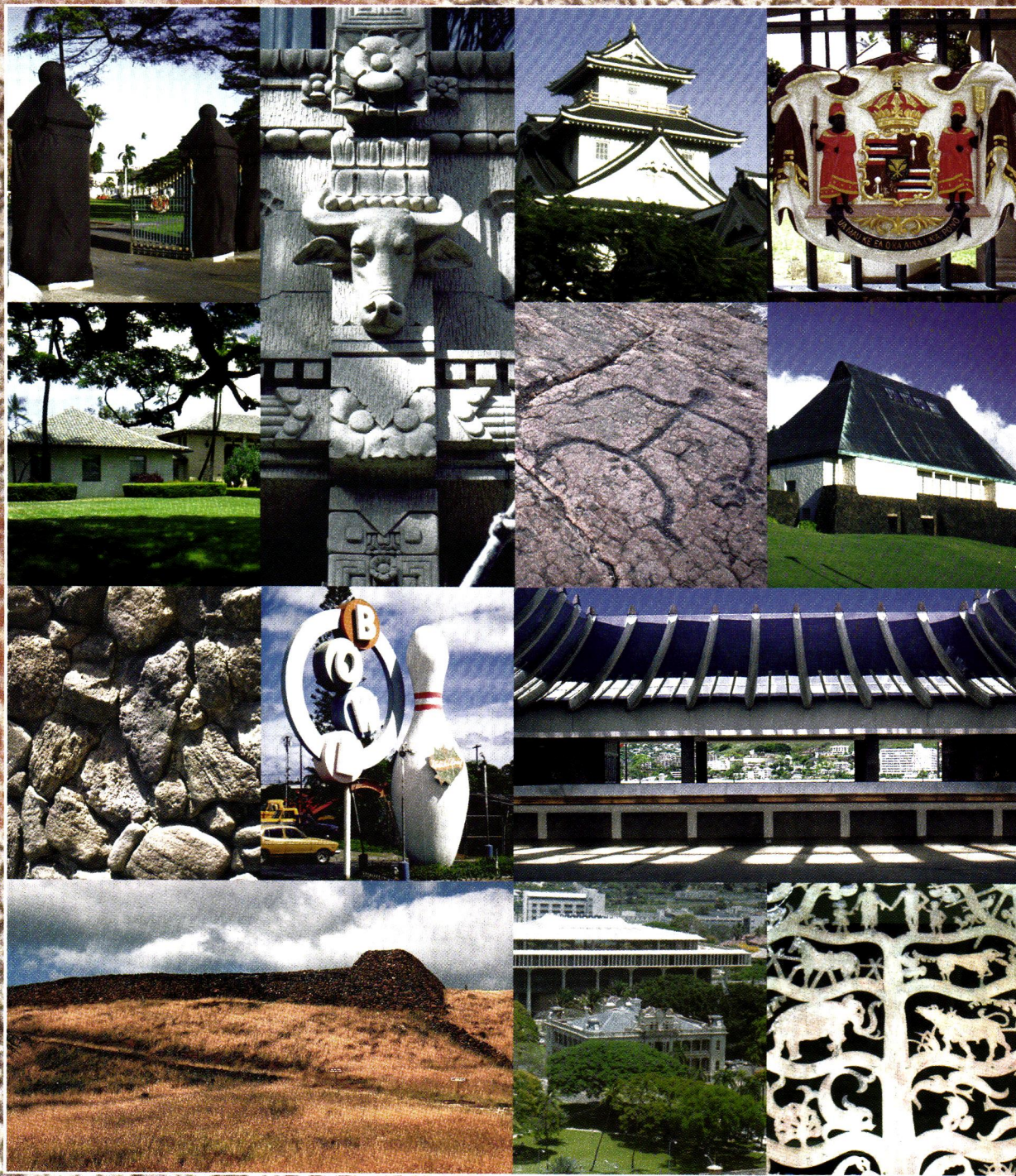


Hawaii Pacific Architecture

The Journal of the Hawaii State Council • AIA • March 1995



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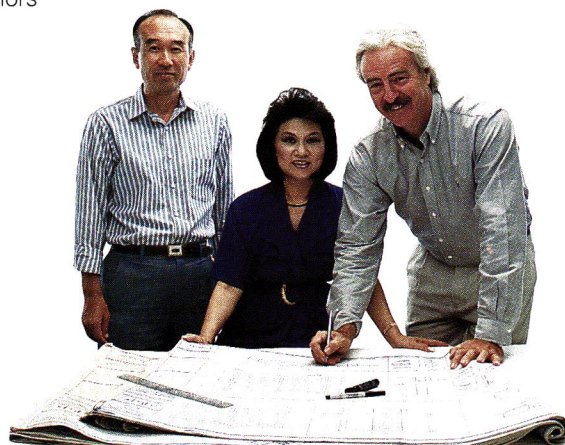
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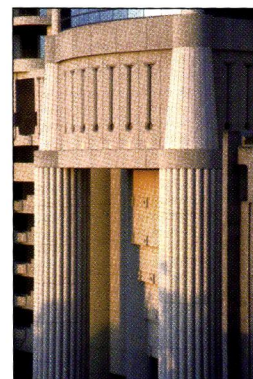
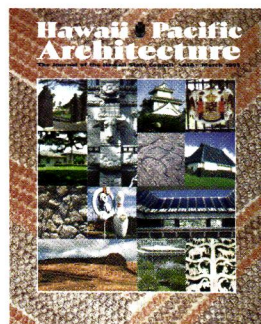
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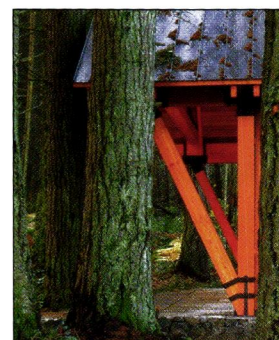
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6 Buildings
and Symbols



16 The Architecture of
James Cutler

IN THIS ISSUE ...

The focus of this issue of *Hawaii Pacific Architecture* is symbols in architecture. The articles address how symbols are used to help define a building's meaning.

Glenn Mason, AIA, explains how architectural symbolism cannot be separated from the discussion of meaning. He focuses on how architects use symbolism in their projects.

Ron Lee examines the pursuit of Hawaii's architects to create a Hawaiian sense of place and find symbols that are timeless. Lorrin Matsunaga, AIA, describes Pacific Northwest architect James Cutler's approach to design as being responsive to regionalism and local culture.

Charles A. Ehrhorn, AIA, addresses how urban design guidelines help architects create "meaningful" cities.

On a more abstract plane, Andrew Yanoviak, AIA, explains how harmonic geometric proportions have inspired symbolic architectural designs.

This month's cover is a collage of designs and design elements which illustrate the concept of meaningful symbols in architecture.

The Hawaiian Tapa design used on the cover and throughout the magazine is courtesy of the Bishop Museum.



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Experts at the Palace

The 1995 "Experts at the Palace" historic preservation lecture series continues this month with a March 14 lecture titled "The Balance Between Cultural Heritage and Tourism." The noon presentation will be held at the Iolani Barracks Visitor Center on the Iolani Palace grounds.

Speakers will include Regina Binder and Thomas Boland of Binder Bowland and Associates, from Provincetown, Mass.

This lecture is part of the eighth annual preservation lecture series sponsored by the Friends of Iolani Palace and the American Studies Department, University of Hawaii at Manoa.

Concrete Admixtures Seminar Scheduled

The concrete association (CCPI) together with both the federal and state transportation departments and the Hawaii Local Technical Assistance Program will hold a seminar on concrete admixtures both March 21 and 23, from 7:45 a.m. to 4:30 p.m. at the Ala Moana Hotel, Hibiscus II Room.

Ken Hover, Ph.D., Terry Holland, Ph.D., and Tim Durning will be the guest speakers. Discussions will focus on how admixtures benefit the industry's needs and still meet requirements or specifications.

Attendees will be briefed on the varieties of admixtures available and how they can be used to enhance concrete's durability, workability and permeability. This seminar will be of interest to engineers, construction personnel, contractors, architects, concrete suppliers and other personnel or agencies involved in the design or use of concrete.

There is no charge for the seminar. To register, call CCPI at 833-1882.

Historic Hawaii Receives NEH Grant

Historic Hawaii Foundation, a 21-year-old statewide nonprofit organization dedicated to the preservation of Hawaii's cultural heritage and historic built environment, has been awarded a grant for \$167,000 from the National En-

dowment for the Humanities. The grant will be used to conduct a month-long "Hawaii History Institute 1995" for secondary school teachers from across the state. This summer program will provide teachers with new tools for teaching the history and heritage of the Hawaiian Islands.

Any Hawaii public or private secondary school teacher who teaches courses specifically focusing on the history of Hawaii may apply. The selection of teacher-participants will be based on their qualifications to help others appreciate the excitement of learning the history of Hawaii.

Graduate course credit of up to three hours may be earned through the College of Education. All expenses for the Institute will be covered by the National Endowment for the Humanities and participating co-sponsors. All teacher-participants who complete the Institute requirements will receive a \$1,000 stipend.

Hawaii Pacific University president and co-sponsor Chatt G. Wright said, "The Institute's goal is to give teachers of Hawaiian history access to new and important information and perspectives. As they become more confident and excited about teaching their subject, the knowledge, personal appreciation of the past and enthusiasm for the subject will immediately impact the learning experiences of approximately 3,000 students during academic year 1995-96. The potential for a long-range multiplier effect, through the colleagues they influence and students they teach, will be extraordinary."

Media Five Promotes Brian P. Meier

Media Five Limited has promoted Brian P. Meier, AIA, to president at the multi-disciplinary design firm. He has been with the company since 1989.

Currently, Meier's projects include the Hale Koa Hotel renovation project; Honukaha, an affordable and senior housing project at the site of the historic American Brewery building in Kakaako; and new projects for the East-West Center.

Outlets at the Dole Cannery

The Outlets at the Dole Cannery is a renovation/conversion of existing warehouse and commercial space into a factory outlet center of approximately 314,000 square feet. Located at the Dole Cannery, Iwilei Road, the development is envisioned to serve as a regional center for Honolulu residents and visitors alike.

Horizon Outlet Centers, Inc., developers of the project, have carried out a multitude of regional outlet centers on the mainland. Master planners and architects of the project are from the firm of Architects Hawaii Ltd. Principal-in-charge is David A. Miller, AIA, and project architect is Holing Tong.

The project site is part of Castle & Cooke's overall existing industrial site. The project structures are mostly in four contiguous buildings on the ewa side of Iwilei Road, constructed between 1918 and 1931. The historic Dole Pineapple Cannery is located adjacent to these buildings.

The old Cannery's exposed steel trusses and exterior metal panels inspired the architectural design approach for the complex. Recent demolition of Cannery structures made possible the salvaging of a broad range of building and equipment parts. These items are being integrated into the project design in various ways, including historic displays, wall materials, suspended ceiling elements, custom fabricated light fixtures, floor graphics, benches, sculptures and other artistic applications.

The major interior and exterior spaces integrate meeting and entertainment with shopping areas. This blend of experiences within a historic, yet contemporary setting creates a shopping environment which will be unique in the islands. In addition to shopping, the spaces can accommodate strolling entertainers, shows, exhibits and receptions.

Honolulu residents are invited to embrace the development as a part of their total community. The Dole Pineapple Cannery, long a symbolic part of Honolulu's history, is now being recycled into a fully accessible asset for Honolulu's people to experience and enjoy.

Giving meaning to structures

Buildings and Symbols

by Glenn Mason, AIA

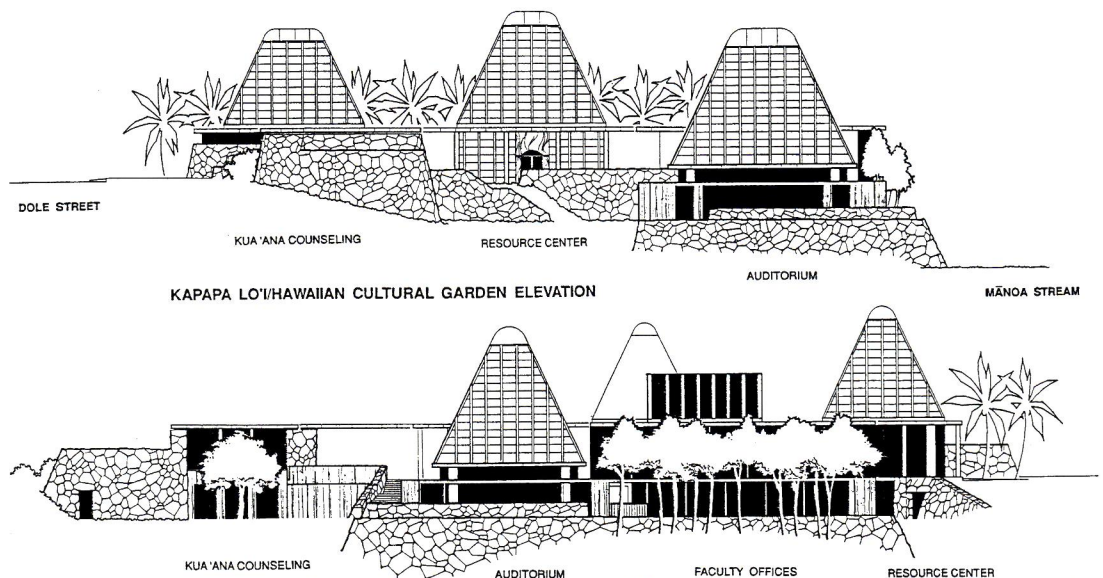


The Bernice Pauahi Bishop Memorial Chapel and Heritage Center, both designed by Kauahikaua & Chun Architects, contain many symbolic elements.

Discussions about architectural symbolism usually bring to mind individual elements in the composition of buildings which mean something else. Some of these elements might be surface decoration, such as the Chinese symbol for prosperity on the Alexander & Baldwin Building or the building's tile murals; building forms such as the double-pitched "Hawaiian" roof; or the steeple of a church. A symbol may even be as abstract as the way spaces between forms are defined.

These form, space and surface elements are merely the tools an architect uses to create something. Whether these elements act as symbols depends on if they have meaning. Architectural symbolism cannot be separated from the discussion of meaning.

Francis Oda, AIA, chairman of Group 70 International, pointed out "Man is a symbolic animal. Whether intended or not, almost everything we do has symbolic origins." From



Currently under construction, the Hawaiian Studies building at the University of Hawaii, designed by Kauahikaua & Chun Architects, uses roof forms which echo the thatched forms of indigenous Hawaii buildings.

this perspective the most poorly detailed, dysfunctional building has meaning, albeit not positive in tenor.

Recognition that architecture, as are most things, is inescapably symbolic leads to the more defining issue of whether designs are done with the meaning of the result in mind. If so, the subsequent issues include:

- Is the meaning being communicated to the “reader,” who can be the occupant, owner and/or public?
- Is the meaning relevant to that reader?
- What tools can be used to communicate the message?

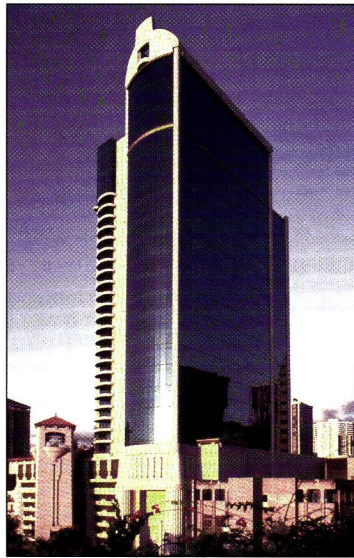
There was a time when most societies defined the meaning of life in a harmonious, orderly system, which usually had religion as its focal point. Hawaiian builders and master craftsmen were the religious leaders, the *kahuna*, in pre-contact Hawaii. In this type of society there is no separation between the meaning and the structure. Communication of the meaning is simple because everyone in the society understands the meaning of the building or object constructed.

The process of defining meaning in an increasingly complex world and in pluralistic societies is much more difficult. The modern movement’s International Style approach to dealing with this complexity was to suggest a new set of symbols which would apply to all societies, based on the industrial age. A noble goal, but one which often failed to recognize that the different societies and various natural environments in which they lived required localized approaches to attain meaning relevant to, and functional for, the people in that society.

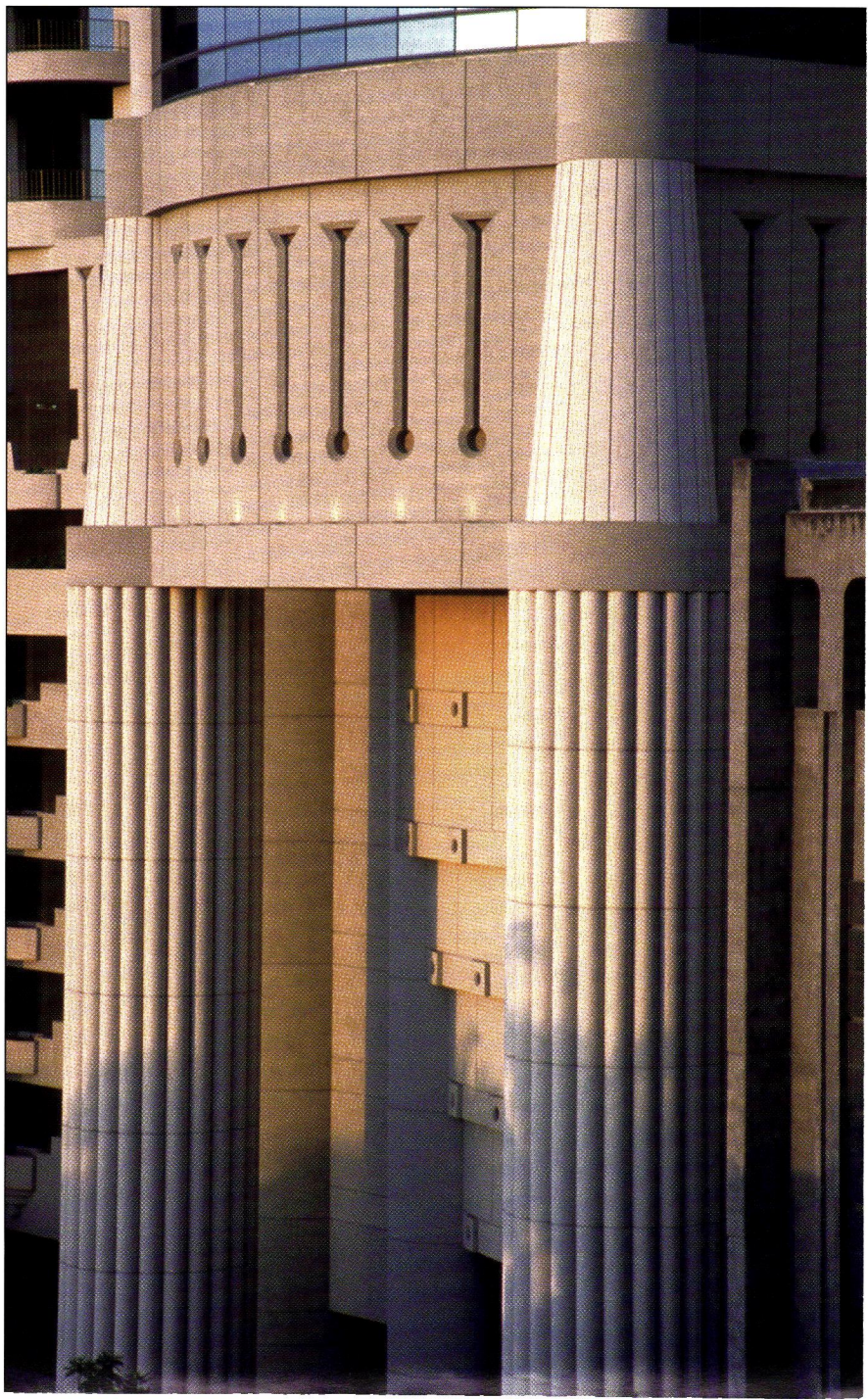
In the past decade this realization has led to a greater number of architects in Hawaii working with the symbolic potential of their buildings. Group 70 has defined a five-step process for focusing its design efforts to attain architecture with meaning. The first step is to understand the lifestyle or cultural issues important to the project. This requires research into both client and community desires and priorities.

The second involves distilling the major thematic elements which will make the issues defined recognizable to people. Oda said he thinks that everyone in the community can contribute to the first two steps and that it is the architect’s responsibility to seek outside contributions to the process.

The third step is to decide on a configura-



The *kahili*, a symbol of royalty, is used as a graphic design element in various areas of Harbor Court. The *kahili* motif is most clearly shown in the stair tower of the parking structure.



tion which supports the theme while also being functional. It is only at this stage that the architecture begins to take shape.

The fourth step requires defining the subthemes—elements which give the project life and richness.

The final step is to detail the signature elements.

This structured approach may not suit all firms, but describes the basic formula for successful architecture when cultural meaning is desired.

Kauahikaua & Chun Architects is a firm which has had both opportunity and success at designing important symbolic buildings. The design of the Bernice Pauahi Bishop Memorial Chapel and Heritage Center at the Kamehameha Schools campus is an extraordinary exercise in imbuing a building with meaning.

These two buildings, although they clearly belong to each other, are very different and exist for different reasons.

From below, the chapel stands as the dominant figure on the edge of its stone base, which is reminiscent of an ancient *heiau*. Its roof is an echo, not a copy, of the thatched roofs of Hawaiian buildings. Koa and other elements, such as a built-in royal pew for Pauahi and eight feather *kahilis*, one for each of the Hawaiian islands, set the building's tone.

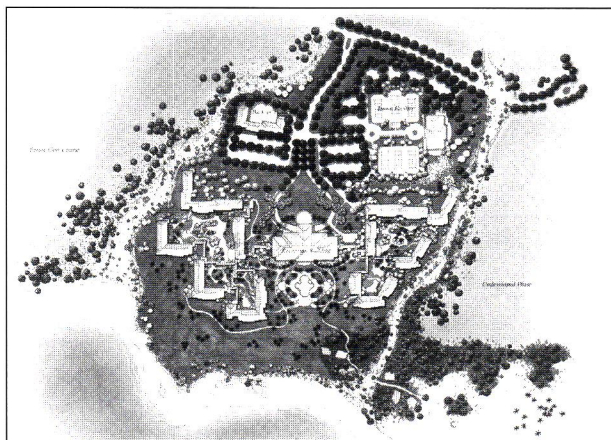
Dan Chun, AIA, pointed out, however, that the Heritage Center is the real memorial. It is where the collections, "the objects of the deceased," are kept.

It was designed to resemble a building from mid-nineteenth century Hawaii, the period of Pauahi's life. Its surface finish is similar to the finish at the Chamberlain's House in the Mission Houses Complex. The pyramid roof and the colonnade around the building were used because they are recognized almost universally as symbols of memorial. Even

the ball at the top of the pyramid and the sponged pink tinge of the walls were done as homage to different meanings for *hale akala*.

Does everyone understand all these messages? No, but as Chun pointed out, his firm tries to work in symbolism in as many levels as possible. That way, at some level, people will understand what the building means.

Dwight Kauahikaua, AIA, called it a two-party discussion and said, "if people don't understand it, it's



The plan of Manele Bay Hotel, designed by Group 70 International, was organized around various courts. Each court reflects Hawaii's different ethnic influences through landscaping and other elements.

not symbolism." The Memorial Chapel and Heritage Center complex may be one of the deepest and most layered symbols in Hawaii, but the buildings are understood and appreciated by casual viewers.

Norman Lacayo, AIA, also used symbolic elements when designing Harbor Court, Honolulu's newest tall building. In some places, for example at the stair tower for the parking structure, the *kahili* form—the main symbolic element used in the project—is fairly obvious. The form was treated primarily as a graphic design element elsewhere in the building. It lends interest and decoration to the building in many areas, but does not communicate its origins.

A master manipulator of forms and spaces, Lacayo is at his best when dealing with the building blocks of meaning. He said he want-

ed to give Harbor Court the solid, massive feel of a stuccoed building of the 1930s. To achieve this effect he reduced the amount of window area at the ground level to a minimum and exaggerated the massiveness of the structure at the lower level.

The feeling of power is successfully wrought at the lower levels. Meaning in this context becomes more a matter of feeling, rather than thinking. When a building design is approached this way, the structure is not a vessel of cultural meaning.

Lacayo has also successfully communicated the three primary functional parts of the building—office, apartment and parking structure—through treating each function differently. The use of lanais on the apartment structure and the sheer, undifferentiated volume of the office mass reflect the gathering of individual residential units as well as the view of the office as a gathering of people into a team.

Chun and Kauahikaua both pointed out that not all buildings deserve the same effort at defining and creating symbols as was spent on their "royal" buildings. However, they, along with Oda and others, believe there are many opportunities to give cultural meaning to much more of the built environment.

Building types which have strong constituencies—schools, churches, libraries—are the first that come to mind. Making these types of buildings culturally relevant is not an antiseptic design room process. It requires mixing with client and community, an increasingly common requirement whether designing laws, buildings or the future of the natural environment.

♦♦ Glenn Mason is vice president of Spencer Mason Architects. He was co-curator of the recent *Grass to Glass* exhibit, a presentation which focused on the past and future of Hawaiian-style architecture.

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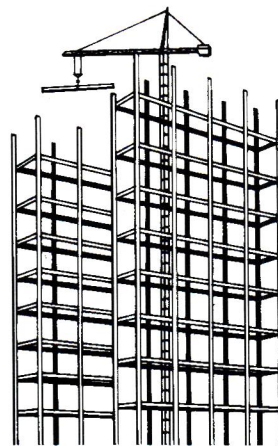


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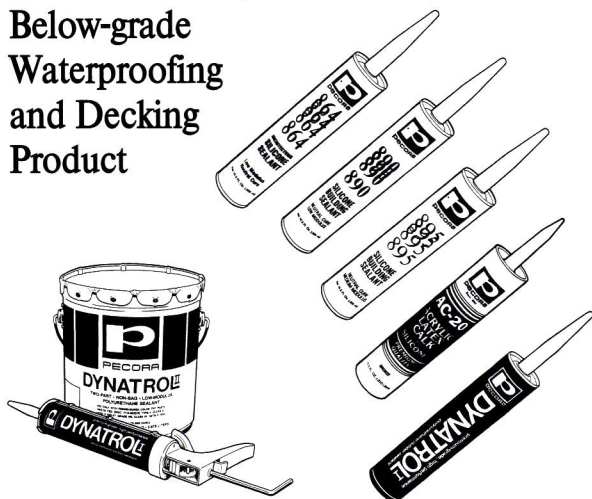
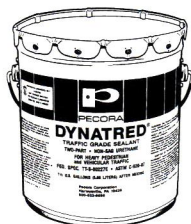
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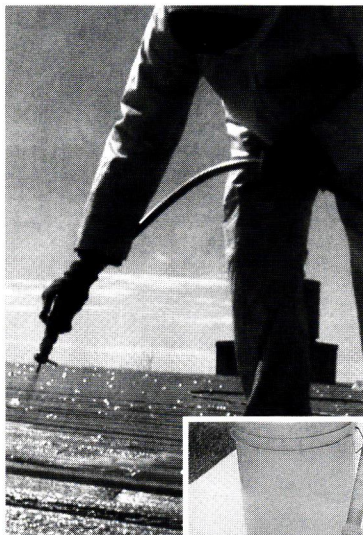
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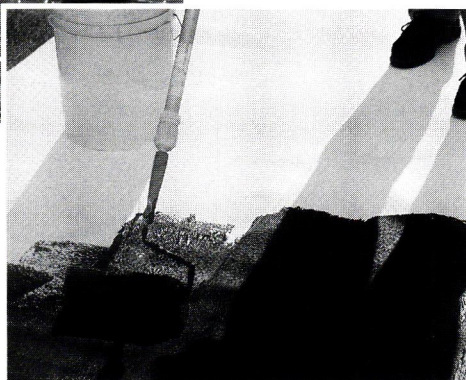
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with which it may be sculptured.

Other stones that yield attractive surfaces when polished also are classified under the general term of marble. This includes onyx and travertine, for example, which are formed from marine deposits in fresh water such as rivers, lakes and hot springs. Outstanding examples of the creative use of marble and related stones exist throughout Hawaii, from treasured edifices dating back to the islands' early architectural history to contemporary structures.

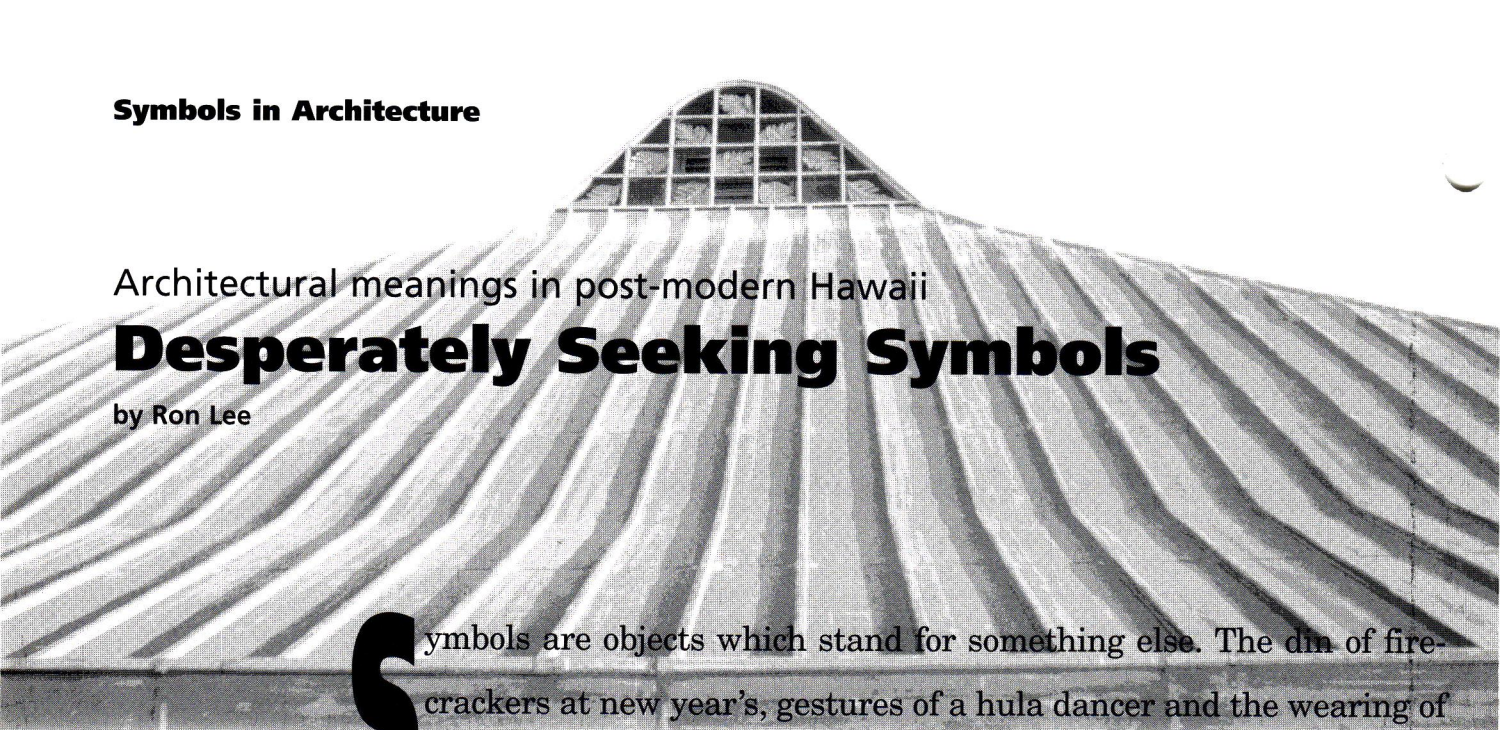
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Architectural meanings in post-modern Hawaii

Desperately Seeking Symbols

by Ron Lee



Symbols are objects which stand for something else. The din of firecrackers at new year's, gestures of a hula dancer and the wearing of leis all have meanings deeper than what is apparent on the surface.

These examples confirm the prevalence of commonly understood symbols in daily life.

Buildings are also symbolic. The great pyramids of Egypt can be seen as a graphic representation of a point source of light descending to the ground. Ernesto Schiaparelli drew this conclusion from his study of the pyramid texts when they were first discovered in 1884. He saw corresponding hieroglyphs of the sun rising between two mountains and suggested that the pyramid is a symbol of light.

This symbol was present as a hieroglyph, a picture of an idea, before it was translated into stone. The written symbol, the word, existed before it became symbolic architecture.

The Greek temple evolved from the pre-classic megaron house to a symbol of the house of a god. The parts of the temple are charged with symbolic meaning. The Doric column represents a standing male figure, the ionic column, a graceful female. The Doric frieze elements are symbols of a more ancient wooden architecture. These symbols are deeply rooted in the development of western architecture.

A pyramid of light, mandala, temple of commerce or a representation of a heavenly kingdom are all part of a long history of buildings that stand for something else. The functionalist movement in modern architecture called for a stop to this "nonsense."

Louis Sullivan noted in "Kindergarten Chats," "That which exists in spirit ever seeks and finds its physical counterpart in form. If a building is properly designed, one should

be able with a little attention, to read through that building to the reason for that building."

Pioneers of the modern movement indicated that a building should express the function for which it was designed. In other words, the building should be symbolic of its use; it should represent itself. For orthodox functionalists, architectural ornamentation was forbidden; historical references in buildings ridiculed. This was a reaction in part to seemingly arbitrary application of ornamentation which had no relation to a building's function.

Modern architecture had to free itself from the burden of historical symbols to conceive essential meanings for new functions which had no previous architectural form. The challenge for modern architecture pioneers was to create architectural symbols for a modern world.

Today, modernism itself has become a historical style. Post-modern architects have restored symbolism and ornamentation in architecture with a vengeance. This includes historical styles such as Art Deco or 1930s Hawaiian which were modern only a short time ago.

Meaningful symbols are a good market. But what symbols are needed to create a Hawaiian sense of place?

An identifiable Hawaiian style of architecture had its golden age in the 1930s. A group of exceptionally talented architects forged a style of architecture based on a residential form which grew from the inside out as the functionalists would like. It responded and

hence reflected the benign climate and informal lifestyle of the islands. It was crowned by a massive roof that came to symbolize this style of architecture.

The finest example of this style is Bertram Goodhue's Honolulu Academy of Arts. In this expansive building, the roof defines the institution. Penelope stands in the central courtyard of a building in the middle of the Pacific Ocean, pondering the meaning of the two adjoining courtyards. This is symbolic of the East meeting the West.

This fusion is exemplified by the roof tiles' color which is neither Mediterranean orange, nor Chinese Imperial blue, but is a neutral gray. Classical references in the piers and pilasters are subdued, almost archaic as if searching for a shared symbol, a common origin.

This structure is a model Hawaiian building because the symbols are archetypal and restrained, reflecting Christian humility, Confucian propriety or kamaaina decorum. This proud, unassuming building gives the art inside a place of its own.

The dominant pitched roof, as a symbol of shelter, is a commonly understood symbol in architecture around the Pacific. It lends itself to multiple readings of meaning in the multi-cultural population. At the Academy of Arts for example, it can be read as Chinese, Spanish or Hawaiian.

In its most basic form, Hawaiian architecture could be described as a roof in a garden. Its effectiveness as a symbol for buildings larger than residences has been remarkably effective at the Keahole Airport in Kona. The experience of landing at Kona and entering through a cluster of open pavilions, improbably situated alongside a jet runway in a lava field, gives visitors a sense of arrival at a specific place like no other in the world. The airport at Keahole is exceptional in that it is a large-scale facility which still utilizes a functional roof to establish a sense of place.

The higher density and larger scale of today's Hawaiian buildings call for new symbols. The challenge for architects in Hawaii is to humanize the super-human scale of an island state which is more densely populated than it ever has been. The symbolic function of a hip roof as shelter loses its effectiveness on buildings exceeding two stories in height. This type of roof is an architectural style which was derived from a very different Hawaii.

There is a desperate search for new symbols in a post-modern Hawaii, beyond the re-

gional style established in the 1930s. This pursuit is for objects which will characterize new functions and larger scales of an architecture not yet formed.

The Hawaii Capitol has chambers symbolic of volcanoes rising out of the ocean and a concrete peristyle representing palm trees. There is a high-rise on the waterfront that makes references to the ancient symbol of *kahili*. Other high-rise dwellings are decorated with non-functional lanais in the air, borrowed from detached cottages.

The entries for the new Hawaii Convention Center presented symbols of fish nets, shore side cliffs, billowing sails on the ocean, palm tree columns, theme water features, local art work and a hipped roof.

This self-conscious search for new symbols is too anxious and contrived. Furthermore, the quest for commonly understood symbols in a pluralistic society is hazardous.

Modern architecture has taught mankind that good architecture is created from the inside out. It is not created by the external application of symbolic ornamentation.

Hawaii has a group of outstanding buildings which can serve as models for a regional style of architecture. The Academy of Arts is truly a modern building. The symbolic content is primal and clear; ornamentation is minimal. This is also true of the airport at Keahole. The open wood pavilions, low lava rock walls and pocket gardens are an appropriate gateway to the Kona coast.

The Mauna Kea Beach Hotel on the Kohala Coast is another example of a modern Hawaiian building. This stark and spare modern building is "decorated" along open-air corridors and courtyards with Pacific artifacts of the highest quality. This 33-year-old resort is a design benchmark seldom approached in the heavily-themed, decorated resorts of late.

The search for a Hawaiian sense of place must be qualified not only in space but in time. It may include clues and references to yesterday but must be designed for today. Hawaii is not just a place which was, but is a place which is becoming. The search is on for buildings whose symbols will be timeless.

♦ Ron Lee of John Hara Associates Inc. is a former lecturer on architectural history at the University of Hawaii School of Architecture.

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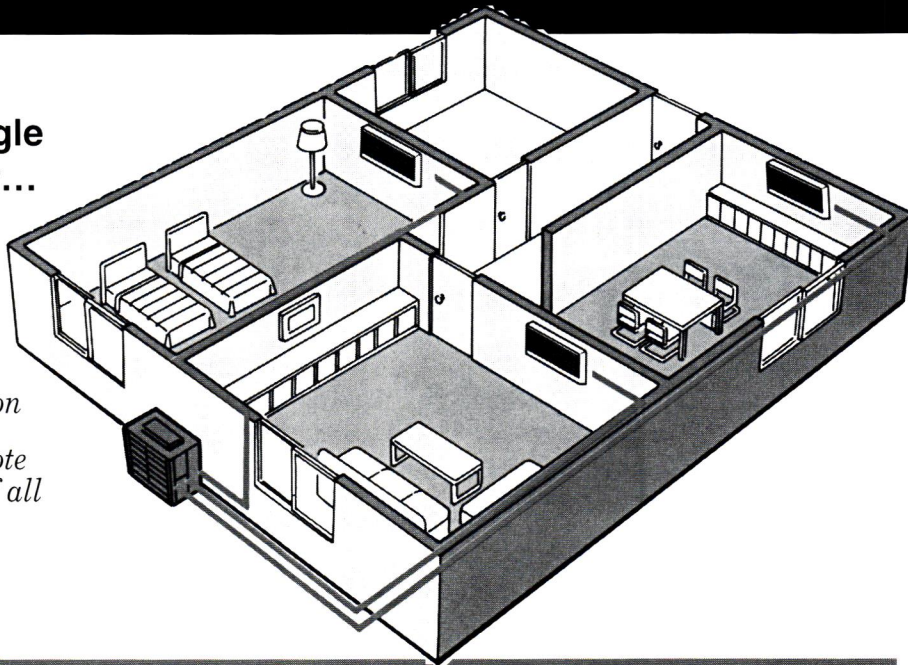
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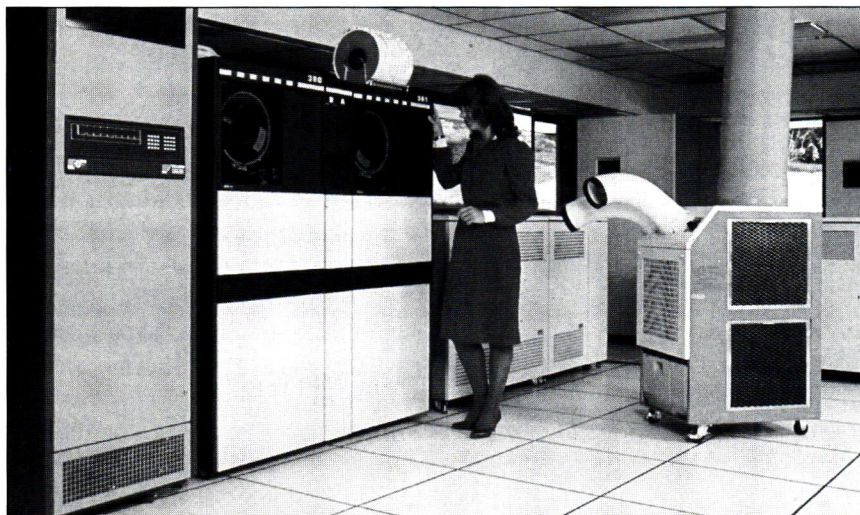
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Symbols in Architecture

Lessons learned from the Northwest

The Architecture of James Cutler

by Lorri Matsunaga, AIA

This detail of the Bloedel pavilion structure reveals that Cutler's architecture is about how the essence of a material is revealed through architecture.

Photo by Art Grice

In the late fall of 1994, two seemingly unrelated events occurred in the local architectural community. One event was the more widely publicized opening of the "From Grass to Glass" exhibit at the Gentry Pacific Design Center in Honolulu; the other event was the slide lecture by the Northwest architect, James L. Cutler, FAIA, of Bainbridge Island, Wash.

While less publicized, Cutler's address, held

at Jefferson Hall on the University of Hawaii Manoa campus, was rewarding and inspirational for those who attended the first of AIA Honolulu's guest speaker series. In retrospect, the Cutler lecture and the Gentry show are connected by an increased interest in an architecture that is more responsive to regionalism and local culture.

While well-respected in the Northwest and nationally, Cutler is not exactly a household name in Hawaii's design community when compared to the likes of Frank Gehry or Peter Eisenman. Nevertheless, at the relatively young age of 45 and with a practice located just outside of Seattle, Cutler has received more than 25 regional and national awards, including three awards from the national American Institute of Architects. Last year, his simple, yet powerful memorial to the victims of the Salem witch trials, which was done in collaboration with the artist Maggie Smith, received national recognition by the AIA.

Contrary to some of the more strident rhetoric of the avant-garde, Cutler is somewhat of a throwback, with his almost introverted, conservative stance toward architecture. He does his own survey work on house projects, locating all the trees on the site, which he prefers to call the "land." He uses wood, stone, rough-formed concrete and metal, in understated yet expressive ways, to bring out the essence or "spirit" within the material.

Many of Cutler's buildings are located in dark, primeval forests. In the Bagley Wright and William Gates guest houses, he played off the permanence of poured-in-place concrete

James Cutler and artist Maggie Smith have received national recognition for their memorial to the victims of the Salem witch trials. The ancient tombstones surrounding the memorial appear as silent accusers or neighbors who did not speak up in defense of the victims.

Photo by Steve Rosenthal



wall planes against the more delicate impermanence of Douglas fir wood to remind house inhabitants of the dynamic life cycle of the surrounding nature—birth, decay, rebirth.

Cutler's lecture given in Honolulu was generally autobiographical and chronological. He discussed his Pennsylvania roots, the Socialist leanings of his parents, his experiences in Louis Kahn's graduate studio, his employment in Bohlin Cywinski Jackson's office and his arrival in the Northwest.

With good humor, yet probably with some pain as well, he described his design intentions and mistakes in his early houses. His examples ranged from the shingle-style Daubenger residence of 1981 in Port Townsend, Wash., a homage to Venturi's Trubeck and Wislocki houses on Nantucket, to a flat-roofed Bottaesque house. Both of Cutler's design examples won numerous awards but leaked badly. These experiences led Cutler to the realization that houses are not lessons in styles but honest responses to climate, light, topography, materials and regional culture.

When asked who has influenced his work, Cutler acknowledged men like Paul Kirk and John Yeon, architects from the 1950s and '60s who are considered pioneers of the modern Northwest regional style. It isn't so much cutting edge design, materials and technology that interests Cutler. He seems more concerned about matters pertaining to the land and "place-making" through architecture.

Cutler's buildings reveal a continual learning process and growth. Lessons from one set of experiences of a project inform the next. Yet each project is special, receiving its cues and inspiration from the unique circumstances of the site and client.

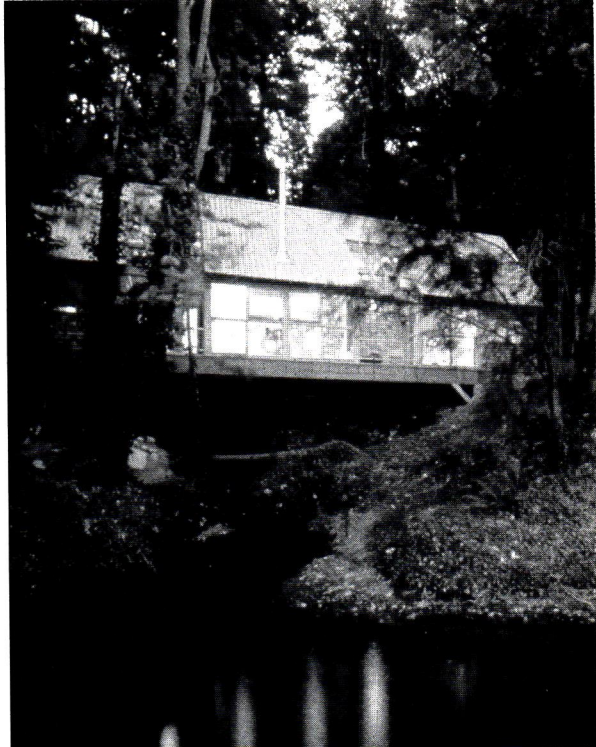
In the Port Blakely project of 1989, the house is a bridge that allows a stream to exist. In the Bloedel project of 1992, designed for an aged lumber magnate/philanthropist within the 150-acre Bloedel Reserve on Bain-

bridge Island, Cutler sited the client's bedroom on a skewed axis where he could see the memorial dedicated to his wife of 60 years in the nearby meadow. Strong convictions about site and materials provide the common thread in Cutler's built work, resulting in an oeuvre that is simple, elegant, beautiful and full of quiet passion.

Environmental issues are what makes the soft-spoken Cutler really angry. He described changes, not always for the best, occurring on Bainbridge Island, where forests and farm lands are competing with "tacky" suburban development.

Cutler talked about a client of a high-end house commission who eventually clear-cut all the trees on his property during the design process, despite assurances from Cutler that he could come up with a solution that would retain all the trees. When confronted by Cutler, the client said, "Jim, I'm not into anything cosmic. I just want a good view and people to admire my house."

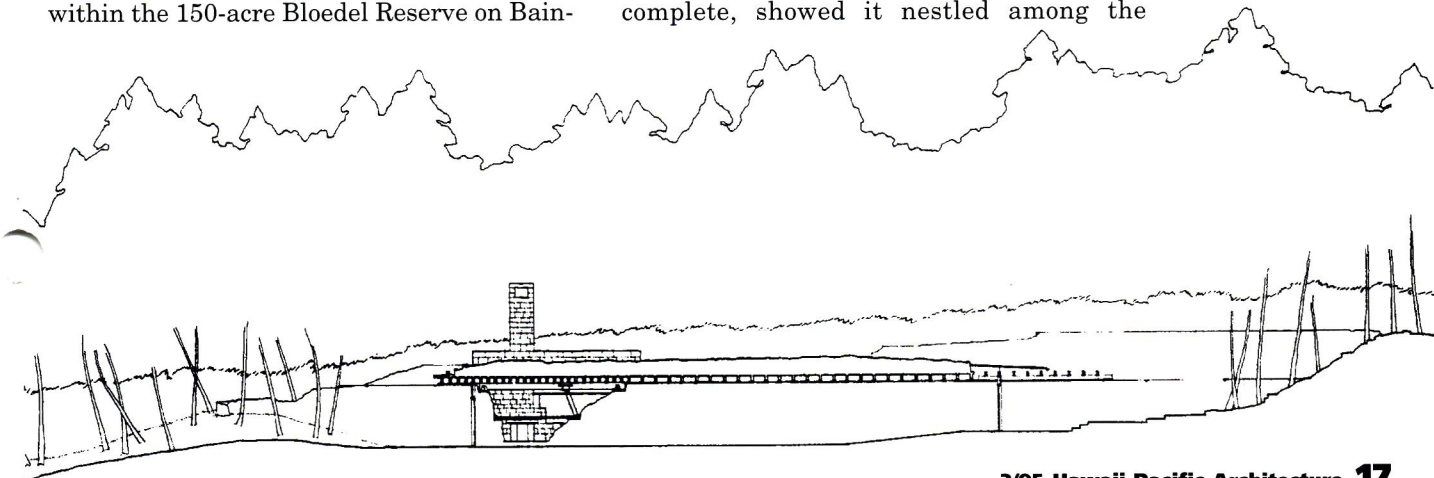
When Cutler taught a design studio at Harvard recently, he said he was appalled at some of his students who believed they were being environmentally sensitive by simply drawing an abstract horizon line to indicate context. In contrast, Cutler's Port Blakely residence spans an ancient stream like a bridge and required the removal of only one tree on a difficult site. A slide image of the house, taken when construction was not quite complete, showed it nestled among the



Bridging a narrow ravine, the Port Blakely house allows an ancient stream to continue its way to a tidal estuary.

Photo by Peter Aaron.

The Gates' guest house elevational sketch shows how the sod-covered residence is slipped into the hillside to minimize its impact on the landscape.



existing firs and undergrowth, straddling the stream. It appeared to have been there for years.

The Gates competition, which Peter Bohlin and Cutler won in 1992, is probably his most significant commission to date. The four-acre Gates compound is located on the eastern shore of Lake Washington, encompassing 37,000 square feet of living space and 450 feet of waterfront property. Only an 8,000 squarefoot underground parking garage and a breathtakingly beautiful guest house have been built so far.

In order to accommodate such an ambitious program within the available land, Cutler and Bohlin proposed to minimize its apparent bulk by burying three quarters of the complex into the hillside. The reality of this proposal meant wiping out much of the site, which was most likely a sobering experience for the environmentally sensitive Cutler. A visitor to the site early in the construction commented that the hillside resembled a highway construction project.

Eventually, native shrubs and mature alders and firs will be replanted on the site to re-establish a native Northwest forest, which will cover the entire estate. While much of Lake Washington is embanked with manicured lawns running to the water's edge, Cutler plans to develop a wetlands environment at the shoreline to deal with site runoff in a creative way, resulting in a pre-modern estuary filled with wild fowl and perhaps even salmon.

When people think of the Pacific Northwest, images of limitless old-growth timber forests come to mind. The use of wood and other indigenous materials in its architecture is a heritage of the region and the foundation for any discussion about a regional architectural style. This past summer in Seattle, the AIA Northwest Regional meeting included a lively panel discussion on changing attitudes in residential design. The panel included Arne Bystrom, George Suyama, Robert Hull and James Cutler. The panelists expressed a desire to

design "small," not in its narrow sense but rather, to design responsibly on the land, an increasingly finite resource in the Puget Sound region.

The panel defined designing small as the employment of design strategies that mitigate development pressures and suburban sprawl. Further, they talked about the need for a stewardship of the region by architects and others in the construction industry. While the use of wood is an essential part of a Northwest regional style and many buildings are made of timber and wood products, local architects are realizing that the land and its resources are not limitless.

Recently, there has been a great deal of discussion about the need for a "Hawaiian Sense of Place" in Hawaii's public buildings. This renewed interest in a regional Hawaiian architecture finds interesting parallels with the Pacific Northwest and other areas of the country, Florida, Texas, the San Francisco Bay region, etc.

Many architects are trying to deal with increased pressures toward universalization, which the critic Kenneth Frampton defines as "the reduction of building to the maximizing of economic criteria and to the adoption of normative plans and construction methods reducing architecture to the provision of an aesthetic skin—the packaging of nothing more than a large commodity..."

In attempting to "dress up" generic plans and forms, some architects in the past decade and a half succumbed to post-modern temptations to borrow historic elements without any real understanding of the past or context. At times, this superficiality has resulted in a depressing kind of kitsch.

Attending programs which feature the works of visiting architects like James Cutler gives Hawaii-based design professionals the opportunity to learn from talented architects who hail from other regions. While the public architecture of the



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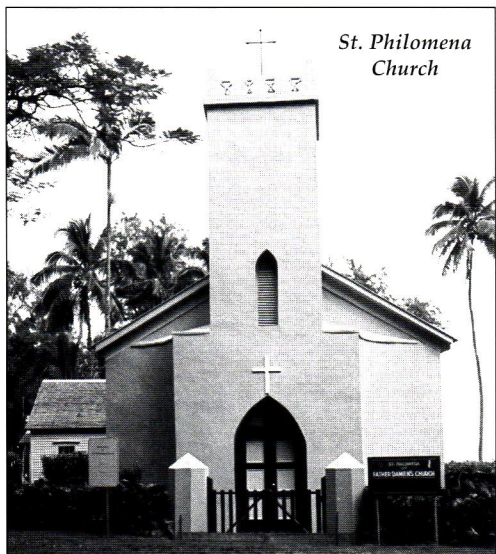
1920s and '30s in the Hawaii Islands has been greatly praised, the "Grass to Glass" exhibit illustrated the creativity and sensitivity of local architects, particularly the modern post-war residential architects—Ossipoff, Sullam, Preis, Johnson,

Perkins—and younger architects like John Hara.

For the next generation of architects, the challenge will be to balance the trend toward optimization/universalization while acknowledging regional differences and dealing

with economic/political issues surrounding diminishing natural resources.

♦♦ *Lorin Matsunaga is a principal at Urban Works Inc., who has roots in the Northwest.*



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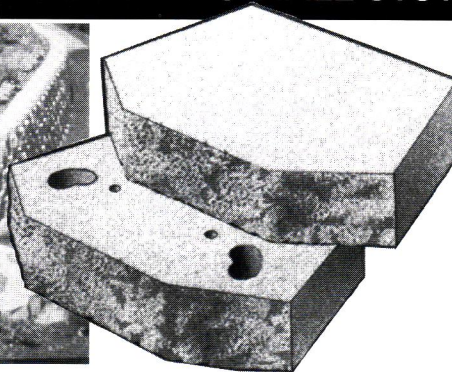
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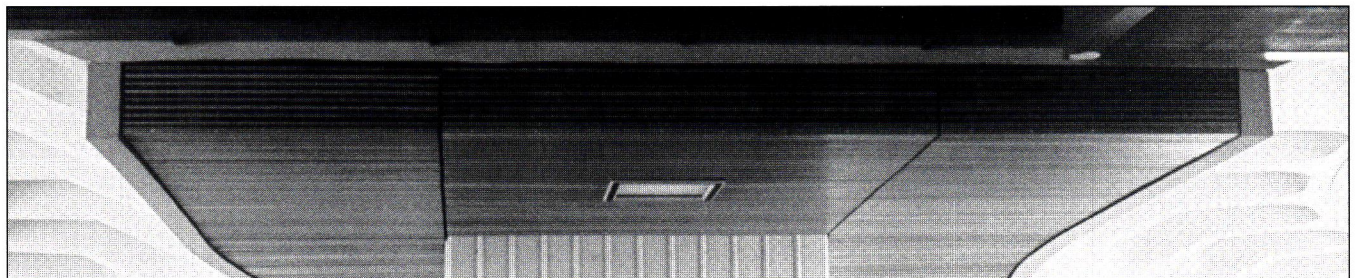
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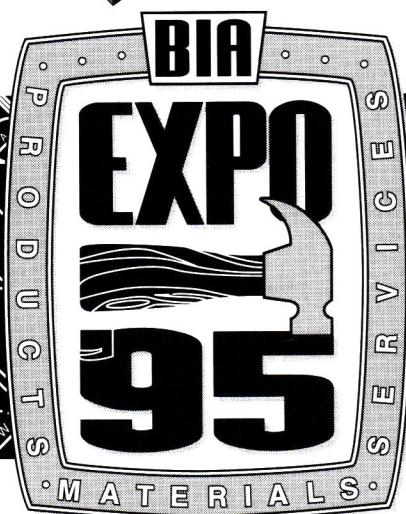
A recent article in *Roofer Magazine* mentioned that computer analysis has shown that metal roofing has a lower cost per square per year than other systems with shorter life spans. Metal roofing can be recycled thus tangibly supporting Hawaii's environment and saving space in already overcrowded landfills.

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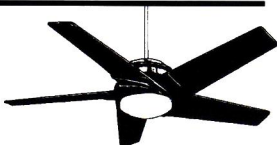
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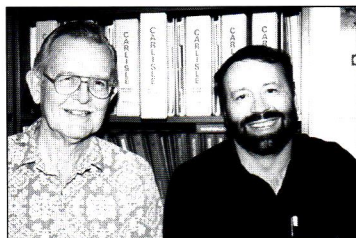
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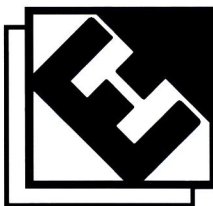
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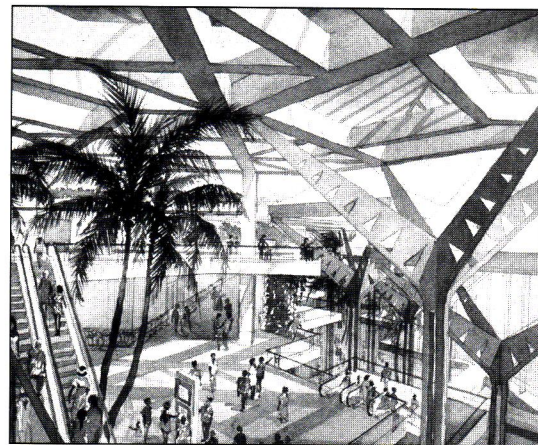
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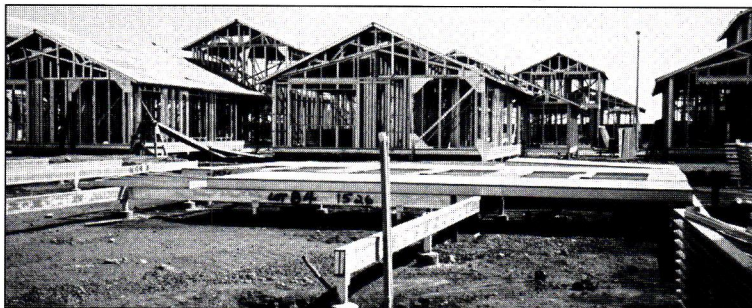
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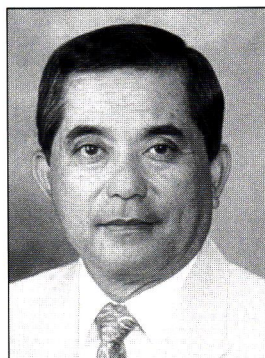
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Leadership Message

Competition for State Projects Welcomed

by Stanley S. Gima, AIA
President



Stanley S. Gima

This month's issue of *Hawaii Pacific Architecture* provides different perspectives on the subject of symbolism in architecture, which at times can create debates between architects and designers. The skillful use of these design elements helps to instill a "sense of place" into architectural spaces.

Controversial subjects among AIA members are many. However, most AIA members would agree on one issue: owners should choose an architect on the basis of professional qualifications.

This creates a problem. Who is to say that one architect is more qualified than another? Most architects consider themselves to be well-qualified to handle any project, even if their firm has had little experience in a specific type of project.

Architects are trained to be generalists, so it's not surprising to find architectural firms of all sizes with varying experience records, ready and willing to tackle almost any project.

In the private sector today, architects freely compete for all types of work. This competition has become standard practice among architects in the United States and was reinforced by the U.S. Justice Department's ruling five years ago promoting competition in the design profession.

The advent of the personal computer workstation has also increased the competitive position of smaller firms, giving them equal footing in competing for projects that used to be considered too large or too complicated for them to handle.

In Hawaii, this phenomena was further intensified by the economic downturn, followed by the ongoing recession during the past two years, which has caused most firms to downsize.

Thus it follows that the state of Hawaii should advertise prospective projects to architects and engineers asking them to compete on the basis of their qualifications, which they are accustomed to doing for private-sector jobs.

The state can be assured of quick and intense competition among architects and engineers. Negotiations, beginning with the top-ranked team, should result in "lean and mean" fees and fast-track scheduling of the design, followed by rapid production of bidding documents.

There seems to be a "silver lining" for the public sector during the construction industry's slow period. If the state were to advertise immediately for a qualifications-based competition among architects and engineers for the most-needed school facilities, plans could be completed by the end of summer. Construction could then begin this fall and be finished by the 1996 fall term!

If bid results follow the pattern experienced during the past 18 months, construction costs would come in below budget.

Inspiring symbolic architectural designs

Harmonic Geometric Proportions

by Andrew C. Yanoviak, AIA

Architects are trained to “read” architecture. Its compositional form and content, including design details, are perceived and even reconceived in the process of simultaneous analysis and synthesis. The critical eye of an architect can render very incisive design critiques beyond “bas-relief.”

“Hidden lines” regulating harmonic geometric proportions are often inherent in a composition of architect-designed “frozen music.” Throughout architectural history and theory, volumes have been written on the geometrical development of many a “rose window” within the “storybook facades” of awe-inspiring Gothic cathedrals.

Twentieth century “master architect” Le Corbusier incorporated his “Le Modular” within the Ronchamp Chapel windows based on ancient Egyptian and Grecian “Golden Mean” geometry. Fifteenth century Leonardo da Vinci did likewise with his “Last Supper” and other classical paintings.

In 1946, Princeton professor Albert Einstein, Ph.D., wrote internationally renowned artist-architect-planner-designer Le Corbusier a note following their campus meeting. Einstein stated that “Le Modular” is “...a range of dimensions which makes the bad difficult and the good easy.” Shortly after its completion, the author and his wife were married at Le Corbusier’s Ronchamp Chapel, a place which is often cited as the greatest work of architecture created during this century. At the chapel “Le Modular” was incorporated in three-dimensions.

The tomb of Pharaoh Kufu in the Great Pyramid of Gizeh in ancient Egypt is dimensioned on the basis of the “Golden Cuboid.” The Parthenon, often considered the most beautiful of ancient Greek temples, utilized a two-dimensional harmonic proportioning system based on the “Golden Section.”

Sitting directly opposite the “glass block” windows at the American Institute of Architects Hawaii State Council office recently while the sun was setting, the chromatic hue and prismatic quality of light was dramatic. The proportions of the window openings within the wall caught my eye.

Ultimately, these geometrical relationships were plotted on my computer in hopes of creating a temporary work-of-art for the AIAH-SC office. Unfortunately, the costs of execution in either neon or illuminated tubular plastic were prohibitive.

The first two-dimensional diagram depicts the nautilus “spiral of life” which has been adopted by the University of Hawaii School of Architecture Alumni Association for its logo. The nautilus “spiral of life” was also a major source of inspiration for the New Orleans Aquarium designed by Cambridge Seven Architects. It was generated by plotting diminishing squares (green lines) and connecting their diagonals (light blue) within the “Golden Rectangle” defined by the 6-by-9 “glass blocks” (with red/orange joints).

The “spiral of life” pattern is the basis for the harmonic geometric proportioning system in “Le Modular.” These patterns have been popularized by modern painter Piet Mondrian. Some of the patterns have also been copied onto fabric prints for draperies and clothing.

Leonardo da Pisa (“Fibonacci”) derived the famous algorithmic series of $3/5$, $5/8$, $8/13$, $13/21$, $21/34$, etc., which approximates the “Golden Mean” irrational number of $1.618034...$ i.e. the sum of the square root of five plus one, divided by two.

The second diagram incorporates the “pentagonal star” (magenta) used in the U.S. flag where the minor and major axes inherently have the harmonic “Golden Mean” relationships

of one to 1.618. ... This design is also apparent in the “square within a circle” diagram of the human body made famous by Leonardo da Vinci.

This popular da Vinci graphic was used on the cover of the AIAHSC Professional Office Practice Standards booklet. Its derivation is based on Pythagoras’ “three to four to five right triangle theorem” which depicts its correlation with the “Egyptian Quadrature” and the “Golden Section.”

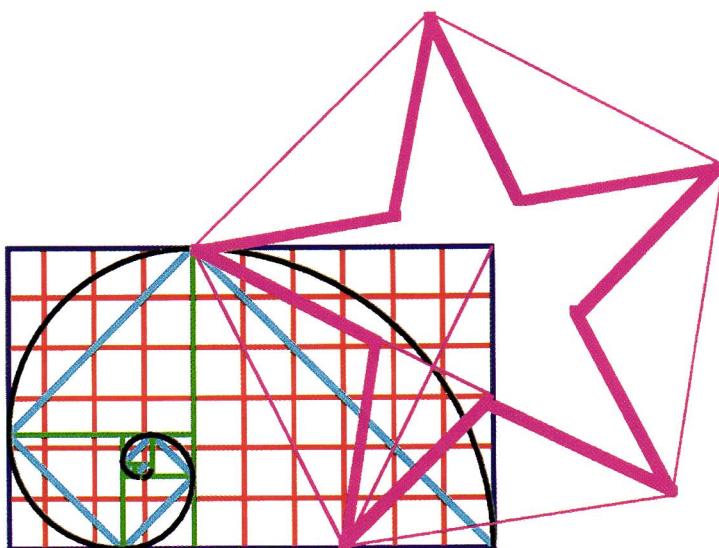
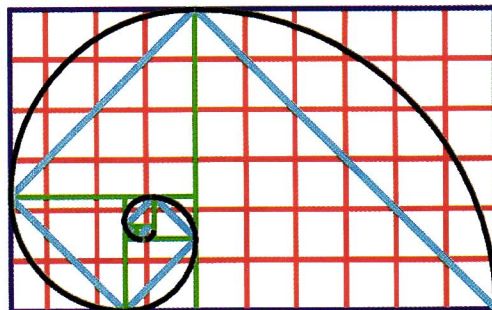
The third diagram integrates the logarithmic “nautilus spiral” with the “pentagonal star” and its source of origin—the decagon (violet). In this instance, it is formulated by 10 circumscribing and 10 inscribing pentagons (violet). The radius of the decagon (orange) is equal to the side of the pentagon (orange) and directly proportional to the diagonal of the pentagon (orange) which is in the same harmonic “Golden Mean” ratio of one to 1.618... between the minor and major axes.

If all of this sounds a bit musical, it is. When the strings or tubes of musical instruments are subdivided geometrically, natural tonic pitches and harmonic chords are produced.

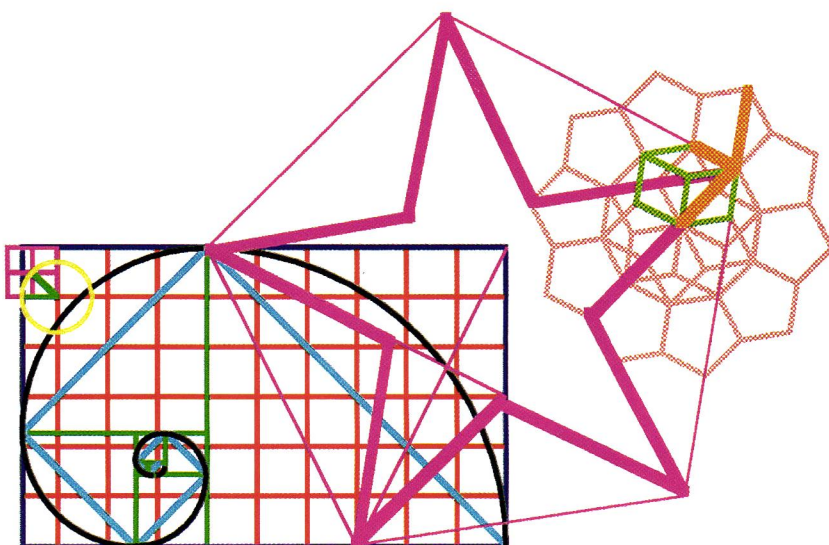
In the upper left-hand corner of the third diagram, is an iconographic replica of the geometric “sacred cut” (yellow, green and magenta) predominantly used by Romanesque architects in their arched, vaulted and domed ecclesiastical architecture which incorporated “iambic pentameter” and other poetically spaced rhythmic structural and ornamental design elements. This is in seminal contrast to the logarithmic “spiral of life” harmonic proportions inherent in the “Golden Mean” and “Golden Section.”

➤ Andrew Charles Yanoviak, AIA, has written several articles on geometrical topics. In 1979, Yanoviak installed suspended works of sculpture at the University of Hawaii-Hilo auditorium based on self-generating harmonic proportioning systems inherent in transformational tetra-octa-icosa-dodecahedral geometry mentioned in Carl Sagan’s “Cosmos” and Jacob Bronowski’s “The Ascent of Man.”

The nautilus “spiral of life” was generated by plotting diminishing squares (green lines) and connecting their diagonals (light blue) within the “Golden Rectangle” defined by the 6-by-9 “glass blocks” (with red/orange joints).



This diagram incorporates the “pentagonal star” (magenta) with the “spiral of life.”



This diagram integrates the logarithmic nautilus “spiral of life” with the “pentagonal star” and its source of origin—the decagon (violet).

Creating a 'meaningful' city

Urban Design Guidelines

by Charles A. Ehrhorn, AIA

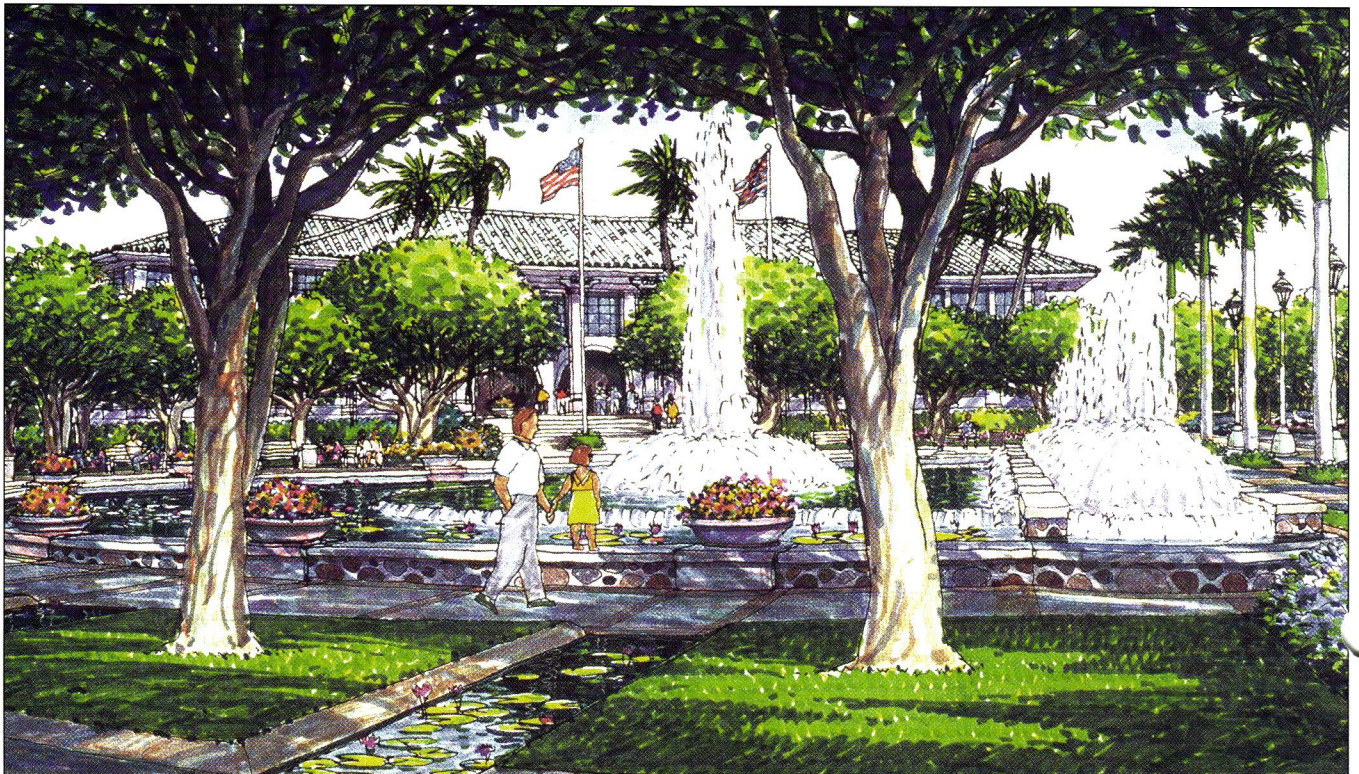
Urban design guidelines are important to building projects because they provide needed coherence, compatibility and predictability to the design process. This is important to all participants in the design process. Architects can benefit by working within a framework which demands the highest quality of design and property owners perceive quality as a means of retaining and enhancing property value.

The public is very concerned about the proliferation of unsightly developments and the negative impacts of urban sprawl. This is expressed through governmental policies which attempt to regulate design and public state-

ments that are critical of building design. Concerns expressed through public forums include "over built" environments, "institutional" buildings not reflective of Hawaiiana and the growing desire for community-based "development plans" as are being produced for Manoa, Kaimuki, Wahiawa, Waipahu and Moiliili.

The public is looking more and more for buildings that reflect Hawaii and the aloha spirit. Some concerns and issues were effectively presented in the "Grass to Glass" exhibit held at the Gentry Pacific Center in Honolulu.

Design guidelines address more than just building design. Landscaping, street scape, vehicular and pedestrian circulation systems,



All the buildings in the civic center district, which is intended to accommodate the growing governmental presence in the Kapolei area, will be set within a park or campus-like environment.

open space and infrastructure development are all part of a comprehensive design plan and design guideline package. These are all key elements for a balanced built environment.

In setting the goal to create a project's sense of place, unique in its own right, guidelines require an architect to look beyond the arbitrary boundaries of a building parcel. Boundaries are considered arbitrary because they reflect imposed ownership patterns rather than reflecting naturally occurring borders.

A project designer must consider the surrounding context and then interrelate with adjacent properties and structures. Both positive and negative impacts on the surrounding neighborhood of a project must be considered. This can lead to projects that are individual and unique, which still work and are compatible with neighbors. Taken together, the neighborhood can create a coherent urban environment that can be enjoyed by the entire community.

Everyone is aware of many examples of incompatible urban environments. However, there are some examples where design guidelines have been effective. These include resort developments at Wailea, Kapalua, Haleiwa and Kapolei.

Kapolei Urban Design Plan

Planning for Kapolei has continued to evolve from the plan initiated by the firm of Harland Bartholomew & Associates in 1955. In the early 1970s, the City and County of Honolulu planning department undertook a general plan revision program which focused on directing new urbanization to Ewa. This new policy culminated in the designation of Ewa as a secondary urban center. Further planning occurred throughout the '80s, as discussed in the September 1985 issue of *Hawaii Architect*.

The City of Kapolei Urban Design Plan, prepared by Group 70 International, defines the design character and quality for the second city. The plan also identifies principles, standards and guidelines directing the city's development. The document is used by developers, the state of Hawaii, City and County of Honolulu, the Estate of James Campbell and the Kapolei Design Advisory Board in the development and review of project designs.

Development concepts in the urban design plan are intended to be general in nature and to provide an overall design framework so that distinctive districts within the city will be cre-

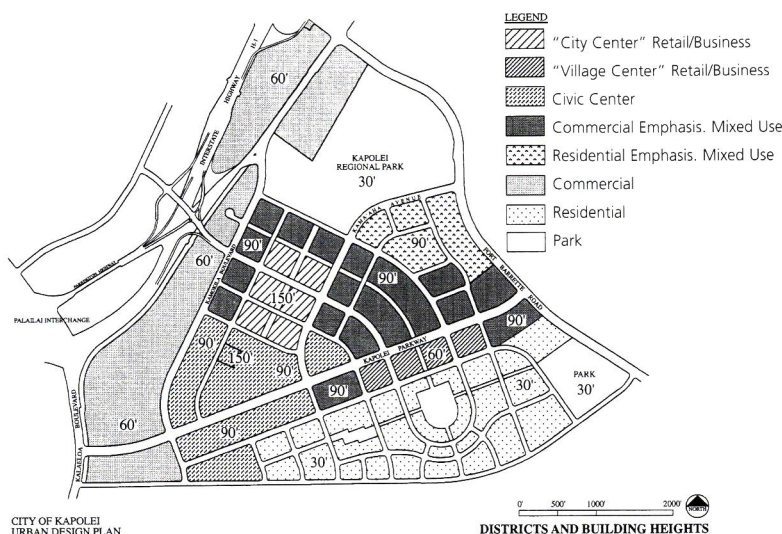
ated. Project designs, in addition to complying with the urban design plan, must still satisfy existing regulatory controls of both the state and city.

The urban design plan addresses the overall mix and location of land uses for Kapolei. Development will include commercial and office uses, residential areas, civic, community, recreational and cultural facilities, as well as circulation and landscape improvements. In total, it addresses the 800-acre, triangular-shaped area which is Kapolei.

Six City Districts

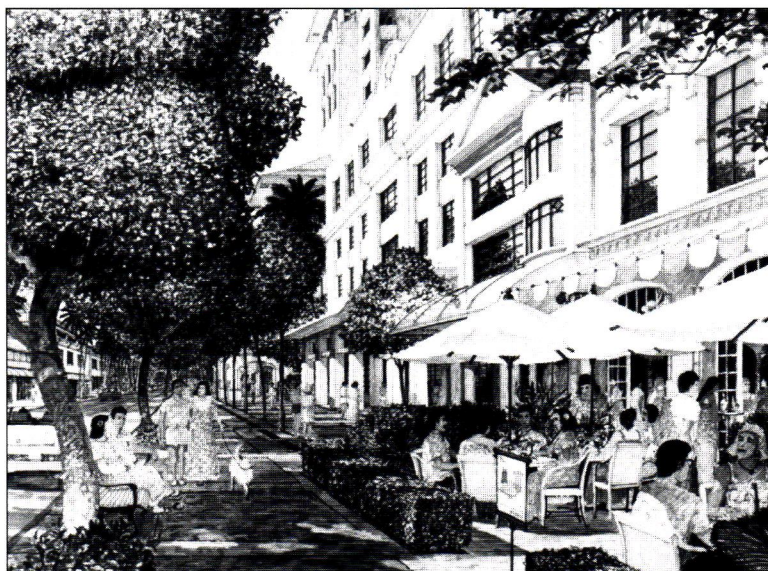
The Kapolei Urban Design Plan establishes six districts and provides guidelines, including building heights and setbacks within each district. Together, these are intended to accommodate the full array of business, commercial, residential, cultural and public uses that characterize a complete city center. The six districts include:

- A city center which has higher building



The Kapolei Urban Design Plan establishes six districts and provides building height and setback guidelines for each district.

The mixed-use district will create opportunities to live, work and shop within a localized neighborhood.



heights. Although covering six blocks of higher densities, special care is being taken through building articulation to insure that Hawaiiana and a sense of place is not lost.

- A civic center district which is intended to accommodate the growing governmental presence in the region with all buildings set within a park or campus-like environment.

- A mixed-use district including both commercial and residential areas which will create opportunities

to live, work and shop within a localized neighborhood.

- A general commercial district of low-density vehicular-oriented uses which includes the existing Kapolei Shopping Center.

- A village center district which will be a local shopping area for residents living within the immediately adjacent neighborhoods.

- A multi-family residential district.

Each district is a relatively large

area which will be recognizable through its strong unifying physical characteristics of space, form, building height and street scape. All six districts are joined by an open space network of parks, pedestrian malls and privately-developed open space.

Palailai Mall will connect the *makai* residential neighborhoods with the city center. Wai Aniani Way will provide a focus and meeting area along a pedestrian spine, connecting the 73-acre Kapolei Regional Park with the campus-like civic center. A third mall will link the *makai* residential neighborhood with portions of the civic center district.

Specific development standards and guidelines have been established within Kapolei. These policies are intended to guide the architectural character, environmental quality and visual impression created by individual projects within the city districts.

Specific provisions for each district include overall design character, building massing, architectural character, site development guidelines, signage and exterior lighting. An important part of the development is the character of its streets. To this end, design guidelines also address landscape development along a hierarchy of traffic corridors.

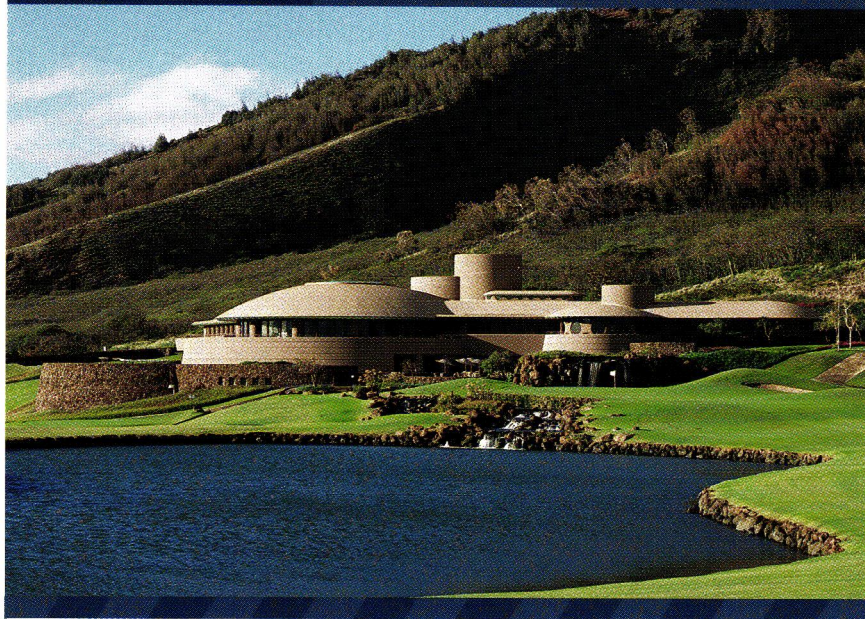
In development, design innovation comes out of an architect's involvement with the processing of inputs from many "clients." These include representatives of the general public, often in the form of neighborhood boards, public agencies, project developers and the landowner. As a long-term landowner, Campbell Estate's interest is in using a comprehensive set of development standards and guidelines which will eventually serve to encourage the building of a cohesive and attractive urban center.

♦ Charles A. Ehrhorn is land planning coordinator for the Estate of James Campbell. Ehrhorn is vice president/president-elect of the American Institute of Architects Hawaii State Council.

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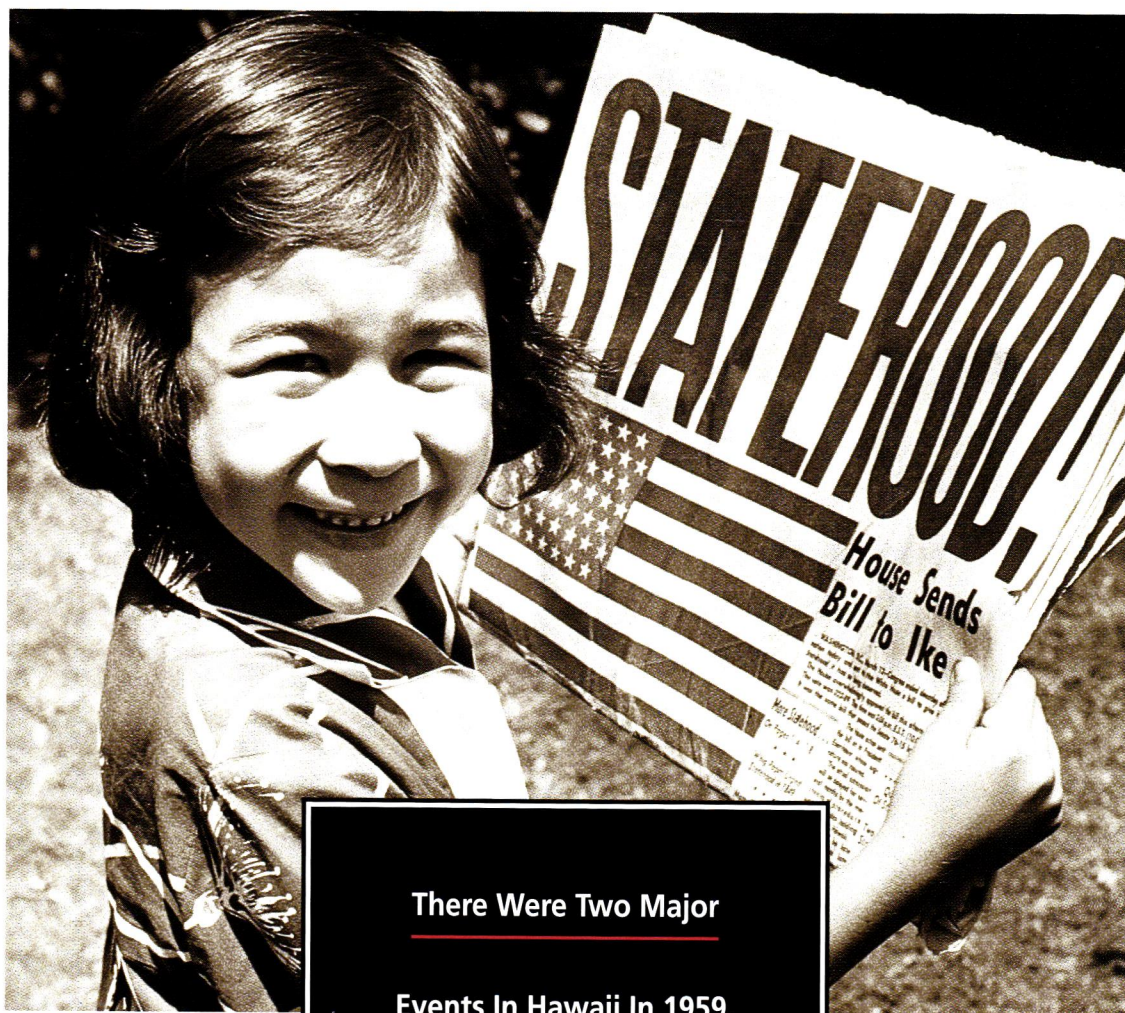
The GRAND WAIKAPU COUNTRY CLUB is a three-story golf clubhouse located at 2500 Honoapiilani Highway in Wailuku, Maui, Hawaii. We congratulate the following companies and their employees in the development of this structure.

Architect: Taliesin Architects, Ltd.
Engineer: Read Jones Christoffersen, Inc.
Owner: Grand Waikapu Resort, Golf and Spa, Inc.
Developer: Waikapu Mauka Partners
Contractor: Hawaiian Dredging Construction Company



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Events In Hawaii In 1959.
(Ours Was The One
On Page 34.)

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