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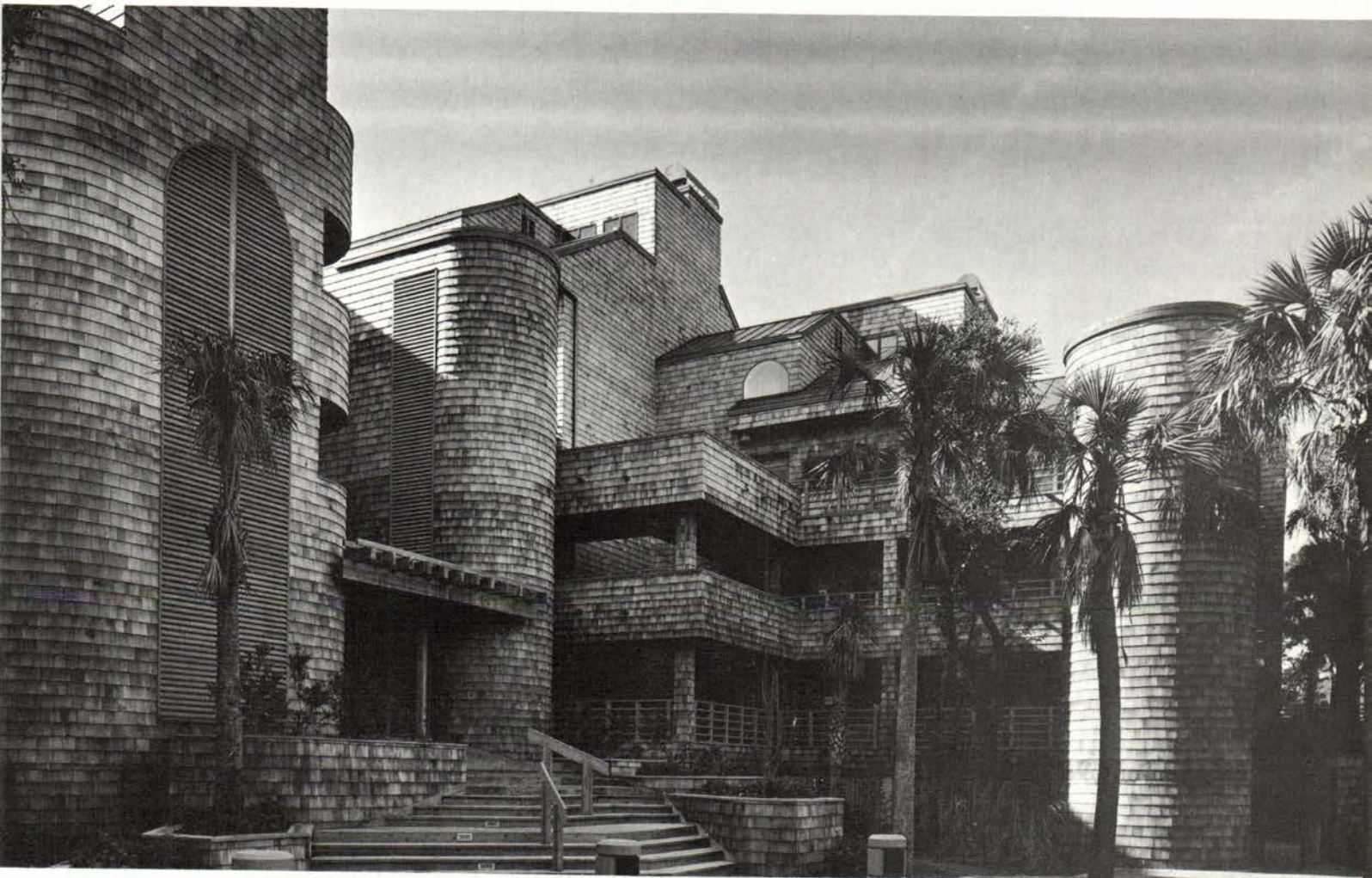


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EVENTS

July 8: Symposium on Asbestos Abatement, Washington, D.C. Contact: Mike Cohn at Institute headquarters, (202) 626-7366.

July 10-12: Chain Link Fence Manufacturers Institute Summer Meeting, Napa Valley, Calif. Contact: CLFMI, P.O. Box 926, B-F Station, Washington, D.C. 20044.

July 12-13: Fifth Annual San Francisco Forum on Architectural Issues—Place Lost and Recovered: Resurgence of the Figurative Dimension in Architecture, San Francisco. Contact: Association of Collegiate Schools of Architecture, 1735 New York Ave. N.W., Washington, D.C. 20006.

July 12-14: BeauxArch III, Architectural Exposition, Bridgehampton, N.Y. Contact: The Hampton Day School, Butter Lane, Bridgehampton, N.Y. 11932.

July 13-16: International Carpet and Rug Market, Atlanta. Contact: Chas Sydney, Atlanta Market Center, 240 Peachtree St. N.W., Suite 220, Atlanta, Ga. 30043.

July 14-16: National Stone Association Operations Division Meeting, Indianapolis. Contact: Gary W. Donnelly, NSA, 1415 Elliot Place, N.W., Washington, D.C. 20007.

July 15-19: Course on Residential Energy Auditing, Madison, Wis. Contact: Donald R. Schramm, Dept. of Engineering and Applied Science, University of Wisconsin-Extension, 432 North Lake St., Madison, Wis. 53706.

July 17-19: CALICON 3, Western Merchandise Mart, San Francisco. Contact: Diane Scheiman, 1355 Market St., San Francisco, Calif. 94103.

July 21-25: Annual Conference of the Illuminating Engineering Society of North America, Detroit. Contact: Betty Downs, Illuminating Engineering Society, 345 East 47th St., New York, N.Y. 10017.

July 22-26: Twelfth Annual Conference on Computer Graphics and Interactive Techniques, San Francisco. Contact: SIGGRAPH '85, 111 East Wacker Drive, Chicago, Ill. 60601.

July 22-26: Course in the Application of Infra-red Scanners to Detect Building Energy Losses and Roof Moisture, South Burlington, Vt. Contact: The Infrascpection Institute, Juniper Ridge, Box 2643, Shelburne, Vt. 05482.

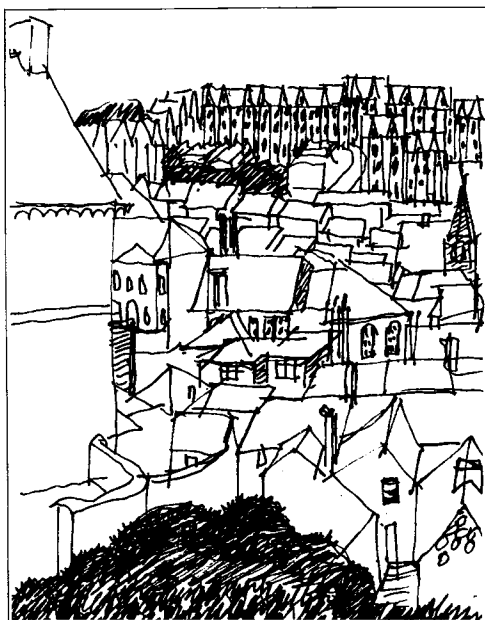
July 23-25: The National Fire Research Strategy Conference, Gaithersburg, Md. Contact: Kenneth E. H. Backman, Director, National Fire Protection Association, Batterymarch Park, Quincy, Mass. 02269.

July 25-26: AIA Energy in Architecture: Process Workshop, Argonne, Ill. Contact: Brenda Henderson at Institute headquarters, (202) 626-7353.

July 29-30: AIA Energy in Architecture: Practice Workshop, Argonne, Ill. Contact: Brenda Henderson at Institute headquarters, (202) 626-7353.

July 29-Aug. 2: Course on Principles of Construction Specifications and Contract Writing, Madison, Wis. Contact: Philip M. Bennett, Dept. of Engineering, University of Wisconsin-Extension, 432 North Lake St., Madison, Wis. 53706.

LETTERS



Jules Gregory Remembered: The profession of architecture has lost one of its most constructive and talented members in Jules Gregory, FAIA, of New Jersey (see April, page 39). Jules was a gifted, award-winning designer, and his loss will be felt personally and by his colleagues and collectively by the professional organization that he helped so continuously and effectively through his long, productive career. In all of his service his close companion and constant helper was his wife, Nancy.

Jules was a man of large vision, purpose, and heart, and it is fitting that he was rewarded, just a few years ago, by receiving AIA's prestigious Kemper award, mostly for indefatigable efforts in building the R/UDAT program—the most unselfish and effective program the Institute has ever achieved.

The drawing (above) of St. Ives, Cornwall, was made by Jules on a trip to England in 1980. *John J. Desmond, FAIA
Baton Rouge, La.*

Law Firm's Art Selections: As a member of the Howard, Rice law firm, I was delighted to see the thoughtful treatment your magazine gave to our recent office renovation project (see January, page 78). We are delighted with the marvelous design and execution by Gensler & Associates, and our delight is shared by the many visitors to the firm.

Your article incorrectly suggests that the featured art works were chosen by Kei Yamagami. While Ms. Yamagami con-

tributed greatly to the renovation project, the art works were chosen by Mary Zlot, our excellent art consultant. Ms. Zlot worked tirelessly and closely with the art committee, and we would have been lost without her expert advice, imagination, energy, and patience.

*Howard N. Nemerovski
San Francisco*

Citicorp Credits: Thank you for your coverage of the San Francisco Citicorp Center project in the March issue of *ARCHITECTURE* (page 136). Please note that Arthur Golding, AIA, who was then principal in charge of design for our firm, was, to a great extent, responsible for the design of the building. The project designer who worked with him was Ralph Stanislaw. I served as principal in charge.

*Roy G. Schmidt, AIA
President and Chief Executive Officer
William L. Pereira Associates
Los Angeles*

Haas in Texas: Richard Haas is fabulous, and your article in the April issue (page 73) was a fine presentation. One item of note: The view on page 77 of the Republic Bank interior is not a "Lone Star tower" but specifically the San Jacinto Monument of 1936 by Alfred C. Finn, site of the final victory of the Texas Revolution. The monument will get a little more notice again next year when Texas celebrates its sesquicentennial.

*Peter C. Papademetriou, AIA
Houston*

Comments on the March Issue: Architects are traditionally terrible at spelling (puzzling, since it is a visual art), but it seems unnecessary to affirm this twice in one issue of *ARCHITECTURE*. See "brouse" on page 98 and "translucent" on page 128 of the March edition. There is also an apparent reverse typo (meaning an unintended correction) on page 176, where "Romanesque" is referred to as a "new coinage."

Seriously, your magazine is interesting and well written. A vote of thanks for: (1) intelligible plans of buildings under discussion—not provided by most architectural publications; (2) broad scope presentations, such as the multifaceted coverage of San Francisco and environs; (3) articles offsetting the tendency of architects to talk only to each other, such as "Public Perceptions of Recent Projects" (page 93).

*Anna Strobel, AIA
Cambridge, Mass.*

Addendum: Architect for the renovation of the Barr Building in New York City, whose rotunda and vaulted hall were shown in our April story about muralist Richard Haas (page 76), was Oppenheimer & Vogelstein.

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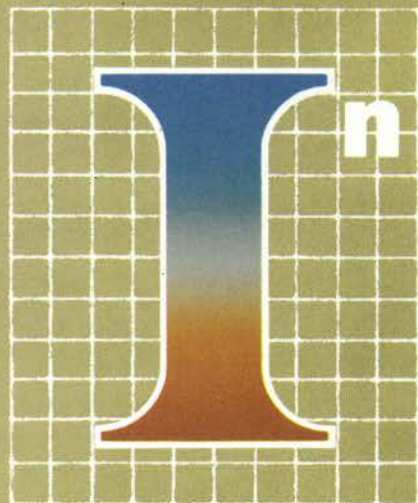
Cover: Marquis Associates' Primate Discovery Center at the San Francisco Zoo. Photograph by Kirk Gittings/Syntax (see page 42).

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Planning

Conference Looks at the Benefits, And Problems, of 'Skyways'

If streets are for people, who and what are the skyways for? Not a frivolous question. Once confined to the snowy reaches of Minneapolis and St. Paul, skyway systems have popped up in Des Moines, Charlotte, Cincinnati, and Dallas, with many other cities at least toying with the idea. They are rapidly becoming second cities, running over and through the existing ones like threads through a loom. Since they are not going to disappear, integrating them into existing cities—socially, economically, and architecturally—has become a critical planning issue.

Two hundred planners, architects, and city officials gathered recently in Minneapolis to discuss how this might be done. Cosponsored by the Walker Art Center and the University of Minnesota school of architecture, the skyways conference featured lectures and workshops on the politics of skyways, the economics, esthetics, and geography of skyways, even the anthropology of skyways. Critic Colin Rowe gave a capsule history of skybridges; historian Sam Bass Warner talked about them as largely private networks that pose a growing threat to the traditional open or liberal city.

If all of this discussion produced no concrete solutions, part of the reason is that skyways are such a recent urban phenomenon. The history of the modern skyway system began in the early 1960s in Minneapolis, as a means of countering the flight of business from downtown to the suburbs. The skyways acted like a gigantic drawstring that pulled the downtown together while providing protection from the brutal Minnesota winters.

Economics and climate continue to be the main justifications for building skyways, though the relative importance of each varies from city to city. By tying groups of buildings together, skyways can create dense commercial centers that can compete with the suburban shopping centers. In many respects, they are second-story suburban shopping malls that also offer attractive economic returns to those fortunate enough to be on them.

Some Dallas developers, for example,

estimate that being located on the skybridge and tunnel network is worth \$1 per square foot on office leases, not counting the benefits gained from leasing space faster than the competition. In Houston, the estimates are closer to \$2 per square foot. While not everyone agrees with these estimates, no one believes that skyways and tunnels are an economic liability.

Several speakers emphasized, however, that the economic benefits of skyways must be balanced against their social costs. Richard Maschal, architecture critic of the Charlotte (N.C.) *Observer*, explained that the introduction of a skyway system has altered downtown Charlotte's once vigorous street life, with the skyways remaining mostly white, the streets and sidewalks mostly black, and very little interaction between them. He also noted that as rents on the skyway level rise, less expensive stores are being forced down to the street, creating a kind of economic stratification to go with the racial one.

A similar situation is developing in downtown St. Paul, though without the ominous racial overtones. The city lives on the skyways, while the street level is given over more and more to marginal retail activity—or to none at all. In Minneapolis, however, the situation is quite different, with both street and skyway

levels working well, at least in the vicinity of Johnson and Burgee's IDS Center. The disparities point up not only that all cities are different, but that no one city can really be a model for any other.

There was widespread agreement among conference participants that the general level of skyway design is appalling, with handsome bridges such as those surrounding the IDS Center in Minneapolis greatly outnumbered by nightmarish designs that violate the buildings they connect and the overall visual character of a city. Most are merely abstract tubes through which people are funneled like pills into a bottle. Few function like streets.

In one of the conference's more illuminating moments, architecture students from the University of Minnesota presented designs for converting sections of skyways into theaters, observation decks, second level squares, and plazas. Whatever the practical problems, the presentations underscored how limited and embryonic the thinking about skyways is at the moment.

There was also a consensus among the conference participants that skyways and tunnels cannot be divorced from an overall plan for a downtown. They are only one part of a larger network that includes streets, sidewalks, parks, and plazas. In too many cities, the system has become a kind of god, frustrating thoughtful consideration of alternative means for achieving the same ends.

One clear message from the Minneapolis conference to cities that are wrestling with skyways and tunnel systems was to slow down, stand back, and take the long view, not the expedient one.

DAVID DILLON *News continued on page 16*



Allen Freeman

Skyways at IDS in Minneapolis.

Indoor, Outdoor Spaces Studied in San Francisco

Indoor public spaces should be highly visible from the street, link up with other public spaces to form a network of pedestrian environments, and include shops and fountains, concludes a study by the San Francisco architectural firm of Kaplan, McLaughlin, Diaz. The study, "Tall Buildings, Tight Streets," is the basis for a professional program this month at the AIA Convention in San Francisco.

Based primarily on a survey of public attitudes toward a range of indoor and outdoor public spaces in winter and summer, plus design analysis and interviews with professionals who manage and evaluate public spaces, the study concludes that enclosed public areas, if well designed, are potentially better used than outdoor parks and plazas, particularly in extreme climates of either hot or cold weather.

The study also finds that the best-liked indoor spaces provide ample public seating in a variety of forms; are liberally landscaped to contrast with surrounding densely built urban fabric; have skylights or other sources of plentiful natural light; rise to more than three floors with at least two floors of activity; contain restaurants and food vendors; employ bright colors and bold graphics; include a variety of linked small spaces; and provide a place for organized and spontaneous events.

The user survey, conducted by Kaplan, McLaughlin, Diaz and architectural sociologist Galen Cranz of the University of California, Berkeley, consisted of 40 to 50 interviews at each of eight sites in downtown San Francisco. These were Transamerica Redwood Park, Sydney Walton Park, One Market Plaza, the Hyatt Regency Hotel lobby, the shopping complex at Three Embarcadero Center, Justin Herman Plaza, Crocker Galleria, and 101 California. (The last three were also part of a user survey that formed the basis "Public Perceptions of Recent Projects";

see March, page 93.) At a ninth site, Golden Gateway Arcades, 14 interviews were held.

The standard questionnaire asked people to rate each space on a scale of one to ten and included such questions as "Do you feel this is a public place or just for people with business here?" "Would you ever come here to meet others?" and "Do you feel comfortable being here by yourself?" Interviews lasted two minutes.

The most popular outdoor space was

Sydney Walton Park at Jackson and Front streets, a meandering grassy setting with a fountain. It was rated a 10 by 29 percent of those interviewed. Golden Gateway Arcades, formed at the base of two contiguous multiple use projects by Wurster, Bernardi & Emmons and Fisher-Friedman Associates, was also rated a 10 by 29 percent. John Portman's Hyatt lobby and SOM's Crocker Galleria were the favored indoor public spaces; both were rated a 10 by 22 percent of interviewees.

Practice

Workshop Discusses Impact of Environment on Productivity

During a recent workshop on "The Impact of the Work Environment on Productivity," psychologists were asked what, exactly, is white collar productivity; architects and designers were asked to what extent office design promotes or hinders productivity and how to evaluate the effects of their designs; and managers were asked if it can be determined that current ratios of investment in intellectual versus technological capital are reasonable.

The workshop, held in April at AIA headquarters and sponsored by the Architectural Research Centers Consortium and the National Science Foundation, also attracted structural, mechanical, and electrical engineers, economists and building economists, planners, real estate analysts, sociologists, ergonomists, building diagnosticians, builders, developers, and scientists—and architects. Participants came from the United Kingdom, Sweden, Germany, France, and Japan, as well as the U.S. and Canada.

Topics discussed included changes in office work roles and job functions; the accommodation of office automation equipment; the relationship of design to its "sister" discipline ergonomics; physiological problems of visual display terminals and the ambient environment of the office; the health of office workers in sealed office buildings; and energy conservation. Conferees considered the possible result of greater opportunities for individuals to control their work environments and threats to privacy from telecommunications and open office planning.

In a background paper, Duncan B. Sutherland Jr. of CRS Sirtine, Inc., noted that every factory worker in the U.S. is backed by \$15,000 or more of capital investment in production tools, while little more than a tenth of this investment goes to facilitate office worker productivity. Efforts to address this imbalance have produced a flood of new, micro-processor-based production tools, rang-

ing from word processors to high-tech pocket calculators. Several participants said that neither the flood of information technology devices nor the best design talents have appreciably increased the productivity of office workers.

The conferees confronted these concerns: Why has the problem proven so intractable? Where have the promises of an information age failed? Was the problem, perhaps, information processing itself? Is it an appropriate technology? Were these unrecognized, more fundamental issues blocking white collar productivity? Are the calculations used to measure such insubstantial quantities as "service" and "productivity" relevant to design research? Is a well-designed architectural office conducive to productivity, or is the opposite the case?

Computer technology, which is changing the face of business, is also altering the face of the office. Our depth of understanding as to the use of this technology to increase organizational productivity lags far behind our ability to create it.

Long-term research studies, conducted by Dr. Arthur Rubin at the National Bureau of Standards, indicate that design considerations are frequently ignored in the process of office automation, resulting in attribution worker dissatisfaction. Automation had proliferated on the assumption that it would increase productivity, but there was little evidence that this has taken place. The NBS studies indicate that lack of office worker involvement in design planning for automation was the major reason for the limited success it had found in the federal sector.

The physical impact of information technology equipment in offices has been evidenced by a rapid proliferation of terminals and associated machines in workplaces. As machines and their connections increased in size and complexity, causing problems of heat and noise, addi-

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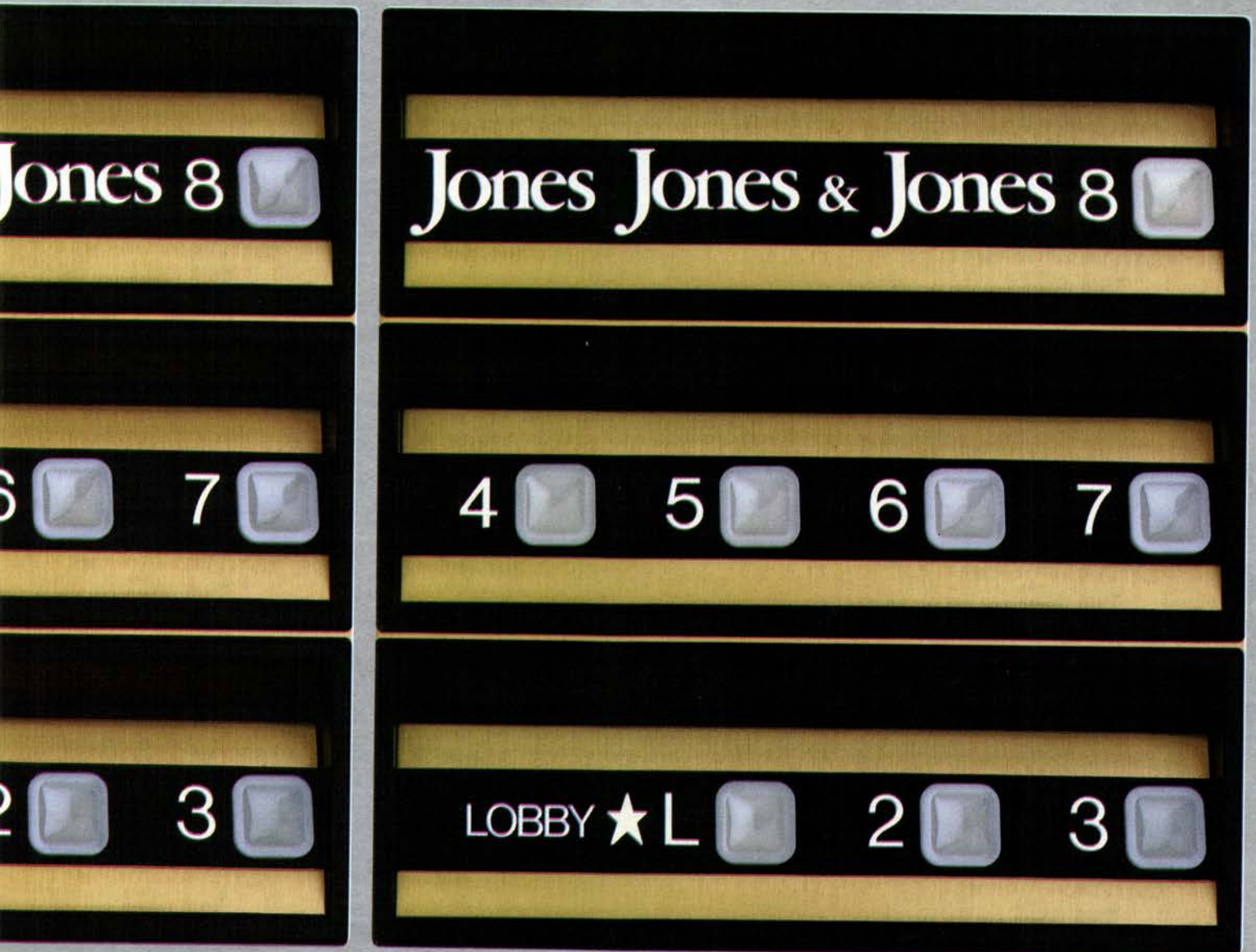
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Unless otherwise indicated, the news is gathered and written by Allen Freeman, Nora Richter Greer, Michael J. Crosbie, and Lynn Nesmith.

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Practice from page 16

tional space for information tools and mechanical equipment to temper new environmental conditions was often lacking and often demanded. Office automation has forced organizational changes such as reductions in the size of working groups and changes in organizational patterns of space usage.

Advanced information technology introduces disproportionate patterns of equipment and space usage to those lower in the office hierarchy in contrast to the space needs in nonautomated offices. As an example, a word processing installation may increase a secretary's space needs by 50 percent, while a coworker's functional space requirements remain static.

Information technology forces an expan-



Drawing by Forrest Wilson

sion and overlapping of traditional job boundaries. Managers become involved in information processing tasks traditionally confined to professional subordinates, and these may in turn participate more in management decisions. Secretarial and clerical workers extend routine processing work into areas traditionally confined to middle management. Jobs, as a result, must be analyzed by functional content rather than structural hierarchy.

Traditional assumptions that each office worker is consistently engaged in one type of activity demanding a particular set of environmental conditions resulting in designing a single workplace for each individual were challenged by several panelists. As office workers increasingly engage in a variety of activities environmental conditions for them vary. One workplace may be inadequate to their needs, and productivity may depend on being in the right place for the right activity.

Work organizations are complex, intricate, and poorly understood systems. Researchers tend to lose sight of the productive organization as a whole, said Dr. Robert Sommer, University of California environmental psychologist. In addition, different forms of productivity may apply to different kinds of work. A clear trend in office automation is toward emphasis on group productivity rather than the individual as its source.

Participants agreed that today's office precepts were based on anachronistic, turn-of-the-century industrial models. Dr. Jean D. Winemon of Georgia Institute of Technology pointed out that little hard data exists concerning the impact of technology on organizational performance to guide facility planning and design decisions. This holds true, it was agreed, despite a host of rapidly expanding major organizations committed to research concerning "the office of the future."

Challenging questions were raised concerning communication. It turns out, Dr. Francis Ventre of Virginia Polytechnic Institute said, that 60 percent of the workplaces in America have 10 or fewer employees, which hardly renders communication a major problem for that majority. He also said that 98 percent of this country's buildings are less than 100,000 square feet in size and that over half of the non-residential buildings enclose less than 5,000 square feet, the size of a basketball court.

Office research, said Dr. Franklin D. Becker of Cornell University, is guided by a specific cultural milieu. Most research of the workplace and human behavior has been short term, emphasizing survey techniques and focusing on such results as satisfaction and comfort measured in terms of performance and job satisfaction. Additional areas of human perform-

continued on page 22



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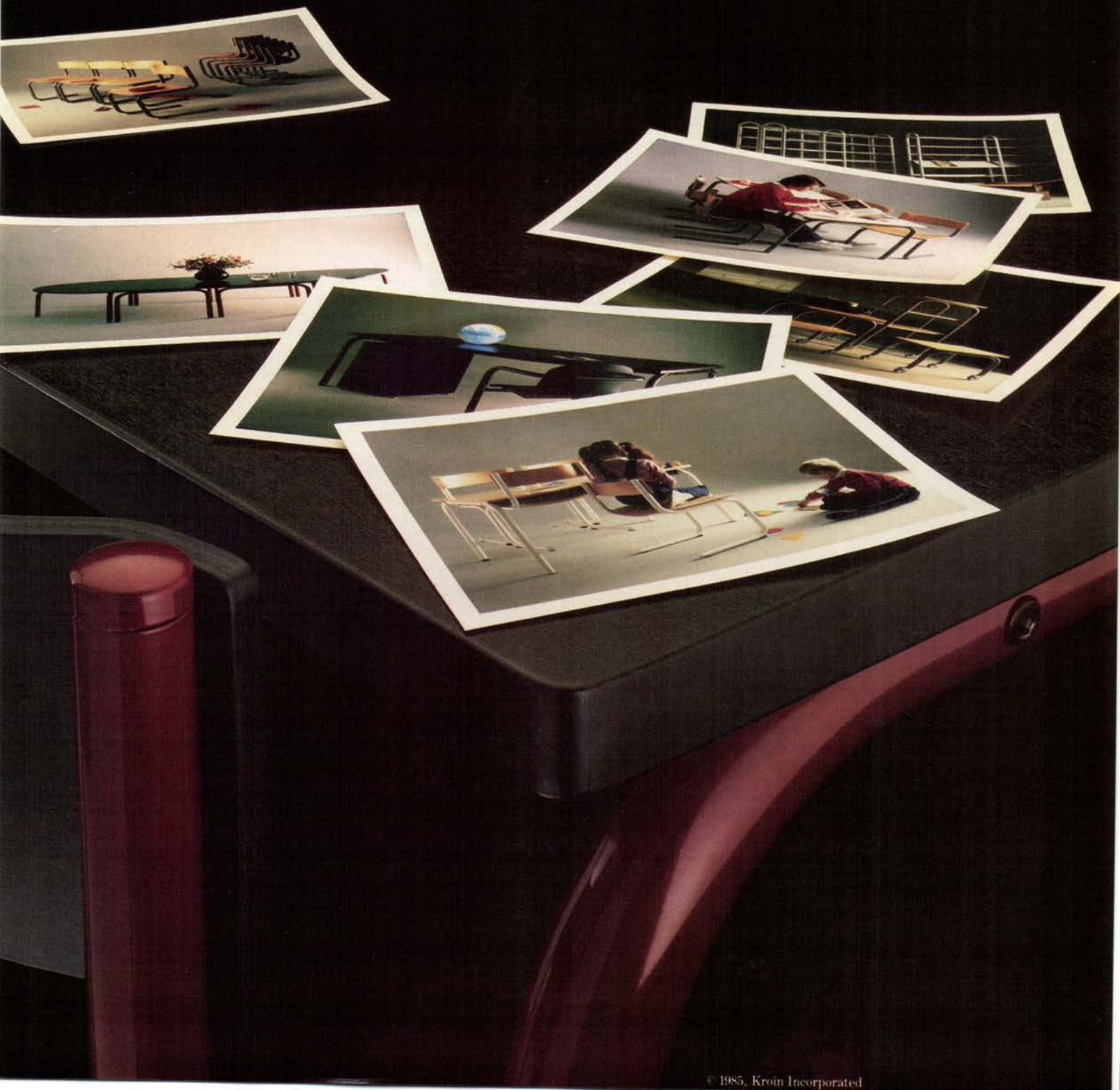
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Practice from page 20

ance must also be given attention, it was argued—for example, work-related social behavior such as cooperation, cohesiveness, group identity, and communication. An alternative, practical solution was presented in which “subjective ratings of environmental conditions” of the occupants would be used directly to gauge building quality. It was also stated that responsibility for productivity lies more with managers than designers. In other words, recognition for accomplishment might well be a more powerful motivation than the work environment.

Professor Peter Jockusch of West Germany said administrators, not the office, should be analyzed. Emphasis on productivity results in dehumanizing effects on both the workers and the general public.

It was also pointed out, somewhat ironically, that unpleasant spaces might encourage employees to work harder to be promoted out of them and into spaces that are more comfortable and in which they could be less productive.

A primary reason that efforts to measure white collar productivity have failed is that the office is conceived as an information factory, Sutherland said. Engineering approaches based on agricultural or manufacturing productivity should not be

applied to the office, he said.

The office is not a production system. It may appear to be such a system, but it is in reality, simply a collection of independent information processing systems called human beings. These combined constitute a “knowledge machine.”

The major problem facing smokestack industrialists in the last century was how to significantly employ human physical effort, Sutherland concluded. The problem that office management now confronts is how to harness intellectual power embedded in an organization's work force.

FORREST WILSON

Dr. Wilson is a professor of architecture at the Catholic University of America.

Study Measures Contribution of Building Exports to Economy

Architectural, engineering, and construction exports by American firms contributed nearly \$11 billion to the domestic U.S. economy in 1983, according to a study by the International Engineering and Construction Industries Council.

However, the study revealed a drop in exports between 1982 and 1983 that translates into losses of almost \$2 billion in

U.S. revenues, 43,000 jobs, more than \$500 million in U.S. wages, and more than \$100 million in federal corporate and personal income taxes. David Perini, IECIC president, said that U.S. exports are threatened by the strength of the U.S. dollar abroad, by heightened foreign competition, particularly in third world markets, by growth in barriers to international trade, and by self-imposed U.S. export restrictions.

The IECIC member groups recommended four steps to increase competitiveness of firms overseas:


- Increase the availability of U.S. competitive export financing by strengthening the Export-Import Bank,
- Support expansion of the U.S. trade and development program,
- Expand the assistance programs provided by the U.S. Foreign and Commercial Service in the Commerce Department, and
- Encourage greater recognition by the State Department of the economic value of business abroad.

AIA, American Consulting Engineers Council, Associated General Contractors of America, and National Constructors Association are member groups that formed IECIC in 1967 to represent the international interests of architectural, engineering and construction firms.

News continued on page 26

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National Trust Honors 18 in Preservation Awards Program

The National Trust for Historic Preservation has cited 18 organizations and individuals in its 1985 preservation honor awards program that recognizes "outstanding achievement in promoting and protecting our nation's architectural, cultural, and maritime heritage."

The recipients are:

- Elizabeth Slater Allen of Providence, R.I., for her continued commitment to preservation and her role in forming the Providence Preservation Society.
- The Archaeological Conservancy of Santa Fe, N.M., for establishing a national program to identify and preserve endangered archaeological sites and for preserving significant sites through outright purchase when no other public or private funding was available.
- The Association for Preservation of Virginia Antiquities in Richmond for acquiring, restoring, and interpreting Bacon's Castle, which was built in 1665.
- David Bonderman of Fort Worth, Tex., for his work as a legal advocate for preservation and his contributions as author of the nation's model preservation ordinance.
- The Brandywine Conservancy in Chadds Ford, Pa., for the King's Ranch rural con-

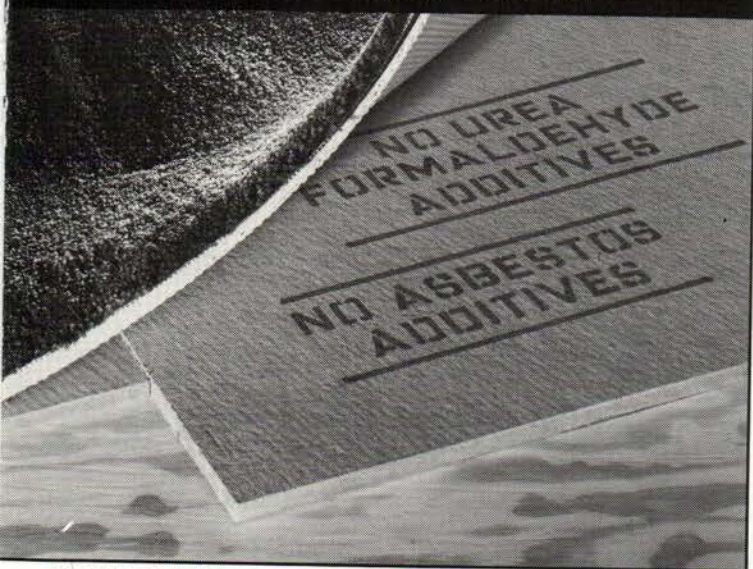
servation project, which successfully built on a strategy involving private capital, federal tax incentives, and a conservation easement to protect the 5,367-acre Buck and Doe Run Valley Farm.

- Architects Cardwell/Thomas & Associates, Historic Seattle Preservation and Development Authority, and the Seattle School District for converting the 1895 West Queen Anne School to housing, the first permanent adaptive use of a vacant school building in Seattle.
- Virginia Devine of Pasco, Wash., for her "outstanding individual effort and personal financial support" to save the Pasco-Kennewick Bridge, which was constructed in 1921.
- Joanne Ditmer for her writing on preservation and urban design issues for the *Denver Post*.
- Ellison/Emery Development of Cincinnati and Richard Rauh, Architect of Atlanta, for the restoration of the 1931 Netherland Plaza Hotel in Cincinnati.
- Friends of Wheeling, W. Va., for its efforts to save the 1849 Wheeling Suspension Bridge through grassroots lobbying, fundraising, and educational programs.
- Georgia Power Co. of Atlanta for its corporate support of preservation programs, including the adaptive reuse of the Terminal Station in Macon, Ga., the Downtown Georgia program, and the Dunover Place demonstration project.

- Billie Harrington of Rochester, N.Y., for her longtime commitment to the Landmark Society of Western New York.
- Historic Nashville for planning and implementing preservation educational programs in the community, specifically the Preservation Awareness Source for Teachers (PAST) and publications such as *The Historic Register* newsletter.
- HTB, Inc. of Tulsa, Okla., and Reading & Bates Corporation of Tulsa, for the restoration and rehabilitation of the Mid-Continent Building in Tulsa (see Nov. '84, page 51).
- Junior League of Portland, Ore., for its commitment to historic preservation through funding and volunteer support of community activities and educational programs.
- Kit Carson County Carousel Association and the citizens of Kit Carson County, Colo., for the successful campaign to preserve and restore a 79-year-old carousel.
- RESTORE of New York City for being the first national program in the U.S. created with the specific purpose of educating craftsmen in state-of-the-art architectural restoration and preservation technology.
- Utah Heritage Foundation and Adele Weiler of Salt Lake City for developing an educational program that reaches approximately 5,000 students each year.

continued on page 34

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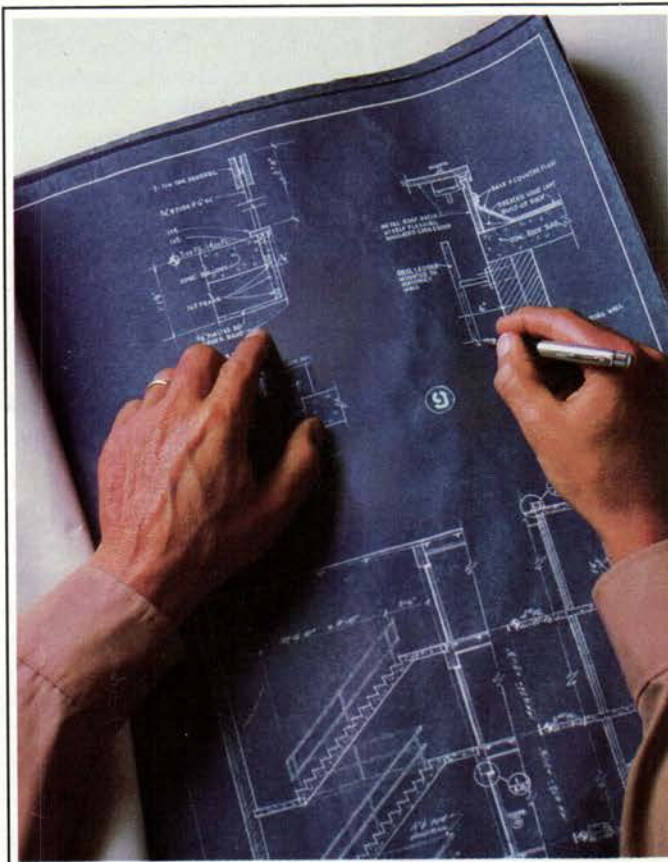
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ARCHITECTURE/JUNE 1985 31

Circle 19 on information card

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Awards and Competitions from page 31

In addition, certificates of commendation were presented to seven public officials and agencies for their contributions to preservation: The California Department of Transportation; Senator John Chafee (R.-R.I.); Barber B. Conable Jr., former congressman from N.Y.; Illinois state Representatives Barbara Flynn Currie and John Hallock of Springfield, Ill.; Representative Norman D. Dicks, (D.-Wash.); California state Senator Milton Marks; and the Nantucket (Mass.) Planning and Economic Development Commission.

Minneapolis Firm Selected in State Building Competition

The Leonard Parker Associates of Minneapolis was selected from among five finalists in a national design competition for a new state judicial building in St. Paul. The finalists were drawn from a field of 54 firms, and each was awarded \$25,000 to prepare perspective drawings, elevations, floor plans, and a small model.

The program called for a \$36 million complex to house the state Supreme Court justices, Court of Appeals, court administrator, law library, and other state judi-

cial functions and to incorporate the existing Minnesota Historical Society Building designed by C. H. Johnson in 1915. The last was originally intended to house the state Supreme Court but its use was changed during construction and the court remained in the Capitol building. The competition guidelines required retention of the "late Roman Renaissance-style" Society Building as an "imageable symbol of the judiciary" while increasing its volume by 300 percent. The site of the new judicial building is on the mall near the Capitol building, which was designed by Cass Gilbert after a similar competition process in 1895.

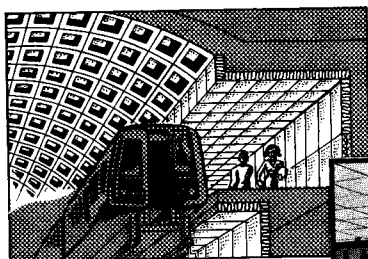
The winning scheme by The Leonard Parker Associates places courtrooms and other public spaces in the renovated and expanded existing building and private spaces such as the offices for the Supreme Court and Court of Appeals justices in the new addition. The entry axis is through the original colonnade, which is interrupted by a new skylight and grand stairway that ends at the large appellate courtroom. Designed as a background setting for the more "object-like" existing building, the addition has a concave west elevation and is set back from the mall behind a series of screening elements. Judges

chambers are located around a semi-circular courtyard that faces the Capitol with the Supreme Court offices on the top floor marked by a crowning band of windows.

The other finalists were Zimmer, Gunsul, Frasca Partnership of Portland, Ore. (second place); a joint design by Gatje Papachristou Smith Architects of New York City and Rafferty, Rafferty, Mikutowski, Roney Architects of St. Paul, (third place); a joint design by Gunnar Birkerts & Associates of Birmingham, Mich., and Architectural Alliance of Minneapolis; and Frederick Bentz, Milo Thompson, Robert Rietow of Minneapolis.

The 13-member jury, a mix of architects and others, consisted of John Rauma, FAIA, of Minneapolis (chairman); Joseph Esherick, FAIA; Robert B. Marquis, FAIA; Glen Paulsen, FAIA; A. Richard Williams, FAIA; Sym Van der Ryn, FAIA; Mildred Friedman, design curator of the Walker Art Center; Beth Dunlop, architecture critic at the *Miami Herald*; Hon. Lawrence R. Yetka, Associate Justice, Minnesota Supreme Court; Hon. Peter S. Popovich, Chief Justice, Minnesota Court of Appeals; state Senator Donald Moe; and state Representative David Bishop. □

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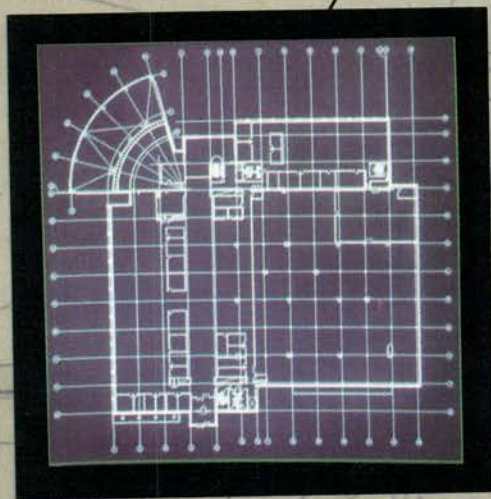
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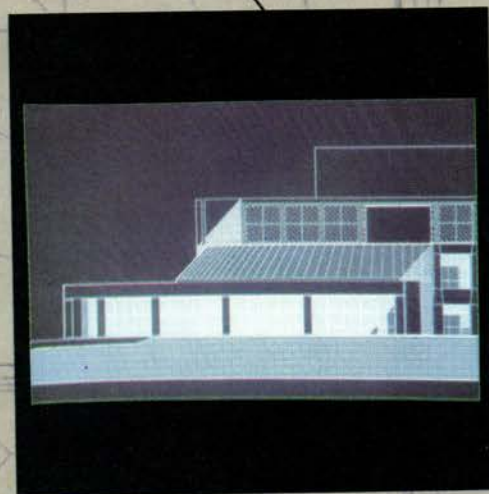
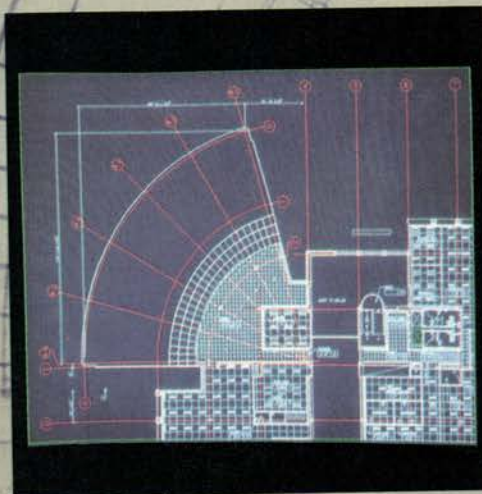
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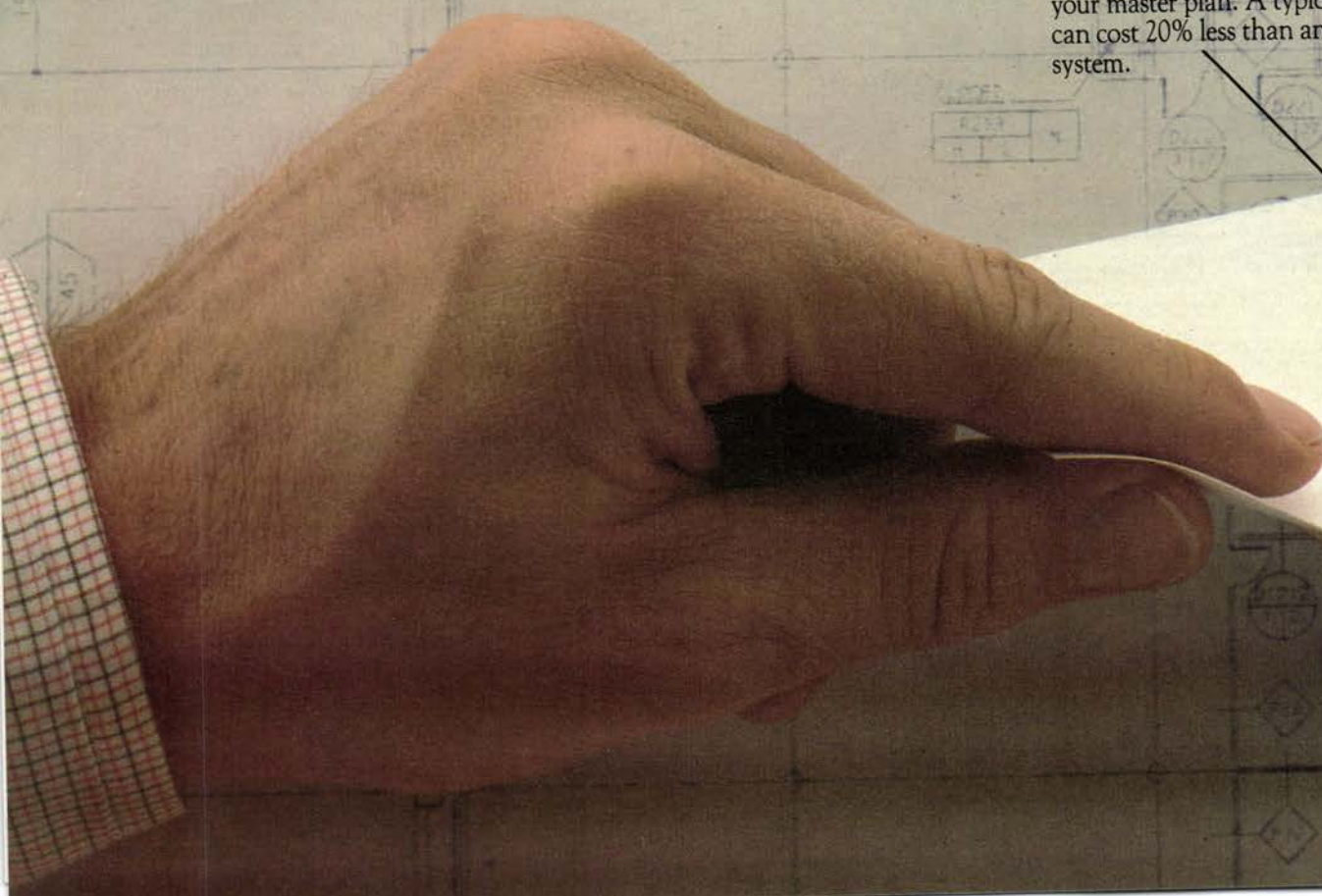


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This month, as do a great many architects, we return to Northern California. The first two buildings in the issue are there, having been readied just a little late for our March issue on the San Francisco Bay Area. In the news section is a report on a survey of some of the effects of the "Manhattanization" of San Francisco, and in the book section a review of a controversial new work on growth and change in that storied city. There is also coverage of San Francisco in one of two articles on coastal development, Pacific and Atlantic.

Next month marks a significant anniversary for this magazine. Since this space and the entire center of next month's issue will be devoted to housing, we will observe the anniversary now.

It will be two years in July since we changed to the name above, and we like it better all the time, mainly because it emphasizes that this is a magazine whose total focus is on architecture as an art and a profession. If anything, that focus gets stronger all the time. It was given impetus, of course, by the fact that in the same issue as the name change we began presenting and analyzing new buildings on a regular basis, instead of only in the annual reviews of U.S. and world architecture. We believe this has strengthened regular issues without weakening the annuals.

In adding new buildings to the editorial mix we announced that we would not play the game of first or exclusive commitments to them. We've stuck with that rule, and we're happy to report that a growing number of frequently published architects now abjure such commitments. We consider that progress, not just for us, but for the basic relationship between the profession and the magazines that serve it. *D.C.*

Soaring Simian 'Conservatory'

*Primate Discovery Center, San Francisco Zoo.
Marquis Associates. By Donald Canty, Hon. AIA*

If the towering superstructure of the building, rising from a broad concrete base, cascading across the sky, resembles a Victorian conservatory, it is no accident. San Francisco's 75-acre zoo, situated just inland from the city's ocean beach, is essentially a Beaux-Arts garden, notes Cathy Simon, principal designer of the primate center (with participation of Robert Marquis, Katherine Anderson; and Steve Perls). The zoo is formally laid out and planted and has a collection of trees that would shame many arboretums.

"The Victorians used enormous glass pavilions to house exotic plants," Simon says. "We decided to build something similar to house exotic animals." Precedent is not far away, in the glistening 19th century conservatory that sits in a similar landscape in Golden Gate Park. There is not that much glass in the primate center. The soaring atria—reaching to 56 feet at their apex—are walled in vinyl-covered steel mesh—but the allusion to the past is immediately apparent and highly appropriate in this setting.

There is drama in the form, in the contrast of dark metal and light concrete, of delicate webbing and solid podium, in the building's sheer height and breadth. But there is a sense of welcome too, and of repose.

This is no arbitrary sculptural ornament. It is a highly complicated facility built to a demanding program for a diverse clientele. There are baboon-like Mandrills who like rocky hills (see cover); Golden Lion Marmosets, the smallest of monkeys, who need a sheltered environment; cat-like Patases who like to run through tall grasses; Crab-eating Macaques, the only primates besides humans who like to swim; the agile Colobuses, who thrive in tall trees. Sixteen species in all, each with its own environmental needs—not counting the human visitors.

The center replaced a line of individual cages along a walkway, the once conventional way to display animals. Simon, who speaks with great affection about the monkeys, says "in those days the animals might as well have been stuffed. There was no recognition that these were creatures with their own life patterns, families or tribes, skills." The Colubus, which can leap 36 feet from tree to tree, had little chance to display its talent in a cage.

Rising from the center's base are, from right, the steel and mesh atria and the cascading metal roof of Discovery Hall. Tall cages at left are backed by trees and a berm containing monkeys' private chambers. In foreground, the Mandrill moat.

Brian Katcher

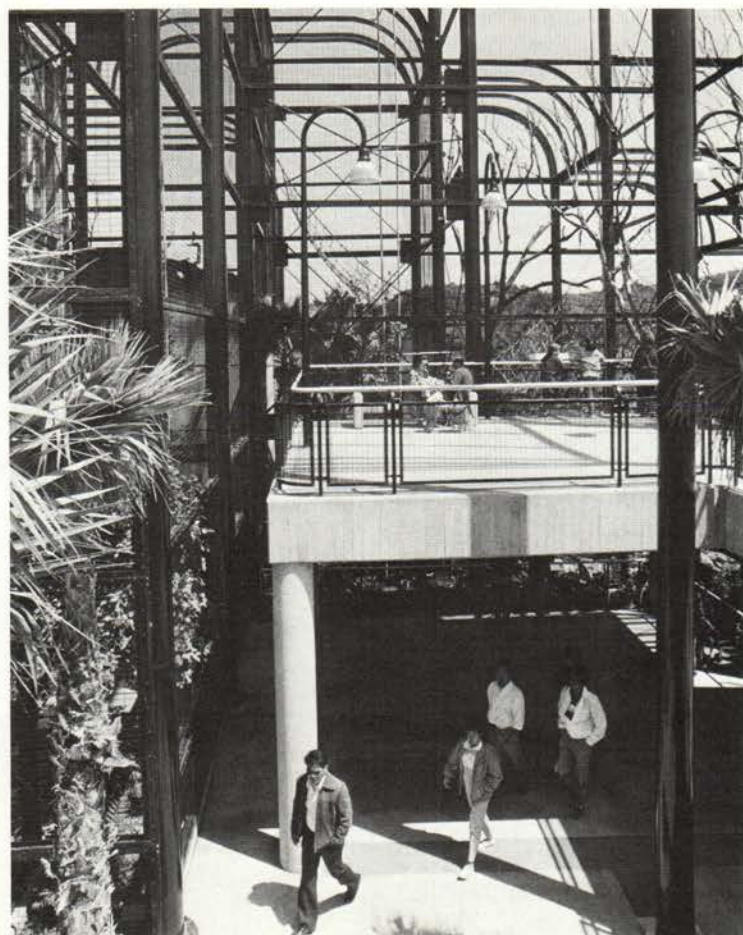




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Brian Katcher

The 16 species were selected to roughly trace the evolution of the primate. Gorillas and large apes are absent because they have their own recently built habitation in the zoo, but it is nearby. The selected species have only one thing in common, and it is that all are either endangered or threatened.

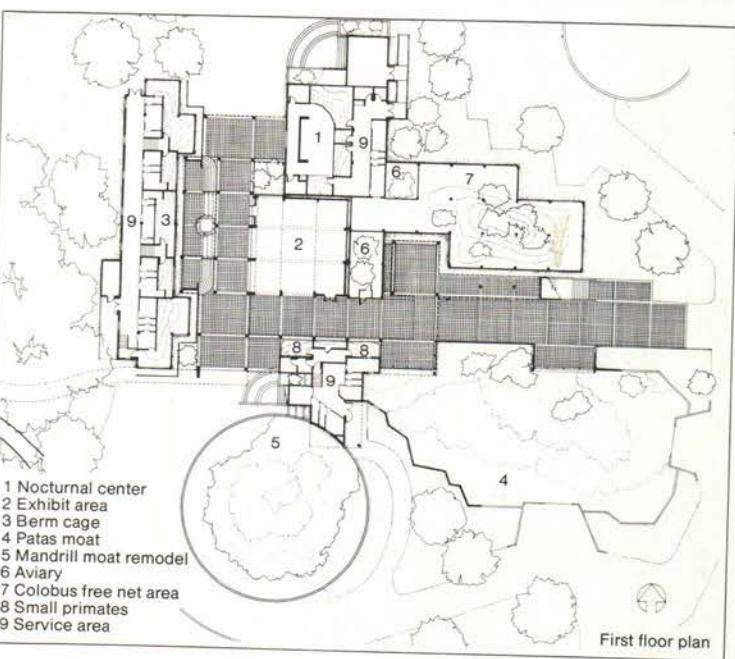
The habitats provided by the center are as varied as the primates. The tallest atria are the province of the Colobus. They are planted in tall trees, but there are no trees as tall as the space, so above the highest branches are pipes that serve as what Simon calls "fake bamboo" for climbing.

The Mandrills have their mound, in a pre-existing concrete moat. The patras have their grasses, many of them wild. Throughout, the landscaping is highly naturalistic, the edges of each plot blurred. The aquatic Macaques, of course, have a waterfall and pool; the smallest monkeys are in three glazed "show cases."

Trees play a strategic role in exhibition of the animals. There was a generous stand just to the west of the site. It shields the center from the prevailing wind off of the ocean, but it also provides a green background for the tall cages along this edge. Similarly, the Colobuses are seen against the small forest within their atrium, making their setting seem all the more natural. Not only do people see the monkeys against green in most situations, the monkeys see the people that way too. The trees between the animals and the structure's perimeter "dematerialize" the latter, in Simon's view.

Two other general principles were established for the viewing of the primates. "People should not be looking down on the animals," says Simon, "as if we were sovereign and they subjects. Studies have shown that being looked down on produces anxiety in animals." The second principle is that, wherever possible, people should not look across the animals' habitats at other people.

Left, ground level path past the center's only small cages. Above, its two contrasting levels. Above right, Patras monkey in wild grasses. Far right, segment of atria showing typical use of trees between the animals and the building's perimeter.





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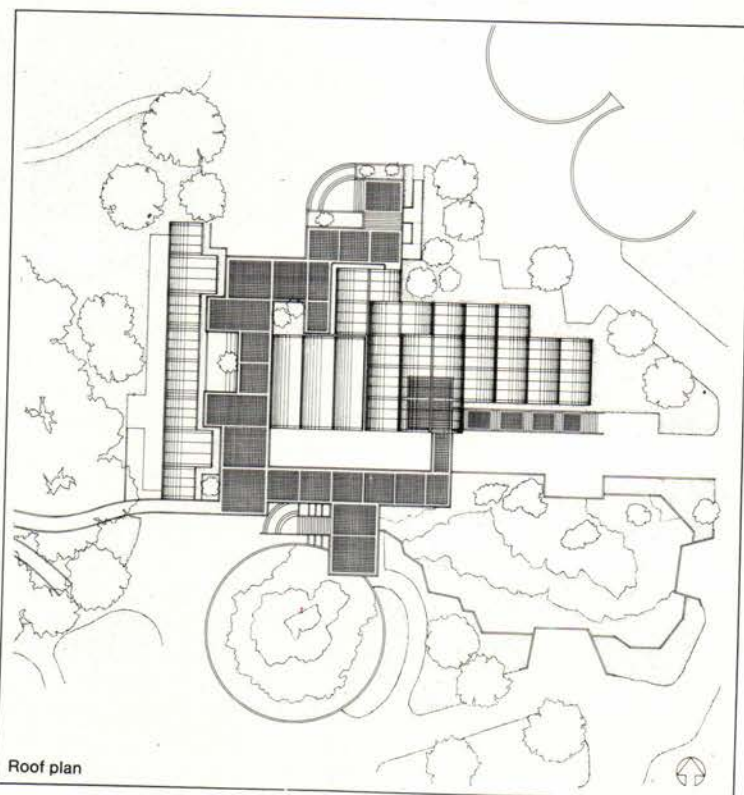


The center provides a wide variety of viewing experiences. Ground level paths through and around the building are alternately open and covered, and always there is a sense of the skeletal structures high overhead. Here are the center's only two real rooms for humans. One is a small but very popular nocturnal center, housing small simian creatures of the night, again in a naturalistic setting. This space is notable for the quality of the dim light achieved by lighting designer Leonard Auerbach, who took a theatrical approach. Usually a uniform blue or green glow in such situations in other zoos, the light here can be focused and has contrasting lighter and darker areas.

The second room is "Discovery Hall." This bright, voluminous space contained 23 "interactive" exhibits designed by the Burdick Group, each in its own way intended to help answer the question, "What is a primate?" Included are four computer terminals with color graphics, keyed to the descriptive signs on the individual animal areas. Themselves unusually informative, the signs also were the work of the Burdick Group.

On the second level is an entirely different experience, literally the high point of the center. Wrapped around the atria here is a broad concrete deck. Having seen the higher-flying primates from afar downstairs, the visitor now can all but look them in

Left, view upward from Patras grounds. Note Colobuses perched in atrium. Above left, Discovery Hall. Top right, Discovery Hall from deck. Framing here changes to white; roof is copper. Light standards are by lighting designer Leonard Auerbach.





Brian Katcher



Top, interplay between primates — visitors and visited. Left, children at a display. Right, the rolling steel frame and mesh at sunset.

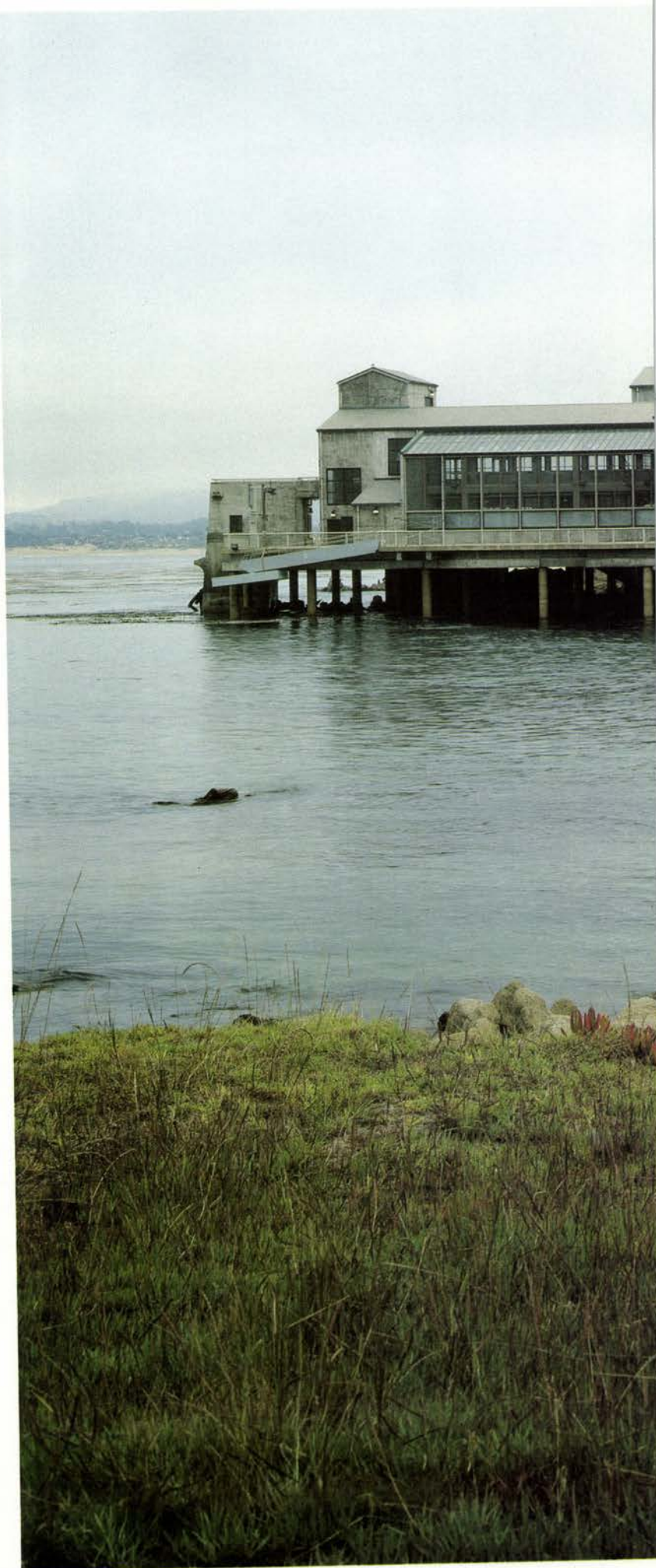
the eye. The feeling is that of a place in the treetops, and indeed, now and then the deck steps back to allow a tree rooted in the ground to penetrate. Being at this level, Simon suggests, may be a subtle reminder that we are primates too. And it provides wonderful views, not only of the primates, but outward over this great, wooded, formal park of a zoo.

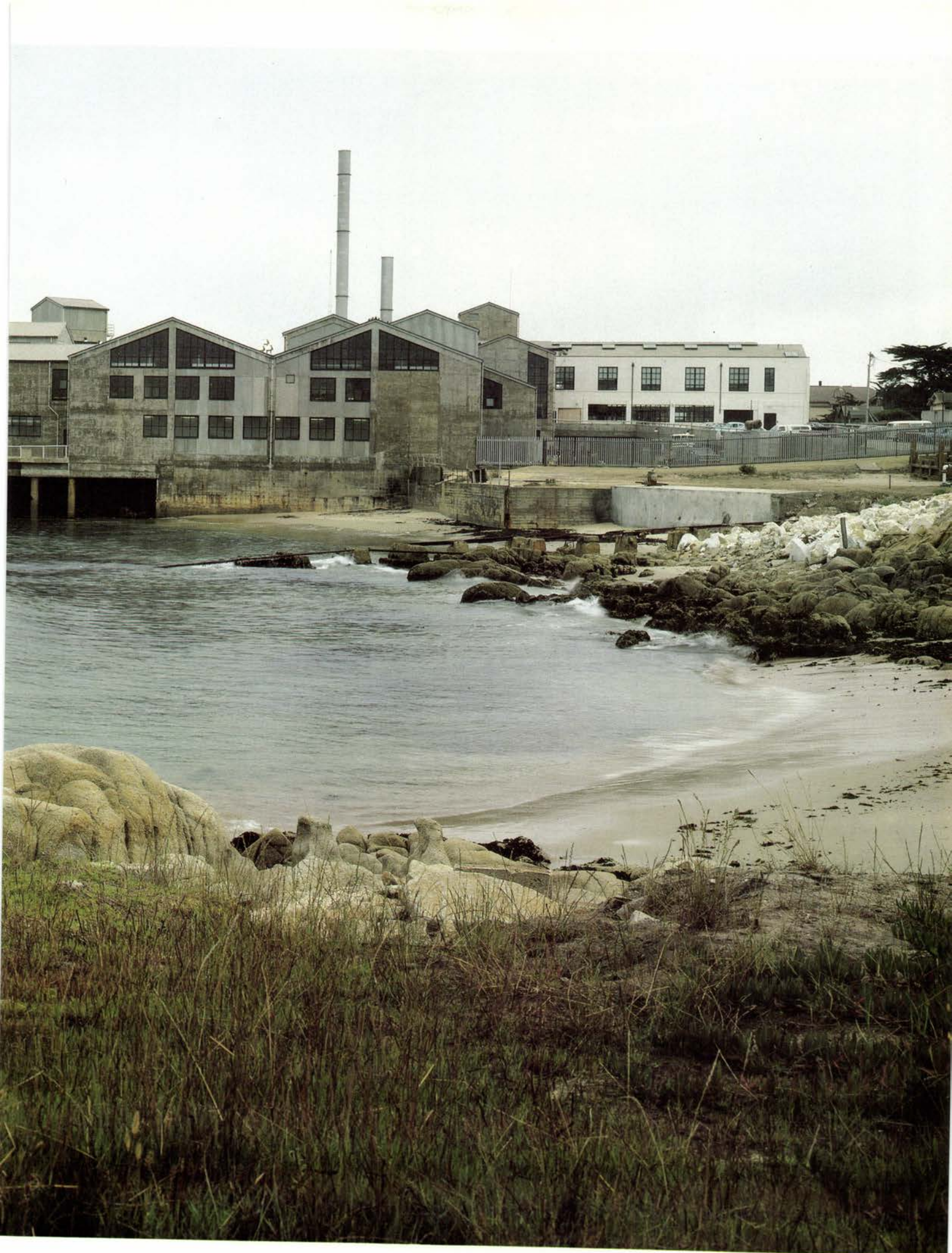
Simon describes the center as "a place for conservation and management of animals, for entertainment and education of the public as well. Conservation includes providing a refuge for endangered species, where breeding may take place for future reintroduction into wild or partly protected habitats. Education is meant to overcome our estrangement from wild animals and to offer an understanding of their environmental and social habits. By presenting animals as an integral part of their environment, we set the stage for an understanding that the best and most effective way to save endangered species is to save their wild habitats—it's no longer a question of saving a bird or a tree, but a whole forest. Zoos must portray this." □



Purposeful Chaos on Cannery Row

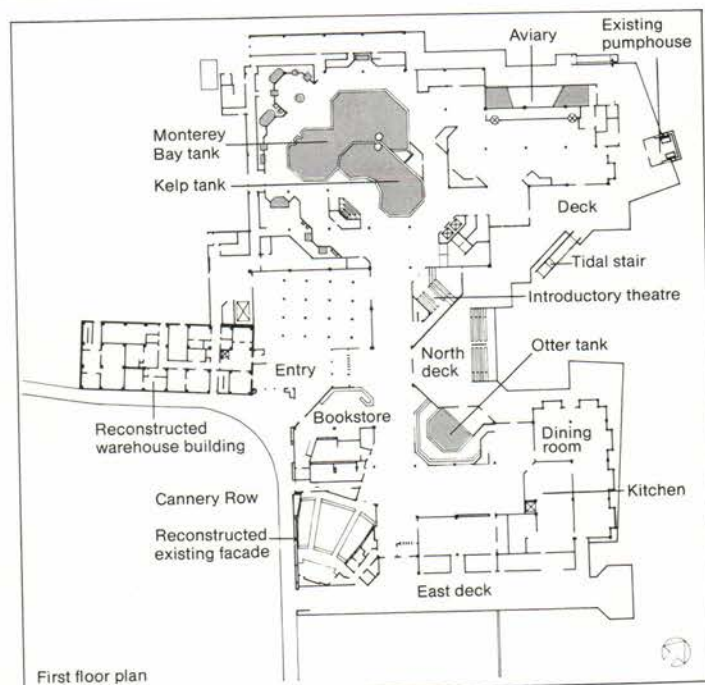
*Monterey Bay Aquarium.
Esherick, Homsey,
Dodge & Davis.
By Carleton Knight III*







Right top, front facade of old cannery was reconstructed while bulk of aquarium is all new construction. Right middle and bottom, exhibit area and cafe wrap around deck and tidal pool. Old foundations serve as base for deck. Below, aerial view and plan show rambling nature of facility. Left, portion of deck, which overlooks Pacific Ocean and enables visitors to see exhibits and natural habitats of aquatic mammals and fish.



A poem, a stink, a grating noise, a quality of light, a tone, a habit, a nostalgia, a dream. . . . The gathered and scattered, tin and iron and rust and splintered wood, chipped pavement and weedy lots and junk heaps. . . ." With those words, John Steinbeck described Cannery Row in Monterey, Calif., in his 1945 novel. Not long after the book appeared, however, the sardines—the lifeblood of the area—disappeared. Why they left or where they went remains a mystery, but with the demise of those little fish, the colorful life as Steinbeck had portrayed it slowly went too. The canneries ceased operation, and eventually the buildings were gentrified, becoming restaurants and boutiques for the myriad visitors drawn to the area. The last and largest of those facilities shut down in 1972, but today it has sprung back to life in a variation of its earlier role, one inspired in part by Steinbeck's description.

The old Hovden Cannery is now the new Monterey Bay Aquarium. Although portions of the old were saved, the public areas are nearly all new construction. What is most surprising is that it looks and feels like the old canneries that Steinbeck haunted, no mean accomplishment by architects Esherick, Homsey, Dodge & Davis of San Francisco.

Before we get into a detailed look at the aquarium and its design, a bit of history. In 1967 Stanford University purchased the Hovden Cannery as a buffer between the increasingly tourist-dominated waterfront and the university's neighboring Hopkins Marine Station, a research facility. The idea of an aquarium, to be located in the old Hovden Cannery, was born at a 1977 cocktail party attended by several local marine biologists. Two of them were sisters, Nancy Burnett and Julie Packard, who wrote their parents seeking support for such an idea. Their father is computer mogul David Packard of Hewlett-Packard. He agreed to fund the entire \$40 million cost, on the condition that the facility become self-supporting.

A foundation to operate the aquarium was established, and the old cannery was purchased for \$900,000. The Packards took a strong interest in the facility—Julie is director—and its design. Charles M. Davis, AIA, principal in charge, describes Packard's approach simply, saying, "He told us, 'I'm going to build the best aquarium in the world.'" Davis indicates his firm was selected because it had designed a marine laboratory in Santa Cruz and had experience with recycling old buildings.

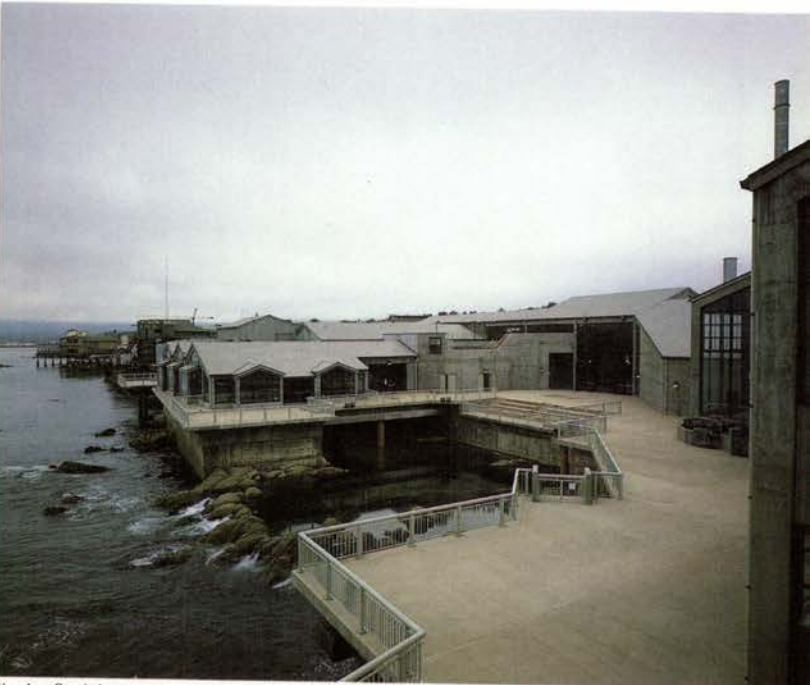
The original idea had been to install a modest aquarium inside the existing cannery, but that approach did not work. Instead, by utilizing some older parts such as the warehouse and boiler house as "anchors" and fitting new construction in and around them, the architects were able to create a complex that is contemporary in nature yet respectful of the past. The aquarium is a massive structure—177,000 square feet—but this bulk is reduced by dividing the complex into what appears to be a number of small buildings. Davis says the result is "almost chaotic with lots of little roofs," but the resulting design looks like the old cannery. Viewed from the sea or the shore, the complex fits into its context, something the California Coastal Commission insisted upon. (Design review by that panel and 13 others took an entire year.) The old boiler house chimneys, for example, had to stay; remade in glass fiber, these triple stacks act as a signpost.

It was no easy task to recreate that historic legacy, according to Davis, who spent five months in Monterey to soak up the atmosphere. "There was no written program," he notes. "The building just evolved. We worked with the staff continually to massage the building." Davis says it helped to have the old cannery, whose character they wanted to preserve, next door to his temporary offices. "Every day we walked over and through the building. It was a kind of Piranesian fantasy with two by fours all painted white and sloping roofs. We regarded it as a special place. It's an area filled with history and metaphor that had to be imbedded in the building."

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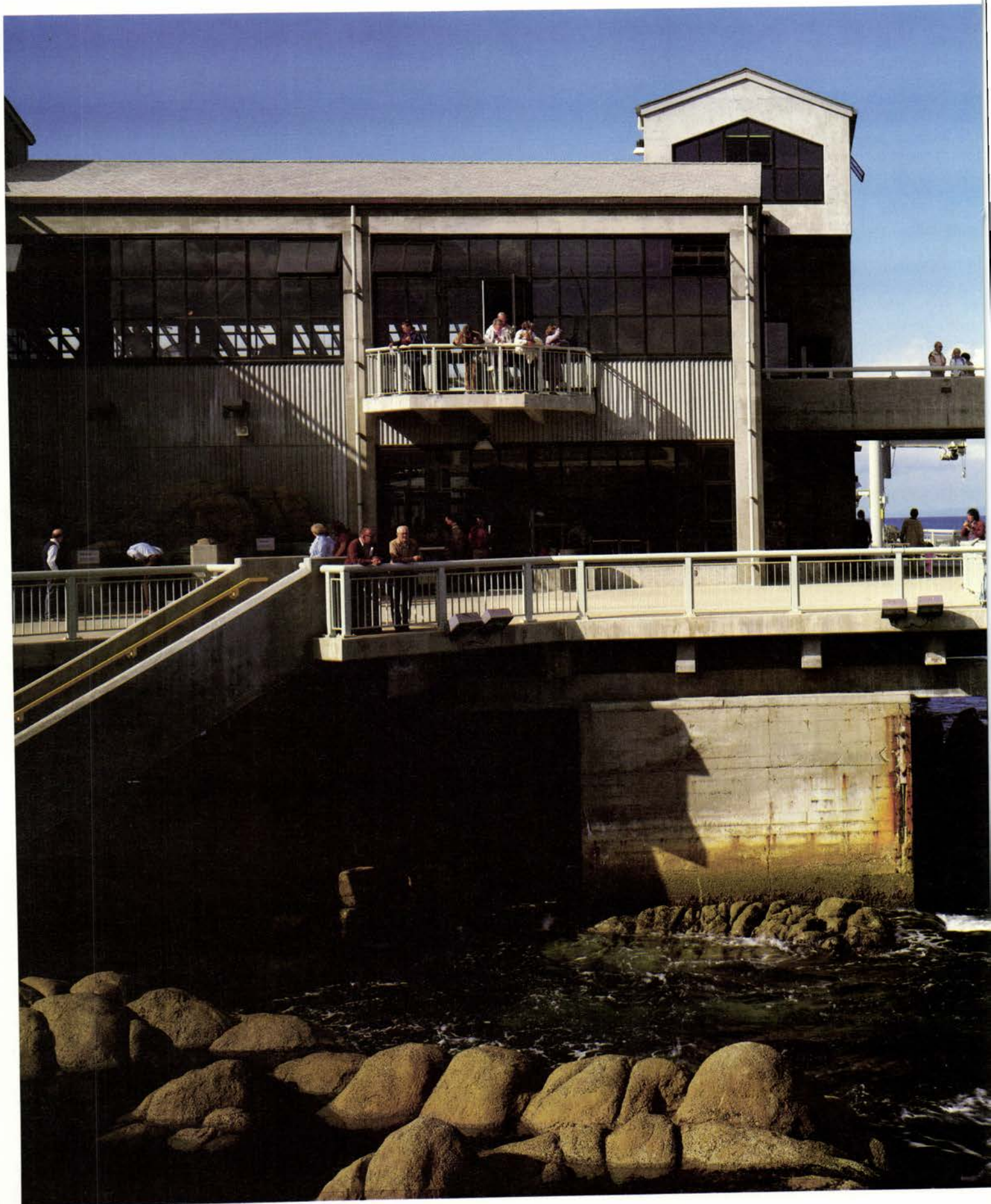


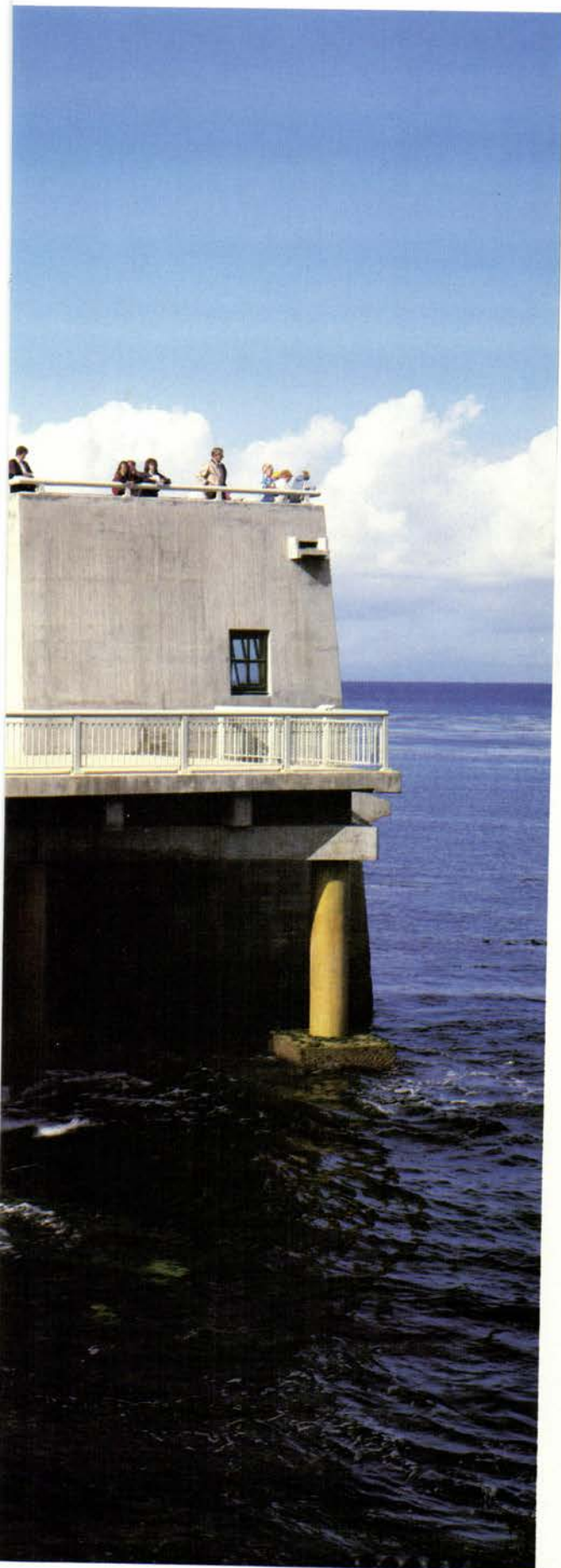
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Nicolas Sapienza







He recalls especially the tremendous range of light—foggy, filtered through clouds, and bright sun reflected off the water—that he was able to see over several seasons. One result of viewing this varied light, he notes, was “to make the building more transparent.” While the street facade is much as it was originally with few openings, the ocean side is heavily glazed and offers 20,000 square feet of decks, all of which reinforce the connection between the exhibits and the real world of the sea, as well as taking advantage of California’s unique climate.

In his introduction to *Cannery Row*, Steinbeck wonders, “How can the poem and the stink and the grating noise—the quality of light, the tone, the habit, and the dream—be set down alive?” In other words, what is the best way to tell his tale? Answering his own question, Steinbeck says, “open the page and let the stories crawl in by themselves.” And that is just the approach taken by the aquarium’s planners with the exhibits. Unlike most similar facilities, visitors to the Monterey Bay Aquarium are not programmed or confined to a predetermined path. Rather, they are left to wander about, seeking out whatever interests them, much as one would when skin-diving on a coral reef or rocky shore.

There are some 83 exhibit tanks in two dozen galleries, all of which are devoted solely to the study of Monterey Bay, whose unusual geology (its bottom is deeper than the Grand Canyon) and habitats (protecting everything from tiny birds to mammoth whales) make it one of the richest aquatic treasure troves in the world. The centerpiece of the aquarium is a pair of huge tanks, including the largest in the country at 355,000 gallons. That one, 28 feet tall by 66 feet long, features a growing kelp forest, while the other is a figure-eight-shaped, 90-foot-long section of Monterey Bay, designed to allow sharks to swim freely, along with other fish and creatures of the deep.

In addition, there are petting tanks, where children may touch starfish and other creatures, a sandy beach with birds, and a tank for an entertaining group of sea otters. Overhead, there are life-size replicas of whales and other fish as well as small boats. The exhibits were all created in-house with the aid of consultants Frederick A. Usher of Santa Barbara, Calif., Ace Design of Sausalito, Calif., and Bios, Inc., of Seattle.

Views across tidal pool to main exhibit building, which makes extensive use of natural light. ‘Conning tower’ at far right is top of pump house used to bring in fresh seawater for tanks.



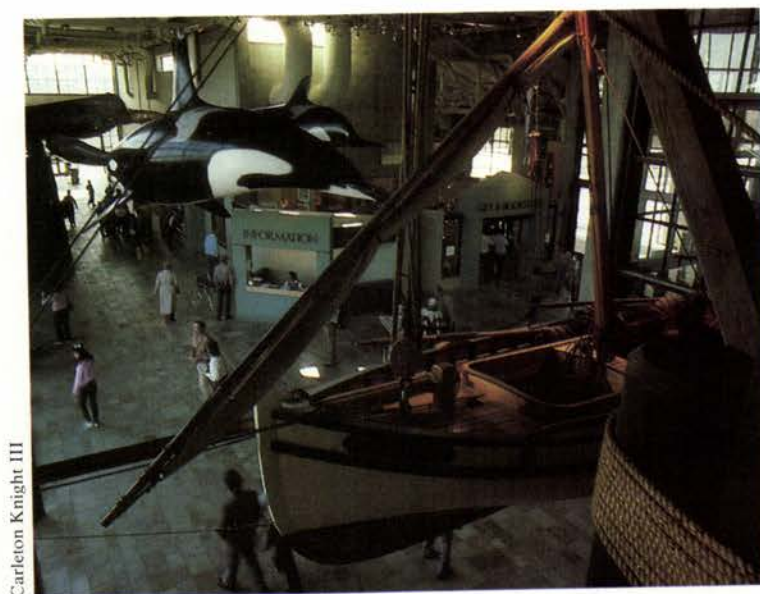
Photographs by Nicolas Sapieha

Right, exposed ceiling with ducts creates factory-like image and permits easy hanging of mammoth glass fiber models of whales and other nautical memorabilia. Below, postmodern bookshop is visible through boat rigging. Below right, kelp in tank.

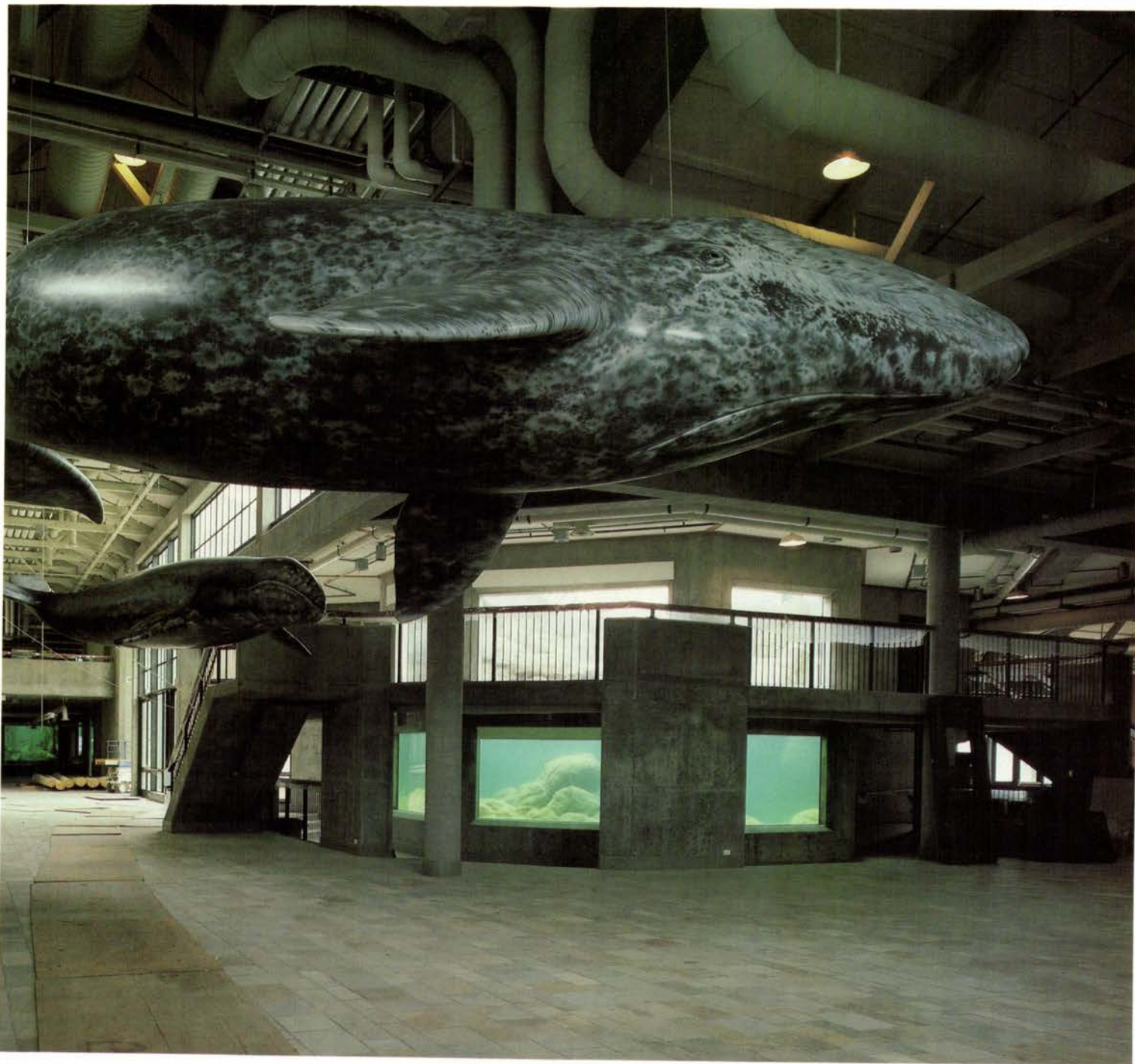
"For all the exhibits, you don't see the architecture," notes Davis. But the architecture is there, purposely tough and industrial to stand up to the corrosive action of the environment, but softened by the addition of wooden railings and benches, which also provide a nautical flavor. Overhead, the ceiling ducts, piping, and framing are exposed, just as in the original warehouse, which was saved and with a new foundation and roof made into the administrative offices. At the boiler house, the walls were removed exposing the structural frame and boilers, now displayed as artifacts. New construction, half of which is over constantly moving water, features concrete walls with corrugated mineral-fiber siding. All materials had to be impervious to the corrosive sea air; the rebar in the specially mixed concrete is epoxy coated, the gutters are copper, and the downspouts are plastic. The industrial steel sash is PVC coated and painted a deep sea green. Inside, the floors are covered with a thick golden-green Rhodesian quartzite tile that has a give when stepped on. Cast acrylic bubble windows, seven-and-one-half inches thick, permit visitors an unusually close look inside the tanks.

The rambling facility has all the exhibits facing the ocean. Two sections, divided by the entry, wrap around a tidal pool at the center. To one side is a three-level exhibit area whose prow sticks into the sea like a ship. Above, there is a conning tower/pump house for the twin pipes that bring in fresh seawater from 1,000 feet out in the ocean. On the other side, a lower structure contains classrooms and an auditorium and is accessible after hours for community use. This wing also holds the delightful Portola Cafe whose interior was done by Marie Fisher and Marnie Wright. Their concept from the start was to differentiate the cafe from the mostly gray interior of the aquarium. They used a green and maroon palette, picked up from a WPA mural discovered in Monterey and given to the aquarium. These designers also planned the bookstore/giftshop, which offers a distinctly postmodern flair, again to give it contrast.

The space seems to work as intended; children especially are enchanted by the variety of experiences. The only problem, if there is one, is in the numbers. Studies indicated the aquarium could expect annual attendance of one million visitors; in its first seven months of operation since the October opening, it registered 1.3 million visitors. That is 10,000-plus daily on weekends and does create overcrowding. Other museums should be so lucky.



Carlton Knight III



Nicolas Sapiéha



Above, old cannery's trademark smokestacks were recreated in glass fiber. Right, walls of boiler house were removed to expose furnaces, piping, and other mechanical equipment. Treated as a historic artifact, this industrial composition serves as the frontispiece to the facility. Main entry to aquarium is through glass doors at right. □





Evaluation: Too Popular a Place?

National Aquarium. Baltimore's Inner Harbor. Cambridge Seven Associates.
By Allen Freeman



The National Aquarium in Baltimore is a freestanding landmark on a downtown waterfront and a major ingredient in one of this country's most significant examples of urban rehabilitation. It is a programmatically and structurally intricate "living" building, home to 5,000 specimens of fish, birds, reptiles, amphibians, invertebrates, plants, and marine mammals. It is also a workplace for 120 employees and hundreds of volunteers. In less than four years the aquarium has welcomed five million paying visitors, a figure that exceeds the most optimistic projections. But herein also lie significant problems for its resident creatures (a dolphin died soon after the building opened), for its staff (they are overcrowded), and for its visitors (they also are packed in tightly).



Above, the aquarium on Pier 3; left, its Inner Harbor setting.

The aquarium originated in the mind of Robert C. Embry Jr., who was Baltimore's low-key and pragmatic commissioner of housing and community development from 1968 until 1977, when he became HUD assistant secretary for community planning development, and is now a partner in a Baltimore-based development firm. In the mid-'70s, when Embry, Mayor William Schaefer, and others were planning the Inner Harbor development, which has replaced a decaying waterfront with the biggest tourist draw in Maryland, Embry noted a failed attempt to plan and build a major aquarium 30 miles south in Washington. Thinking this might be an opportunity for his own city, he inter-

viewed Kevin Roche and the late Charles Eames, architect and exhibit designer for the Washington project. But Roche and Eames declined because of a possible conflict if Washington's plans were resuscitated, and Embry turned to Peter Chermayeff, AIA, of Cambridge Seven. (During construction of the Baltimore facility, Washington gave up the notion of building its own aquarium, Congress conferred national status on Baltimore's, and what began as the Baltimore Aquarium opened after three years of construction as the National Aquarium in Baltimore.)

Embry recalls: "We wanted Peter because there was no other aquarium as good as his New England Aquarium. We appreciated that he is more than an architect—his interests encompass displays, graphics, conveying information with pizzazz."

The city commissioned Cambridge Seven to program as well as design the aquarium and put Chermayeff in charge of a cadre of outside consultants. The first site was just north of the Maryland Science Center, a late and uncharacteristically unmonumental Edward Durell Stone building of buff brick on the southwest corner of the Inner Harbor. The rationale for adjacency was that the two could functionally complement each other.

At a meeting of the Inner Harbor design review board, Chermayeff's scale model of proposed massing for the building was positioned next to the science center on a diorama of the Inner Harbor. Jay Brodie, AIA—then Embry's assistant, later his successor, and now executive director of Washington's Pennsylvania Avenue Development Corporation—recalls sharing reservations with others on the review board about this proposed location: The aquarium looked too big there. "Also, as the mass developed," he says, "it was obvious to everyone that we had a landmark building here and we weren't getting full impact." When someone moved the aquarium model to the end of Pier 3, all agreed that it was the better site.

Brodie says the board assumed that the pier site would be prohibitively expensive, but it turned out that both sites would have required driving piles because the shore is "essentially mush."

The aquarium ended up costing \$21.3 million to build, most of it city money. Embry asked the mayor to pay for it entirely with proceeds from the sale of the city's airport to the state, but Schaefer insisted on holding a bond referendum for part of the cost, "reasoning courageously that the city is poor, few people here have seen an aquarium, and before engaging in a project of this kind we'd want the approval of the voters," Embry recalls. The resulting bond issue represents about a third of the construction cost. An additional \$2 million came from the Economic Development Administration of the U.S. Commerce Department, and there was a smaller private contribution.

Chermayeff's Baltimore design is a sort of second generation New England Aquarium, a facility that has grown by two significant additions since it opened in 1969. The material is the same, reinforced concrete, but while the Boston building employs a strictly modernist vocabulary, the Baltimore Aquarium is a bright metaphor of the sea, with two triangular sail-like roofs and a large wall section painted like semaphores on the west facade. With 115,000 square feet of space on seven levels, Baltimore's aquarium is almost twice as large as Boston's, contains nearly three times as much water, and has a greenhouse terrestrial exhibit absent in the New England facility.

The form of Boston's original building is a cylinder (large tank) in a box. Baltimore's is a more complex rectilinear volume with an elongated cylindrical volume intruding on one side, topped by a triangular pyramid. In Boston, the public remains in a single space, spiraling up at the box's edge and then down around the tank. In Baltimore, visitors take an exterior escalator (under the smaller pyramid), pass through a small lobby, enter at the bottom of the large space, and take escalators to various platforms within that volume. They ascend to the greenhouse (larger pyramid), come back down to the top of the cylinder, ramp down inside two stacked ring tanks, go back up one floor, pass by a gift shop, and exit through the same lobby they first entered. This route is, except for return visitors who know shortcuts, the only choice.

For in contrast to Monterey's new aquarium, which allows visitors to wander about freely, sampling the various exhibits and perhaps returning to some of particular interest, Baltimore's provides a sequential path similar to that of a Disneyland or a world's fair pavilion. In fact, Cambridge Seven's platforms and ramps for the U.S. Pavilion of the 1967 World's Fair in Montreal, still standing under the burned-out ruin of Bucky Fuller's geodesic dome, are close relatives to those in Baltimore. Also different from Monterey, whose exhibits depict marine life in the Monterey Bay, the Baltimore and Boston aquaria contain aquatic life from around the world. The Baltimore exhibits are intelligent and low key, and for those who take time to absorb their implied message, a plea for conservation of the earth's water resources.

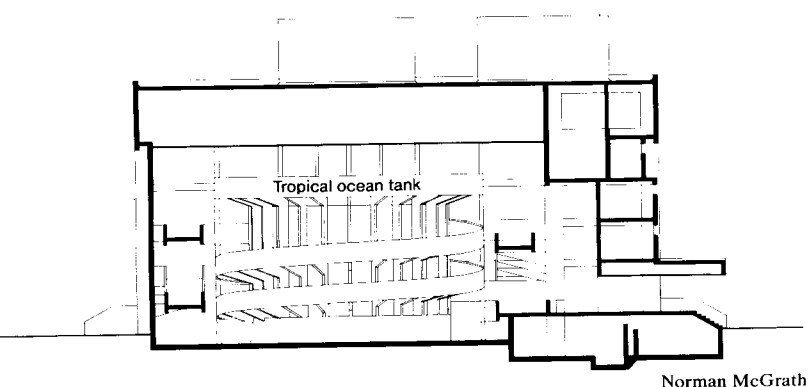
When the Baltimore Aquarium opened in August 1981, Paul Goldberger in the *New York Times* praised the skill of the exhibits, the graphics, and the "exciting spatial sensations" of the rain forest greenhouse and ring tanks, though he described the exterior as "rather brutalist," having "more energy than grace." Nora Richter Greer in this magazine described "a dramatic building on a dramatic site" and found its interior design and exhibits "exciting and instructive" if provoking "occasional feelings of claustrophobia" amid the crowds.

A market study commissioned by the city in the mid-'70s had concluded that an aquarium could cover operating costs by charging \$4.50 admission if attendance reached 650,000 annually. "Nobody, including myself, believed it could draw that many,"

Right, lesser glass pyramid shelters entry porch with overlook, seen here from the adjacent pier to the east. Below, lobby has neon strips under coffered ceiling and large aquatic mural.







Left, Cambridge Seven's New England Aquarium in section, where concrete ramps and trays, in photo, project from the two main structural elements, a cylinder tank in a box. In Baltimore aquarium, right, visitors enter a large space over a performing tank, in photo, ascend to greenhouse, and spiral down inside stacked tanks.



admits Embry, and Brodie recalls the 650,000 figure prompting laughter when he addressed civic groups. The science center was attracting only one-sixth that number, the Baltimore art museum about 150,000, and Fort McHenry, home of the National Anthem, was drawing only 450,000 with free admission. But the popular appeal of the aquarium was immediately apparent as people lined up for as long as three hours under the broiling August sun. The first year, paid attendance more than doubled the projection and has remained well over a million a year.

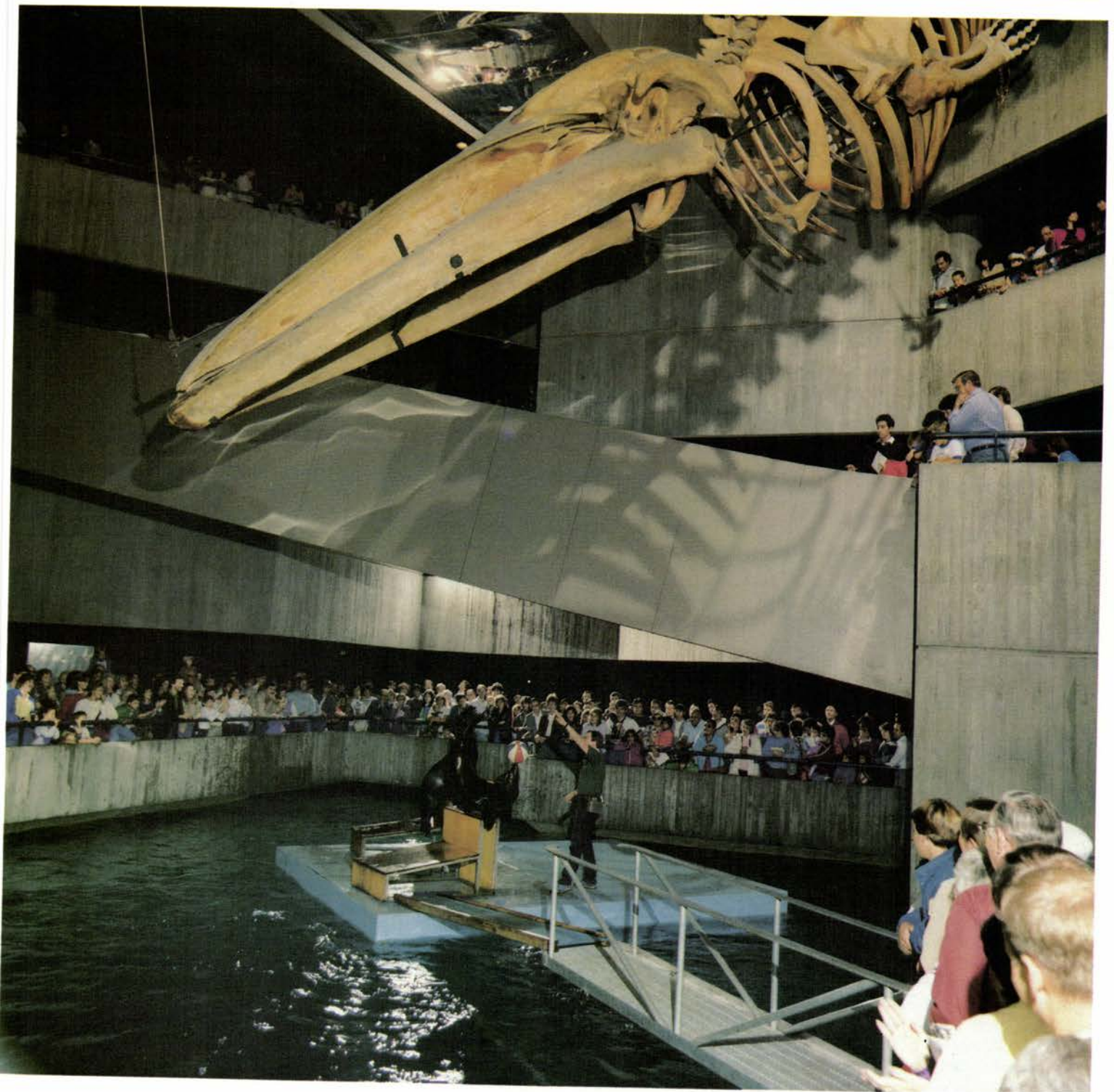
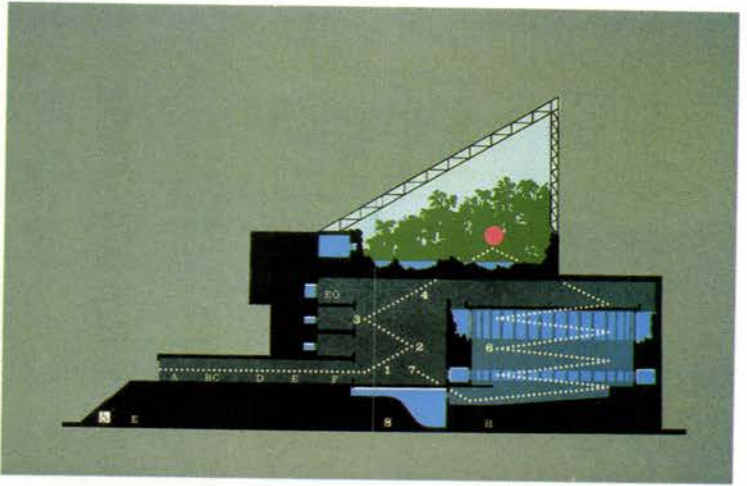
An early consequence of the crowds, combined with unhappy events to be related shortly, was the death of the dolphin. Subsequently the dolphin tank was used for other animals. Amid pressure to open the building with all the exhibits functioning, the administrators brought in four "green," or naive, Atlantic Bottlenose dolphins fresh from the wild. This is not an unusual practice, says Robert Jenkins, director of husbandry and operations, but one that requires careful handling until the animals acclimate to captivity. That, however, proved impossible.

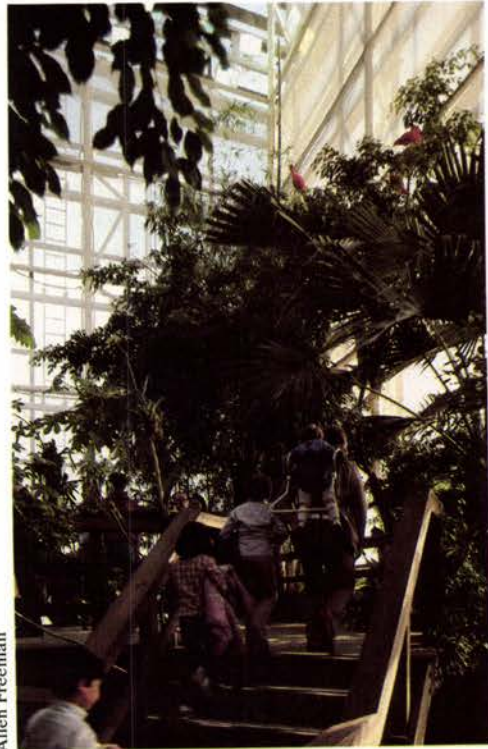
The popular dolphins attracted constant crowds around their large, centrally located tank, and, because the aquarium was (and is) frequently booked for evening functions, and cleaning crews were scheduled when the building wasn't otherwise in use, the sensitive mammals got insufficient rest. They were also overstressed by the slight, constant sound and vibrations from the aquarium's main vertical turbine pumps, located directly under the tank, and light levels were too low for these creatures used to the tropics. As Jenkins puts it, "All animals have tolerance levels. They can take only so much stimuli, and then things crash." When one of the four died, the three survivors were shipped to the Florida keys where they have lived happily since. California sea lions have taken their place in the big tank, and, though they have fared well, are to be replaced by a pair of Beluga whales that the staff hopes to receive permission for capturing off the Canadian coast this summer.

Other problems either brought on or intensified by unanticipated popular success include staff crowding, congestion at several points in the visitor route, and insufficient signage.

Estimates of work space needs were based on a facility expected to attract 650,000. The architect, in consultation with the New England Aquarium staff, anticipated a full-time staffing level of 60, half the current level. As a result, many office spaces have had to be repartitioned, and most are crammed.

Elsewhere, in the public spaces of the building, there are two main spots on the tour route that become especially jammed. One, a re-creation of a section of the Maine coastline, is designed





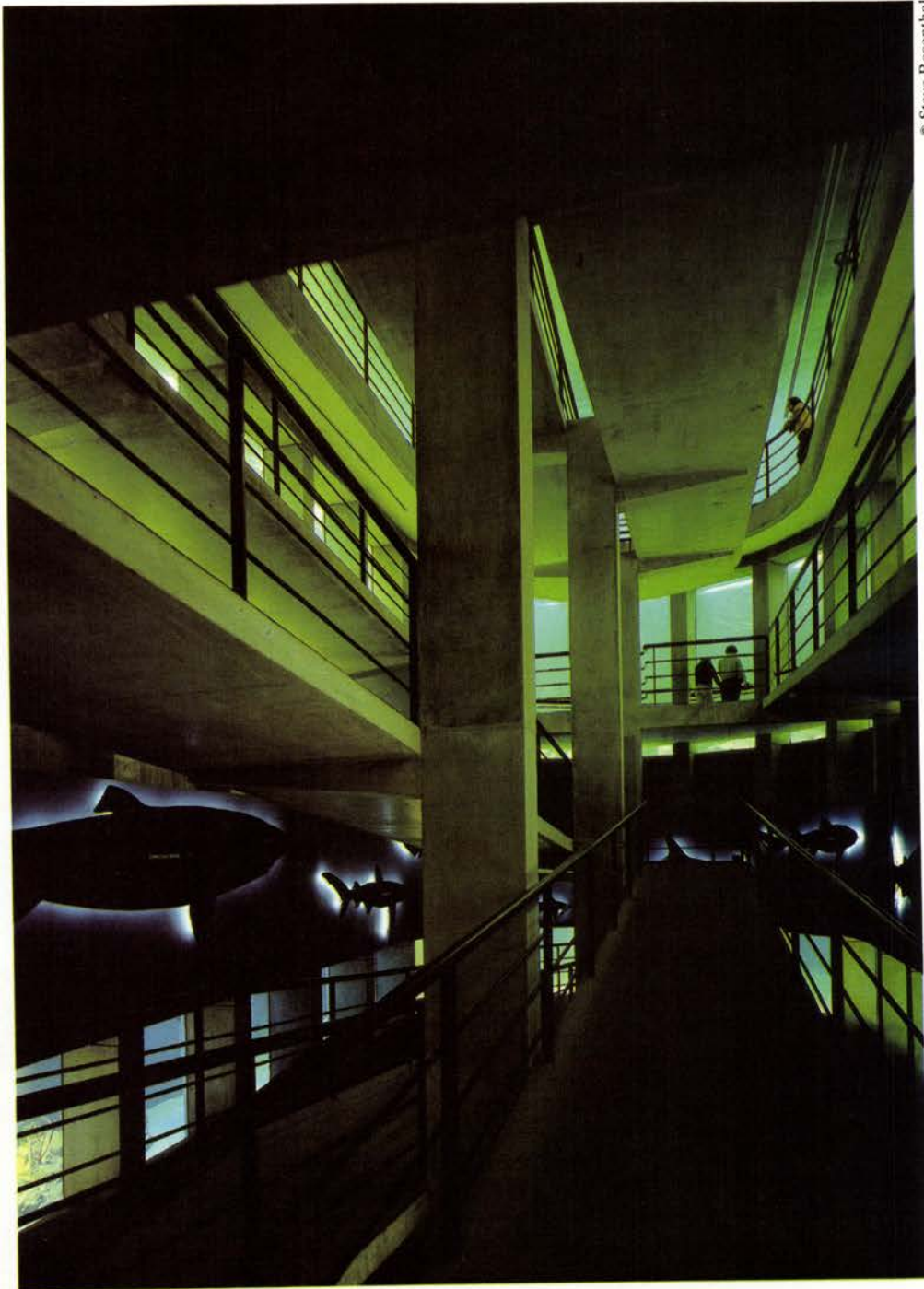
Allen Freeman



Courtesy of Baltimore Aquarium

for children and lets them pick up and handle gentle tidal creatures like horseshoe crabs. Understandably one of the most successful exhibits for big people as well as small, it is to be enlarged and redesigned to comfortably accommodate adults as well as children. The second point of congestion, at the top of an up escalator, results from the popularity of a sea bird exhibit located there, combined with a lack of clarity in the intended route. Here the staff has ingeniously and unobtrusively improved traffic flow by installing a projector in the ceiling that throws moving arrows and animal silhouettes on the dark floor. Another projector does similar service at a confusing point between the rain forest and ring tank exhibits.

Signage, usually a compromise between function and uncluttered exhibit design, suffers somewhat in Baltimore from an excess of discretion. Labels identifying exhibit groups and individual cases are clear and well positioned. But the smaller labels identifying each animal, meant to be seen at close range, are located in strips across the bottom of the exhibits. When crowds gather, the labels are obscured for all but those in the front row. Although Chermayeff still prefers labeling at this close range only along the bases, he says with hindsight that he would have

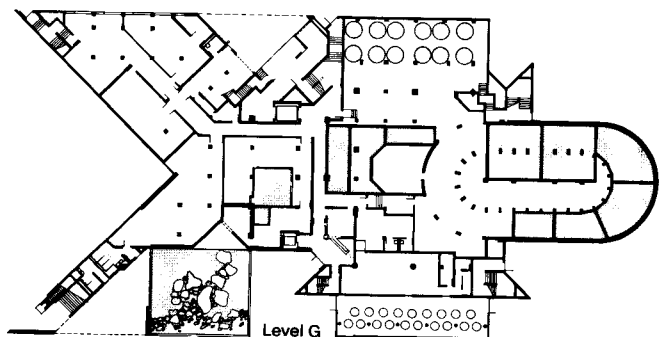
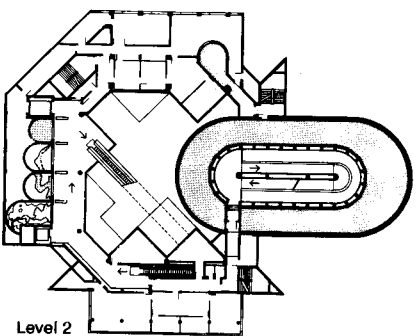
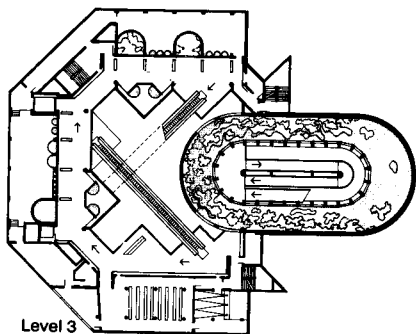
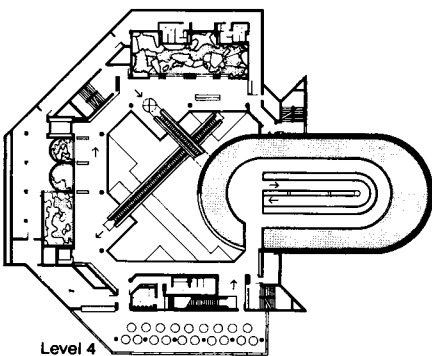
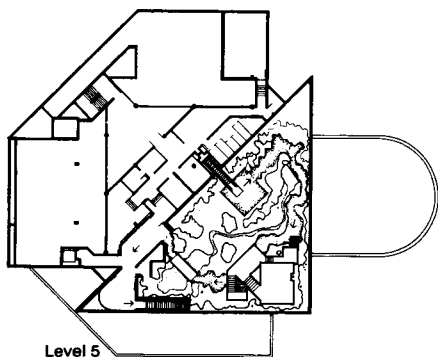


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repeated those labels above the cases and is now working on this modification with the staff.

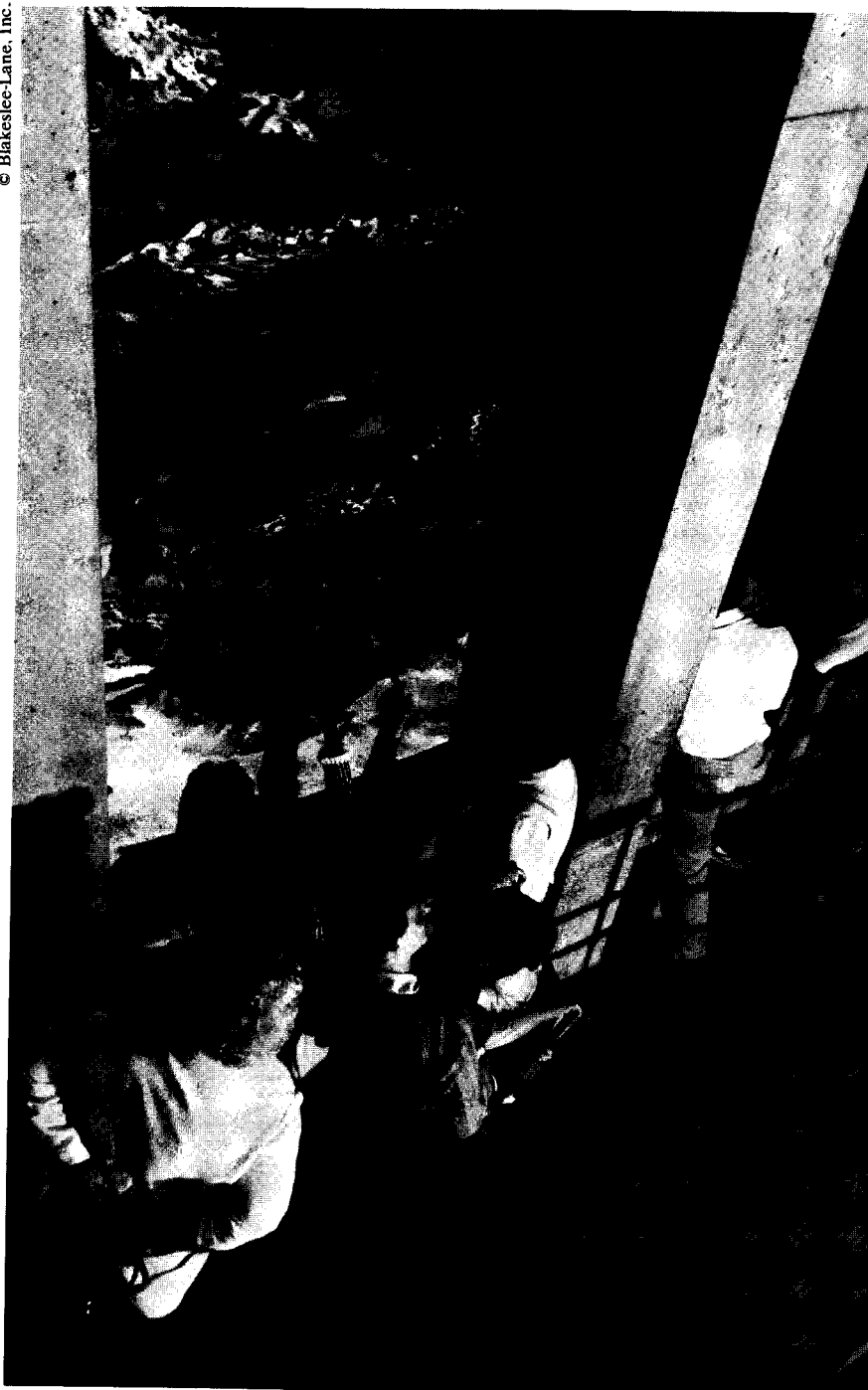
But the aquarium's major experiential flaw is apparent only to the few unable to use its escalators. Handicapped access in this vertical building of sequential exhibits is difficult and circuitous at best, requiring the disabled, like salmon, often to go against the flow of people to reach an elevator. The route becomes particularly jarring near its end, where one must abruptly leave the dark, atmospheric views of the deep, go through the fluorescent-lit marketing offices, and then return to the public spaces.

Simply put, the building meets only minimum requirements of the disabled. Chermayeff says that optimum access would have mandated ramps in place of escalators in the original design, but ramps would have required more space. The detour through offices, he says, is a compromise that he is especially unhappy with. "It looked workable in plan," he says, "but a questionable solution was made worse when the staff grew beyond our program expectations." He has proposed a solution in the form of a bit of building surgery that steals space from a mechanical room for a hydraulic elevator. This would move the disabled



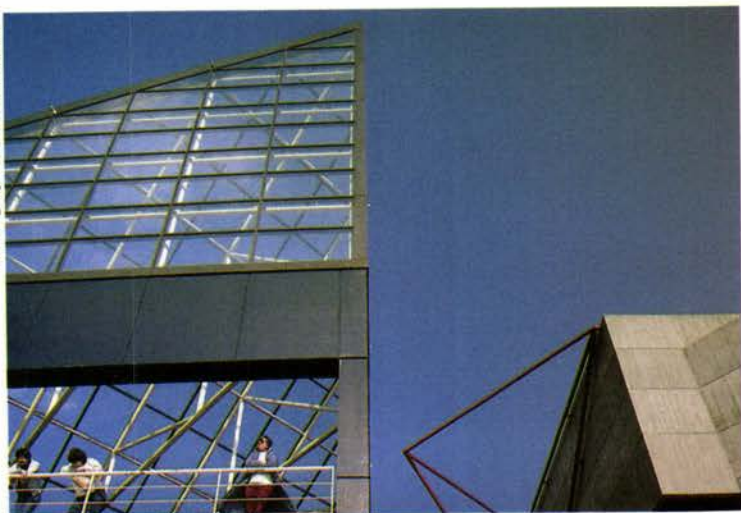
Baltimore aquarium's intricate plan provides varied interior spaces. Large photos show the inside of the ring tanks. Across page, bright rain forest contrasts with darker cases. Right, crowds gather in front of sea bird exhibit.

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Allen Freeman





Above, the shiplike entry porch with views toward Harborplace. Right, from across Inner Harbor, rounded mass expresses ring tanks; multilevel office block is behind semaphore graphic.

through the final exhibits in the same sequence as the able-bodied.

There have been other built-in problems, none critical. The rain forest brought rains of ants, and then cockroaches, on the entire building. These had to be carefully controlled with poisons that were harmless to the birds and other higher creatures that feed on them. Steel clips that hold the acrylic windows in place on the ring tanks when evacuated of water rusted away, resulting in a still active lawsuit by the architect against the supplier. As part of cost cutting before the building opened, conventional steel pumps were substituted for more expensive stainless steel or glass fiber versions, and they quickly became maintenance headaches caused by salt-water corrosion. They have been replaced with stainless steel pumps, insulated with a mechanism to dampen sound and vibration.

But the building's functional problems and fine-tuning recede in light of acceptance by the public so substantial that two expansions are planned. One, by Cambridge Seven, attaches to the north end to shelter queues and expand the gift shop, coatroom, and admissions area under a third glass pyramid. The other comprises an outdoor performing stadium and large holding tank for mammals on the end of the adjacent pier to the east. It is the result of a competition of ideas limited to Maryland architectural firms and won a year ago by a joint venture team of Cho, Wilks & Burns/Jones & Jones.

Baltimore and Cambridge Seven proved that people like aquariums, and the public loves this one. Executive Director Nicholas Brown thinks aquariums "have a grab on popular fancy beyond virtually any other kind of quasi-museum." Aquariums are neat, self-contained packages, he points out, and, although capital intensive, don't require the real estate that zoos and amusement parks do. Too, they can contribute to the mix in an urban fabric and skyline, as Baltimore's significantly does.

And now, imitation. Brown and Associate Executive Director William Flynn have entertained groups considering aquariums as renewal components in at least seven foreign and 17 U.S. cities. Asked if he fears competition from rival cities, Brown quickly smiles and says, "only providing anybody pulls it off the way we have." □





Building by the Sea: The Southeast

Hilton Head and its successors vs. 'New Jerseyization.' By Robert A. Ivy Jr., AIA



In the late summer of 1979, I traveled to the village of Gulf Shores, Ala., for a week at a beach cottage. There were few buildings on the narrow strand of sand at the termination of Alabama Highway 59; most were single family vacation dwellings.

Our rented beach house was little more than a raised plywood platform in the dunes, shaded from the Southern sun by overhanging roofs and open to the elements through sliding doors. Little Lagoon, a shallow marsh-fringed body of water, lay north within view of the bedrooms. To the south was the arc of the sugar-white beach and the blue-green reaches of the Gulf of Mexico.

One week later the cabin was destroyed. Hurricane Frederic struck on Sept. 19, 1979, and demolished 80 percent of the buildings in Gulf Shores while another 6 percent of the buildings were rendered uninhabitable. The coastal highway was washed

away or completely covered with sand. It was as if a single giant wave had come ashore and erased the small community.

I did not return until 1984. The view of the village had substantially changed from the causeway crossing the Intracoastal Waterway; condominiums were popping up where private homes had sat. Large white multistory buildings lined the water's edge, creating a scene more familiar to visitors of Miami Beach or Ocean City, Md.

In March 1984, there were 80 condominium projects ranging in size from five to four hundred units either recently completed or under construction on the 40 miles of Alabama shoreline. Several of these white, multitiered behemoths crowded right down to the water's edge beyond the former dune line.

Regional newspapers began to report strains on the infrastructure. Developers fought federal attempts to limit growth, and the community found private financing for a sewer system. More construction permits were issued, but controversy surrounded the dune line. Previously there had been a 40-foot set-

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back requirement from the crest of the primary dune, but Fred-eric had washed the dunes away, leaving new buildings exposed to the sea's full force. Where would the boom lead?

The shore here seemed bent on what authors Orrin Pilkey et al. refer to as "New Jerseyization" in their book, *Living with the Mississippi-Alabama Shore*, one volume of a series entitled "Living with the Shore." New Jerseyization is a lemming-like march to the sea, quick construction, and consequent calls for protection of investment from property owners by shoreline engineering. The authors cite the example of Monmouth Beach, N.J., where beachfront construction and beach erosion required erection of a seawall, which resulted in further erosion and additional erosion control devices ad infinitum—to the point that there is no longer any sand beach left and the vacation structures now face a growing seawall that blocks all ground-level views of the water.

But the sea can only be kept out at high cost. Mississippi's seawall is bordered by a 40-mile stretch of white sand that must be replenished regularly at great expense. In Miami Beach, severe erosion of the beach finally cost taxpayers \$68 million for 15 miles of new sand.

Pilkey, a coastal geologist, asks that we understand that "beaches are like flowing rivers of sand." The barrier island on which Gulf Shores and many coastal communities sits is constantly moving with the winds and tides. Pilkey says that the waters of the Gulf have been rising at the rate of one foot per century with a consequent horizontal land displacement of from 100 feet to over 1,000 feet per century. Our beaches are returning to the sea in an inexorable natural process. Pilkey also warns that "any given structure on the Mississippi/Alabama coast will experience a major hurricane in its expected lifetime." Where have communities, developers, or individual builders succeeding in planning for major storms? Where were beaches respected? I traveled several states in the Southeast in search of answers.

At Hilton Head, S.C., I talked with Charles Fraser, the man behind the Hilton Head phenomenon. As a young man, Fraser took a piece of the Carolina coast and planned its growth to achieve the goal of "harmony and cohesion" of community and environment. He realized in 1957 that if he were to achieve those goals successfully at Sea Pines Plantation (his first major project) then he had to look beyond any individual building lot to the project as a whole. He sought cohesion through integrated plan, and today, 28 years later, that plan, prepared with the assistance of Sasaki Associates, is holding up. Fraser saw to it

that environmental planning exceeded any statutory requirement. So many trees were saved that it is difficult to photograph buildings at Sea Pines.

Hilton Head has felt the force of change since its inception. The island has grown from an isolated timber preserve with few inhabitants to a small boom town. Outside the gates of Sea Pines Plantation hotels and condominiums now line the shore, and McDonald's vies with the Burger King for dominance. Sea Pines, however, remains remarkably true to plan. While the newness of its buildings has worn off, and its larger buildings seem undistinguished, the overall cohesiveness that was sought has been maintained. If the result is bland, it is also environmentally sensitive.

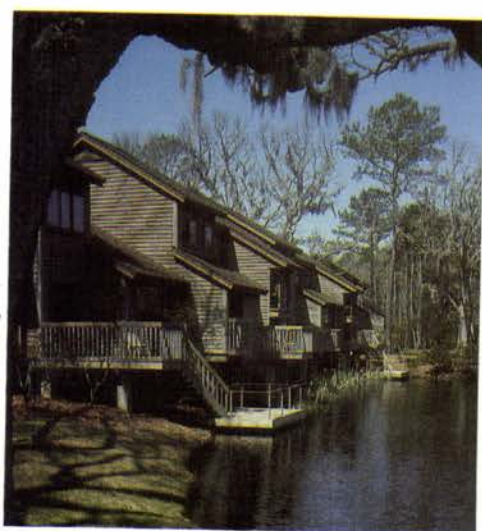
Fraser took the lessons learned from the Hilton Head to Kiawah Island, off the coast of South Carolina, where he served as consultant. Kiawah is an unusual island with an unusual owner, the Kiawah Island Co., which took unusual pains to save it and direct its growth. Kiawah is growing, "accreting," rather than eroding, according to Dr. Tim Kana, a coastal geologist from Columbia, S.C., and co-author of a study that became a blueprint for the development of the island. The study included coastal analysis, morphological development of the barrier island, an inventory of wildlife, an archaeological investigation, as well as a botanical survey.

It showed that while the island was gaining shoreline, its northern tip was unstable and its southern tip subject to inlet formation, therefore no development was recommended at these critical points. The client accepted these recommendations and set aside portions of the island as permanent wilderness.

Except for one small plot, Kiawah's 10,000 acres and 10 miles of beach were acquired in their entirety from a single source. Purchasing it all prevented the kind of perimeter development that has occurred at Hilton Head. Kiawah is over a bridge, whole and entire unto itself.

Kiawah contains a large climax forest of palmetto and oak within which are woven individual houses, groups of condominiums, and an inn. All building at Kiawah must be located behind the secondary dune line, so that most construction is protected from wind and wave by twin rows of substantial sand dunes covered with natural vegetation.

Opposite page, Windswept condominiums on Kiawah Island, S.C., are tucked behind the secondary dune line. Below, Sea Pines at Hilton Head, S.C.: left, town houses clustered around numerous lagoons, and right, condominiums on South Beach.





Carefully planned seaside developments.

Boardwalks cross sand dunes to limit man's footprints on the fragile mounds. There is no development on the primary dune except at the beach pavilion directly in front of the inn itself. All major utilities are run in conjunction with streets so that water, electricity, and telephone lines do not intrude into the natural setting. Storm water is anticipated and controlled through a series of locks in island lagoons (consultants included Edward Pinckney/Associates and Thomas & Hutton Engineering Co.). When a hurricane or winter storm approaches, the entire water level can be lowered to accept the coming onslaught and minimize flooding to the island.

As Fraser had learned at Hilton Head, the key to the success of controlled development lay in the covenants; an architectural review board has final authority over new construction on the island. Kiawah's buildings are low key and low density.

The Windswept condominium project at Kiawah by Don Sandy, AIA, was the first and most compelling architectural composition that I had witnessed at either Hilton Head or Kiawah. Here a strong architect exercised imagination within a codified set of constraints (building materials, views, forms) and produced a group of buildings true to their own place. They add to man's enjoyment of the larger community, are safely set behind the secondary dune line in the climax forest, and allow their inhabitants a porch with a view near salt spray and sunset.

Many of Kiawah's other buildings are unremarkable from an architectural point of view. Looked at individually, many are plain, yet all blend together to form a large pleasant park that puts man near the sea in relative safety and respects the island's natural processes.





Like Kiawah Island, Seaside, Fla., has a complete master plan and covenant structure, but there the similarity ends. If Kiawah produced a music, it would be romantic and pastoral, perhaps Beethoven's Sixth Symphony. Seaside, by contrast, would be baroque, in which each note raises its head for one singing moment then falls to join the larger melodic line.

The developer, Robert Davis, together with the planner, Andres Duany and Elizabeth Plater-Zyberk of Coconut Grove, Fla., sought to recreate the ambiance of a small Southern town on Florida's panhandle west of Panama City. Developer and planner observed other small towns, traveled, and read widely before crafting the master plan.

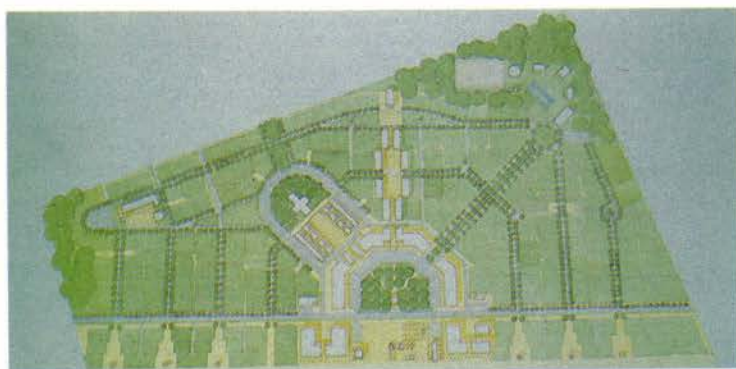
The growing community will eventually include a town hall, a school, and a post office of its own. Surrounding these public facilities will be individual houses of varying size, apartments, and a hotel, all laced together with footpaths, picket fences, and the small outbuildings familiar to the larger world.

Although Duany served as the planner for the overall scheme, houses are being built by owners using other architects or by themselves. The results are funky, personal, and in keeping with the vernacular tradition.

The night I visited Seaside, I slept in a cottage called the Dreamsicle. It was a simple frame building designed by New England architects Robert Orr and Melanie Taylor and was reminiscent of the houses at the Monteagle Assembly in Tennessee or the town of Chataqua, N.Y.—one of Seaside's models. The small, two-bedroom building contained a large central space open



Opposite page, above, single-family houses on Kiawah, and below, landscaping of the Windswept condominiums. Above, single-family house in Seaside, Fla.; right, Seaside's Dreamsicle cottage.



A community of delightful amenities.

to the roof at its core with subservient bedrooms, kitchen, and sitting alcoves at its flanks. You could see the ocean from the metal-roofed front porch and listen to the call of birds or neighboring rocking chairs that slowly moved during the night.

The Dreamsicle and its companion buildings are carefully placed according to the plan to maximize the whole community's views. Parking is arranged so that cars do not dominate the narrow streetscape and roads become alternate footpaths to neighbor's cottages. Rising here and there is the metal-roofed, pastel tower of a cottage, peeking up to catch its glimpse of the water beyond.

Duany planned the streets with specific vistas and termination points. At the head of Tupelo Street sits a circular gazebo, while at the street's terminus on the sea bluff stands a beach pavilion. These limits demark the town and make it understandable, approachable, and human scaled.

A graphic code binds the dynamic, iconoclastic community creation together, with review authority vested in a review board under the developer's eye. Each area of the community is zoned as Type I through VIII, and corresponding building types range from the suburban model (Type VI) with its front yards and fences, to the more urban Type I, which permits five-story buildings with commercial activity below and apartments above.

Although the entire planning process took five years, the environmental concerns that were so evident at Kiawah are not as evident at Seaside. Seaside sits on a mainland beach with 2,800 feet of ocean frontage 25 to 30 feet above mean sea level.

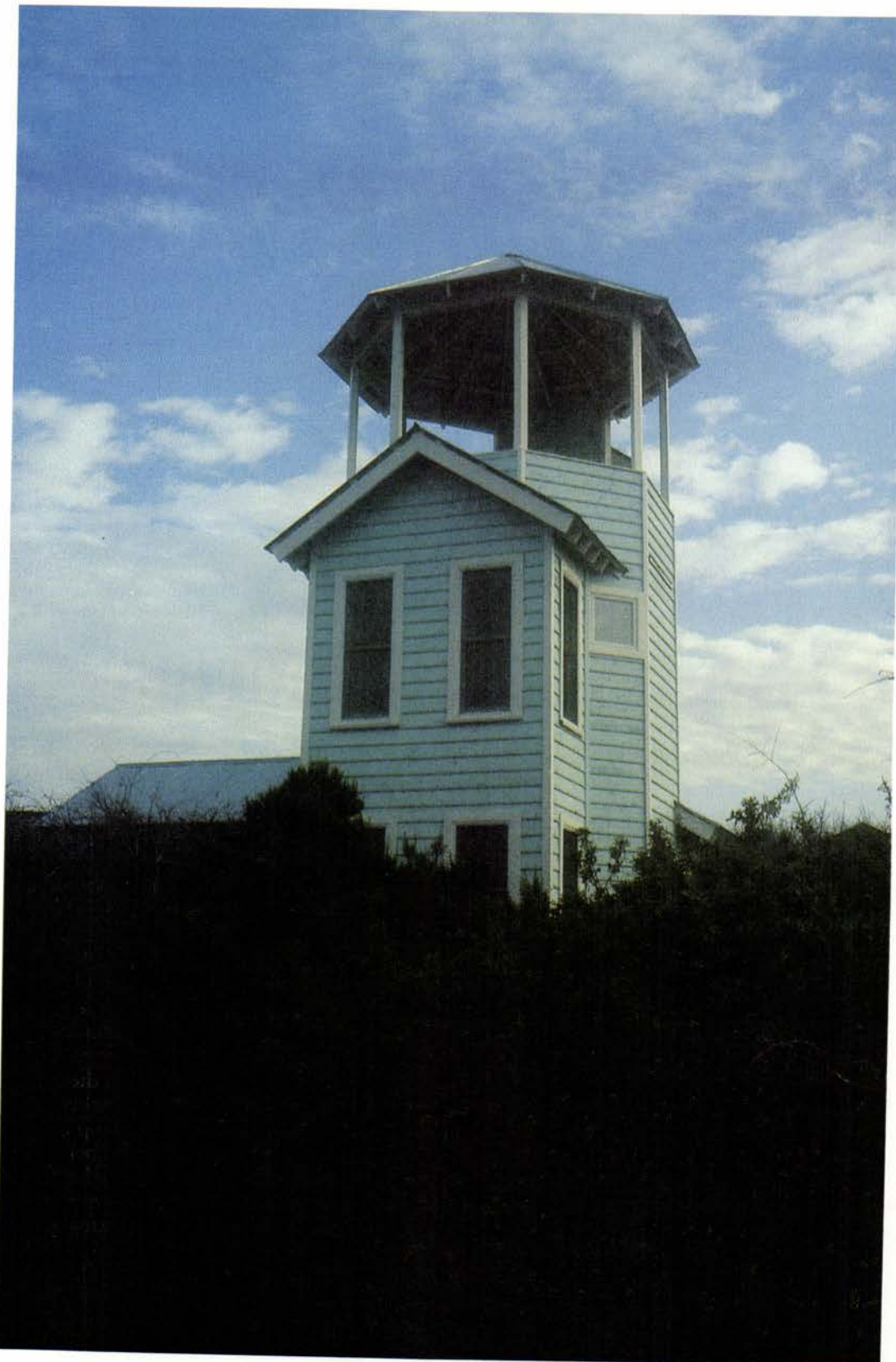
The town is crossed by County Road 30-A, and the seaward lots, which now bear only one beach pavilion and one house, are planned for additional development. Since the beach at the adjacent community of Seagrove, Fla., is subject to moderate to high erosion, it seems incongruous that this lovingly planned community will build out to the edge of its primary dune and jeopardize its chances for stability.

Most communities lack the flexibility, the vision, and the single point control exhibited by Charles Fraser or Robert Davis. Many voices rise to express special interests and points of view in the small communities of the Southern coastlines. Fraser feels that direction must come from the state level, where agencies can define and monitor growth in and coordinate the necessary review processes. Kana agrees and adds, "We need to be able to draw a circle around our barrier islands and examine them in detail . . . to see where the shoreline and wetlands will be." The decision of building placement is the critical point, according to the scientist, since the problems tend to diminish with adequate setbacks. Kana also believes that any building team should include a specialist in the coastal sciences.

The traveler through the Southern states must be concerned about the rapid rate of building taking place on what seem to be the last vestiges of open beach. But we should be heartened at the evidence that it is possible to build near the water and harm neither occupant nor neighbor—that there are instances of environmentally sensitive development and, in some cases, actual architecture. □



Opposite page, plan of the town of Seaside, Fla., by Andres Duany and Elizabeth Plater-Zyberk. Public buildings, designed by various architects sensitive to regional vernacular, are, top to bottom: beach pavilion, gazebo and cottage at termination of Tupelo Street, and Seaside Market. Below, small towers and widow's walks provide landlocked houses with views of the ocean.



Photographs by Robert Ivy Jr., AIA

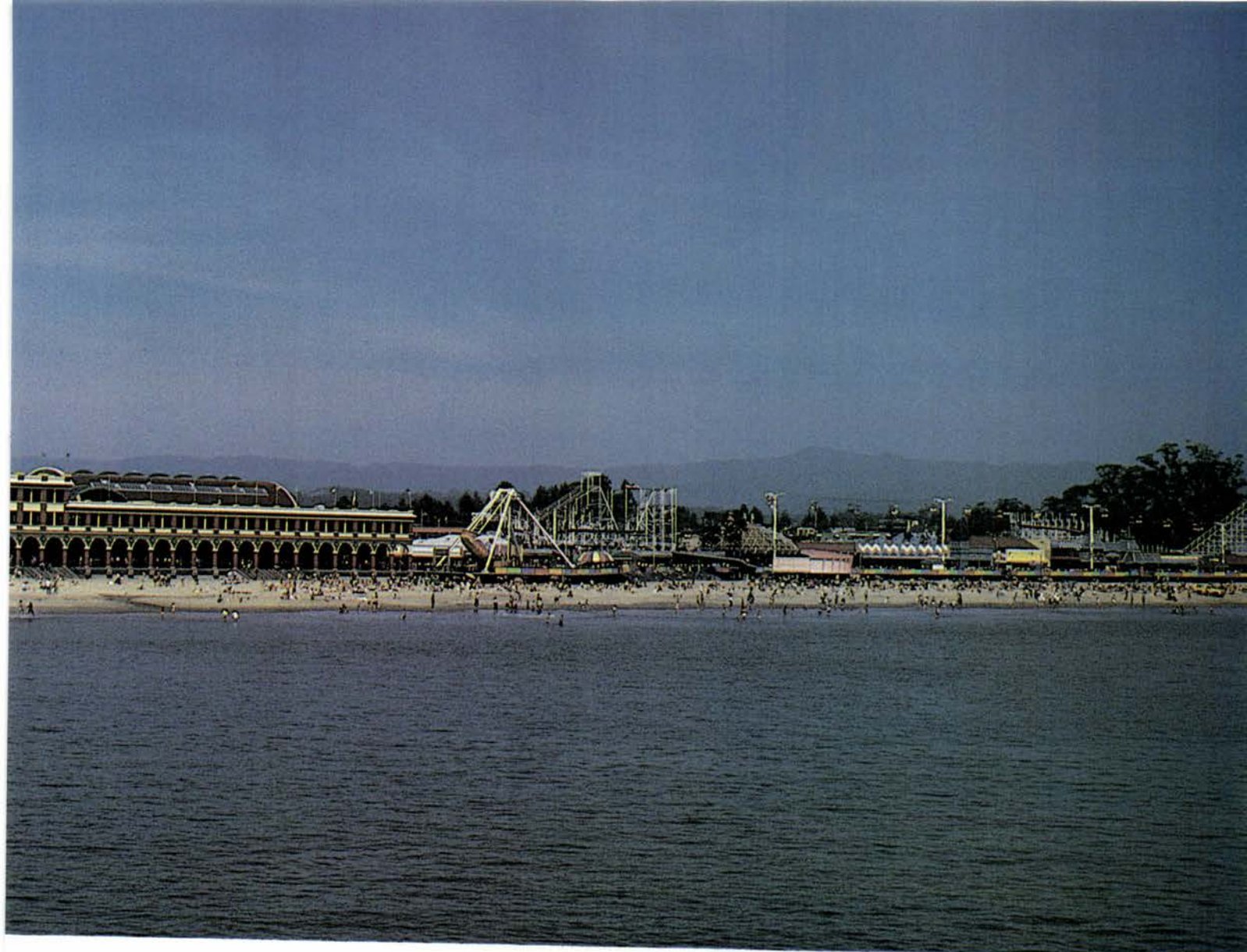


Building by the Sea: California

With emphasis on 'pleasure zones.' By Jim Burns and Peter Brand



Photographs by Jim Burns



Above, view of the rides and casino in Santa Cruz from the pier; across page, below, colorful casino arcade in Santa Cruz.

This article deals with the urban seaside environment in California and the resources of recreation, entertainment, and lodging that might be available there. We give these facilities the overall term of "pleasure zones" and examine a few of them in terms of their good, bad, or indifferent qualities from design and social use viewpoints.

We start with the classic amusement piers that flourished in the first half of this century. Those piers offered a wide range of entertainment and recreation opportunities for both shallow and deep pocketbooks. Access to pier and beach was usually free, and people used piers as a means of putting food on their tables as well as strolling out to view the sunset. The delights available for a small fee here were myriad: thrilling rides on roller coasters, chute-the-chutes, Ferris wheels, and, more sedately, gorgeously caparisoned Looft carousels; games of chance and skill; live performances of music and theater; sideshows of strange and wondrous beings; fun houses and haunted houses; cafes and restaurants catering to all incomes; excursion and fishing boats for trips out to sea; gigantic fresh and salt water plunges and bath houses; nighttime fireworks displays; and evening dancing in grand ballrooms and dance halls.

The architecture of these amusement piers coruscated with exuberance, fantasy, and celebration. Madly crenellated and crocketed rooflines, bulging with turrets of exotic shapes, were outlined with twinkling lights that fired the night sky. Facades

in forms of gargantuan faces, ships, sea serpents, marine dieties, and opulent oriental pleasure domes lined the piers and beach-front strands, providing total fantasy environments where people could escape their everyday lives. Every sense was entertained. Odors of cotton candy, roasting hot dogs, fresh fish on the grill, esoteric incense from the haunt of the nautch dancer or the fortune teller proliferated. Kinetic excitement was everywhere, in the spinning, lunging rides, the people strolling or being propelled in wheeled jitneys, the careening seabirds overhead, the swirling and flapping banners and pennants. An intricate melange of sounds vibrated in people's ears; music, shrieks from roller coasters, cries of vendors and shills, explosions from game booths, mewing of sea gulls, the crash of waves below. Food and drink for every appetite abounded. The entire experience was a visual overdose, too, with resplendent forms, colors, graphics, materials, and an apparently endless panoply of design tricks to announce: "This is it! Here is the place where you can have the most fun you've ever had!"

All of these qualities are present in the last of the great waterfront amusement zones in California, up north in Santa Cruz. Here the pier and the amusement area meet one another at right angles across the beach. The pier has recently been enlarged with restaurants and shops in an appropriate streamlined mode with colors echoing the casino across the water. The architect is Spencer Associates. Enthusiastic pole and drop line fishing continues at pier end, with a full congress of sea lions barking below, demanding a handout.

Jim Burns works with communities on planning projects. **Peter Brand** is a project manager for the California's Coastal Conservancy. They have collaborated on some of the coastal projects described in this article.



Sta. Cruz thrives, Sta. Monica rebuilds.

Facing the beach and pier is the wonderful casino, approaching its 80th birthday in a couple of years. When rail service ceased here, Santa Cruz did not go into a decline as did other amusement zones to the south. When theme park attractions like Marine World Africa USA and Marriott's Great America opened inland along Highway 101, the Santa Cruz casino kept going. Now the theme parks are in trouble—the former planning a move to another region and the latter negotiating between the owners and the city of Santa Clara for a possible takeover by the community. The casino still rides high above its surf and sand, and if you listen closely on a calm summer evening, you can almost recapture the strains of Jack Teagarden's band or Blue Barron's orchestra drifting down from the Cocoanut Grove ballroom.

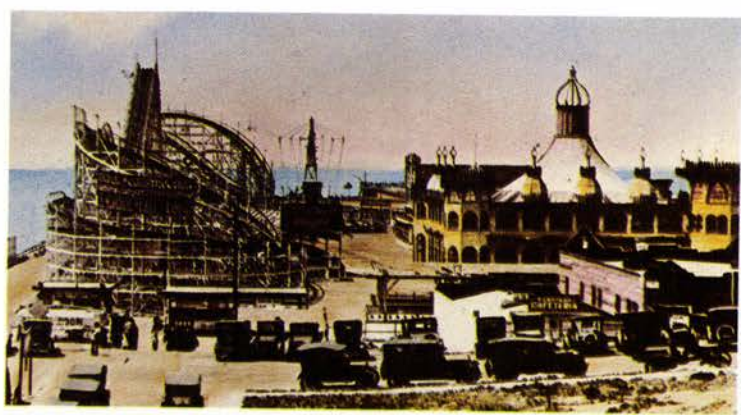
Location has helped Santa Cruz. It is directly accessible from San Jose in the burgeoning Santa Clara/Silicon Valley to the east, as well as south from San Francisco and north from Monterey-Carmel. Crowded Highway 17 over the coast range from the valley can provide a ride on warm weekends not to be duplicated for sheer terror by the beach's 60-year-old Giant Dipper, the last wooden roller coaster on the West Coast.

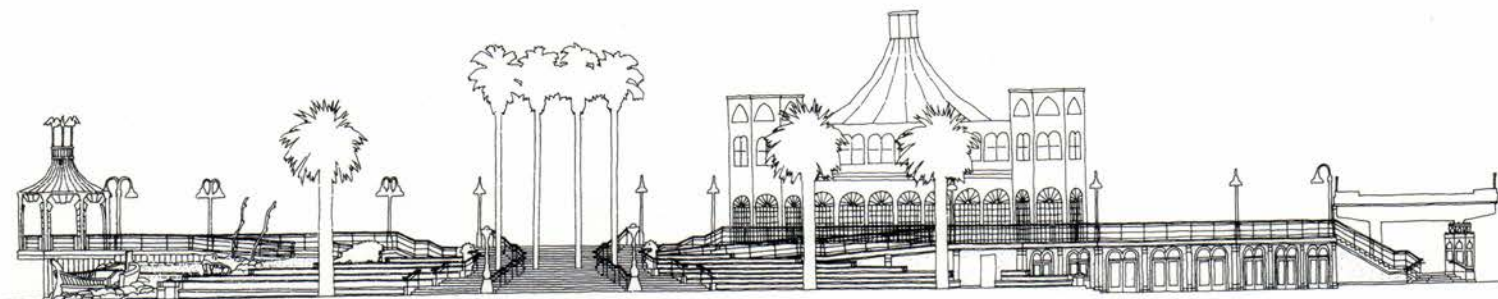
The casino is a cornucopia of opportunities for people of many inclinations and incomes, all in one spot. The Cocoanut Grove and Sun Room provide eating, drinking, and evening entertainment of a quality frequently redolent of the old days. The arcades on the ground floor provide all the noise and color and excitement required by a younger crowd interested in video games, getting a beer without showing an ID, and trying on the latest T-shirts. A variety in types and prices of eats and drinks flourishes. The long expanse of the loggia over the beach provides easy access to the sand as well as places to hang on the railings and watch the action below. At the far end, the loggia leads out to

the rides and fun fair section that stretches for a few hundred yards to culminate in the excitement of the Giant Dipper. The casino and its appointments are always in a state of refurbishment. Today they blush in a rainbow of postmodern hues taken somewhat stronger, brighter, and more exciting than most designers could tolerate. It works splendidly, blending the older loggia and arcade with the newer cladding of the rotunda into a lively and fantastic composition. Buildings in the town that are near neighbors to the casino and pier also add to the festive seaside resort atmosphere, each asserting a little of its own personality of Victoriana, mission revival, art deco, mysterious East, or get-down 1950s schlock. It's a terrific place to have fun for free, just wandering around.

The old Santa Monica pier and its now vanished sister amusement piers just to the south in Ocean Park and Venice thrived from the early days of the 20th century until after World War II. Then they declined due to the auto-borne freedom of people to go to different attractions such as the new inland theme parks, as well as the increasing tendency of many to sit at home and wait for their entertainment to be delivered electronically. But many people, usually residents of the coastal areas, remained faithful to the potentials of their seaside pleasure zones. A 1974 vote by the Santa Monica City Council to demolish their old pleasure pier rallied an outraged citizenry to the pier's support. This was the beginning of a pier renaissance that peaked with Coastal Conservancy-sponsored community planning workshops

Across page, top, vibrant seaside facade of Santa Cruz's casino; across page, bottom, the casino's arcade frames views of the rides. This page, from an earlier time: right, top, Santa Monica pier; right, front to back, Santa Monica, Ocean Park, and Venice piers in 1930; below, La Monica Ballroom on Santa Monica pier, 1926.





Jim Burns



Varied approaches on the waterfront.

for the pier in 1983 and the selection of Moore Ruble Yudell and Campbell & Campbell to take the people's guidelines into finished designs the next year. Today, work is set to begin on the first phase—celebratory public accessways to the pier and a children's fantasy park adjacent to the beach replete with a sea serpent and a kid-sized boat in a play fountain. Wide stairs that can be used for seating overlook the volleyball and "muscle beach" area on the south side of the pier. Pergolas, palm trees, festive lighting, terraced levels, and ramps all lead up to the pier where the beloved Looft carousel and its period building have been restored.

Piers and wharves provide some of the most magical experiences available in urban environments. They allow people to extend themselves physically and emotionally from the boundaries of their daily lives. They let people turn back and get a panoramic view of where they reside, a synoptic experience impossible to achieve in amongst the streets and buildings of the city. Piers are generally considered to be for recreation and entertainment, and wharves their working equivalent. They exist side by side or share the same structure on occasion. Jane Jacobs pointed out in *The Death and Life of Great American Cities* that "penetrations into working waterfronts need to be right where the work . . . goes on on either side, rather than segregated where there is nothing much to see." This is advice more honored in the breach than the observance today, commercial pleasure zones usually being separated tidily from the more rambunctious activities of the working waterfront. In a few places that have developed over time, such as San Francisco's Fisherman's Wharf, the working wharf is esteemed as a tourist lure and zealously incorporated rather than fenced away.

Piers and wharves grew from the twin needs of function and profit. Amusement piers on the West Coast usually were built in conjunction with railway lines, sometimes by the owners of the lines themselves. The Pacific Electric Railroad of Henry E. Huntington (1850-1927) produced pleasure piers at a number of points on the coast. The hamlet of Pacific City was so grateful for the prosperity brought by the electric railroad and pier that it renamed itself Huntington Beach and went on into the

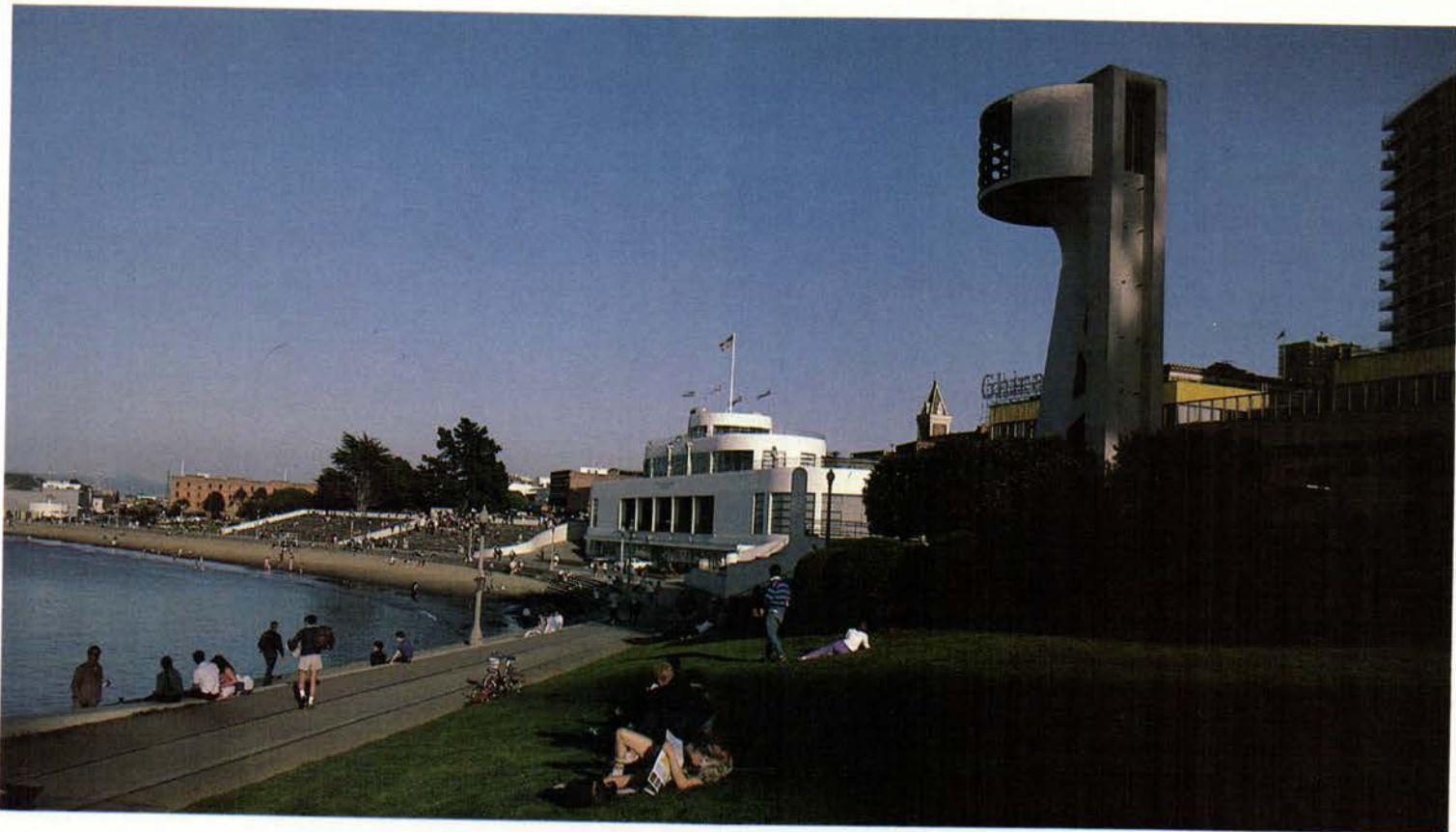
Left, Santa Monica pier in 1983. Above, design for its refurbishing. Right top, Maritime Museum and amphitheater at San Francisco's Aquatic Park; right middle, 'hulking nonmaritime' Pier 39; right bottom, San Francisco waterfront promenade.

legends of surfdom. Santa Monica, Ocean Park, Venice, Seal Beach, and others in the Los Angeles area were developed closely with their rail accesses, as were San Clemente, Ocean-side, and the San Diego area piers to the south. Today San Clemente remains as a unique spot where one can detrain from Amtrak and step almost directly onto the beach and pier. The freedom of people to enjoy fast and direct rail transit from inland to the ocean was replaced by the freedom to get in the family car and drive off in any direction whatever, freeway grid-lock permitting.

Since the decline of the amusement pier, piers along the California Coast are either minimal structures designed to get people out over the water efficiently or more elaborate affairs featuring restaurants, souvenir shops, and probably some commercial fishing, boat tours, and equipment rentals. Some larger piers, such as the Santa Cruz pier and Santa Barbara's Stearns Wharf, provide extensive on-pier parking, a use that the people of Santa Monica banned from their pier.

In San Francisco, the senseless loss of port activities to surrounding bay communities has resulted in a drastically underused waterfront. This has given rise to wierd merchandising mutations like Pier 39, a hulking nonmaritime shopping complex covering 45 acres of the bay with 105 shops and 23 restaurants and a marina. It is out of scale and inappropriate to its neighbors. Disdaining to be like its western neighbor Fisherman's Wharf, a real blue-collar environment, it equally failed to achieve the elegance of the classic Embarcadero pier facades to the east. San Francisco's ad hoc planning processes permitted this unfortunate blot, called "horizontal Manhattanization" by the late columnist Charles McCabe.

Westward around the bend from Pier 39 toward the Golden Gate Bridge is a far more gracious, varied, and useful environment. It is Aquatic Park, whose chief adornment is Aquatic Pier—a simple arc of concrete that sweeps out to the bay and curves back to enclose a small harbor. At the end, a zigzagged pavilion sits abandoned, waiting for the next person to try a bait shop and refreshment stand there. Looking back from the pier, one sees the shores of Aquatic Park alive with many kinds of activity, many of them free. The elegant streamline moderne Maritime Museum and Senior Center is to the right, near the bocce court and the pathway out to the pier. Left of the museum is an amphitheater that faces the bay and is in constant use by drummers and bongo artists. The park's lawn is between the amphitheater and Hyde Street, of Hyde Street cable car fame; its turnaround dips into the park where the click of Instamatics in tourist season sounds like a locust swarm. Bookending a variety of mixed use restored structures along Bay Street are the pioneering recycled complexes of Ghirardelli Square and the Cannery. The Hyde Street Pier, a state-run open-air maritime park of historic ships and artifacts, is at the foot of the hill in the bay; just to the east is Fisherman's Wharf. All look out to views of the bay, Alcatraz, Angel Island, the Marin County hills and towns, and the Golden Gate Bridge. A trail leads westward to the entrance of San Francisco's side of the Golden Gate Na-



tional Recreation Area, which includes recycled Fort Mason (art and performance center) and curves under the bridge eventually to lead to Ocean Beach facing the Pacific. Overall, it's a fantastic pleasure zone.

This resumes downtown, just east of the Ferry Building at the foot of Market Street. Here the Port Promenade by William Turnbull Associates stretches along the north waterfront to the Bay Bridge. At least one previous design for this area between the Embarcadero and the bay was replete with kiosks and the rather cliché array of street furniture frequently proposed for malls and the like. To the port commission's credit that approach was abandoned, and Turnbull designed this sensitive solution, which discreetly allows the majesty of the bay and bridge views to take over. The promenade itself becomes a welcoming stage for people's activities during lively lunch hours or romantic strolls at dusk, being protected by subtle terracing from Embarcadero traffic. Port Promenade is a superb example of knowing how to subdue the designer's ego and let a dramatic context speak for itself.

Meeting the water is the most important and delicate act performed by the architect or developer of oceanside pleasure zones (or any other type of project). Aquatic Pier reaches out and embraces its little harbor. Santa Monica Pier will carry a lightsome load of festivity over the surf in years to come. San Diego's Crystal Pier bridges out to its fishing platform with a double row of snug cottages, where people can be lulled to sleep by the sound of waves beneath. In Oceanside, the previously hard-edged Strand is enlivened with a central plaza and park areas, accessways, and beach connections, with the redesigned Strand Community Center and amphitheater at the center, by Ron Yeo, FAIA, and landscape architects Lang & Wood.

In Laguna Beach, Main Beach at the very center of town was dedicated in 1974, designed by landscape architects Lang & Wood, and Fred Briggs, AIA. It is a paradigm of how a community can meet its waterfront by using a small amount of open space (2.64 acres plus beach) reclaimed from an area of old beach houses and small-scale commercial buildings. This is space available to everyone, and in its urban scope provides special facilities for varied interest and activities. At the north end, the beach butts into a cliff atop which is the Laguna Beach Museum of



Success and failure on San Diego Bay.

Art. Below the cliff is where fiercely fought volleyball matches pound throughout the day. The beach south of the central life-guard tower has been colonized by people interested in the more languorous persuasions of sun bathing and dipping into the water. Surfing and diving generally occur in more adventurous areas away from Main Beach. Curving gently along the inland border of the sand is a boardwalk (in this case real boards; some California "boardwalks" are concrete) that is used by strollers, roller skaters, bikers, and people using wheel chairs and other modes of locomotion. They never seem to bump into one another, a tribute to the open and welcoming nature of the place. Between the boardwalk and Pacific Coast Highway that hugs the shoreline is a softly contoured grassy park, the green complement to the tan of the beach. Here people seek shelter from the sun under trees, read, chat, watch over small children, and picnic. A kid's playground and open shower are at the south end. A few commercial buildings are tucked here, and dining decks sprout umbrellas on upper levels. At the south end rises the comfortable old Hotel Laguna. Across the Pacific Coast Highway is the bustling, human-scaled downtown of Laguna Beach. Like Port Promenade, Laguna Beach has made a virtue of simplicity, working with great natural resources and the lively qualities of an interesting community to create a very special pleasure zone.

Further south on San Diego Bay is a much more recent waterfront pleasure zone. Seaport Village faces out onto the bay with its back to a landscaped parking lot and to the redeveloping downtown. Located where the ferry to Coronado docked before completion of the bay bridge in 1969, Seaport Village is, as its owners point out, "a theme park, not an amusement park."

The basic theme is profit, which is fine; that is why most good pleasure zones were built, including the Hotel del Coronado across the bay and all the piers and parks along the railway lines. Visually, the "theme" is a mulligan stew that includes the ubiquitous "Cape Cod" wharf building (here mercifully kept to one restaurant projecting over the water); overdecorated Victorian; old West falsefront; south-of-the-border stucco (artfully peeling) over "adobe" with *vigas* sticking out; a Washington state lighthouse replica; a somewhat Bay Area-style central restaurant; and, providing the only fantasy note, a reconstructed Looff carousel.

It sounds pretty awful, but it was competently put together by Norbert W. Pieper, AIA, with consultation from Raymond E. Wallace Special Productions and using Disney-trained artisans. What really makes it become a good neighbor to the bay and the public park it faces is the planting and site plan by landscape architects Wimmer, Yamada & Associates. All the hokum falls nicely into place as the landscape softens, guides, and ameliorates it around a series of diminutive plazas each with accessways and views to the boardwalk and bay. Inside the buildings, there is nothing to do but buy something to eat or to take home. Outside it is all free, including the parking, and fronts on a boardwalk (more real boards) that sweeps from the working tuna fleet wharves, to the public park, and on around to where the real boards stop and concrete begins again, and you are stopped short by the aggressive reflecting monolith of the Intercontinental Hotel (The Hope Consulting Group, architect).

The Port District of San Diego, having done something right—or almost right—with Seaport Village, turned right around and threw up the 681-room Intercontinental, which looms over the diminutive village and the rest of the waterfront like a mirrored space lozenge waiting for blast-off. It blocks views of the bay

from downtown. It is raised on a lofty baroque base that makes pedestrian access unthinkable. It even cuts off its own lower floors from the bay with a super-Frisbee-shaped extension containing meeting rooms and projecting over the pedestrian promenade toward a 435-berth marina. Between the lozenge and the Frisbee is a Club-Med-type chasm with man-made waterfalls running over some strange quasi-rock material, which keeps lolling guests from the rude stares of the hoi polloi as well as limits their own bay views. (Wimmer, Yamada & Associates again, this time without the deft touch shown at Seaport Village.)

Having caused this monumental presence on the bay, the Port District has announced a future companion hotel tower of 727 rooms by the same developer, Torrey Enterprises, but a different architect, Welton Becket & Associates. Initially planned as a curvy twin to the first, Intercontinental #2 will evidently have a more angular shape but will apparently still be clad in the herpes of architecture—reflecting glass. Then, if all goes as planned, a Hyatt Regency (Torrey again) will provide a 33-story, 800-room hotel wedged between the Intercontinentals and Seaport Village for a total of 2,208 rooms plus the requisite ancillary spaces for conference facilities, tennis courts and swimming pools, restaurants and bars, and lots of parking spaces—all between the bay and downtown. Hold on. As Al Jolson used to say, “You ain’t seen nothin’ yet.” On the other side of the Intercontinentals, the Port District and the City of San Diego are planning a 655,000-square-foot convention center with 2,000 parking spaces, designed by Canadian architect Arthur Erickson affiliated with locals Deems Lewis Associates. The Port District’s attitude about bayfront planning was winningly summed up by a representative of Seaport Village when it opened. “Realize this is a commercial venture,” he told Roger Showley of the *Union*. “We want to make it a quality, attractive, pleasant place for people to want to come to and spend their money. I hate to sound crass, but that’s what the port wants.” By the time all the port’s projects are in place, San Diegans and others walled in downtown behind this phalanx of structures will have good reason to

appreciate the small open spaces and bay views of Seaport Village. They will serve to remind people that San Diego once connected with its bay.

The introduction of out-of-scale hotels that wreak havoc on the special waterfront environment is not unique to San Diego. The San Francisco Port Commission announced last April its desire to build a 500-room hotel jutting into the Bay on old Pier 45 between Fisherman’s Wharf and the brummagem Pier 39. It is theorized that the monies thus earned will go to good deeds such as refurbishing facilities for the fishing fleet. The fishermen need all the help they can get these days, but they appear dubious about getting it this way. The building of Pier 39 to the contrary, such intrusive and inappropriate projects usually face a rocky road in San Francisco; a wild time of controversy, lawsuits, and delays can confidently be predicted if the port is really serious about its 500-room behemoth.

All along the California coast are examples of how to provide lodgings that are amenable to a seaside environment, in a variety of qualities and scales. Most of them have been there for some time. Had the San Diego planners looked northward to Crystal Pier in Ocean Beach, they would have found a delightful example of decking a small-scale motel onto a pier, part of it acting as a splendid pier entrance gate and a landmark in its neighborhood. Looking a little further up the coast to Ocean-side, they would have come across Roberts Cottages, as fine and solid a little group of 1920s-’30s vacation bungalows as exists on any coast. Painted in warm tones over stucco, the line of cottages directly facing the beach along the Strand is offset so that the row in the rear gets its views between the cottages in the front rank. Yards in between are commons for chatting, hanging out laundry, and barbecuing; parking is at the rear below the bluffs. On the north coast, Venetian Courts on the beach in Capitola just south of Santa Cruz is a cozy and picturesque complex of units, part owned and part rentals, climbing a small slope along one side of the beach and constructed around a maze of its own tiny pedestrian streets and gardens.



Jim Burns



Across page, San Diego's Seaport Village with Intercontinental Hotel looming in the background. Left, above, seaside scale of Seaport Village; left, cottages on San Diego's Crystal Pier; above, 'fine and solid' Roberts Cottages in Oceanside near San Diego.

Aging queen of the California shore.

Diminutive size is not a prerequisite for a desirable seaside hostelry. The epitome of the resort hotel on the West Coast is everyone's favorite, the Hotel del Coronado, which is of considerable dimensions. It was built by Coronado's developer Elisha Babcock as a dramatic magnet to draw lot buyers to his town. In recent years, the "Hotel del," as its admirers call it, has suffered some additions inappropriate in style and scale, including thickly detailed "Victorian" pavilions and a porte-cochere of lumbering heaviness. But the fantastic massing and vivacious forms of the grand old structure still rise above all the clutter around it and command the oceanfront like the regal dowager it is.

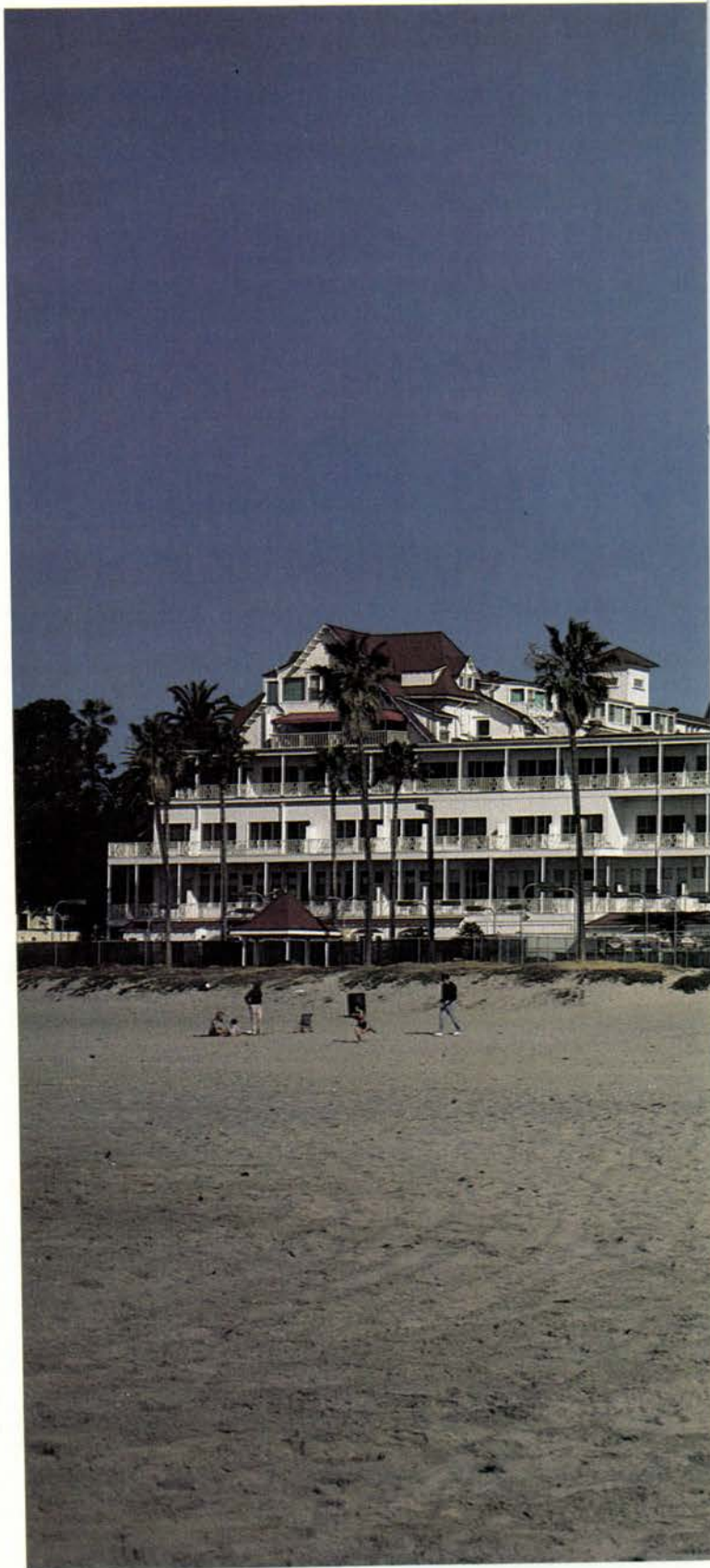
Very few hotels have been built since 1972, and even fewer of architectural merit. The same goes for commercial pleasure zones and amusement complexes. In an attempt to publicize good design along the coast, the California Coastal Commission in 1980 inaugurated a coastal design awards program. It was embarrassingly dropped after one outing because of a dearth of decent examples. The Coastal Conservancy has recently published a book on coastal design called *The Urban Edge: Where The City Meets The Sea* (William Kaufmann, Inc., 1985). Most of the articles, by a range of noted design critics and practitioners, are perforce about history or processes that might cause improvements, rather than descriptions of admirable current facilities. One still has to refer to the past when citing exemplary coastal design for pleasure zones and lodgings. The Miramars of Santa Monica and Asilomars of Monterey have no descendants today.

Some hope of resurgence lies in the Coastal Commission and Coastal Conservancy, formed as a result of 1976 legislation. The commission is the "enforcer" of the state's strong regulations over coastal development; the conservancy is the facilitator, providing aid for public and private projects it considers in the general interest.

One of the few new resort hotels on the coast in recent years, the Ritz Carlton at Dana Point, resulted from the commission's insistence that the developer of the area provide a hotel and not just a lot of single family mansions terraced above the ocean. In Seal Beach, Santa Monica, Santa Barbara, Imperial Beach, and as far north as Eureka, communities have worked with the state agencies to develop environments that will be places for tourists to visit as well as for residents to enjoy. In this process, the conservancy has given "grant loans" (returnable to its revolving fund) for major pleasure pier and park projects in Huntington Beach, Manhattan Beach, Oceanside, Seal Beach, Santa Monica, Santa Cruz, and Santa Barbara.

The problem now lies in finding developers and architects with sufficient imagination and commitment to create pleasure zones that can be as wonderful tomorrow as they were yesterday. The prospect is dim at this writing. Gone are people like George C. Tilyou, who called his Steeplechase Park at New York's Coney Island "the Funny Place" and who spent his life enthusiastically inventing wilder and wilder ways for people to have fun. Gone too, are the likes of Abbott Kinney, whose short-lived dream was to transport Venice, Italy, to Venice, California. Gone are tycoons like Henry C. Huntington, who saw the logic and profit in providing pleasure zones and piers to delight the people who rode his Pacific Electric Railway. No longer with us are the Elisha Babcocks and their Hotel del Coronados, or the more anonymous folk who built the Crystal Pier and the Roberts Cottages and the Venetian Courts. They are replaced by people whose imaginations do not exceed an occasional Seaport Village but more frequently produce the odium of a Pier 39 or San Diego Intercontinental convention complex.

The incredible dreams of the Tilyous and Kinneys and Loeffs and Babcocks are diluted and compromised by corporate boardroom mentalities and public commissioners who have no vision beyond the "bottom line." The Coastal Commission and



Conservancy seem more concerned with quality and human use than the developers who will profit from them. The most we get these days is the "festival marketplace" where we are to be beguiled into "recreational shopping," perhaps with a reconstructed carousel thrown in as sweetener—places, as the Seaport Village man said, where people will want to come to spend their money. "No pleasure endures unseasoned by variety," wrote Pubilius Syrus around 42 B.C.: not even recreational shopping, he would no doubt add today.

The places in this article were developed in one way or an-



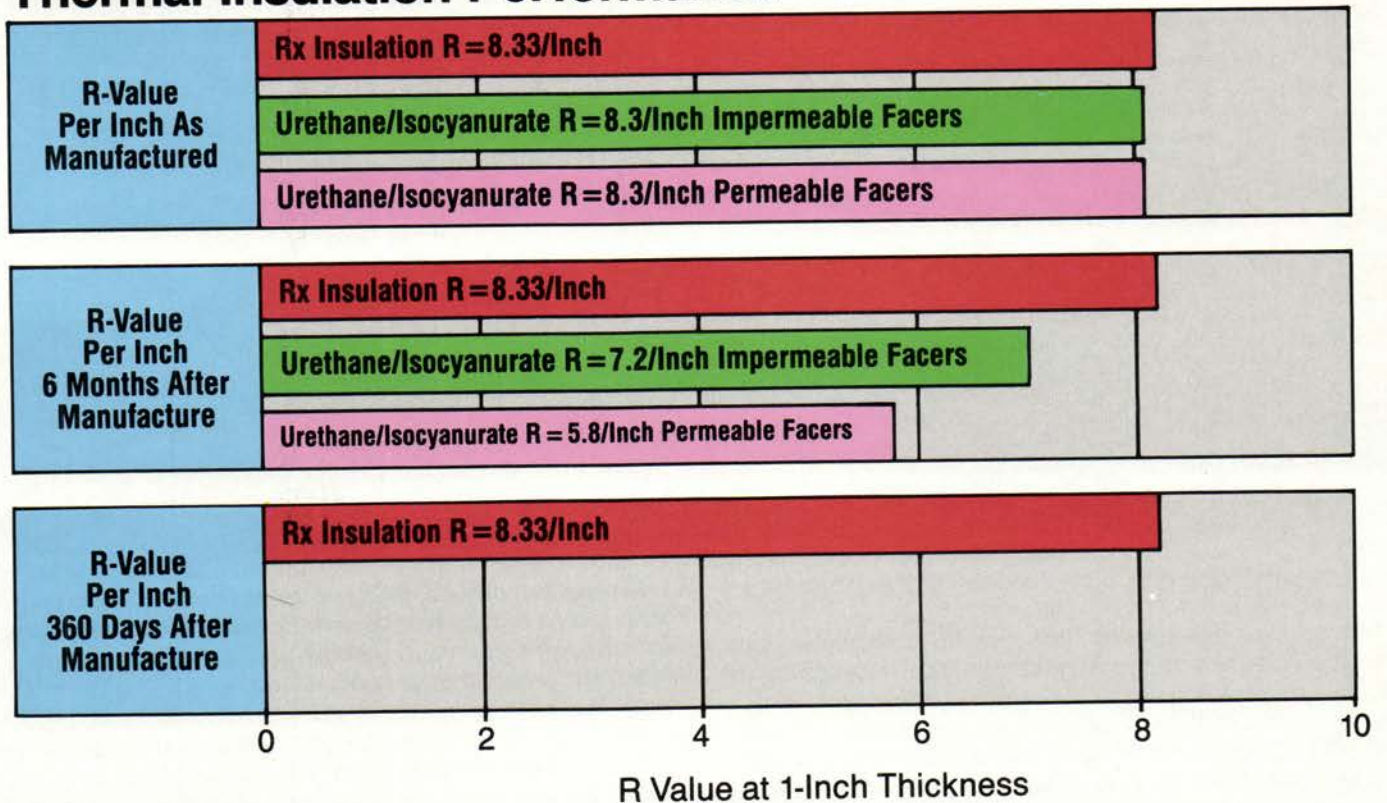
Above, Hotel del Coronado as it faces the Pacific in San Diego.

other for economic reasons, on the sound Shakespearean basis that "no profit grows where is no pleasure ta'en." The failure of recent years in most waterfront pleasure zones has been in the curbing of fantasy, of the unbridled gusto, enjoyment, and courage with which people created the Santa Monica piers and Santa Cruz casinos and Luna Parks and Atlantic Cities. The safe and tasteful approach, spun around the safe and tasteful patriotic cartoon-character, historic, or homespun "theme" has diluted the

excitement and chance-taking of the old pleasure zone pioneers. Extravagance is considered somehow vulgar; exuberance is somehow suspect; amusements and distractions that divert people from boutiques and oyster bars are deplored. The Steeplechase Funny Place has given way to the festival marketplace. The very themeness of theme parks generates their boringness, except in the hands of geniuses like Disney. For most of the rest, they are a bland lot, the antithesis of the discovery, delight, amazement, excitement, and even usefulness that coastal pleasure zones formerly had as their prime characteristics. □



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'Sensational' Account Of a City Transformed

The Transformation of San Francisco. Chester Hartman. (Rowman & Allanheld, \$11.95.)

San Francisco's first modern highrise was built in 1959. Since that time more than 40 million square feet of office space have been built and another 20 to 30 million square feet have been proposed. Chester Hartman labels this dramatic infusion of steel and glass the "Manhattanization" of the city that is the site this month of the AIA convention. *The Transformation of San Francisco* provides a detailed history of the collaboration between private business and city government in promoting downtown development.

The first half of the book is an update of Hartman's 1974 work *Yerba Buena: Land Grab and Community Resistance in San Francisco*. Essentially this is the story behind urban renewal. Corporate and business interests in the 1950s believed that San Francisco's small downtown had to expand and that South of Market was the obvious location. The existing downtown was hemmed in by hills, prime retail development, and strong neighborhoods, while the South of Market area offered hundreds of acres of flat land with low intensity usage, low land prices, and a population that seemed expendable. A grandiose plan for a convention center, sports stadium, hotels, office buildings, shopping, parking, and a host of civic amenities was proposed first by a private developer in 1955 and was carried forward by the incredibly powerful Redevelopment Agency over the next 25 years.

Of course large scale planning meant large scale demolition and people removal. According to Hartman, the Redevelopment Agency was either unwilling or unable to relocate the 3,000 single residents and the 280 families in the area. At the same time, other public projects were displacing large numbers of low income residents in neighborhoods around the city, exacerbating the problem South of Market. Residents began to organize around the housing issue and in 1968 took their first real step in fighting the redevelopment scheme. They petitioned HUD to review the agency's relocation plan and followed that with a series of lawsuits.

What stands out in this account of attack and counterattack, of public poli-

cies and private deals, is that San Francisco's story is probably not unique. Minneapolis and the development of Cedar-Riverside, the "new town in town," is the first example that comes to mind, but there are dozens of others. Hartman's account of the gory details in San Francisco puts the whole process of urban redevelopment into context and reminds the reader not to believe everything he or she reads in the newspaper.

The second half of the book gets beyond the particulars of the Yerba Buena Center case study and looks at the relationship between City Hall and downtown, and at the impact of downtown development on housing, jobs, transportation, and the overall quality of life in the city. The details, the connections, the ironies, and the innuendos are engrossing, but it is not entirely surprising to find out that the mayor is prodevelopment; that one member of the Redevelopment Agency board is a realtor who happens to share offices with the mayor's husband, and another is a lawyer representing real estate interests; or that the planning commission has never turned down any development project.

At the same time labor, environmentalists, minorities, neighborhood activists, and working class groups each fought for their own issues without the benefit of strong alliances or of strong leadership. Still, they have brought about a variety

San Francisco's 'Manhattanized' downtown.

of reforms, including some new housing, rent control, protection for residential hotels, requirements for downtown developers to contribute to a housing fund, and a sunlight ordinance protecting public open space from the shadows cast by highrises.

However, the reality remains: Housing costs are among the highest in the nation, traffic is staggering, and, as Hartman says, "diversity is disappearing; niches where idiosyncratic residential and commercial life can flourish are becoming hard to find; segregation by neighborhoods, classes, and races is increasing. There is a pervasive sense that much of what is good in San Francisco is on the way out."

In the final chapter, Hartman offers the reader some lessons from San Francisco. He suggests that halting "Manhattanization" requires campaign reforms, more citizen participation, a coalition of housing forces and growth control forces, and a regional approach to planning and growth. In the face of what he has just presented these lessons seem rather idealistic if not insufficient.

Overall, I do like the book. It's a "good read" and a fascinating chronicle of an intricate and complicated urban political history. What I dislike about *The Transformation of San Francisco* is that it never quite gets beyond sensational journalism. Hartman complains bitterly about the biases of the media, the San Francisco newspapers in particular, and yet he relies

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Allen Freeman

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heavily on *The Bay Guardian*, a progressively biased local weekly, as a major reference source for "factual" information. This seriously detracts from the credibility of his arguments.

Further, he presents the developers as bad guys and the housing/neighborhood activists as good guys. Downtown development certainly bears a major responsibility when it comes to the destruction of moderately priced housing. But one cannot ignore the middle-class based no-growth movements of the early '70s that brought about down-zoning in residential neighborhoods. This in itself contributed significantly to the tremendous rise in housing prices and the subsequent housing shortage.

Hartman has a way of leaving out a number of messy facts that might detract from the apparent righteousness of progressive community groups. Although he sensitively describes the schism between a housing group and their lawyers, and the inevitable differences between the values of a community group and their professional advocates, he completely leaves out any real analysis of why these groups have had such difficulty working together. I doubt that a more balanced evaluation would undermine the thrust of this book, and, in fact, it might improve it.

In the final analysis, the significance of this book lies in Hartman's description of the physical transformation of city form and not in whether Hartman is writing accurately and analytically about San Francisco's urban political history. Architectural historian Spiro Kostof has argued for many years that we cannot learn or know about urban form simply by looking at the buildings. He contends that cities are an amalgam of the living and the built and to understand a city we must understand its history.

Florence is a classic example. It was a Roman city with a grid until feudal lords obstructed thoroughfares and sealed off whole neighborhoods under their control. The young republic that began in the 12th century took charge of the city by opening passageways and eradicating pockets of resistance. Their intent was to use the design of city form to confirm the supremacy of the commune, the people, and their institutions.

The relationship between political history and urban form is often more legible in ancient European cities than in modern American ones. Recently, however, sociologist Manuel Castelle has put forward the theory that spatial form does not merely reflect society but is one of society's fundamental material dimensions. He writes in *The City and the*

Grassroots that spatial form is produced by human action and it expresses the interest of a dominant class, as well as the power relationships within society.

Thus, cities are "transformed" in the modern era by concentration and specialization according to the interests of capital and by the commodification of the city itself through real estate and land speculation. San Francisco is the classic example of a modern city shifting gears to meet the needs of a new technological era with new systems of management and new modes of production. Blue collar (manufacturing) jobs and now pink collar (clerical) jobs have been pushed to outlying suburbs because corporate headquarters can manage communication and control via the telephone and the computer. And so the city begins to transform, with highrise office blocks and large, quasi-public facilities replacing less valuable neighborhoods, businesses, and residents.

Castelle makes it clear, however, that for each spatial restructuring attempted by the dominant class, there is a variety of alternative urban forms proposed by popular classes and (or) social movements. This, too, is visible in San Francisco. There have been direct physical consequences brought about by the housing and anti-growth movements, from the preserva-

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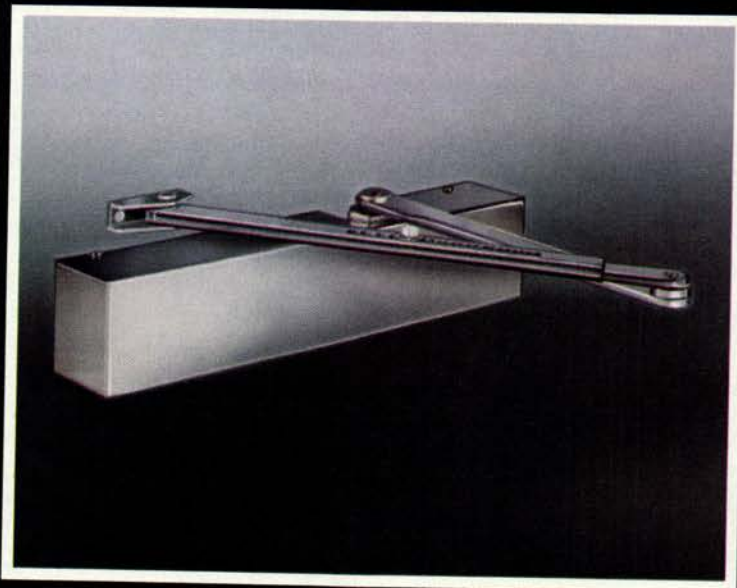
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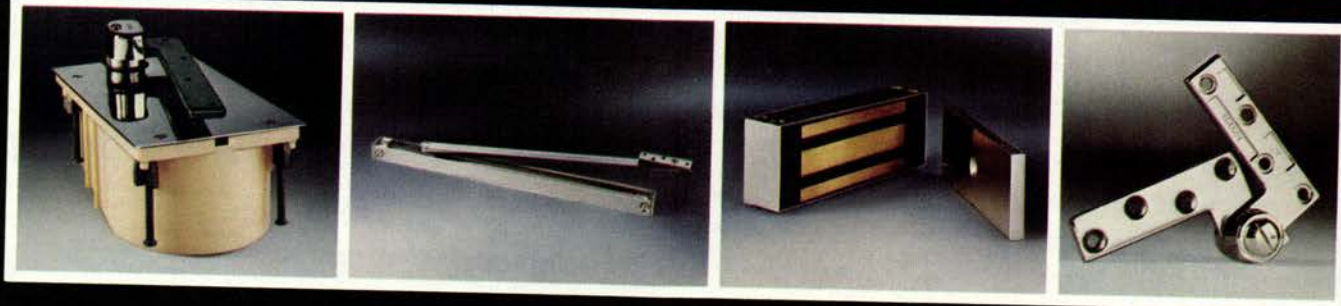
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Books from page 90

tion of existing buildings to the reshaping of new buildings in terms of height and bulk. This is also a significant part of the transformation.

The change in San Francisco over the past 30 years is represented in the "Manhattanization" of the downtown, but it is also represented by the housing that has been preserved and the stadium that never was built. In *The Transformation of San Francisco* Chester Hartman describes the people, the interests, the debates, and conflicts that have been crucial in the shaping of the city. I doubt that anyone who reads this book will look at San Francisco, or any other American city, in quite the same way. MARY C. COMERIO

Ms. Comerio is an assistant professor in the college of environmental design at the University of California, Berkeley.

The Historic Preservation Yearbook: A Documentary Record of Significant Policy Developments and Issues. First edition, 1984/85. Russell V. Keune, editor. (Adler & Adler, \$78.)

Any architect who has been involved in preservation knows how difficult it is to maintain up-to-date information on pertinent aspects of that field. This frustration has been shared by persons employed

in all segments of an increasingly complex, multifaceted endeavor. This inaugural volume represents an impressive step in ameliorating the situation.

This is a substantial (590 pages), copious reference work, much of which offers a compendium of laws, regulations, and policies. At the same time, considerable space is devoted to delineation and analysis of issues. The topics covered are diverse, ranging from federal standards to landmark designation of religious properties to tax incentives for housing rehabilitation programs.

Practitioners will find little specifically addressing design concerns or technical matters related to architecture, but anyone undertaking the restoration/rehabilitation of a historic property will discover this book to be an invaluable source of information, making it well worth its hefty price. Compiled by an AIA member who has long been a leading authority in historic preservation, the book's contents are as reliable and current as they are extensive.

Future volumes bring the promise of including more issue-oriented text, to which architects should seriously consider contributing. This would be a good place to reprint the National Park Service's *Preservation Briefs* and newly launched *Technical notes* series, both of which are essential

reading on aspects of materials conservation and repair. Let us hope, too, that sales will be brisk enough to reduce the cost of subsequent volumes. But irrespective of price, the book is a bargain. Keune has managed to condense a file cabinet of materials into one useful volume that deserves to join the ranks of *Sweet's Catalogue* and the *BOAC Basic Building Code* as an indispensable part of the professional reference library.

RICHARD LONGSTRETH

Mr. Longstreth is director of the graduate program in historic preservation at George Washington University.

The Boston Society of Architects' A.I.A. Guide to Boston. Michael and Susan Southworth. (Globe Pequot Press, Old Chester Road, Chester, Conn. 06412, \$14.95.)

The focus of this guide is architecture and urban design, with the mentioned sites in Boston and its environs selected primarily for their architectural significance. Arranged by districts, the guide supplies interesting architectural and social information on each site noted, with dates and names of architects provided. Useful maps delineate architectural highlights of each area, making the guide useful to non-Bostonians. □

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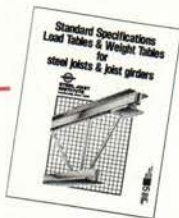
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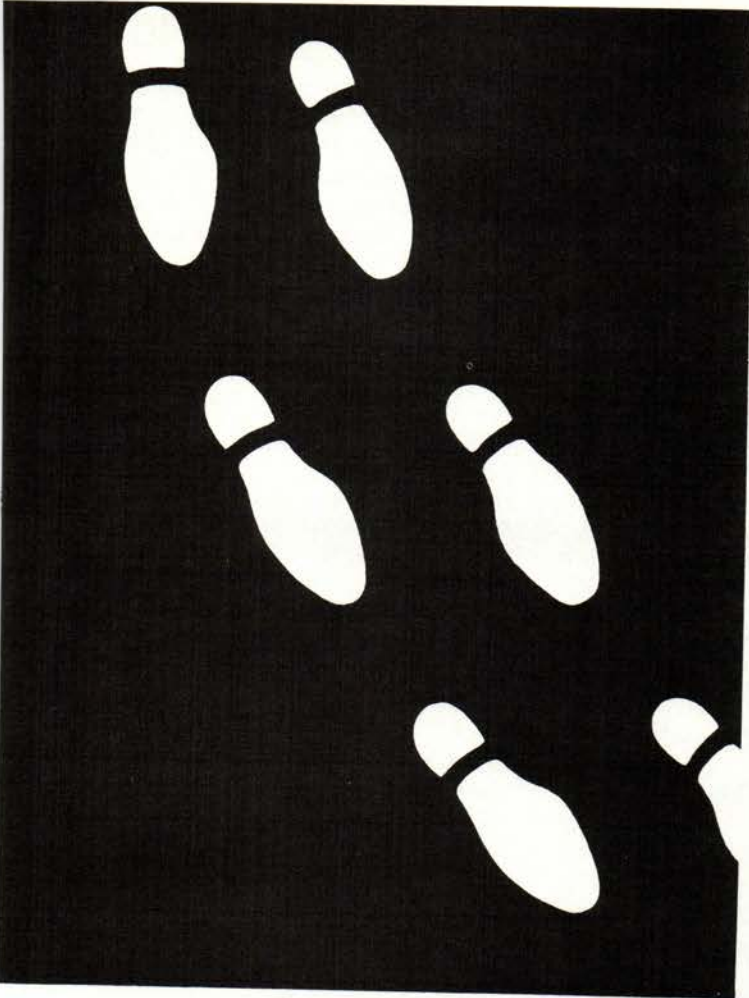
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America. The journal is intended to provide analysis of architectural topics with emphasis on social and environmental perspectives of the South and West. It is available for \$15.75 from the Center for the Study of American Architecture, University of Texas, Austin, Tex., 78712.

Classical Building Competition.

Classical America is sponsoring its first classical public building competition worth \$5,000 in prizes. The competition is open to students of architecture, and the deadline for submissions is Sept. 1. For more information, contact Classical America, P.O. Box 821, Times Square Station, New York, N.Y. 10108.

Pei to Receive Chicago Award.

I.M. Pei, FAIA, will be presented the "Chicago Architecture Award" at NEOCON 17. Pei was chosen for his "significant contributions to architecture and to the design of urban environments, which have facilitated the highest standards of architecture for cities."

Architectural Precast Award Winners.

Mexico City Mormon Temple and Visitor Centre, Mexico; Atrium Two, Cincinnati; and Philip Morris, USA, Cabarrus County, N.C., were winners in the 1985

continued on page 96

BRIEFS

Degree Program in Lighting Design.

Parsons School of Design has developed a masters in fine arts degree in architectural lighting design. It is the country's first advanced curriculum in illumination design, taught as an architectural/interior design discipline.

Thomas Jefferson Professors Named.

Edward J. Logue, Hon. AIA, president of the South Bronx Development Organization, and Demetri Porphyrios, head of history and theory studies in architecture at the Polytechnic of Central London, have been appointed the 1985 Thomas Jefferson professors in architecture at the University of Virginia.

Charles Luckman Honored.

The University of Illinois has awarded its medal in architecture to Charles Luckman, FAIA, in recognition of "a lifetime of outstanding achievement and service to the profession of architecture."

New Regional Journal.

The Center for the Study of American Architecture at the University of Texas has published the first annual edition of *Center, A Journal for Architecture in*



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Briefs from page 95

Carl E. Shawver international architectural award competition sponsored by the Architectural Precast Association. The award, established in 1972, recognizes both the design and manufacturing excellence in architectural precast concrete.

NSPE Recognizes Five.

The National Society of Professional Engineers honored five employers for their outstanding employment practices and policies. The awards are presented annually in five areas: construction, education, government, industry, and private practice. The president will present the awards during the society's winter professional meeting in January 1986.

Lighting Designers Award Program.

The International Association of Lighting Designers is sponsoring its third annual lighting design awards program, open to anyone who has designed a permanent lighting installation. Deadline for entries is Sept. 20. Entry forms may be obtained from Marion Greene, IALD, 30 W. 22nd St., New York, N.Y. 10010.

Study Tour of Underground Settlements.

The University of Minnesota is sponsoring a 21-day study tour of historic and contemporary earth sheltered buildings around the Mediterranean. The study tour

will provide opportunities to meet local researchers and architects who have studied the settlement sites. For a complete itinerary, contact the Continuing Education Office, Science Museum of Minnesota, 30 East 10th St., St. Paul, Minn. 55101.

University of Texas Program Honored.

The audiovisual program, "Built in Texas," produced by the University of Texas at San Antonio, was named a silver medal winner at the International Film and TV Festival of New York. Slide sets are \$50 and filmstrips are \$30. Both are available through the Marketing Department at the university.

Concrete Institute Publication.

The American Concrete Institute's 1985 edition of the five-part reference set, "Manual of Concrete Practice," is now available for \$225 (\$150 to ACI members) from the Publications Department, ACI, P.O. Box 19150, Detroit, Mich. 48219.

50th Anniversary Exhibition.

The San Francisco Museum of Modern Art will have on view through Aug. 25 an exhibition of design projects from the Clos Pegase Winery Competition. Featured will be drawings and models submitted by the five architect/artist teams who were finalists in the competition.

CREDITS

Primate Discovery Center, San Francisco, (page 42). Architect: Marquis Associates, San Francisco. Tile: Quarry. Paint: PPG. Simulated rocks: diGiacomo Inc. Blinds: Levolor. Lift doors: Glenco. Windows: Blomberg. Light fixtures: Peerless.

Monterey Bay Aquarium, Monterey, Calif. (page 50). Architect: Esherick, Homsey, Dodge & Davis Architects, San Francisco. Principal-in-charge: Charles Davis. Exhibits design: Frederick A. Usher, Ace Design, Bios, Inc. Structural, civil and marine engineers: Rutherford & Chekene. Mechanical and electrical engineer: Syska & Hennessey. Acoustical consultant: Charles M. Salter Associates. Audiovisual engineers: Lloyd F. McKinney Associates. Lighting consultant: Don Maxcy Design Associates. Landscape architect: Michael Painter & Associates. Restaurant consultant: Pat Stein Associates. Interior Design: Marie Fisher, Marnie Wright, Dwayne Bohuslav, Michael Albanese. General contractor: Rudolph & Sletten. Cement shingle roofing: Suprdur. Fiber cement siding: Gold Bond Building Division, National Gypsum. Windows: Hope's Architectural Products. Exterior light fixtures: Daylight, Prescolite. Street lighting: Architectural Area Lighting. Quartzite flooring: Marlin Granite. □

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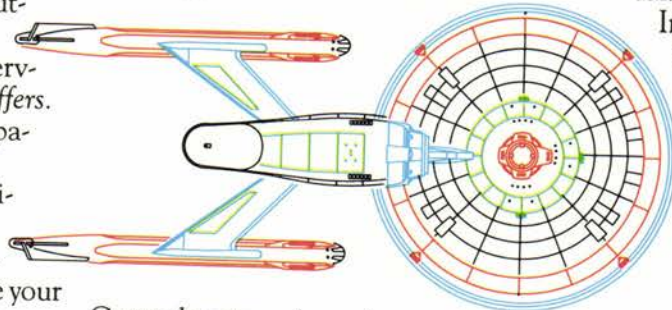
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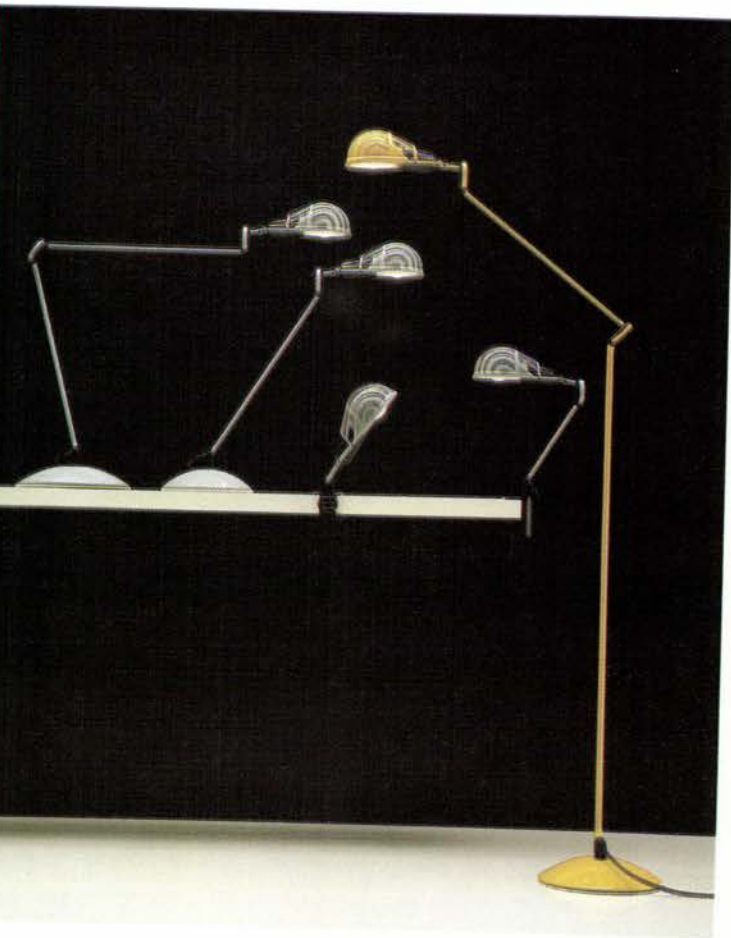
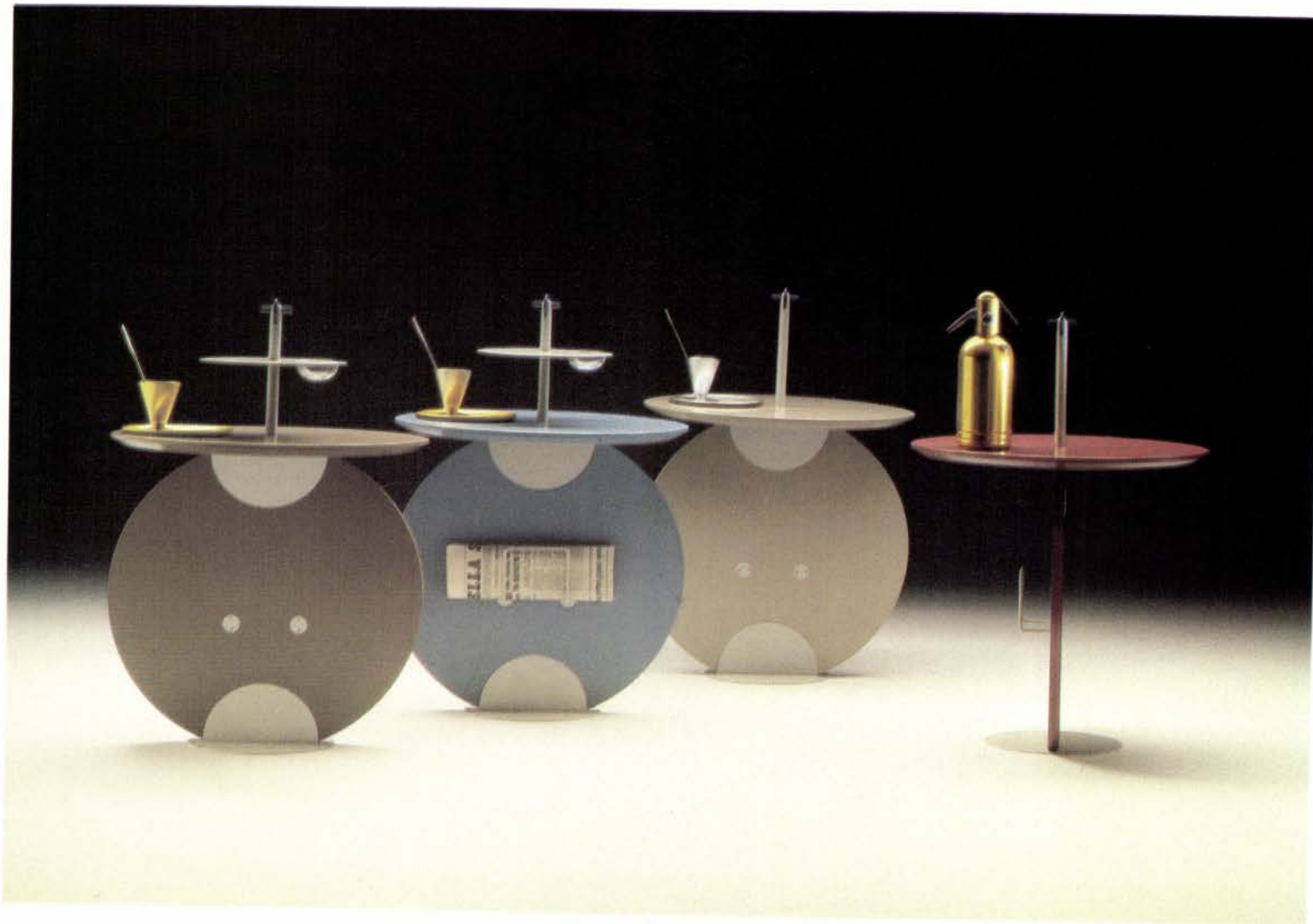
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The center leg table (1) by the Italian company Kartell has five pieces that interlock without bolts or screws. The straightforward design plays upon bold geometric shapes: A thin square top rests on a rectangular leg that is anchored by two triangular supports. Colors are a bright yellow, red, and green, and black and white. The Liverpool Bench (2), designed by Ronald Carter for Peter Miles Furniture of England, has a slightly elongated and curved backrest comprised of vertical slats with tiny holes punched out. The slats are repeated on the seat. Finishes are natural, oiled, or sealed wood. Covered cotton canvas foam cushions are available, as well as chair and table models. (The U.S. distributor is Internal Designs, Ltd., of Chicago.) The design of the Italian company Giorgetti's Camuni rectangular table (3) is reminiscent of the Viennese school in its simplicity of lines and its subtle touch of formality. The table is polished solid oak. Designed by Gastone Rinaldi, Thema's Desy chair (4) has a tubular steel structure that is stove enameled with epoxy colors or chromed. The backrest is solid rubber, and the seat is foamed polyurethane on elastic bands. Seat and backrest covers can be fabric or leather.

A whimsical play upon the circle is the theme of the Cadetti tables (5). Designed by Michele De Lucchi for Morphis, a division of Acerbis International, the circular wooden table is supported by an identical circular element that is flipped on its side and connected to the top by a cylindrical pole. One model has an extra circular surface above the table top, which contains a small ashtray. Both have a newspaper rack positioned on the support circle. Colors are brown, gray, blue, red, or violet with gray details. Lumina Italia's Igloo adjustable lamp (6) comes in several models with stands of different lengths—table, clamp, gripper, wall, ceiling, and floor. The igloo-shaped reflector is adjustable and opens for easy bulb replacement. Colors are black, white, red, gray, and yellow. □

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Here at the Wyndham Hotel in Dallas, Texas, we fabricated our granite to meet the requirements of a curvilinear design to help create the flowing, upward movement which recalls the feeling of organic form. At Cold Spring, we're meeting your new requirements for innovative designs by combining technology and



Wyndham Hotel
Dallas, Texas
Owner: Trammell Crow
Architect: Dahl/Braden & Chapman, Inc.
Granite: Indian Sunset

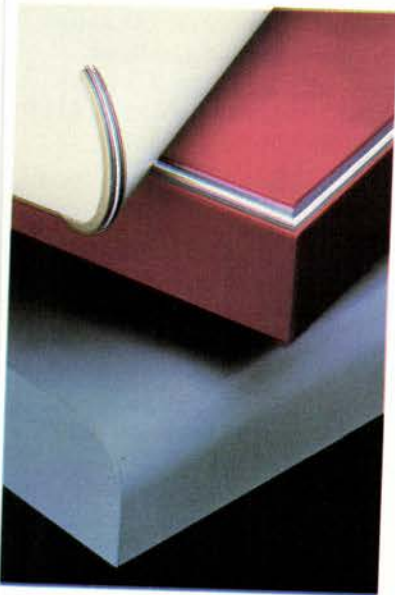
DIMENSIONAL STONE FROM

COLD

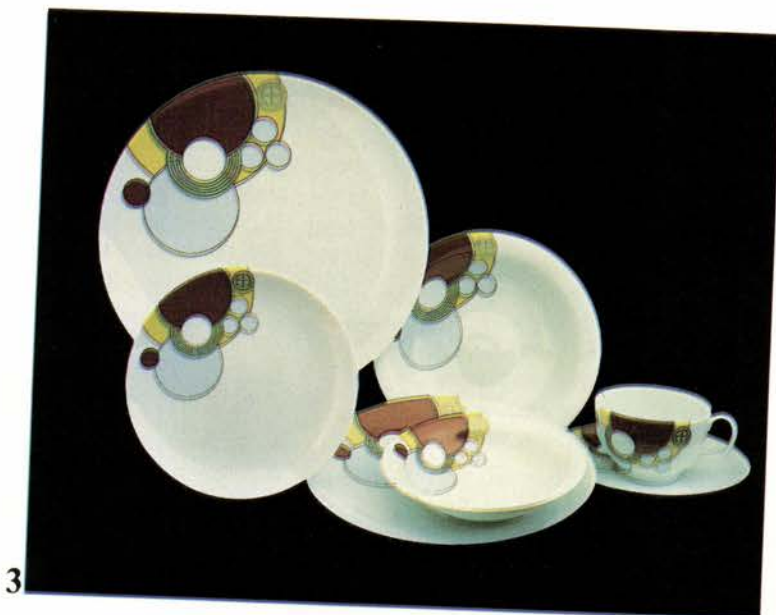
Circle 41 on information card

Products

*A selection of notable offerings and applications.
By Lynn Nesmith*



2



3

Wilsonart's Solicor series of laminates (1) can be stacked to form narrow bands of color for decorative accents or detailed with 10-foot edgebanding strips. The surfacing is designed to be radiused, beveled, or routed with channel sides. (Circle 201 on information card.)

The large clear span hangar (2) at Miami International Airport was conceived by Miami architect Glenn Allen Buff, AIA, working with Space Structures Corporation during the initial design, engineering, fabrication, and assembly. The aluminum arch with a vinyl on polyester membrane was assembled in three sections on the ground and lifted into place. (Circle 202.)

Frank Lloyd Wright's Imperial Hotel dinnerware is being produced by Noritake and the Imperial Hotel for Heinz & Co., an Oak Park, Ill., firm that specializes in reproducing selected designs of Wright. The porcelain dinnerware has an asymmetrical geometrical pattern with the hotel logo handpainted in 18K gold. (Circle 203.)

Products continued on page 104

Computer Storage Unit.

Adjustable storage unit for computer processors is designed to minimize work surface clutter. The heavy duty wire unit mounts beneath most work surfaces and stores processors for a wide range of personal computers. Three adjustable models provide horizontal or vertical mounting, and a locking mechanism secures the processor firmly in place. (Steelcase, Grand Rapids, Mich. Circle 213 on information card.)

Glass Block.

Hexagonal-shaped Hedron I glass blocks are designed to eliminate the need for disruptive posts, columns, or angles at junctures of glass block walls, panels, and partitions. It is available in two patterns. The "Vue" block design has clear exterior and interior surfaces for maximum light transmission and visibility, and the "Decora" pattern's inner surface has a moderately distorted finish designed to provide limited visibility and maximum light transmission. (Pittsburgh Corning Corporation, Pittsburgh. Circle 212 on information card.)

Computer Table.

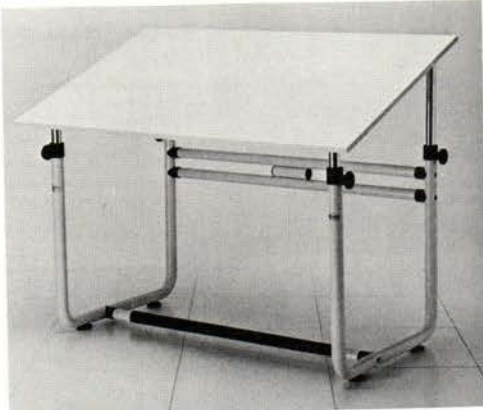
Terminal table, measuring 30 inches in width, has an independent keyboard surface and a built-in tilting VDT work surface. The mechanism allows the monitor to be tilted 15 degrees by pulling or pushing on a front handle. It is designed to be operated from the seated position and to tilt without changing the vertical focal point between eye and screen. Tables are available with a brown or tan frame and an oak or tan laminated top. (Human Factor Technologies, Londonderry, N.H. Circle 208 on information card.)

Antistatic Mats.

Stat-Zap mats are designed to dissipate built-up static charges that can disrupt sensitive electronic and computer equipment. The mats have a carpet top and a vinyl backing with no ground wires to connect. Standard sizes range from 24x36 inches to 48x120 inches. (R. C. Musson Rubber Co., Akron, Ohio. Circle 220 on information card.)

Vertical Blinds.

Inspiration custom vertical blinds have vanes made of a layer of aluminized polyester film sandwiched between a 100 percent polyester front and back. The film acts as an insulating barrier to reflect summer sun and retain interior heat in winter. The textured fabric has a tight weave to block out light and is molded to concave/convex configuration to retain its shape. The head track system has "sure lock" carriers to secure the vanes in position. Vanes are available in 21 colors. (Levolor Lorentzen, Inc., Lyndhurst, N.J. Circle 214 on information card.)



Drafting Table.

Four-post drawing and drafting table (above) has a tubular design with gas spring balances and foot pedals to control movement. It has a factory-sealed hydraulic system and is fully adjustable. (Charvoz-Carsen Corporation, Fairfield, N.J. Circle 209 on information card.)

Window Units.

Point One aluminum storm windows are designed with interior or exterior mounting options. (Republic Aluminum, Chicago. Circle 215 on information card.)

Door Hardware.

Long Escutcheon door lever sets have a thumb turn and safety release with either passage or privacy functions. The decorative hardware and coordinated accessories are available in solid brass, brass with wood inlays, and a variety of colors. (Valli & Columbo, Duarte, Calif. Circle 216 on information card.)

Roof System.

Operable domed skylights measuring 15 to 75 feet in diameter provide a controlled open air environment in commercial and institutional installations. The operable skylight is designed to provide energy savings. (Rollamatic Roofs, San Francisco. Circle 207 on information card.)

Access Floor System.

Access 2000 flooring consists of 24-inch panels constructed of reinforced concrete and supported at each corner on pedestals attached to the subfloor. Cables, HVAC systems, and mechanical services are hidden under the raised floor, and power and communication hookups are accessible where needed. Panels are supplied with a choice of modular carpet surfaces. (Floating Floors, Toledo, Ohio. Circle 217 on information card.)

Lighting System.

Modular lighting system with two- and four-inch diameter tubing is designed to accommodate incandescent, fluorescent, low voltage, and track luminaires. The linear fixtures provide decorative, display, and general lighting in a single suspended

unit. Coordinated components and inserts are designed to be used in a variety of installation patterns. (Omega Lighting, Milville, N.Y. Circle 218 on information card.)

Stainless Steel Gratings.

Wear-resistant entrance gratings and floor mats are available in 4x6- and 4x8-foot sizes. Tapered stainless steel wires are welded to support members and narrow 1/8-inch slots. (Kadee Industries, Cleveland. Circle 219 on information card.)

Software System.

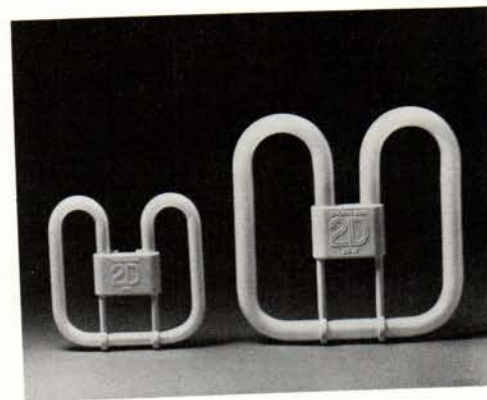
Software programs, compatible with the Commodore microcomputers, are designed to provide solar energy calculations. Programs cover solar radiation values, collector efficiency curves, active and passive systems simulation, and yearly solar heating fractions. The system includes diskettes, program manuals, sample calculations, and user instructions. (Solarcon, Inc., Ann Arbor, Mich. Circle 239 on information card.)

Task Lights.

Wes-Lite task lights are designed to permit individual workers to control light intensity without reducing energy efficiency. A patented screen lens provides broad light distribution on the work surface and is designed to reduce shadows and glare on glossy paper and computer screens. Task lights are offered in neutral, dark neutral, soft white, and soft gray trim colors and are available in four-, five-, and six-foot sizes. (Westinghouse Electric Corporation, Grand Rapids, Mich. Circle 240 on information card.)

Compact Fluorescent Lamp.

The D lamps (below) are designed to be installed in any position without impairing color or light output performance. The 16-watt lamp is made of glass tubing with the end terminating in a central plastic molding that houses an integral starter and two electrical contact pins. A matching lamp holder snaps the unit in place. The lamp has a rated life of 10,000 hours. (Votarc Tubes, Inc., Fairfield, Conn. Circle 211 on information card.)



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Circle 46 on information card

Office System.

Laminated wing tables have 180-degree radius forward edges and are designed to match other System 2 Plus office components. Three sizes are available in oak, walnut, putty, and gray finishes. (Panel Concepts, Inc., Santa Ana, Calif. Circle 235 on information card.)

Bathroom Basins.

Ceramic basins made of vitreous china are available in rectangular, octagonal, and oval configurations in any custom color. Gold or platinum line details are also available. (Kallista, Inc., San Francisco. Circle 234 on information card.)

Elevator System.

Traffic Master 200 control system is designed to be used with elevators in lowrise and midrise buildings. The computerized diagnostic capabilities are designed to provide analysis of traffic patterns, location of problem areas, and access to built-in test programs for maintenance. The system can be reprogrammed on site without disrupting passenger service. It can be adapted to existing elevator systems as well as new installations. (Armor Elevator Co., Louisville. Circle 233 on information card.)



Light Fixture.

Shell series of wall-mounted light fixtures (above) is constructed of handmade high-gloss ceramic in white, black, or a range of custom colors. The seamless fixture measures 16½x10 inches and projects nine inches from the wall. Two 100-watt standard A lamps in a porcelain socket provide bright reflected light and can be adapted with a dimming switch. (Light Plus, Santa Barbara, Calif. Circle 210 on information card.)

Bathroom Fixtures.

Top Brass 73 series of bathroom fixtures is comprised of basins, tubs, showers, and bidets, and accessories including towel bars, robe hooks, towel rings, and toilet paper holders. Three enamel colored finishes and 11 metal finishes are available. Fixtures have washerless brass valves and ceramic discs. (Harden, Los Angeles. Circle 238 on information card.)

Window Blinds.

Optix vertical transparent blinds are made of polymeric resins with 3½-inch vanes, shaped to interlock for a complete closure. The blinds are designed to allow a full view to the outside but filter glare and ultra-violet light. They are available in transparent amber, bronze, charcoal, smoke, indigo, and frost. (Nanik, Wausau, Wis. Circle 237 on information card.)

Commercial Flooring.

Designer Cork flooring is made of a natural cork permanently bonded between a moisture-resistant vinyl backing and a transparent vinyl wear surface. Tiles are available in two square sizes as well as variety of accent planks, pickets, and bands. (PermaGrain Products, Media, Pa. Circle 236 on information card.) ☐



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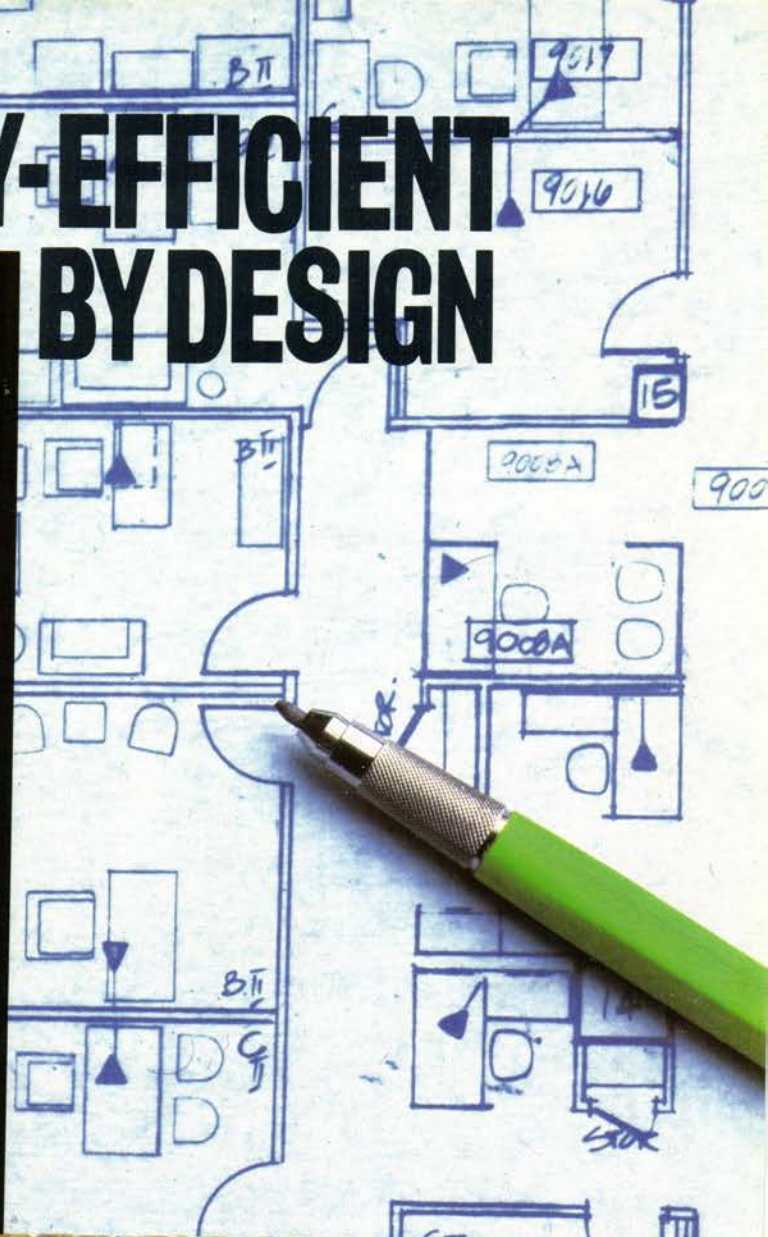
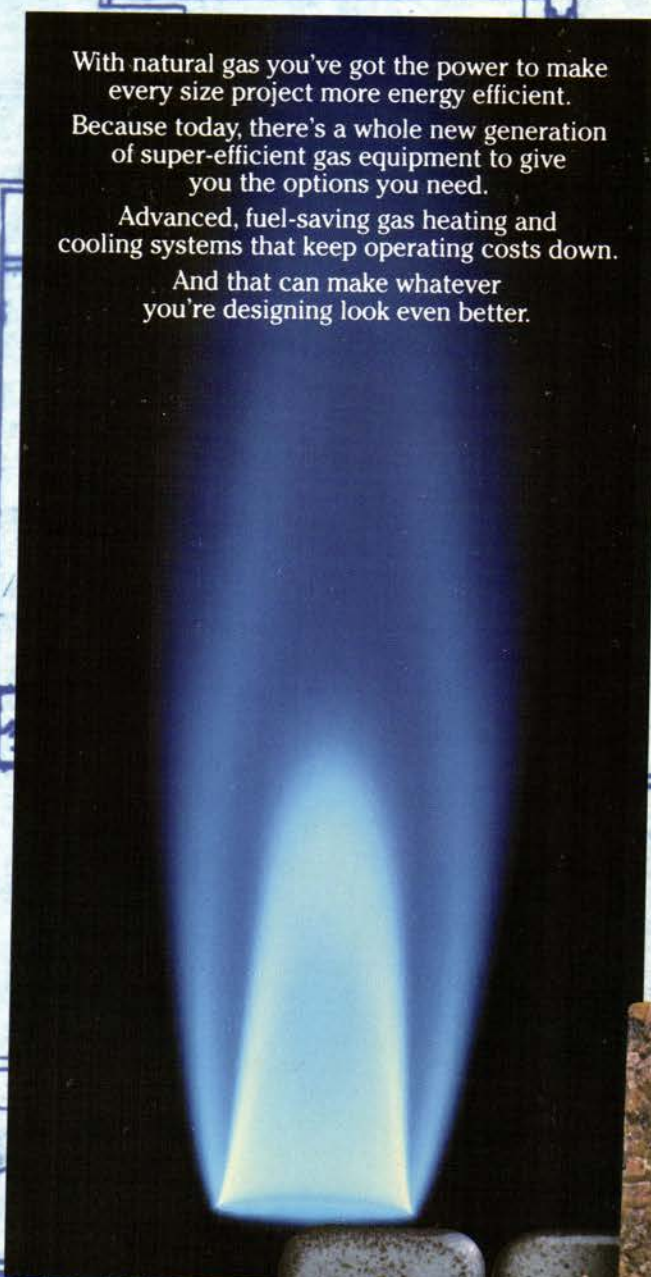
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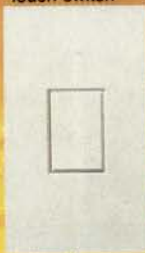
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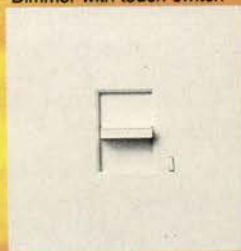
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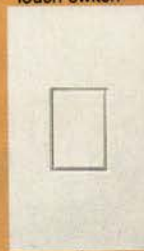
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Dimmer with touch-switch



Touch-switch



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