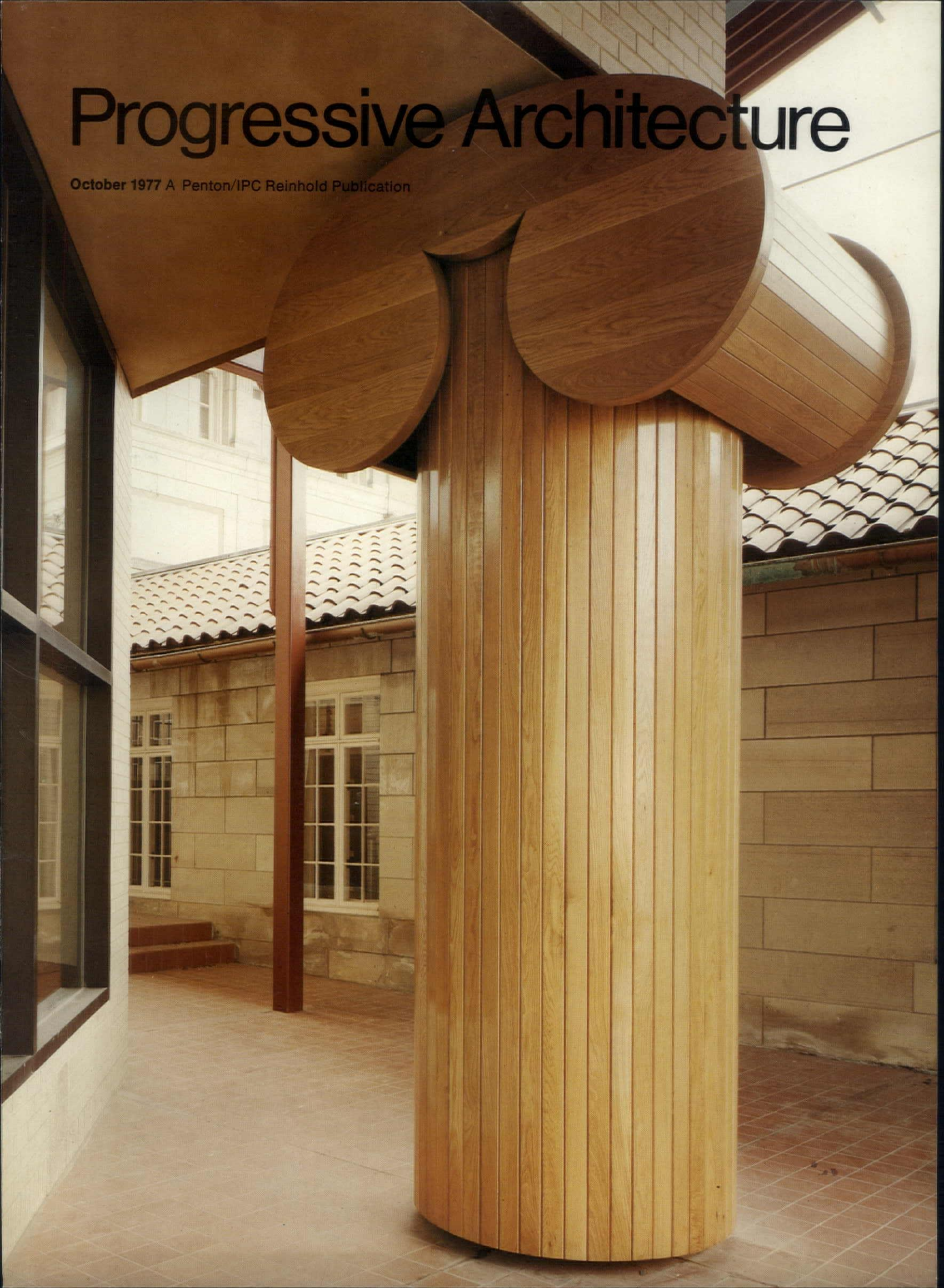


Progressive Architecture

October 1977 A Penton/IPC Reinhold Publication





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The Gannett West building, shown here, was specifically designed to conserve maximum amounts of energy and provide spatial flexibility. It was completed early in 1976 as part of The Farley Gannett Engineering Center, headquarters complex of the Harrisburg, Pa., engineering firm of Gannett Fleming Corddry and Carpenter, Inc.

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Design and planning

49 Realization of symbols: Introduction

Work by Venturi & Rauch, consisting of four new buildings and one grand scheme, are critically reviewed. Included are:

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56 Seeing the forest for the trees: Penn State Faculty Club, State College, Pa.

60 Mission accomplished: Brant-Johnson House, Vail, Co.

64 Country manners: Weekend house, Westchester County, NY.

67 Casino qua non: Hotel-casino project, Atlantic City, NJ.

70 Three California houses: Introduction

Included are two new "high-tech" houses, which illustrate concern for industrialized architecture, and the famous Eames Case Study House.

72 People who live in glass houses: Peter de Bretteville's adjoining houses.

76 TEST case: Helmut C. Schultiz's steel-framed house.

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Outdoor lighting not only can enhance the appearance of a project but it can also contribute a great deal toward safety and comfort.

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Images of house

October 1977

Two polar approaches to the design of houses are represented in this issue. The Venturi & Rauch houses remind us that there are certain symbols of the house—primitive in origin and recognized almost worldwide—which can be embodied in today's houses; the Southern California houses remind us that these symbols can, alternatively, be dispensed with entirely. Modern Architecture has always presented a paradoxical split over the symbolism of home—the revolutionary, technology-based International Style avoiding traditional forms as a matter of dogma, the organic and vernacular-based work of the Prairie School and the Bay Region, for instance, adopting this symbolism with equal conviction.

When Frank Lloyd Wright abandoned the pitched roof that had distinguished his houses from other early work, was this an enlightened step? Or was it a surrender to the standards of his contemporaries and his own form-making drive? It is ironic that shortly after Wright gave up the pitched-roof house, Le Corbusier's flat-topped housing at Pessac was being refaced in traditional images by its residents.

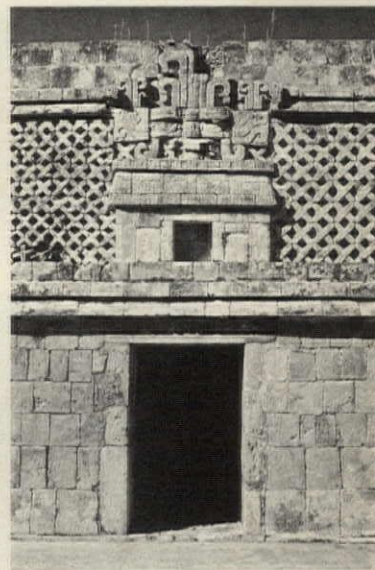
One of the tenets of main-line Modern Architecture has been that the house is a paradigm for, or a fragment of, the world of larger buildings, differing from them only in scale. This is obviously the position of the California architects whose work appears in this issue, and the position of the New York Five, among others. It is a position that Robert Venturi and Charles Moore and their associates, among others, have rejected.

Since the earliest times when mankind began assembling in villages, the need for symbolic recognition of each dwelling has remained an unresolved issue. In such revered models as the American Indian pueblo and the Parisian neighborhood, the individual unit is suppressed. In 19th-Century British and American rowhousing, the unit is first indicated by discreet emphasis on uniform entries, then later in the century by willful variation among fronts—the individualization often counteracted by the treatment of whole rows as single formal entities.

One revealing illustration of the dilemma comes from Yucatan and dates back over 1000 years. The ceremonial city of Uxmal was organized into imposing, monolithic blocks, classically rectangular, symmetrical, and repetitive



Nash row, London (above);
house in Bedford, NY (below);
relief, Uxmal, Mexico (right).



David Morton, top left, John Dixon, others

in detail—the very antithesis of the curved-cornered, steep-roofed, casually sited peasant house still seen in the surrounding countryside. On one structure, however, the symbolic representation of this house is centered over each doorway, apparently to identify it as the quarters of an important personage.

In most present-day apartment buildings, the identity of the unit is lost. But those of Sert, Jackson & Associates, for instance, follow the model of Corbu's *unités* in attempting to single out units on the façade. Among the architects represented in this issue, Helmut Schulitz clearly sees his single house as one unit within a larger system that accommodates variety; Venturi, in his one multifamily building—Guild House in Philadelphia, 1963—chose to treat the whole structure as a single, enlarged house symbol.

Behind these questions of individual dwelling symbolism are a number of primarily social questions: In an increasingly urbanized world, is the isolated single-family house merely a holdover for the specially privileged? Is the construction of closely spaced separate houses for middle-to-low-income occupants merely a pathetic waste of resources? Is the effort to express the identity of single units in multifamily buildings valid?

For the moment, there are no certain answers to such questions, which seem to have been with us throughout history. Unless the behavioral scientists can identify the benefits of the dwelling symbol or the costs of denying it, the questions will remain unanswered. Meanwhile, we simply accept the fact that fine architectural solutions are possible based on either of two obviously opposing premises.

John Morris Dixon

Views

Industrialized enterprise

I am particularly intrigued with the article by Steven Winter on Industrialized Housing (P/A, July 1977, p. 77). However, I do not think that he is fully aware of all the facts. He refers to the Tracoba, Wates, and Balency Systems as being imported from Europe, which is true, and Zachry, Shelley, and Townland being the darlings of Operation Breakthrough and Wall Street. However, I think that Tracoba is now out of busi-

ness and Rouse Wates have certainly packed up and Balency is not doing any work in the U.S. And to my knowledge the American systems are doing very little.

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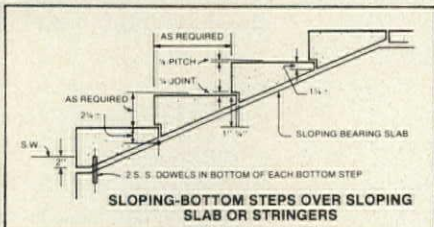
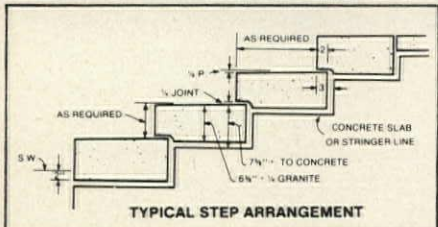
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The future of occupants

After reading the May issue of P/A, I felt new excitement in the practice of architecture. The issue was well organized, making it interesting to observe the profession of architecture as it is now practiced in several ways (protagonists, polemicists, etc.). Examples from these different architectural practices seemed to illustrate well your analogy to the performing arts. I imagine many architects placed themselves in these role positions. It would be interesting to learn how many of the polemicists (post-modernists) are out here. Are the recent grads accepting this role? And are there others picking it up? It is contrary to what I was taught in the 1950s.

To understand the future of architecture one should reflect on the history of architecture. Have we forgotten how architecture came about in the first place—to provide shelter for humans. After humans started constructing shelter, they found infinite ways to do this and express themselves. People or humans were mentioned a few times in the issue (Margaret Mead, Sandra Howell), but why are *people* not included as protagonists? Some of the best architecture of history was created by the needs of people. From these needs came the form, the art, thermal environment, materials, structure. Were they creating art for art's sake or was the art only an expression of their life? Was the art of the Renaissance, Baroque, Gothic, Byzantine era an expression of the human using the architecture or only a decor for the new technology which allowed all manner of art. Architecture allowed for a three-dimensional expression of the art of the period. Did these buildings meet the human shelter needs or were they only architectural expressions that humans just "fit in"?

Eventually this architecture became impractical in the industrial world of rising building costs. Utilization of space became mandatory. Since the classic designs did not readily fit the needed flexibility of space and the high cost of ornamentation, the classic design began to disappear. In came the modern movement of nonornamental and the well worn "form follows function." So we have a menagerie of glass and aluminum cubes, some slabs of masonry and concrete, all austere in design . . . a questionable art expression. Most do not meet the *human needs*.

Many have technological problems of structure, mechanical/electrical systems, and con-

[continued on page 10]

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GRACE

Views continued from page 8

struction responsibility. Therefore, now we have much criticism and distrust among our clients. You present in this issue that some architect protagonists are trying to improve the present state of affairs. Some polemicist are looking for new ways, new meaning to the art of architecture. But what I see missing is that *human need*. Peter Eiseman's "House VI" is an interesting attempt at a new art form but as Gutman critiqued it, misses some human needs even though it is an exciting space [P/A, June 1977, p. 65]. I fear we are ignoring the real purpose of architecture—shelter as a human need.

Where is the additional expertise that we need to define these human needs? Architects are not social or environmental psychologists. Are un-

dergraduate design schools teaching this to architects/interior designers? There are several colleges teaching these subjects but as an advanced degree. Missing from your scenario are the behavioral scientists. They are also missing from the protagonist group. Maybe they are in the polemicist group.

The point to all of this is that the future belongs to the human being and his needs. We are past the industrial age. We know how to make things and put things together. The emphasis now should be on people and their relationship to themselves, each other, and to the environment and their environment to them. That is why the social and environmental psychologists are making their studies.

Attend an EDRA Conference or an APA Convention session on the built environment. This has to be where architecture/interior design is

going. Designing for the human will not destroy the opportunity for art, a not-quite-destroyed blessing architecture has had throughout history. Art can be an expression and an adjunct to architecture and interior design in much the same way as nature shows us beautiful art even after the rigid requirements of nature are met. After the rigid *human* needs are established, programmed, and developed in the proposed built environment, the *true* artists can create their art, architecture, and interior design. And with all the excitement. I feel that this is the "future of architecture."

John M. Gibson, AIA

Bohlen, Meyer, Gibson & Associates, Inc.
Indianapolis, IN

Fire hazards

It is always good to see the occasional item in P/A about fires. Building codes, though recently improved to give better guidance, do not provide the information and principles that an architect needs to use judgment in fire protection matters. ("Toxicity: a hazard procedure in fires," P/A, May 1977, p. 103)

Mr. Skolnik's thought-provoking article, though too brief, does heighten the reader's awareness that the toxicity of fire gases must be given more attention by code authorities and design professionals. The article rightly indicates that the definitions and hazard evaluation are problems to be dealt with "considering total systems rather than isolated elements." As he no doubt realizes, the subject goes far beyond the mere testing, evaluating, and prescribing remedies. The dimensions of the material, its arrangement, the environment (humidity, ventilation), the means of fire suppression and egress, all have their effect on the danger of fire gases to people.

"As an example, vinyl (polyvinyl chloride) floor covering should not be discriminated against just because the substance evolves large amounts of toxic hydrogen chloride gas when burning. A fire would have to chase out or destroy all human life in the occupied area before the vinyl on the floor could become sufficiently involved to become a toxic influence. On the other hand, a vinyl folding partition could be quite hazardous, as a fire could propagate on its surface in the early stages of a fire.

Because the subject is so important and timely, and a one-page article could not possibly serve to *instruct* the reader, I urge that more space be given to the toxicity of fires in a future issue, either by a longer article, or group of them. Perhaps Mr. Skolnik, who does his homework very well, should be the compiler of such a work.

Martin M. Brown, PE, C.S.P.
Fire Protection Consultant
White Plains, NY

Addendum on book credits

Text: Eugene Kupper has responded to the letter from John Hejduk (Views, September 1977) regarding credit to designers of the book, *Richard Meier, Architect*. As Kupper points out, this book presents in its acknowledgments, credits, and biographical chronology an unusually complete listing of all individuals who have contributed to Richard Meier's architectural work and professional development and to the book itself.

[Editors]

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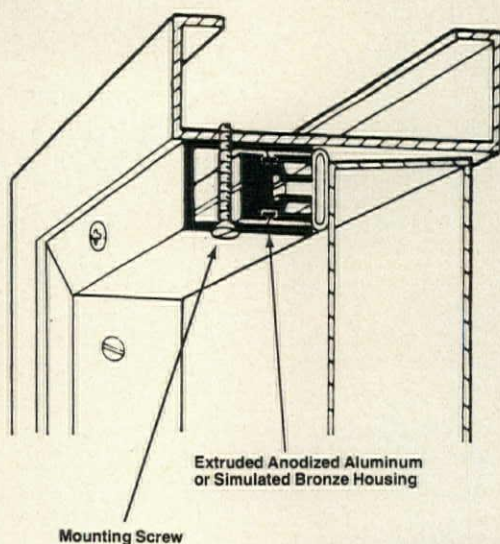
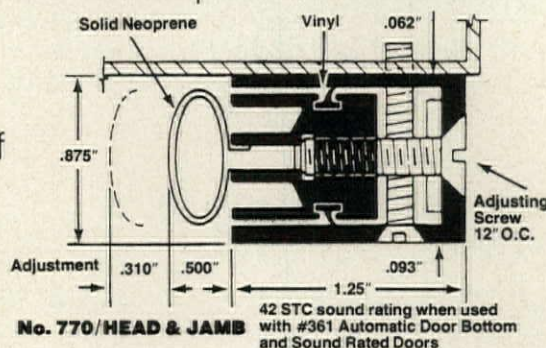
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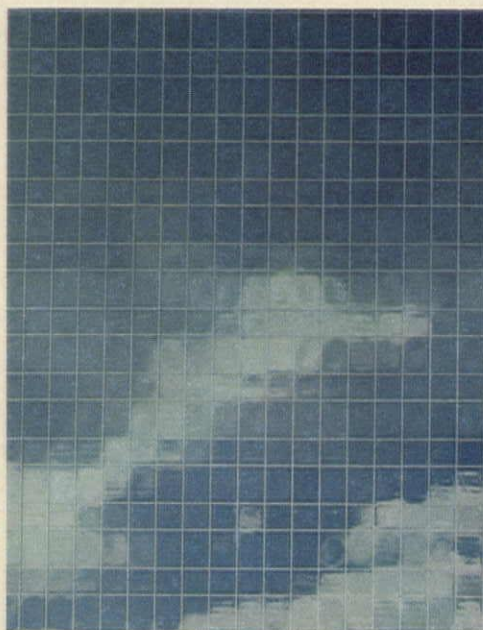
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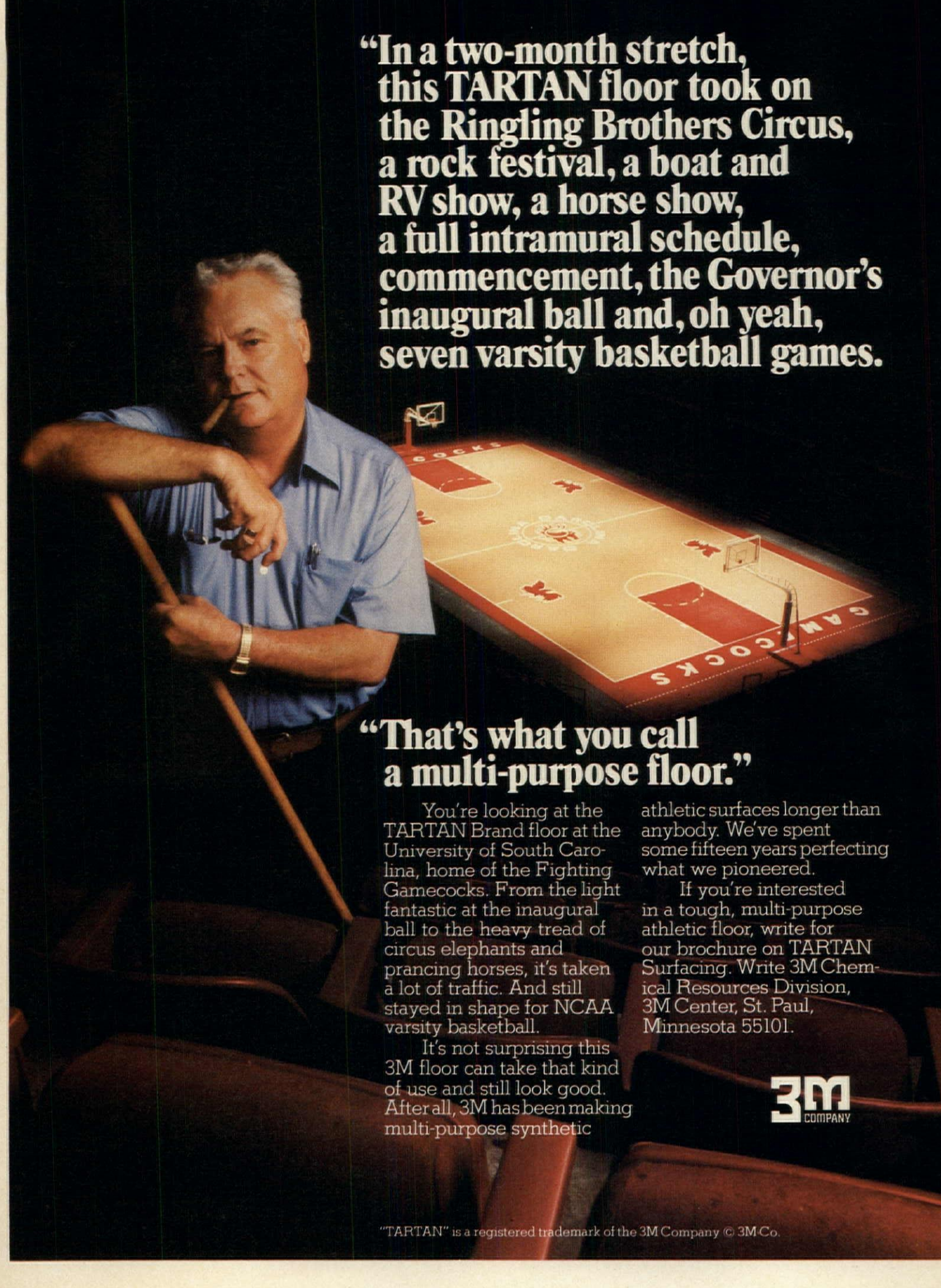
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Approval/funds for Pennsylvania Avenue

The President's signature on a bill approved by Congress last spring will fund initial improvements to America's Main Street—Pennsylvania Avenue in Washington, D.C.

The funding will mean that the long-delayed plan (it was first unveiled—in somewhat different form—in 1963) can at last get underway. It also means that the historic Willard Hotel will be restored and probably reopened as a hotel. The building, vacant since 1968, has long been threatened. The U.S. Court of Claims ruled in January that the federal government, by its actions over the years in delaying the Pennsylvania Avenue plan, owned the building and must pay for it. Another court case will determine how much the government has to pay Charles Benenson.

John Woodbridge, outgoing executive director of the Pennsylvania Avenue Department Corporation, says federal funds are designed to be used to attract private investment. The corporation believes that the total \$130 million it has asked for over the next 15 years will draw \$400 million from the private sector.

Work underway includes acquisitions, property appraisals, and design. Recently solicited were proposals for a major open space, a plaza, in the vicinity of the White House between 13 and 14 streets. The design team will be announced this month; part of the team's work will be narrowing Pennsylvania Avenue in this area to make it more pedestrian than vehicular in character and to maintain the avenue's diagonal



Pennsylvania Avenue's beautification program.

thrust—at present modified by a curve.

Also announced are two new projects: a 12-story commercial building at 13 Street and a Canadian chancery to be located across from the National Gallery of Art. The architect for this project is expected to be selected through a national competition in Canada. Contract for the National Gallery's landscaping went to Sasaki Associates of Watertown, Ma.

The overall plan includes preservation of existing structures, a large housing complex designed for the corporation by Hugh Newell Jacobsen, and numerous street improvements. "The point is to create a lively and unified street," says Woodbridge. He resigned his post effective Sept. 1 to return to architectural practice in San Francisco. Acting executive director is Peter Meszoly.

National exposition spotlights energy

"New Opportunities '78 and the Energy Challenge" is the theme of the Building and Construction Exposition and Conference to be held Nov. 1-3 at McCormick Place in Chicago. The Producers' Council, Washington, DC, is sponsor of the program, which will have six theme sessions ranging from how to build profitably in the cities to the design of energy efficient buildings. John Morris Dixon, editor of *Progressive Architecture*, will be the moderator of the first session, "Government Thrust—President Carter's Energy Program and Government Construction," to be held Nov. 2.

Energy savings begin at home for the AIA

A \$191,000 energy retrofit for the American Institute of Architects headquarters, Washington, DC that was scheduled for an early fall completion was temporarily delayed while the Institute re-negotiated lease amendments with some of its tenants. The project is expected to be finished before the first of the year and winter arrives. Michael Sizemore of Sizemore & Associates, Atlanta, is project architect with engineering assistance from Newcomb & Boyd. The Architects Collaborative of Cambridge, Ma, architect of the headquarters building, will provide overview and background along with Cosentini Engineers of New York.

The retrofit will include insulating the garage ceiling, reducing daylight glare,

News report

redesigning and reducing by 40 percent the artificial lighting, reducing the cooling, and making greater use of outside air. Solar energy is not included since it would involve replacing major pieces of equipment.

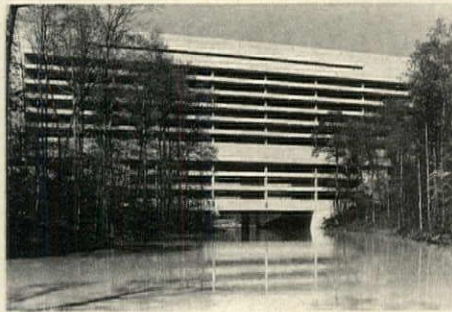
Dollar savings are expected to be \$604,000 over the next five years. The cost of the project will be paid by a loan from AIA reserves, Building Reserve Account.

Major hotel opens in Charlotte, NC

The Radisson Plaza Hotel designed by Odell Associates of Charlotte and the Atlanta firm of Thompson, Ventulett, Stainback & Associates has opened as the central unit of the \$40 million North Carolina National Bank Plaza project in downtown Charlotte. The hotel has 381 rooms—fewer than the White House Inn which closed four years ago. The hotel and plaza project are connected by a skyway system to the Civic Center and to a nearby Belk department store. The complex includes an indoor shopping mall, facilities for the Charlotte Athletic Club including a rooftop circular swimming pool, a cafeteria for bank employees, and a ballroom accommodating up to 880 people. The Radisson hotel chain out of Minneapolis, MN, also has new hotels in Kansas City and Atlanta and another planned in the South. Radisson Plaza is a joint venture of NCNB and Carter Associates, an Atlanta development firm.



Prow of a new hotel, Radisson Plaza, Charlotte.



IBM's Atlanta-based General Systems Division.

System/7 runs IBM's new building

The recently opened headquarters of International Business Machines' General Systems Division in Atlanta will save an estimated \$165,000 annually in utility bills thanks to the IBM System/7 computer which controls such functions as turning lights on and off, regulating the air conditioning, monitoring the entry, and detecting abnormal conditions in the building. The system also regulates heat generated by other computers in the building and deploys it to warm the offices. Only in temperatures 11F or below will the electric boiler heating system be activated. The building is by the Atlanta firm Thompson, Ventulett, Stainback & Associates. It straddles a man-made lake which collects and filters drainage including oily water from the parking lot before depositing it in the Chatahoochee River.

Design test for NCARB examination

Delegates to the annual meeting of the National Council of Architectural Registration Boards approved a resolution that will incorporate a design problem into the state-administered examinations taken by all candidates for professional registration. In recent years the design test was waived for individuals with accredited degrees in architecture. The new test, administered this year for the first time, will be required of all candidates in 1978. The test will be under study for a year as to its scope, content, and procedures.

Delegates also approved a set of "hard-edged" professional conduct guidelines that differ from the American Institute of Architect's ethical code in that they are designed solely to pro-

tect the public rather than professional interests and will be strictly enforced with appropriate sanctions, if adopted by individual state registration boards. Accordingly, the NCARB guidelines do not touch on such subjects as advertising; nor do they address the issue of competitive bidding on the assumption that rules in such areas would be hard to enforce and would not best serve the public interest.

Other resolutions adopted include approval for further study of the concept of architect development verification—which means that registered architects periodically will have to show evidence of keeping current with architectural practice. Iowa recently became the first state to require by law such evidence, and other states are considering similar legislation. The NCARB committee to study the concept and propose a testing program is headed by Edward Healey of Cedar Rapids, IA. Action by the delegates also removed the controversial two-year professional practice requirement for NCARB certification.

25th P/A Awards 34 winners chosen

Narrowing the field to 74 from 654 entries, the 25th annual P/A Awards jury picked 34 winners. By category, they are 19 in design, 9 in planning, and 6 in research. The recipients will be announced in the January issue of *Progressive Architecture*, traditionally devoted to publication of the winning projects, along with comments from the jury.

Judging the projects this year were (design) Charles Moore, professor of architecture at the University of California at Los Angeles; Richard Meier of Richard Meier & Associates, New York; Natalie de Blois of 3D/International, Houston; and William Bain Jr. of Naramore Bain Brady & Johanson, Seattle; (planning) Calvin Hamilton, planning director of Los Angeles and David Lewis of Urban Design Associates, Pittsburgh; and (research) Robert Gutman, professor of sociology at Rutgers University, and Robert Shibley, architect with the U.S. Army Corps of Engineers, Washington, DC. Last year's jury selected 27 winners from 619 entries. Elected chairman of this year's jury was Charles Moore.



Chicago Harbor: a 'light brigade' of artists and architects creates sky-high sculpture over the waterfront.

Chicago's 'Light Space 77'

Volunteer architects and artists in Chicago collaborated to produce a week-long environmental sculpture using Daniel Burnham's Beaux-Arts planned city lakefront gateway—the harbor—as their gallery. With a battery of searchlights programmed by Chicago artist John Mooney, the team created a different work of art each night for seven nights in August during the city's annual waterfront festival. Mooney's designs began with "Sky Beams" that traced configurations in the dark sky; next was the "Temple of Light" created by luminous columns forming an apex high in space above the harbor; "Light Passages," a serial piece extending over a period of several nights, illuminated eight miles of the shoreline with light shafts in precision-programmed movements; the finale was "Le Luci Sedici," a sculptural geometric configuration.

Miami-Dade student wins top prize

Irene Fernandez-Fraga of Miami-Dade Community College in Florida has received the \$1200 first prize in the 1977 Special Competition sponsored by the National Building Granite Quarries Association under the auspices of the National Institute for Architectural Education. Second prize was won by Paul Anderson of Georgia Institute of Tech-

nology, and third prize went to Roger Miller, also of Georgia Tech. Honorable mentions were received by Karen Caswell of the University of Minnesota and Paul Hill of the University of Oklahoma. Ms. Fernandez-Fraga is the first woman ever to receive a first prize in a competition of the 83-year-old NIAE, formerly the Beaux-Arts Institute of Design. The title of her project is "Agora, Forum . . . Street Fair, U.S.A." Jurors were Byron Bell, Arthur Douglass Jr., Herbert Fletcher, E. James Gambaro, Howard Juster, Dorothee King, Robert Mayers, and Stanley Salzman. John Stonehill was chairman.

Don't knock it 'til you've tried it

Nearly every county courthouse existing in the United States replaced an earlier one, and now county administrators are proposing yet another generation of courthouses to improve these facilities and expand the space.

Most of the early courthouses were small makeshifts, but the replacements now standing are proclamations of the majesty of the law and the ambitions of the counties. Their towers, cupolas, and domes gained physical and symbolic height. Their architecture—Greek Revival, Second Empire, Richardsonian—was more imposing than any other in the county.

Experience has shown that adaptive reuse studies should include a report by someone familiar with old construction and restoration. After an Ohio

county had new downspouts installed, for example, an examination of the roof revealed built-in drains that worked perfectly—which had been covered by a careless roofer. Cosmetic treatment, not major changes is a good rehab rule.

A Courthouse Conservation Handbook, published by the National Trust's Preservation Press, 40 Jackson Place NW, Washington, D.C. 20006, concisely reviews the problems of old courthouses and a variety of rescue approaches. It is illustrated with photographs, plans, and elevations of before and after situations and includes a guide to resource organizations and a bibliography. [George McCue]

Accessible campus: design workshops

The National Center for a Barrier Free Environment headquartered in Washington, DC, together with the Association of Physical Plant Administrators of Universities and Colleges is holding workshops on how to design and modify campus facilities to be accessible to the handicapped. The workshops will be held Nov. 9–11 in Palo Alto, Ca, and Dec. 7–9 in New Orleans. Instructors will include Timothy Nugent, University of Illinois Rehabilitation Education Center director; Stephen Cotler, New York State University Construction Fund Accessibility Project coordinator; and Ronald Mace, president of Barrier Free Environment of Fayetteville, NC.

[News report continued on page 26]





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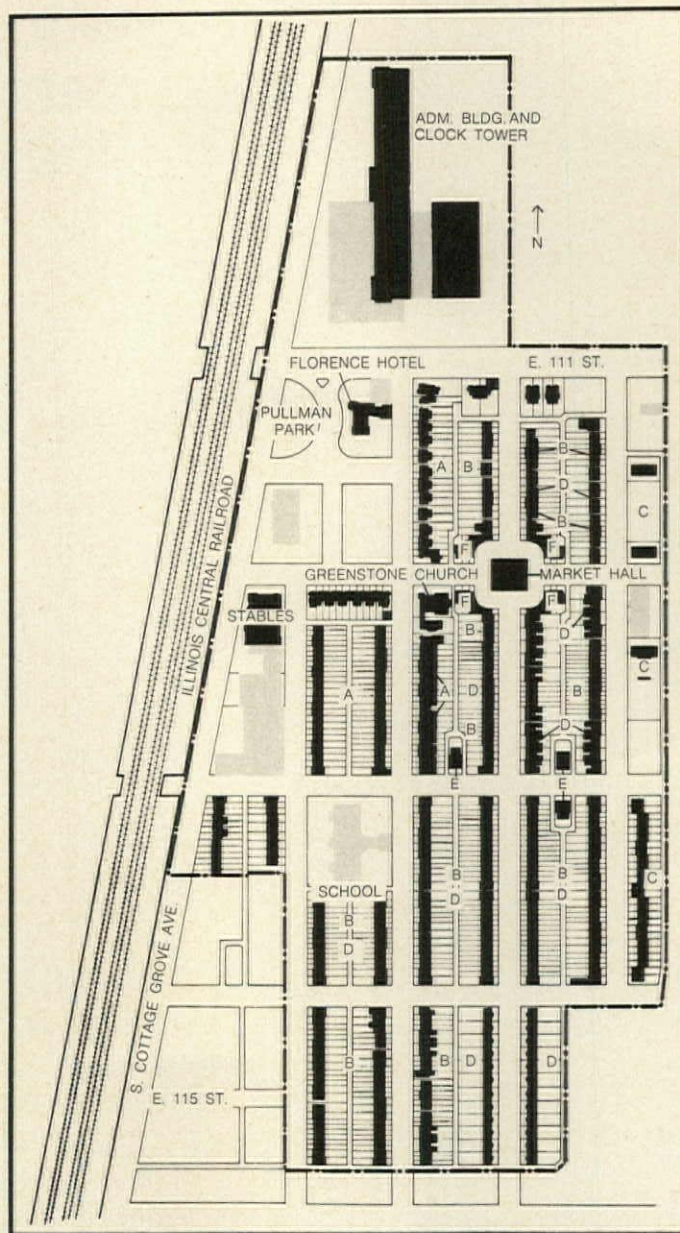
In perspective

Pullman: 'utopian' company town

Little-known now outside Chicago, the once-renown planned community of Pullman, IL. has experienced its share of notoriety and is leading the way in neighborhood preservation. The 18-block town, built in the early 1880s by railroad industrialist George Pullman, is on Chicago's south side and was annexed to Chicago in 1889. It was conceived as the ideal community where Pullman employees could live and work manufacturing the famous Pullman sleeping and dining cars.

Solon Spencer Beman of New York was hired by Pullman to design the buildings which ranged from the Florence Hotel where visitors and businessmen sojourned in Queen Anne elegance to townhouses for executive and management personnel and four-room rowhouse "cottages" and four-flat walkups for factory workers. Landscape designer Nathan F. Barrett planned the community and landscaping. The achievement won recognition in 1896 at the Prague International Hygiene and Pharmaceutical Exposition as the best planned community, without equal.

In recent years, the Historic Pullman Foundation has purchased the run-down Florence Hotel and Pullman's Masonic Lodge and Market Hall. A reuse feasibility study recommends operating the Florence as a conference center/hotel, and with anticipated profits, the foundation hopes to establish a revolving fund that will provide grants for restoration and reuse in other parts of the community, already undergoing widespread rehabilitation by individual property owners.



Pullman, completed in 1882, occupies an oblong strip two miles long and a half-mile wide west of Lake Calumet on Chicago's south side. A mix of housing was achieved: 6- to 9-room townhouses for top management (A); 5-room row houses (B); 4-room workers' cottages (C); walk-up flats (D); boarding houses (E); and arcade buildings containing apartments (F). Today these homes are being restored and renovated—some being combined to form a single dwelling. Gray areas denote later additions.

Completed in 1882, the town in two years attained a population of 8500 which resided in 1400 dwellings. A decade later in the midst of national economic depression came the Pullman Strike of 1894 followed by a court order in 1898 forcing the sale of non-industrial property so that by 1907 the town was completely out of the Pullman company's control.

The town's failure largely was attributed to George Pullman's paternalistic attitude towards the resident-workers and to municipal operations. He expected to earn a 6 percent return on his investment; it never yielded more than 4.5 percent due to taxes and high maintenance costs. No one could fault his innovative design leadership, bringing to town planning the same pace-setting concepts of human comfort, efficiency, beauty, and elegance that revolutionized the railroad industry.

But his straight-laced authority was crushing, and eventually the residents rebelled.

Pullman's factories were well lighted, both naturally and artificially, and brightly painted; housing was no more than two rooms deep with plenty of windows and yards although density was high; amenities such as a library and theater and free services such as trash collection were provided. Manicured gardens and parklike landscaping presented a rewarding vision to the many visitors who arrived by train to see for themselves this well-publicized community.

After the strike and sale of property, the town ceased to grow and eventually became a mere residential neighborhood, a bit ragged in upkeep, and by 1960 developers were ready to raze the town and build an industrial park. The citizens—an ethnic community



Photos: Courtesy of Historic Pullman Foundation



The Greenstone Church (left) is so called because of the attractive green hue of its serpentine stone. The Florence Hotel (above), named after George Pullman's daughter, will be used as a conference center/hotel. Environment Seven of Chicago is architect for this project; Lowell Anderson of Springfield is restoration design consultant.

M.E. Ernst



typical of south Chicago—protested, and the Pullman Civic Organization was formed. Through its efforts and those of design professionals like city planners Pete Pointner and Mike Shymanski who live in renovated Pullman homes, the district has achieved landmark status at the city, state, and federal levels.

Pullman predates British planner Ebenezer Howard's first Garden City, Letchworth, by 24 years and contained many of the famous Garden City features, such as a green belt and a central shopping arcade. Despite its better-than-average urban characteristic for a company town, life in Pullman was relatively dull, on top of being highly regimented, and the residents did not govern themselves. This absence of vitality and self-government contributed to the discontent and downfall. [Ann Carter]



M.E. Ernst

The partially restored Historic Pullman Center (middle, left) once was a boarding house. Typical of renovations are the front parlor (above) of an executive home and the hallway (bottom, left) of a townhouse. One of four curved arcade buildings (bottom, right) faces the Market Hall, which will be a center of retail shops and artists' studios.





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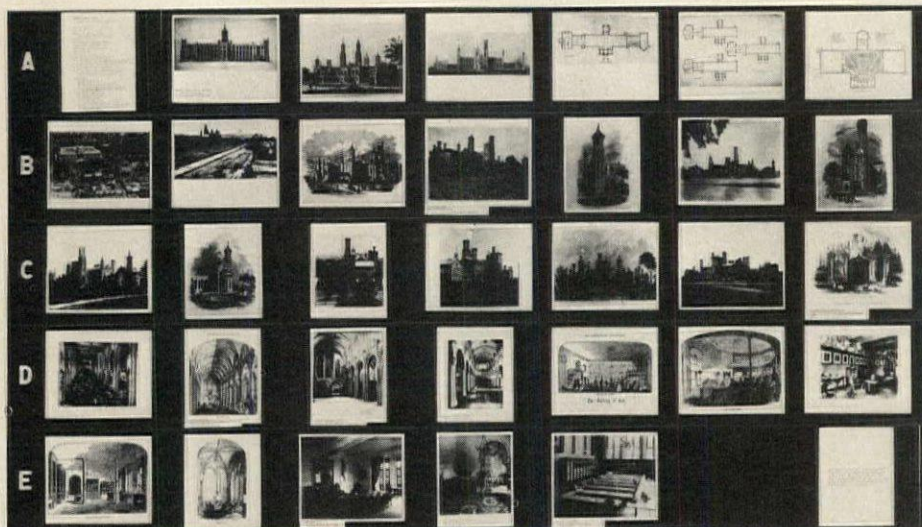
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Smithsonian Institution on microfiche of the Dunlap Society.

Groups formed to preserve documents

The increase in restoration/renovation projects in the last three years has uncovered a critical need: the preservation of architectural documents. With-

out drawings, photographs, or other records, the process of upgrading old buildings is severely hampered. Led by the Committee for the Preservation of Architectural Records based in New York City, a number of similar groups have organized in various states including Illinois, Georgia, Wisconsin,

Oregon, Missouri, Virginia, Minnesota, and Texas, and a society has formed in Canada. These groups are encouraging people and architectural firms to save, not discard, documents, and they also are identifying repositories for the documents.

New York's CPAR, for example, undertook during its first year the compilation and distribution of a directory of repositories in New York, from the familiar Avery Memorial Architectural Library of Columbia University to less well-known institutions.

Activities of the group include compilation of a national directory of architectural documents and publication of a quarterly newsletter available free (funded by a grant) by writing the committee at 15 Gramercy Park, New York, N.Y. 10003.

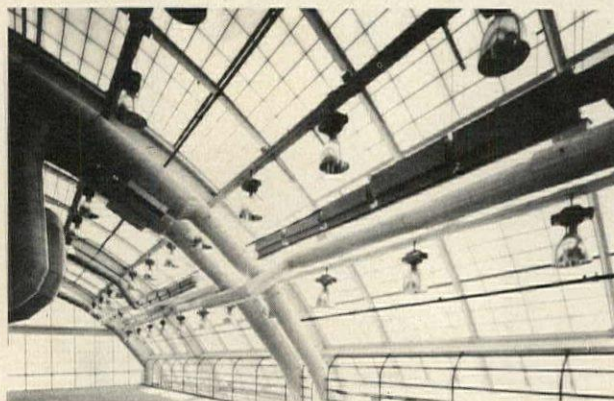
The American Institute of Architects Research Corporation has published a paper by Michael Wilson on preserving architectural records and creating a national information system. The report stated that most buildings erected in the United States prior to the [News report continued on page 34]

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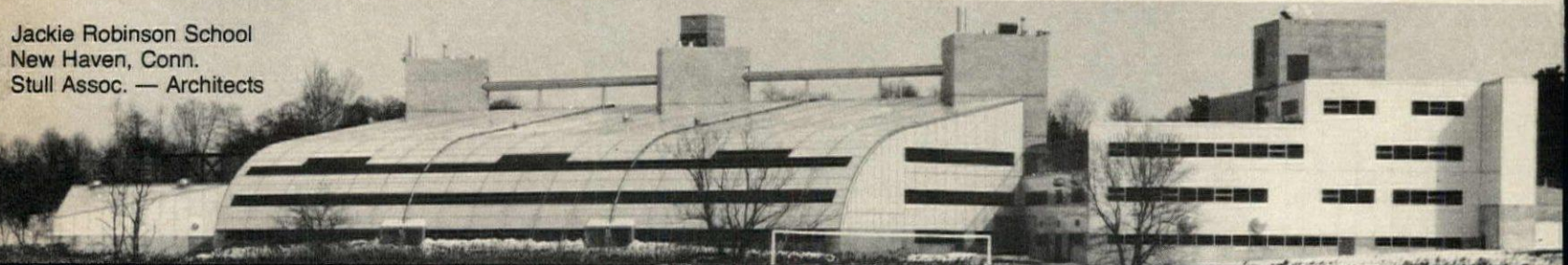


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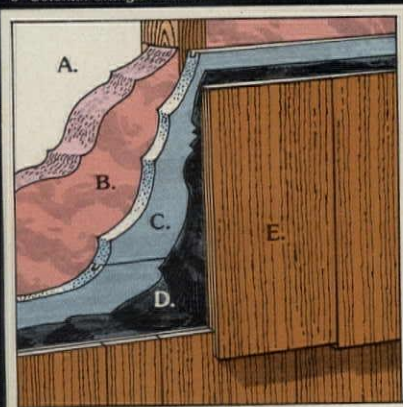
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the Humanities.

20th Century have been destroyed "without a trace." Even saved documents remain in historical societies in uncataloged conditions.

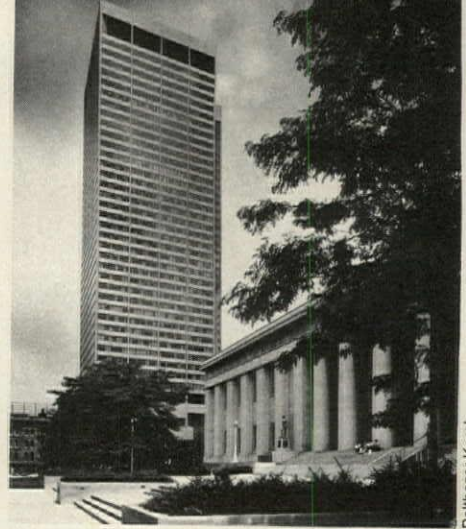
Potential users of these documents, the report continues, are not only historians, but also preservation interpreters, real estate and zoning personnel, landscape and interior designers, and planners.

The Dunlap Society in Essex, N.Y., headed by art historian Bates Lowry, one-time director of the Museum of Modern Art, New York, is another new group dedicated to presenting full documentation of architecture and the fine arts. Its pilot project offers material on 20 selected buildings in Washington, D.C., among them the White House, Capitol, and Pension Building. Available on slides and microfiche will be documentation of buildings from conception to later alterations and uses. These materials will be for sale on subscription and individually. The activities of the Dunlap Society are

Two images for Ohio tower

The new 41-story State of Ohio office tower in downtown Columbus combines the State Supreme Court and a million sq ft of office space for various government departments. Although the courts required only a small part of the total, they were treated in a prominently distinct and dignified manner by placing them on the first four levels above the entrance lobby and wrapping the court facilities around an 80-ft-high atrium.

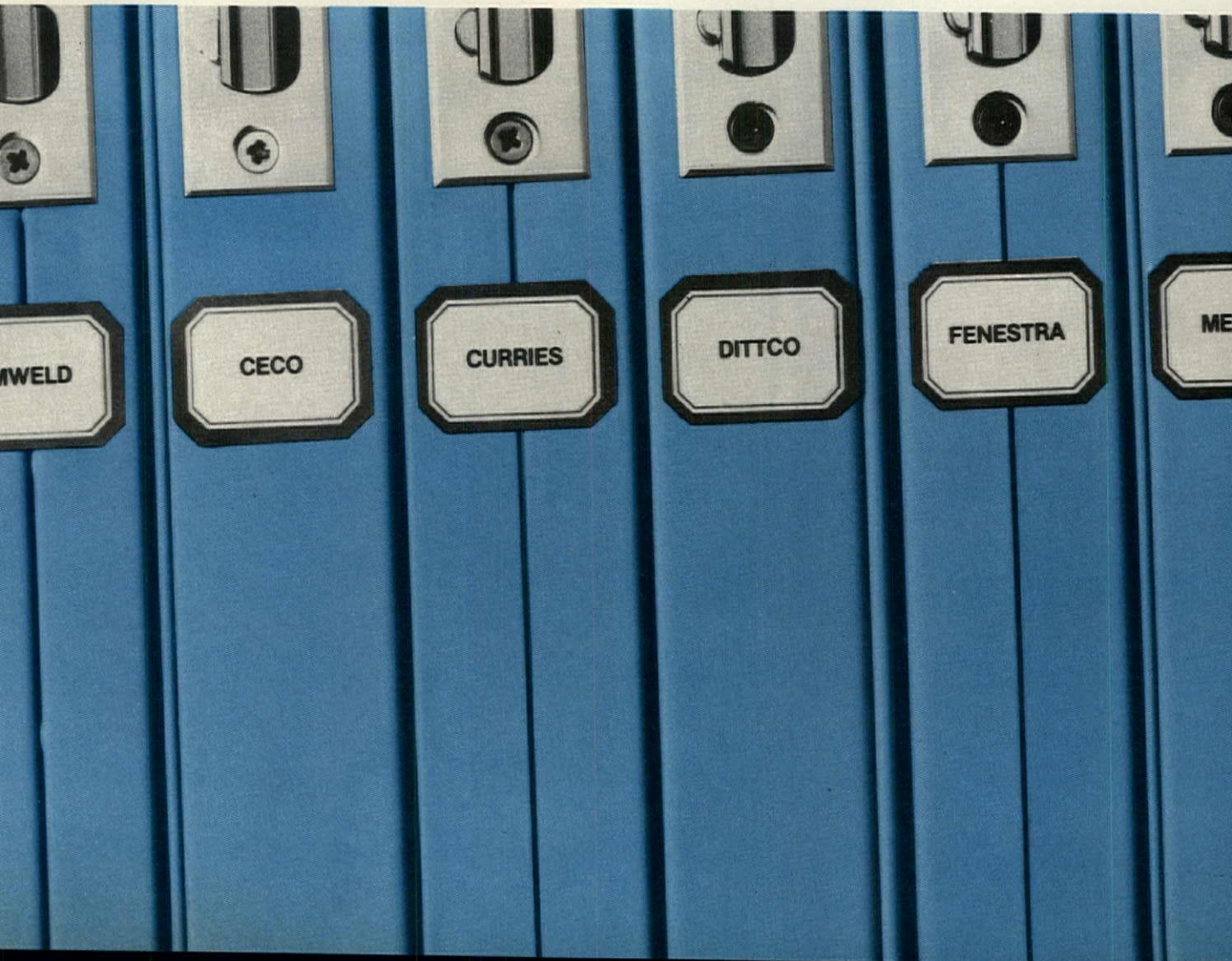
The \$56-million building was designed by Dalton-Dalton-Little-Newport of Cleveland with Brubaker Brandt of Columbus. It was completed last year and combines in one facility state departments formerly housed in other spaces throughout the city. The tower is near the historic State Capitol and the Wyandotte Building, a structure on the National Register for Historic



Front of Ohio tower faces the Capitol . . .

Places, which was used until 1974 for state offices and now is up for sale.

The exterior materials are bronze anodized aluminum and stone with polished stainless steel at the entry; inside, granite pavers and stone are used extensively on the lower five floors. Throughout the building air is returned through the lighting fixtures and the lamp heat allows lesser quan-





Balthazar Korab

... Opposite sides express service functions.

tities than usual of supply air used.

Service features such as elevator banks are located at the periphery, and to accommodate the atrium, a massive steel truss was used at the fifth floor to support the tower above. Cost of the structure was \$44.60 per sq ft.

SF showrooms expand into contract market

Contract West is a new market opening at Showplace Square, San Francisco's home furnishings marketplace. Contract West will sponsor a four-day seminar Jan. 25-28 bringing together architects, designers, and store planners for seminars and social events. The gathering will coincide with the Winter Home Furnishings Market Jan. 22-26. Showplace Square is in sand-blasted brick warehouses renovated to provide nearly a million sq ft of exhibition space. New to the complex is a 60-ft-high glassed-in grand courtyard called the Galleria. Architect for the renovation is Tayler & Houston of San Francisco.

Personalities

Alan M. Voorhees has been named dean of the College of Architecture, Art, and Urban Sciences at the University of Illinois at Chicago Circle.

The following have been elevated to Fellowship in the American Society of Interior Designers: James Langley Aldrich, Oakland, Ca.; Helen Friedman, Portola Valley, Ca.; James M. Halverson, Seattle; William Richards Whaley, Alexandria, Va.; and Karl Steinhäuser, Chicago.

Blanche Lemco van Ginkel has been named director, University of Toronto School of Architecture.

Calendar

Through Oct. 30. "Calder's Universe," Dallas Museum of Fine Arts.

Through Nov. 2. "H.H. Richardson's Allegheny County Courthouse—Part One" exhibit, Pittsburgh.

Oct. 17-18. Seminar on cost containment in hospitals and health facilities, University of Wisconsin, Madison.

[News report continued on page 39]

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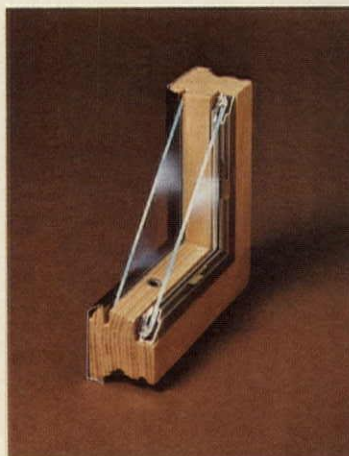
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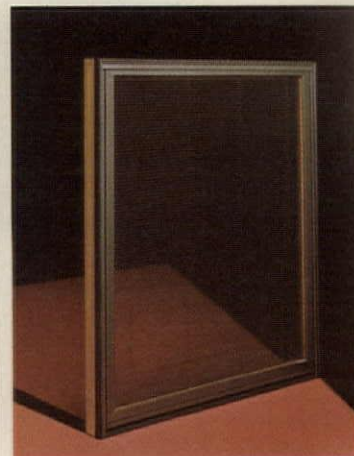
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Report from Berkeley

Rethinking barrier-free design

The University of California at Berkeley began its policy of encouraging disabled students to enroll when Ed Roberts, a quadriplegic dependent on mechanical respiratory equipment, was admitted in 1962. It was an auspicious beginning: today, Roberts is director of California's Department of Rehabilitation, and there are some 450 disabled students on the Berkeley campus. Roberts and other disabled students at Berkeley in the latter half of the 1960s were instrumental in forming the Physically Disabled Students Program, which led to the creation in 1972 of the Center for Independent Living, a grass-roots network of people and services that has been an important help in the growth of Berkeley's disabled population, which has pushed actively for accommodating changes in the campus and the community.

In an effort to make the Berkeley campus more accessible, the university established a committee to remove architectural barriers in 1975. The committee recommended to the university that it take steps immediately to comply with Section 504 of the 1973 Rehabilitation Act. This requires federally assisted institutions to make programs accessible to the disabled.

In all, 66 buildings and the campus grounds were surveyed by teams consisting of one able-bodied and one disabled student. The presence of the disabled student helped teams evaluate accessibility not only in terms of codes and standards but also in terms of the direct evidence of barriers and inconveniences. The work, directed by architecture student Keith Wilson, was

also aided by Raymond Lifchez, professor of architecture. Lifchez ran a summer seminar for the surveyors in which the question of what constitutes accessibility could be discussed in depth. He also undertook a film study of the disabled using the campus and its environs.

For Lifchez, the work on the barrier survey has been part of a continuing research effort on the use of the built environment by physically disabled persons. Prior to the campus survey, he had carried out a survey of housing near campus that could be used (or converted for use) by the disabled. This year, Lifchez has directed a second study looking specifically at how disabled people use housing.

Joseph Califano, secretary of the U.S. Department of Health, Education, and Welfare, announced in the spring that Section 504 would be enforced as written. His announcement followed weeks of demonstrations in various cities across the United States by disabled people who feared that the government was about to back away from the intent of the legislation. Its enforcement raises a number of questions for the institutions and their architects who must comply with it: What is a barrier-free environment? What is accessibility? At what point are the disabled served and the law upheld?

These questions are not easily answered, since as a group the disabled resist categorization. Disabled can include the severely handicapped, the blind, and pregnant women, even the parent with child-in-arms. Each represents a category of humanity that at some time is at a disadvantage regarding the environment.

Recent literature on barrier-free design has put undue emphasis on the disabled as *objects*—describing severely disabled people, for example, as *wheelchairs* with certain dimensions and performance. Questions of dimension and performance are important, but only as adjuncts to the broader questions of why access is sought, or what it means—as a disabled person—to move through an able-bodied world. These situations require empathy on the part of the designer and his client—a willingness to understand more fully the range of disabilities and their environmental consequences.

Necessarily, disabled people also must be involved in the programming

toward modification of the built environment. The real message of Section 504 is that the disabled have the right of access to federally assisted institutions in the same way that able-bodied people do. Through participatory planning and other approaches, architects and planners have increasingly been able to base their design decisions on the directly expressed preferences of users. This "step beyond empathy" must also be taken for the disabled.

[Barbara Winslow, John Parman]

The authors are engaged in the University of California Department of Architecture: Winslow is a candidate for a master's degree, and Parman is working on his doctorate.



Colleen Mahoney



Bonnie Wudtke



Colleen Mahoney

Curbs are great, but they tend to put wheelchair users into the traffic outside the crosswalk; however, their placements also must allow a defined curb for blind people. (Top)

Barrier-free means contending with environmental difficulties, but the challenge is to design so that the environment grows more accessible without becoming increasingly boring. (Middle)

What is a power wheelchair? Is it a car? A glorified stroller? Street furniture—trash baskets, hydrants, vending machines—needs to be reconsidered so as not to threaten the disabled with a continuous hazard and junkyard. (Bottom)

Oct. 24-28. First international conference on energy use management, Tucson, Az. Organizers are University of Arizona and Interdisciplinary Group for Ecology, Development, and Energy.

Oct. 26-27. "Design: Work of Art? Working Object?" national design conference sponsored by the AIA, Washington, DC.

Oct. 28-30. Fourth annual Back to the City conference, San Antonio.

Oct. 31. Deadline for submissions in the AIA Honor Awards Program, AIA Headquarters, Washington, DC.

Nov. 1-3. Second annual Building & Construction Exposition & Conference, McCormick Place, Chicago.

Nov. 3-6. Energy Fair '77, Anaheim Convention Center, Anaheim, Ca. Show will feature alternative energies and energy conservation techniques and products.

Nov. 4-6. "Design-In" conference on establishing new community centers for the arts, cosponsored by the AIA and the American Council for the Arts, Cincinnati.

Nov. 8-10. International Interior Design Show, Automotive Building, Exhibition Place, Toronto, Canada.

Nov. 8-10. Conference on energy efficiency in wood building construction, McCormick Inn, Chicago. Conference is sponsored by Forest Products Research Society.

Nov. 9-11. Workshop on developing an accessible campus for the handicapped, sponsored by the National Center for a Barrier Free Environment and the Association of Physical Plant Administrators of Universities and Colleges, Palo Alto, Ca. Similar workshop Dec. 7-9 in New Orleans.

Nov. 10-11. Institute on planning and designing multi-purpose senior centers, University of Wisconsin, Madison.

Dec. 1. Deadline for entries in the American Plywood Association's Plywood Design Awards Program, Tacoma, Wa.

Dec. 1-3. "Old and New Architecture: Design Relationship," sponsored by National Trust for Historic Preservation, Washington, DC.

Jan. 22-25. National Association of Home Builders annual convention/exposition, Dallas Convention Center.

[News report continued on page 41]

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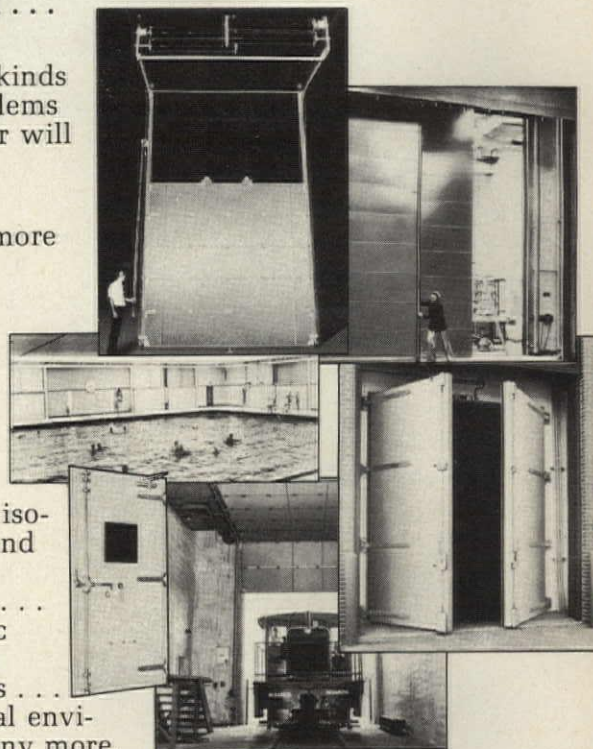
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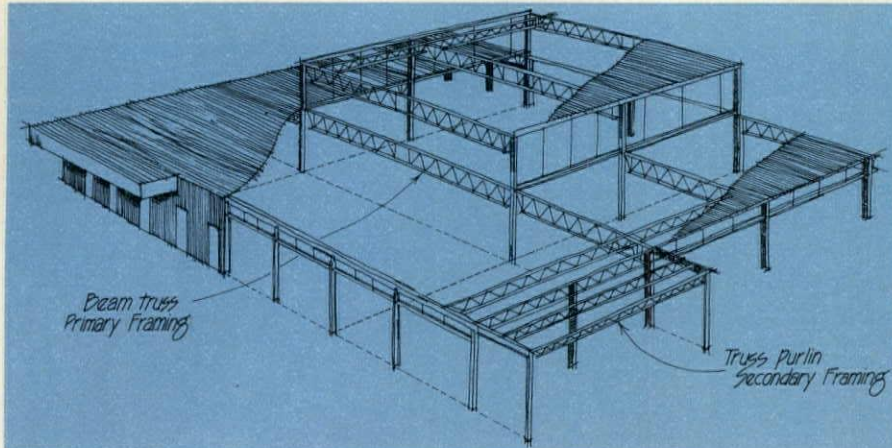
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Architect: Odell Associates, Charlotte, North Carolina

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Send for our
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McGraw Edison, Columbia, Missouri
Architect: Ralph Broughton, St. Louis,
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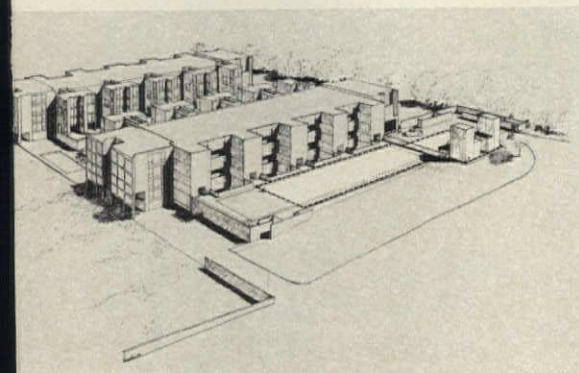


1a



1b

2



3

1 Pei's new Boston work—I.M. Pei & Partners of New York is architect for two projects underway in Boston, bringing to eight the firm's major projects in the Boston area. Recently announced is a new wing (1a) for the 107-year-old Museum of Fine Arts. As part of the museum's \$19.5 million renewal program, the new wing will contain a major museum entrance, gallery for special exhibits, 400-seat auditorium, restaurant, and function rooms. The other Pei project is the \$12 million John F. Kennedy Library (1b) on the new U. of Mass. campus in the Dorchester section of the city. The harborside site was selected after successful neighborhood opposition to first-proposed Cambridge site near Harvard University (P/A, Sept. 1974, p. 32). Completion is expected in 1979; the complex will contain theaters, museum, archives, and a pavilion.

2 Salk Institute addition—Undertaking an addition to a 20-Century masterpiece, the Salk Institute for Biological Studies by the late Louis Kahn in La Jolla, Ca, architects Naramore Bain Brady & Johanson of Seattle in association with Deems/Lewis & Partners, San Diego, have designed a below-ground Cancer Research Animal Facility to be completed in December. The \$2.85 million, one-level addition of 23,000 sq ft is located beneath a podium—the incompleted South Terrace—designed by Kahn. Two service towers will rise above grade in line with the existing symmetrical massing of structures housing mechanical operations.

3 Monroe Centre—Downtown Chicago, increasingly concerned about competition from just north of the Loop, has a major building entering construction right in the Loop's center. The \$60 million Monroe Centre by the Chicago firm C. F. Murphy will occupy a corner site at Dearborn and Monroe Streets opposite the First National Bank building and plaza and the Inland Steel building. The Westminster building, Monroe Theater, and three smaller structures will be demolished to make way for the 40-story office tower, to be completed in 1979. The developer is Romanek-Golub & Company.

4 Jakarta shopping center—A downtown shopping center is being planned and designed by Daniel, Mann, Johnson & Mendenhall (DMJM) of Los Angeles for Jakarta, Indonesia. Gajah Mada Plaza will have all the usual facilities including a 27-story office tower, a night club, a public swimming pool, and tennis courts. The \$30-million project, to enter construction in 1979, is being developed by P. T. Harapan Motor Sakati Industri Co. of Jakarta.

5 Saudi teachers' college—The Houston firm of James M. Sink Associates has designed the first phase 1.4 million-sq-ft megastructure for a teacher training college on a site near the Riyadh airport in Saudi Arabia. The second phase of 600,000 sq ft will begin in 1980. The new college will have six academic bays and courtyards stemming from a central pedestrian concourse;

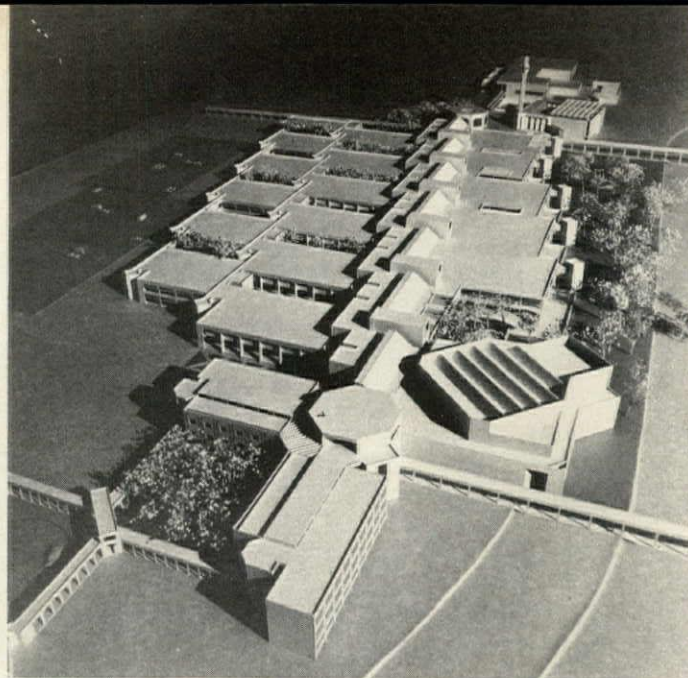


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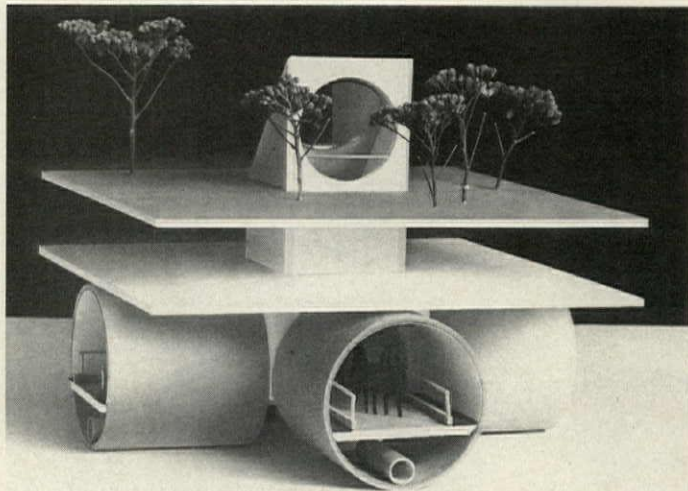
a 950-seat auditorium; and 10 mini-libraries serving the classroom bays and faculty offices. Nearby will be housing for 2000 students and a mosque. The project is considered a milestone in the Saudis' plan to become self-reliant in education.

6 Tunnel periscopes—A 450-ft-long tunnel under the downtown Detroit Medical Center connecting a therapy unit with the hospitals and medical school will have four "periscopes" bringing in light and a view of the ground above. This will be accomplished by angled mirrors on the underside of the sloping wall. The 13-ft square units will project 12 ft above the surface. The design is by a joint venture of William Kessler & Associates, Zeidler Partnership, and Giffels Associates.

7 Arabian housing—The Eggers Group of New York is architect and planner of a \$600 million housing project in Dammam, Saudi Arabia. Phase one, entering construction in the fall of 1977, will contain 32 towers of housing for a total of 1664 units. The apartments will include three bedrooms, three baths, and a kitchen with provision for through-wall air-conditioning units. The towers will rise in groups of four in eight identical blocks. Parking and service facilities will be on the lower level. Concrete wall and floor panels made in Holland and elsewhere in Europe will be assembled on site by Arabian field crews. Completion is set for the fall of 1979.



5



6



7

In this flammability test, the chair with VONAR 3 interliner was not consumed.



Time: 30 seconds into the test.
Identical ignition sources nearly half consumed.



Time: 4 minutes.
Standard chair (left) involved.



Time: 10 minutes, 30 seconds.
Chair with VONAR 3 (right) is out.

Chairs for this test provided by and available from
Thonet Industries Inc.

At the start of this test, these chairs were identical in every way but one. Both were made with identical 60% wool/40% polyester upholstery fabric, standard polyurethane foam in the seat and back cushions, and wood structural parts. But the chair on the right had a layer of VONAR[®] 3 interliner (3/16" thickness) added as an envelope around the polyurethane foam in the back and seat cushions.

Test Results

Two 24" x 30" sheets of newspaper crumpled in a paper bag were placed on each seat cushion touching the back cushion, then ignited.

After four minutes, the paper fires were out, but the standard chair continued to burn, producing large quantities of flame, heat and smoke. The chair with VONAR 3 was only slightly involved.

At 10 and one-half minutes, the standard chair was completely consumed. The fire in the chair with VONAR 3 was out and had sustained relatively little fire damage. Far less heat and smoke were produced.**

The VONAR Difference

As flames heat the VONAR interliner, heat-absorbing moisture and a flame retardant are released. Then the VONAR forms an insulating char on the chair parts in contact with the ignition source. Result: in limited ignition situations, VONAR reduces the likelihood of ignition of upholstered furniture as a unit. Should ignition occur, it reduces the burning rate.

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**The test described here does not demonstrate that all furniture using VONAR interliners will perform in this manner or will not burn under all actual fire conditions. The test was not conducted to assign "numerical flame spread ratings" to any materials involved. The results show only that specific types of chairs, which used VONAR interliner properly, performed as indicated under the test conditions. Since DuPont does not make furniture or make or install interliner, we assume no responsibility for furniture performance. Consult your furniture supplier for flammability information on a specific furniture style.

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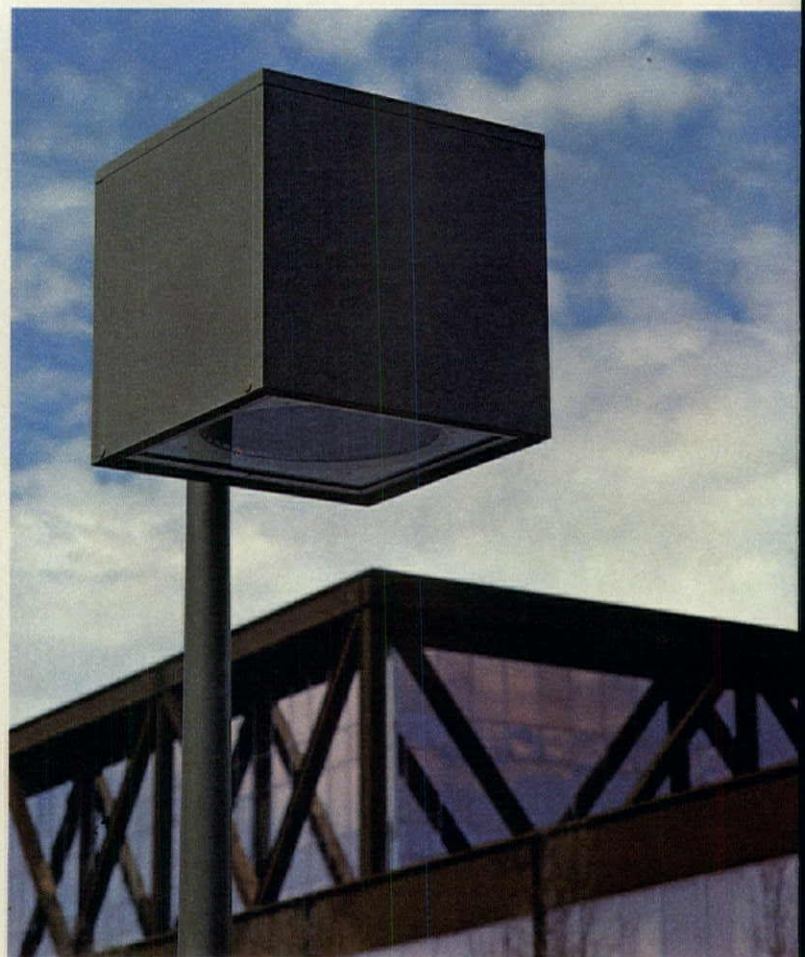
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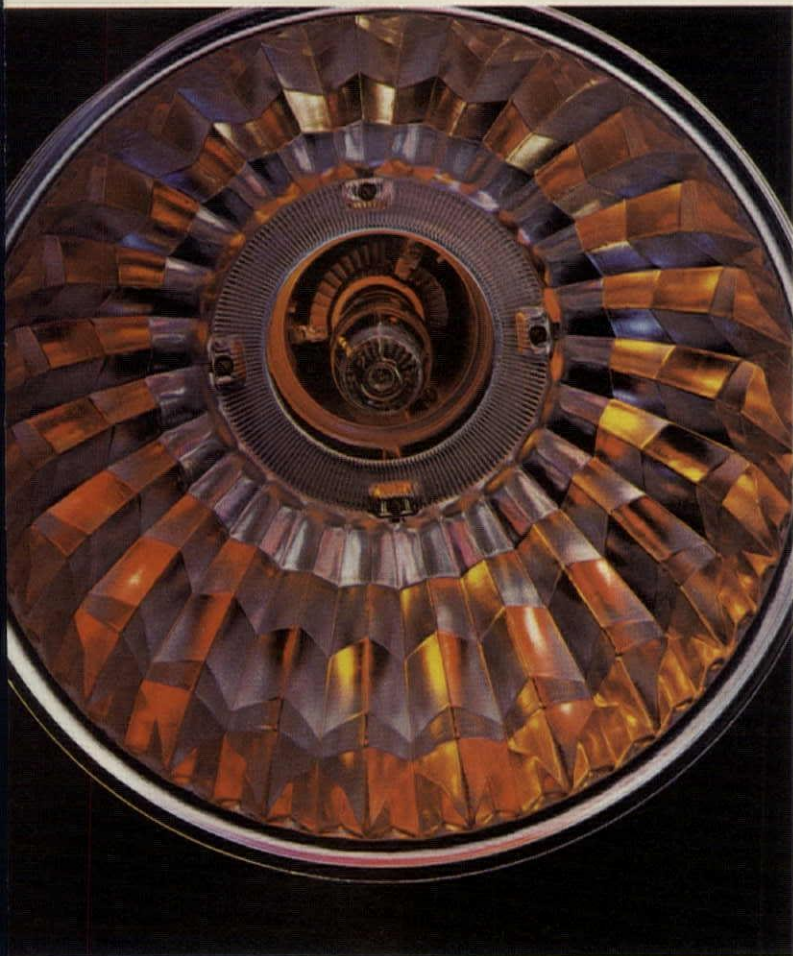
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Complicated framing problem?

That's what the designers of Columbus County Hospital did. And it paid dividends in reduced construction time and foundation costs.

Columbus County hospital is a 166-bed (all private) acute care general hospital in Whiteville, N.C. The hospital planners conducted a study to determine the most compact nursing unit possible, using 40 to 50 beds as the optimum size.

A circular plan was considered, but later dismissed because it was not

space efficient. Too much space was created for support functions in the center portion of the circle for the number of beds desired.

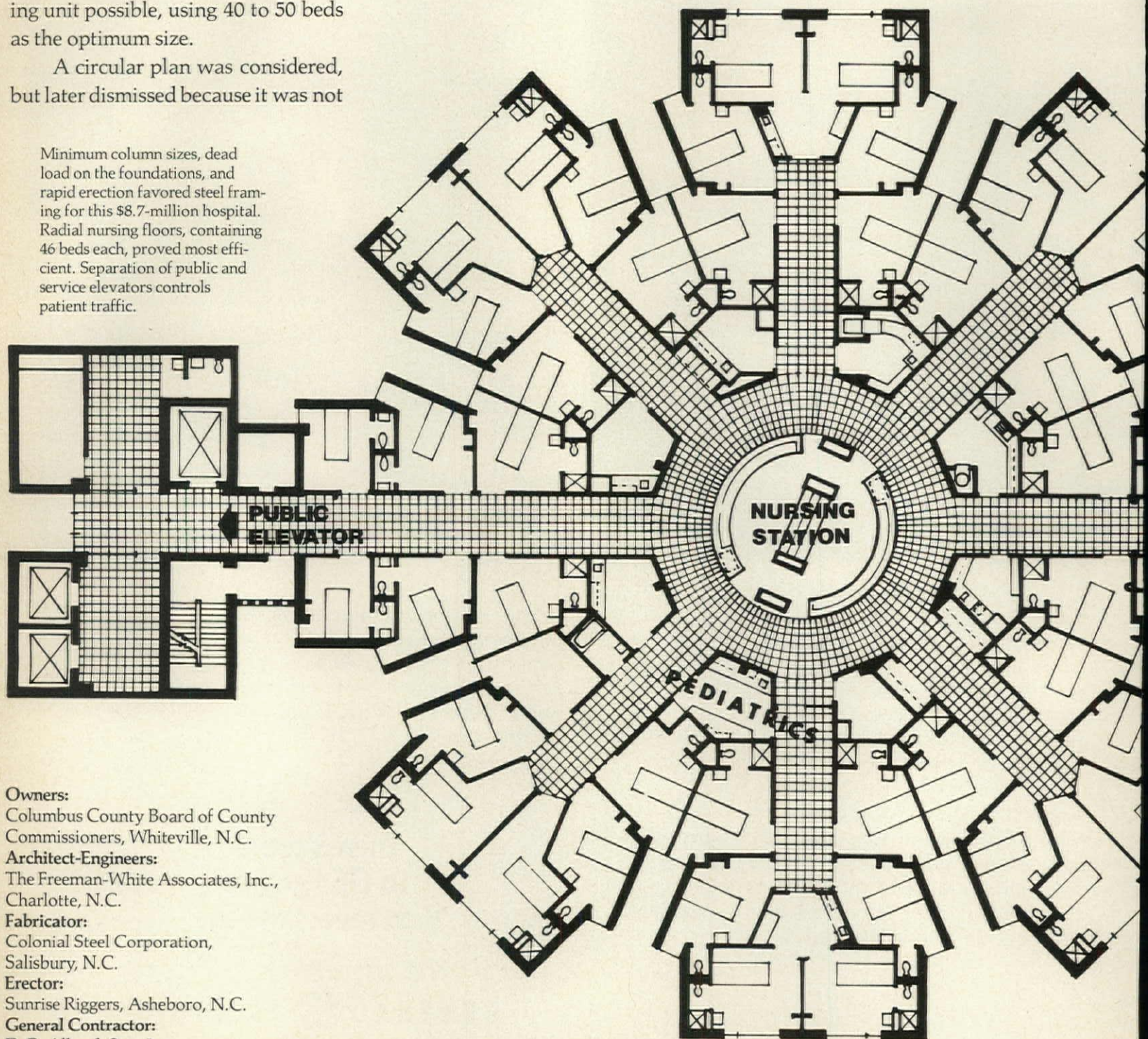
Radial plan selected

By compressing the arrangement of patient rooms around a central nurses' station, the radial plan

succeeded where the circular plan failed. Distance from nursing personnel is greatly reduced. It's only 38 ft from the nurses' station to the most remote patient bedroom.

Furthermore, the undulating exterior walls make it possible to provide windows for all patient rooms,

Minimum column sizes, dead load on the foundations, and rapid erection favored steel framing for this \$8.7-million hospital. Radial nursing floors, containing 46 beds each, proved most efficient. Separation of public and service elevators controls patient traffic.



Owners:
Columbus County Board of County Commissioners, Whiteville, N.C.

Architect-Engineers:
The Freeman-White Associates, Inc., Charlotte, N.C.

Fabricator:
Colonial Steel Corporation, Salisbury, N.C.

Erector:
Sunrise Riggers, Asheboro, N.C.

General Contractor:
D. R. Allen & Son, Inc., Fayetteville, N.C.

Solve it with structural steel.

even those located on the interior of the circle.

Only steel could handle the job

The architects first investigated a concrete framing system, but found it wasn't feasible because of the awkward convergence of beams and large, erratic bay sizes. And because of the configuration of the plan, column locations did not permit the use of a continuous concrete frame. They also found that concrete column sizes were too large for the limited column space available in the radial plan.

John H. Bennett, A.I.A., Freeman-White Associates commented, "Due to the nature of the radial plan, steel framing proved to be more advantageous than concrete. It re-

Columns are fabricated of ASTM A572 Grade 50 high-strength steel; the balance of the frame is A36. Bethlehem supplied 950 tons of steel for the 152,000 sq ft facility.

Web of steel illustrates framing complexity of the octagonal nursing tower. A future tower can be added to the east wing.



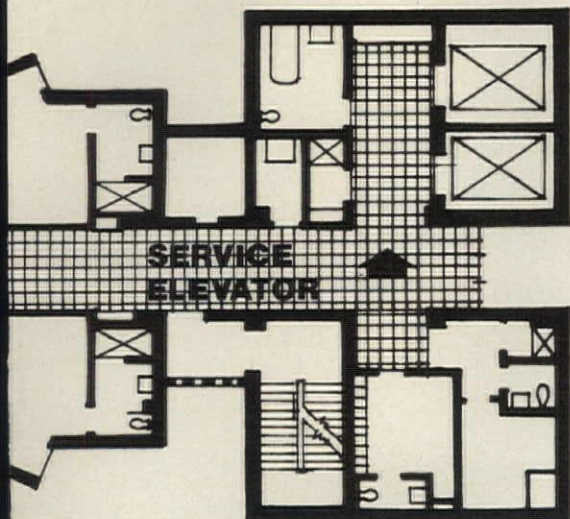
sion offers a broad range of technical and advisory services, including preliminary frame analysis (PFA).

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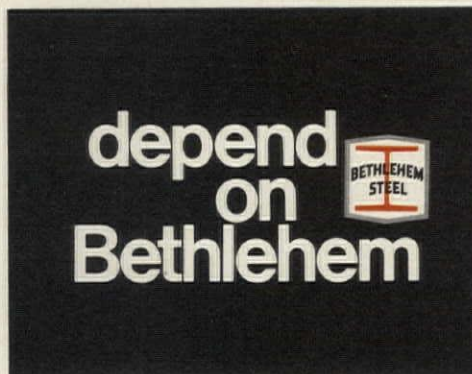
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sulted in reduced column sizes, as well as substantial dead load reduction for the foundation."

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HOW BEAUTIFUL IT IS TO COME IN UNDER BUDGET.

Engineered loadbearing masonry has established itself as a tight-budget building system. But with its fame for frugality came an undeserved reputation for colorless architecture. Houston's Halbouty Center, developed by Gerald D. Hines Interests, should set the record straight once and for all.

Neuhaus + Taylor, Architects, ignored the traditional notion of compartmentalized loadbearing design and erected an innovative structure featuring two handsome atria.

Wide-open spaces were a requisite for versatile leasing of the property; engineered masonry accommodated every need.

With considerable exposed brick throughout the lobby and interior, The Halbouty Center is a beautiful expression of masonry as a decorative and functional material. But its beauty is far more



than skin deep. The original owner's budget was undercut 15% by the use of engineered masonry, yet architectural detail was not compromised.

Of course, there are long-range economies to an engineered masonry building, too. Fire walls are inherent to the system. The mass of masonry walls makes them highly energy-efficient. And once the tooling is finished on a masonry structure, its walls are virtually maintenance-free. Engineered masonry. It makes any budget beautiful to work with.

For more information, refer to the Engineered Loadbearing Masonry insert in Sweet's, U.S.A. #4.4d/lm & Canada #4uni, or write to IMI.

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Circle No. 334



Realization of symbols

Four new buildings by Venturi & Rauch, shown here with one ill-fated grand scheme, add substantially to the body of executed work by this influential firm.

The opportunity to publish four recently completed works by Venturi & Rauch is a cause for celebration. Up to now, these influential architects have had all too few chances to demonstrate their ideas in actual buildings. To date, U.S. architecture magazines have been able to publish only 11 of their new buildings, the first of them—the Chestnut Hill house, credited to Venturi & Short—having appeared in P/A in May 1965. (Nine of these buildings, and almost all of the firm's published projects, have been shown first in P/A.)

A review of the firm's architecture over the dozen years since reveals how little the architects' approach has changed since it was set forth in that 1965 house and in Robert Venturi's book, *Complexity and Contradiction in Architecture* (Museum of Modern Art, New York, 1966). While individual works vary widely—as a matter of principle—depending on circumstances, there has been no fundamental change, except in our perception of the work. Venturi emerged in the 1960s as an *enfant terrible*. P/A's article on that first Chestnut Hill house opens with a brave warning: "To some, at first sight and even afterward, this house will seem willful and ugly—even offensive, ugliness often being considered on a par with the seven deadly sins." In retrospect, that house seems remarkably gentle; the kinds of mannerism that made it seem radical—the historical allusions, the applied ornament, the exaggeration of proportions, the occasional flaunting of an unassimilated element such as a drain pipe—have since appeared, more or less conspicuously, in the architecture of many others.

Consistently, their buildings seem to be designed around a basic *parti* that is unassertive and familiar—differing only subtly from the vernacular or revivalist models that the architects study. Then, among the details and surface treatments, the works are punctuated with truly discordant elements—the Ionic column at Oberlin (see cover), for instance, or the patterned façade there. One purpose of these shock elements, apparently, is to serve notice that other details, materials, proportions, etc. may not be as conventional as they look initially.



T-shirt tribute to latent symbolism in art museum addition (next page).

While our editors are enthusiastic about these latest Venturi & Rauch efforts, we have not reviewed them uncritically. Though the design principles have been established in the architects' minds for a decade, applying them still involves risks. In reaching for certain effects, they may fall short, or the reaching itself may become too obvious. And, since the architects strive to interpret user needs symbolically, the outcome depends to a great extent on client collaboration. Except with the most informed clients, however, the process is not participatory, so discrepancies between the symbolism and the users' response are real—and in a sense predictable—possibilities.

Notwithstanding a few reservations, however, a review of these latest products convinces us that the firm's work has a real superiority—a certainty, even in the more willful flourishes, that distinguishes it in somewhat the way Richardson's work was distinguished from that of his very able followers. The references to various styles and antecedents are melded in a uniquely knowing way; the shifts between "ordinary" and "fancy" modes are handled like smooth transitions of musical key; the exaggeration of certain elements is never haphazard, but reinforces the whole and focuses our perceptions. Now that the initial shock has served its historical purposes, we can concentrate on these more eternal values in the work of Venturi & Rauch. [John Morris Dixon]

A summing up

In additions to a college art museum, Venturi & Rauch have incorporated many of the ideas they have been developing in other projects over a number of years.

Venturi & Rauch's new addition to the Allen Art Museum at Oberlin College is a well-built, well-finished structure. It is so simple and straightforward in its organization that there is the temptation to describe its two separate and identifiable parts in the Venturis' own terms, as a "decorated shed" connected to a "loft" building.

The loft portion of the addition is a rectangular steel-framed building providing large horizontal spaces. These spaces (about 35,000 sq ft) make up the bulk of the addition and house new facilities for the art department. On the ground and first floors large high-ceilinged studio spaces are provided. These are rectangular rooms with good natural light—neutral spaces that do not compete with the art being made in them. Also provided are laboratory spaces for the Intermuseum Conservation Association and new space to re-house Oberlin's art library. The exterior is sheathed in brick with large windows forming continuous bands.

The museum's exhibition space has been expanded by the addition of a 3750-sq-ft gallery for contemporary art. Entered from the main building, it is a two-story cube of space well scaled to the art it displays and to the adjacent spaces in the original museum. The gallery is a "decorated shed." It is a simple building that uses applied ornament, a checkerboard façade of pink granite and rose sandstone, symbolically to convey importance. Inside this new gallery natural and artificial light are successfully combined. This runs counter to recent practice which has tended to exclude natural light because of the technical problems it creates for both the exhibition and conservation of art. These problems are solved by carefully controlling the natural light which is admitted through the windows at the top of the gallery. Control is achieved architecturally by the use of a large roof over-

hang and by the coved configuration of the gallery ceiling. The light admitted is then filtered through hanging screens of translucent acrylic, etched to reduce glare and coated to filter out ultraviolet light.

The original museum building has been air conditioned, and a portion of the second floor has been renovated to create a print display and study area. This space contains handsomely designed oak display cases, designed as the result of a close collaboration between architects and client. Finally, the servicing and storage area for the museum has been relocated in the addition and functions beautifully, the new gallery being located directly above the loading dock and connected to it by a freight elevator.

Venturi & Rauch have paid careful attention to Oberlin's needs. The museum's director, Richard Spear, who worked closely with them throughout the planning, is delighted to explain their attention to details as well as the total workability of the new facility. This is a refreshing experience in a period when so few *designed* buildings seem to work well for their users. However, to consider the Allen Art Museum only in terms of its use would miss a major part of its importance.

Arcades ring central hall of original museum.



Recognizing a diverse setting

At Oberlin, Venturi & Rauch were asked to add to a distinguished building. Oberlin's museum was designed by Cass Gilbert in 1917 in a style which Venturi has described as Tuscan Renaissance with Mid-western influences. It stands on a corner facing Tappan Square, a park surrounded by other Gilbert buildings. Next to it, across the street, is a Citgo gas station. It is this juxtaposition, in Venturi's words, "della Robbia topped with Citgo logos . . . terra cotta friezes with molded plastic signs," that is his equivalent of the human condition his architecture addresses. These are the perceived environment his buildings acknowledge and to which they are made to respond.

Because it is an addition, the Oberlin building might be expected to address some of the same architectural issues as Venturi & Rauch's winning entry for the Yale Math building competition of 1970, a design that was considered to be an important "position paper" on contemporary architecture. The issues at Yale were spelled out in the competition program which asked for an addition to the existing math building that, in spite of its size, would function deferentially as a background to the older structure. The addition was also to recognize the appropriate scale and character of the immediate surroundings—the adjacent buildings, the street, and perhaps even the history of architecture at Yale.

Conceptually, the problem of the building addition may be approached by imagining the existing building as an incomplete fragment of a larger whole. Michael Graves writes ("The Swedish Connection" JEA Vol. XXIX No. 1), that "the addition can be seen as the completion of the fragment, as its extension, or as a new fragment in itself. Unlike their Yale Math building project which conceptually was an extension of an existing building, the Allen Museum project is a "new fragment." The decision to treat the addition in this way, as a separate block with a linking element, makes sense—given first the completeness of the original museum's bilateral symme-



The addition steps back in two blocks, the gallery clad in a bold pattern of granite and rose sandstone, the loft portion beyond in buff brick.

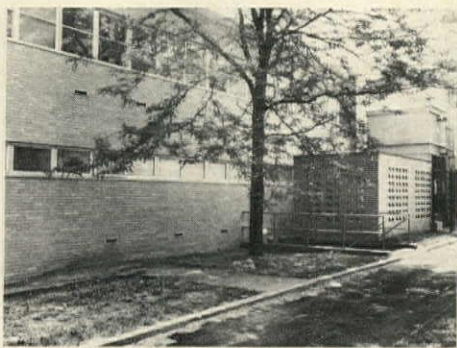


Allen Memorial Art Museum addition

try and second the need to locate the addition alongside the existing museum because of site constraints. (A previous addition extended the building to the rear in 1937, precluding this obvious and ideal location.)

The "new fragment," the "loft building," is not perceived independently. Because of its chameleonlike resemblance to the 1950s Modern of the Hall Auditorium annex immediately to the south—from which it borrows its flat roof, wide fascia, strip windows, and buff-colored brick—the possibility of seeing the addition as a "pavilion" unrelated to surroundings is denied.

While the "new fragment" or "loft" seems to have been determined in sympathetic relation to the architectural charac-



Walls of Hall Auditorium annex to south.

teristics of its immediate neighbor, the link element is a more assertive and personal statement. Though it joins the Museum and art school, it doesn't interconnect them as might be expected, but houses the new two-story-high Ellen Johnson Gallery of Modern Art previously described. Antithetical to the "glass bridge" solution for connecting dissimilar parts, the gallery is anything but expediently invisible. Color, pattern, and changes in materials, rather than in form, distinguish it from the parts it connects. While the new checkerboard façade is sympathetic to Gilbert's building, no literal attempt has been made to adjust or resolve its visual relationship to the decorative panel motif of the older building. Gilbert and Venturi simply collide with the most unexpected of *modern* gestures. A 10-in. vertical strip of gray granite, reminiscent of the ubiquitous $\frac{3}{8}$ -in. reveal, visually "gaskets" the connection while

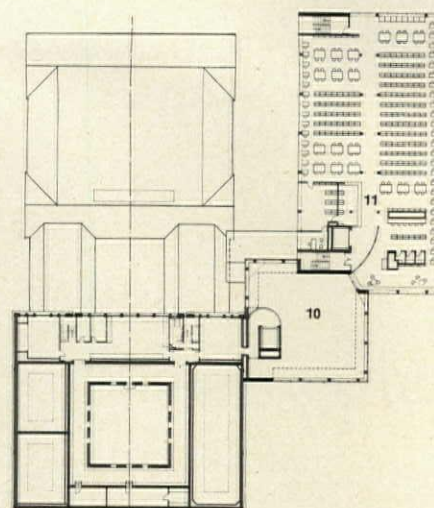
confessing the artistic difficulty of making such an intersection.

It is at the rear of the gallery link that Venturi & Rauch are at their most extraordinary. Here an exterior walkway overlooking the service drive and truck dock actually connects the circulation of the two buildings. This exterior walk is sheltered by a pitched roof of factory-finished corrugated aluminum supported on steel rafters and purlins. These are painted to match the roof tiles, soffit, and projecting rafters of the Cass Gilbert building. Here, Venturi & Rauch have transformed the contemporary idiom of brightly painted industrial materials into a visual equivalent of the older structure. This "pasted-on piece" comments on the architecture of the adjacent building and on well-known contemporary architecture which exploits industrial materials for their decorative potential. The metal roof functions to tie the two buildings together in a gesture similar to that of the eclectic "Gothic" entry portico, which was to be grafted to the intersection of new and old at the rear of the Yale Math building.

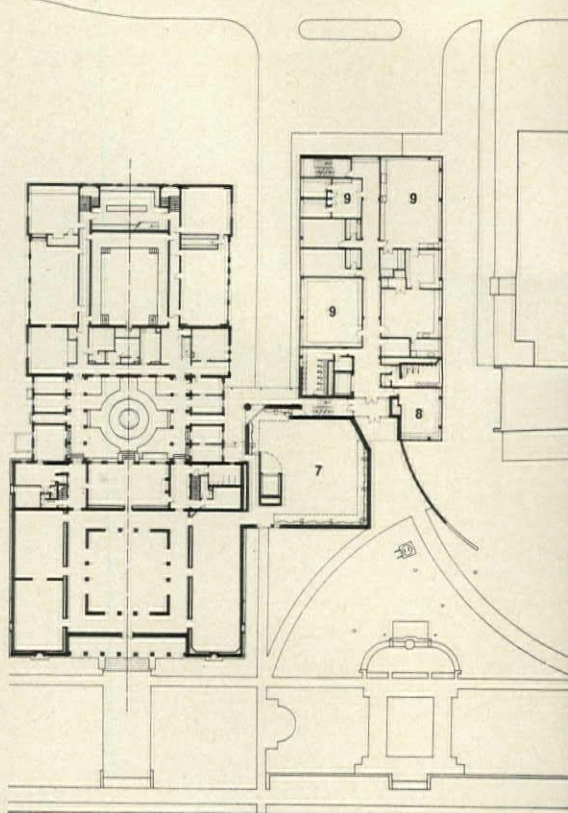
Under this roof, the corner of the new gallery is cut off diagonally and the building above is supported by a steel column. This has been decoratively sheathed with a fat, cartoonlike, Ionic column made of wood slats. Inside the gallery this column is prominently on display through a large window set diagonally across the corner of the space. The meaning of this gesture, the intention of transforming an architectural element into "art" via the "pop" sensibilities of the 1960s, is reinforced in-

Legend

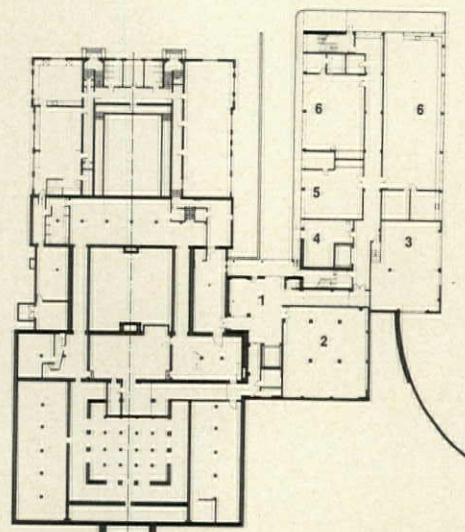
- 1 receiving and shipping
- 2 art storage
- 3 mechanical
- 4 structural lab
- 5 shop
- 6 studio
- 7 gallery
- 8 student lounge
- 9 conservation labs
- 10 upper gallery
- 11 art library



SECOND FLOOR



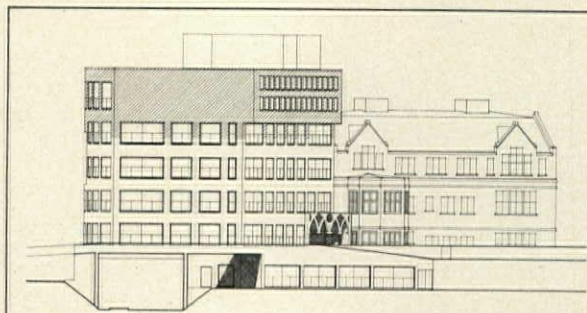
SITE PLAN, FIRST FLOOR PLAN



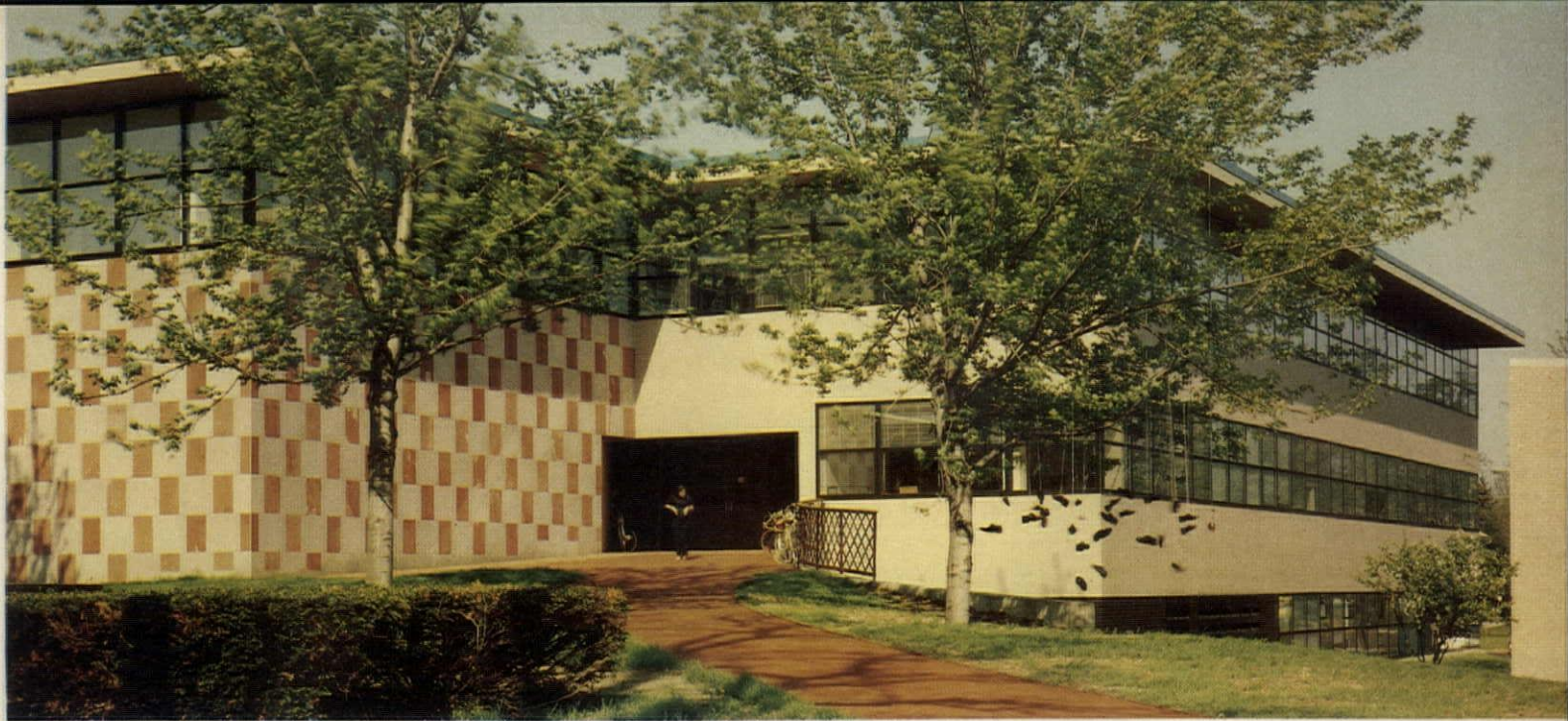
GROUND FLOOR

← N

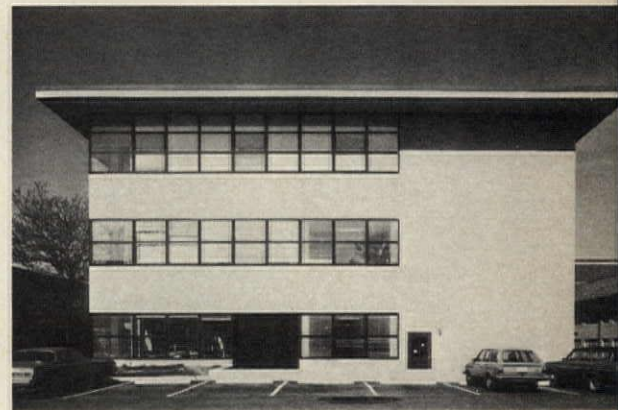
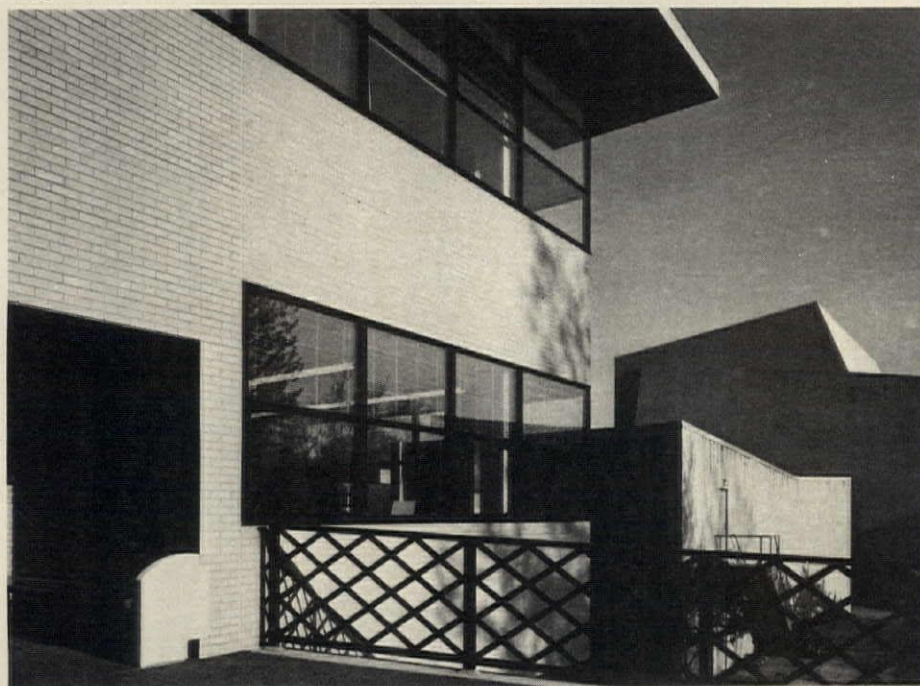
30' 10m



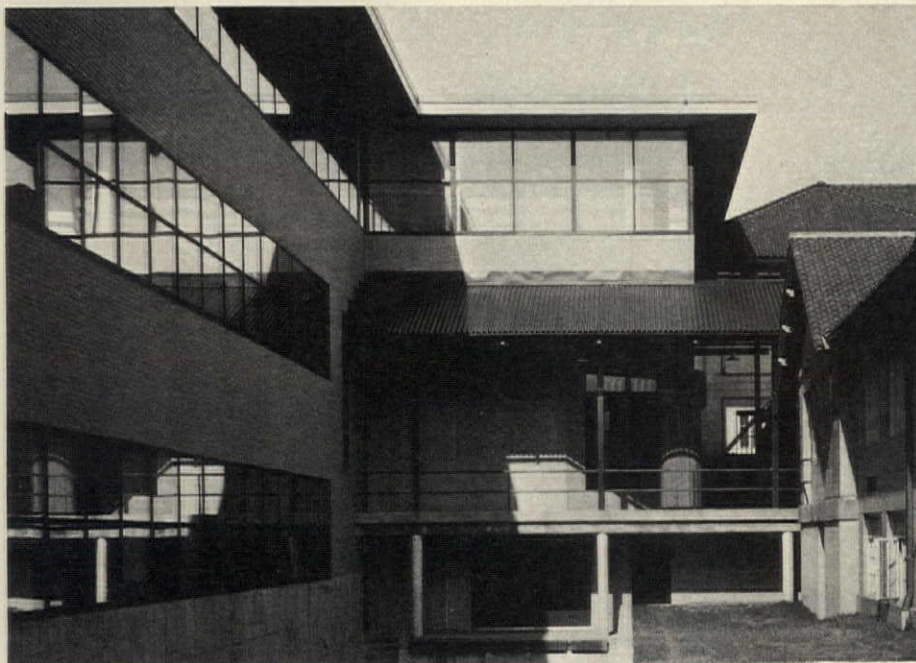
Competition-winning design for Yale Math Building (1970) used tracery at entrance to link "ordinary" addition to the original Gothic Revival structure.



Jogged plan exposes cubic volume of gallery and gives both portions of addition fronts toward street; buff brick matches building next door.



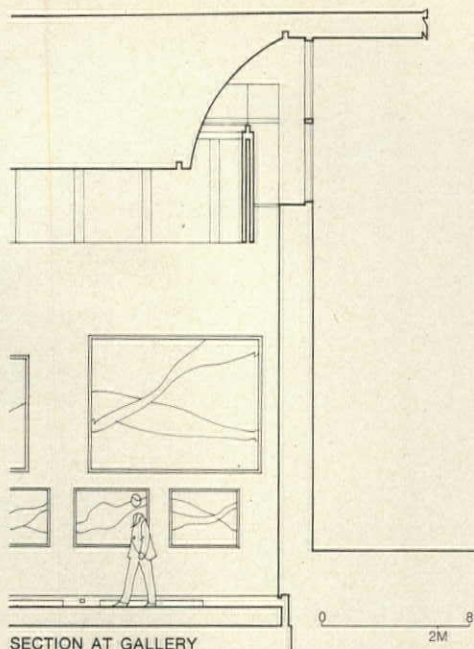
Front entrance to studio/lab/library portion (left) has sheltered marble bench. Strip windows of "plain" side wall (top photo) wrap around onto east end (above). Above truck dock (below left) is covered link between studios in old and new wings. Pitched roof over link (below) echoes slope and corrugation of original roofs; corrugations are repeated in soffit overhang—reminiscent of 1950s functionalism—that runs around addition.



Allen Memorial Art Museum addition

tellectually by the presence of Claes Oldenburg's sculpture, "3-Way Plug," installed diagonally opposite the column, outside the front of the new gallery (see site plan).

The addition to the Allen Art Museum reflects a unique point of view about architecture. Each of the addition's parts has been designed to mediate in progressive steps the visual, stylistic, and historical distance which separates the Cass Gilbert building from the structure to the south. The filling in of gaps and the creation of an acceptable continuity between "della Robbia tondos" and "Citgo logos" is the herculean task Venturi & Rauch have attempted and accomplished at Oberlin. [Stuart Cohen]



New gallery is designed for widest variety of works. Desired natural lighting enters through high strip windows around most of periphery (section left) and is modulated by overhang, deep cove, and "curtain" of overlapping translucent acrylic panels. Source of resulting halolike glow is apparent from certain points (below), dispelling the mysterious, artificial quality common in overhead daylighting schemes. Two large windows interrupt hanging space to give orienting views out; one window looks down into gallery from library. Diagonal window at northeast corner of room (facing page) looks out into covered student passage, framing the pop Ionic column designed by architects to support corner of volume above.



Entrance to second-floor library.

Data

Project: addition and renovation, Allen Memorial Art Museum, Oberlin College, Oberlin, Oh.

Architects: Venturi & Rauch, Philadelphia, Pa.; Jeff Ryan, project manager; Stanford Hughes, Dick Rice, Tony Atkin, Janet Schuren, Tony Pellechia, Stanley Tatala, project staff.

Site: area for addition, about 100' x 200', along south side of existing building, which had to include loading dock and some parking.

Program: new art gallery (3750 sq ft); additional teaching facilities for art department; new art library; laboratory for Intermuseum Conservation Association; renovation of existing museum, including print display facilities, increased storage, air conditioning and humidity control; new receiving and shipping area for entire complex. Total area, new construction: 39,305 sq ft; renovated in existing building: 17,250 sq ft.

Structural system: steel frame, for economy, ease of erection, and adaptability to change.

Major materials: cut stone gallery façade to match stone and color of original front; buff brick; aluminum-framed windows, 1/2 in. insulated glazing; enameled aluminum fascia; built-up roof; gypsum board interior walls and ceilings; floors concrete in studios, synthetic tile in labs, carpet in library, oak in gallery. (See Building materials, p. 116.)

Mechanical system: constant volume, original building; variable volume, addition.

Consultants: The Keast & Hood Co., structural; Vinokur-Pace Engineering Services, mechanical and electrical; Dian Boone, interiors.

General contractor: J&R Construction Co.

Cost: \$2.5 million.

Photo: Thomas Bernard, except as noted.



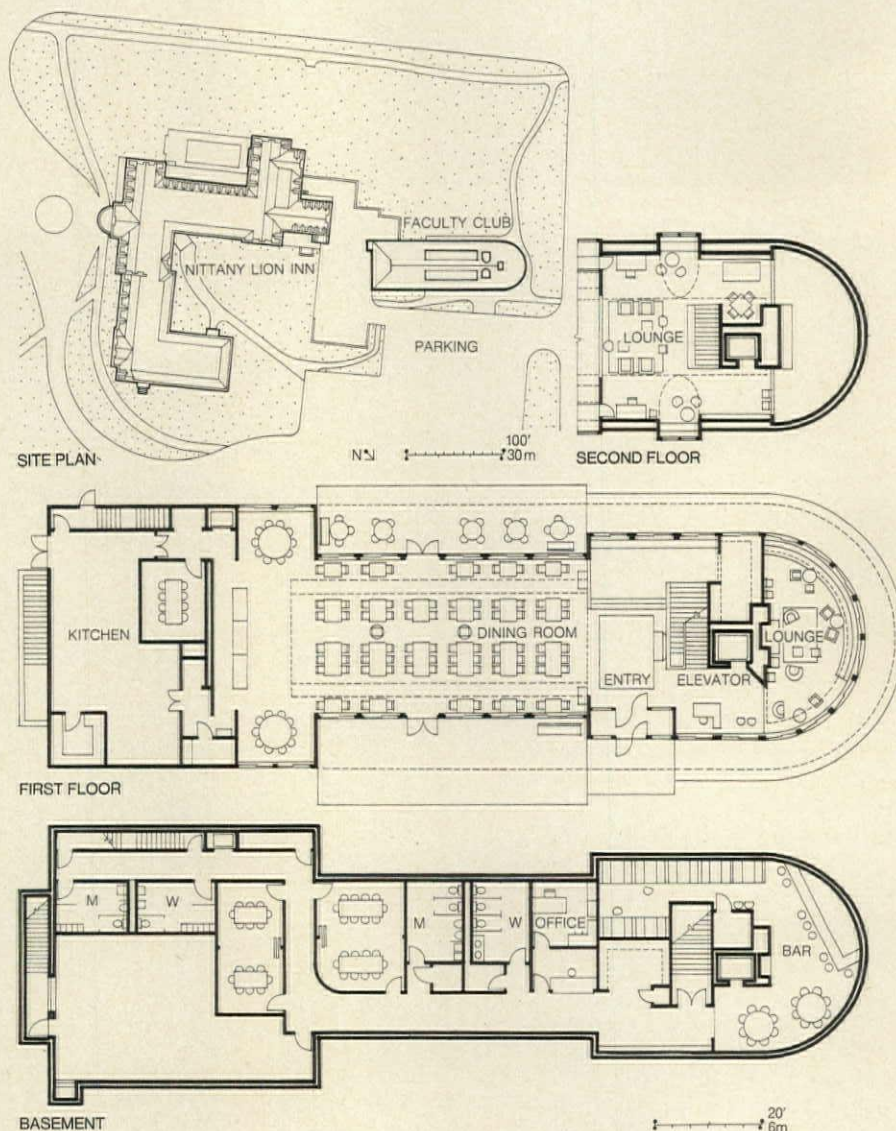
Seeing the forest for the trees

A paradoxical work by Venturi & Rauch poses problematic questions about art imitating life and life animating art.

We all know this building. Depending on one's background, it could be any one of the little resort casinos that hug the shores of Moon Lake or Kiamesha Lake or the cedar lakes of South Jersey or Lake Tahoe or the 10,000 lakes of Minnesota, recalled fondly from summers long past. For the more historically observant, it could be an unused illustration for Vincent Scully's *The Shingle Style*, left out because it resembles so many others in that book. Or it could be (as one well-known White architect thought when he first saw it) a renovation of an existing building—a compliment as flattering as any its architects could ever hope for.

But it is none of those things. It is the Pennsylvania State University's new faculty club, and with it the century-old land-grant college has gotten its first certifiable high-art architectural landmark. The university's main campus at State College, Pa. (near the geographical center of the state) is a handsome place, graced with stately avenues of arching elms. If the general level of the school's architecture before the advent of Venturi & Rauch is less than memorable, it nonetheless has a serene, reposeful quality entirely lacking in some of the more consciously designed modern university campuses around the country.

The faculty club sits amidst a stand of tall oak, fir, and tulip trees, and one of the architects' main charges was to leave as many of the trees intact as possible; a slight inflection of the plan performed that requirement admirably. The architects' other responsibility was to be as respectful as possible of the adjacent Nittany Lion Inn, a fine 1930s Colonial structure of white-painted brick revered by alumni who return to it on homecoming weekends. To both those ends the architects applied themselves with considerable skill, and the faculty club is nothing less than a small masterpiece of siting.



Let the sun shine in

A first, larger (and more expensive) scheme by Venturi & Rauch proposed a white-painted brick building not unlike the old Inn. When the budget proved to be inflexible, the design was changed to a shingle-sided frame construction. Having to abandon their first conception, the architects wanted the building to be (in Robert Venturi's words) "neutral and recessive." That it is, and from all accounts its exterior appearance is an unmitigated success among many segments of the public, including those who had never heard of Venturi & Rauch before.

The interior design of the faculty club is

quite a different matter, and its problems are rather important ones, both in understanding the immense influence of Venturi & Rauch in the past decade and in trying to determine that firm's future direction. The single most controversial element of the interior design is the color that predominates on the first and second floors: a particularly unappealing shade of Eye-Eze green. According to Venturi, the light green was chosen to "evoke the interior of a forest grove," (atypically naturalistic imagery from this firm). They sought to reinforce that feeling by the use in the dining room of clerestory windows screened by lattices, intended to filter light in the same



The shingled exterior of the club blends into the surrounding grove of trees on the Penn State campus.

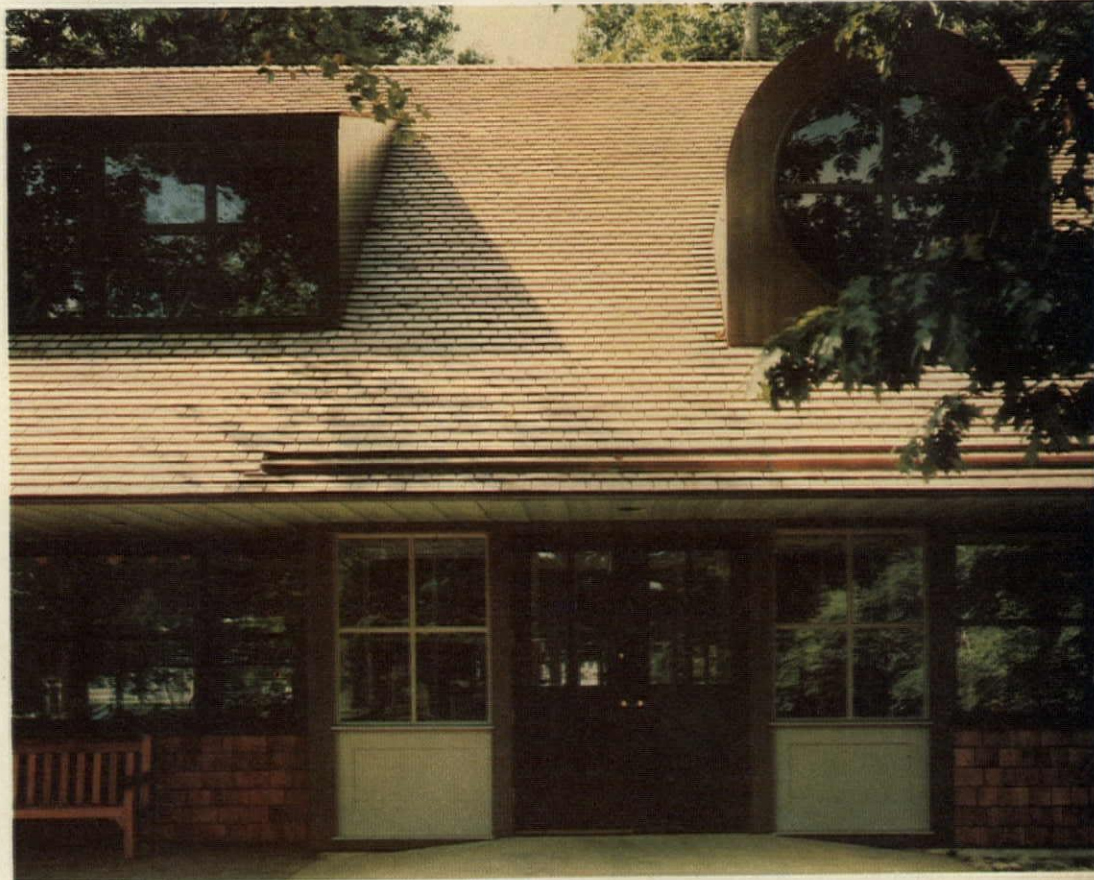
way the trees outside the room do. That effect, though, cannot work at nighttime—when the color is said to be particularly infelicitous—and during the winter, when the woods outside are filled with snow, the color gives a chilly feeling no matter what the actual room temperature is inside.

Venturi & Rauch have carried off bravura effects in the past with an apparent ease that eludes even the best of their would-be imitators, but in this interior they have failed, the ironic victims of the very principles they themselves have set forth in their writings. These architects have an undeniable gift for choosing images whose associations summon up resonant responses, and Venturi & Rauch's success in doing so has been tied directly to their very informed selection of those images. Within the context of the popular imagery that they have exploited so notably in the past, the exact shade of green that the architects chose to paint the interior of the faculty club has inescapable institutional connotations. Though Venturi states that their aim at Penn State was to provide an interior that would be "easy, semi-domestic, somewhat idiosyncratic, and not too institutional," their color choice almost perversely zeros in on the one color most likely to defeat that stated purpose.

Do as I say, not as I do

For here is the crux of the problem: although an architect can choose an image-laden symbol, an architect cannot dictate the meaning of that symbol. Commenting on the negative reaction to the green walls of the faculty club interiors, Venturi countered that if people "are looking at the symbol and not at the atmosphere we've created, that's not my fault," a surprising assertion from a leading exponent of pluralist values in architecture.

The memory of Venturi & Rauch's inclusive philosophy lingers on in the matter of alterations made after completion by the management, most notably the rearrangement of the tables and chairs in the dining room from their original rigidly serried ranks to the equally unsatisfactory hodgepodge in which they now stand. That the



The entrance to the club, with one of the two round dormer windows that light the second floor.

original configuration was unpopular with the users does not seem as important to the designers as does the maintenance of the image—based on the dining halls of the great English universities—and Venturi's reaction is not all that different from the unyielding impositions of such supposedly opposite architects as Richard Meier and Peter Eisenman. Even within the context of Venturi & Rauch's professed references there are severe restrictions. The management's inclusion of two *Ficus benjamina* trees flanking the fireplace in the first-floor lounge is unacceptable to Venturi, though why the arboreal imagery is suddenly objectionable at that point remains unclear.

The management has still more serious contentions: according to the faculty club manager, the building is "an operational disaster." He cites the lack of bathrooms on the main floor of the club, the inadequate size of the kitchen (only large enough, he says, to handle 100 people, not the 150 or 200 served on a typical day during the school year) and the intrusive placement of the fire doors smack in the middle of the dining room walls.

To be sure, there are individual elements throughout the club that are executed with Venturi & Rauch's unsurpassable sophistication. The choice of furniture and fabrics is uniformly surprising and delightful.

Penn State Faculty Club

For instance, they have covered Mies's classic Brno chairs with an Art Deco cut velvet that is chronologically, if not historically, correct, and have upholstered the light maple Chippendale reproduction dining room chairs in a green and gold version of Josef Hoffmann's *Notschrei* fabric, originally designed for the Café Fledermaus in Vienna in 1906. An informal mix of traditional (whether American vernacular or classic high-design modern) furniture has been used throughout, and in that aspect at least, the architects' associative connections succeed.

Subterranean homesick blues

The basement level is painted in a friendlier tone, a pale sandy color, and it is tempting to think of the upstairs spaces having been painted with it instead. Banquettes along the wall of the basement corridor are beautifully executed, far superior to similar ones in the window alcoves of the second-floor dormers, which are made unsittable by ventilating ducts that dig into the small of the back.

The basement also contains what is the building's strangest space of all, the semi-circular bar, as yet unused, pending the issuing of the club's liquor license. The bar is placed below grade for reasons of economy, along with miscellaneous conference rooms. Done in the most vernacular idiom of any of the club's rooms, the bar looks like some place you used fake I.D. to get into when you were 17. But beyond the curving wall curtained wittily in plaid gingham is not the parking lot with its neon sign flashing "Steaks/Chops/Fine Cuisine," but rather a concrete wall: like the proverbial whorehouse without a second floor, this is a roadhouse without a road. It is an eerie and hermetic room, seeming almost ready for some George Segal figures (it is not real enough even for Duane Hanson figures) to be installed. It will be a different room once it is used, and that is the moral that the Faculty Club ultimately gives us. If you are going to give people evocative and specifically referential buildings based on populist design traditions, those buildings must enhance—and not stifle—the activities they contain, they must promote—and not forbid—accommodations to human needs.

It would be a sad denouement to one of the most brilliant careers in recent architectural history if Venturi & Rauch were to abandon the opportunity that they have opened up for other architects. That is the opportunity to make a human connection in design by not being afraid to be human. Creating places that can speak meaningfully to their users is by far the most difficult task an architect can face. Few architectural firms bring such great talent to that task as does Venturi & Rauch. Let us hope that the difficulty they have in releasing the accessible side of their talent diminishes in the future, a future that they have played such an important part in shaping. [Martin Filler]



Balconies in second-floor lounge (above) overlook the semi-circular first floor lounge (below).



Data

Project: Pennsylvania State University Faculty Club, State College, Pa.

Architects: Venturi & Rauch (Robert Venturi, John Rauch, Denise Scott Brown, Robert T. Renfro, Richard Rice, Missy Maxwell, Steve Kieran, Janet Schuren, Tony Atkins.)

Program: Faculty club for a large state university, with dining facilities for 100.

Site: a wooded lot on university campus.

Structural system: steel frame, wood joists.

Mechanical system: central steam heating, outside compressor air conditioning.

Major materials: wood shingle exterior, gypsum board interior, plywood floors. (See Building materials, p. 116.)

Consultants: Dian Boone, interiors; Vinokur-Pace Engineering Services, Inc., mechanical; The Keast & Hood Co., structural.

Contractor: G.M. McCrossin, Inc.

Costs: \$939,485; \$76 per sq ft.

Photography: Stephen Shore.



The dining room (below) is lit through clerestory windows screened by lattices. Entry hall (above right) leads downstairs to the bar (above left).



Mission accomplished

This ski house by Venturi & Rauch achieves unity through references to the 18th, 19th, and 20th Centuries.

The house that Venturi & Rauch completed for Sandra and Peter Brant in Connecticut last year (P/A, Aug. 1976, p. 50) fused into one form such disparate references as those associated with Palladio and the W.P.A., Regency and the Bauhaus, Art Deco, and 1950s vernacular. In a ski house in Vail, Co., finished this year for the same clients and a friend, the architectural associations, while not as numerous, are nonetheless equally disparate. And like the earlier house, the images are ordered into a tightly composed, self-contained structure of an apparent simplicity that belies its true complexity. The house, Robert Venturi notes, is not ordinary.

The 2600-sq-ft five-bedroom house is organized to serve large numbers of weekend guests, who are accommodated in double-bunk bedrooms and, if necessary, on window seats in the living room that double for sleeping. The four-story house rises as a tower amidst tall, straight trees on the steep, northern side of the mountain above Vail. Service facilities are on the first floor, bedrooms are on the second. On the third floor are the entry, dining, kitchen, and a guest room. The fourth-floor living room is a spacious, atticlike space where groin vaults are punctured on three sides by large dormer windows, and on the fourth side by a huge "ski-lodge" fireplace. The interior is finished in horizontal cedar siding and wide pine plank flooring. The exterior is clad in a combination of horizontal and vertical cedar siding, with cedar shakes on the roof.

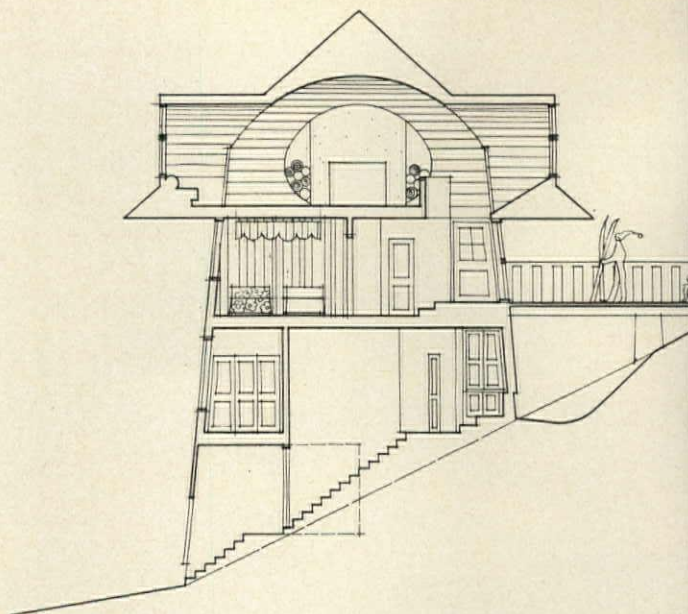
In comparison to the Tucker house (p. 64), which Venturi describes as ordinary ("a child would draw it"), the only-casually-similar Vail house is much more complex and unordinary. The inward-tilting sides, capped by the extreme overhang of the hip roof with its overscaled dormers is not usual; neither is the large scale of the small building, which is designed in such a mannered fashion so it can be read well

from a distance in the dense site. Inside, the mannerist attitude is continued, especially in the staircase, of which Venturi says "you have to fight your way up in a picturesque way."

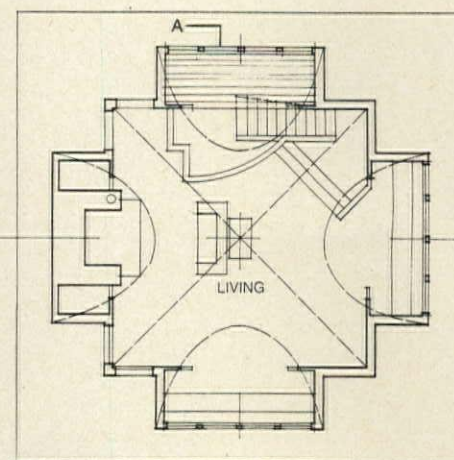
Arrival at the vaulted top floor confirms Venturi's remark that "I was thinking of 18th-Century Polish synagogues with their wonderful vaulting." But Polish synagogues are not all that was being thought about. Other references, especially those to Art Nouveau and the Arts and Crafts movement, are also unmistakable. The overall image of the house refers to Art Nouveau architecture of the end of the 19th Century, and more specifically to the attitude of vertical massing and angular geometry associated with the northern tradition of that style than to the more florid styles of the southern countries. It seems natural that Venturi & Rauch would favor the former attitude, since it is the one that would eventually come to exert the most influence on this side of the Atlantic. But it was also within the northern sphere—in Britain—that the Arts and Crafts movement would arise, and in the first two decades of the 20th Century be transported to America, where it would also become known as Mission Style.

In the Vail house not only is natural wood used exclusively for all surfaces, in the Arts and Crafts tradition, but as in that fashion it is also used for all built-in furniture and cabinets and for other architectural details. The house is furnished with wicker furniture of the period and with oak furniture of the Mission Style master Gustav Stickley.

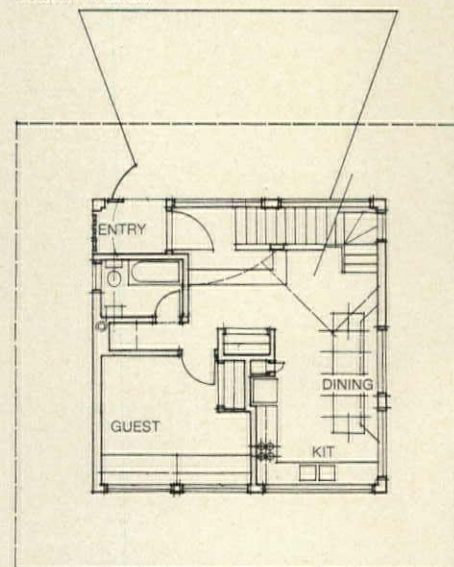
Where the Vail house refers to Art Nouveau, Arts and Crafts, or Polish synagogue architecture it doesn't simply borrow, but rather performs a transformation on the original source. An Art Nouveau house would never have been completely constructed of natural wood, and it would certainly never have been furnished and detailed with wood in the simple and direct manner demanded of the Mission Style. On the other hand, a Mission house would typically be a low-lying structure with a strong emphasis on the horizontal. A build-



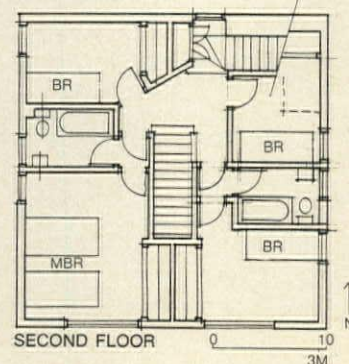
SECTION A



FOURTH FLOOR



THIRD FLOOR



SECOND FLOOR



Ski house recalls Art Nouveau and Mission Styles; even rendering is in period style. Third level entrance (above), rear view (below and rendering).



Brant-Johnson House



ing of either style would never have terminated in a rustic, wood-clad groin-vaulted ceiling; the antecedent for that form would never have been used for a domestic building, and certainly not for a ski house—in Poland or anywhere else.

Although the architecture of historical allusion has been around for several years now, what distinguishes the Vail house from most other such inclusivists or pluralists structures is that it is not simply a collage of borrowed architectural antecedents. The house is conceived within a system of references that are integrated at a rare level of cohesion, where the whole becomes an invention of form that is sustained independent of its parts.
[David Morton]

Data

Project: Brant-Johnson House, Vail, Co.

Architect: Venturi & Rauch; Robert Renfro, associate in charge; Doug Southworth, Elizabeth Plater-Zyberk; William J. Ruoff, consulting architect.

Site: a 25-degree slope left natural on northern side of mountain above village.

Program: a ski house for five, designed to accommodate many weekend guests.

Structural system: round steel columns at corners; roof structure of wide flange beams; wood framing.

Major materials: cedar boards on exterior and interior walls; cedar shakes on roof. (See Building materials, p. 116.)

Mechanical system: electric hydronic baseboard heating.

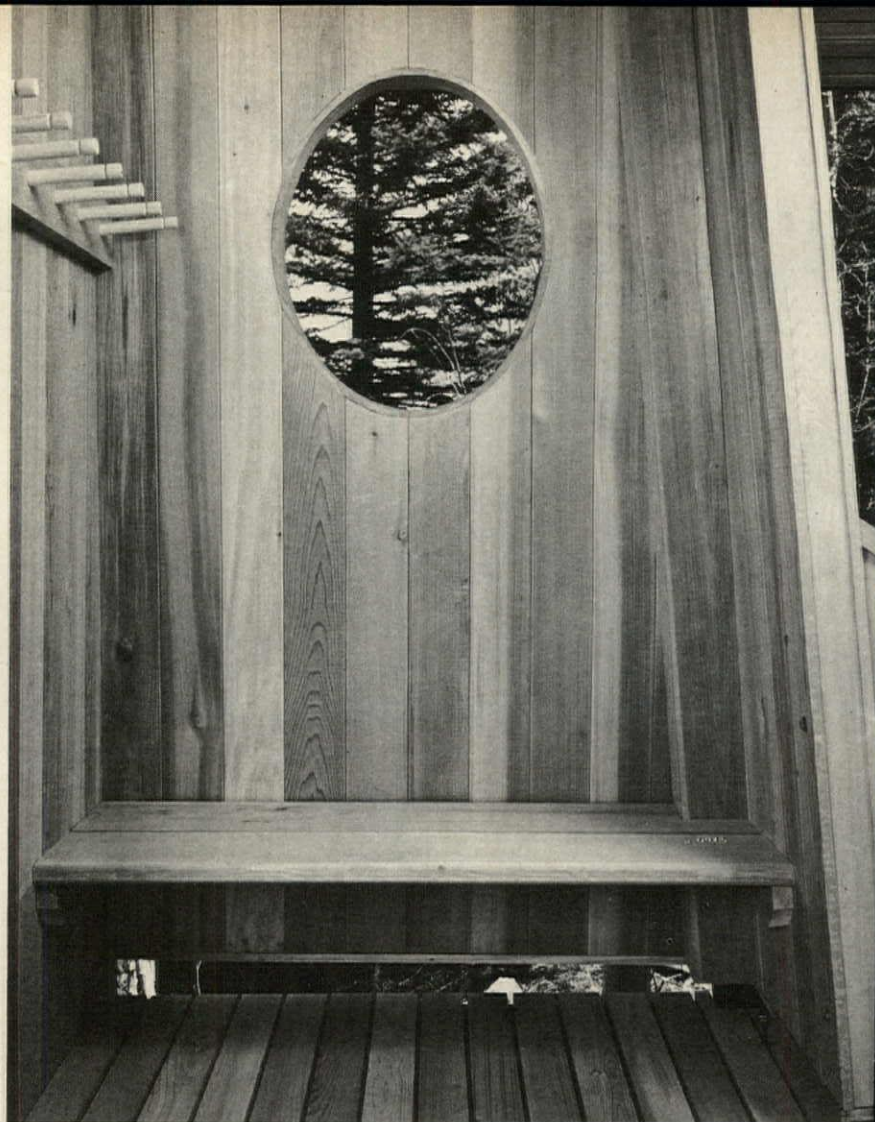
Consultants: Vinokur-Pace Engineering Services, mechanical; The Keast & Hood Co., structural.

General contractor: Hoyt Construction Co.

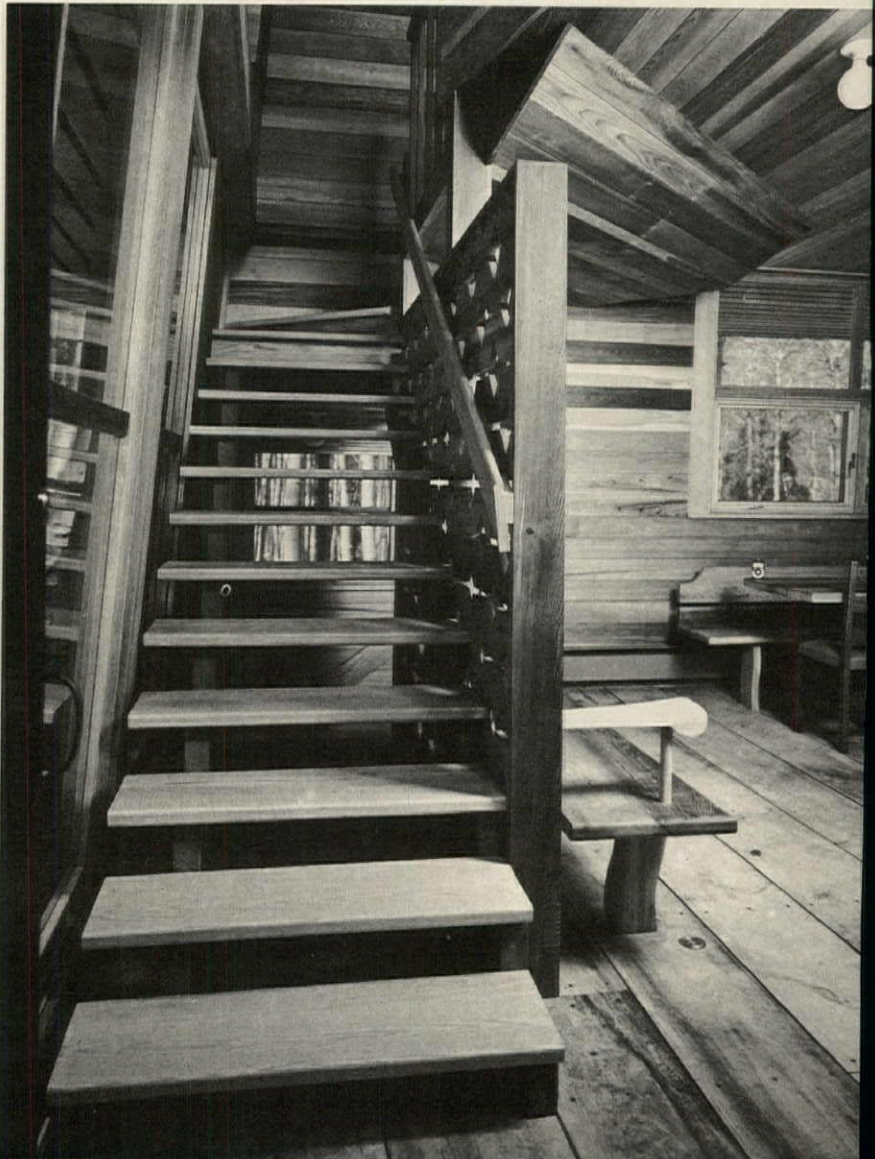
Client: Sandra Brant.

Cost: withheld.

Photography: Thomas Bernard.



Mission Style craftsmanship seen in kitchen (left), entrance porch (above).





In dining area (above and facing page bottom) stairs lead to fourth floor living room (above right and below) where period furniture has been used.



Country manners

Of Venturi & Rauch's several buildings in their version of the Shingle Style, this weekend retreat is the most basic.

Seen first through the trees (facing page) this tall, square box of a house, with its oversized pyramidal roof looks, as Robert Venturi remarks, like a child's drawing. Even compared to the vacation house at Vail (previous pages) this design is disarmingly direct. For here there are no big discrepancies between initial image and actual organization—nothing comparable to finding that the great room at Vail is up in the attic.

Here the most prominent element of the exterior is the big round central window that bursts through the eaves and rests on a rectangular opening below in a far-fetched version of the Palladian motif. The implication is that there is a major second-floor room running up under the roof, and that is just what happens. The more domestic, utilitarian character of the first floor is indicated by strips of smaller windows placed as function dictates (asymmetrically even on the main façade); there is some harmless deception in the vertical lattice effect that extends from these window sills to the ground, blurring the actual scale of this floor and introducing a bit of cabin imagery. The treatment of all exterior wood with bleaching oil unifies the surface and plays down variations in texture.

The first sight of the house, focusing on the central window, is from a drive that then swings uphill to the left; a walk from the car leads to a distinctly understated door at the northwest corner. At this entry, the actual door and the screen door get equal design attention—in summer camp tradition—both custom-made of simple, slightly overscaled lumberyard pieces.

Inside, the first floor is carved up functionally into essential rooms. The second, by contrast, is a single space, 25 ft square, with windows on all four sides. Above the 13-ft ceiling level, a portion of the space rises up to the roof peak, surrounded by a book-lined mezzanine. Spatial complexity in these upper reaches yields a bowerlike

bridge, with a daybed under a segmental vault facing out through the center of the big round window.

The most willful flourish in the room is the symbolic shape of the fireplace block, repeating the silhouette of the entire house. Under its minimal yet mannerist eaves are sheltered a hi-fi cabinet on one side and a bar—served by a dumbwaiter from the kitchen—on the other.

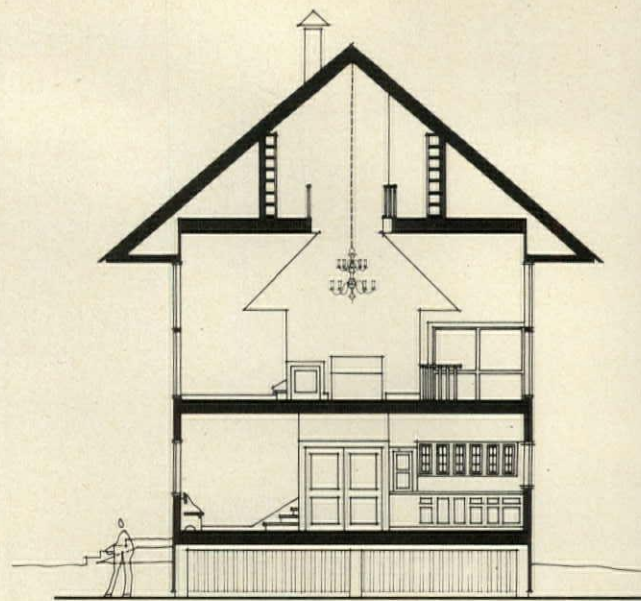
Upstairs/downstairs

Differences in character between the two floors are reinforced by choices of materials, colors, and furnishings. The country cottage atmosphere of the first floor, for instance, is established by a bright green bench (architect-designed) just inside the entrance and maintained in the predominant green and rust tones, which appear combined in a gingham fabric.

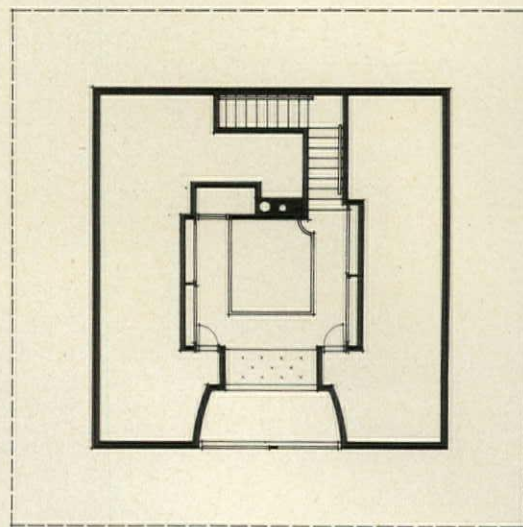
One element used without variation throughout both levels is the pale green of the painted gypboard walls (a color sustained in the ceramic bathroom tile and the plastic laminate of built-in counters). This is the same green that disturbs some users of the Penn State Faculty Club (p. 00) and offended *New York Times* art critic Hilton Kramer when the architects used it for an installation at the Whitney Museum. Here, where the context rules out institutional connotations, the color seems just right. On a sunny summer day, it seems luminous as it reflects the wavelengths of light sifted through foliage outside. (Asked whether the color seemed chilly in winter, the owner recalled no such problem.)

One characteristic of this pervasive pale green is its chameleonlike adaptability to the more formal space and furnishings upstairs. Complemented by the blues and soft reds of an old oriental rug, which are echoed in upholstery fabrics—and juxtaposed to gilt mirrors and a brass chandelier—the green becomes part of a loosely Georgian ambience. Dark oak floors—stained to match the quarry tile downstairs—also take on a formal quality in this setting.

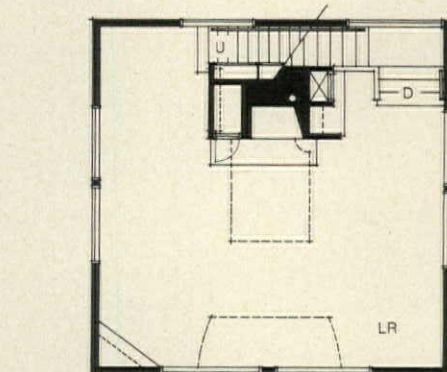
All of the interiors were designed to accommodate the owners' existing, tradi-



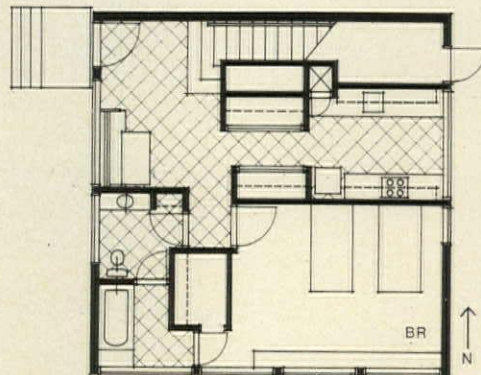
SECTION



MEZZANINE



2ND FLOOR



1ST FLOOR



The big round window—actually a tall oval—dominates both exterior image and hall-like living room; overall silhouette is recalled in fireplace wall.





Weekend house

tional furniture and paintings. One acquisition just for this house was the Chippendale mirror above the fireplace, a vertical oval as specified by the architects.

Critical to the upstairs/downstairs concept is, of course, the stair between, an element that Venturi & Rauch has often handled with imagination. This stair, with its broadened bottom treads, is directly ahead of the entering visitor, beckoning to the expansive space above. It runs up a slot behind the fireplace with a remarkably gracious gradient, taking 19 risers where 14 would usually do. Near the top is a day-lighted landing, from which three more treads—extra wide again—lead dramatically up into the main room.

If there is a weak point in this calculated procession, it is at the understated entrance door and the space just inside it. This entry space, with its pleasantly lighted dining alcove, is too ill-defined even by tract house standards, meandering off toward a too-obvious bedroom door. Even this lapse, it could be argued, reinforces the ordinariness of this level vs. the formality above.

As a weekend house for a New York couple, this little building is—like all of Venturi & Rauch's houses—an act of art patronage, however modest and workable it may be. It embodies a statement, by the owners as well as the architects, about the traditions of home in America. It says all that need be said about the desire for convenience with a bit of grandiloquence, about bucolic ideals vs. urbanity, about formal organization with vernacular liberties. It puts all our domestic memories into one little box. [John Morris Dixon]

Data

Project: house in Westchester County, NY.

Architects: Venturi & Rauch, Philadelphia.

Site: south-facing, wooded slope, portion of existing rural estate.

Program: weekend use, year-round, for a couple; only one bedroom required.

Structure: concrete and concrete block foundation; wood frame with plywood sheathing.

Major materials: red cedar roof and wall shingles, walls coated with bleaching oil; aluminum, commercial-grade sliding windows; gypsum board interior wall surfaces; quarry tile and stained oak flooring. (See building materials, p. 116).

Mechanical system: hot air heating system, oil-fired (wooded setting, deep eaves, and venetian blinds help to make natural ventilation effective for summer cooling).

Consultants: Dian Boone, Interiors.
Cost: withheld.

General contractor: Louis E. Lee Co.

Photography: Thomas Bernard.

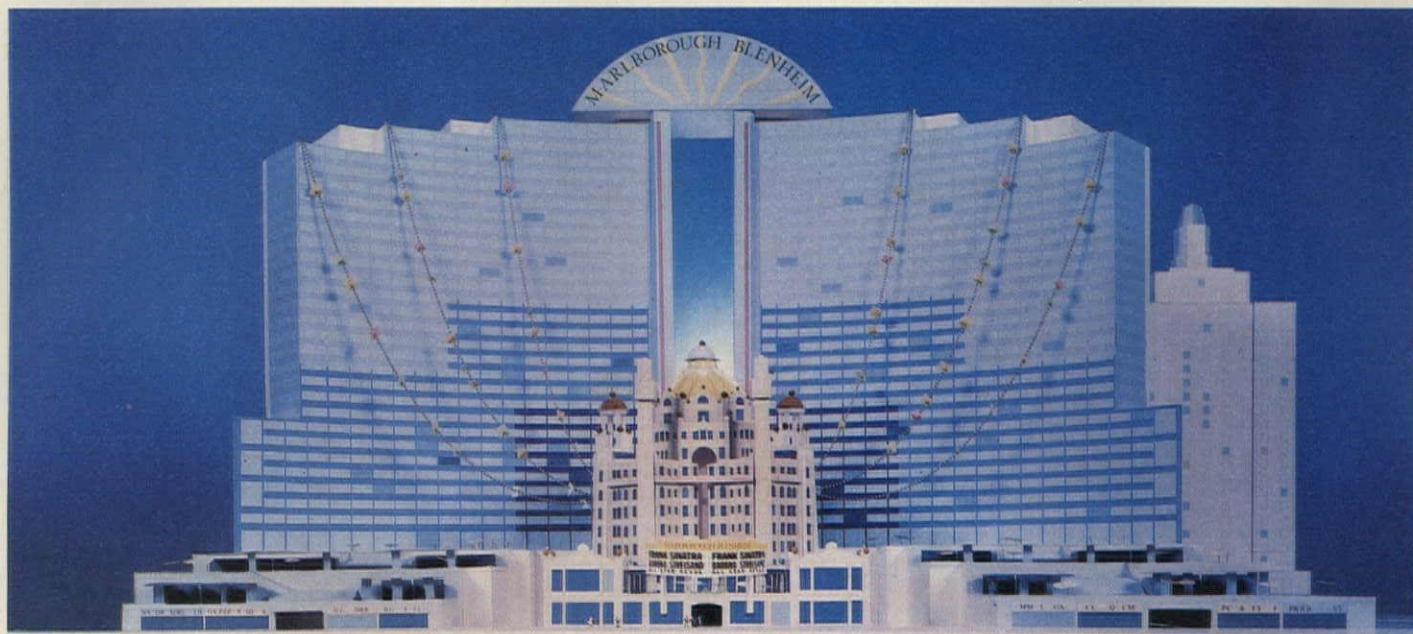
Narrow stair of easy gradient leads from entry (below) directly up to living room (above). Dark stained stairs, flooring, and spare, curved handrail recall Georgian vernacular.



Casino qua non



Marlborough-Blenheim and Dennis Hotel (left).



Proposed scheme retains Blenheim Hotel portion only (foreground), with new hotel behind.

A preliminary design scheme for a hotel and casino in Atlantic City boldly displays Venturi & Rauch's iconographic theories applied on a grand scale.

When it was learned that Venturi & Rauch were hired as architects to design a large gambling casino and hotel in Atlantic City, it seemed like the perfect pairing. The once glittering New Jersey resort is learning from Las Vegas in its attempt to bring economic prosperity to a seaside city now festering with advanced stages of urban blight: last year a state law was passed allowing casino gambling there—the only place with such laws outside of Las Vegas.

For the new construction implicit in this legislative deal, what more appropriate architects should be drawn into the venture than the firm that decoded Las Vegas architecture, analyzing the iconographic aspects that gave this spa its identity?

Apart from the Las Vegas connection, this opportunity is unusual because of Atlantic City's collection of turn-of-the-century architectural extravaganzas. Hotels

were designed to emulate the elegance of French chateaux, Italian Renaissance palazzi and Moorish compounds in order to embrace the public fantasies of yesterday.

Despite Atlantic City's decline in recent years, many of its vestiges of seaside pomp still remain, however tarnished and lackluster. To the architects who made looking at history more than almost all right, this situation offered a potential object lesson about how new construction could acknowledge the past.

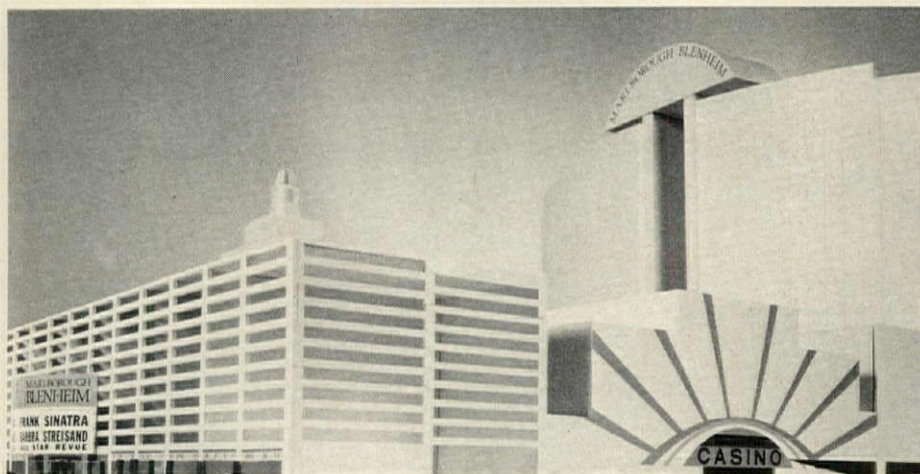
Thus Venturi & Rauch's commission to add on to and refurbish the historic Marlborough-Blenheim Hotel, designed in 1906 by Philadelphia architect William Price, was intriguing on several levels. It would allow the firm to synthesize in the 1970s the revelations that Rome and the rest of Europe held for Robert Venturi in the 1950s (*Complexities and Contradictions in Architecture*, MOMA, 1966), or Las Vegas held for Venturi, Denise Scott Brown, and Steven Izenour in the 1960s (*Learning from Las Vegas*, MIT Press, 1972).

Unfortunately, however, the deal fell

through. Apparently the client, property owner, Reese Palley, an art dealer who leased the old hotel site to slot-machine makers, Bally Manufacturing Corp. of Chicago, couldn't sell them on the Venturi & Rauch proposal, executed with resort architect David Jacobson. Bally and real estate developers Cushman & Wakefield are now hiring their own team of architects and planners. The lease doesn't mandate preservation of existing buildings.

While the new boom situation would seem a challenging and exciting physical, economic, and cultural context for architectural efforts, a darker side is obviously inherent in this commercial prosperity. Intense land speculation and the estimated \$1 billion in new construction over the next 15 years are creating significant waves that could engulf the magnificent architectural heritage of the town, as well as incite developers to throw up shoddy new construction. By calling for 325-sq-ft-minimum room sizes and at least 500 rooms to be included in hotels seeking gambling licenses, the casino code may prevent the spread of floating dice games to every

Hotel-casino project



Main entrance to casino is on cross street perpendicular to Boardwalk.

penny arcade. Yet this restriction contains within it certain drawbacks. Small old hotels are being demolished for large site assemblages, and some of those chateaux like the Dennis Hotel may be torn down just because their rooms are too small.

Backdrop with ornaments

Even Venturi & Rauch couldn't completely avoid these constraints. As this scheme (one of several alternative proposals) indicates, both the Marlborough Hotel and the Dennis Hotel would be demolished for a new hotel on this boardwalk site. Only the front portion of the Blenheim was to be retained, with the two boardwalk pavilions connecting to its central domed building. Looming up behind this Moorish set piece with its Renaissance massing and plan would be a new 26-story crescent-shaped block of 1500 rooms.

The large-scale polychromed building is a sophisticated, if not ironic, blend of iconographic elements. It inventively alludes not only to the confection in front but the now historic "modern" hotels of the Lapidus-like Miami ersatz vernacular.

The amalgam is quite an accomplishment, as is the way the architectural features of the Blenheim are abstracted into *signs* in the new building. For example, the general shape of the new building echoes the Blenheim's own horseshoe arrangement of spaces on its lower levels and the main portion's accommodation to this plan. The central shaft that pierces the Blenheim's volumetric mass and carries the eye up to the dome atop the hotel is reflected in Venturi & Rauch's scheme where a central open-air court links the two new wings. The old dome is echoed by the actual "sign" for the new hotel—a tunnel vaultlike appurtenance containing bar and restaurant that bridges the two wings.

The gradually cascading new hotel wings refer to the older hotel's own kind of massing; a gradual emanation of spaces from the dense central core. This architectural approach is signified in literal terms by the different colors of the blue polychromed brick picking out parts of the building's frame. This abstraction of archi-

tecture into sign transforms the new addition into an evocative silhouette-like backdrop for the encrusted object occupying the foreground, much the way a small figure spotlighted on a stage casts an enlarged shadow behind it.

In their belief that architecture should be functional and ordinary, the architects apply ornament to the conventional structure. An appliqué of festoons is draped like lifted trains of an evening gown from the roof of the Blenheim to the new hotel.

Spaces within the complex are straightforwardly disposed with the functionalist directness inherited from modern movement architecture: The crescent would contain all the hotel rooms; the old hotel, suites, and meeting rooms; rooftop terraces linking the two would support garden swimming pools and outdoor recreation. Meanwhile, the main indoor recreation attraction, the casino, would be housed in an aggressively simple loftlike box with billboardlike façades. This authentic decorated shed would be placed between the new hotel and the parking garage was to front a cross street.

With the turn of events, however—and new architects involved—it is not certain what, if anything, will remain of the Marlborough-Blenheim. The Venturi & Rauch proposal would no doubt have stirred up controversy among professionals, who would object to the obvious appliqué of ornament to a very plain sort of architecture. But in all probability this scheme would have successfully probed its attempted levels of reference and meaning—bridging the gap between current commercial "electrographic" architecture of Las Vegas, modernistic resort architecture of Miami, and the eclectic fantasy architecture of Atlantic City past. America's unique contributions to resort architecture could scarcely have been capsulized with as much intensity or élan.

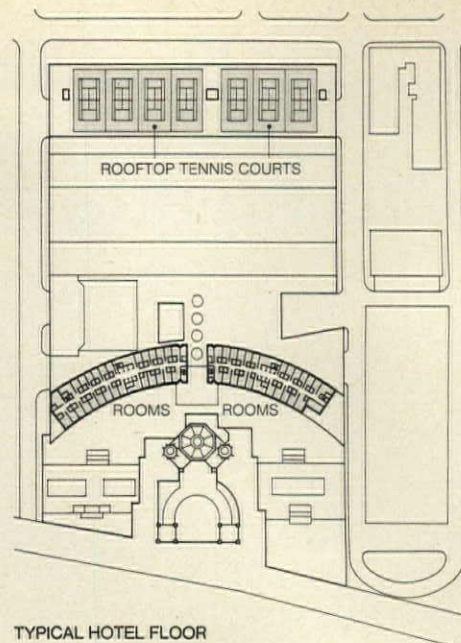
[Suzanne Stephens]

Credits

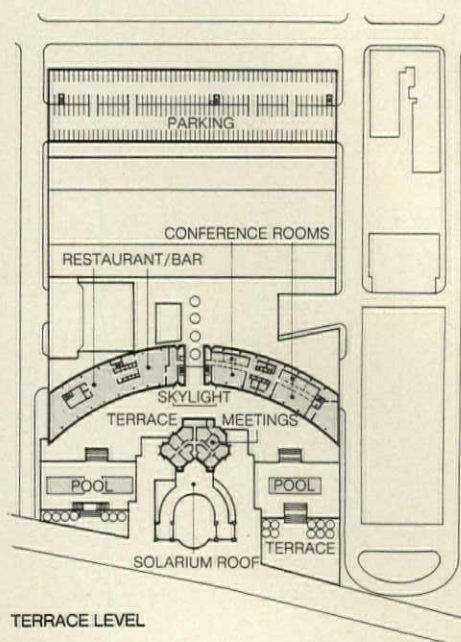
Architects: David Jacobson Jr., Los Angeles, in association with Venturi & Rauch, Philadelphia.

Client: Reese Palley.

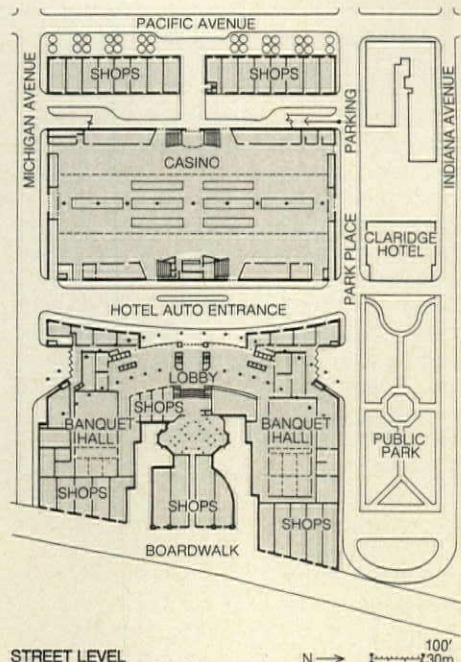
Photographs: Thomas Bernard.



TYPICAL HOTEL FLOOR

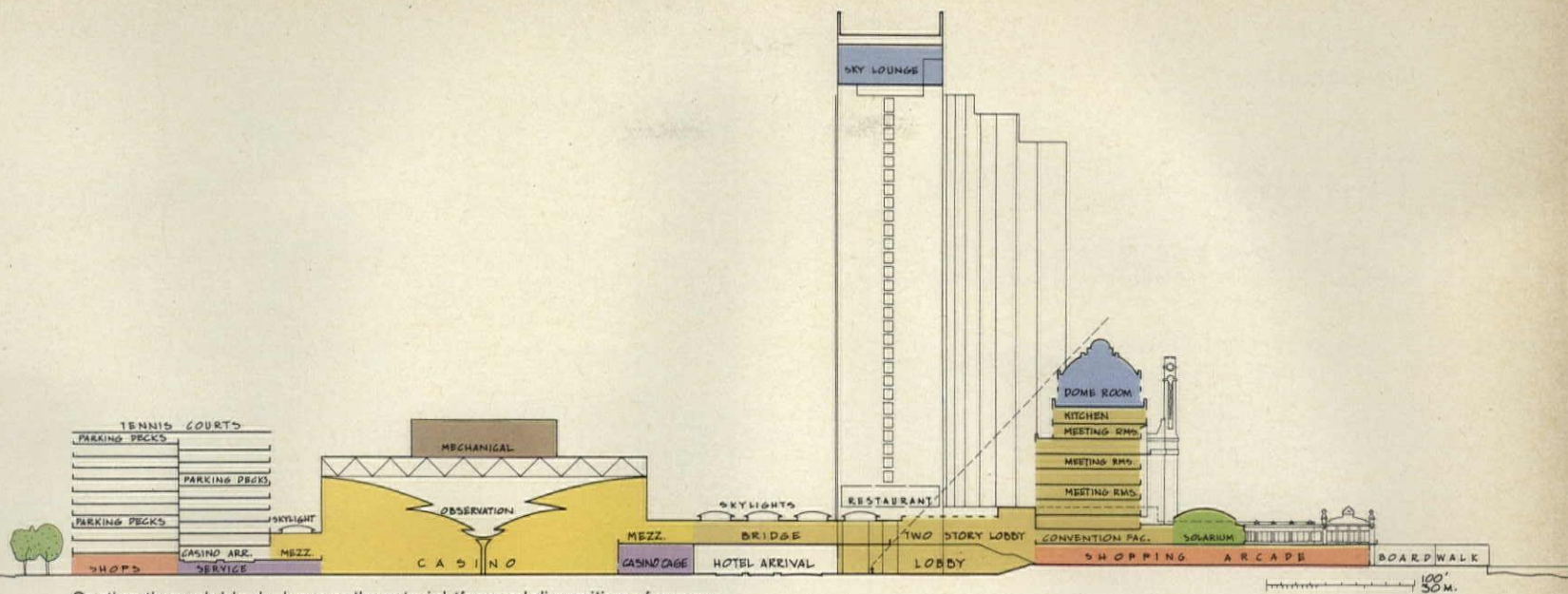


TERRACE LEVEL



STREET LEVEL

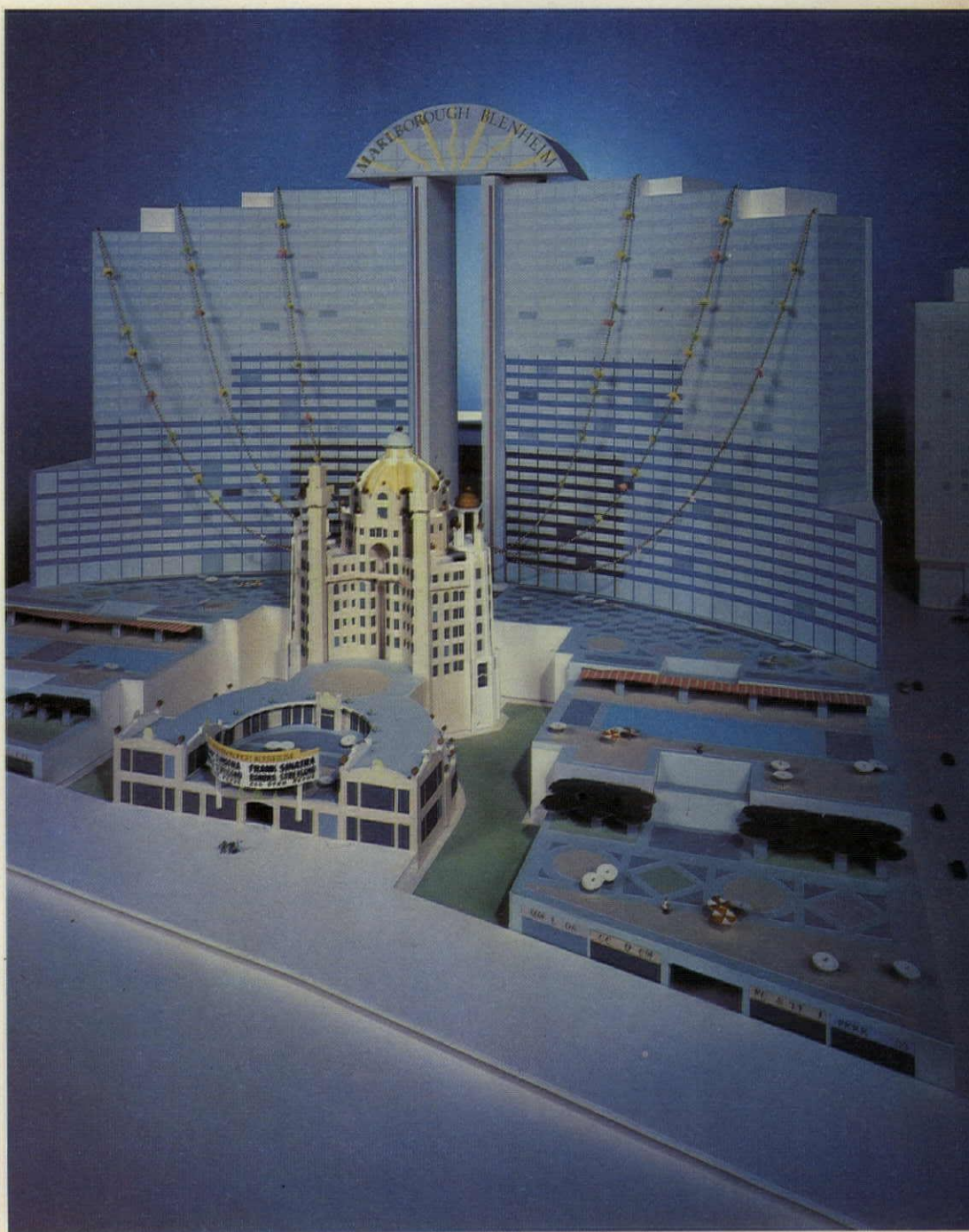
100'
N → 1"=30m



Section through block shows rather straightforward disposition of spaces.



In their scheme, Venturi & Rauch would have retained the spaces in the Moorish turn-of-the-century Blenheim hotel for suites and conference meeting rooms. Old postcards indicate the evocative nature of the building's eclectic architecture, which would have been further elaborated and updated by a design calling for polychromy and festoonery on a basically backdrop building.



Introduction

Three California houses

The famous California Case Study houses of the 1950s were part of a world-wide concern with industrialized building, which is still flourishing in California today.

On the following pages two new "high-tech" houses vividly illustrate that the concern for industrialized architecture remains alive in Southern California. Although neither house represents merely a continuation of the California Case Study house tradition begun almost 30 years ago, each is seen as a demonstration project in its own right. The house by Peter de Bretteville (facing page) is more concerned with the use of catalog components in the making of form than is the house by Helmut C. Schulitz (right), which shows a greater interest in the development of methods for system construction. The section concludes with an appreciation of the most famous Case Study house of all, Charles Eames' house (below) of 1949.





de Bretteville and Simon house (above), Los Angeles, 1977
Schultz house (facing page, top), Beverly Hills, 1977.
Eames house (facing page, bottom), Santa Monica, 1949.

de Bretteville and Simon Houses, Los Angeles, Ca.

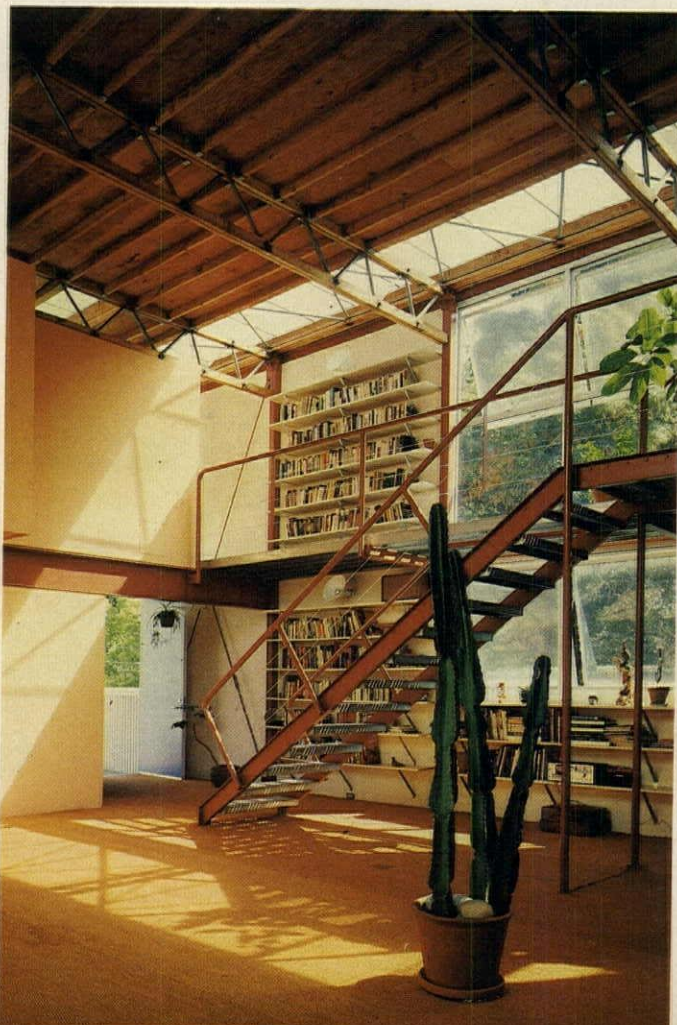
People who live in glass houses

The old idea of the two-family house is updated in California and given a new high-tech image as it recalls elements of Los Angeles' architectural past.

Sited foursquare next to a steeply winding road in Los Angeles' Laurel Canyon, the connected de Bretteville and Simon houses present an initial image of surprising directness. In an area where residential development is generally woodsy and picturesque, their public face is a sheer two-story, 124-ft-long continuous surface of corrugated asbestos and fiberglass panels. The twin boxes mark a place different from others, although the differences are more than just skin deep. What is proposed in their design at once takes a stance with respect to the current scene, as it



The de Bretteville and Simon houses are based on a 4-ft module, which is clearly visible at the north façade (above) looking into de Bretteville's studio. Given their initial similarities, the houses are actually quite different, especially in terms of their finishing, as seen in living rooms of Simon house (left) and the de Bretteville house (right). The houses are also dissimilar in function, as shown in the plans (p. 74).



recollects elements of LA's past architectural events, all in the unique synthesis of the needs of two particular families.

Apparent connections exist to the milestone Santa Monica house and studio of Charles and Ray Eames (p. 80). The superficial similarity of two boxes with a space between, apparently constructed from standardized elements, does not justly credit the 28-year-old achievement of the Eameses, nor is it an adequate or complete reading of de Bretteville's design. Other associations exist, moreover, in terms of the concept behind the project's program. The notion of two families in the creative arts sharing a homesite recollects the concept for the original Schindler house on Kings Road. Moreover, de Bretteville's attitude, in the actual detailed resolution of this project, has more in common with Schindler's casual mix of building elements than with any purely "high-tech" systems building approach. The project is not a nostalgic revival of the *Arts and Architecture* Case Study Houses aesthetic, but the result of a thoughtful yet evolving process acknowledging the realities of these antecedents while it reflects the attitudes of a contemporary architect.

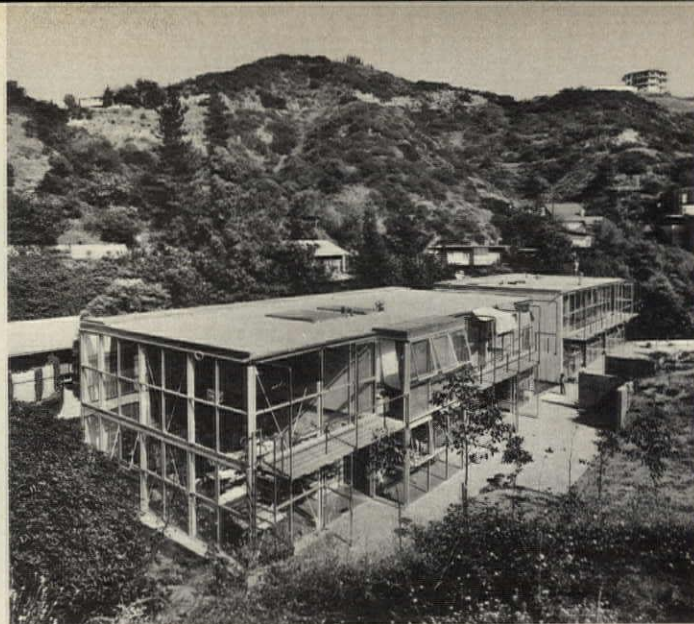
Programmatically, there is nothing radical in either of the two houses. (Peter de Bretteville, the architect, and Sheila, a graphic designer, wanted studio space as part of their house; screenwriters Roger and Dyanne Simon decided to separate their office on the lower level.) What is unique was the decision to organize them so that they began to exhibit nearly urbanistic qualities. While the site consists essentially of two lots zoned R1 and totaling only one-half acre, the two families deliberately set out to live somewhat cooperatively, reacting against the suburban isolation of Los Angeles. (Their initial interest extended back to the Horatio West Apartments restoration (P/A, Nov. 1976, p. 68), but spaces there didn't suit their needs and, rather than modify the spirit of Gill's buildings, the families decided to build their own.)

The houses are organized around a common public entry "notch," with secondary entrances at the extreme end of each building. This notch acknowledges the separation required by building code. The main level of each house consists of a double-height volume, enclosed on two sides by glass. Particular functions such as bathrooms, kitchen, storage, and so forth are treated as cores, and the upper-level bedrooms appear as platforms hung off the cores. Two balconies run the length of each house, the interior one on the back a circulation spine and the exterior one on the front doubling as a sunscreen.

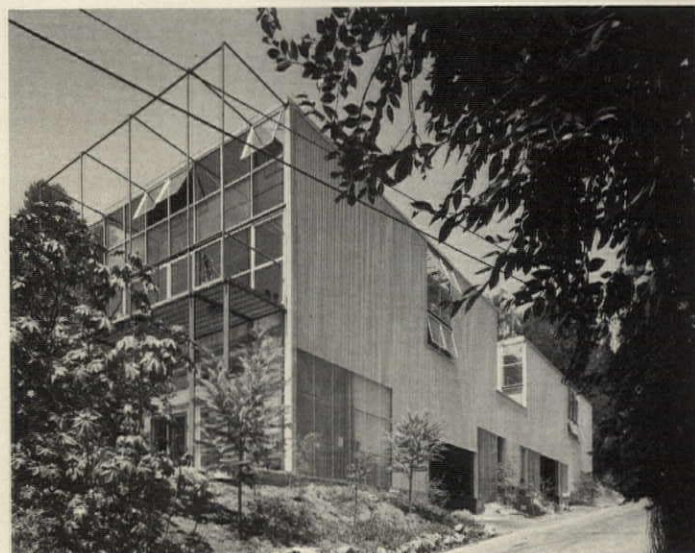
Different strokes

A detailed analysis of the specific treatment of each function, and the relationship of this to the whole concept, points out how actually different the two houses are, given their initial similarities.

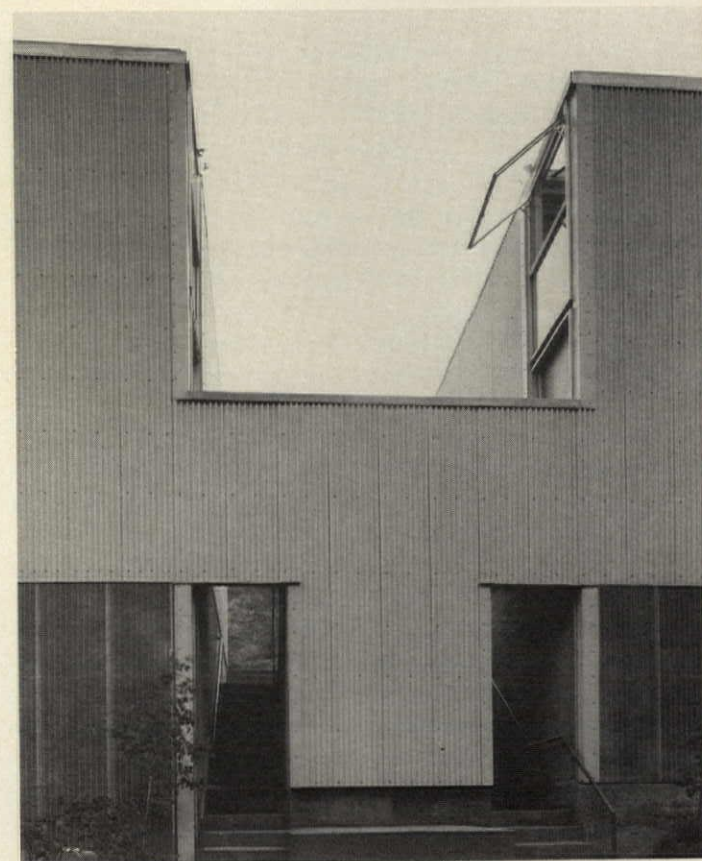
One basic difference was the inclusion, in the de Bretteville house, of the studio as part of the main volume. Coupled with their need for only two bedrooms and one and one-third bathrooms, this gives the de Bretteville house a true "core" reading of the secondary spaces. In the Simon house, a more conventional arrangement and a higher ratio of bathrooms, plus the separation of children from adults, in a sense resulted in the "core" being the positive space of the living room.



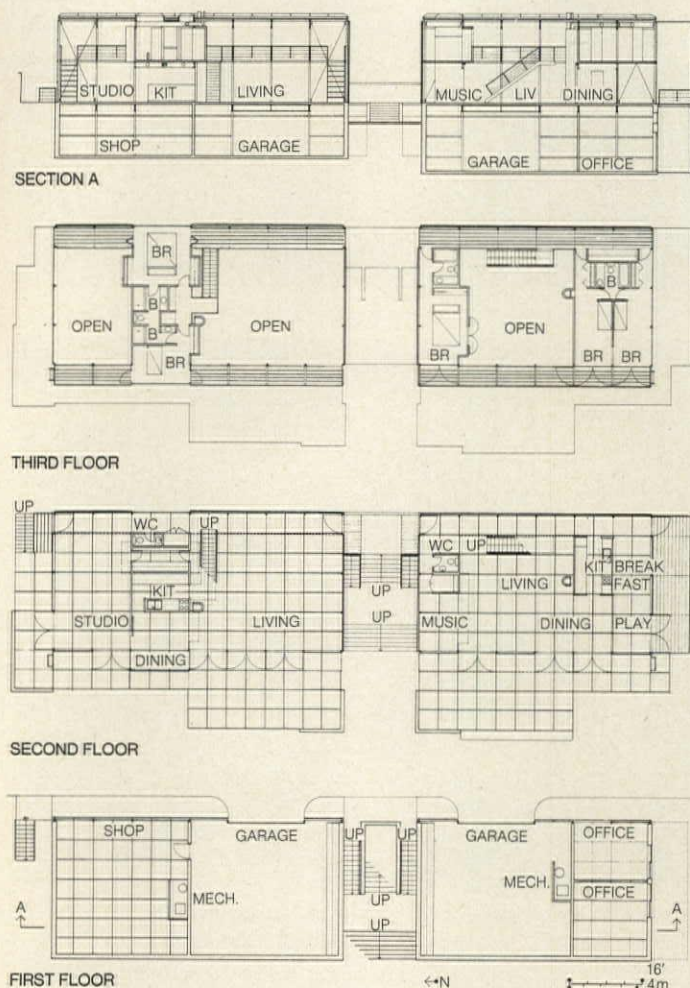
West façade (above) contrasts sharply with east entrance façade (below).



Entry notch (below) serves both houses; stairs descend to Willow Glen Road and ascend to landing serving both front doors at blank-wall entry.



de Bretteville and Simon Houses



Beating the system

The similarities yet differences between the two houses particularly extend down to the level of details. Additionally, it is here, in the tectonic resolution and development of the design, that the project might be contrasted meaningfully to the antecedent of Eames and the contemporary project of Schultz (p. 76).

Based initially on a 4-ft cubic module, the design underwent various minor adjustments and accommodations to specific requirements of components selected for use. For example, the corrugated panels used for exterior sheathing did not quite fit the module, but were not rejected for this reason. Steel was chosen as the basic framing for both its visual lightness and the concept of the twin balconies in section. However, the principal span is framed by open-web joists (having 2x4 wood top and bottom chords, with 1/2-in. steel pipe between) and the actual roof is framed by 2x4s, 16 in. on center on joist hangers with plywood over. What results is an extremely composite structure, which becomes lighter in weight from foundation to roof. Peter de Bretteville remarks that he likes the composite nature, for the tectonics are just an aspect, not the whole statement.

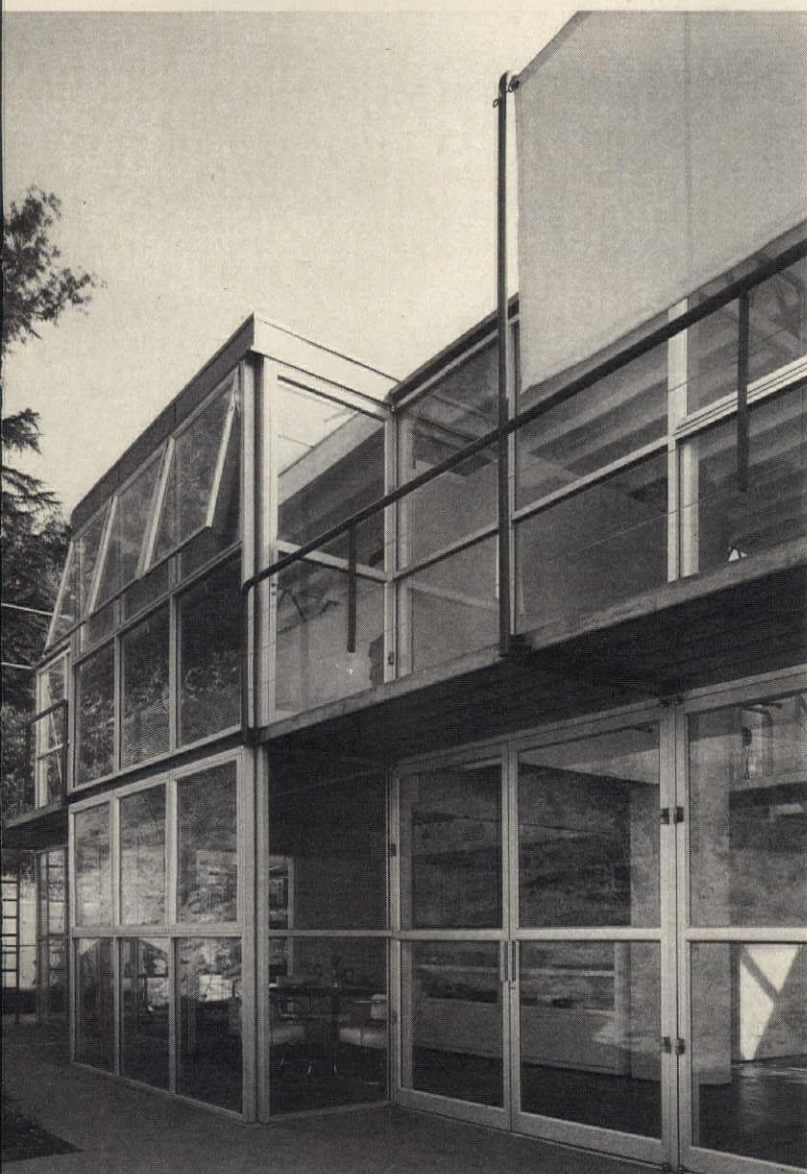
The built quality of the object was not the sole means to an end, and this attitude operates at many levels for both



On private west façade 4-ft module is extended to balcony, canopies, and . . .

houses. The correspondence between framing and enclosure—"structure ending where space ends"—also came from attitudinal reasons: by fixing the perimeter de Bretteville dealt with the notion of a dense particular capsule set in generalized volumes.

It was this decision which perhaps is as important an aspect to compare the project with the earlier Eames House, as the casual attitude to building systems is useful in comparison with the Schultz House. The cores and their appendages create, in de Bretteville's intentions, an intermediate scale which intrudes into the volume. This "building scale" operates particularly from the cores, from which the closets have been pushed out like pods hanging off the core. This not only provides a flush interior wall surface for the sleeping alcoves, but more importantly was chosen as a way of activating the principal interior volumes. Likewise the relative locations and relationships with the principal stairs operate on this building scale. In Eames, the scale is different, nearly furniturelike, and this may be seen best by the spiral staircase being unobtrusively tucked away into a wall. Compositional issues, handled by Eames in a near painterly way, are somewhat sidestepped by de Bretteville in his rigorous gridding off of the exterior skin on the private side of the houses. Yet, the extensions



... handrails seen in Simon house (left) and de Bretteville house (above).

of the grid into the strut balcony, handrails, and canopies make this container more plastic than the delicate package of the Eames house.

Principles and process

The program and its armature underwent an evolutionary interactive process. The idea of "container" was somewhat transcended as a notion of a general model of environment. Rather than exhibiting the optimism of a neutral solution to complex problems, the houses became more and more specific within their vocabulary.

Aside from the conceptual schematic differences between the projects, the furnishing of each house by the particular families has yielded nearly completely different environments. The de Brettevilles felt that an auto body shop actually suited their needs, were informed on the warehouse idea, and particularly like hardware items. Consequently, their house is essentially white on the interior, including all wood items: counters and cabinets are white plastic laminate, rubber stud tile floors in wet areas are black. Color is not used systematically to "explain" relationships (as in Schulitz) but in a subtle manner. The core walls are slightly gray, steel beams are yellow, there is a pink staircase and doors are chalkboard-green. The indus-

trial design effect is completed by the concrete floor, sealed to a rusty color. Where certain standard items didn't suit the design, de Bretteville designed his own, such as the improvised "Brion Vega" grilles for forced air registers.

In the Simon house, all steel was left shop-primed, the truss and wooden roof were left natural. Rubber studded tile is rust color, all counter tops in the kitchen are butcher block, and cabinet surfaces are a natural wood veneer. Interior core walls are painted a peach color, with buff-tan on the lower portion. The Simons' house is as warm and soft as the de Brettevilles' is cool. Combining this warmer color scheme with a more conventional arrangement of parts, the Simon house probably answers most people's definition of what a home might be. In articulating their own house, and perhaps in clarifying the idea of the core, the de Brettevilles provided an interior where the big spaces are really big, while the sleeping zones are mere alcoves.

However, the Willow Glen houses show that a box can have a lot to offer. Two boxes together can create a context that transcends suburbia and provides options of living choice. While the paved "street" fronts on both houses and is generally serviced by skateboard circulation, the entry notch, while symbolic of community, actually functions as an insulator, with its blank wall visually separating the houses. Both community and privacy become states of mind rather than exclusive alternatives.

Developed with industrial materials, the design does not have the integration of all components as its only end. The materials are only the palette from which choices were made. Their composite combinations reflect a spirit of accommodation which runs through the design at all levels. What appear to be identical packages turn out to be diverse and complex, specific solutions to differing needs; this divergence between initial impression and actual fact adds to the reading of the design. Peter de Bretteville, who not only designed the project but also constructed portions of it himself, observes, "I feel like I'm at the beginning now." Not bad for a start, at that. [Peter Papademetriou]

Data

Project: de Bretteville and Simon Houses, Los Angeles, Ca.

Architect: Peter de Bretteville; Robin Wilson, collaborator.

Site: two R1 lots on a sloping half acre in Laurel Canyon.

Program: two single-family dwellings for close friends who wish to live cooperatively, but with appropriate degree of autonomy and privacy.

Structural system: square tubular steel columns on 8' x 28' bays carry steel beams supporting a concrete slab on first floor and trussjoists at the roof with exposed 2x4s on joist hangers. The second level infill, where required, is a floor of solid 2x4s on edge carried on steel beams.

Major materials: concrete, painted steel, wood, corrugated steel and fiber glass, sheetrock on studs. (See Building materials, p. 116.)

Mechanical system: forced hot air heating.

Consultants: Dimitry K. Vergun, structural.

General contractor: owners.

Clients: Roger and Dyanne Simon, Peter and Sheila de Bretteville.

Costs: withheld.

Photography: Marvin Rand, except top right, p. 73, Norman McGrath.

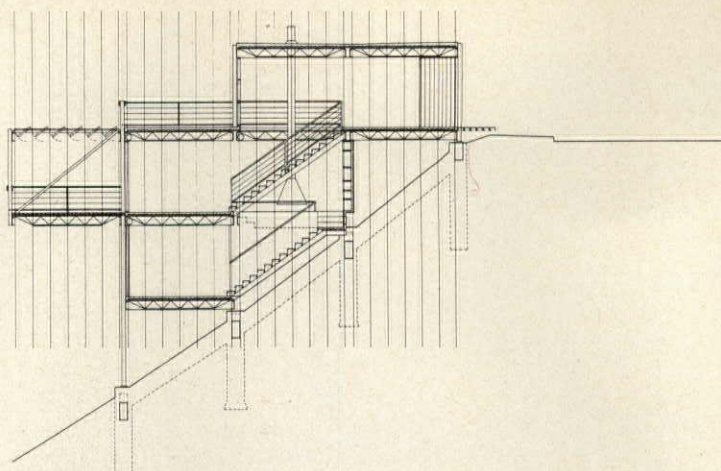
TEST case

A steel-framed house in Southern California reflects the area's earlier Case Study program, yet its primary sources spring more from European systems building.

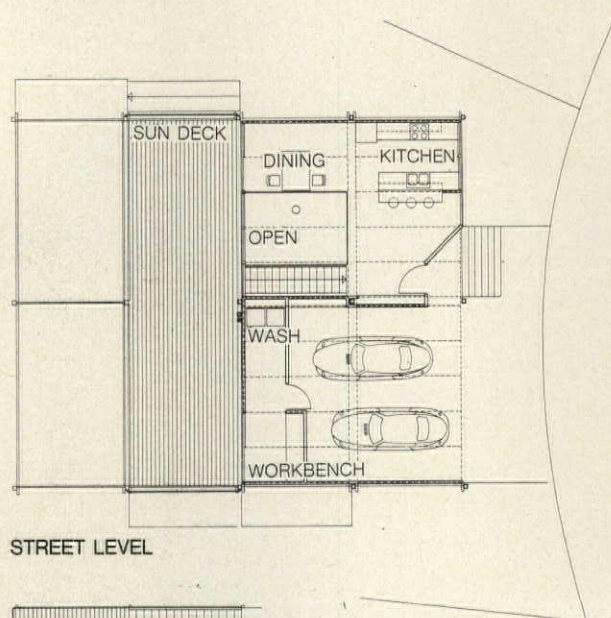
In his book *Los Angeles, The Architecture of Four Ecologies*, Reyner Banham refers to the Charles Eames house of 1949 and the Case Study Houses of Raphael Soriano, Pierre Koenig, and the later steel-framed houses of Craig Ellwood as "The Style That Nearly. . . ." He contends that the Case Study Program, under the impetus of John Entenza, editor of the Los Angeles-based magazine *Arts and Architecture*, "was about to contribute to the world not merely odd words of architectural genius but a whole consistent style." This supposedly Southern California tradition is, in fact, one segment of a worldwide postwar interest in industrialized building and a belief in the flexibility, economy and beauty of interchangeable, prefabricated parts.

The CLASP system in England, the Uchida Laboratory in Japan, the SCSD system in California and the SAR and Marburger Bausystems in Europe continued this worldwide tradition through the 1960s, into the 1970s, and up to the present. A resurgence of interest in industrialized components for private residences is occurring in architecture today, probably as much out of frustration with soaring labor and material costs as it is out of a renewed interest in technology and a determination to prove that preindustrialized housing can achieve more than the mobile home parks that litter the landscape. One architect who is a firm believer in the potential of open systems industrialized design is Helmut C. Schulitz, an associate professor at UCLA.

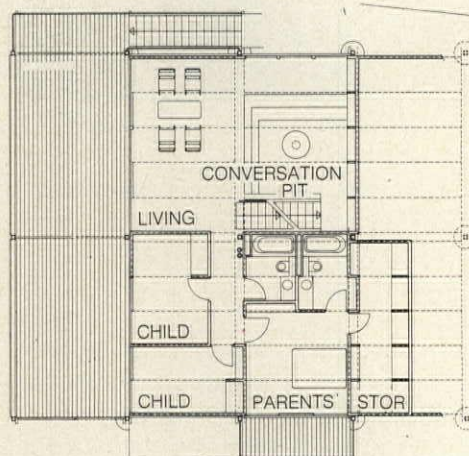
Schulitz is a German architect who studied systems building at Munich Technical University under G. Hassenpflug, a former member of the Bauhaus. After graduation in 1962, Schulitz continued his work on prefabricated building systems for the German government. At that time his primary involvement was in concrete systems, such as the Marburger Bausystem, which he feels had a considerable influence on his own concepts of systems building. Schulitz realizes today that his current work in steel frame open systems design is a direct descendant of the California tradition of Eames and the Case Study Houses, but he admits almost apologetically that he "wasn't aware of the



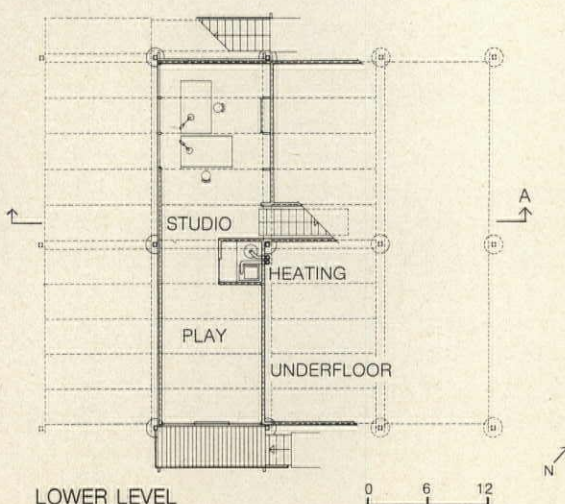
SECTION A



STREET LEVEL



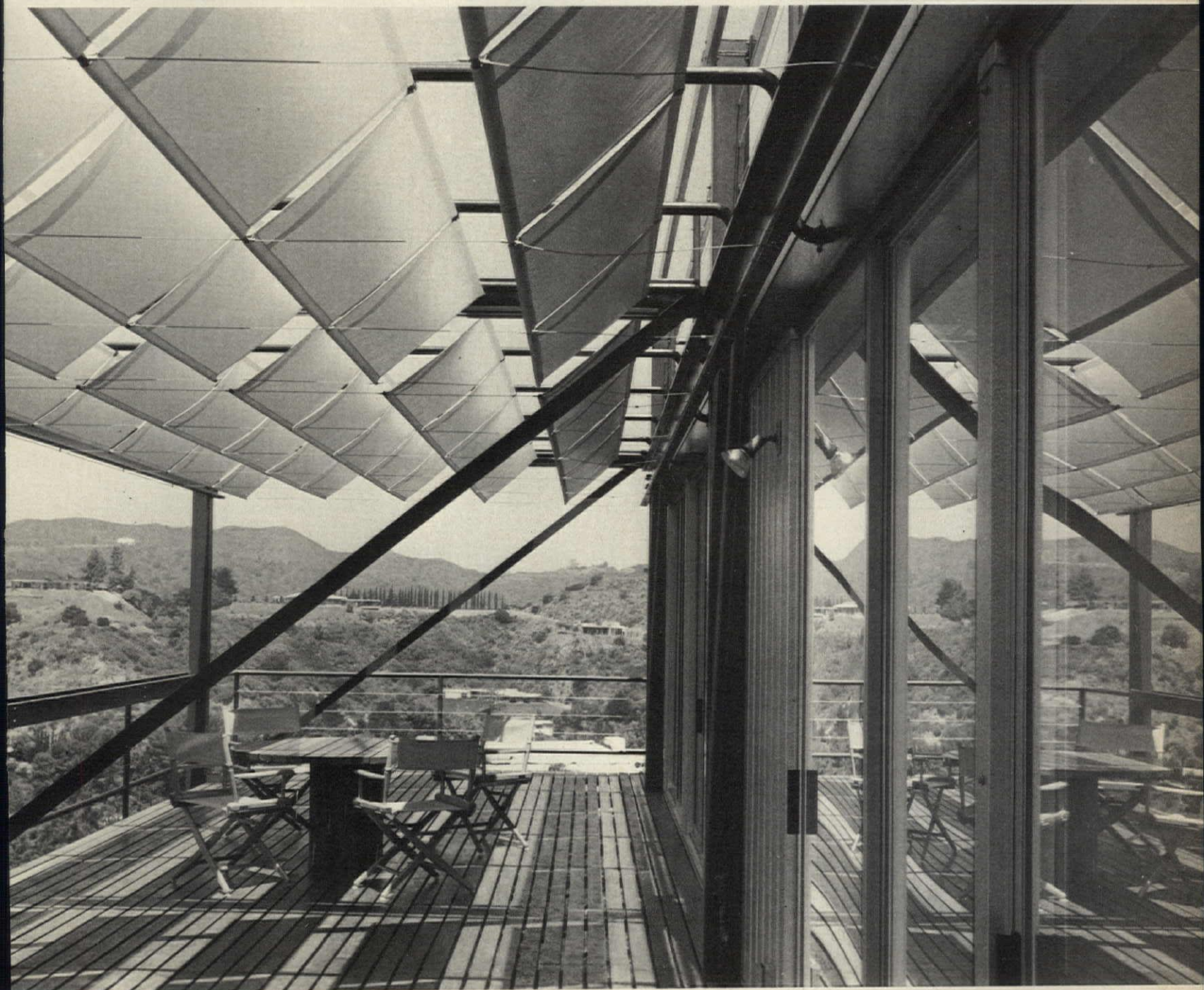
MIDDLE LEVEL



LOWER LEVEL



By using a modular coordination grid, the TEST house integrates a wide variety of preindustrialized components into a single, flexible building.



Schulitz House

similarities between what I'm doing and tradition."

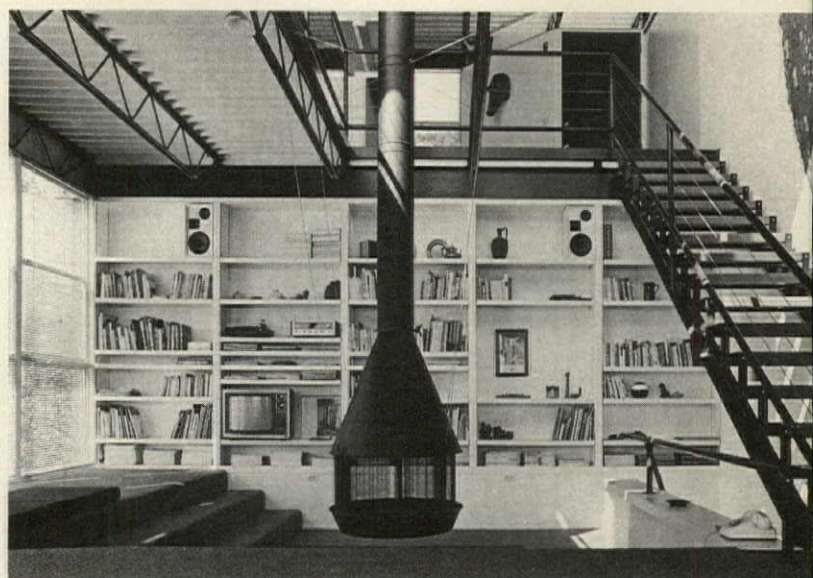
Since joining the faculty at UCLA in 1969 Schulitz has been pursuing the concept of open systems architecture—a system of integrating a wide variety of preindustrialized components, by many different manufacturers, into a single, flexible building, by using a modular coordination grid, usually 4 inches (10 cm). It is distinct from closed systems, which are prefabricated but allow only the use of specific components. The open systems concept allows for the introduction of variation without the need for a large number of repetitive elements; it allows for variety and flexibility at a small scale, and enables the designer to choose stock catalog building components off the shelf. This is essentially what Eames intended nearly 30 years ago.

As the culmination of a series of T.E.S.T. (Team for Experimental Systems and building Techniques) System research projects, Schulitz has built a prototypical house for himself, his wife and their two children. Erected on a steeply sloping (40 degree) site with spectacular views of the Wilshire corridor and the Pacific Ocean, the house attempts to realize some of the flexibility inherent in open systems design. As a prototypical house it represents only a small percentage of the potential of the system, but Schulitz has developed drawings that indicate how this building system could be applied to a larger, low-rise, high-density development.

In giving the House an Honor Award in the recent Southern California Chapter AIA Awards competition, an internationally composed jury, including Paul Rudolph, Fumihiko Maki, and Joseph Escherick commented that, "... apart from the clarity of its structure, it dealt with light and the control of light. ... The manipulation of interior space gave it a certain dynamic quality that one doesn't usually find in small houses. ..."

The house itself is an elegant, erector-set assemblage of industrial components that step gracefully down the steep terrain. Set on 12 concrete columns, buried deep in the hillside, the steel frame was erected in two days, converting an impossible site into three level decks. Its structural purity exposes all the bolted connections and welded joints; in order to fit envelope components to this frame, however, occasional custom-made fill-in parts are needed. This aesthetic honesty is both less sophisticated and more visually complex than the severity of Mies van der Rohe's Farnsworth House or Philip Johnson's Glass House. By separating enclosure from structure and articulating the various building systems by color, Schulitz has created a fun house of yellow ducts and blue bar joists interlaced with ribbed aluminum panels and canvas sunshades.

"The system reflects the *assemblage* character of off-the-shelf components," he claims, "while still emphasizing systematic coordination." At \$28 per sq ft, the 2500-sq-ft house seems larger than it is. (The low construction cost is due in part to the fact that Mr. Schulitz acted as his own contractor and did much of the work himself. It is impossible, he maintains, to estimate accurately the cost had the job been constructed by traditional contracting methods.) The cantilevered balconies and roof decks with panoramic views extend the interior volumes and give the rigid rec-



tangular spaces a certain sense of openness. Perhaps this is enough for \$76,000 on a site that couldn't be sold for eight years because conventional wisdom labeled it "un-buildable," and yet the feeling persists that we should be able to do more after 30 years of pre-industrialized, prefabricated, prepackaged components. One is reminded of the way Hardy Holzman Pfeiffer Associates employ exposed mechanical and structural systems as elements of decoration, as symbols of circulation and as counterpoints to the rhythm of the enclosing volumes in the Columbus Occupational Health Center or in the Mount Healthy School, both in Columbus, In.

The future of open systems is in their flexibility and variety. The Schulitz House represents only one step in the creative use of pre-industrialized components. As Alvin Toffler pointed out seven years ago in his futurist manifesto *Future Shock*, "The more advanced the technology, the cheaper it is to introduce variation in output. We can safely predict, therefore, that when the construction industry catches up with manufacture in technological sophistication, gas stations, airports, and hotels, as well as supermarkets, (not to mention housing) will stop looking as if they had been poured from the same mold. Uniformity will give way to diversity." Let's hope Mr. Toffler was right and that Schulitz will prove it in his continued investigations into the potentials of open systems. [Michael Ross]

Data

Project: Schulitz House (T.E.S.T.—Team for Experimental Systems and building Techniques—House), Beverly Hills, Ca.

Architect: Helmut C. Schulitz; Research Assistant, Doug Denes.

Program: 2500-sq-ft, three-bedroom residence for family of four, with studio and play rooms on top, third, level.

Site: steeply sloping site (40 degree), and view influenced design.

Structural system: steel frame, which allows walls to be nonbearing and demountable and allows future modification of floorplan made, made erection easy and quick (2 days).

Major materials: aluminum cladding (see Building materials, p. 116).

Mechanical system: forced air with exposed duct work; natural cross ventilation with adjustable canvas louvers.

Consultants: Kurily and Szymanski, structural.

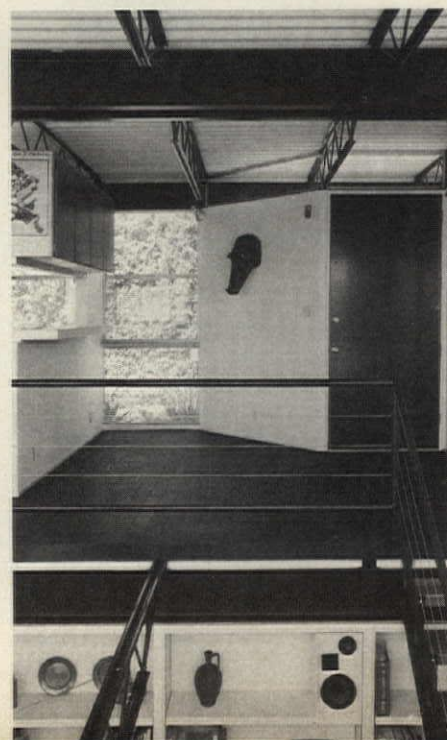
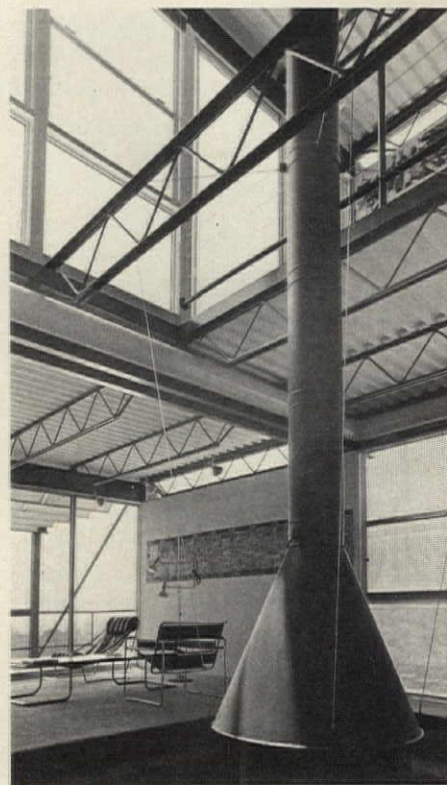
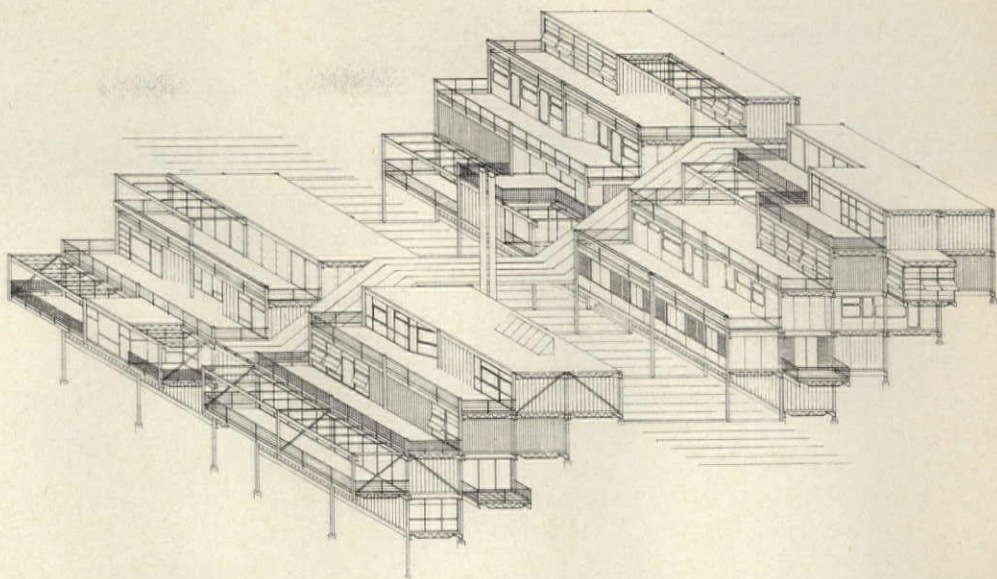
Contractor: Helmut C. Schulitz.

Client: Helmut C. Schulitz.

Costs: \$76,000, \$28 sq ft.

Photography: Helmut C. Schulitz.

Views of the living spaces illustrate how the erector set character of the house makes clear the distinction between structure and envelope. This distinction is further emphasized through articulating various building systems by color. Although the TEST house represents only part of the potential of open system, Schultz has developed drawings (right) indicating how the system could be applied to larger developments.



On attaining a certain age

The design of Eames's Santa Monica Case Study house, now 28 years old, did not spring full-grown—great ideas never do—from its creator's imagination.

Charles Eames was 70 this year and his house was 28. Built in 1949, after his molded plywood chairs were established and the molded polyester chairs were getting into mass production, the house appears as another aspect of process. If the house had been off the same bolt as the furniture it might well have been a shell form.

Now I wonder if the house was not a narrower problem—more pure, if you like to think of the cube as pure and doubly curved surfaces as impure. The house was certainly narrower compared with the originality of the chairs; there existed a technology of steel, but the rethinking of chair forms was in its infancy when Eames took up furniture design. His imaginative borrowings ranged from the tractor seat for his chairs, bus seating for his sofa, and the hospital gurney for his chaise. The seeds for the house were steel-framed industrial building, by then already reinterpreted by Richard Neutra and Raphael Soriano.

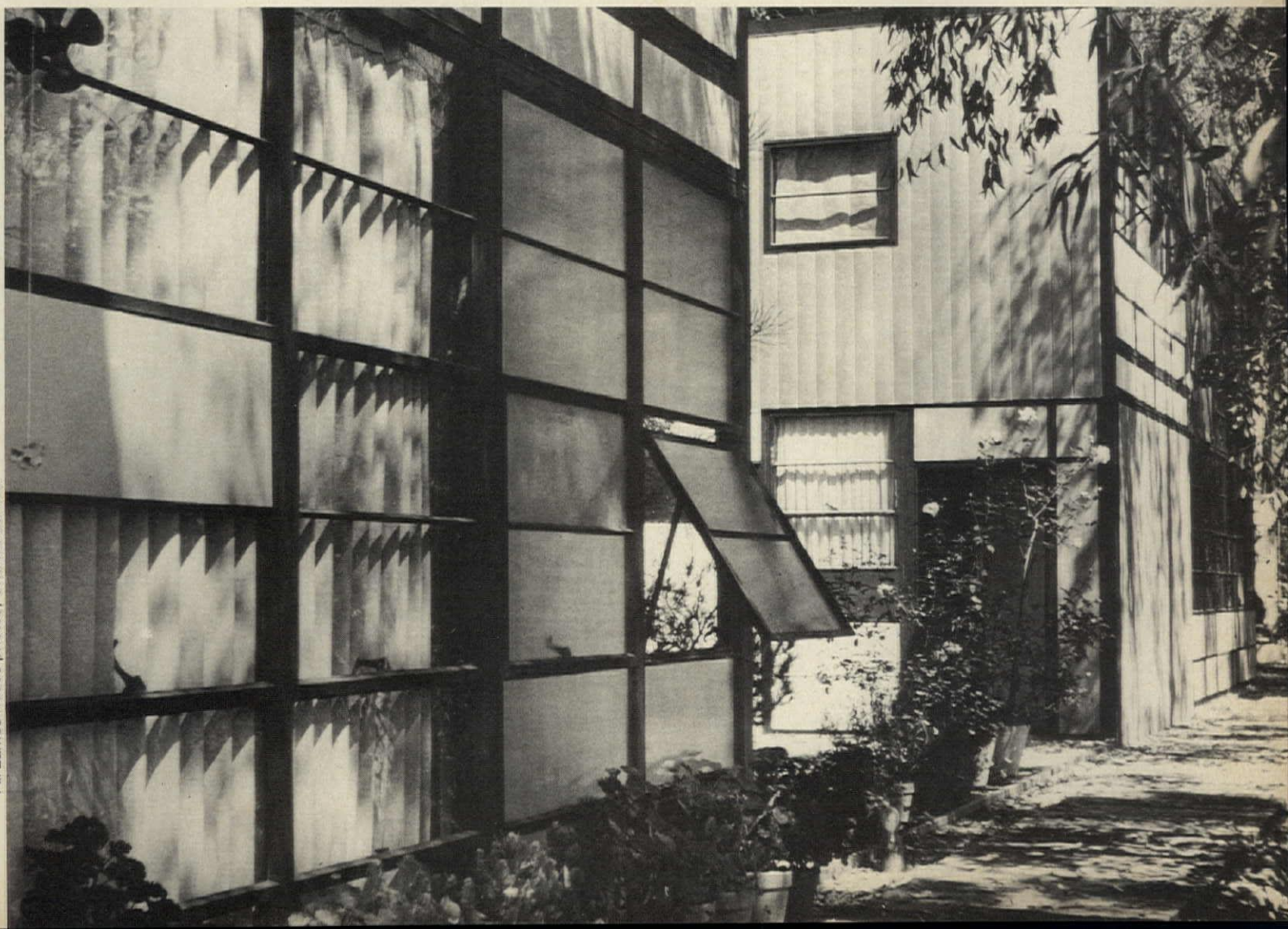
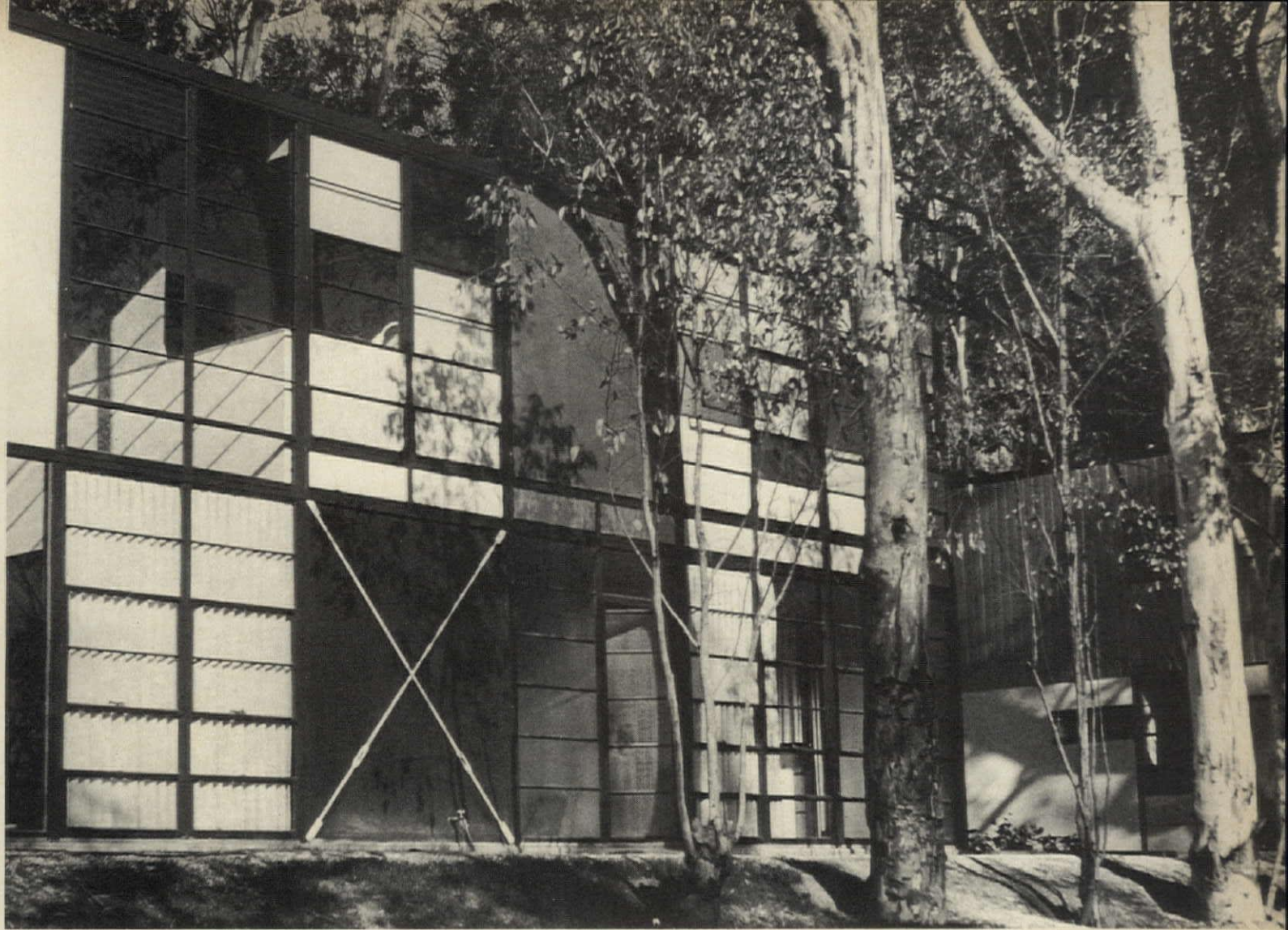
One of the many remarkable things about the Eames house is that it was quickly redesigned after the steel had been delivered to the site. It was turned from a bridge form (much admired in the 1940s) to two cube forms, one for living, one for studio. The self-certainty and flexibility which this transformation demonstrates makes one wonder what architecture lost when Eames chose to stick to furniture.

Eero Saarinen may have figured in the decision. From a distance of two decades Eames concluded that "in architecture the idea degenerates," and called furniture design a more direct and pleasurable route. Yet he had shown that he could make a major change in a building and not lose control. (He was, however, his own client.)

What impresses so many architects of the present generation is the fine detailing of the steel in the Eames house—indeed, in all the steel-framed Case Studies of *Arts & Archi-*

The most famous of all California Case Study Houses remains as fresh today as when it was built 28 years ago. The steel columns, open web joists, and all connections are visible in this house, which is known for its craftsmanship and its adaptation of standard steel sections to residential use.





All Eames house photos, Charles Eames.

Eames House

tecture magazine of the 1950s. Eames exposed his 4-in. H-columns and 12-in. open web joists, and all connections are visible. Neutra used the same framing members in his 1929 Lovell house, but concealed them; Soriano exposed his pipe columns, but no connections are visible inside the house, though in entrance courts and dining courts the steel beams and decking are exposed. The gradual acceptance of steel allowed Craig Ellwood to expose more, and Pierre Koenig to expose it all (see facing page).

What they all had in common—Neutra to Helmut Schulitz (p. 76)—was the adaptation of standard steel sections to residential use. What this generation sees as the great difference is the cost of good detailing today, even the improbability of getting it at any price. For this reason Schulitz designed his house so that no walls intersect the joists, no partitions go to the ceiling. He calls the craftsmanship in the Eames house fantastic—impossible to get today, but it wasn't easy in the 1940s and 1950s either, judging by statements of some of the contractors and structural engineers on the Case Study houses (see my *Case Study Houses 1945–1962*, 2nd ed., 1977, Hennessey and Ingalls, Los Angeles).

Henry Salzman, contractor on the Ellwood Case Studies: "... the finishing details are always a problem around the Hs or the Is—it's touchy to close in around a wide-flange beam. An ideal situation would be a webbing running horizontally. A box beam is needed that is the same width as the columns, then the beams won't have to run in and out of a flange."

Albyn McIntosh, structural engineer on several Case Studies: "The architects on the steel Case Studies have brought the best out of their materials . . . but the houses will remain individual performances until the architect can convince the contractor."

William Porush, then a professor at Cal Tech, and structural engineer on Soriano houses: "It seems all right to me to take a beam and a column and a couple of plates and bolt them together. But not to Soriano. . . . He rejects one detail after another until . . . something . . . suits him."

It is natural that one generation should question the decisions of the previous one. Alfred Kazin calls this the cold stare of nonrecognition that one generation gives to the one just behind it. The design research that is done in groups today previously came out of individual efforts of the architects. The idea that the Eames house, or other Case Studies, started with an aesthetic is an example of the cold stare. They were based, as John Entenza noted at the time, "upon the system utilized, and the visual organization properly reflects the system." The Eames house was simplified, or it would never have been built.

Konrad Wachsmann gave the cold stare to the generation before his, but cited examples in which "creative ideas are not derived solely from images tinged with emotion and preconceived opinions about 'looks.'"

From a distance of 28 years the Eames house is tinged with emotion. So may be the steel-framed houses of today in 2005. But the real point is that there are always shoulders in the past to stand on, and that's why architecture is called a continuous art. [Eshter McCoy]



Interior and exterior details of the Eames house (this page) show the . . .



. . . wide variety of infill elements possible within a regular wall system.



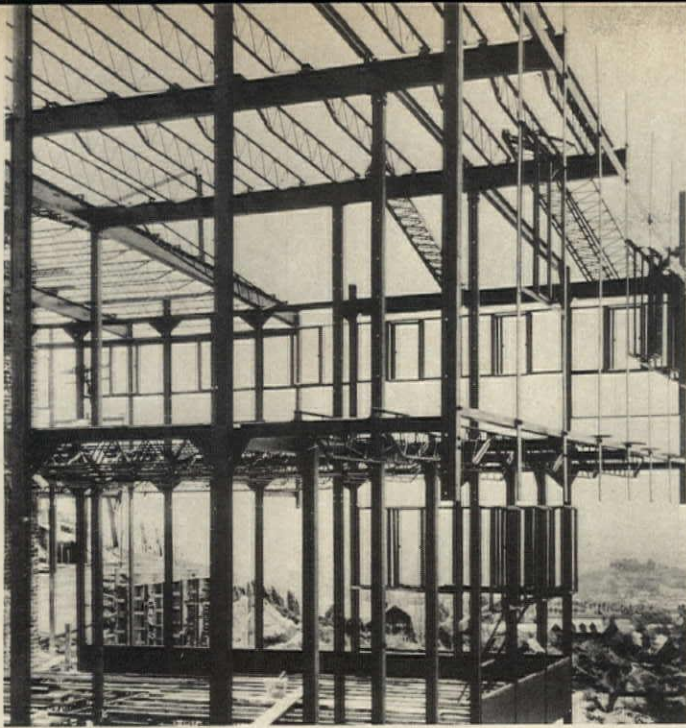


Photo: Bethlehem Steel.

Richard Neutra, Lovell house, 1929, Los Angeles (above).

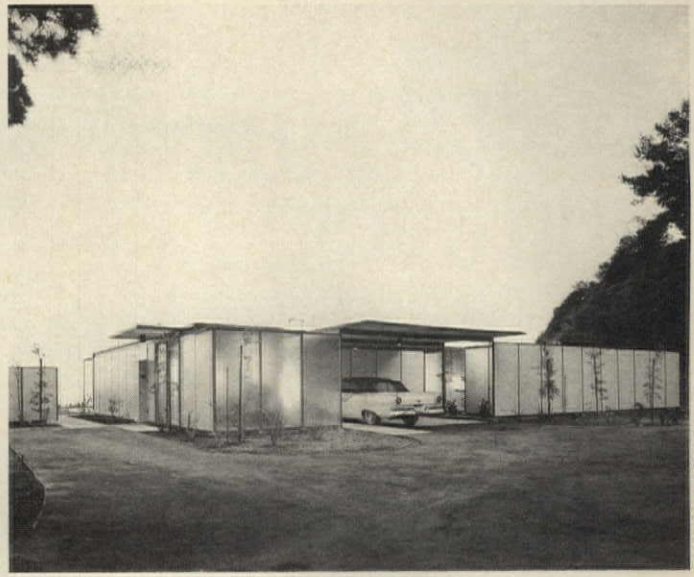


Photo: Marvin Rand.

Craig Ellwood, Case Study House, 1958, Beverly Hills (above, below).

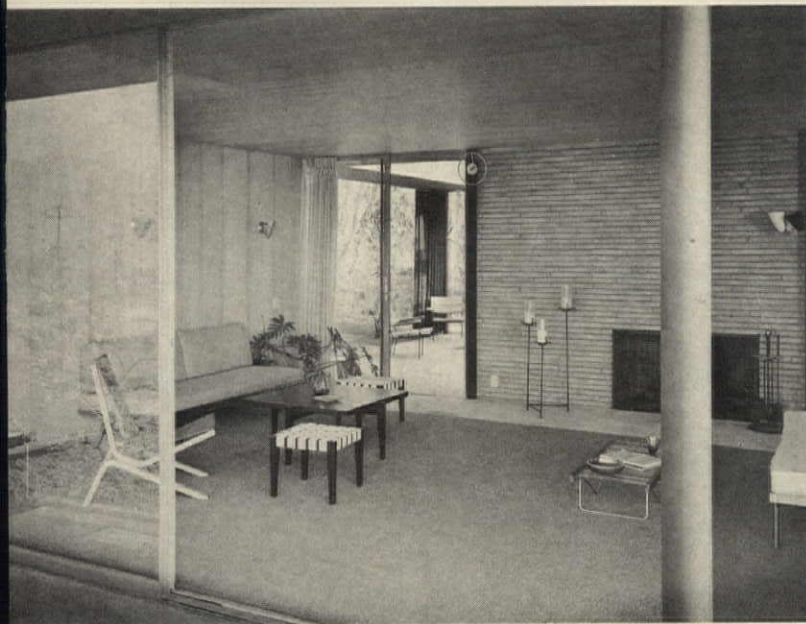


Photo: James M. Reed.

Raphael Soriano, Case Study House, 1950, Pacific Palisades (above, below).



Photo: Marvin Rand.

Pierre Koenig, Case Study House, 1958, Los Angeles (below).

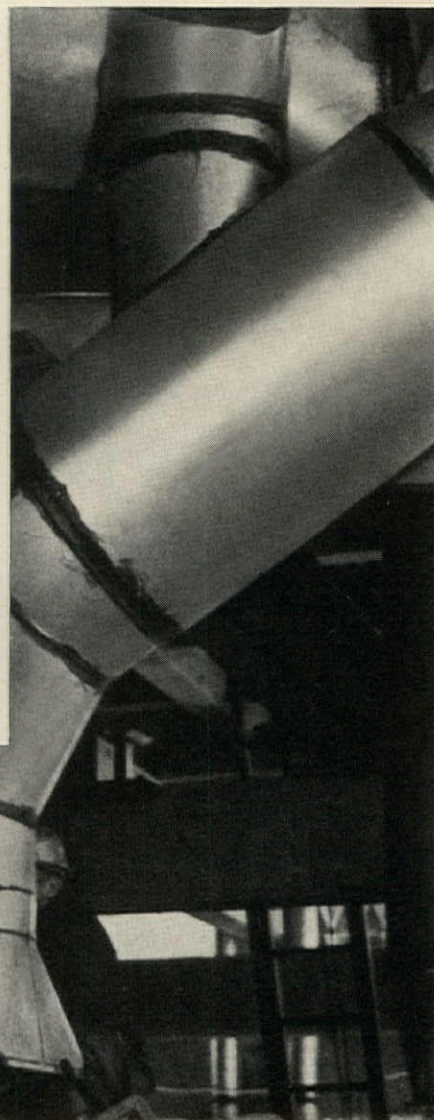
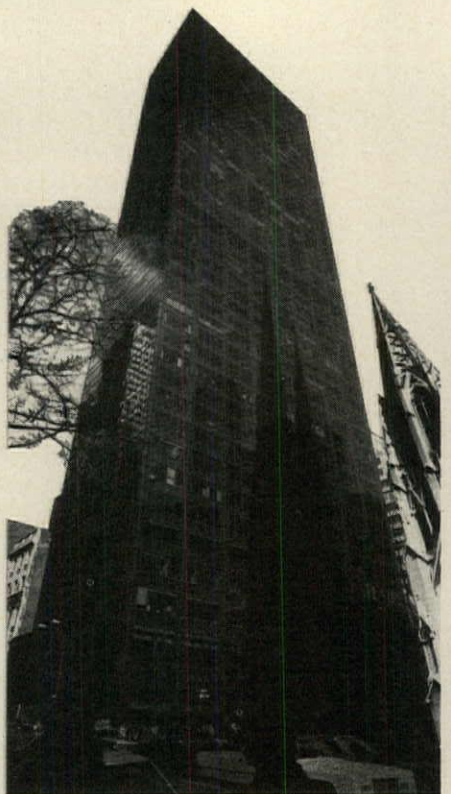


Photo: James M. Reed.



Photo: Julius Shulman.

Specify galvanized steel now and avoid headaches later.



Doesn't it make sense to build with steel that's galvanized and head off damage due to corrosion in the future? The designers of the Olympic Tower thought so.

In this midtown New York building the lower floors are commercial, upper floors residential. Since the floors in the commercial portion had to carry more structural weight, the architects specified corrugated steel decking welded in place and covered with 3 to 5 inches of concrete. Looking ahead, they also required that the steel be galvanized.

Steel provides great strength but even locked in concrete it's subject to corrosion. Galvanizing can

protect against this possibility. The steel ductwork and pipes in the Olympic Tower are also shielded against corrosion with a coat of zinc.

ASARCO Incorporated is a major producer of galvanizing grade zinc. We're located at 120 Broadway, New York, N.Y. 10005.

ASARCO

The Construction Research Council

Alvin D. Skolnik

What it is, what it does, and how it operates are summarized below. Becoming a member of this private nonprofit organization could prove to be a valuable investment in the future of the building industry.

The Construction Research Council is a private nonprofit association which provides a vehicle for private and public building owners and users to unite in a concerted effort to improve the building process. Through the application of modern technologies and management concepts, the goals of CRC are to improve the quality of buildings, to reduce the time required for design and construction and to reduce the cost of construction and maintenance.

Founded in 1975 under the auspices of the Building Research Advisory Board of the National Academy of Sciences-National Research Council, the CRC is a mechanism for the identification of the needs of private enterprises and governmental agencies that, on a continuing basis, procure, own, and operate buildings.

In response to requests from administrators of several federal agencies during the 1960s, the Federal Construction Council (a standing committee of the BRAB) reviewed a variety of new concepts for modifying both the technology and the process of building; concluding that the greatest potential for achieving significant improvement was through the employment of pre-engineered, pre-coordinated subsystems as the basic building blocks in construction. Their recommendations are well summarized in TCC Technical Report No. 62 "Promotion of the Development and Use of the Subsystem Concept of Building Construction," available upon request from CRC's headquarters in Washington, D. C.

Although CRC has committed itself to the broad goals stated above, the organization's immediate goal is a five-year program to contribute to the development and implementation of the subsystem concept of building construction. Subsequently, other goals in keeping with the overall purpose will be defined. Successful implementation requires that all affected elements of the building community understand and accept the concept. There must be a willingness on the part of manufacturers to produce subsystems, contractors to install them, labor to work with them,

design professionals to employ them in their designs, and code authorities and standards organizations willing to approve them for use.

Currently, attention is being given to the following areas:

1 Building owners' requirements are being analyzed and the types of subsystems needed to satisfy those requirements are being identified based on different facility types. This involves the difficult task of defining what functions the various subsystems must perform.

2 Performance specifications for the respective subsystems will be developed which reflect the needs of the owners and users, stipulate the required attributes, define quality control criteria and methods, establish functional, dimensional, and interface criteria, and provide for the ready intermix of subsystems produced by different manufacturers.

3 A prequalification program is being established which will relieve subsystem users of the difficult task of scrutinizing numerous subsystems in an effort to find those meeting their needs. Under this program, manufacturers will be invited to submit proposed subsystems for consideration which will be analyzed for compliance with the applicable performance specification.

4 CRC will periodically publish performance requirements and specifications developed under its auspices, lists of qualified subsystems, and relevant literature from a variety of sources.

5 Consultation with all elements of the building community (manufacturers, design professionals, contractors, labor leaders, code authorities, and standards organizations) will be continued on a regular basis in order to minimize institutional constraints on the use of subsystems.

The Construction Research Council's Articles of Incorporation and its By-laws state its purpose for organizing as follows:

"To serve the needs of the building community and society as a whole through standardizations and improvements in the process of constructing and renovating buildings; to identify building requirements of public and private entities; to identify areas of commonality of needs and standards for various kinds of structures; to foster the development and implementation of improved building technologies, standards and techniques; and otherwise to promote the public interest by coordinating programs and activities leading to improvements and economies in the methods of construction of buildings."

Individuals, partnerships, corporations, organizations, and public agencies are eligible for election to membership. For a prospectus, write to the Construction Research Council at 1000 Vermont Avenue, N.W., Washington, D. C. 20005. □

Author: Alvin D. Skolnik, FSCI, is Director of Research and Specifications for Skidmore, Owings & Merrill, New York.

Another light discourse

Third in our continued series on lighting, a discussion of outdoor lighting addresses several areas unique to the exterior illumination of buildings and the environs.

If indoor lighting is a poor orphan in architectural design, as some contend, then outdoor lighting may be yet a more impoverished one. While the world of the lighting manufacturers, consultants, and engineers remains divided on some issues, constant reevaluation and improvement are offering the architect an impressive array of choices and services. And in a time of energy awareness, most *quality* manufacturers are ready to help. But again, as we said last month, the design community has to be aware of the issues. Professionals have to know enough to participate actively in lighting design, to seek expert advice from consultants and/or manufacturers as needed. That's the purpose of this article, as it was in our October 1976 (HID lighting) and September 1977 (indoor) lighting features.

Probably the least controversial goal of industry is the achievement of the most energy-efficient illumination possible. Efficiency—or efficacy, as the industry often refers to it—is usually taken to mean the number of lumens delivered for the input wattage. It is the Holy Grail of lighting, but there are other contenders for the designer's attention. Some of them are, in no special order: color rendition, lamp life, lamp lumen depreciation over rated life (LLD), luminaire dirt depreciation (LDD), mounting height for area lighting, project security considerations, maintenance, light cutoff, and many others. Often it is necessary or desirable to compromise between efficacy ratings and one or more of these other factors.

While fluorescent lamps may still find some outdoor applications in moderate climates, their sensitivity to wide temperature ranges normally limits them to interior use. That leaves the outdoor market largely to incandescent, tungsten halogen, and what are known as HID (high-intensity discharge) sources. Efficacy of incandescent and tungsten halogen lamps is low compared with either fluorescent or HID products. Hence they are usually limited to use for accent or decorative, as opposed to area or overall, lighting. Controllability is their forte, and the color, direction, area, and effect of such light will continue to be needed to

HPS and mercury vapor lamps (64) light St. Paul's dome, St. Paul, Mn.

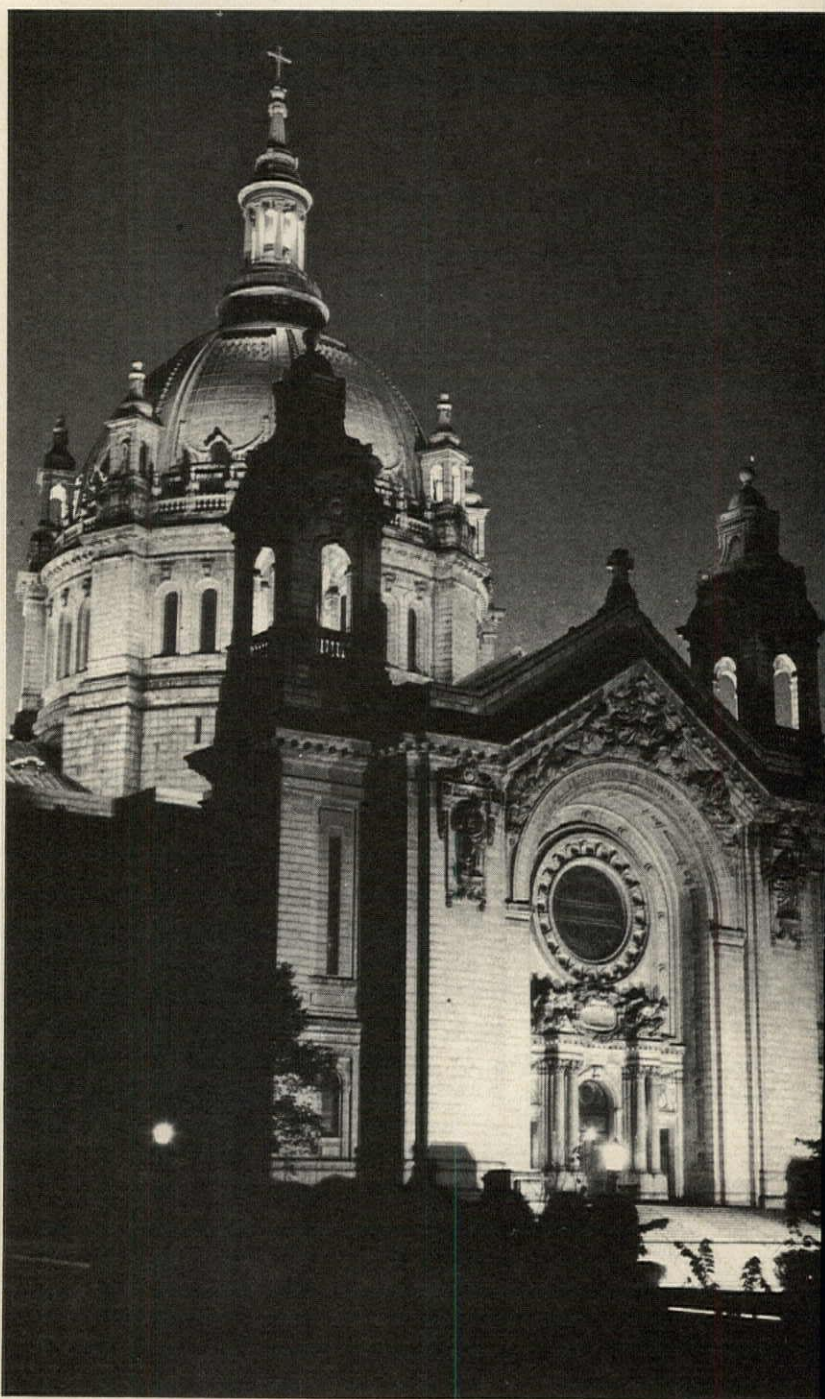


Photo courtesy General Electric

enhance aesthetic aspects or complement HID lighting. HID's, comprising mercury vapor, metal halide, high-pressure sodium (HPS), and—with some dissent on terminology—low-pressure sodium (LPS), are the apparent wave of the future. We have described most of these sources in the previous articles, so we will not go heavily into them here, except to discuss some outdoor ramifications not covered before.

So long, consensus

Among those contenders for attention, color of light has to be a major concern of designers, both architects and manufacturers. Color ideals, as we noted last month, are subjective. The gold cast of HPS or the yellow monochrome of LPS, for instance, have been both criticized and admired, depending on the observer. But that opens up another controversy. How important is color rendition? This is not to im-

ply that HPS and LPS lamps render color the same. All artificial sources alter color perception somewhat, but probably the strongest misinterpretation of color is under LPS illumination. Since LPS produces a roughly monochromatic yellow light, colors lose most of their differentiation. Reds, such as stop-sign red, are rendered black. With HPS, the gold light does alter the white to produce some yellowing, but colors are not as drastically altered. In terms of efficiency, LPS wins. Delivering more lumens and more lumens per watt than other sources, LPS is the most efficient. And output even gains as the lamp grows old (but so does wattage use). However, LPS lamps are much longer than other HID sources, making control of light more difficult.

Another problem with LPS is handling and disposal. While most lamps should be disposed of carefully, LPS lamps contain active sodium which, if exposed to moisture, can ignite with explosive force. Sodium in HPS lamps, only



Cleveland's Chester Common, a mini-park designed to accommodate many types of activities (above and below) has mercury vapor general night time illumination. Accent lighting is with 12v incandescent lamps. Surrounding lighting is HPS. Design: P. Heintzelman, R. Reeves of the Cleveland Department of Community Development, Downtown Planning.



Nicollet Mall in Minneapolis (above) is illuminated by pole fixtures holding two or four plastic covers, each with eight incandescent lamps. Mercury vapor uplights on trees. Design: Seymour Evans & Associates. City Park in Highland Park, Tx (below), uses clear mercury lighting mounted in shielded fixtures hidden in the trees. Design: John Watson.



Outdoor lighting

a fraction of the amount used in LPS, is in an amalgam with mercury, minimizing any handling danger. Many manufacturers are very vocal in their preference for HPS, some are noncommittal, and some prefer LPS.

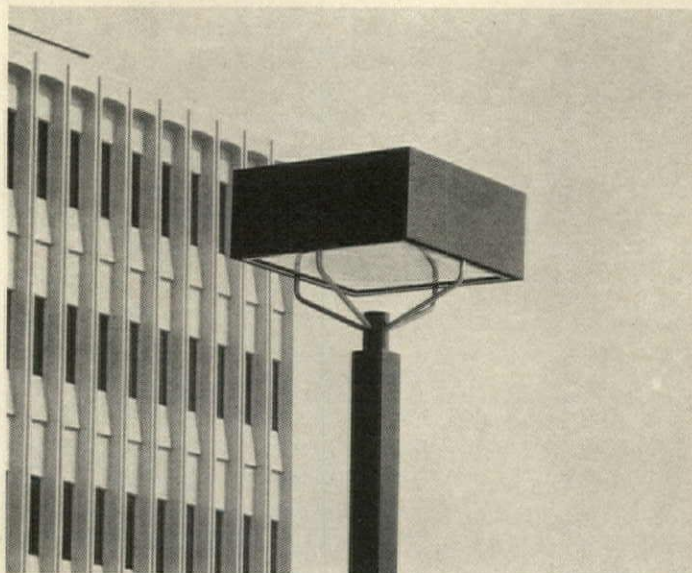
The original HID, mercury vapor, now comes in warmer hues and phosphor coated varieties. The 400w mercury vapor lamps can provide 23,000 initial lumens, a rated life of 24,000 hours and a mean efficacy of 44.3 lumens per watt. Metal halide lamps are widely felt to be the best combination of efficiency and color rendition for outdoor use. With a rated life of around 15,000 hours and a mean efficacy of about 70 lumens per watt for a 400w lamp, metal halide produces roughly 40,000 initial lumens; in HPS, the initial output is 50,000 lumens, mean efficacy is 96.8 lumens per watt, and the life rating is 24,000 hours. It should be obvious from this brief glance that specifying a 400w source can produce many different efficacy ratings, so designers should be up on what lamp type does what. Higher and lower wattage and lumen values, of course, are available. Clearly, tradeoffs here must be made in terms of intended use, color rendition, present and projected power costs, maintenance difficulties, and light quality and distribution.

Look for quality

Among the manufacturers of lighting fixtures and sources interviewed by P/A, one other common concern is that the designer-specifier insist on quality. That implies many things. Will the manufacturer be in business next year? Many lines *look* the same, but are they? Will they respond to wind, dirt, water, and other factors equally? Consider maintenance factors thoroughly; your client will! Does the manufacturer offer custom luminaires or extra services such as computer-aided design assistance? In the case of custom products, will UL still back the product? Most fixture manufacturers have no axes to grind about lamps; so the reputable ones will do their best to serve the design professional. Selection of a lighting consultant would obviously be done with the same care as choosing a mechanical engineer. If the decision is to go straight to a manufacturer, choose carefully with an emphasis on quality and credibility.

While much area lighting in the past just dumped lumens on the surface indiscriminately, luminaires now have the capability to cut off light where it is not needed or wanted. Cutoff patterns can eliminate runaway glare or "light pollution." Some fixtures can give an almost precise square pattern on the surface, so that there need be neither overlap nor dark spots.

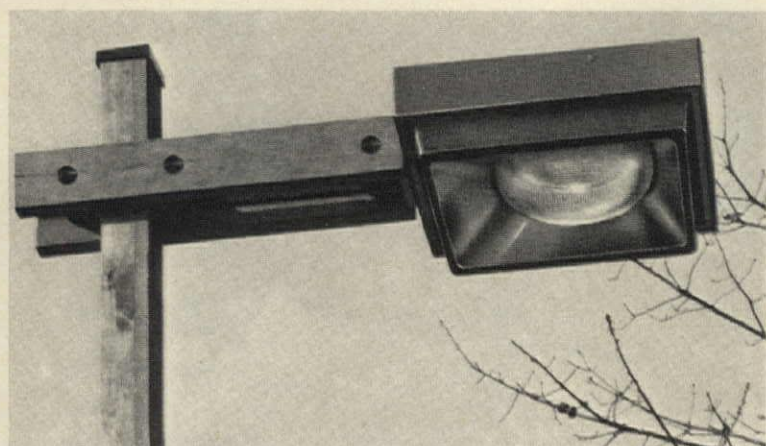
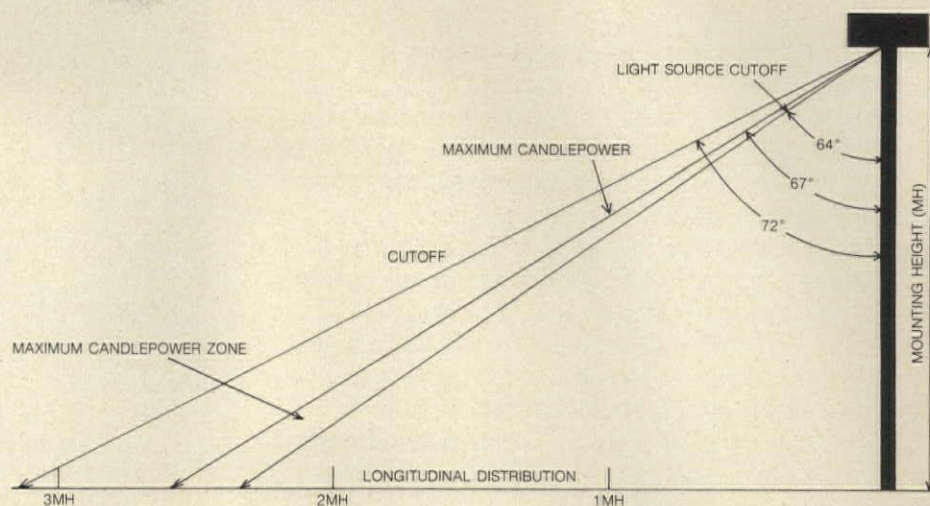
Some producers feel that high-mast lighting with the high-wattage efficient HID lamps grouped to light a large area is a valid solution. Glare is not a problem, because the source is high above normal sight lines, and maintenance is performed by lowering whole lamp groups for ground-level relamping or cleaning. Not all manufacturers concur. Here the proponents of lower light levels and "pools" of light are in conflict with those who urge high wattage and fewer sources. Both sides point to savings, the former in terms of energy use, and the latter in energy efficiency and number of fixtures installed. Either case may be valid, de-



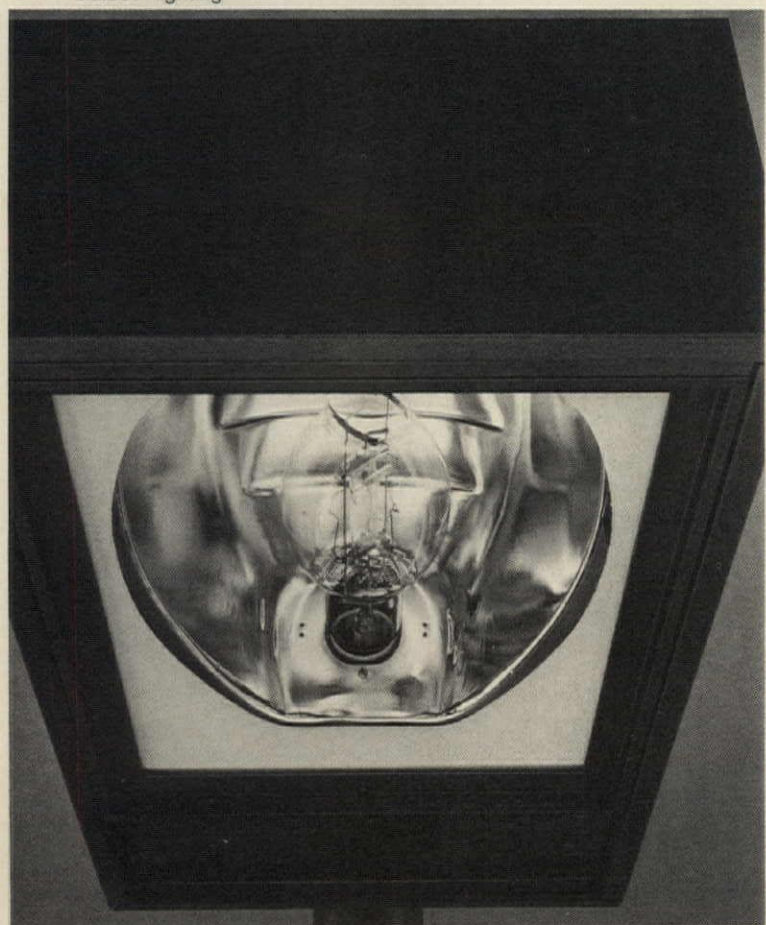
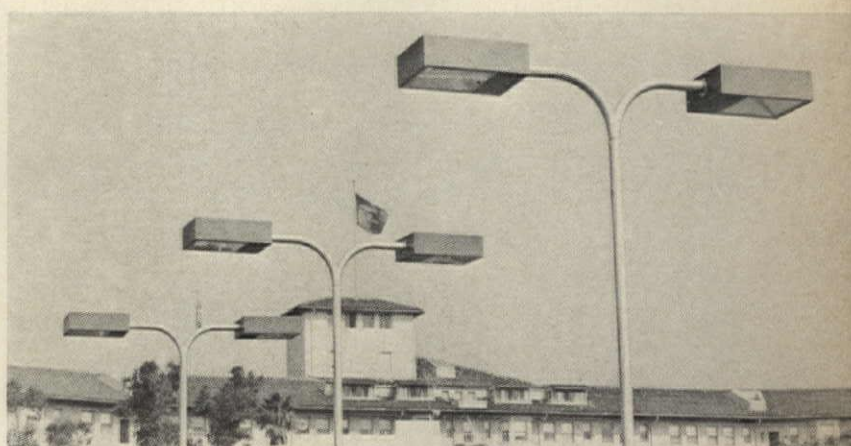
Outdoor lighting



A group of current outdoor lighting offerings: Square fixture by Kim (opposite page, top) produces square cutoff light pattern. Fixture types which formerly were only decorative now use refractors (Appleton, facing page, bottom), directing light. A range of architecturally notable luminaires with cutoff characteristics is available. Diagram (right) is adapted from McGraw-Edison, showing cutoff principles. Other examples (clockwise from top left, below) are General Electric, C-E ElSCO, Holophane, and ITT Landmark Outdoor Luminaires.



Outdoor lighting



Outdoor lighting

pending on the program, site, or other factors.

Improved energy use is on everyone's mind. From the point of the lighting producers, the single most important objective is to deliver effective lumens to the desired location without waste. Thus the cutoff luminaire and several other developments zero in on delivering only the necessary amount, where wanted, with no waste. More critical consideration is now being given to decorative sources which give out light in all directions, including up into the night sky. Some of the familiar ball fixtures have been rethought to direct light to the ground through the use of reflectors or refractor or prismatic lens enclosures.

Source efficiency will probably be mandated by regulatory legislation, even though lighting is said to account for only 5 percent of our total energy use. In fact, a federal government program is under way to replace existing mercury vapor lighting on federally funded highways with high pressure sodium fixtures. Uncle Sam will pick up 90 percent of the tab, to launch an attempt to increase efficiency. Going from a 400w mercury vapor lamp to a 250w HPS source, for instance, is said to produce a 37 percent savings in electricity and a 40 percent increase in light; from a 175w mercury to a 150w HPS nets a 14 percent decrease in electricity and a 106 percent light increase. Metal halide lamps are also available to replace mercury sources, many in existing mercury fixtures. They may be burned in any position, and come in 400w and 1000w sizes.

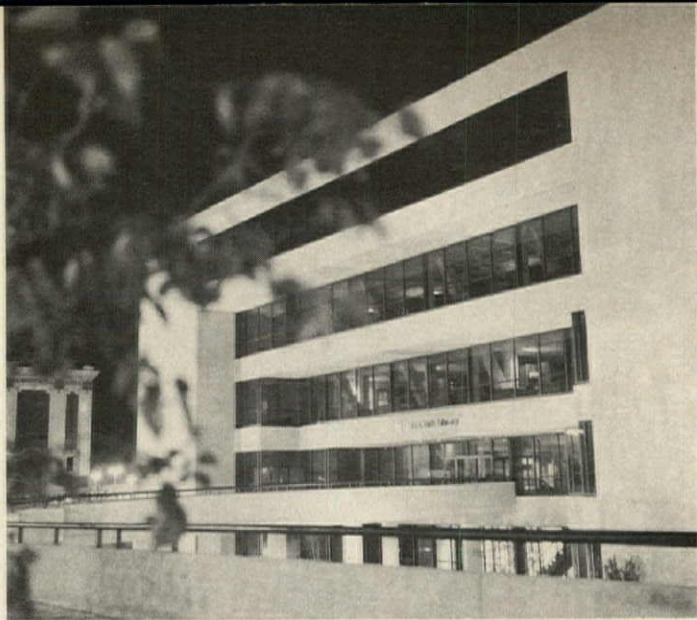
Safety, security, and effect

Another aspect of outdoor lighting which has other kinds of ramifications is the use of light to deter crime and vandalism. In some areas, it may be possible to offset the cost of such night-time losses through the use of properly designed lighting. Light sources should be located so that an intruder is either directly illuminated between the source and the building, or silhouetted against the lighted building. The first of these gives an observer a better view of a suspect, but both are effective. The installation should not be obtrusive, obviously, and, if done well, will be an integral part of the building's aesthetic at night.

As part of the safety planning of buildings and walkways, consideration must be given to the wide variety of equipment available for lighting pedestrian paths. Care should be taken to evaluate installations for glare or just plain aesthetic appropriateness. Many forms of low- or medium-height lighting are on the market, and a good design can use still other off-the-shelf components in an infinite number of ways to create mood or effect.

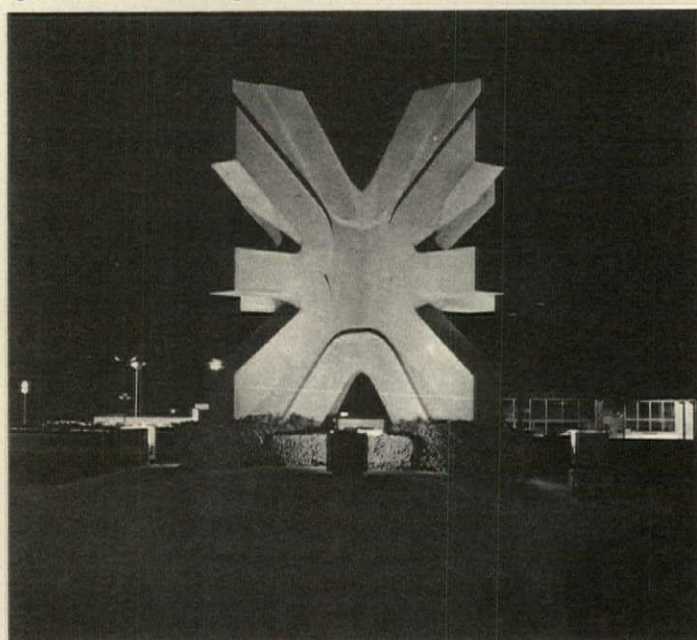
The key to the synthesis between functional and aesthetic segments of lighting design is to decide early what effect is wanted, be it security or visual delight. Then the mechanism for accomplishing it unobtrusively can be designed. After attacking each individual task this way, then the overall scheme should be reviewed for cohesiveness of its parts. Light and the resulting mood, pattern and effectiveness, are the primary goals of the first stage, followed by the hardware and pragmatics.

It is important to keep light directional for proper three dimensional effect. Equally strong light from both sides will

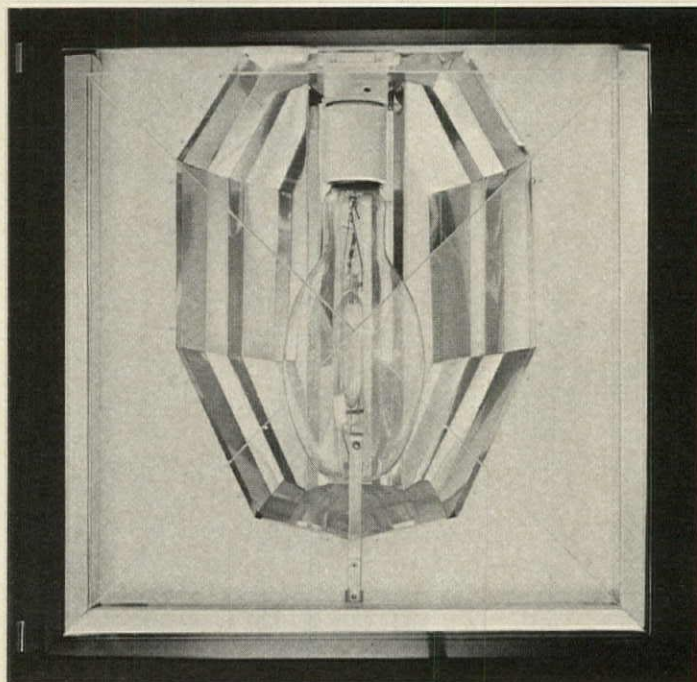


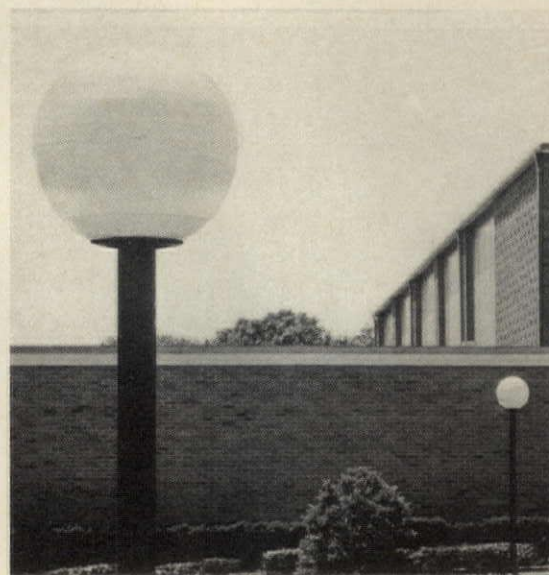
Courtesy Wide-Life Corp.

Night lighting on the W. Dale Clark Library, Omaha, is turned on by photosensors automatically. Lighting, when full-on (above) can produce 15 footcandles, but dimming ballasts allow for reduction of both power use and lamp output to save energy when off hours require less light. Half of the fixtures go off completely on the clock control.

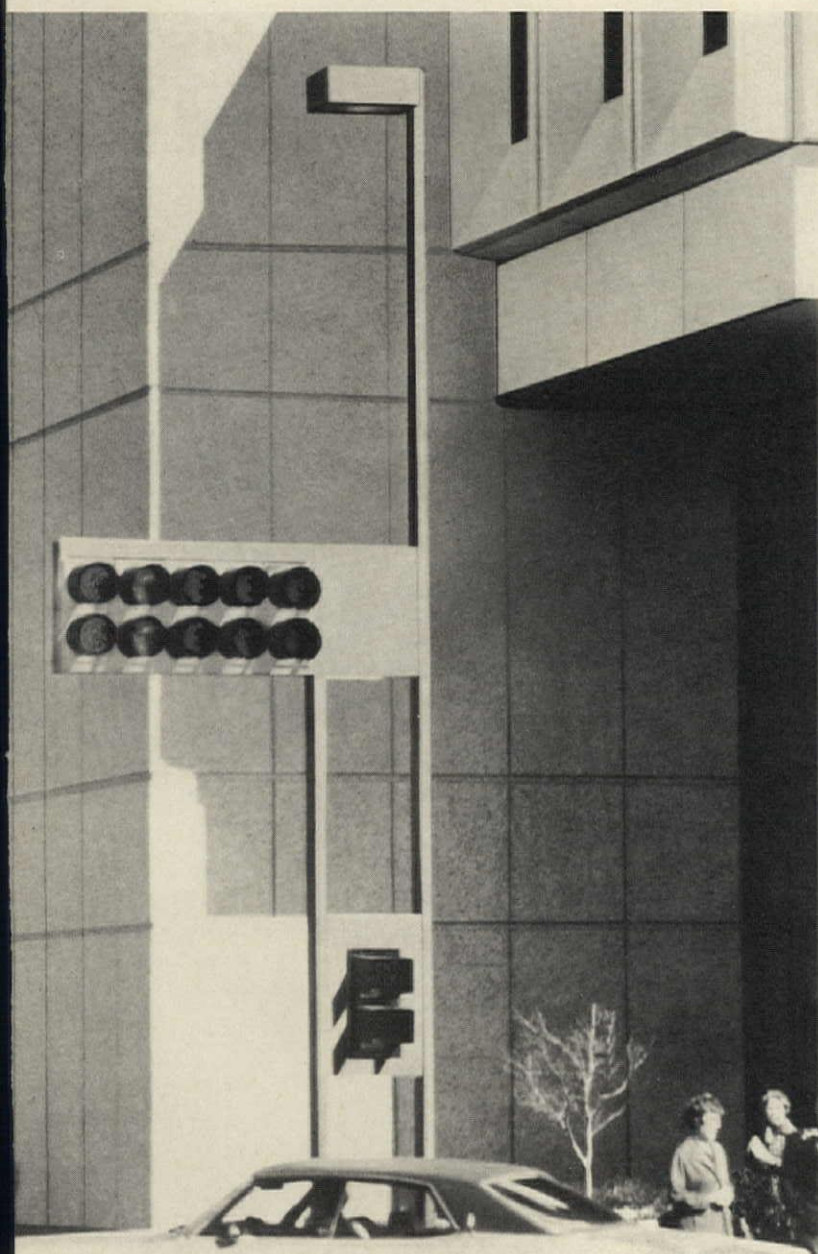


Other outdoor options are Sterner Cubes (above), for vandal-resistant lighting, and an elegant reflector luminaire (below) by Prescolite.





Photos right courtesy Holophane
Photo left courtesy McGraw-Edison
Photo below courtesy Crouse-Hinds



Some of the newer areas of lighting design offer architects options such as street modules (above), incorporating any or all street communications, etc. Some light fixtures feature whole interchangeable ballasts (top, above). Refractive or prismatic (top, center, and right) enclosures limit wasted uplight, concentrating more light downward.

cancel out effects of the lighting. It is better to have a strong primary direction with a little fill from the other side. A hierarchy of lighting level, placement, and even color temperature can do wonders. Avoid the trap of trying to do too much, but the juxtaposition of, say, mercury vapor, incandescent, and HPS lighting can produce some subtle and interesting effects.

Since each of the broad points touched upon above could be expanded upon at great length, we are clearly unable to cover them fully. It is important that architects make themselves aware enough of both the issues and the opportunities which exist in lighting. There is an impressive array of products, and an equally imposing fund of technical assistance out there. It's available to us. All we have to know is what, when, and where to ask. [Jim Murphy]

Acknowledgements

Our special thanks to the following sources for assistance in preparing this article: Appleton Electric Co.; ASG Industries; C-E ElSCO Lighting; Columbia Lighting Inc.; Crouse-Hinds Co.; Elliptipar; Fostoria Industries; General Electric Co.; GTE Sylvania; Guardian Industries Corp.; Guth Lighting; Jules Horton, Jules G. Horton Lighting Design Inc.; Harvey Hubbell, Inc.; the Illuminating Engineering Society of North America; ITT Landmark; Holophane Division, Johns-Manville Corp.; Kenall Manufacturing Co.; Kim Lighting; Lightcraft; Lightolier; Lutron Electronics; McGraw-Edison, Area Lighting Division (and the Hanlen Organization); McPhilben Lighting Division, Emerson Electric Co.; Prescolite; The Ram-busch Co.; Scovill/Nutone; Der Scutt (Poor, Swanke, Hayden & Connell); Staff Lighting; Sterner Lighting; Teledyne Lighting; Thomas Industries Inc.; Victor Manufacturing; Westinghouse; Wide-Lite Corp. (Jim Anthony, Weekley & Penney); Yorklite.

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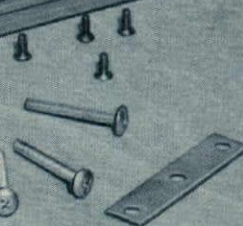
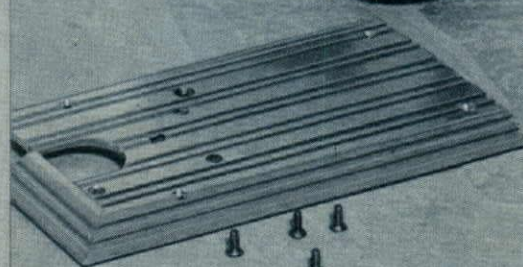
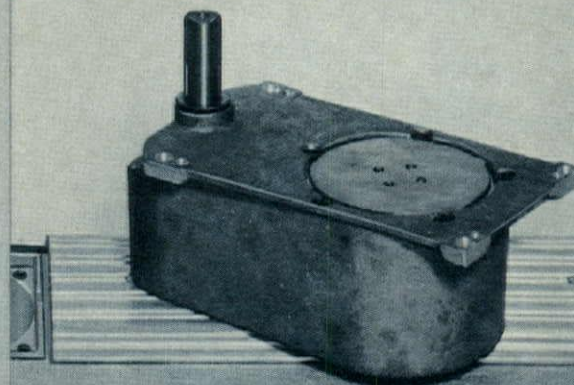
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Surety bonds: no third party umbrellas

Bernard Tomson and Norman Coplan

In a recent case, when one contractor's judgment against another contractor proved uncollectible, it turned in vain to the surety company for redress.

It is common practice to require building contractors to secure performance and payment bonds as a condition of their employment. Usually, a performance bond is intended primarily for the owner's protection and a payment bond is for the protection of the owner and of subcontractors, and material men who furnish work and materials to the project. Whether some other party outside those categories has any rights or remedies under such bonds depends upon the intention of the owner and the contractor as reflected in the wording of the bond.

A recent New York case raised the interesting issue of whether a prime contractor, who has sustained damages because of the delay of another prime contractor on the same project, could recover its damages against the surety company of the other contractor (*Novack & Co., Inc. v. The Travelers Indemnity Company*, 392 N.Y.S. 2d 901). The plaintiff in this action had entered into a contract with the New York City Housing Authority for the performance of plumbing work on a certain project. The Authority had also entered into a contract with Wilaka Construction Co., Inc. (Wilaka) for the furnishing of the concrete foundation and general construction work at such project. Wilaka was required to furnish the Housing Authority with a performance bond and a payment bond, each in an amount equal to 100 percent of the bid price. The performance bond provided that the undertaking was "for the benefit of . . . third persons having just claims arising out of or in connection with the said Contract and Work performed thereunder, as well as for the benefit of the Owner itself, but the rights and equities of all other beneficiaries or obligees . . . shall be subject and subordinate to those of the Owner."

The contract between the Housing Authority and Wilaka provided that Wilaka was to perform its work at such times and in such manner as not to delay or interfere with the progress of the work by each of the other contractors, and that if any other contractor should suffer any loss because of the improper performance of Wilaka, such loss would be reimbursed by Wilaka. The Housing Authority's contract

with the plaintiff, the plumbing contractor, stated that if it should "sustain any loss, damage or delay through any act or omission of any other contractor having a contract with the Authority for the performance of work . . . the Contractor shall have no claim against the Authority for such loss, damage or delay, but shall have recourse solely to such other contractor."

The plumbing contractor, contending that it had been delayed by the general contractor, instituted an action against it in reliance upon the provisions of the contract between the general contractor and the Housing Authority and recovered a judgment in the amount of approximately \$391,000. Being unable to collect this judgment, the plaintiff instituted an action against the general contractor's bonding company, contending that by its terms, the performance bond which the general contractor had secured was intended to protect third parties such as itself. The Trial Court dismissed this action, and upon appeal, the dismissal was affirmed.

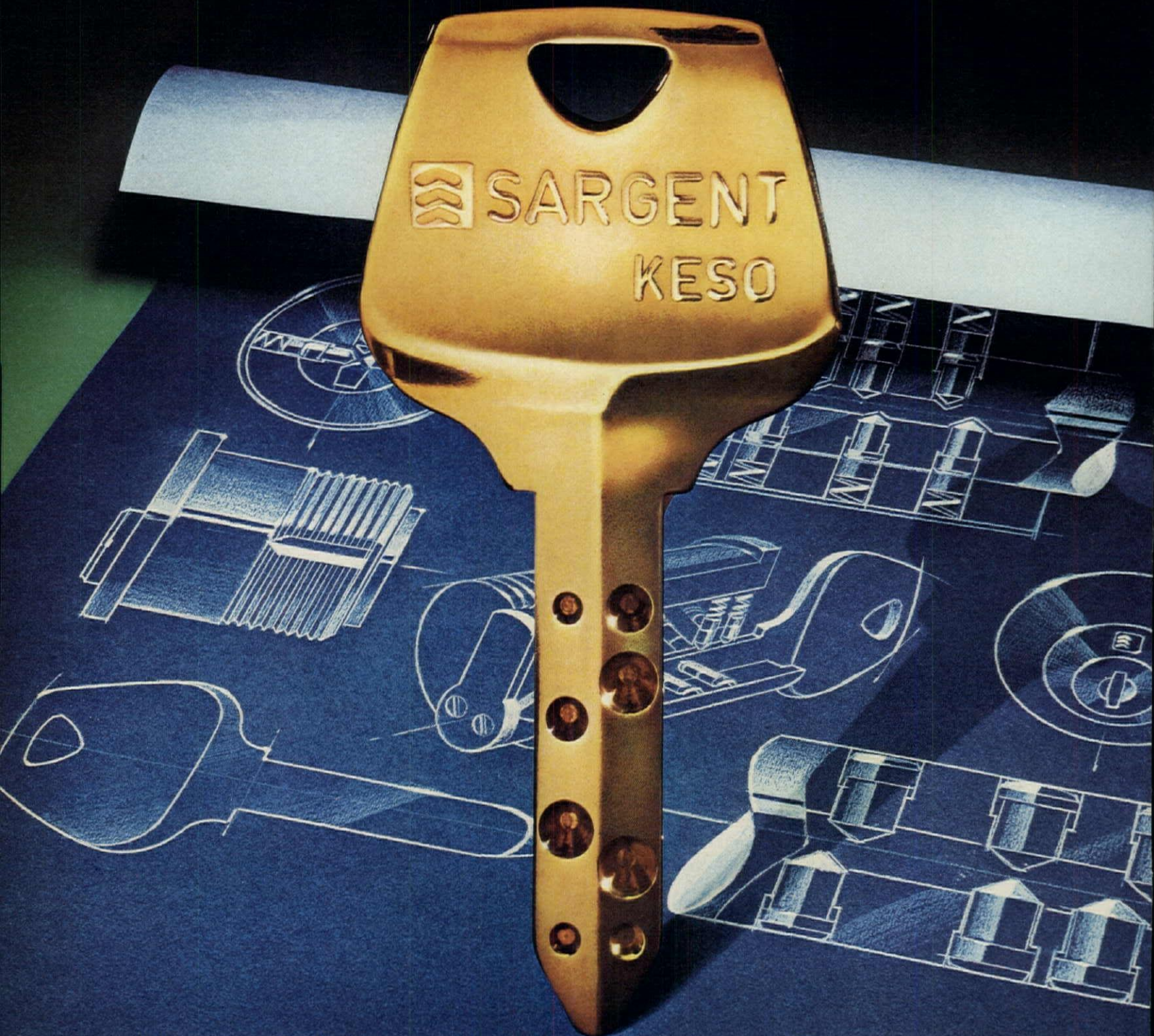
In reaching its determination, the Appellate Court pointed out that the case was unusual in that ordinarily the party seeking to enforce rights, as a third party beneficiary of a surety bond, is either a supplier of services or materials as subcontractor to the general contractor who had secured the bond, or employees of such general contractor. The question to be determined, said the Court, is whether the language of the bond in this case indicated an intention to cover a claim in the nature of the one presented by the plumbing contractor.

The Court first considered whether the surety, because of its performance bond, became liable to the plaintiff because the judgment obtained by the plaintiff against the general contractor was uncollectable. The Court pointed out that under the construction contracts, no claim was to be asserted against the owner arising from damages which one prime contractor might cause another, and that the owner was to be indemnified as against any such claim. These provisions, stated the Court, clearly negated any intention on the part of the Authority, the obligee of the performance bond, to award third party benefits of the type sought by the plaintiff.

Secondly, the Court pointed out that by its terms, the bond made the rights and equities of all beneficiaries subject and subordinate to those of the owner. Such a provision, said the Court, made it clear that the primary concern of the owner in requiring the performance bond was to protect itself against any claims which might be made against it and not to grant third party rights.

Thirdly, the Court considered whether the language of the performance bond gave the plaintiff the right to sue the defendant. The Court pointed out that although the payment bond specifically stated who could sue on it (and such class of persons did not include the plaintiff) the performance bond contained no specific authorization designating or naming the persons who might sue on it. The Court concluded that the inclusion of a specific authorization for a direct right of action in a payment bond, as contrasted with the omission of such a provision in the performance bond, was strongly indicative that the performance bond was not intended to provide a direct right of action to a claimant, such as the plaintiff, as against the surety company. □

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Through Stirling darkly

James Stirling: Buildings and Projects 1950–1974, introduction by John Jacobus. New York, Oxford University Press, 1975, 184 pp, 675 illus., \$30.

Reviewed by Eugene Santomasso, assistant professor of art history, Brooklyn College, City University of New York.

One of the most inventive and influential post-war architects has sanctioned the first comprehensive compilation of his work. James Stirling, with the assistance of Leon Krier, determined a format of this book somewhat comparable to the volumes of Le Corbusier's *Oeuvre complète*. A unique index consists of reduced illustrations of Stirling's work arranged chronologically in broad columns. Of the 38 buildings and projects listed, 12 appear only in the index accompanied by a brief legend. A critical assessment of Stirling has been contributed by the art historian John Jacobus.

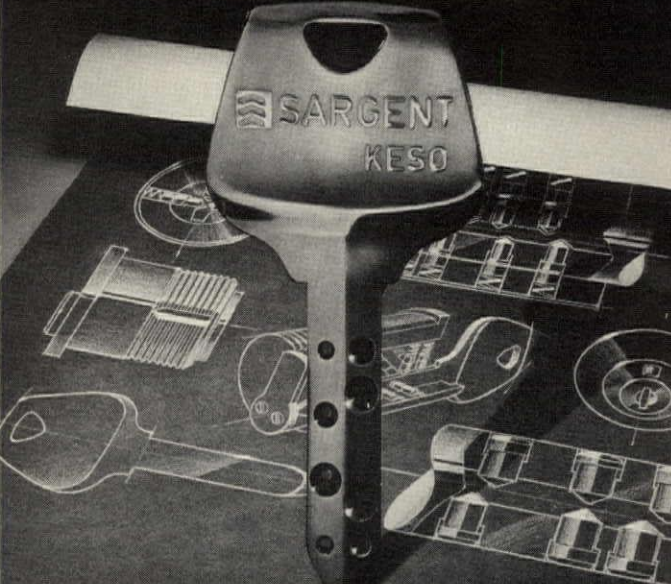
Jacobus considers Stirling's place in modern architecture and analyzes his development. Discussion of the architect's major works is interspersed with statements by Stirling (set in bold type) that clarify his opinions on such issues as the effect of vernacular traditions on architectural design and the implications of achieving a forthright expression of materials, structure, and mechanical systems. Insight into Stirling's years at the Liverpool University School of Architecture (he graduated in 1950) is gained from Stirling's recollections and from those of Colin Rowe who had joined the faculty in 1948 and who, in a letter to Jacobus, reconstructs the intellectual climate there and how Stirling was a part of it. Among the constellation of influences upon Stirling in these formative years, special significance is ascribed to the architectural itinerary during his visits to the U.S.A. and France.

Jacobus mentions those segments of British architecture which seem to have most deeply affected Stirling, including the English Baroque of Vanbrugh, Hawksmoor, and Archer, and neo-classicism of Soane, 19th-Century vernacular architecture, factories, and commercial buildings, and the work of Voysey and Mackintosh. It remains for future studies to determine the effect of Alvar Aalto upon Stirling and to explore further the degree to which Stirling has been in-

[continued on page 100]

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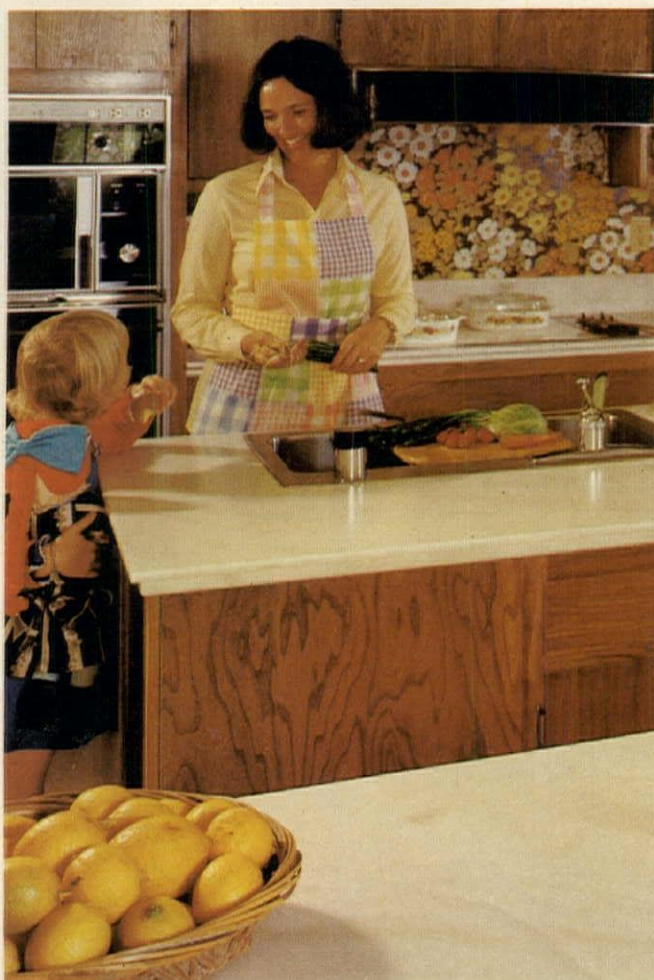
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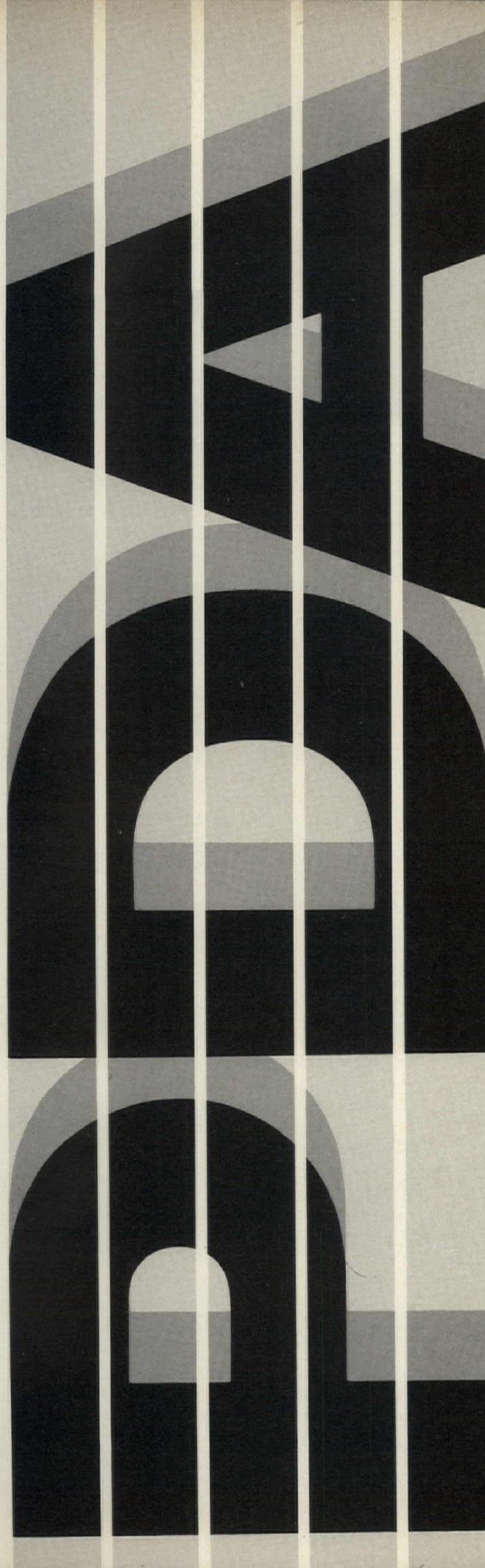
Books continued from page 99

fluenced by the London group, Archigram. Stirling's later career is assessed largely in terms of English developments—the ongoing ferment in London architectural circles since the early 1950s and the so-called New Brutalism. Only limited attention is given to Stirling's position within the larger sphere of architecture outside Britain, such as his relation to Le Corbusier, post-war Constructivist trends and Team X.

Important factors in Stirling's development are not systematically examined. The character of the changes in his post-1960 work, points of continuity between earlier and later designs, and possible influences initiating these changes are subjects which deserve closer scrutiny. While the architect's concerns with "regionalism" and vernacular aesthetics in the 1950s and early 1960s (Ham Common, Preston Housing, Old People's Home in Blackheath, and Children's Home in Putney) are discussed at some length, the altered nature of this concern in later works is hardly touched upon. In the course of explaining the pivotal place of the Leicester labs in Stirling's development, the labs are linked with Owen Williams' factory for the Boots Pure Drug Co. at Boston, and Pierre Chareau and Bernard Bijvoet's Maison de Verre in Paris. Because Stirling has documented his visits to these two buildings, they are the only ones cited by Jacobus as being consequential in Stirling's shift away from Corbusian imagery in the early 1960s. A less parochial but no less cautious approach toward clarifying possible influences upon Stirling might have included other buildings in which the expression of structure, mechanical systems, or materials are especially noteworthy, such as Brinckmann, Van der Vlugt, and Stam's Van Nelle factory in Rotterdam, and examples of Victorian architecture.

Aspects of modern architecture that might help us to place Stirling in historical perspective are vaguely defined. We are told in one place that the Leicester labs could be regarded "as a realization of the visions of such diverse pioneers as Joseph Paxton, Antonio Sant'Elia and the Russian Constructivists," while later we learn that although the labs and the History Faculty building at Cambridge may be suggestive of 1920s Constructivism, Stirling's awareness of such works as K. Melnikov's Russakov Tramway Worker's Club in Moscow came only after the completion of Leicester. Since there is no discussion of the specific ways in which Paxton's designs or those of Sant'Elia and the Russian Constructivists compare with Stirling's work, there is no attempt to gauge the degree to which Stirling has moved beyond these past idioms. Had connections between certain of Stirling's buildings and Constructivism been considered without equivocation, our comprehension of Stirling might have been amplified. Further comparisons with Constructivism are prompted by Stirling's use of axonometrics in which buildings are made to look like complex mechanical systems. The axonometrics but not their Constructivist parallels are discussed by Reyner Banham in the catalogue *James Stirling—RIBA Drawings Collection* (1974). Links between Stirling and Constructivism have recently been presented by Peter Eisenman in an illuminating analysis of the Leicester labs in *Oppositions 4*. Finally, it should be

[continued on page 102]



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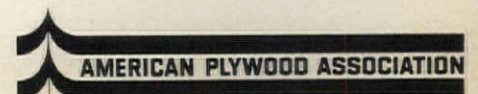
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Books continued from page 100

noted that a probable stimulus for both the Corbusian and Constructivist interests of Stirling is the well illustrated periodical *L'Architecture Vivante*, one of the major publications of the 1920s and conceivably known to Stirling as early as his student years in Liverpool.

The problem which Expressionism has posed for historians is compounded in Jacobus's essay. It is pointed out that Nikolaus Pevsner originally criticized the Leicester labs as representing a disturbing return to "expressionism." Minimal commentary is offered on Pevsner's loose application of terms or on his prejudices regarding the characteristics of a viable modern architecture. The result is a misconstrued view of Expressionism that raises a number of questions, and since the aims of Expressionism are not defined, the summation of it as "a self indulgence or a species of literary or historical symbolism" seems specious. Are self indulgence and symbolism endemic only to Expressionist architecture? Is it justifiable to equate the presence of non-rectilinear geometry solely with Expressionist architecture as Pevsner has assumed? To what extent is Expressionism antithetical to the *Neue Sachlichkeit* ideals which Jacobus cites? Rather than become involved with these issues the intent is to swerve entirely from Expressionism. Thus Jacobus maintains that possible relationships between Stirling's work and Expressionist projects of the 1920s are "coincidental" since Stirling's non-cubic geometric forms and fragmented surfaces are found in early projects (Selwyn College) and are the result of his efforts to express internal spatial divisions and mechanical systems. The fallacy of this argument is its assumption that Stirling's intentions and the recognizable changes in his designs have little or nothing to do with an awareness of history. On the contrary, it should be stressed that Stirling has been receptive to ideas compatible with his own interests and that these ideas have sustained his particular formal and theoretical goals. It may be that Expressionism is not at all relevant to Stirling's development, but this fact has yet to be firmly established.

The major part of the book, comprising the documentation of buildings and projects, also poses problems. Ostensibly the material gathered for this volume has made Stirling's work more accessible to architects and historians. The program for each project is described; excellent photographs of models and completed buildings are juxtaposed with a splendid array of plans, sections, and drawings rendered in that crisp, taut, linear style long associated with Stirling and his office. However, the vivid visual presentation is confounding because all diagrams are blank, with only general designations offered in captions. We are invited to examine fascinating shapes and exquisite linear patterns unsullied by particulars. This lavish volume does not facilitate the study of Stirling's designs. It brings us close to the architect's work but paradoxically the view of the whole is segmented and incomplete. Thus the photograph of Stirling on the last page seems strangely fitting. The architect engages us with his direct glance but his left hand is casually raised and covers the lower half of his face, obscuring a full sense of the man who is so near and bathed in bright light.

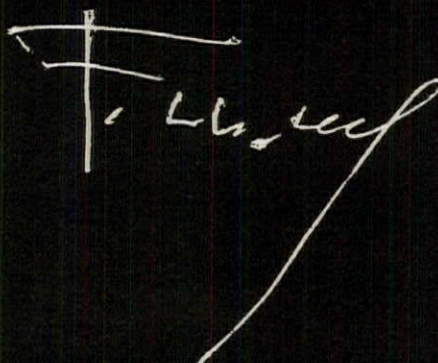
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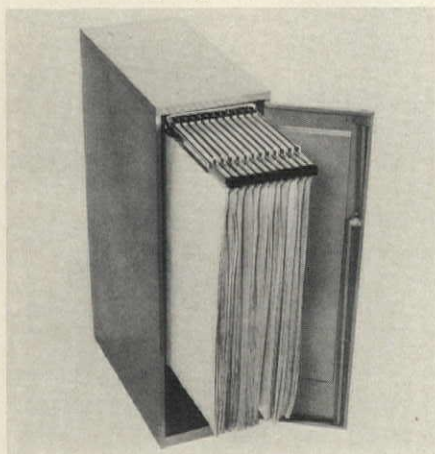
A handwritten signature in white ink, appearing to read "F. L. Wright", is written across the bottom right of the page. The signature is stylized, with a long, sweeping underline that extends towards the bottom left.

Products and literature

Items specifically related to the technics article beginning on p. 90 are included in this section for the reader's convenience.



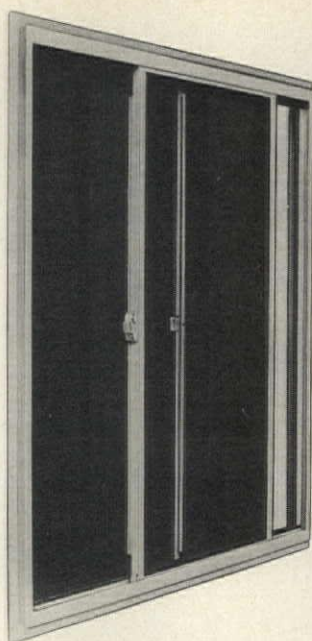
Task/ambient lighting



Combo cabinet

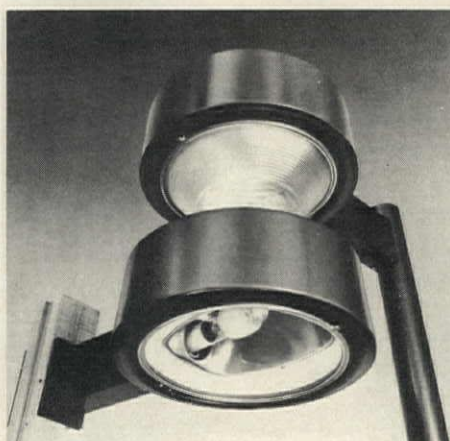
Combo cabinet for prints, plans, maps, charts, and graphics features a 54-in. overall height to provide snag-free storage of 48-in. graphics. Locking bars of the cabinet are flat instead of round and a latch plate has been added. A safety latch locks the slide-out rack when it is in a fully extended position. The bottom pan of the cabinet has been inverted to create an air space between the bottom of the cabinet and floor to prevent content damage from water seepage. Made of steel construction, the cabinet holds 12 1CB binders and accommodates sheet widths of 24, 30, and 36 in. Plan Hold.

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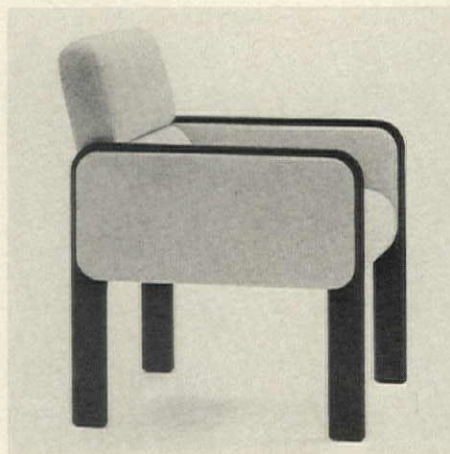


Magnudisc

Task/ambient lighting includes integral work station lighting for Free-Dimensional System components, free-standing Light Towers and file-top Mini-Lights, and task light units for use with Cube Desks. Elements may be used separately or in combination. Work station fluorescent up-light fixtures are designed to accept two or three 40w lamps and have optional switching features. Light Towers provide ambient lighting using Metal Halide lamps. Metal Light Towers are 68-in. high by 18 in. square and come in several different colors. Wood Light Towers are 69½-in. high by 20 in. square and are finished in oak veneer or fabric covered, with black or mirror chrome steel bases. File-top Mini-Lights in metal or oak veneer also use the same optically designed reflector available for 175w or 250w or 250w Metal Halide Lamps. Stow/Davis. Circle 104 on reader service card

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[continued on page 106]

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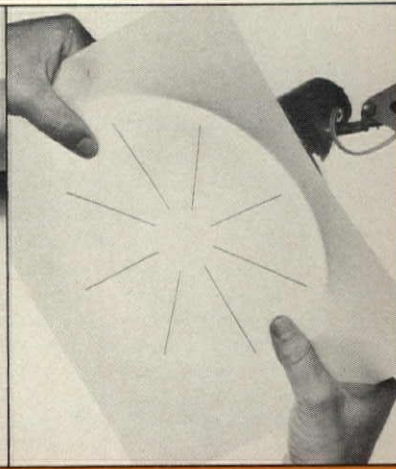
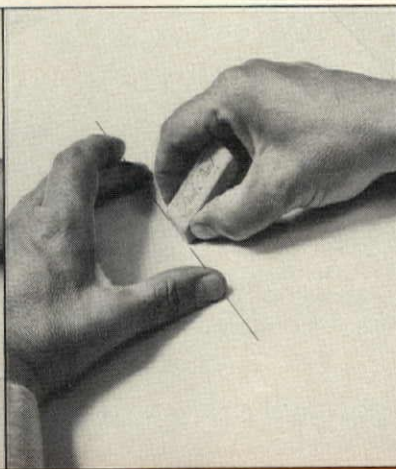
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1. Lay down a line on your drafting paper.

2. Erase and redraw the same line in the same place several times.

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Centercube luminaire. All-aluminum housing is sealed and weathertight, and the lens is high-strength tempered Borosilicate glass. Bronze acrylic enamel finish is standard. The unit will accept up to four 1000 w high pressure sodium lamps. Trimblehouse Corporation.

Circle 108 on reader service card

Floodlight fixtures with stainless steel housings enclosed in wet-cast concrete range in sizes from 12" to 26"x28". The housing is steel reinforced and the fixture is protected by a 10 ga steel grille. Each cube rests on a collar base which provides air flow. Four standard models are offered, but fixture is also available in a variety of exterior finishes, including stainless steel, granite, and exposed aggregate. It is also available as a street cube with adjustable louvers and nonglare lighting. Wattages from 100 to 400 watt HID sources are available. Sterner Lighting Systems, Inc.

Circle 109 on reader service card

People Shelters are designed for use at shopping centers, bus stops, golf courses, parks, terminals, swimming pools, and skating rinks. Frames consist of 2"x2" hollow extruded aluminum tubing with all connections concealed and vandal-resistant; fascias and window frames are of extruded aluminum. Optional extras include wind screens, bubble roofs, map holders, polycarbonate clear or tinted glazing, lights, poster frames, and benches. Visual Products Co.

Circle 110 on reader service card



Centercube luminaire



Architectural accessories

Architectural accessories. A wide choice of planters, seats, benches, receptacles are available in matched sets in a style and size for almost any contemporary setting. Shown is one of eight styles, available in a choice of solid woods and finishes. Landscape Forms, Inc.

Circle 111 on reader service card

Washer-extractors. The System 4 machines offer eight different automatic programs in either 35-lb or 50-lb capacity—four for permanent press and four for regular fabrics, matching the washing program to the type of fabric and degree of soiling. Optional supply injector, with four-supply capability—allows machine to be unattended. A 30-in.-dia. washing cylinder provides lift-and-tumble action for washing. Features include single speed motors, a special pre-extraction load distribution speed; low-carbon Type 304 stainless steel cylinder and shell; continuous welding; tapered roller bearings; a 2½-in. gravity drain valve. Pellerin Minor Corp.

Circle 112 on reader service card

Audio Visual Intercom. An inter-office communication system that incorporates volume controlled speakers and flashing indicator buttons that are fed into a main control panel. According to maker, job-related information can be conveyed through the main board at the reception desk. It can also be modified to include special requirements such as music, smoke detectors, Zim-merly Enterprises, Incorporated.

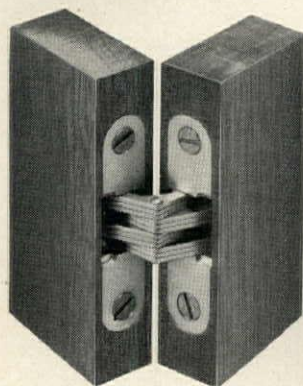
Circle 113 on reader service card

Touch-Open door. The specially designed door incorporates features such as cushioned nosing and large, transparent vision panels to provide safe passage for the handicapped. No electric eye or other expensive operators are needed. The doors can be faced with rubber or plastics. RubbAir Door Division.

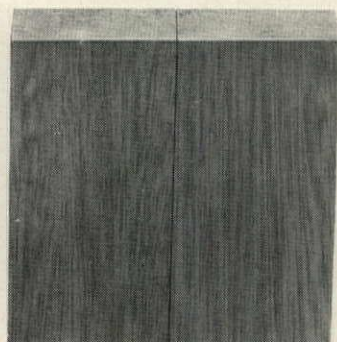
Circle 114 on reader service card

[continued on page 108]

The hinge that hides



NOW YOU SEE IT



NOW YOU DON'T

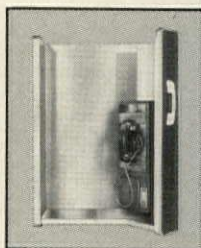
The Soss Invisibles—for a custom look for any room! These amazing hinges hide when closed, eliminating unsightly gaps, hinges, and door jams. They're the perfect hidden touch for doors, doorwalls, storage cabinets, built-in bars, stereos, and TV's. Specify the Soss Invisibles wherever looks matter. See listing in Sweet's or write for catalog: Soss Manufacturing Co., Division of SOS Consolidated, Inc., P.O. Box 8200, Detroit, Mich. 48213.



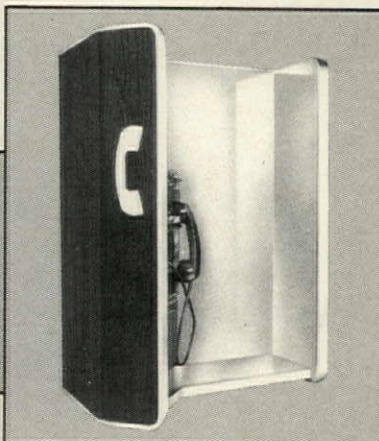
Compatible Quiet

The New ADCO 20-L ACOUSTI-CALL® Booth

Compatible because it is versatile. The 20-L accommodates coin telephone mountings at either the 54" universal coin slot height or the regular height. And exterior finishes include walnut wood grain; beige or blue textured enamel paint on steel; plus stainless steel, aluminum or plastic laminate options.



Designate 21-L for right side mounting.



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p.h.d. collection

p.h.d. collection. It features ten different designs—casual and dining chairs, barstools, an ottoman, and tables—of tubular steel, color-coated with polyester or epoxy finish (for indoor or outdoor use), with removable upholstery of canvas in solid colors or silkscreened prints. Alternate upholstery is available and some designs are available in solid brass tubing. Shown is the "a" series casual chair. Plum Crazy, Ltd. Circle 115 on reader service card

Floating dock system. The heart of the system is a chemically inert float unit that is molded from Marlex CL-100 (a brand name of Phillips Petroleum Company). It is said to be unsinkable, impervious to the marine environments, and easily shipped by common carrier, and can be applied to most floatation requirements. The firm offers the services of its engineering staff for custom designs and large marinas, and has developed several plans for structures such as swim rafts, walkways, and single and double slip private docks that are available to architects and designers at no charge. Descriptive literature is also available. Thompson Floatation Company. Circle 116 on reader service card

Hanging benches, made of fiberglass, are offered in 4-, 6-, and 8-ft multiples and in angled sections that fit the contours of walls. Benches are hung from existing structures by adjustable steel supports. Reinforced Plastic Industries, Inc. Circle 117 on reader service card

Roach Prufe is said to completely eliminate cockroach infestation in 7 to 10 days after application and retains its killing power for years. It is also effective against water bugs, ants, and silver fish. It has been tested and approved by the U.S. Government for use in homes, apartments, hospitals, hotels, schools, factories, restaurants, and new building construction. It is nonstaining, nonvolatile, and nonflammable. During new construction, one lb is required for every 1000 sq ft of floor space. Copper Brite, Inc. Circle 118 on reader service card

Literature

Contemporary outdoor lighting. Magnusquare unit has a prismatic lens for direct and general lighting. Sharp cut-off Magnuform luminaire is said to provide controlled light distribution, without light spillage. Both types may be mounted to a ceiling, canopy, wall, or pole either singly or in multiples. The Magnudisc offers a wide variety of mounting options and uses HID lamps. The luminaire has a low-profile cylindrical shape and is available with matching standards. Up to four units can be mounted on aluminum, steel, or wooden poles. Housing for units is aluminum sheet; finish is baked enamel in wide choice of colors. Separate brochures provide technical data and descriptive details. Harvey Hubbell Inc. Circle 200 on reader service card

Floodlights/area lights. Catalog sheets illustrate and describe three different series of floodlights and three different series of area lights. Floodlight series include high performance—up to 1000w mercury vapor, 1500w metal halide or incandescent, 400w high-pressure sodium light sources—and five mounting arrangements. Wide-Beam floodlights include three models: 250w, 400w, and 1000w, for mercury vapor; 1500w metal halide, and 1000w high-pressure sodium. Decorative floodlight has standard sphere housing; custom housing shapes on special volume orders. Guardian Lighting. Circle 201 on reader service card [continued on page 110]

New from Bally

A comprehensive guide for erecting walk-in coolers and freezers outdoors.



Handbook
for Outdoor
Walk-In Coolers
and Freezers



It contains everything you need to know about erecting walk-ins outdoors, including critical facts that many refrigeration people don't even know. It has 16 pages of drawings, and specifications covering concrete slabs, weatherproof roofs, electrical and refrigeration characteristics, and other needed information.

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Circle No. 316, on Reader Service Card

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The functionally designed DART incorporates those most wanted conveniences such as instant printing, single switch operation, forward-reverse control, and automatic ammonia pump for dry vapor development. It also has new innovations such as front and rear print delivery, built in feed shelf, stainless steel developer section for long life and low maintenance, and hi-lo vapor control switch. These features make the DART the most complete, compact and maintenance free table-top whiteprinter available. Better yet, equivalent whiteprinters cost hundreds of dollars more. Sure, we're biased, so why not find out for yourself by calling **TOLL FREE 1/800-334-6641** or by writing DIAZIT COMPANY, INC., Route U.S. #1, Youngsville, N. C. 27596 for more information on the DART and our complete line of seven ammonia and ammonia-free whiteprinters plus the name of your local dealer.

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Circle No. 323, on Reader Service Card



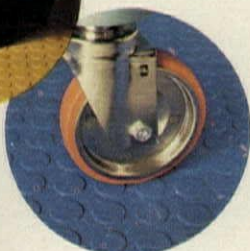
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Exacta 17 area/street lighting. Cut-off reflectors for precise lighting patterns are said to be suitable for both area and street lighting. Units are of one-piece integral die-cast aluminum construction and come in three sizes in 20 models using mercury vapor, metal halide, and high-pressure sodium light sources ranging from 100 to 1000 watts. Brochure illustrates units and poles, which include round, square, octagonal metal poles in steel or aluminum, up to 60-ft high, and laminated wood poles, up to 40-ft high. Descriptive data and specifications are given. McPhilben. Emerson Electric Co.
Circle 202 on reader service card

Redwood lighting. Clear heart redwood and weather-resistant exterior metal parts are used. Catalog illustrates line of products which include street lights, walkway lights, wall lamps, lanterns, hanging lamps, and the latest addition, strip lights. Descriptive information is given. Victor Mfg. Co., Inc.
Circle 203 on reader service card

Power Drawer™ Concourse Luminaires for commercial, industrial, institutional, and roadway lighting applications come in single and multiple configurations. Two sharp cut-off optical designs are available to choose from. Round or square-shaped housing is of one-piece heavy gauge formed aluminum finished in black or bronze thermoset enamel. Ballast drawer as-

sembly slides into housing and connects to power supply with polarized quick-disconnect assembly. Brochure contains technical information, and specifications. McGraw-Edison Co.
Circle 204 on reader service card

Desk-top composing machine for headline typography. Composition is achieved by dialing method that yields copy on pressure-sensitive tape—with no further processing necessary. It is self-adhering on paper, glass, metal, and other surfaces. Called Model 36 Gestefont, the device measures 12"x14½". Literature is available. Gestetner Corporation.
Circle 205 on reader service card

Ceramic tile. Up-dated 1977 color brochure contains illustrations of tiles that are glazed, unglazed, heavy-duty, pavers, for outdoor pool areas, and custom designed. Descriptive data and specifications are included. United States Ceramic Tile Company.
Circle 206 on reader service card

Handmade tile products. Shown in full-color brochure are tiles that are solid glazed in squares and 2-in. round, unglazed chocolate, unglazed terra cotta, decorative tiles with a wide variety of designs (custom designs too), precast pavers, relief tiles, lava stone, and marble tiles. Company also makes coordinated sinks, bath fixtures, and accessories. Products are handmade in Mexico for residential and commercial use. Elon Inc.
Circle 207 on reader service card

Cultured stone veneer. Manufactured pre-cast 'stone' is made from Portland cement, an aggregate formulation, and mineral oxide colors. The 'stone' is cast from hundreds of individual molds. Each 'stone' receives individual color attention and is then cured. Maker states the finished product can be applied to any structurally sound surface—interior or exterior; that no foundational support is needed nor are wall ties necessary; that product is applied with mortar and can be applied over uneven sub-surfaces as well as around corners, columns, and arches. Color brochure is available. Stucco Stone Products.
Circle 208 on reader service card

'Redwood Interiors' brochure illustrates some of the choices of color, texture, pattern, and grain that are available for interior paneling. It contains a paneling guide to the variety of effects achieved through vertical, horizontal, or diagonal installation, and to the finishes that may be applied. California Redwood Association.
Circle 209 on reader service card

Tapestry collection. Four-color catalog shows a selection of artists, styles, sizes, materials, and weaving techniques available. Collection constantly changes and slides are available on any tapestry not in the catalog. All tapestries are hand-woven in India or France. In addition, a custom-designed tapestry can be woven in any shape, size, material, or weaving technique. Modern Master Tapestry Inc.
Circle 210 on reader service card
[continued on page 112]

Plaster in a roll™ the no problem heavy duty wallcover that covers problem walls ...including concrete block!

Plaster in a Roll™ goes up like wallpaper over every conceivable surface including poured masonry, concrete block, plaster, expanded foam and wood.

This unique gypsum impregnated jute product bridges small voids, hides blemishes and bumps. Available in decorator colors and fabrics. Class A flame spread.

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Moen gives your clients the first full line of energy-conserving fittings. Now our faucets, valves, and shower heads include special features that automatically save water, energy needed to heat water and sewer usage charges.

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outside

KINNEAR

rolling doors

*protect from weather, fire
and theft*

When Kinnear Rolling Doors are open, they're coiled compactly . . . out of sight and out of the way . . . directly over the opening. The crowds of tourists at this park aren't even aware of them. But when they're closed, these doors provide a reliable closure against wind, dirt, snow, rain and sleet. They're a fire retardant and, of course, an impenetrable barrier to intrusion and vandalism.



Above: Hersheypark, Division of HERCO, Inc.
Hershey, Pennsylvania
Right: Royal Bank of Canada
Toronto, Ontario

Kinnear Rolling Doors and Grilles are available in steel, stainless steel and aluminum. They may be manually, mechanically or power-operated, and can be designed and built for practically any size opening. Their simplicity of design and their basic operating principle puts them high on the efficiency charts for just about any closure problem.

inside

KINNEAR

rolling grilles

*protect from theft . . .
with showcase-like display*

Kinnear Rolling Grilles provide excellent protection against intrusion, yet permit free passage of air and light. This means they don't interfere with mall air conditioning and they provide an unobstructed view of showroom or lobby. Like Kinnear Rolling Doors, the grilles open straight up and coil out of the way directly over the opening to provide a full-width, business-enticing entranceway.



Write for the complete Kinnear catalog. It contains all the information you'll need in specifying. In the meantime, when you think doors or grilles, think Kinnear.



KINNEAR-Division of HARSCO CORPORATION

1900 Fields Ave., Columbus, Ohio 43216

FACTORIES: Columbus OH 43216

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Saving Ways in Doorways Since 1895

A DIVISION OF **Harsco**

Circle No. 338, on Reader Service Card

Literature continued from page 110

Dock lifts and truck levelers. Separate brochures give load capacity, dimensions, and descriptive data. Pit details are given for truck leveler. Southworth Machine Co.

Circle 211 on reader service card

Welsh quarry tiles come in a combination of natural earth brown tones in 4"x4" and 6"x6" squares, 6"x3", 8"x4" rectangles, and 6"x6" hexagons; other sizes by special order. Free literature. Imported by Shep Brown Assoc., Inc.

Circle 212 on reader service card

Door controls. Overhead and floor closers, panic exit devices, pivot sets are illustrated and features are described in pamphlet. Jackson Exit Device.

Circle 213 on reader service card

Rolling metal doors. The 1977 catalog gives architectural details on rolling metal and fire doors, rolling grilles, rolling shutters, and sliding grilles. Cornell Iron Works, Inc.

Circle 214 on reader service card

Furniture hardware. A catalog contains complete line of Richard Heinze concealed hinges and fittings for commercial/architectural case-work as well as contemporary residential case goods. This Western European manufacturer's line is stocked and represented by Terry Hinge and Hardware Co.

Circle 215 on reader service card

Cyclone fence. Fabricated from high-strength steel, the chain link fabric is zinc coated and receives a colored extruded polyvinylchloride shield during fabrication. Framework and accessories are also galvanized before a matching color thermoplastic or thermoset polyester resin is applied electrostatically and oven baked. Standard color is green to blend with the environment, but fence is available with a galvanized or aluminum coating. Catalog gives construction details and includes short form and standard fencing specifications, gives installation data. U.S. Steel Supply.

Circle 216 on reader service card

Generator controller. Standard equipment includes seven gauges and six indicator lamps to monitor engine/generator performance of generator sets. The programmable controller processes information and determines the communication to operating personnel, states maker. Four-page brochure describes unit. Kohler Co.

Circle 217 on reader service card

Power-Trac. Brochure illustrates and describes various systems: four-circuit, miniature, and raceway, plus their accessories, and various lampholders. The four-circuit Trac can be used for four different types of electrical services including emergency lighting, night lighting, call systems, p.a., or music systems, display signs, pendant or decorative lighting, power receptacles for cleaning equipment, etc. Illumination and lamp data are included in brochure. Halo Lighting Division, McGraw-Edison Company.

Circle 218 on reader service card

Electric snow-melting systems. Fully illustrated brochure details installation methods and applications such as stairs, curves, and unusually shaped sidewalks. It also shows how to estimate annual operating cost. Easy Heat.

Circle 219 on reader service card

Flush doors. Catalog on 1977 lines of wood doors is illustrated in full-color, includes brief specifications. Mohawk Flush Doors, Inc.

Circle 220 on reader service card

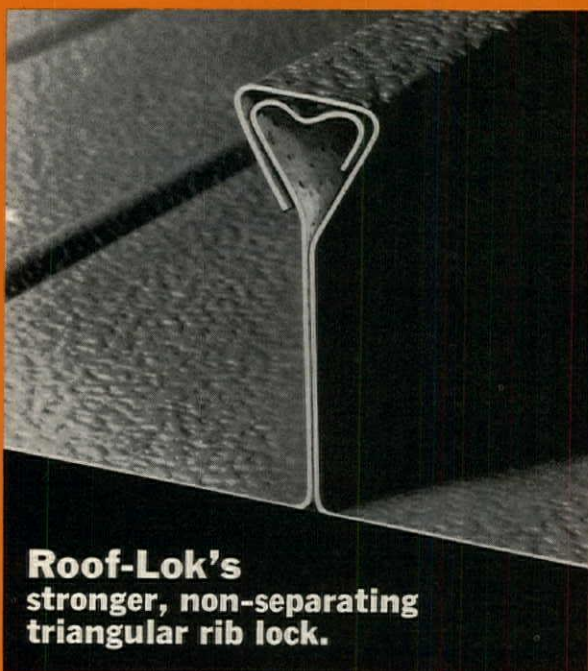
Ceramic tile standard. Included in 16-page specifications guide is the TCA 137.1-76 standard. Guide lists and defines the various types, sizes, physical properties, and grading procedures for ceramic tile in the U.S. Features of the standard include sampling and acceptance procedures based on sound statistical control methods. A section describes the quality required in special-purpose tile. Trim shapes are covered and the terms "standard grade" and "seconds" are defined. Tile Council of America.

Circle 221 on reader service card

Security and insect screens, screen doors, and accessories are illustrated and described in a new 28-page catalog. They are especially designed for public housing, commercial buildings, prisons, utilities, hospitals, schools, detention homes, dormitories, laboratories, and museums. Brochure contains detailed information on the design and construction of the units, plus complete specifications. Kane Manufacturing Corporation.

Circle 222 on reader service card

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**Roof-Lok's
stronger, non-separating
triangular rib lock.**

**in standing seam
roof systems.**

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NEW from Architectural Panels

It's more than just a choice. Roof-Lok's better because of its exclusive triangular rib that locks the panels together for a "hole-free", "leak-free", "maintenance-free" roof. Panel width — 12", std. length — to 45' (available over 100'). Seam height — 2 3/8". Insulated and uninsulated in embossed aluminum, aluminized steel, galvanized steel, weathering steel. 5 gauges. Many colors. Write for literature.



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Last year we said "...Knoll Task Lighting, designed by Sylvan R. Shemitz and developed by Knoll, is more tool than object: its premise, logical and straightforward. Knoll Task Lighting begins by focusing the light where the people are, gives them a real sense of their own place, and angles the light to make work a pleasure. And the system frees you to plan without reference to fixed ceiling patterns. The proper level of general light is supplied by uplighting from work stations and the Kiosk.[®]"

But seeing is believing. So we photographed the offices of a company who has used Knoll Task Lighting throughout. They have achieved a perfectly balanced light environment, tailored to their needs, and at the same time they have cut their energy use in half. Could you ask for anything more?

Knoll International
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Circle No. 339, on Reader Service Card



Building materials

Major materials suppliers for buildings that are featured this month, as they were furnished to P/A by the architects.

Addition and renovation, Allen Memorial Art Museum, Oberlin College, Oberlin, Oh. (p. 50). *Architects: Venturi & Rauch, Philadelphia.* Cast-in-place concrete floor on metal deck: Bowman Products, Cyclops Corp. Light-weight concrete roof: Zonolite, W. R. Grace Co. Four-ply built-up roofing: Johns-Mansville no. 600.

Brick walls: Stoney Creek. Gypsum board interior walls and ceilings: U.S. Gypsum. Vinyl-asbestos tile: Amtico. Carpet: Milliken. Waterproofing: Karnak Chemical Co. Glass fiber rigid board insulation and mineral fiber blankets: Owens-Corning Fiberglas. Extruded polystyrene board insulation: Amspec Styrofoam. Anodized aluminum windows: Lupton Mfg. Insulating glass: Polypane. Hollow metal doors: Williamsburg Steel Products. Rolling steel doors: Kinneer. Sliding aluminum exterior doors: Kawneer. Locksets, panic hardware and door closers: Sargent. Electronic door closers: LCN Sentronic. Hinges: Hager. Various paints: Benjamin Moore Co. Laboratory casework: Hamilton Mfg. Freight elevator: Escal. Surface-mounted fluorescent lighting: Wakefield. Water closets and lavatories: American-Standard. Flush valves: Sloan. Heating system: York Division, Borg-Warner Corp. Pneumatic controls: Johnson Service.

Brant-Johnson house, Vail, Co (p. 60). *Architect: Venturi & Rauch, Philadelphia.* Windows, doors: Pella. Hardware: Hand-forged by Newton Millham. Kitchen range: Vulcan. Bathroom fixtures: American Standard. Heating: Intertherm.

Weekend house in Westchester County, NY p. 64). *Architects: Venturi & Rauch, Philadelphia.* Locksets, cylinder type: Schlage. Exterior bleaching oil: Cabot's.

de Bretteville and Simon Houses, Los Angeles, Ca. (p. 72). *Architect: Peter de Bretteville, Los Angeles, Ca.* Steel grating: United Integrated Grating. Trusses: Trusjoist Corp. Steel: Curoco. Insulation: Johns-Manville. Windows: Rebco, Torrance Metal Windows. Entrance door: Rebco. Washer-dryer: Westinghouse. Downlights: Halo. Water closets: Colton. Heating: Westinghouse.

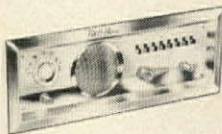
Schulitz house, Beverly Hills, Ca (p. 76). *Architect: Helmut C. Schulitz, Los Angeles, Ca.* Open web steel joists: Great West Steel Ind. Steel decking: Verco Mfg. Inc. Stair treads: Curoco. Aluminum siding: George D. Widman, Inc. Carpet: Bigelow. Roofing: Flintcote. Fiberglass insulation: Owens/Corning Fiberglass. Windows: International Window Corp. Doors: Arcadia/Northrop Architectural Systems. Locksets: Schlage Lock Co. Hinges: Stanley Hardware. Paint, varnish: Sinclair Paints, Dunn-Edwards Corp. Kitchen cabinets: Sears Roebuck and Co. Appliances: General Electric. Stove: Gaffers Sattler. Dishwasher: Kitchen-Aid. Stairs: R & B. Wagner. Fluorescent lights: Lightolier. Water closet, lavatories: Norris Ind. Fiberglass tub and enclosure: American Standard. Furnace: Carrier A.C. Co.



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1 or 2 talking circuits
1 or 2 door opener buttons

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Notices

Reorganizations

Spinney-Parker, Architects, Inc. is the new name for Spinney-Coady-Parker, Architects, Springfield, Ill.

Smith, Hinchman & Grylls Associates, Inc. of Detroit and Metz, Train, Olson & Youngren, Inc. of Chicago have announced the association of the two firms as part of the SH&G network.

3D/International (3D/I) is the new name for Diversified Design Disciplines, Inc. (3D), Houston, TX.

The Hawaii Division of Daniel, Mann, Johnson, & Mendenhall has opened an office in Tamuning, Guam, headed by H. Mark Ruth, AIA.

Gruzen & Partners of New York City, Newark, N.J., and Washington, D.C. has acquired the Washington, D.C. firm of McLeod Ferrara Ensign.

Johnson Hotvedt DiNisco & Associates, Inc., is the new name for Johnson Hotvedt & Associates, Inc., Boston, MA.

[continued on page 121]

New firms

James R. Zachry & Associates, 400 E. Red Bridge Rd., Kansas City, MO. 64131.

Robert A. Brooks, AIA and James T. Collier, AIA have formed **Brooks/Collier Architects**, Suite 220, 3133 Buffalo Speedway, Houston, TX.

Brian J. Pape has established **Habitat Design**, Stephens Bldg., Columbia, MO. 65201, specializing in integrated solar architecture and energy conservation planning.

James Howie, Andrew Freireich, and Joseph Druffel have formed **Howie, Freireich, Druffel, Architects**, 500 Fifth Ave., New York City 10036.

Clifford L. Coleman, AIA and Melissa M. Coleman have opened an architectural practice at Morris St. and Benoni Ave., Oxford, MD. 21654.

Neil Frankel, AIA has established **Frankel/Associates/AIA**, 173 W. Madison, Chicago, IL.

Architect Lynn A. Riley, AIA and Jeffry T. Fletcher, Partner, 213½ E. Broadway, Maryville, TN. 37801.

Mori Mitsui, Architect & Associates, PA., 1189 Hooksett Rd., Hooksett, NH. 03104.

Charles S. Bicksler & Associates, Griffith Towers, Pottstown, PA. 19464.

Robert W. Anderson and Brian R. Klipp have formed **Anderson/Klipp Architects AIA**, 288 Clayton St., Denver, CO. 80206.

Paul Depondt and James M. Peterson have established the architectural/engineering firm of **A/I**, 18 S. Michigan Ave., Chicago, IL. 60603.

Robert F. Galpin, Jr., AIA & Associates and Prem N. Bhandari, AIA have formed **Galpin & Bhandari Architects**, 184 Manget St., Marietta (Atlanta), GA. 30060.

Richard G. Stein, FAIA, Cyril Beveridge, AIA and Carl Stein, AIA have established **Richard G. Stein & Partners, Architects**, 588 Fifth Ave., New York, NY. 10036. The firm is successor to Richard G. Stein & Associates.

Michael A. Rubenstein Associates, 305½ Healdsburg Ave., Healdsburg, CA. 95448.

Ben Weese, A. William Seegers, Tom Hickey, and Cindy Weese have opened **Weese Seegers Hickey Weese Architects Ltd.**, 230 E. Ohio St., Chicago, IL. 60611.

New addresses

Ronald D. Hales, Architect, AIA, 726 25th St., Ogden, UT. 84401.

G.I. Norbraten Architect Ltd., 200-2314 11th Ave., Regina Sask., Canada.

Ueland & Junker Architects and Planners, 1616 Walnut St., Philadelphia, PA. 19103.

Ronald L. Dimery, Architect, 112 Clark St., Oxford, GA. 30267.

Douglas Orr, Winder & Associates, Architects (formerly Douglas Orr, de-Cossy, Winder & Associates), 85 Willow St., New Haven, CT. 06511.

Robert Wagenseil Jones & Associates, Architects, 251 Park Ave. S., New York City 10010.

Mayer, Gawron & Associates, 2704 Main St., Santa Monica, CA. 90405.

3D/International, 200 Park Ave., New York City 10017.

Richard Weingardt Consultants, Inc., 1576 Sherman St., Denver, CO. 80203.

William Cochran Associates, PC, Architects, 1028 Wisconsin Ave., N.W., Washington, D.C. 20007.

Giffels Associates, Inc., Giffels Bldg., 25200 Telegraph Rd., Southfield, MI. 48037.

Appointments

Arthur C. Clements, David A. Heuer, and **Kyun Kim** have been elected partners of **Lothrop Associates, Architects**, Westport, CT., and **White Plains, NY**.

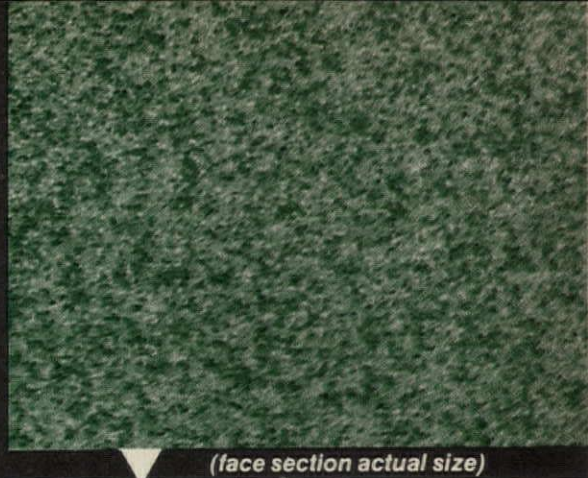
Fritz K. Neubauer and **Barry N. Eiswerth** have been named partners of **H2L2 Architects/Planners**, formerly **Harbeson Hough Livingston & Larson**, Philadelphia, PA.

William W. Camp, PE has been appointed a vice president of **Smith, Hinchman & Grylls Associates, Inc.**, Detroit, MI., and director of a new environmental engineering division. **Dale R. Johnson, AIA** has been named director of the health facilities division.

Richard I. Mitcham has joined **Howard Van Heuklyn & Associates**, Los Angeles, CA., as senior associate and director of professional services.

Kasi Z. Hasan has been named staff architect of **Grayson Associates, Inc.**, architects and planners, Belmont, MA.

Rosalind Dwight has been named to the research and development staff of **Broome, Oringdolph, O'Toole, Rudolf & Associates**, Portland, OR.



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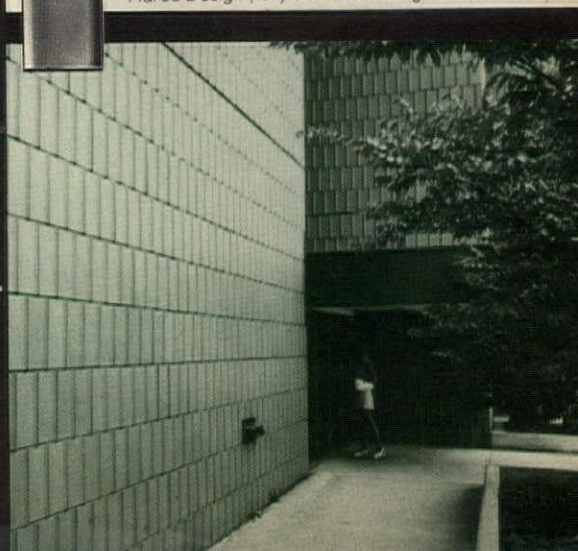
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56' x 7'	1350 lbs.	Steel	Yes	Standard	Standard door for most applications.
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60' x 7'	1450 lbs.	Steel	Yes	Standard	Standard door for most applications.
62' x 7'	1500 lbs.	Steel	Yes	Standard	Standard door for most applications.
64' x 7'	1550 lbs.	Steel	Yes	Standard	Standard door for most applications.
66' x 7'	1600 lbs.	Steel	Yes	Standard	Standard door for most applications.
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70' x 7'	1700 lbs.	Steel	Yes	Standard	Standard door for most applications.
72' x 7'	1750 lbs.	Steel	Yes	Standard	Standard door for most applications.
74' x 7'	1800 lbs.	Steel	Yes	Standard	Standard door for most applications.
76' x 7'	1850 lbs.	Steel	Yes	Standard	Standard door for most applications.
78' x 7'	1900 lbs.	Steel	Yes	Standard	Standard door for most applications.
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