenti* (electrical). Landscape architects: *Anthony Guzzardo & Associates.*

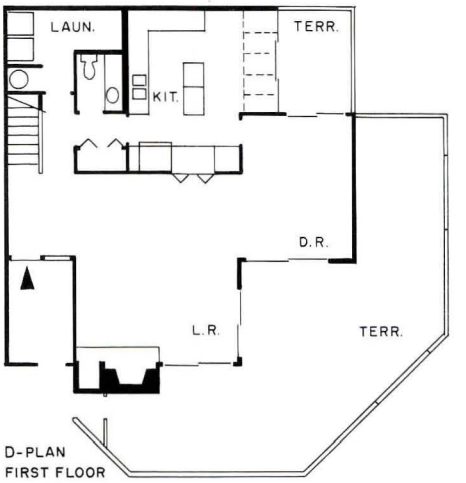


Charles Callister Jr. photos except as noted

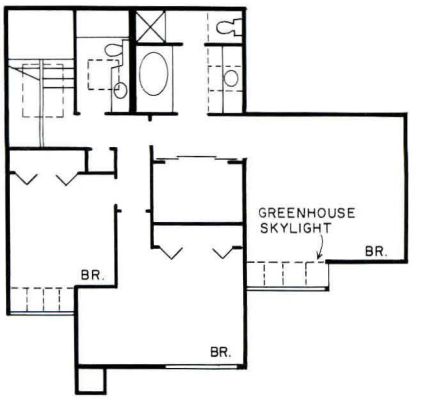
The section most clearly reveals the horizontal organization that is central to both the character and success of this design. The raised podium provides parking at its center for occupants of every category while a mix of offices and shops with direct access to the street occupies the perimeter spaces. All housing is on the three stories over the podium.







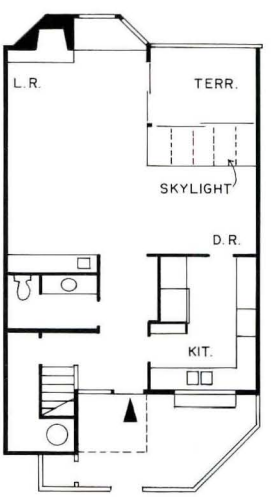
D-PLAN
FIRST FLOOR



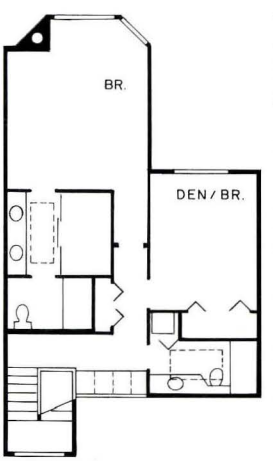
SECOND FLOOR

C-PLAN FIRST FLOOR

SECOND FLOOR

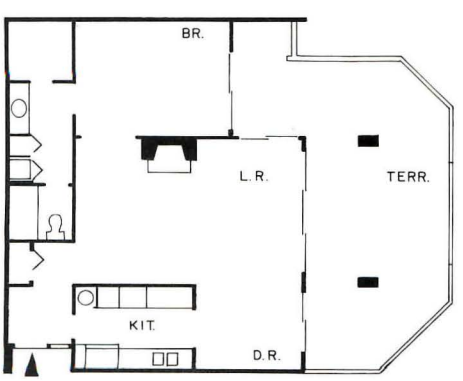


B-PLAN FIRST FLOOR

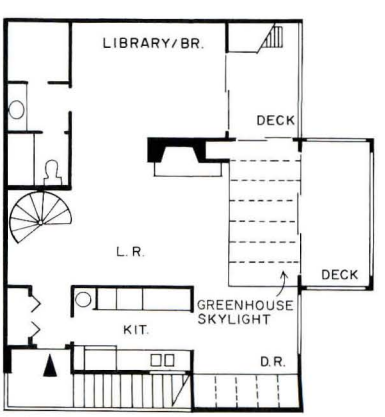


SECOND FLOOR

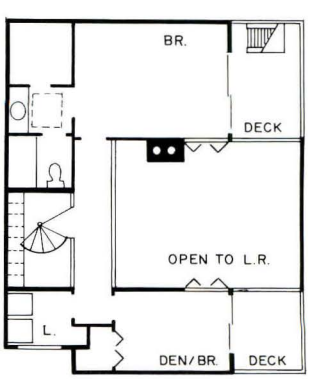
The unusually rich mix of apartment types—one- to three-bedroom, simplex or duplex, nearly all with a private outdoor space—reflects the desire to appeal to a market with varied spatial needs and preferences. Each apartment is also surprisingly varied in its volumes, the amenities it offers, and in the flexibility with which it can be furnished. The common spaces, as the photographs at right indicate, benefit from the same level of design concern and the same preoccupation with establishing a clear, unmistakable sense of identity.



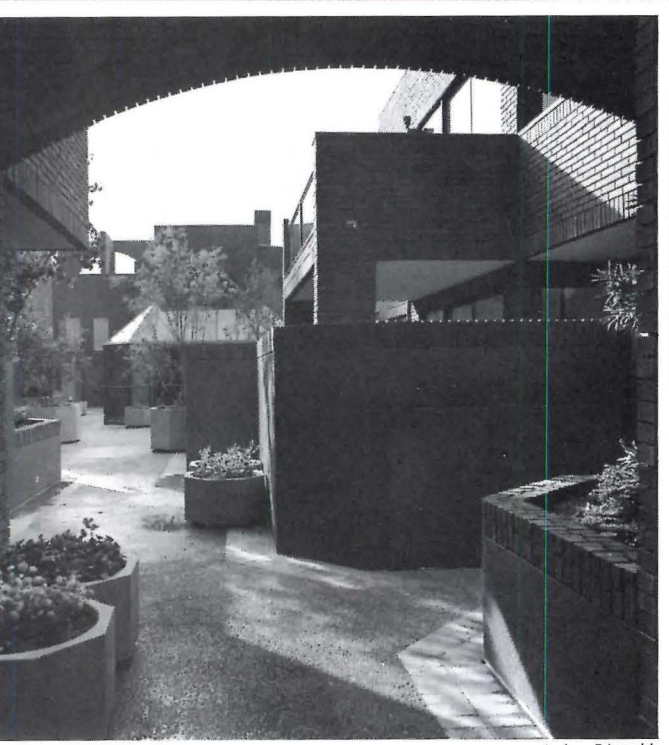
A-1 PLAN



A-2 PLAN FIRST FLOOR



SECOND FLOOR



Joshua Friewald

245 EAST 50th STREET NEW YORK CITY

Both demand and cost have risen so sharply that residential developers now look with interest at small sites like this 33-foot-wide, mid-block lot in the heart of New York City's East Side. By obtaining a variance that allowed them to add a floor area equivalent to two and a half stories, Madison Equities were able to justify the project and commissioned architect David Kenneth Specter to design the elegant tower shown here. The typical floor (shown at right) places two one-bedroom units back to back with occupants sharing an elevator lobby and a plumbing wall, but having two means of egress provided by scissor stairs off the lobby. The large core area produced by this arrangement was unavoidable, but it does not deprive the apartments of adequate space. Each is nicely apportioned and opens either north or south to views of 50th Street or the mid-block garden. The plan is varied only at the top by a duplex penthouse, and at sidewalk level by professional space with an entrance separate from the tenant's entry and lobby. All the apartments are graced with "winter gardens," glass projections with operable sash that offer views down towards street level as well as skyward. The winter gardens also give access to narrow balconies enriched by rail-height planters that easily—and graciously—become dominant elements in the facade.

The special problems of building on a narrow mid-block site not only vexed the contractor but governed, in at least one instance, the choice of materials. Specter would have preferred to span the entire 33-foot-width with concrete plank, but the task of getting elements of this size into place was simply too difficult. Instead the floors are framed in steel and carried on intermediate supports.

To New York's surprisingly slender inventory of rental apartment types, this new design (originally planned as a condominium) adds variety, and the apparent simplicity of its forms makes it blend comfortably into its busy surroundings.

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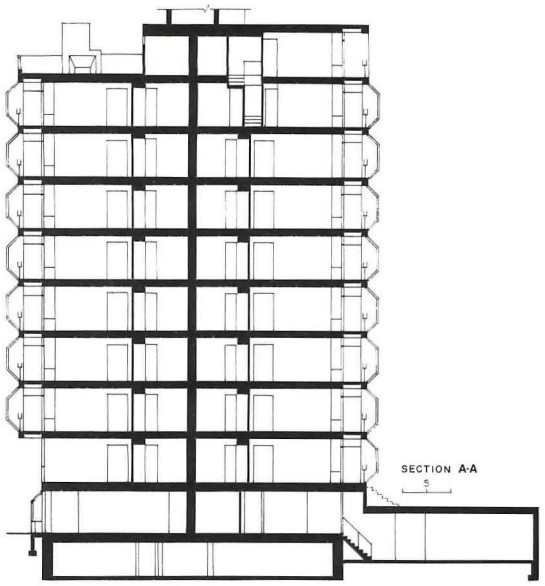
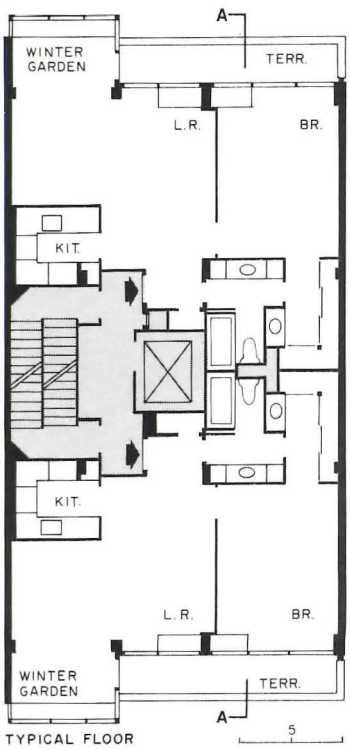
245 EAST 50TH STREET, New York City. Architect: *David Kenneth Specter—John Davison Allen: senior associate.* Owner-builder: *Madison Equities.* Landscaping: *Lauren Reider.*

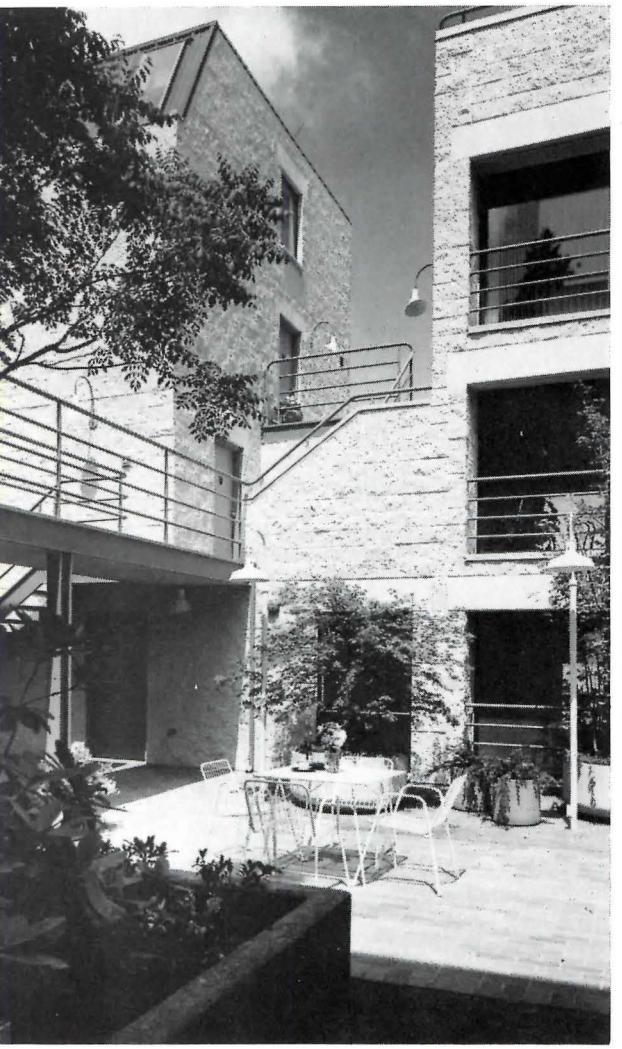
Marc Neuhof photos

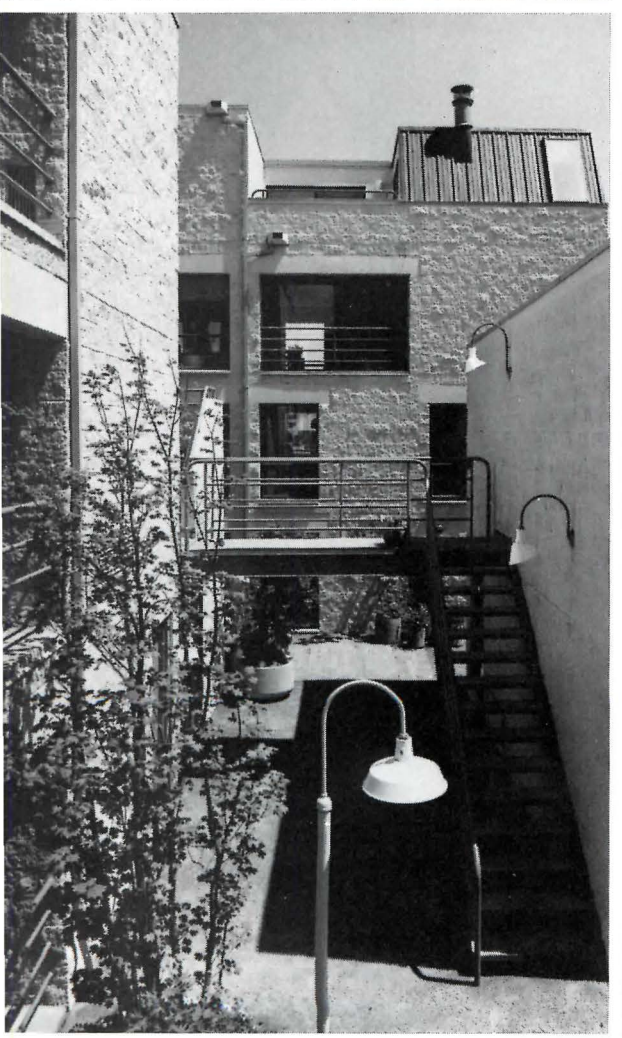


New York's residential buildings tend to be either low-rise or high-rise. This new design attempts a mid-rise volume which is only possible, says developer Gladstone, in districts where rents are already high and where a frontage width of at least 30 feet can be obtained and fully exploited by the architect.



TYPICAL FLOOR





HOYT SQUARE PORTLAND, OREGON

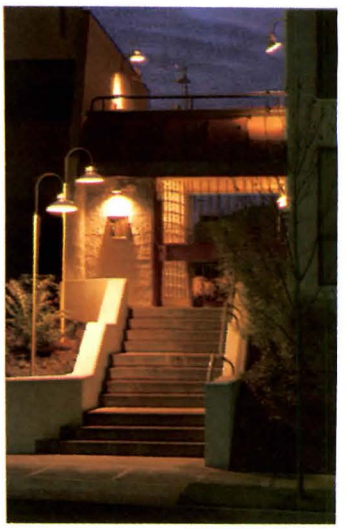
Robert Leeb's design for this small condominium community grew out of neighborhood animosity when it was discovered by local residents that a fast-food outlet was about to be constructed on this 100- by 130-foot corner property in Portland's Northwest area. Citizens filed a lawsuit to stop the project and won since the proposed drive-in would have violated the city-approved land use plan. Through the cooperative efforts of the city, the neighborhood and Portland's lending institutions, the land was purchased by the city and a competition was organized among local architects to provide urgently needed housing for the site. Hoyt Square Condominiums is the result of that competition.

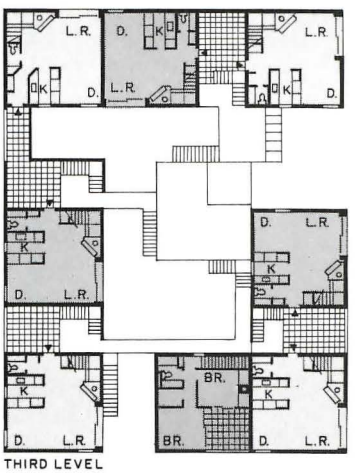
Paying scrupulous attention to the scale of nearby buildings, Leeb developed a plan that includes one- and two-story single-level dwelling units as well as two-story townhouses with various amenities including skylights and roof terraces. All the units are carefully clustered around a central landscaped court that gives access to all the units and is jointly owned by the condominium. Instead of off-street parking, the design provides garage space for 22 automobiles below grade.

Split-face concrete block with precast lintels provided not only a handsomely textured exterior finish but a structural system capable of providing fire protection and a suitable degree of soundproofing. Openings are concentrated on the three sun exposures and kept to an absolute minimum on the north elevation.

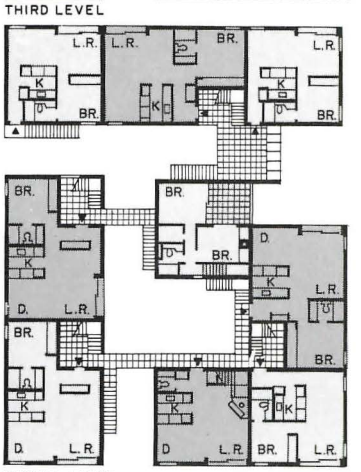
Hoyt Square enjoys the unmistakable thumbprint of design quality in its concern for scale and massing, its delight in the application of enriching details, and—most important—in its provision of physical amenities that elsewhere seem to be disappearing from urban housing.

HOYT SQUARE CONDOMINIUMS, Portland, Oregon. Architect: *Robert S. Leeb.* Structural engineers: *Van Domelen, Looijenga & Associates.* Landscape architects: *Walker, Macy, Mitcheltree.* Contractor: *Silco Construction Company.*

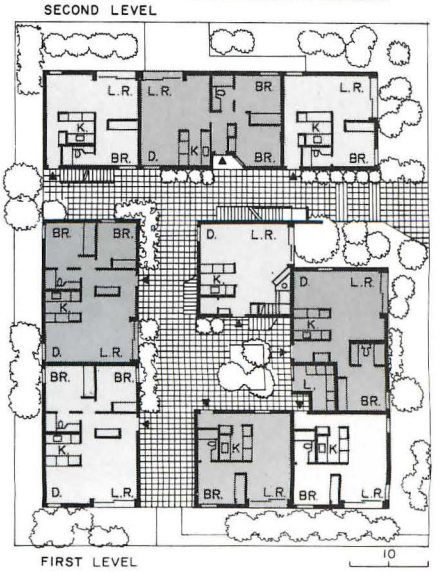




THIRD LEVEL



SECOND LEVEL



FIRST LEVEL

Ed Hershberger photos

The apartment interiors are compact but well planned so there is little or no wasted space. The choice of finish materials is limited to those most appropriate for each application and the detailing throughout is simple and appealing.

PIKE & VIRGINIA BUILDING SEATTLE, WASHINGTON

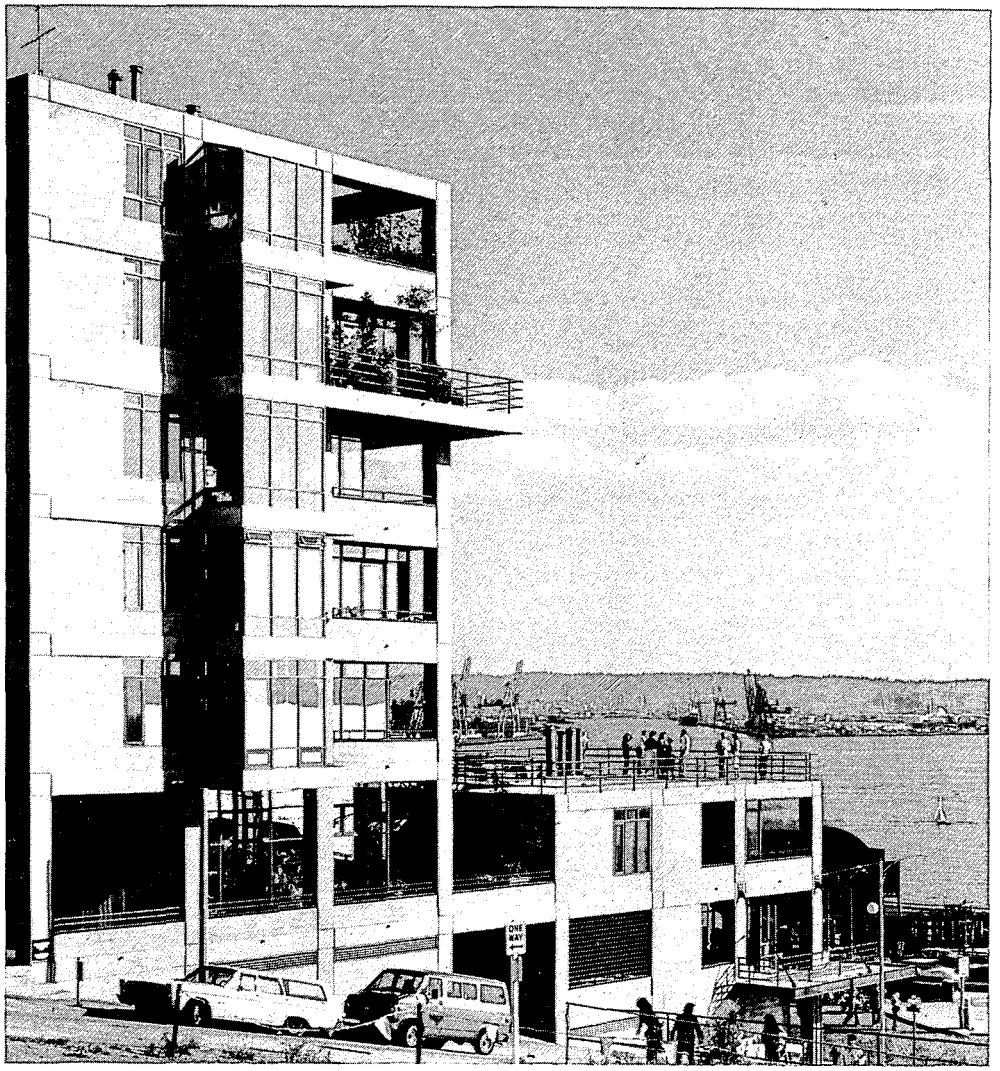
Within the powerful rectilinear frame of this Seattle condominium are 14 living units, all with expansive views of Pike Place Market and Puget Sound beyond. In an appropriate gesture of respect to its surroundings, the building has two scales: a low-rise section fronting on Pike Street (where neighboring buildings rise to three stories), and a mid-rise block located to the rear and rising to a full six stories. The roof of the low-rise section has been developed as a usable deck. Parking is under the tall block, and above it (see section) is an area designated for retail. At present, the commercial component in the project is limited to a flower shop, a wine shop and a delicatessen, all placed so they can be patronized by sidewalk trade as well as by the building's residents.

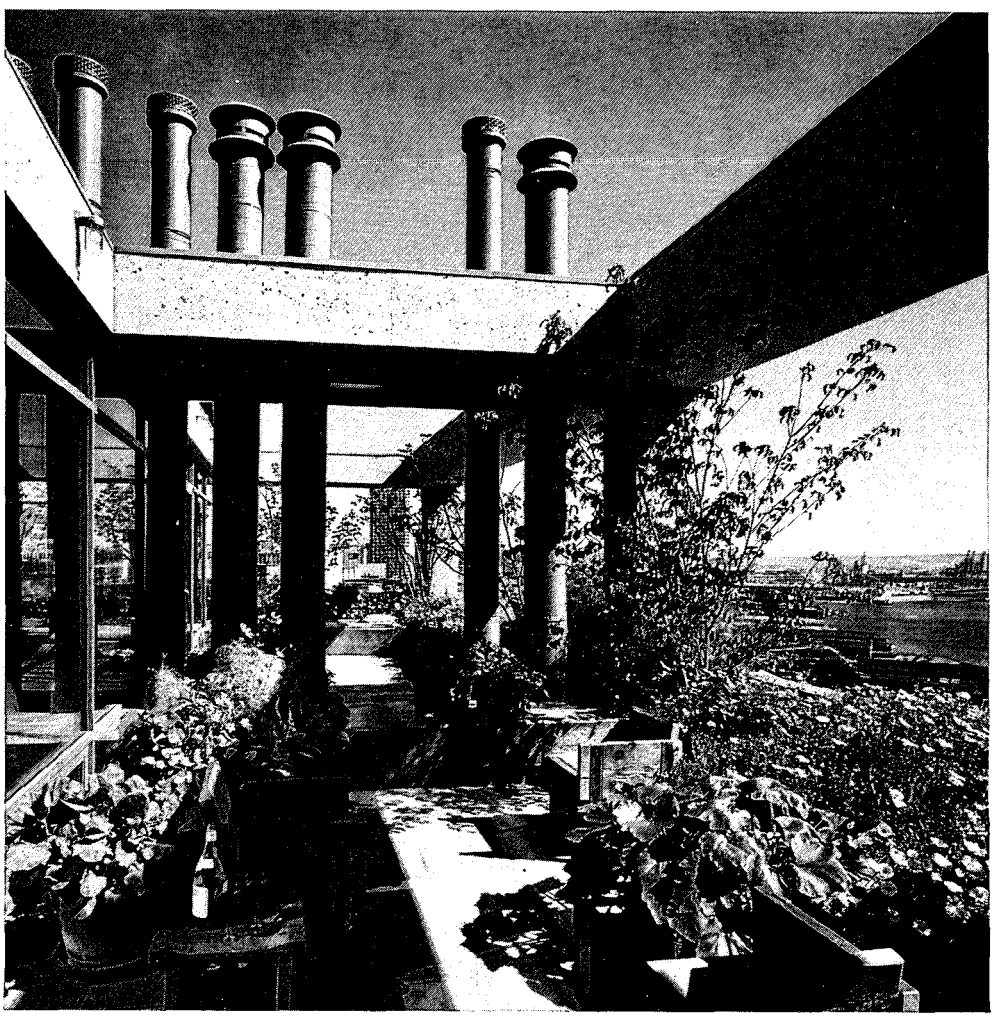
The long span concrete members and the exposed waffle slabs, both unusual in residential buildings, give the interiors a loft-like character that each owner has modified to suit himself. All the apartments, which vary in size between 500 and 3,000 square feet, have generous expanses of glass, and many have private outdoor space as well.

The essence of the design, or more properly its core image, is the notion of glass boxes stacked inside an outer box of concrete. This idea has been successfully emphasized by recessing the glazing line to bring the concrete frame into bolder relief.

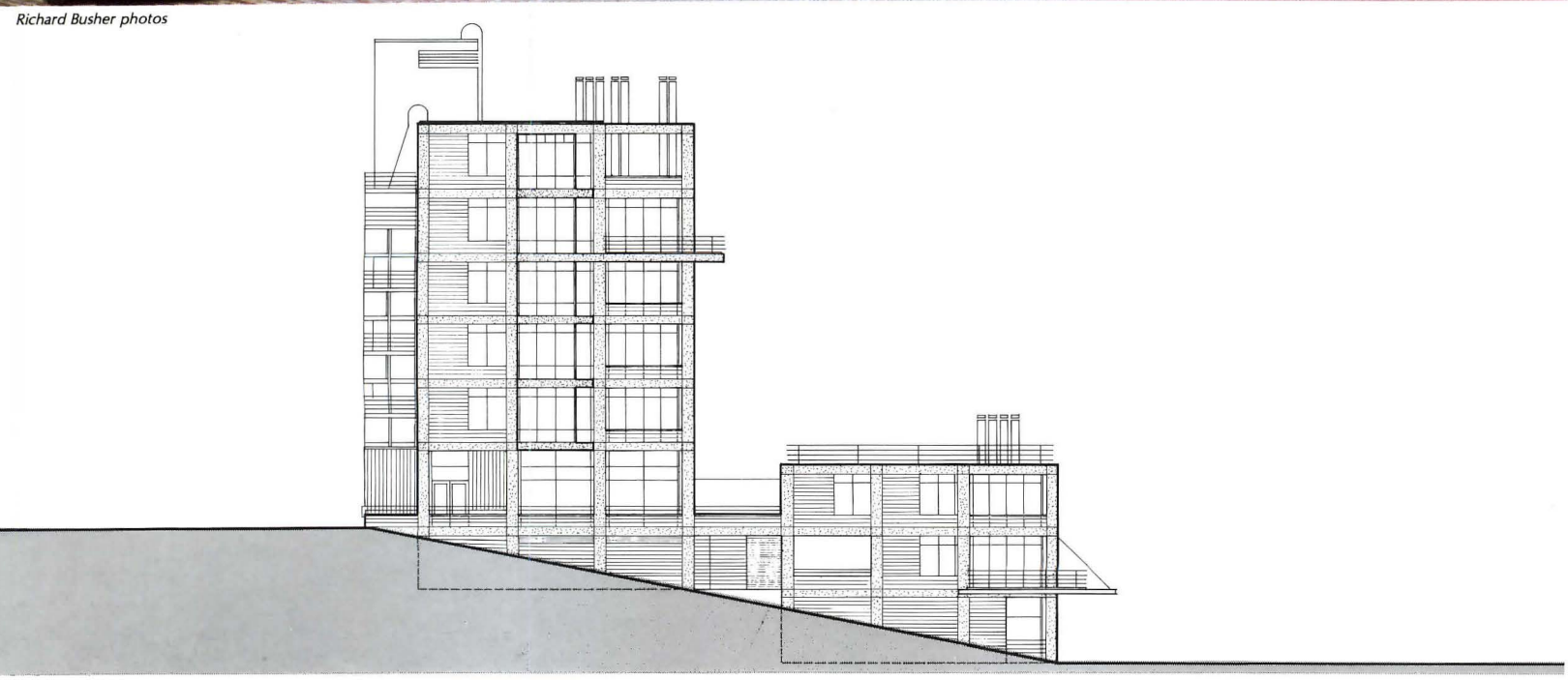
The architects, who doubled as developers, both have apartments in the building. "It's like living on the edge of a bluff" says James Olson, "with that kind of exposure to winds and storms. It's very exciting. . . . " Olson's top floor terrace is shown in the photograph at right.

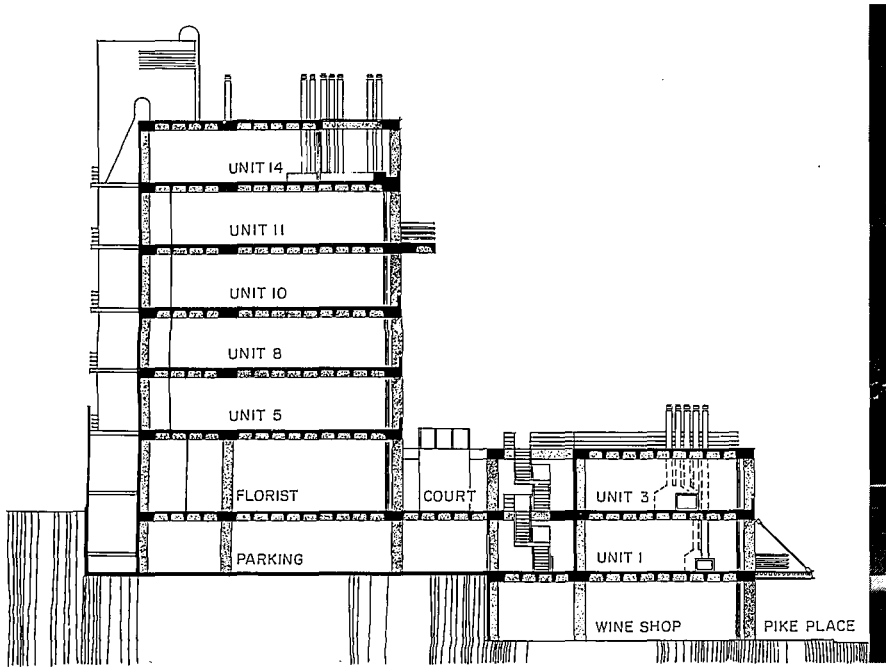
PIKE and VIRGINIA BUILDING, Seattle, Washington. Architects: *Olson/Walker Partners—James Olson, Gordon Walker, Richard Sundberg.* Engineers: *Ratti/Fossatti Associates* (structural); *Stern Associates* (mechanical); *Sparling & Associates* (electrical). Contractor: *Eberharter & Gaunt.*

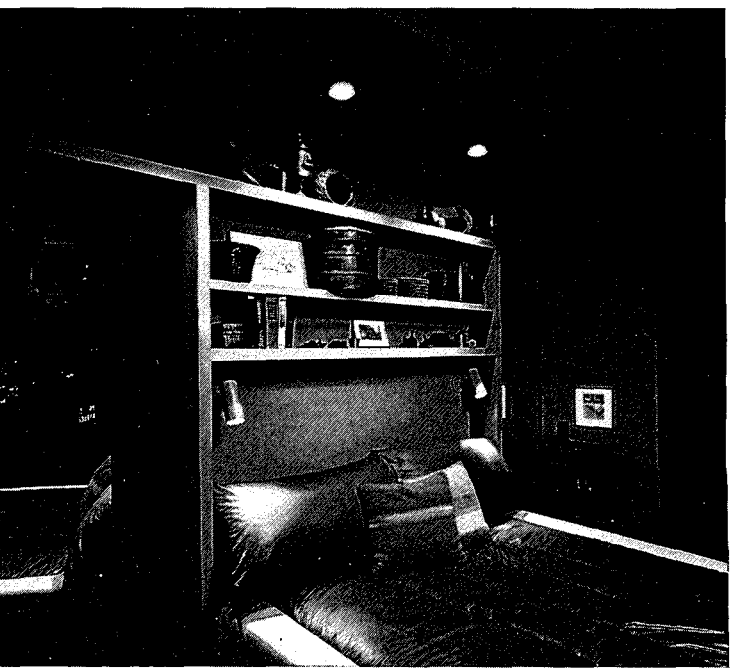


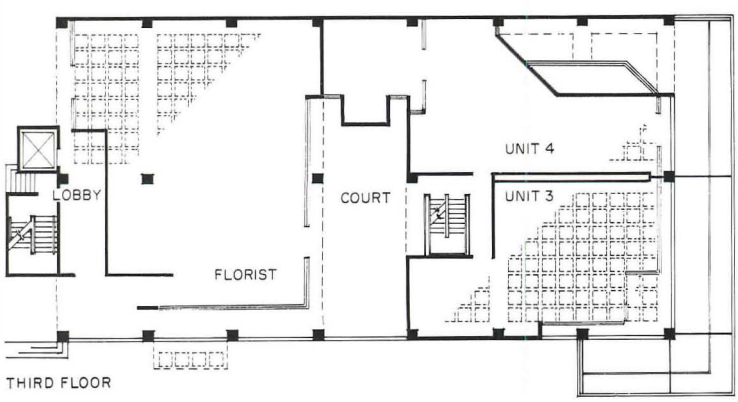


Richard Busher photos

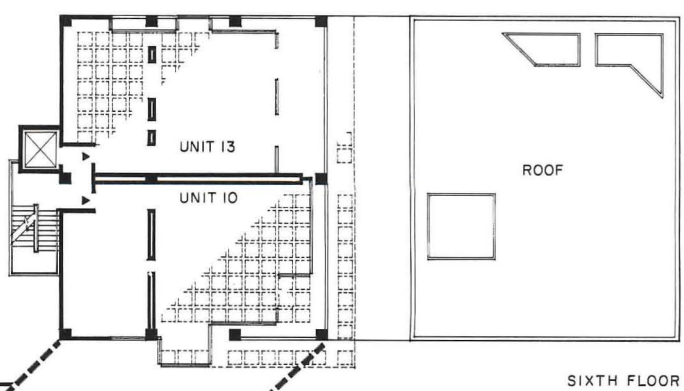



UNIT 14
UNIT 11
UNIT 10
UNIT 8
UNIT 5
FLORIST
COURT
UNIT 3
PARKING
UNIT 1
WINE SHOP
PIKE PLACE





THIRD FLOOR

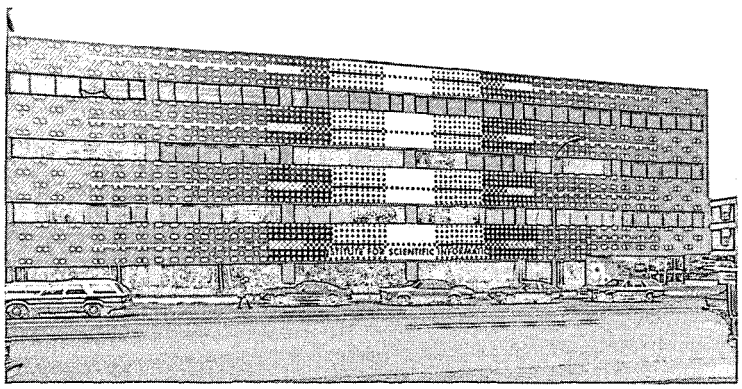


SIXTH FLOOR

UNIT 10 (TYPICAL PLAN)

The long-span techniques produced two bays on each floor. The square shape of these bays made the waffle slab—which distributes its loads in two directions—an efficient floor system. It also provides virtually column-free space so that each owner had more than the ordinary degree of freedom in apartment layout and in furnishing. As a result, the apartment interiors are intensely varied, and a level of personal expression, says Olson, is "creeping through the frame in the form of their plants, rapidly growing up the sides and hanging over the terraces."

Budget lighting has the attributes of quality



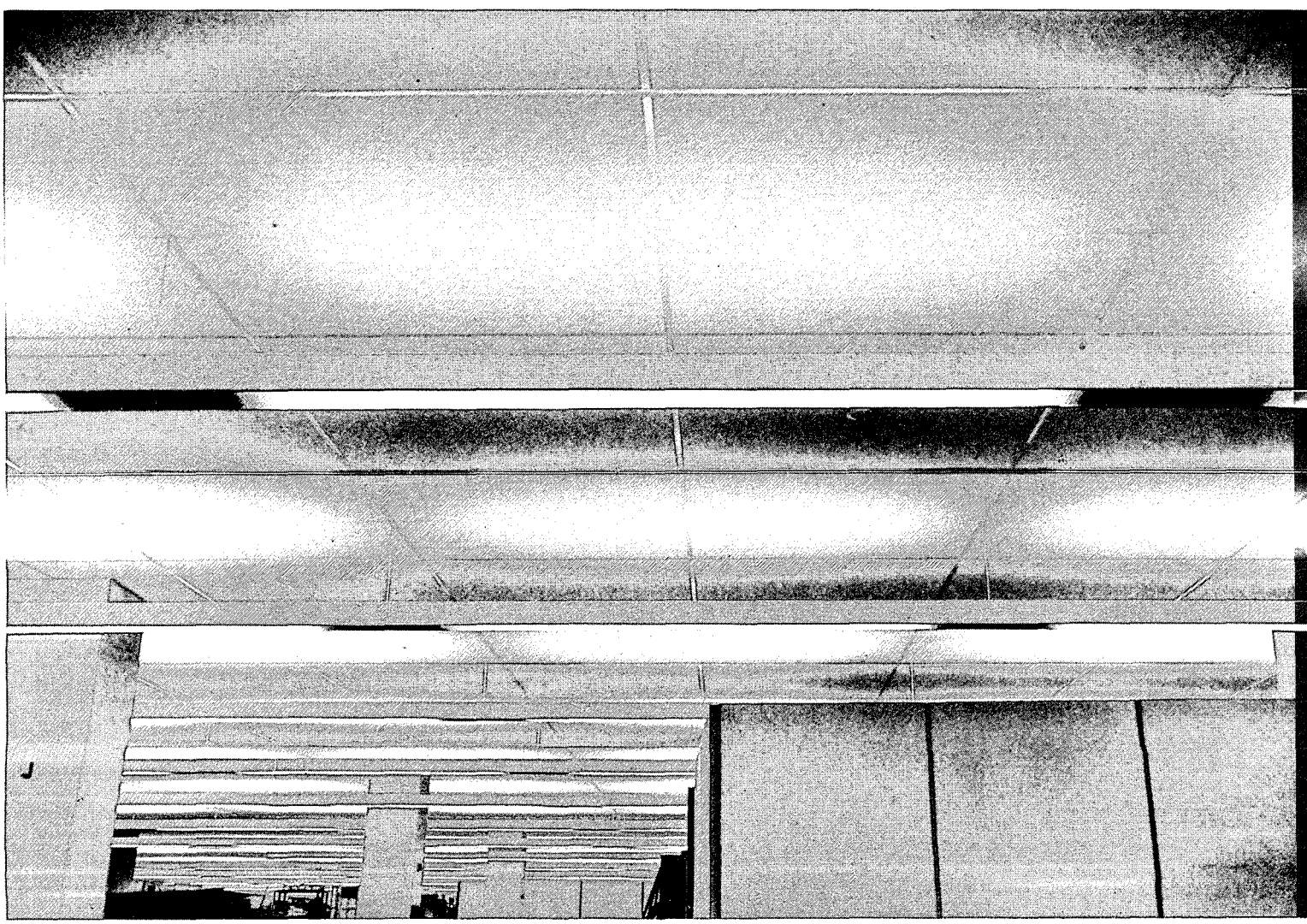
The installation, on a significant scale, of indirect/direct fluorescent fixtures in a science abstract company's headquarters signals renewed interest in the approach.

There is no mistaking that the ISI headquarters, near 30th Street railroad station in Philadelphia (and published in RECORD, May, 1980) is a Venturi building. But polemics aside, the interiors, in particular the lighting, reveal an ignored aspect of the work of Venturi, Rauch and Scott Brown: a scrupulous attention to the pragmatic matters of cost and function. In response to these concerns, lighting consultant Raymond Grenald, AIA, has revived the indirect/direct fluorescent fixture for energy-efficient, comfortable lighting. Almost equally important were cost, ease of installation and appearance of the fixture.

Once common in schools and office buildings, the indirect/direct fluorescent fixture faded from use as ceiling heights were lowered for cost reasons and to allow space for air-conditioning ducts, and because lay-in fixtures were more easily installed. Technological innovation and fashion also encouraged the change.

The revival of the indirect/direct fixture is rooted in potentially positive illumination characteristics. Depending upon the design, it can be very efficient because little light is trapped within the fixture. With the 10-ft row spacing used in this building, about 60 footcandles of illumination are provided with an energy requirement of only 1.2 Watts per sq ft. Moreover, the illumination of the ceiling plane by the fixtures can be beneficial esthetically and functionally. The desirability of an illuminated ceiling, of course, depends partly upon whether the psychological impression (active, cheery) is appropriate for the space. But visual impression aside, the illuminated ceiling offers a very positive functional attribute: with light coming in all directions from the ceiling, the quality of light for reading is very high because veiling reflections are reduced—the system can produce a high ratio of ESI footcandles to raw footcandles.

Ray Grenald never abandoned the indirect/direct fixture, however, using the approach in his own office. But cost, functional and esthetic requirements of ISI



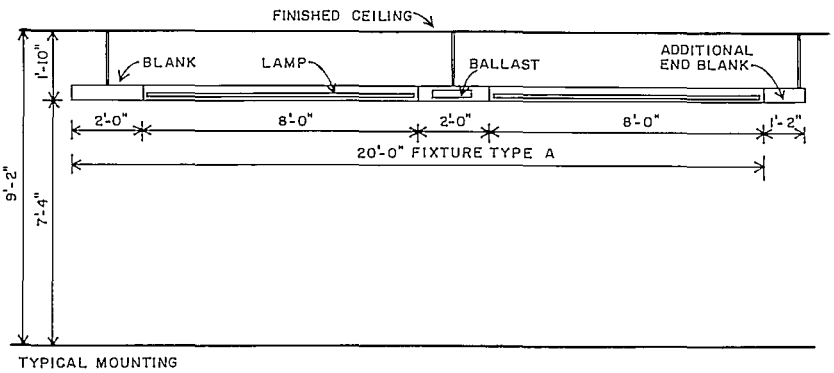
(Institute for Scientific Information) headquarters led him to develop his own design for the building, since a fixture he might have used is no longer made.

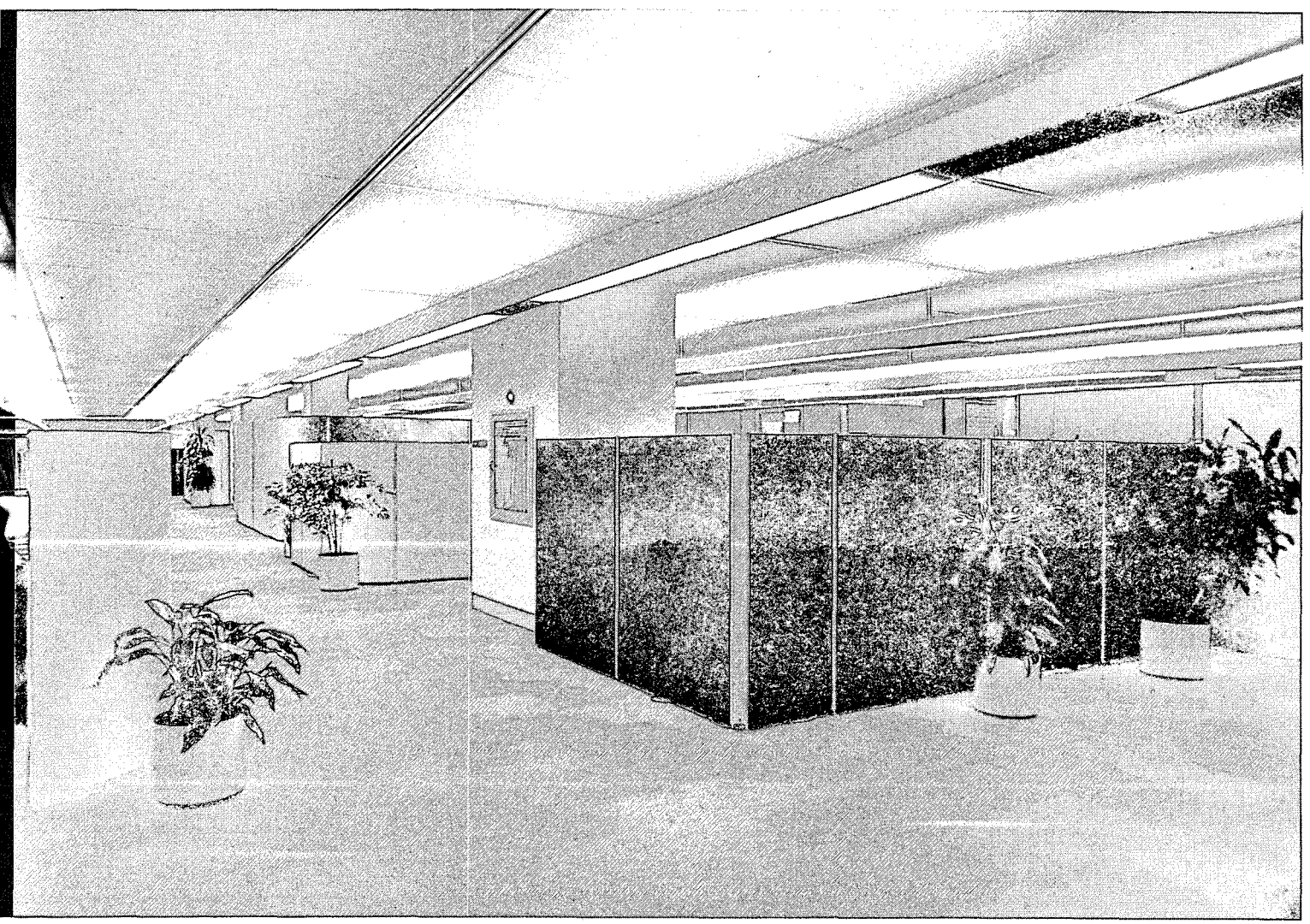
The business of ISI is producing and selling science abstracts and the reading and research is performed by people in their mid-twenties. Such work requires high quality lighting, but because the workers are young, lighting levels can be moderate. Task lights are used where some high partitions block light from working surfaces, and for such tasks as accounting.

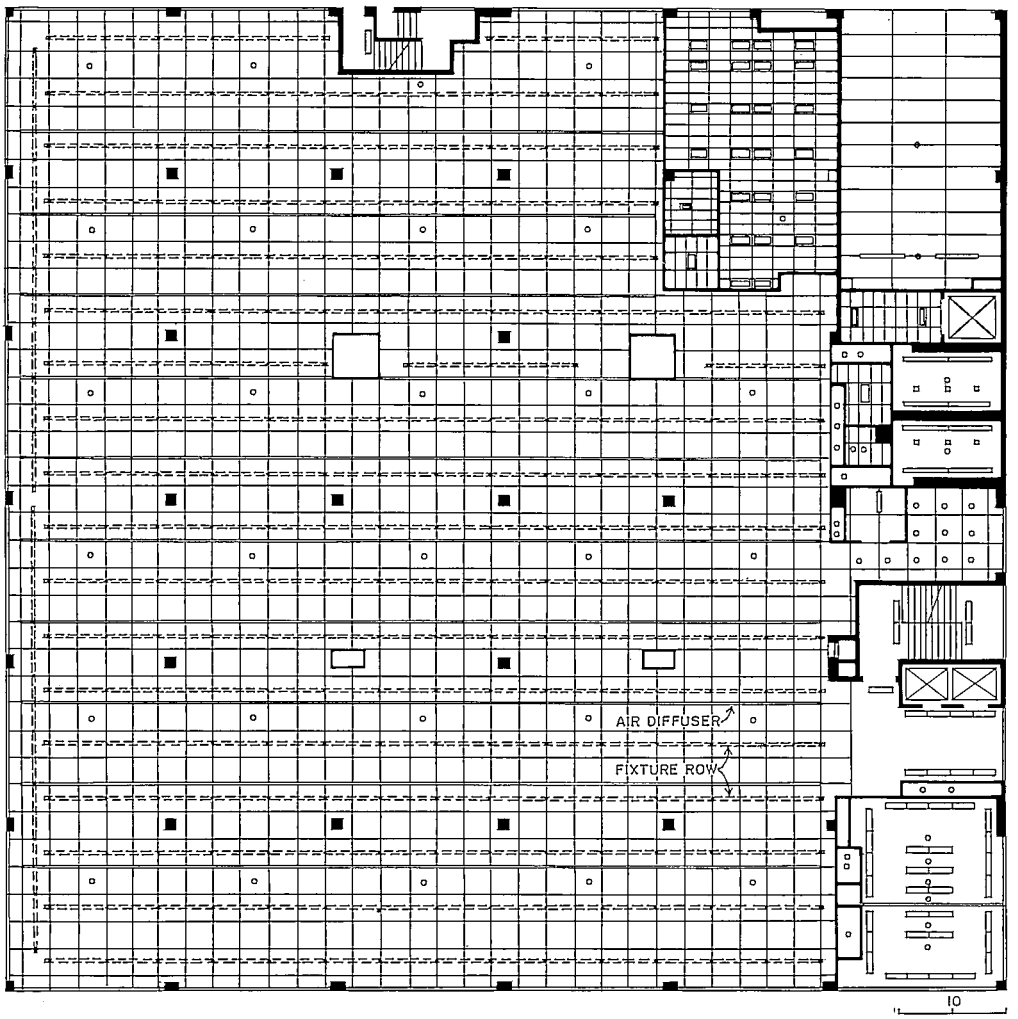
The architects, with Robert Venturi as principal-in-charge and David Vaughn as project architect, had a number of concerns with respect to the lighting, economy being high on the list as long as it did not sacrifice quality. ISI headquarters is, indeed, a "budget" building. It cost $37.50 per sq ft, excluding site work. The owner allowed $5.6 million for the building, including site work, but the bid price was $1 million under this. This fact and the fact that bids were within less than 1 per cent of each other attests to the thoroughness of the architects' cost control and their contract documents.

Another reason for the choice of the indirect/direct lighting fixture was the requirement of the acoustical consultant, Kring Herbert of Ostergaard Associates, that hard reflecting elements in the ceiling (such as lensed lighting fixtures) be avoided to ensure acoustical privacy in the open-plan offices. The open-bottom fixture lets sound through to the absorptive ceiling instead of reflecting it. A two-channel masking sound system feeds "pink noise" to ceiling-mounted speakers, 15 ft o.c. in a checkerboard pattern.

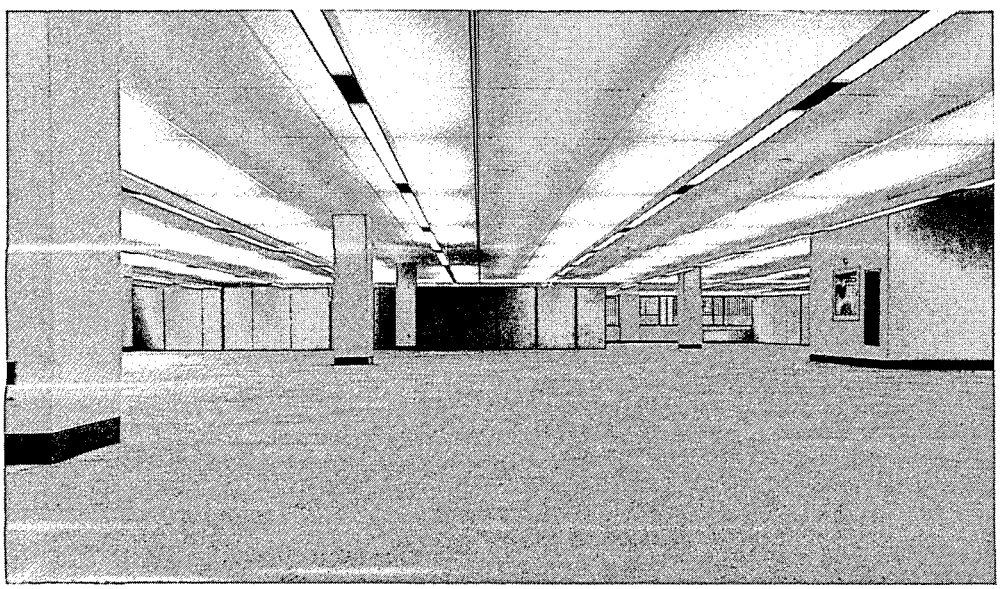
The architects also wanted the fixture to be as inconspicuous as possible. Grenald designed it just 6-in. wide, utilizing 8-ft-long high-output lamps. The fixture design yields 65 per cent uplight and 35 per cent downlight. Each row of fixtures receives power only at one end through a conduit stem, so all the remaining hangers could be thin ¼-in. rods, two per 10-ft fixture length. (Grenald toyed with the idea of suspending the fixtures by "airplane" wires.) Suspension is simplicity itself. There are no penetrations of the 5- by 5-ft acoustical ceiling panels (the high-sound-absorbing type developed for open offices) except at the power-supply stem end. Furthermore, there are no distracting canopy hangers at the ceiling. Rather, the fixtures hang from simple C-shaped sheet-metal clips that slide onto the T-bars of the ceiling system. These clips have short ¼-in.-diameter threaded studs welded to them, and the connection to the threaded ends of the stems is made by a short coupler that is turned up tight to the T-bar. The fixtures were supplied in 20-ft lengths so that they could be installed easily and quickly by three workmen. Between the 8-ft lamp sections of the fixtures is a 2-ft blank section so that the fixtures are consistent with the 5-ft module of the ceiling panels. Every other blank section houses a ballast for two lamps. With a higher budget for lighting, Ray Grenald would have preferred row spacing of 7½ ft, rather than the 10 ft actually used, to achieve a smoother brightness pattern on the ceiling. Still, the pattern, though noticeable, is modulated and not distracting.

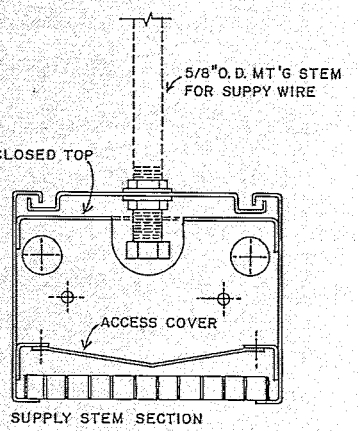


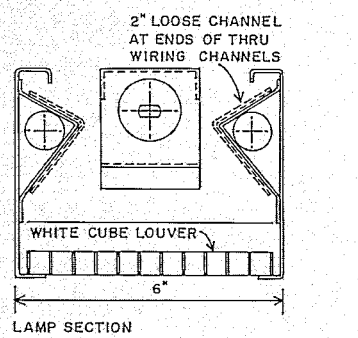


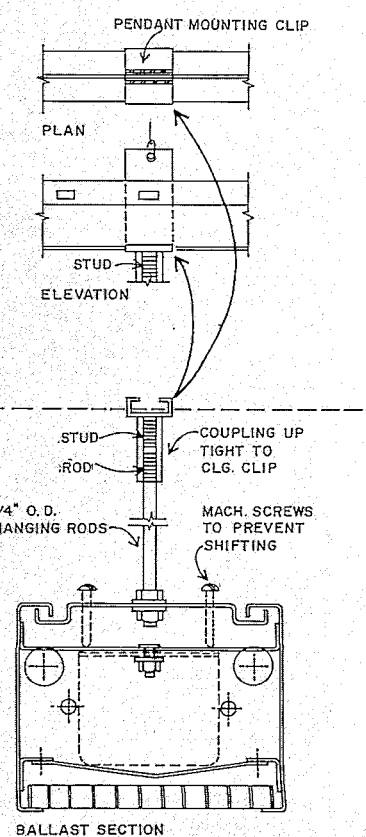


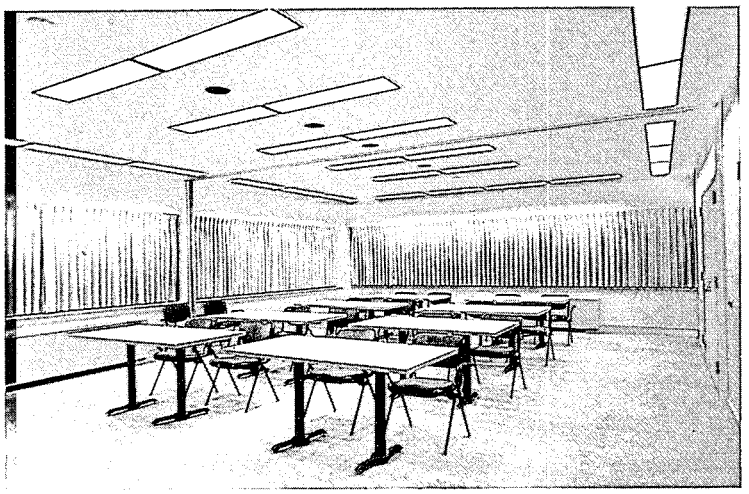
The 10-ft spacing of rows of fixtures corresponds to the 5-ft module of the 1½-in.-thick acoustical ceiling panels, which have high sound absorbency and a light reflectance of 75 per cent. An additional row of fixtures near the wall opposite the core illuminates the wall to minimize brightness contrast during the day and to light the wall at night. The sheet metal sides of the fixture are detailed to prevent light leaks. Through-wiring channels at either side carry wiring for regular and emergency power. The bottom comprises ½-in. cube louvers of aluminum painted semi-gloss white. Below is an open area which does not yet have partitions in place.











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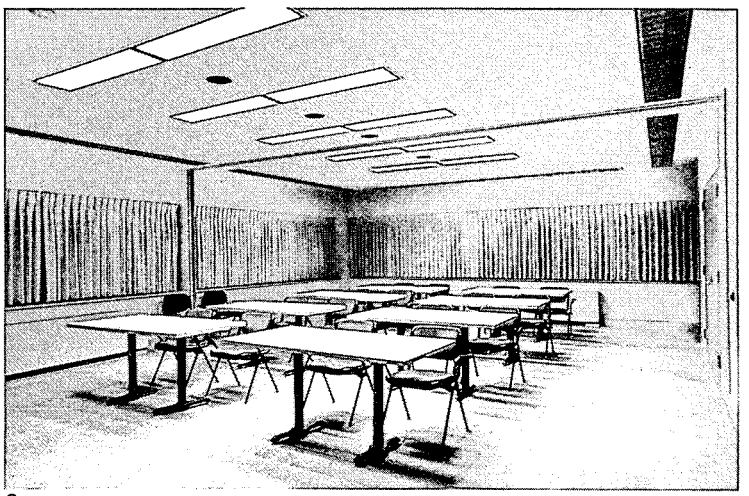

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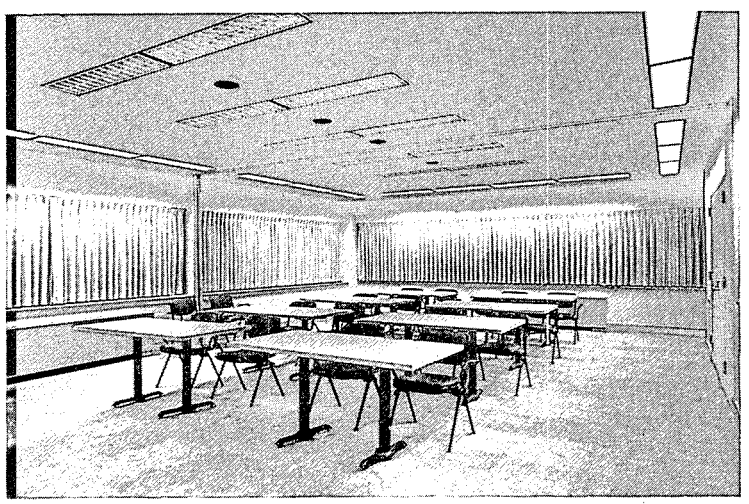

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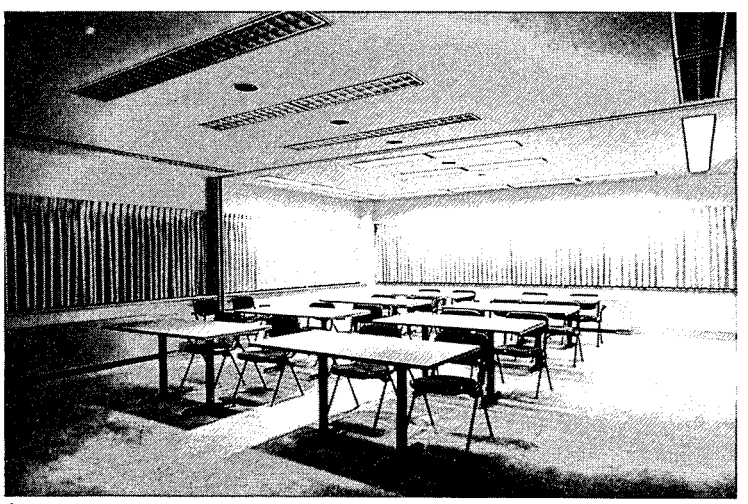

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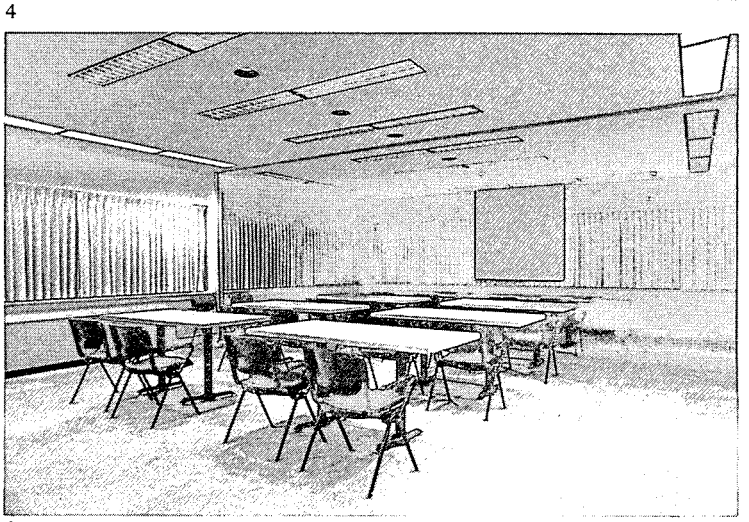


6

Fixture patterning and control provide considerable flexibility in function and mood for this conference room in the ISI building. Groups of fluorescent fixtures in the center and at the perimeter are separately switched, and the incandescent downlights are switched in two groups and are on dimmers. A sliding partition, concealed in a pocket on the right-hand side, divides the room. The various modes possible are shown in the photos above: 1) all fixtures on, 2) perimeter fixtures off, 3) perimeter fixtures on, 4) all fixtures at one end on, 5) incandescent downlights, only, on for viewing the roll-down screen, 6) perimeter fluorescent fixtures and downlights on for viewing screen.

For more information, circle item numbers on Reader Service Inquiry Card, pages 159-160

VINYL WALLCOVERINGS / *Wall-Tex*'s "Open House" collection of strippable vinyl wallcoverings is introduced in a Sample Book and a Consumer's Decorating Guide. Wallcoverings are arranged by color groups within the sample book. ▪ Columbus Coated Fabrics, Columbus, Ohio.

circle 400 on inquiry card

COLD STORAGE DOORS / A four-page brochure shows how a standard production molded fiberglass door was put through a series of "torture tests" to demonstrate its resistance to extremes of exposure, gasket loading, wind loads, and dead and live weights. ▪ Jamison Door Co., Hagerstown, Md.

circle 401 on inquiry card

CERAMIC TILE KIT / The *Ironrock* Tile Selector Kit is a compact, 11- by 12-in. portfolio which opens to form a display of tile samples, color selector, installation guides and technical information. Also included is a color catalog on imported *Normandie* tile. ▪ Metropolitan Ceramics, Inc., Canton, Ohio

circle 402 on inquiry card

STANDING-SEAM ROOF / The *MR-24R* standing-seam metal roof, originally for use only with pre-engineered structural frames, is now available as an option for both conventional buildings and as a reroofing solution. A brochure explains how the system's concealed clip panel-to-structural fasteners are slotted to allow the roof membrane to react to any temperature-induced expansion and contraction as an intact unit, a "floating" action. The roof carries a UL Class 90 wind uplift rating. ▪ Butler Mfg. Co., Kansas City, Mo.

circle 403 on inquiry card

CONCRETE FORMING / Three different systems are explained in an *AllenForm* brochure, including the stud and waler system, said to work especially well with high walls and unusual architectural shapes. The *Buyken* single liner is used primarily for foundations, low and curved walls, and the *AllenForm* gang lock system provides design flexibility and quality in repetitive applications. ▪ AllenForm Inc., Itasca, Ill.

circle 404 on inquiry card

COFFEE SERVICE / A color brochure describes the automatic *U3* electric coffee urn, a twin three-gal. urn with two separate coffee reservoirs to permit brewing of a second batch of coffee while serving the first batch. The low-profile unit stands 31-in. high; legs are positioned to fit on a 30-in.-wide counter. Both single- and double service (front and back) urns are offered. ▪ Bunn-O-Matic Corp., Springfield, Ill.

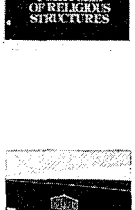
circle 405 on inquiry card

STRUCTURAL TIMBER / A 40-page book, the current "Glulam Systems" catalog contains technical data and design information about glued laminated structural timbers and framing systems. Illustrated with color application photos, it includes span and load tables, data on the panelized roof system, and beam and column connection details. ▪ American Institute of Timber Construction, Englewood, Colo.

circle 406 on inquiry card

RELIGIOUS STRUCTURES / Also from the American Institute of Timber Construction, a "Portfolio of Religious Structures" features 12 pages of photographs showing the applications of glued laminated timbers in church construction. ▪ American Institute of Timber Construction, Englewood, Colo.

circle 407 on inquiry card



STEEL BUILDINGS / A color brochure illustrates how *Metallic Skyline* buildings meet the space requirements of large warehousing, commercial, industrial and manufacturing operations with longer spans and fewer interior columns. Single- and multi-story buildings are shown, with exteriors of brick, stone, glass, and concrete, or masonry walls. ▪ Marathon Mfg. Co., Houston.

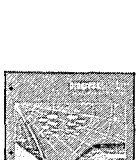
circle 408 on inquiry card

INDUSTRIAL PLASTICS / The most recent edition of the "Complete In Stock Plastics Buyers Guide" contains 120-pages listing *Acrylite* and *Exolite* acrylic and polycarbonate sheet, as well as other acrylic, nylon, vinyl, polystyrene, phenolic, etc. plastics and supplies. Complete product descriptions, sizes and prices are given; fabrication and technical services are described. ▪ AIN Plastics, Inc., Mt. Vernon, N.Y.

circle 409 on inquiry card

SOUND ABSORBENT PANELS / Four variations on the *Vicracoustic* panel are shown in a product brochure. All systems—A, B, C and D—have a sound-absorbing glass core and a rigid molded glass fiber board. ▪ L. E. Carpenter & Co., Wharton, N.J.

circle 410 on inquiry card



COMMERCIAL LIGHTING / The *Progress* catalog presents a full line of fluorescent and incandescent fixtures for stores, offices, apartments and motels. Products include recessed and track systems, energy-saving fluorescents, nondestructible wall and ceiling fixtures for indoors and out, and architectural luminaires that meet or exceed all UL applicable standards. ▪ Progress Lighting, Philadelphia.

circle 411 on inquiry card

ONE-PLY ROOFING / A data kit on *Lexply #1* hypalon membrane roofing contains two samples of the product: one brand new, and one exposed to the weather for 14 years. Technical information, installation instructions, and a copy of the *Lexply* warranty are also included. ▪ BFGoodrich Co., Akron, Ohio.

circle 412 on inquiry card

OUTDOOR LIGHTING / A fully indexed catalog includes all *ITT* outdoor lighting products for roadway/area, security, floodlighting, environmental, industrial and commercial applications. Prices, product features, dimensions and ordering information are given for all items. ▪ ITT Outdoor Lighting, Southhaven, Miss.

circle 413 on inquiry card

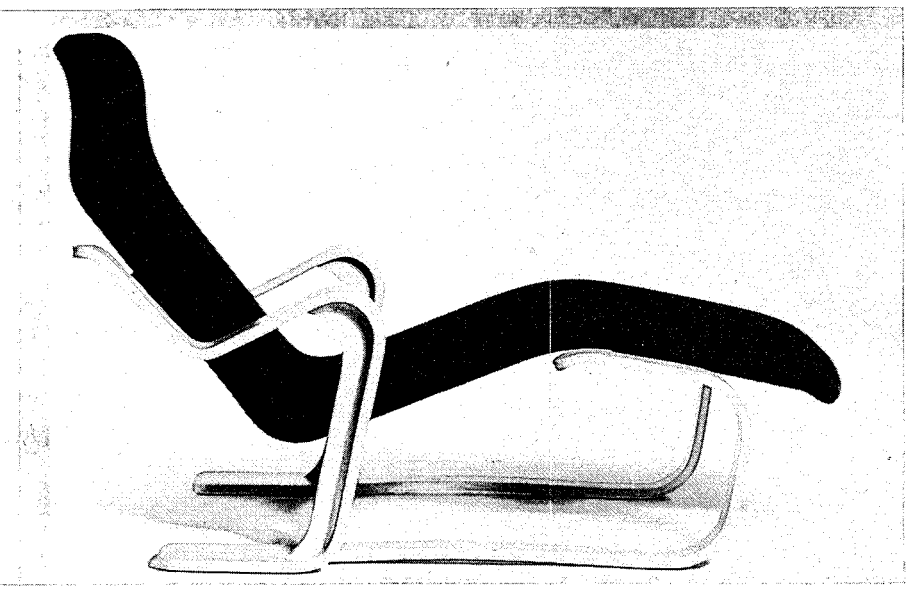
ELECTRIC FURNACES / "Series B15 and S15" coil bearing furnaces, for use in offices, commercial buildings and large homes, are described in a selection guide. These furnaces are prewired for both heating/cooling and heat pump systems, and are rated from 12 to 30 kW. They may be mounted for upflow, downflow or horizontal operation. ▪ Square D Co., Mesquite, Texas.

circle 414 on inquiry card

INDUSTRIAL FASTENERS / Design and technical data on a variety of frequently used specialized fasteners is given in an illustrated 23-page catalog. Products include *Tensilock* screws, and terminal clamps. ▪ Eaton Corp., Cleveland.

circle 415 on inquiry card

For more information, circle item numbers on Reader Service Inquiry Card, pages 159-160



Breuer's Long Chair now produced in the U.S.

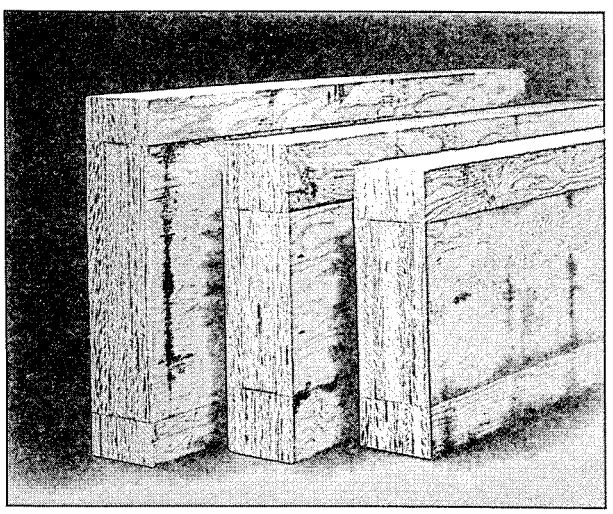
Designed over 45 years ago, Marcel Breuer's Long Chair is now being manufactured in the U.S. by this company, a successor to the Isokon Furniture Company in England, first maker of the chair. The Long Chair, one of the classic furniture designs of the 20th century, is continuing to be available with a laminated wood frame. ▪ Claud Bunyard Design, Inc., Gardner, Mass.

circle 302 on inquiry card

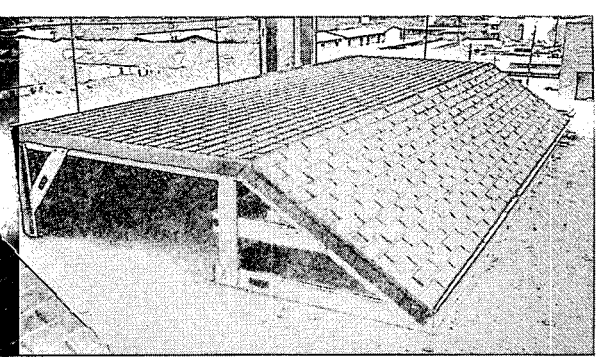
Unique wood garage door header introduced

Advanced wood fiber technology developed by this company has been applied to its new garage door header, claimed to offer superior structural performance, plus material, weight and labor savings. Designed for single story applications with maximum roof loads of 55 psf, it is made of *MICRO-LAM* laminated veneer lumber. It has been approved by the National Research Board. ▪ Trus Joist Corp., Boise, Idaho.

circle 301 on inquiry card



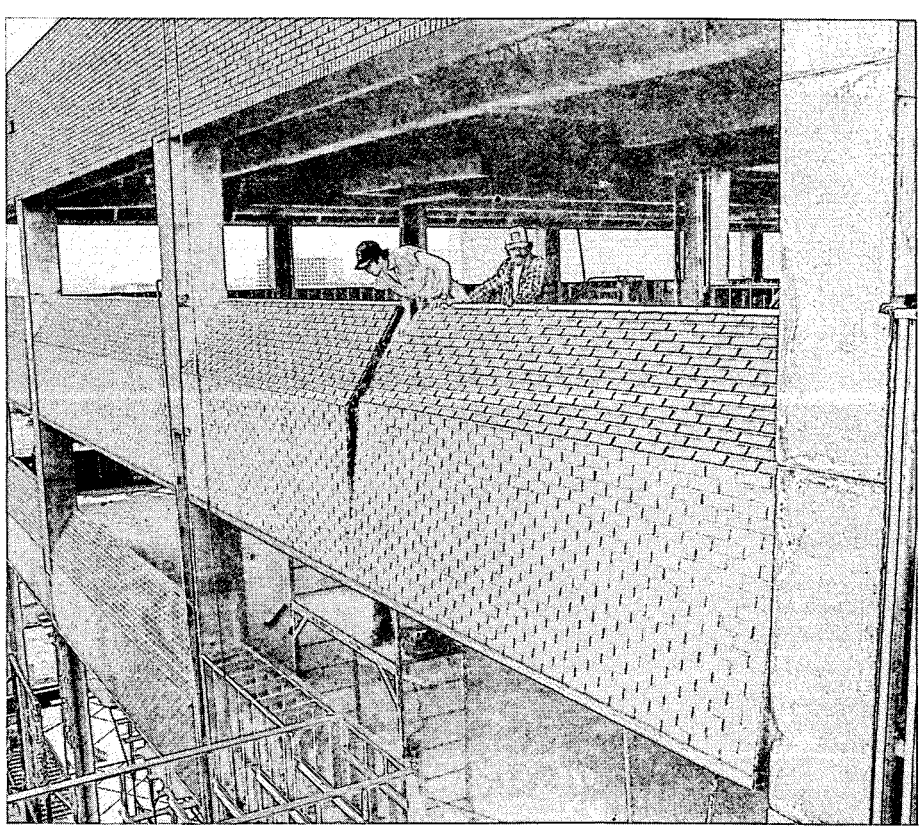
Prefabricated brick panels lessened problems on office building



n a low-rise building in Houston, a pre-fabricated modular wall panel system faced with a hin brick veneering material provided the local architect, Klein Partnership, and the owner/general contractor/design consultant, Walter D. Allen, a cost effective option to a raditional brick facade. The architects desired the esthetics of brick but needed light veight panels, so this system was used with 7/16-in.-thick *Mini-Brick®* attached to a iberglass impregnated rigid board on a steel frame with a atex mortar. While each panel weighed 1500 lbs, it was still lighter because the brick is ⅓ the weight and size of standard brick. Labor costs were claimed to be reduced, too. The panels were produced on-site and conveniently lifted into place, minimizing working time outdoors in rainy weather. Workers were also able to work on other parts of the building during the 14 to 21 day curing period for the panels. ▪ Huntington/Pacific Ceramics, Inc., Santa Fe Springs, Calif.

circle 303 on inquiry card

more products on page 121



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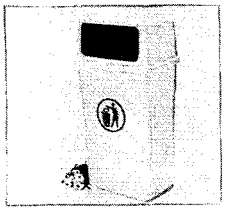
"The door people"™

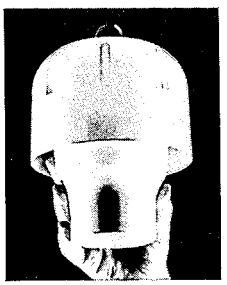
Circle 41 on inquiry card

LITTER CONTAINERS / The "Model 130" plastic litter container is said to combine low cost with vandal- and weather-resistant construction. The 34-gal. units may be bolted to floor or sidewalk; side-mounted to pole or wall, or can be used free-standing. Spring-activated doors in front and back allow easy, out-of-sight litter disposal; both reusable rigid liners and disposable bags are available. ▪ Plastic Omnium, Inc., Canton, Mass.



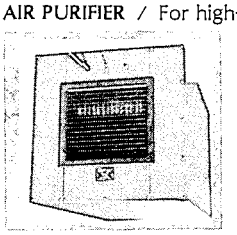
circle 304 on inquiry card

DESTRATIFICATION DEVICE / Designed for the average-sized room with up to a 10-ft ceiling, the *StratoJet MkII* device captures rising warm air before it escapes and redirects it gently to the floor by means of a low-velocity fan and a honeycomb air-concentrator nozzle. The 6-in-high unit is almost silent, and draws less current than a 10-Watt light bulb. The destratification device is said to offer savings of at least 15 per cent in residential heating costs, while eliminating cold floors and drafts. ▪ Rusth Industries, Ltd., Portland, Ore.



circle 305 on inquiry card

AIR PURIFIER / For high-volume industrial applications, the "Model ET-24" air purifier will treat about 2400 cu ft of air per minute. Within the series, there are five possible combinations of filters, designed specifically to remove oil mists, coarse particles, spray paint, lint, heavy smoke, etc. ▪ Ecology Tech, Jonesboro, Ark.



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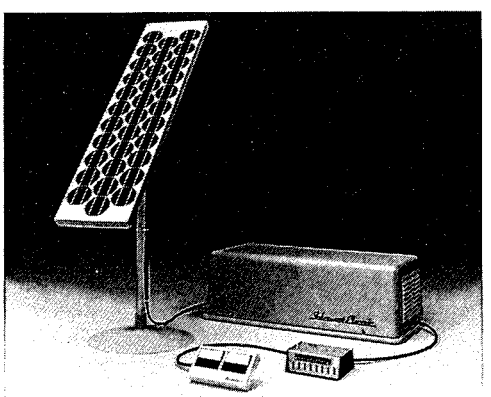
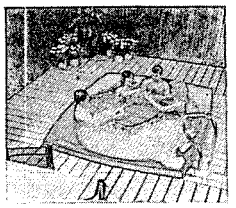


SOLAR POWER / The "Pilot" series of solar electric generators produce 150 to 500 Watt-hours per day for lights, TV and other 12-Volt DC appliances. Prices start at $495, complete and ready to install; the unit shown here produces up to 160 Watt-hours per day and includes one panel, one battery, charge controller, pole rack, cover and meter panel, and retails for $1,405. Much larger systems are also available, producing enough electricity for a modest home, and including a DC to AC inverter. ▪ Solarwest Electric, Santa Barbara, Calif.

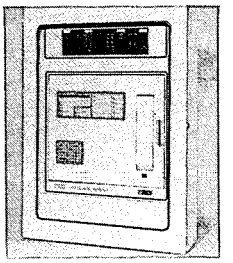
circle 307 on inquiry card

WHIRLPOOL SPA / The *Super Spa* provides seating for up to six adults within a 103- by 86½-in. fiberglass-reinforced acrylic tub. Six directional whirlpool jets and a number of air inlets provide a hydro-massage action. The unit can also be used as a hot, soaking tub: the heater and circulating pumps can be operated independently from the whirlpool jet pump and blower. The *Super Spa* can be installed indoors or out; its compact, UL-listed support system can be located in a variety of enclosures. Options include the safety hand rail shown in photo and a choice of water heating systems. ▪ Kohler Co., Kohler, Wisc.



circle 308 on inquiry card

MULTI-FUNCTION CONTROL / The "2120" multiplex system is said to provide cost-effective control and monitoring functions for life safety, fire detection, security and energy management in small- and medium-sized buildings. Other features include automatic control of elevators, air handling equipment, doors and signals. The central processing unit can be equipped with one or two communications channels, capable of monitoring up to 1,008 points and controlling up to 504 points. ▪ Simplex Time Recorder Co., Gardner, Mass.



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more products on page 123

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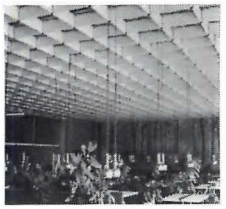
Circle 44 on inquiry card for salesman's visit

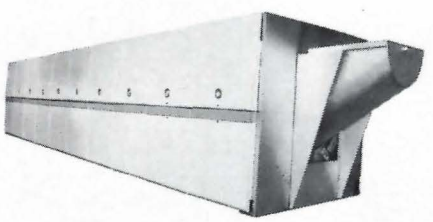
ALUMINUM CEILING SYSTEM / The *Daempa Baffle* is available in a perforated version, said to provide superior sound dampening characteristics. Each 2- to 10-ft-long aluminum panel has a core of mineral wool and polyethylene foil; the optional perforations leave the panel with 22 per cent open area. The perforations themselves are invisible from 10 ft away. the *Daempa* ceiling is offered in more than 100 different finishes, including bright metallics and colors. ▪ Levolor Lorentzen, Inc., Lyndhurst, N.J.



circle 310 on inquiry card

FLEXIBLE LOCK SYSTEM / An addition to *Corbin's* "High Security" cylinder lock line, this removable core unit offers a master key system adaptable to the user's needs. Security of the cylinder is ensured by its interlocking pin feature. The removable core unit, like all "High Security" cylinders, may be keyed under the same master key. ▪ Cordin, Emhart Industries, Inc., Berlin, Conn.

circle 311 on inquiry card



LAUNDRY EQUIPMENT / A modular system based on 100-lb washing units, *Milnor's* continuous batch washer for large laundries offers substantial savings in labor, water and fuel. A built-in reuse system saves water and heat; the washer adapts to a variety of floor plans and requires a ceiling height of only 10 ft. ▪ Pellerin Milnor Corp., Kenner, La.

circle 312 on inquiry card

CONTRACT CARPETING / A new "Ultragraph" tufting machine can produce custom patterns and designs in carpeting that formerly had to be printed or woven. The contract installation shown here in Scottsdale, Arizona's Conference Center and Resort Hotel used the tufting process to produce an Indian motif in heavy-duty *Zeflon* nylon yarn carpeting. ▪ Badische Corp., Williamsburg, Va.

circle 313 on inquiry card

SINK/COUNTER TOP / A color-blended kitchen sink and ceramic tile counter top system, "The Ceramica Coordinates" line features a 32- by 21- by 16-in. enameled cast iron sink from *Eljer*, and four matching *American Olean* "Encore" tiles. The sink rim permits an installation flush with the tile counter top; the double-basin sink will accept an automatic disposal unit. The "Coordinates" come in sand, seal, wheat and blue colors; "Encore" tile is available in three sizes, along with matching grouts and bullnose trim. ▪ Eljer Plumbingware, Pittsburgh.

circle 314 on inquiry card

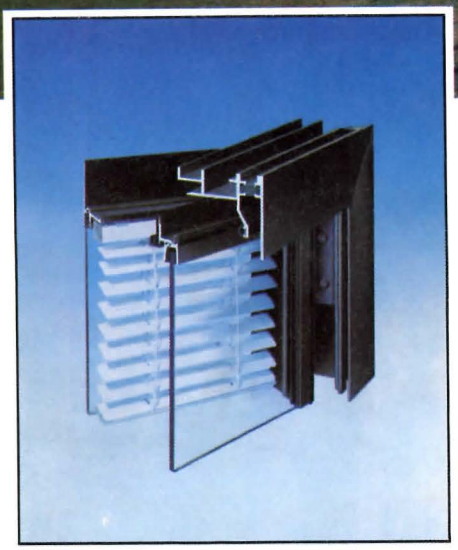
STOVE HEAT SHIELDS / Break-resistant heat shields for freestanding stove and heater installations meet UL standards, and are listed for use in mobile homes. Panels are fastened to the floor on a hard surface, and on walls over one-in. ceramic spacers for air flow. The stove can be placed as close as six in. to the wall shield, maximizing useful floor space. Available in sizes to meet most stove manufacturers requirements, the heat shields come in brick, flagstone and barnsiding patterns. ▪ Hop Cap, Inc., Bremen, Ind.

circle 315 on inquiry card

more products on page 125

hospitals

Aiken Community Hospital Aiken, SC - Architect — Gresham & Smith



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Oral Roberts University City of Faith, Tulsa, Oklahoma, Architect — Frank W. Wallace

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St. Vincent's Hospital Indianapolis, Indiana Architect — Klein Partnership

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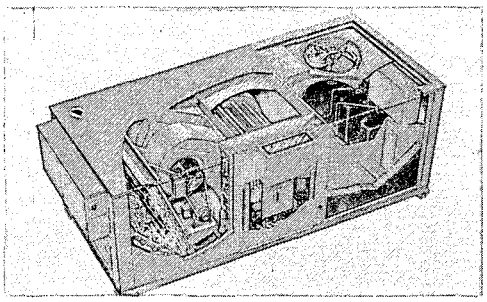
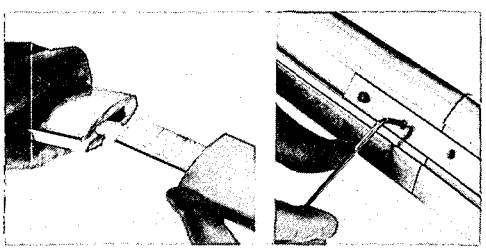


SINGLE-PACKAGE HVAC / *Lennox Industries* has introduced three high-efficiency, single-package rooftop product lines for the light-commercial market, in 7.5- and 10-ton cooling capacities. Including a gas heating/electric cooling unit (shown), an air conditioner line and a heat pump series, the light-commercial units feature demand-oriented electronic controls. These match the cooling and heating output of the unit with actual building requirements, and operate the *Power Saver* damper system to introduce up to 100 per cent outside air in place of mechanical refrigerant when outdoor conditions permit. ▪ Lennox Industries, Inc., Dallas.

circle 316 on inquiry card



ALUMINUM RAILING / A non-welded railing system for mechanical assembly, *Carlsrail* wrought aluminum components have internal splices, shown in photos, for end-to-end and corner connections of handrails. Wall and post brackets secure the handrail by means of an internal clamping device. Bolts for mounting posts on the fascia and for attaching handrail brackets to the post are concealed by a decorative insert strip in aluminum or wood. ▪ Julium Blum & Co., Inc., Carlstadt, N.J.

circle 317 on inquiry card

OFFICE SEATING / The "Techtonic" chair series includes high-back, low-back (shown) and steno chairs scaled for open-plan interiors. Graded densities of foam placed in a rigid polyurethane shell provide for long-term seating comfort and support. The textile or leather coverings may be plain or button tufted; "pentaprong" bases are offered in oak, walnut, chrome or bronze. ▪ The Gunlocke Co., Wayland, N.Y.

circle 318 on inquiry card

TILE SEALANT / The *Tilekote 19* sealer is clear and fast-drying, designed for Mexican, terra cotta and other unglazed tiles and clay products. The penetrating sealer is rubbed into the surface with a synthetic sponge and allowed to dry for two hours; usually only two coats are needed to properly seal and protect the floor surface. ▪ Dura Seal Div., Minwax Co., Inc., Clifton, N.J.

circle 319 on inquiry card

Warren Platner Standard Brands Research Center/**Michael Graves** Sunar Showroom Houston/**Gwathmey Siegal** Knoll Boston Showroom/**Joseph D'Urso** Calvin Klein Showroom, L.A. Residence/**Davis B. Allen** Weekend House/**John Richards Andrews** Clyde's Restaurant/**Auer-Nichols** Gulf & Western Headquarters/**Ariston** Boot Store/ **Ari Bahat** Residence/ **Beyer Blinder Belle** Astor Wines & Spirits/ **Suzanne Binswanger** Beach House/ **Marcel Bretos** New York Apartment/ **Bromley-Jacobsen** Heaven Disco, Les Nuages Restaurant/ **Counterpoint** United American Bank/ **Norman DeHaan** Lake Point Tower Club/ **Del Campo** Vidal Sassoon Salon/ **Andrew Delfino** Stanford Court Hotel/ **Ruben de Saavedra** Kips Bay Showhouse/ **Angelo Donghia** Miami Showroom/ **Arthur Ferber** Manhattan Cooperative/ **Thomas Foerderer** Mark Ross Residence/ **Forbes-Ergas** Argentine Banking Corp./ **Eve Frankl** Dualite Offices/ **Stanley Jay Friedman** Brueton Showroom/ **Gensler & Associates** Athletic Club/ **Mark Hampton** Kips Bay Showhouse/ **Warren Hansen** Muppets Townhouse/ **Interior Concepts** Deutsche Bank/ **ISD** Alma Desk Showroom/ **Jutras & Nobili** Berkshire Place/ **Kaneko-Laff** Anaconda Tower/ **Hamilton Houston Lownie** Red Cross Blood Center/ **Theodore Brown** Hibernia Bank/ **Charles Kratka** San Antonio Hospital/ **Langdon & Wilson** Downey Savings & Loan/ **Manchen & Walker** Manolo-Blahnik Shoe Store/ **Juan Montoya** Manhattan Residences/ **Morris-Aubrey** Braniff Headquarters/ **Neville Lewis** Anaconda Tower/ **Giovanni Offredi** Saporiti Italia Showroom/ **Powell-Kleinschmidt** Chicago Apartment/ **Valerian Rybar** Pierre Hotel Ballroom, Restaurant at Resorts/ **John F. Saladino** Mt. Sinai Hospital, Almays Offices/ **Janet Schirn** Elsco Showroom/ **Rita St. Clair** Baltimore Restaurant/ **3/D International** Houston Headquarters/ **Adam Tihany** Apartment/ **Udstad-Dandridge** Apartment/ **Venturi & Rauch** Knoll New York Showroom/ **Walker/Group** Burdines/ **Sally Walsh** Seymore Mirrow Showroom, Braniff Headquarters/ **Whisler-Patri** Seven Hills Restaurant/ **Ken White** Merchandise Mart Reference Center/ **Lynn Wilson** Radisson Hotel/ **Spiros Zakas** Rigatoni's Restaurant.

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St. Procopius Abbey is an impressive example of contemporary architecture, and like many other recently erected buildings of comparable distinction, it is roofed with TCS (terne-coated stainless steel). There is an inherent logic here, for TCS is unmatched in its resistance to corrosion, never needs maintenance if properly installed, and weathers to a uniform and attractive warm gray. Thus excellence of product complements excellence of design.

TCS: THE LOGICAL CHOICE

ST. PROCOPIUS ABBEY, LISLE, ILLINOIS ARCHITECTS: LOEBL, SCHLOSSMAN & HACKL, CHICAGO, ILLINOIS ROOFING CONTRACTOR: SYTSMA SHEET METAL, INC. BRIDGEVIEW, ILLINOIS