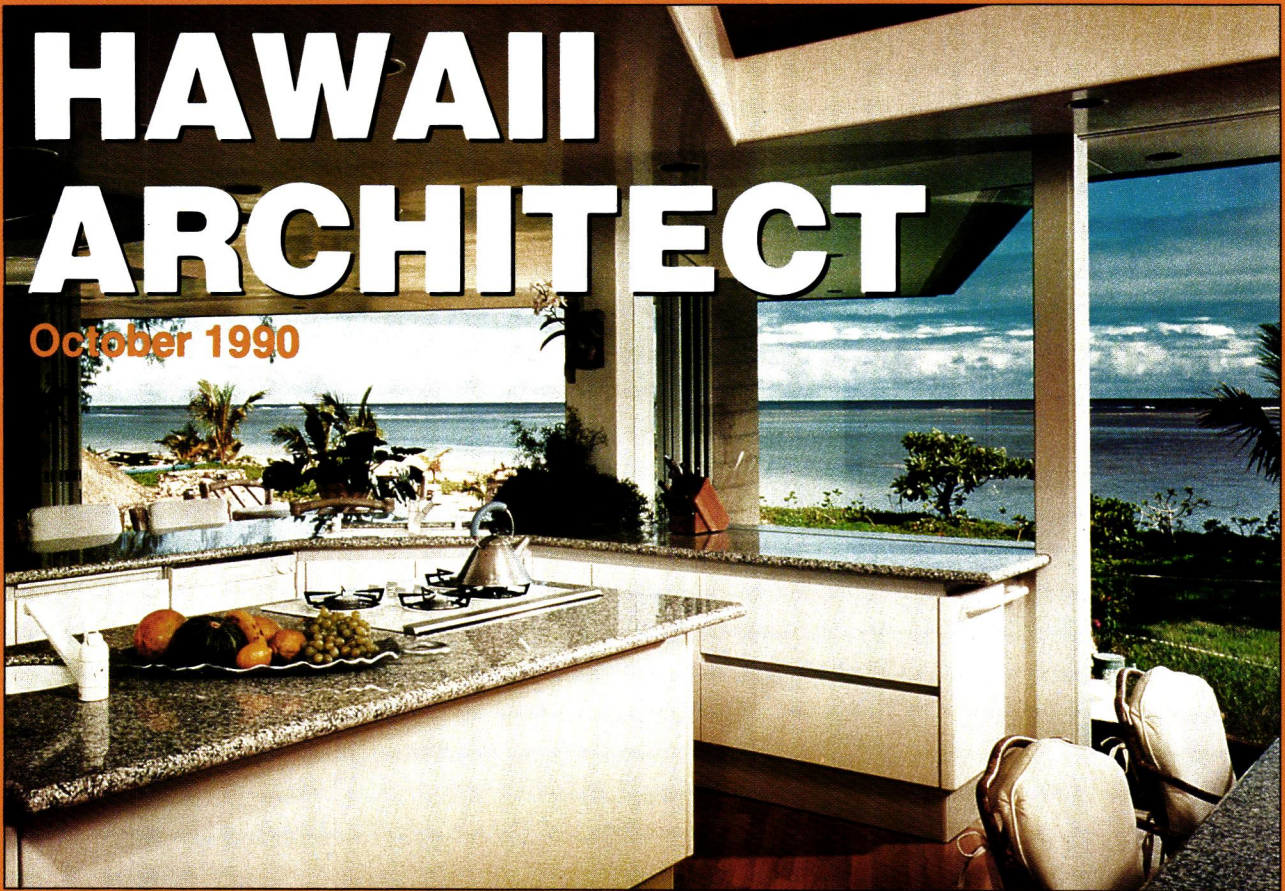


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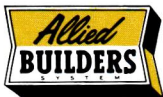
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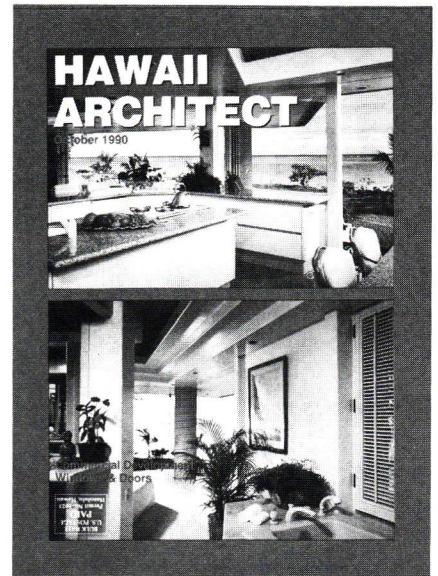
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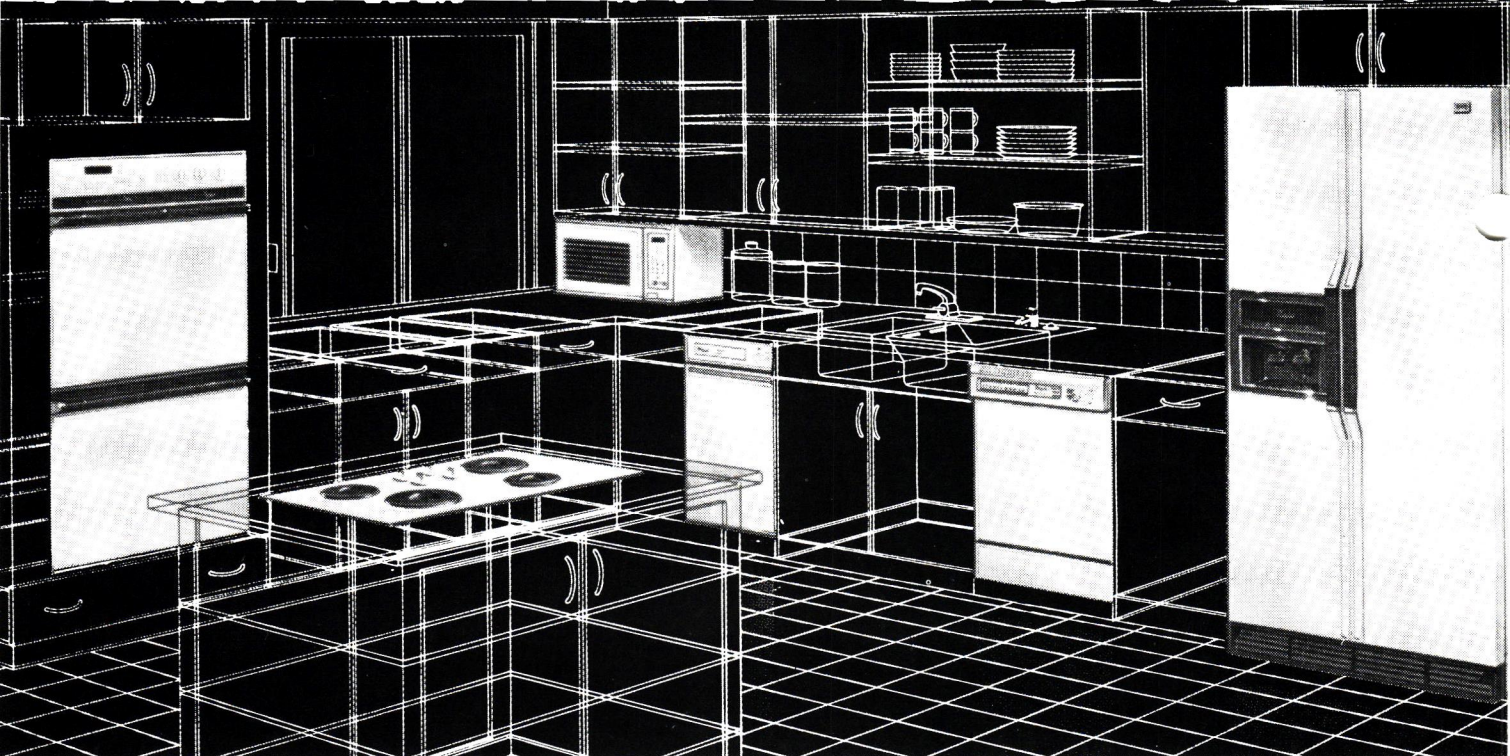
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President's Message

Big Island Geography Challenges Architects' Organization

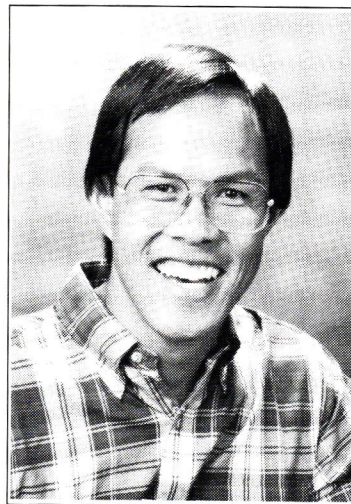
by *Clemson Lam, AIA*
Vice President
Hawaii Island Section

Architects on the Big Island are a lucky bunch. We live on a wonderfully diverse island that is physically large enough for great natural variety and open spaces. In spite of a growing population, the Big Island still maintains a small town feeling where you find yourself waving to people you know as you drive from place to place.

However, there is a down side to the geography of the Big Island — it divides the island's architects into three main groups. Hilo and Kona are separated by two hours driving time with Waimea (Kamuela) halfway between the two. These distances have prohibited close interaction between the architects on an islandwide basis.

The architects in Hilo have regular lunch meetings, as do the architects in Kona, and Waimea is still small enough that architects can't help bumping into each other at the grocery store, blueprinter or post office. Yet it is uncommon for these groups to get together to find out what the other is doing.

Because of driving distances, the Hawaii Island Section's quarterly meetings have adopted an air of informality and fun, including families when possible. The June meeting was a visit to a residential project under construction at a remote beach where architects, spouses and kids picnicked, played and discussed shoreline architecture — a bit. For the coming meeting we will travel to one of our



Clemson Lam, AIA

member's homes in the cool uplands of Keauhou mauka.

Outreach into the community has taken several forms. Individuals have donated their time to visit schools and participate in career days. Architect's Week prompted displays of architects' work at shopping malls and libraries. Last year the first annual Sandcastle Building Contest at Hapuna Beach drew large crowds (by Big Island standards) and some very interesting sand sculptures. We have also discussed the possibilities of doing community sketch problems — redesigning of an old fire station into an art center and a Hilo park shade structure.

Big Island architects are largely independent practitioners who have escaped the high stress and pressure of the big city and big office. Only a few offices have

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At the Water's Edge: A Festive Approach to Commercial Development

by Edward R. Aotani, AIA, and
James K. Tsugawa, AIA

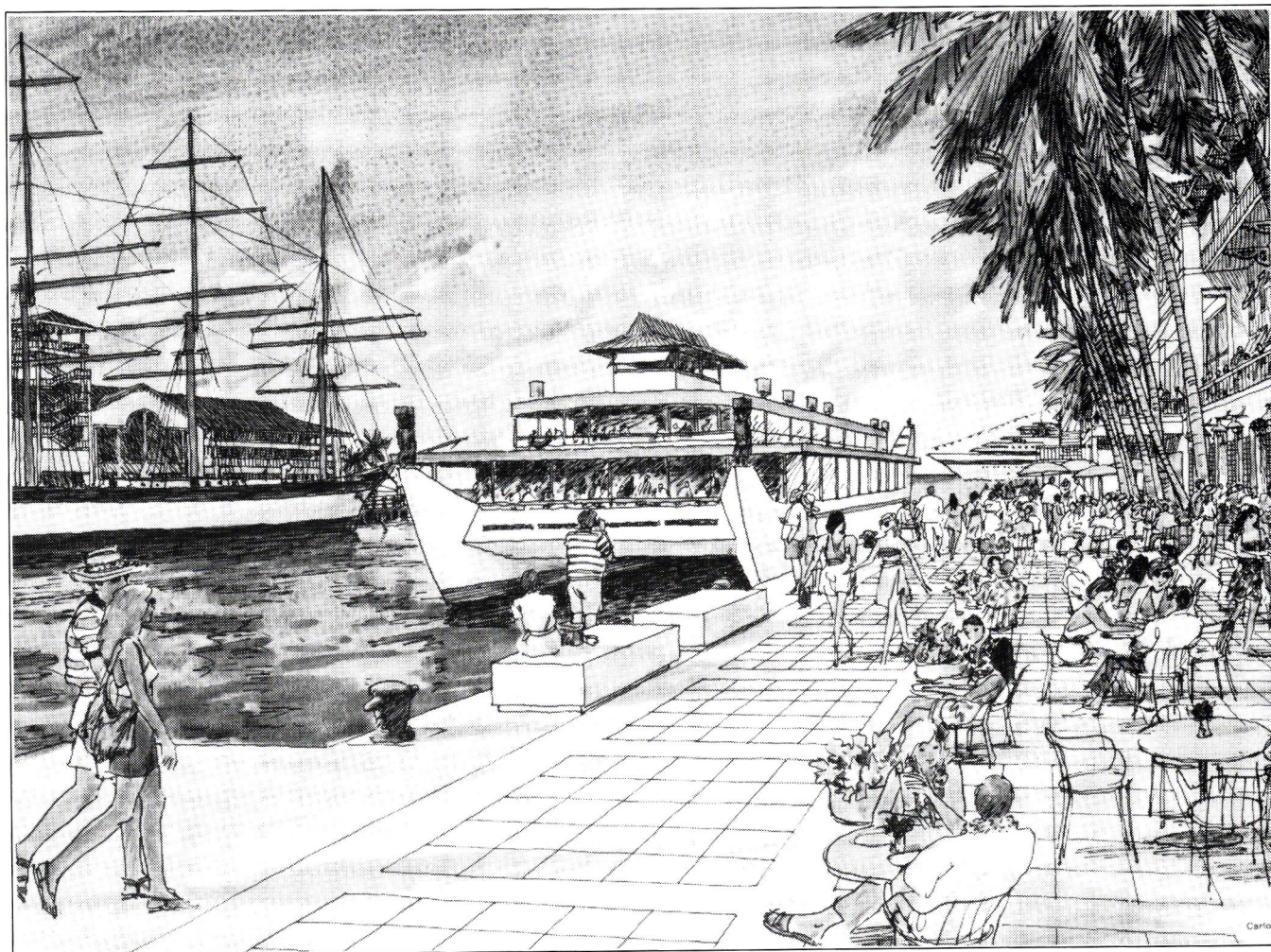
When The Waterfront at Aloha Tower is complete, the multimillion-dollar project by Aloha Tower Associates will bring a new concept of commercial development and retailing to the 50th state. The development is part of the state's overall master plan for Honolulu Harbor, and encompasses

approximately 22 acres from piers 5 through 14.

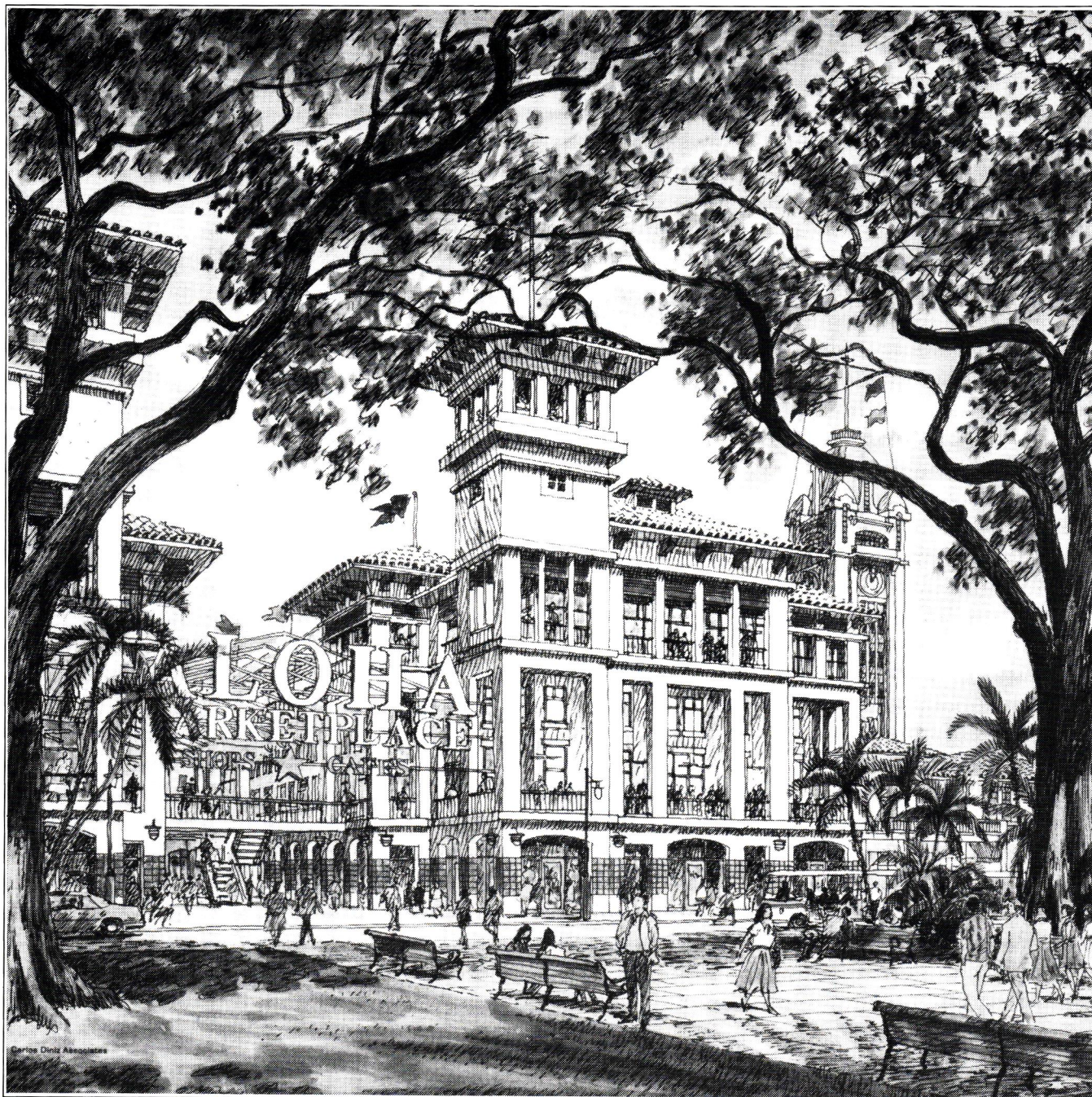
In keeping with the state's objective to "create a major public gathering place at the Aloha Tower complex," Aloha Tower Associates has taken an historic redevelopment approach to the project while creating exciting water's-edge experiences appropriate to the Honolulu

waterfront.

The centerpiece of the project is the Aloha Tower Marketplace, a four-story retail/commercial complex conceived as a festive place for residents to dine, shop, work and celebrate. Built adjacent to Aloha Tower and its surrounding plaza, the marketplace will add 300,000 square feet of retail space and



Shops, cafes and restaurants spilling out of the Aloha Tower Marketplace create a bustling promenade at Honolulu's Pier 8, with dinner cruise boats and ferries at pierside.



Monkeypod and banyan trees frame the entrance to the Aloha Tower Marketplace from Irwin Park. Green tile roofs, signature towers, deep overhangs, recessed lanais, ceiling fans, gentle stucco arches, bright awnings and flags create architecture in keeping with the festive spirit of the waterfront setting.

Aloha Tower Associates has taken an historic approach to the project while creating exciting water's-edge experiences appropriate to the Honolulu waterfront.

130,000 square feet of office space to downtown Honolulu.

The architectural palette is uniquely Hawaiian, recapturing the spirit of the buildings that

once occupied the waterfront.

Stucco buildings with green tiled roofs, signature towers, recessed lanais, arches and deep overhangs provide character and

visual interest — essential elements of the festival market experience. Numerous "courts" break up the building mass into smaller, intimate experiences.

In both design and merchandising, the emphasis of festival marketplace philosophy is on the careful orchestration of commerce, recreation and showmanship. The first two floors of the marketplace are a mix of retail shops, cafes and restaurants, over-the-counter specialty food outlets, a market bazaar and an entertainment center. A view corridor extends

from Irwin Park directly through to Pier 9. Intersecting this major corridor is a large center court which gives a clear view from Aloha Tower through the marketplace to the Hawaii Maritime Museum on Pier 7. Throughout, the interior layout allows for double-loaded corridors.

An international food court will overlook the Aloha Tower Plaza,

while 17 cafes and restaurants are planned for the perimeter of the marketplace along piers 8 and 9, providing waterfront views of the harbor activities.

Office space will occupy the two floors atop the marketplace, adding mixed-use vitality to the festival setting.

Aloha Tower itself will be completely refurbished with a new arched base, and will serve as the main people mover, connecting the marketplace with below-grade parking for 2,000 vehicles. A new amphitheater stepping down to a landing at the water's edge will host outdoor performances. The landing also will serve as a pick-up and drop-off point for commercial water taxis.

While new to Hawaii, the festival marketplace is a well-proven design concept pioneered by international planner and developer James W. Rouse. Rouse is chairman of Aloha Tower Enterprise Hawaii which is a partner of Aloha Tower Associates and an affiliate of The Enterprise Development Company. He has been involved with festival marketplace developments in such cities as Boston, Baltimore, Norfolk, Osaka and Sydney.

According to Rouse, the creation of the Aloha Tower Marketplace is one of the most dynamic projects he has encountered. When completed, he predicts that the Aloha Tower area will be one of the most appealing waterfronts in the Pacific Basin. **HA**

Edward R. Aotani, AIA, and James K. Tsugawa, AIA, are coordinating architects for The Waterfront at Aloha Tower project. Aotani is president of Aotani & Associates, a Honolulu firm specializing in community and state planning and architecture. Tsugawa is president of Honolulu-based James K. Tsugawa & Associates, architects of the newly-completed Maunakea Marketplace and many other commercial and residential projects.

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Shopping in Oahu's Second City

A 245,000-square-foot shopping center marks development of the island's newest city.

by Kurt Mitchell, AIA

On Aug. 22, 1990, ground was broken on one of the first commercial projects in the City of Kapolei. Located in the heart of Oahu's second city, the Kapolei Shopping Center is evidence of Campbell Estate's commitment to the island's newest city.

The center represents a key element of the first phase of development in Kapolei and introduces the first important chapter in the architectural evolution of this exciting new city.

Phase I of the center, anchored by a Safeway Supermarket and a Longs Drug Store, will consist of 135,000 square feet of retail space covering 18½ acres. Phase II will comprise an additional 110,000 square feet of space and will include at least one additional anchor tenant and related shop space. The center will enjoy excellent access and visibility from the adjacent H-1 Freeway. The site is located *makai* of the H-1 Freeway at the Makakilo Drive interchange.

To date, the center is almost entirely pre-leased with approximately 26 retailers now scheduled to open. Anchor tenants Safeway and Longs will occupy 46,000 and 26,000 square foot stores, respectively. This will be Safeway's largest store in Hawaii. Additionally, the Kapolei Shopping Center will be home to a wide range of other retailers including restaurants, apparel boutiques, a bookstore, jewelry store and many other specialty

merchandisers.

Also included in Phase I will be four free standing building pad sites which have been targeted to restaurant operators.

Customers will appreciate the 750 parking stalls provided, approximately 1½ times more parking than required by code. The center also will provide extensive landscaping which will add an essential element necessary to maintain Kapolei's "Garden City" concept.

In 1987, Kober/Hanssen/

Mitchell Architects and the Estate of James Campbell worked together with retail consultants and leasing agents to determine tenant positioning and appropriate layout for the center. Stephen MacMillan, director of Kapolei Properties, and I led a design team to develop design concepts and determine the shopping center's character and ambience.

All aspects of the various design themes were taken into consideration for the center,





CAMERA HAWAII PHOTO

***Above:** The Rev. Richard Kamanu (l) presides over the blessing of the site for the Kapolei Shopping Center, while Gov. John Waihee (center) adds a special sparkle to the ceremony. **Left:** Longs, Safeway and a variety of other tenants will provide shopping opportunities for Kapolei residents.*



The center introduces the first chapter in the architectural evolution of Kapolei.

which will ultimately serve many new residential communities in the Kapolei area. At the very onset of the design process, various architectural character statements were developed. Styles that captured the essence of the early Ewa plantations to

those influenced by European/Mediterranean villages were considered. The architectural approach ultimately selected embodies a number of unique styles. It encompasses the essential qualities of *kamaaina* architecture while blending

traditional European lines that give a contemporary touch to the overall design.

In 1988, Brad Myers, manager, Kapolei Commercial Development, and Synthia Tang, project manager, Kapolei Commercial Development, joined the project design team. Along with Stanford Lee, project architect, and Rey Quemado, project designer for KHMA, the team continued to explore various design idioms of the selected theme.

As the design process continued, KHMA and the project team developed a design that blended European influences with *kamaaina* architecture. The double hip "Dickey" roof design will be of a blended green clay tile compatible with the Kapolei community character. The center will have a clean, modern appearance accentuated with classical elements.

Arched entry ways, classic traditional columns and large shaded arcades all lend themselves to a comfortable shopping environment. Although development cost constraints presented a significant design challenge, a quality level uncommon in community centers was ultimately achieved.

Tenants will have the opportunity to choose from a number of storefront designs provided by the project architect in an effort to give the center a cohesive appearance. However, individuality will be encouraged in tenants' interior design efforts.

In addition, generous common area elements, including grand arcades, extensive landscaping and hardscape, will provide an attractive and inviting atmosphere for the center's ultimate beneficiary: the customer. HA

Kurt Mitchell is president and chief operating officer of Kober/Hanssen/Mitchell Architects, and has been involved in many commercial and retail projects.

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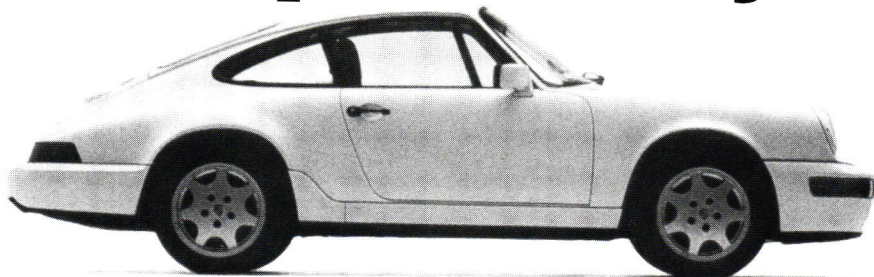


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A Window to the Future

by Wyman Williams

Windows are an ancient invention that probably developed as soon as walls became fixed. Early Egyptian paintings show wall openings covered with matting while relics from Assyria and Crete show more complicated window combinations. The ancient Greek style of building around a central courtyard did not include many windows because sufficient light was available from the doorway. It took the Romans to develop glazed windows with some openings covered by glass, but they were usually filled with translucent materials such as marble, mica or shells.

By the 15th century in Europe, a hinge casement type window was developed, and casements are still the most popular window in most of Europe. These were later refined into the "French" window, which often reached to the floor and was usually divided into three or four sections. This apparently has evolved into our now popular French doors. In the 17th century, the vertical sliding sash produced single and double hung windows which are now used extensively in England and the United States.

From a simple, functional wall aperture to admit air and light, architects, designers and manufacturers have created a variety of window designs. In addition to the many conventional types of windows, there are some newer varieties presently available.

The first of these employs the use of a rigid vinyl (PVC) frame which can be manufactured to function in a similar manner to any aluminum or wood frame window. This vinyl window is enjoying rapid growth when one considers that in 1982, the vinyl

window was only 5 percent of the replacement window market. It is now projected to obtain 30 percent of the 1990 replacement market. It is estimated that vinyl windows have now overtaken aluminum windows in the total


Continued



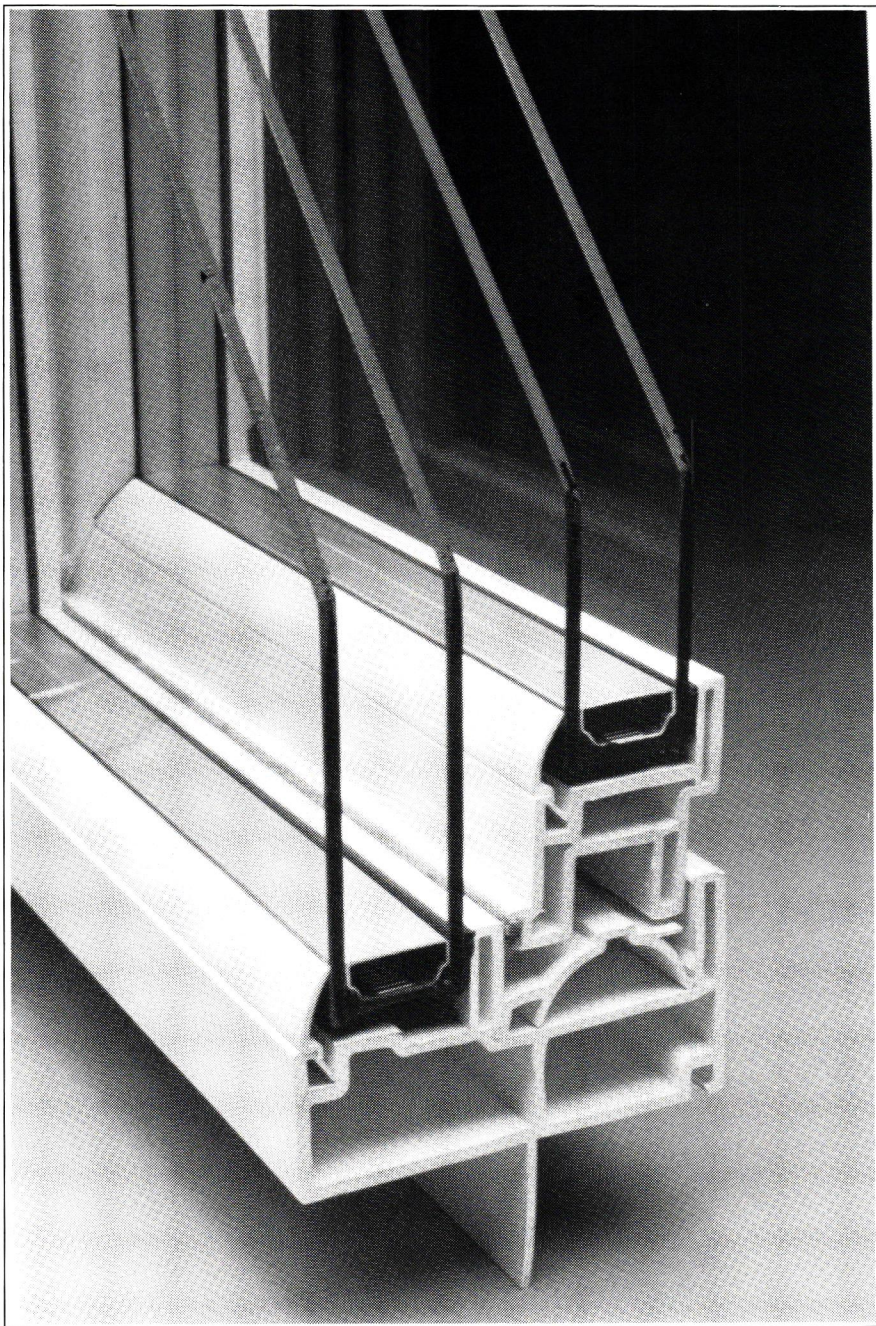
Stacked corner windows combine with other Marvin casement and picture windows to create an open, airy feeling.

A close-up photograph of a textured, woven material, likely a book cover or endpaper. The material features a dense, grid-like pattern of small, raised squares. A horizontal band of a different, smoother material runs across the middle. The top edge shows a rounded, dark binding element.

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The tubular construction of a rigid vinyl window by Mercer Industries, pictured in this cross section, provides strength and function.

U.S. market.

This distinct growth has been nurtured by a number of factors. Some of the maintenance advantages of vinyl involve the integral color of the product, which requires no painting and hides scratches. This same vinyl surface is readily cleaned with soap and water and will not rust, rot or oxidize. Another advantage is the injection molding process that produces window profiles to a very accurate shape with design features built in. A practical

advantage of this synthetic product is price stability. We have all witnessed the increasing cost of aluminum, which makes long-term price projection difficult.

One may become increasingly optimistic regarding the market for vinyl windows when the history of this product is considered. Vinyl windows were introduced in Britain and Europe in the 1960s, and this type of window now enjoys 50 percent of the replacement window market in Britain and an astounding 90

percent in West Germany. The West German enthusiasm can be rationalized because of the development of the PVC compound in that area. About half the new construction in West Germany is done with vinyl windows.

Acceptance seems to be less in the United States due to a poor job of introducing the product to architects and specifiers. The initial efforts were aimed toward the replacement and remodeling markets and copied the shapes and applications of aluminum windows. The engineering aspects and advantages of this product were not stressed to professionals. For example, the accurate shape allows the windows to have welded corners instead of being fastened by screws. Internal vaults can be extruded into profiles that give increased strength and stability.

The durability and inherent features of the vinyl window appears to have many advantages for use in Hawaii. Our salt-air conditions often create problems for aluminum products, and the solid color tends to hide scratches. However, these features may come at a 5 percent to 10 percent price increase over a similar aluminum window, and there may be some limitations in window and door sizes unless reinforcing is incorporated within the design. The color of the frame is generally limited to white or almond, colors which have been entirely resistant to ultraviolet degradation.

In commercial applications, consideration should be given to the combustion characteristics of this product. PVC is less flammable than most organic materials found in buildings, and it will not continue burning unless a powerful heat source is applied. The flame spread is reported to be less than 25 with a fuel contribution of zero, but care must be used to obtain a smoke level of less than 400. This smoke

rating is in the same range as some other materials found in buildings, but PVC is unique in that when it burns it releases HC1 which is irritating. However, this HC1 odor is readily detected and does not incapacitate like carbon monoxide gas. It appears that the biggest cause of fire deaths is carbon monoxide which is produced when all organic materials burn.

Another new product for Hawaii involves shape rather than structure. Marvin Windows has developed picture windows and single-hung windows with curved panes of glass as an exciting alternate to conventional angled bow or bay windows. This unique glazing is combined with pine frames and sash to produce a window with many design possibilities. These windows are built to a 6-foot radius which is common in towers or radius walls. A curved unit may be inserted in a flat or radius wall with a maximum jamb width of 6 9/16 inches. The window is available in single-glaze or dual-insulated glass held in place with wood stops which are removable for reglazing. The exterior frame is available in bare wood, primed or prefinished colors. There are 30 standard sizes, with the maximum dimensions for a curved

glass single-hung window approximately 3 feet 2 inches by 5 feet 6 inches. The curved glass picture units are available to 5 feet 2 inches by 5 feet 6 inches.

The next glass adventure by Marvin Windows was to make a corner window from two panes of glass with a 90-degree angle without joint or seam. This produces a panoramic view. The frame and sash are made of pine, and the sizes are easily combined with the standard casement windows. Corner windows can be stacked one or two units high for distinctive rooms, or can be inserted into flat walls as a triangular bay window. This type of window also boasts the options of bare wood, primed or exterior prefinish.

The corner window requires the use of a cantilevered structural framing, since this window does not support any structural load. Therefore, the headers over this corner unit should extend back into the framing to allow support in a manner similar to conventional corner windows with field glazing.

The structural considerations for corner windows brings to mind a concern all window suppliers share. Because of the ability to stack windows vertically

and horizontally, beautiful effects can be obtained in stairways and entrances. However, the structural characteristics of this massive area of glass, with only minimal framing, should be considered. A structural engineer should be consulted to design for wind loads and seismic considerations when several units are combined. In general, the window manufacturers do not take design responsibility.

The thickness of the glass, both single glaze or double glaze, should be specified for high wind conditions. The manufacturers of windows generally adjust the thickness of glass to the relative size of the opening, but they would have no knowledge of local conditions regarding high winds. In some of our windy ridge areas, the glass thickness should be substantially increased.

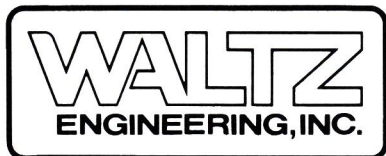
It is always a challenge to architects and specifiers of the construction industry to utilize the myriad of products which are constantly in evolution. The window products in this article might add design interest to a future project. **HA**

Wyman Williams is executive vice president of Honsador, Inc., and has been in building materials distribution in Hawaii for 25 years.

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"In the major spaces, the walls slide out of the way to give a real sense of openness to this home."

"The glossy finishes which would seem to work against the idea of an open beach house actually fit very nicely."

"Choice of detailing and finishes indicates thoughtfulness in responding to the climatic conditions of the site."



AUGIE SALBOSA PHOTO

The open living area with built-in seating and ledges creates an enjoyable space in which to entertain and converse.

The home of John and Takako Ferry, located on the North Shore of Kauai, involved designing a custom home on a 1-acre site on Anini Beach.

A linear design of the three-bedroom house was chosen to take advantage of the view from every room. Enclosed living spaces, covered walks and decks make up the 3,600-square-foot residence.

The architecture of the house incorporates Hawaiian and Japanese design elements — a raised floor (to aid in cross ventilation), double-sloped roof using celadon-colored Japanese J tile and copper edging.

Careful, elegant detailing throughout the house reinforces the concept of the interior spaces flowing to the exterior environment. Marble tiled floors in the house continue to the exterior lanais. The soffit above, extending six feet beyond the sliding glass doors, again creates the feeling of the interior spaces being a part of natural beauty outside.

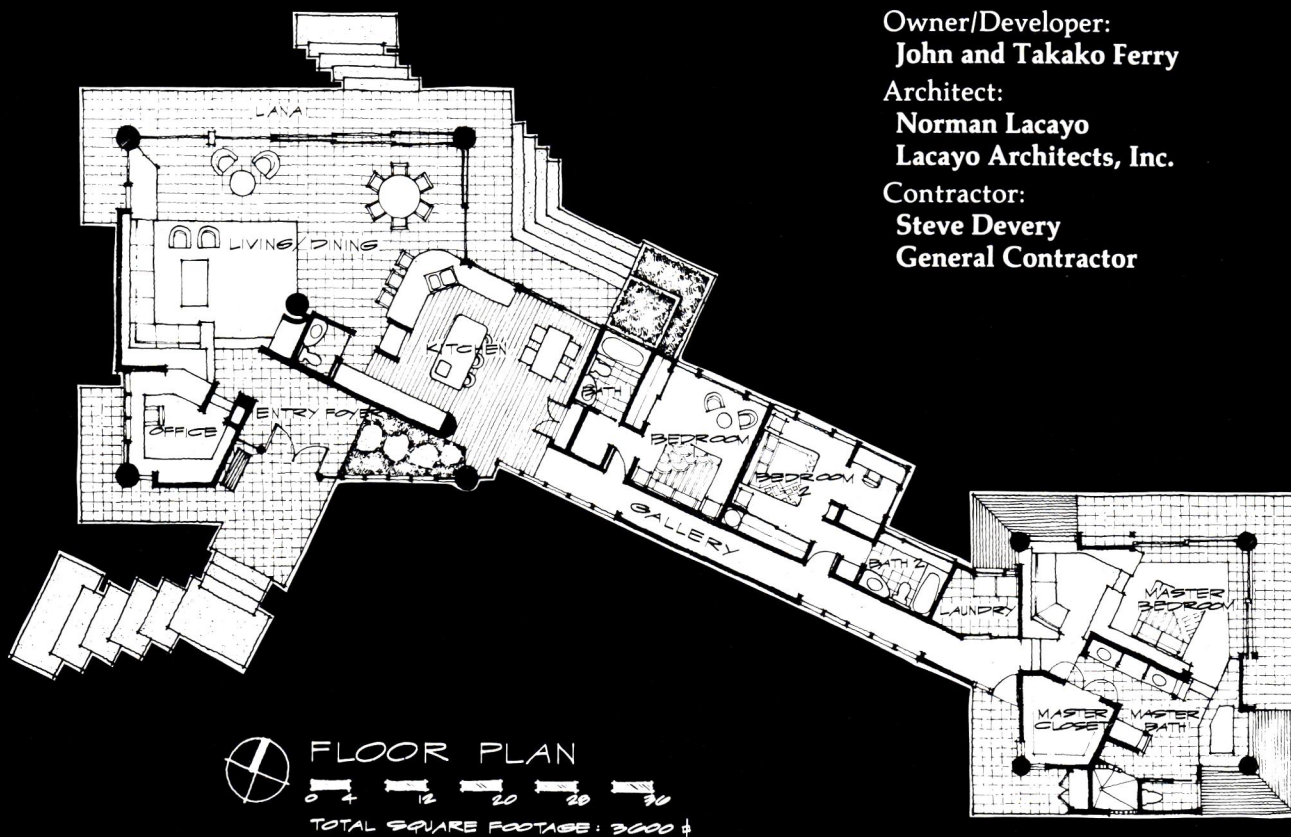
The 24-inch diameter columns are composed of concrete and coral with a sandblasted finish. The finish material on vaulted ceilings is bleached oak. Veneer plaster is used throughout the home.

The entry foyer steps down to

the living and dining area. Built-in seating and ledges create an enjoyable space to entertain and converse. The vaulted ceiling rises to 20 feet above. The floor is finished with carpet and marble tile.

Granite countertops and European cabinets are installed in the fully-equipped kitchen. The center island is designed as the cooking and preparation area. Bleached oak is used as the floor finish.

The master bedroom, situated at the end of the gallery for privacy, looks out toward the ocean and lighthouse beyond. A built-in seating area, master bath and walk-in closet complete the master suite.



CREDITS:

Owner/Developer:
John and Takako Ferry

Architect:
Norman Lacayo
Lacayo Architects, Inc.

Contractor:
Steve Devery
General Contractor

The Problem With Grilles Is . . .

Perforated curtains offer an alternative to traditional security grilles

by Tom Wadsworth

You rarely see them during the day. They only come out after closing time. And they have lots of problems.

Manufacturers call them rolling grilles. They are used to provide security — with ventilation and visibility — in parking garages, automotive service centers, mall storefronts and outdoor storefronts.

Although widely used, they have distinct disadvantages. The

key problem is the opening between the aluminum rods, which is usually about 2 inches.

Through that space, people have been known to throw trash, gum and, worse, cigarette butts. Lit cigarette butts. When you own an auto center and may have flammable materials close by, you don't want lit cigarette butts lying around.

Children also find that space just large enough to

accommodate their hands and feet. So, they climb on it or yank on it, and occasionally damage the door.

Which raises another problem: repair. Because grilles have so many connecting links, assembling or repairing them is a labor-intensive process. In other words, a grille is expensive to manufacture, and expensive to repair.

The solution is the perforated slat security door.

This door resembles rolling steel doors in design, strength and durability. However, the slats of the perforated door have thousands of tiny holes which allow the ventilation and visibility offered by grilles. Further, the holes are so small that even most bugs can't get through, and certainly not cigarette butts or children's hands.

The perforated door also costs less than a grille. Much less. Depending on the exact specifications, a 12 foot by 10 foot steel perforated door can cost a third less than the labor-intensive grille.

Another advantage is delivery time. Because perforated doors are manufactured more quickly, they can reach the buyer in much less time. In Hawaii, where delivery delays are often a problem, this can be a major benefit.

It looks better, too. The smooth, contemporary design of the perforated door offers a new, architecturally pleasing alternative to the jail-cell look of the grille.



Perforated slat security doors resemble rolling steel doors but allow the ventilation and visibility of grilles.

People have been known to throw trash, gum, and, worse, lit cigarette butts through security grilles.

The perforated curtain also can be customized by combining perforated and non-perforated slats for various applications. Customizing a grille, however, is next to impossible.

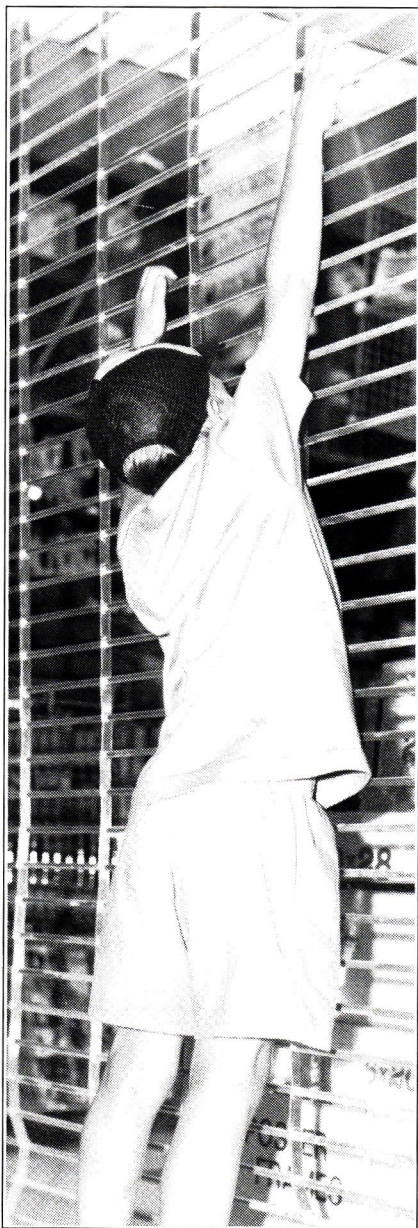
Repair of a perforated door is quicker and less expensive than

repairing a grille. A damaged slat is simply replaced with a new one.

The perforated slat security door is an architect's dream. It does the job. It looks great. It

costs less. What more can you ask for? **HA**

Tom Wadsworth is communications manager for Raynor Garage Doors.



The space between aluminum rods in a security grille is just large enough to accommodate children's hands and feet.

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Building Codes and Design Standards Who's Responsible?

by Andrew Charles Yanoviak,
AIA, CSI

Architects and engineers (A/Es) often include phrases in their contract specifications and project manuals which appear to relieve them of responsibilities they feel they can safely pass on to others. For example, it is quite common to instruct the project contractor that he is to be responsible for strict compliance with all applicable building codes and standards.

In this manner, A/Es may deceptively reassure themselves that they really do not have to burden themselves and their staff members with learning the particular details of various difficult-to-comprehend code sections. Instead, there is a tendency to shift the burden for code compliance, interpretation and application toward the plan examiner and building official in the local building department, as

well as the contractors and subcontractors on the job site.

To understand certain code sections in a current edition of the building, plumbing, mechanical, electrical or fire code, it is often necessary to have a thorough understanding of how that particular code section was developed historically. Therefore, it may be very beneficial for the A/E to research previous editions of the code, as well as to

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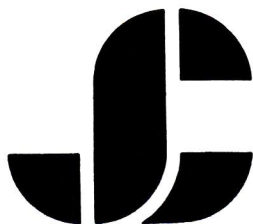
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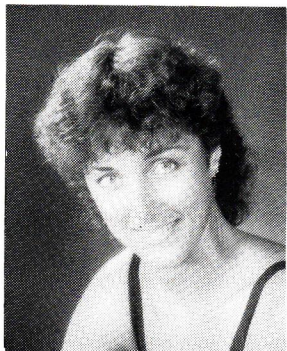
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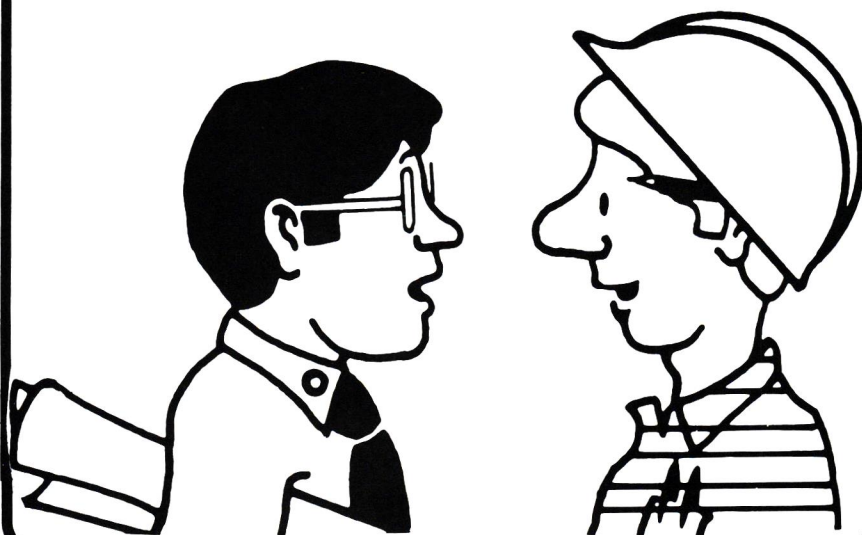
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participate in code change development, by taking the time to review and comment on proposed code revisions.

In addition, as many seasoned A/E's can appreciate, it is important to understand the interdependent relationships between various code sections and their coordinated impacts on rational design decisions in creating innovative architectural complexes. Consequently, it may be frustrating for A/E's to participate in construction litigation conferences where an attorney who purports to be an expert in codes may point to an isolated word, phrase or section in a specific edition of a code or standard and misinterpret and misapply that particular provision.

As has been clearly explained in several code development and professional liability seminars, the A/E is ultimately responsible for code compliance. Even if the plans examiner, inspector or building official misses, misinterprets or misapplies the provisions of the code, the owner and his A/E assume the responsibility and professional liability for code compliance. Of course, to a certain extent, the contractor contractually shares this responsibility, especially when the electrical, plumbing, etc. plans are only schematic or diagrammatic and the approved shop drawings do not cover design details.

However, in accordance with Hawaii statutes and administrative rules, the A/E has a responsibility to observe construction, but not to supervise construction, on a periodic basis.

Code and standards administration organizations afford opportunities for A/E's to become more involved in code and design standards education and professional development. The American Institute of Architects/Building Performance and Regulations Committee is open to participation by any AIA

member, and the Maui and Honolulu Chapters/AIA hold regular monthly open committee code meetings where code change proposals are discussed.

Most codes and standards are developed on a consensus basis, where input is provided not only by involved A/Es, but also by manufacturers and their trade associations such as APA (American Plywood Association), or AAMA (Architectural Aluminum Manufacturers Association). Consequently, as consensus standards, most codes represent only the very basic *minimum requirements* in providing for public health, safety and welfare. So, even if the contractor complies with the *minimum requirements* of the code, these may not be considered sufficient in certain circumstances; and, it is the professional responsibility of the A/E to fully understand the codes and standards provisions, and to upgrade and optimize design factors and other requirements wherever necessary.

AAMA, in conjunction with ANSI (American National Standards Institute), recently updated "Voluntary Specifications for Aluminum Prime Windows and Sliding Glass Doors"

(ANSI/AAMA 101-88). As a result of information obtained from water infiltration experiences in the field during storm conditions and ensuing construction litigation, AAMA upgraded its wind load tables and glass tables. The publication states, "... Those wishing to use higher values than those indicated above for 'design pressure' or for 'air infiltration, 'water resistance' and/or 'uniform loading' may select and specify pressures satisfactory to them."

Just as it is necessary to have a thorough understanding of the historical development of certain code sections in order to provide appropriate interpretations and applications of code provisions, the same is required for the proper appreciation and application of particular design standards.

For example, A/Es incorporate both proprietary or prescriptive specifications and generic or performance-oriented specifications into their contract documents, and this approach is used in formulating code provisions. However, preceding design standards are often referenced in the codes or contained in the appendices of codes, until they are eventually

incorporated within code provisions, and they can also be prescriptive or performance-oriented.

Therefore, the determination of design pressure is a matter of professional judgment, and not just an arbitrary selection of a number from a local or national building code or design standard. ANSI/AAMA as a design standard and the model building codes may use different versions of the 'Wind Velocity Map' furnished by the U.S. Weather Bureau, because of the inherent time lapse between their development and coordination.

Over the years, there have been some dramatic changes in basic wind speeds represented geographically throughout the United States by isotachs or isopleths on the wind velocity maps. Design pressure (DP) is fundamentally based on velocity pressure (VP) and VP is derived using the basic wind speed and the height of the window unit above grade, as well as the ANSI exposure and importance factors.

It is interesting to note that although the Environmental Data Service only shows the maximum anticipated 50-year mean recurrence wind velocities from 70 to 110 miles per hour, AAMA



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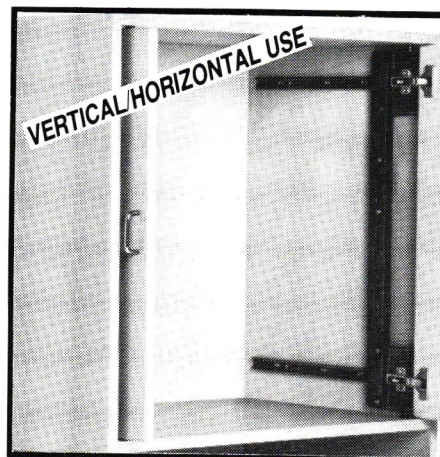
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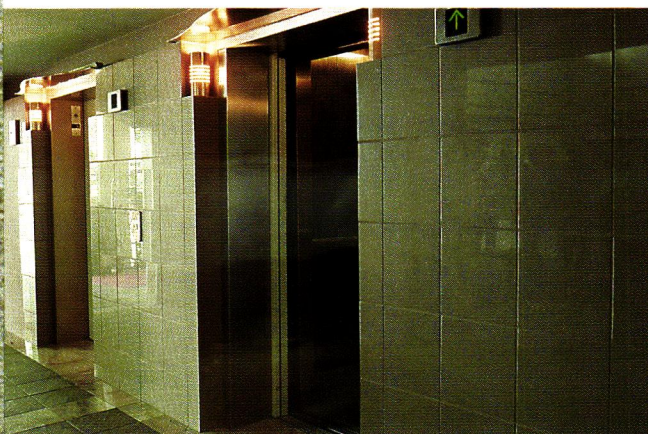
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provides wind load tables from 70 to 120 mph. Dade County, Florida, and the South Florida Building Code use 120 mph as a required wind speed with a water test (static) pressure (WTP) of 6.77 pounds per square foot at 30 feet above grade, which far exceeds the AAMA minimum WTP requirement of 2.86 psf.

In Hawaii, where the local building code may only require 70 mph, and the ANSI design standard recommends 80 mph as a minimum wind speed, the A/E should convince the owner that he needs to do his professional homework (wind tunnel studies, calculations, review of test reports, etc.) and he may come up with 90 or 95 mph as a basic wind speed.

The Metropolitan Dade County, Florida, Building and Zoning Department has a Product Control Division which examines plans, specifications, calculations, test reports and product samples, and issues a "Notice of Acceptance." For a window that was used in a 350-foot highrise tower in Honolulu, Dade County approved the same manufactured product for elevations up to 25 feet above grade.

Just as it is necessary for a design professional to have a thorough understanding of the historical development of prevailing code sections and design standards provisions, it is also of paramount importance for an A/E involved in the selection, specification, shop drawing review and approval, construction observation and punch lists for installed windows and sliding glass doors, to have a thorough knowledge of the historical development of the windows and doors he approves.

Investigation into the historical development of certain window cross-section profiles may reveal that the previous manufacturer sold out to another manufacturer who has altered the product

design, and that the tool and die extrusions were originally formulated for a lesser performance residential window that would never qualify for the intended commercial or recommended monumental use.

The performance requirements specified in the ANSI/AAMA 101-88 design standard never promise leakproof or waterproof windows; on the contrary, their current and previous publications are loaded with disclaimers. For the benefit of A/E specifiers and design professionals-of-record, in the appendix they state, "Since excessive water leakage may jeopardize furnishings and equipment, it is important to design and select products that will not permit significant leakage under normal service conditions. It is generally accepted, however, that water leakage can be tolerated during periods combining high winds and heavy rains. In recognition of this, water resistance is generally determined at a pressure less than the design pressure."

Imagine attempting to pacify a dissatisfied client or owner of a highrise luxury condominium or penthouse apartment with those statements. Obviously, A/Es are beholden to higher standards of care and professional responsibilities.

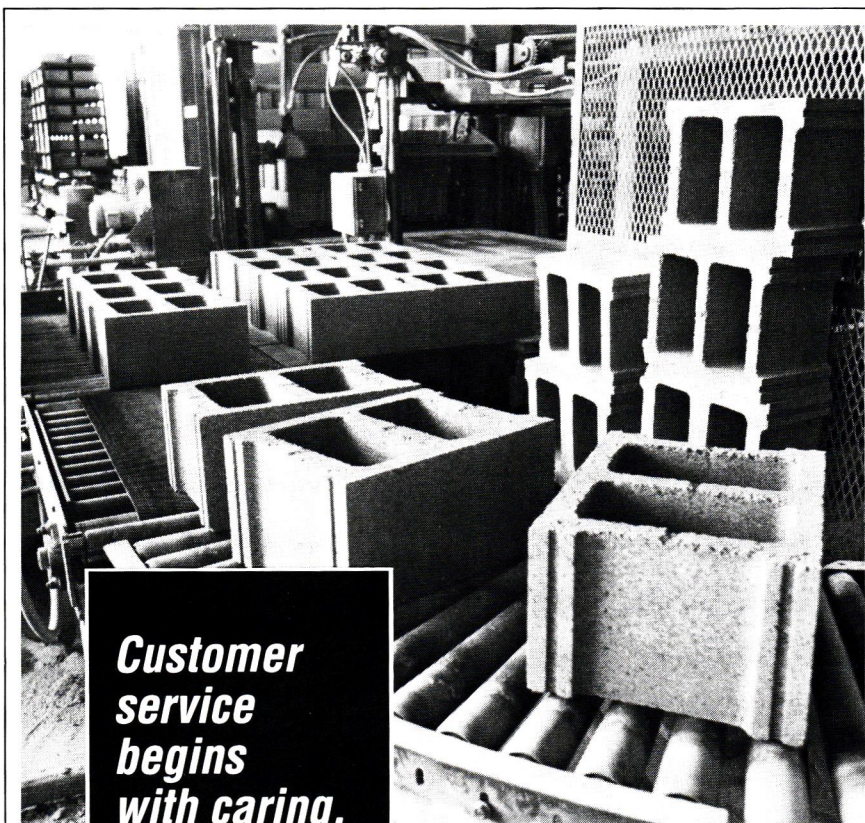
As AAMA states in its current standard, "The local building codes should be reviewed by the specifying authority to determine the required adjustments to the design pressures given in the tables due to building shape and edge effects, other exposures, etc. not included in the table. . ." References are to wind gusts, vortex shedding, eddy currents, drift conditions and so forth. AAMA continues, "It is the responsibility of the specifier to stipulate the required design pressure in the specifications for each project."

One of the distinct advantages

in serving on the various codes and standards development committees is that the A/E not only gains a better appreciation of current design standards and their historical development, but participates in the voluntary consensus participatory process. The A/E gains insights and foresights into the future with regard to upcoming building performance regulations and requirements. In our litigious

society, to be forewarned about codes and standards development is to be forearmed in making creative design decisions that are both functionally and economically sound. **HA**

Andrew Charles Yanoviak, AIA, CSI, is senior commissioner for Governmental Affairs of the Honolulu Chapter/AIA, and is chairman of the HC/AIA Codes and Government Relations Committee and Professional Liability Subcommittee.



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CD-ROM Technology: The Fast Track to Architecture Information

by Wil Frost

Today's architectural students and professionals have available a new compact disc computer technology to help them conduct project research. Although similar to the compact discs that many of us play in our home stereo systems, this technology, called CD-ROM (compact disc - read only memory), can be read only by special CD players designed to work with computers such as the IBM PS/2 or Apple Macintosh. Presently in the field of architecture, these products are used primarily to find building product specifications and journal articles.

Many architects are already familiar with the CD-ROM index to the Sweet's Catalog Files called *Electronic Sweet's*. With the addition of a \$600 to \$800 CD-ROM drive to an existing IBM or compatible microcomputer system, the Sweet's CD-ROM disc saves staff time by providing fast access to building products which meet project specification requirements.

Other CD-ROM products offer a variety of choices, ranging from encyclopedias on disc to data bases of journal article citations and summaries published by various companies and organizations. There is even an entire architectural journal published exclusively on disc, *Architectural CD: An Animated Magazine of Articles, Graphics and Data for Architects and Designers Using CAD*. All

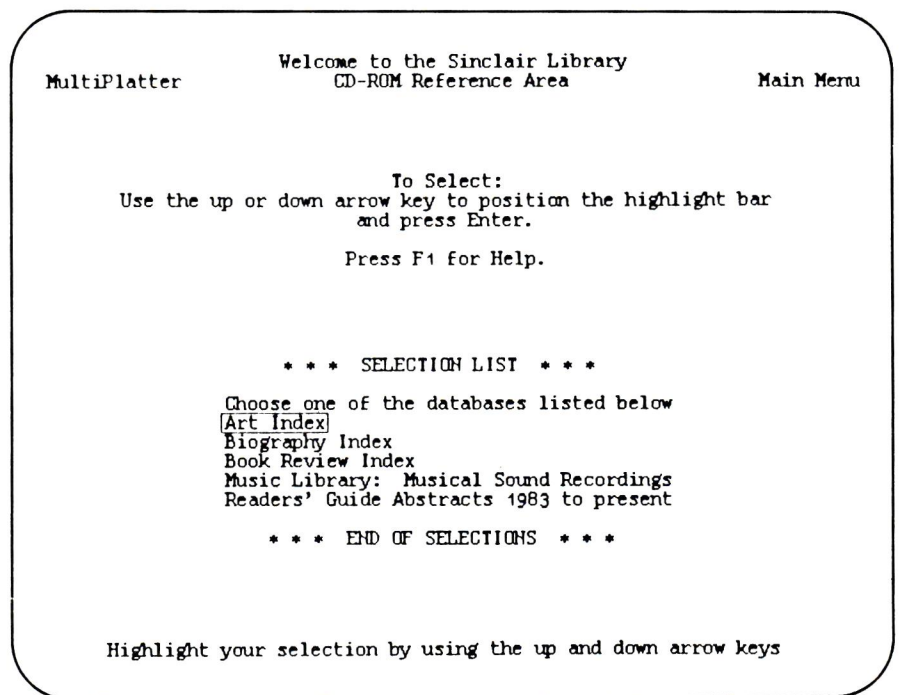


Figure 1

indications are that CD-ROM is the medium of the '90s.

The libraries of the University of Hawaii at Manoa have invested heavily in CD-ROM technology over the past three years and today offer students and faculty, as well as professionals in the community, access to more than two dozen CD data bases. Products of special interest to architecture students and practicing architects include *Electronic Sweet's*; three journal article indexes: *Art Index*, *Applied Science and Technology Index* and *Social Sciences Index*; and *PAIS*, which provides information on public policy topics published as journal articles, books and government reports.

The *Art Index*, published by the H.W. Wilson Company, provides access to articles published in almost 200 major art, architecture, interior design and city planning journals since 1984. Included are such important sources as: *Architectural Record*, *Architecture*, *Interior Design*, *Interiors*, *Japan Architect*, *Journal of Architectural Education*, the *Journal of the American Planning Association*, *Landscape Architecture* and *Progressive Architecture*, as well as more than two dozen other design and planning periodicals. An annual subscription provides an updated disc every three months.

The *Applied Science and Technology Index* is useful for its


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ESC - STOP Showing Records - Resume BROWSING Terms    F1 - HELP
F2 - BROWSE a NEW Term [F4 - PRINT this RECORD] F5 - Go to a Citation
F6 - PRINT/DISPLAY all Records from HERE to the END

```

Figure 2

coverage of articles on the construction industry and technical subjects such as acoustics, engineering, fire prevention, heating/ventilation/air-conditioning and transportation.

The *Social Sciences Index* is of interest to students and faculty

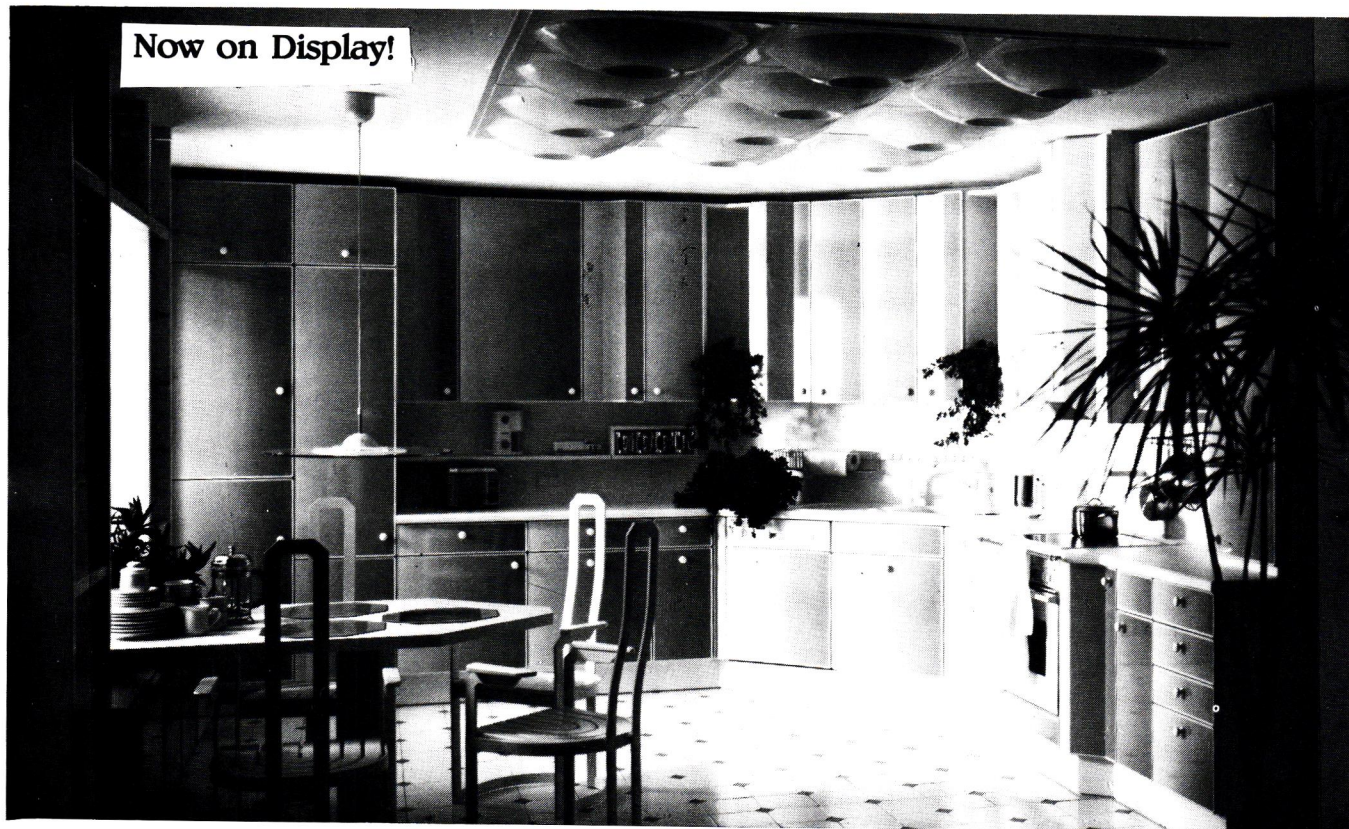
for its coverage of the social and psychological aspects of the built environment. *PAIS* is of primary interest to city planners and others interested in public policy issues such as housing, transportation and urban renewal.

For a taste of the way such

products work, a brief search of the *Art Index* is illustrated here. The sample topic is one of interest to both students and practicing designers — management of the professional practice.

On library CD-ROM workstations, the searcher's first task is to decide which data base to search. In Figure 1 *Art Index* is highlighted as the choice. The next screen offers a choice of search methods.

When you use different CD-ROM products, it quickly becomes obvious that each product has its own terminology and way of presenting instructions and information during a search. However, although the design and wording of the screens are different, the search methods are very similar. Most products offer a straightforward "browse" method in which you select a subject



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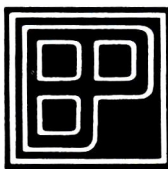
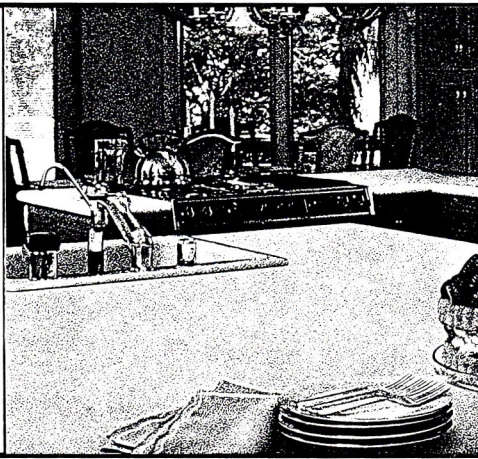
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entry from a list of subjects.

In the *Art Index* you select the "browse" method to conduct a simple search of the data base. The methods called Wilsearch and Wilsonline allow you to specify increasingly more complex search requirements, such as combining concepts, limiting by date or specifying articles in a particular journal.

To "browse," you type a subject word or name. If the subject "architectural firms" has been entered, in response, *Art Index* displays a list of the official subject headings used in the index. The search term, ARCHITECTURAL FIRMS, is shown in the middle of the list. The number to the left of the term indicates that there are 10 citations on the disc related to that subject. Selecting the more specific subject, (Figure 2) ARCHITECTURAL FIRMS AND GROUPS/MANAGEMENT, with 43 citations, the next screen displays the first article citation. From this point, a new citation is displayed each time the return key is pressed. Options are displayed at the bottom of each screen. For example, on an article citation screen, pressing function key F4 allows you to print the citation on the screen.

The great thing about such a CD-ROM index is that it takes only about half a minute to search many years of journal article citations. Any citation that seems worth following up can be printed with the press of a key. When you compare this to the time it would take to search the printed volumes of an index and copy citations by hand, it's no wonder students and faculty stand in line to use the CD-ROM workstations in the university library. HA

Wil Frost is architecture librarian and head, Sinclair Library, University of Hawaii at Manoa. He coordinates library collection development and instructional services for the School of Architecture and the Department of Urban and Regional Planning.

Local Architect Publishes Collection of Illustrations

"BONHUI Architectural Drawings and Leisure Works," a collection of illustrations produced by local architectural designer Bon-Hui Uy, has been released by Pacific United Publishing of Taiwan. Uy is currently the director of design for Honolulu-based Media Five Limited, a multidisciplinary design corporation. This is his third publication of selected works produced in New York and Honolulu between 1981-89, with introductory comments from distinguished architects Edward Larrabee Barnes, Samuel M. Brody, John Burgee, Stanton Eckstut and Jacqueline T. Robertson.

Uy displays his ability to convey a design intent through clear and informative architectural drawings in pen, pencil and color

pencils. His work ranges from loose sketches to well-finished renderings.

"I like to share my work, and a book is a good way of collecting and sharing it with a wide range of viewers," he said. "This book is by no means an attempt to show the best examples of good architectural rendering. It is how I interpret architecture at a given point in time."

"My leisure sketches began as an on-the-spot way of capturing images as I see and interpret them," Uy said. "They evolved through a thinking and experimentation process for creating visual images. Leisure sketches are so free from constraints and such pure fun that they are almost a relief from the more rigid and technical architectural drawings."

Uy and Media Five Limited's graphic department recently won a design award from the Honolulu Chapter of the American Institute of Graphic Artists for their joint effort on this book. The 160-page, 10" x 10" hardcover book has 134 illustrations, 63 in color, and is available in Hawaii through the Honolulu Book Shops and in New York City at Urban Center Books. **HA**

Honolulu Chapter Sponsors Design Awards

The annual design awards are a function of the Honolulu Chapter/AIA, not the Hawaii Council as previously indicated in *Hawaii Architect*.

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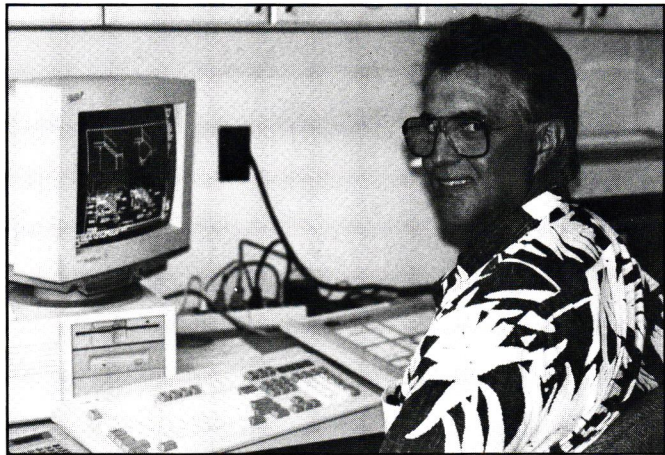
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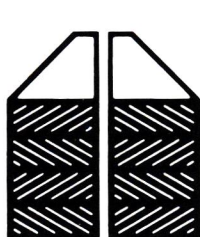
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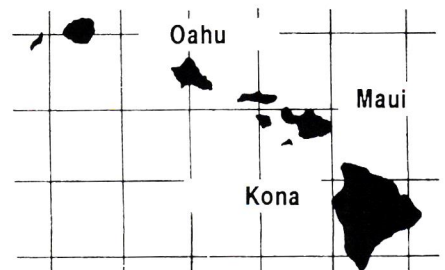
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Media Five 1st in State To Take CSI Award

Media Five Limited received a national award for exceptional merit from the Construction Specifications Institute (CSI) for the renovation of the Waikiki Parkside Hotel. This is the first time a firm from Hawaii has placed in the CSI competition.

The \$1,233,000 project included architecture, interior architecture, interior design and documentation for the entrance, lobby, elevator lobby, back-of-the-house, four penthouse suites, conference room and pool deck.

The award was presented at the opening ceremonies of the 34th annual CSI Convention and Exhibit in Chicago in June. **HA**



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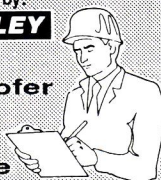
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President's Message

Continued from Page 7

more than three architects and most Big Island architects are sole proprietors. To tackle larger jobs,

joint ventures are formed. Increasingly popular is subcontracting various phases of the projects. Computers, modems

and fax machines also have brought us closer to each other as well as consultants who may be in Hilo or even Honolulu.

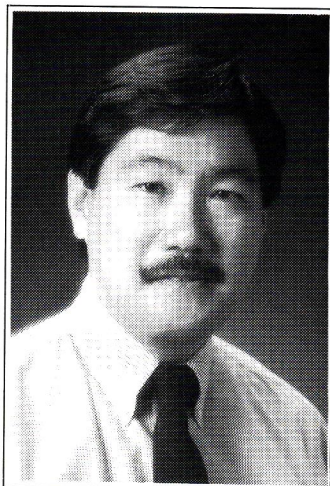
There are many new faces in the profession and they seem to be relieved to find our little organization eeking out an existence. They want to meet the local practitioners and learn about the county system, the contractors and what it is like building on a remote island.

We have been meeting now for four years. Our numbers have fluctuated and we struggle against great distances, small numbers and the fact that everyone is busy. With the influx of new architects maybe we will reach a critical mass where all this will come together and we can have a viable, enriching organization. **HA**

Takano Renamed To Review Board

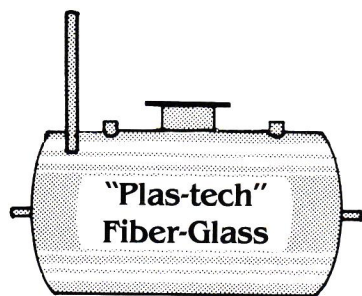
Gerald T. Takano has been reappointed for a second term to the state of Hawaii's Historic Places Review Board. The board reviews all potential historic sites and makes recommendations for their placement in the state of Hawaii Historic Sites Register and the National Register of Historic Sites.

Takano is an architectural planner and a project manager for Media Five Limited. **HA**



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New Members

5 Join Honolulu Chapter

The Honolulu Chapter/AIA continues to add to its ranks with four new members and one associate member.

James Loftis, FAIA, with Media Five Limited, holds a bachelor of architecture degree from the University of Oklahoma. He and his wife, Sue Anne, have three grown children, Jeffrey, Lezlie and David. In his leisure time, Loftis enjoys golf and skiing.

Darwin M. Young holds a bachelor of architecture degree from the University of Hawaii and enjoys jogging, biking and listening to music. He is employed by Kajioka Okada Partners.

A graduate of the Harvard University architecture program with a bachelor's and master's degree, **Stephen Hin Yuen** is employed by Group 70 Limited. Married, he enjoys reading and swimming.

With DMJM Hawaii, **James F. Zemski** holds a bachelor of science in architectural studies from the University of Wisconsin at Milwaukee. He and his wife, Charlotte, have one son, Tom.

Zemski enjoys kayaking, hiking, windsurfing and rock climbing.

The HC/AIA's newest associate member is **Carl E. Foster**, an employee of Fox Hawaii, who holds a bachelor's degree in environmental design and masters' degrees in planning/community development and architecture from the University of Colorado. Foster and his wife, Sherry, have two children, Blair and Ben. His pastimes include sketching, photography, writing and deep sea fishing.

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