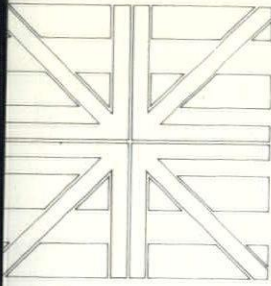


Cathy

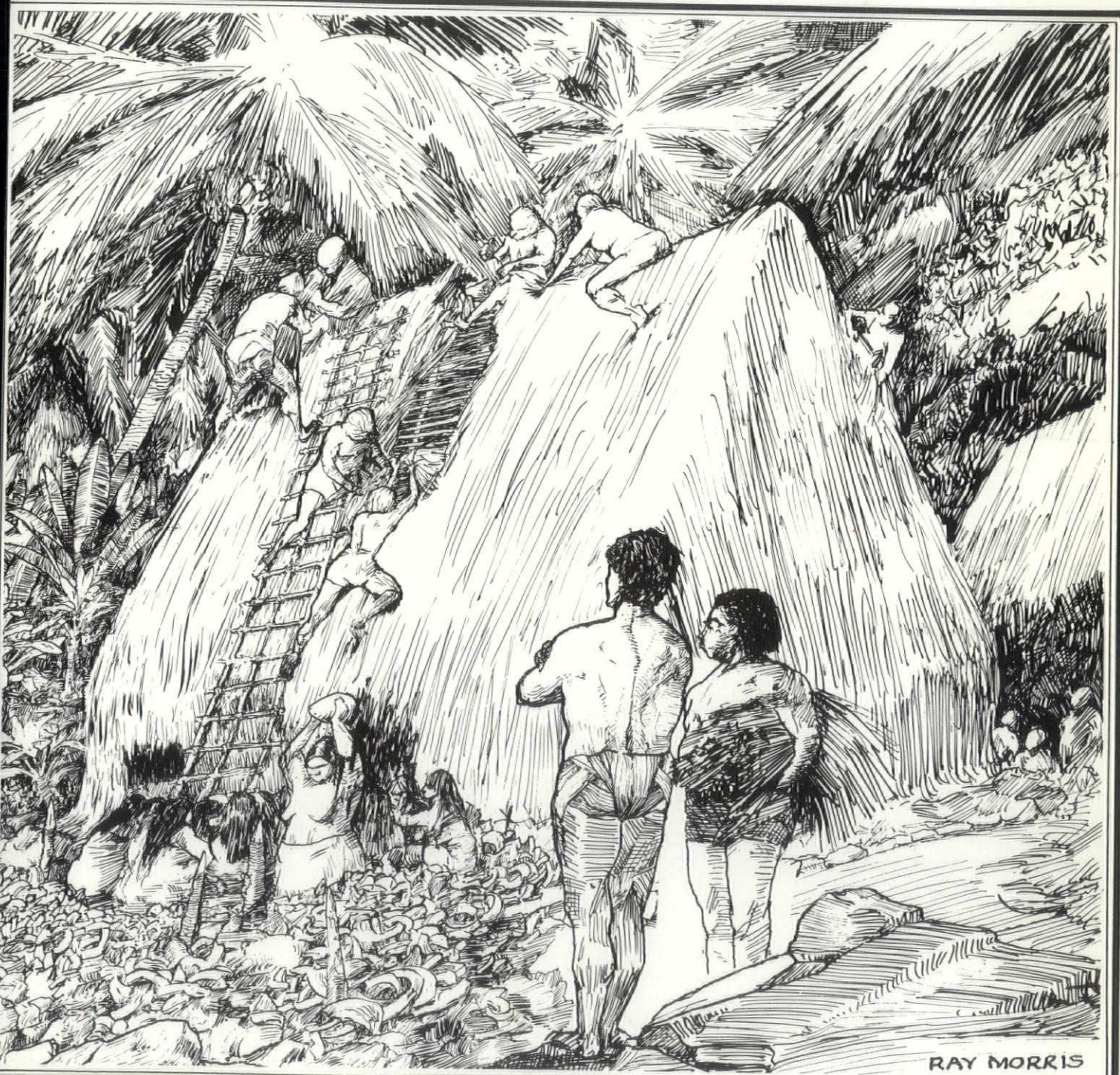


journal
of the
hawaii
society/
american
institute
of
architects

HA

HAWAII ARCHITECT

December, 1979



RAY MORRIS

HAWAII ARCHITECT

December, 1979

Volume 8, Number 12

Hawaii Architect is a monthly journal of the Hawaii Society/American Institute of Architects. Subscriptions are \$10 per year. Opinions expressed are those of the editors and writers and do not necessarily reflect those of either the Hawaii Society or the AIA.

All correspondence should be directed to:

Hawaii Society/AIA
1192 Fort Street Mall
Honolulu, Hawaii 96813

Beverly McKeague
Executive Secretary
Phone (808) 538-7276

HS/AIA Officers:

President:
James Reinhardt, AIA

Vice President/President-Elect:
Jack Lipman, AIA

Secretary
Robert H. Hartman, AIA

Treasurer
Carol Sakata, AIA

Directors
Lewis Ingleson, AIA
Spencer Leineweber, AIA
Gordon Ogata, AIA
Maurice Yamasato, AIA

Associate Director
Leland Onekea

Hawaii Architect Personnel Editor
Glenn E. Mason, AIA

Contributing Editor:
Ali Sheybani, APA

Staff
Mike Chun, AIA
Rob Hale, AIA
Michael J. Leineweber, AIA
Curtis Miyamura
Ron Holecek, AIA

Art Director
Jan Olin

Published monthly by:

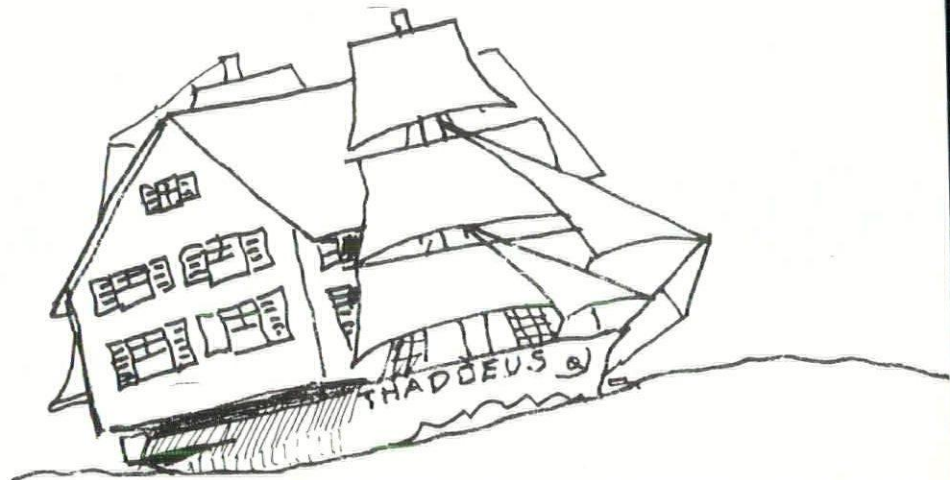
Crossroads Press, Inc.
863 Halekauwila Street
P.O. Box 833
Honolulu, Hawaii 96808
Phone (808) 521-0021

Stephen S. Lent, Publisher

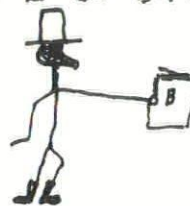
POSTMASTER: Send address changes to the Hawaii Architect, 1192 Fort Street Mall, Honolulu, Hawaii 96813

HAWAII ARCHITECT (USPS063170)
controlled circulation
postage paid at Honolulu, Hawaii

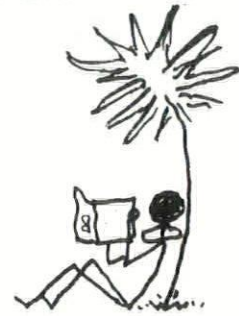
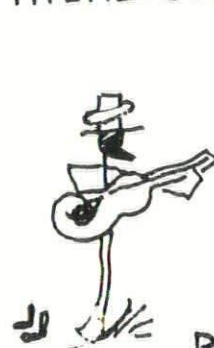
Contents:



HAWAII HAD NO WRITTEN LANGUAGE PRIOR TO THE COMING OF THE MISSIONARIES IN 1820. THEY BROUGHT A NEW ENGLAND HOUSE WITH THEM THAT CHANGED THE TYPE OF DWELLINGS FOR ALL TIME.



THEREFOR HISTORIC MOVEMENTS WERE



RECORDED BY PETROGLYPHS,
WELL KNOWN TO BE VAGUE AS TO MEANING.

HAWAII ARCHITECT



THE HAWAIIAN HOUSE

Development of a Unique House Form

by RAY MORRIS, ME/AIA

THE FIRST LESSON IN GRASS HOUSE ARCHITECTURE

The following events took place near the town of Shanklin, on the eastern coast of the isle of Wight in the English Channel about the time of the American Revolution, as far as we remember. Author Unknown.

Ah, very, very poor was she, old dame pig and her children three
Robust, beautiful little ones were those three sons,
Each wearing always, without fail,
A fanciful little knot in his tail.

But never enough of sour and sweet had they to eat
And so one day with a piteous squeak
Did the mother speak,

"My sons, your fortunes you must seek."
So out in the world as they were sent,
The three pigs went.

Trotting along the first one saw
A man who carried a bundle of straw.
"Give me some straw for a house and bed,"
The little pig said.

Straightway, not waiting even a bit
The kind man did as he was bid,
And the little pig built a house of it.

But he was no more than settled before
A wolf came along and knocked on the door
Tap-tap, and cried, "Little pig, little pig
Let me come in."

But the pig replied, "No, no, by the hair of my
Chinny, chin, chin!"

The old wolf grumbled and added beside,
"Then I'll huff and I'll puff
and I'll blow your house in!"

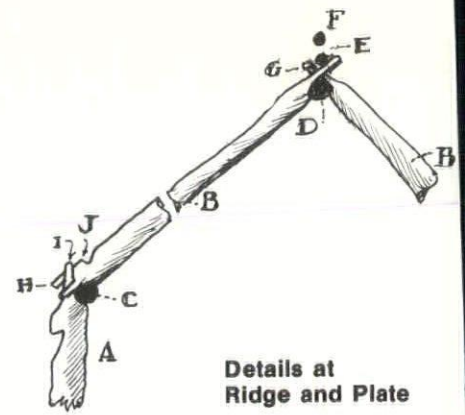
He was gray and big,
And he huffed
And he puffed
And he blew the house in
And he ate the poor little pig.

It is believed that the first settlers in Hawaii arrived already having the knowledge of the vertical walled house with ridge, rafters, and plates. The form it took was in time modified by materials available, climatic conditions, individual inventiveness, and by customs and superstitions.

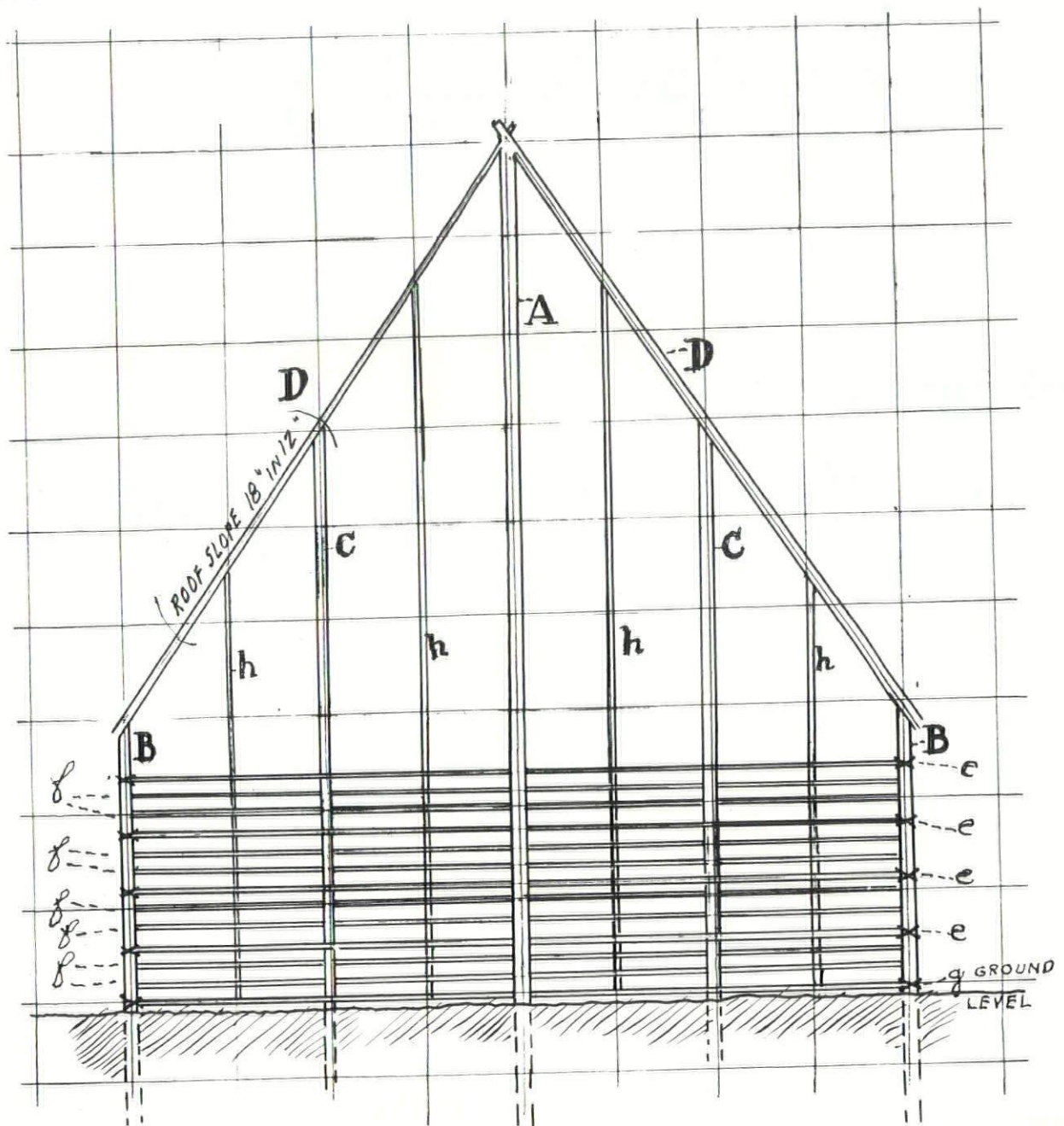
Russell A. Apple points out in his book *The Hawaiian Thatched House* that there are today no surviving authentic prehistoric Hawaiian grass houses. We do have, however, one draftsmanlike drawing that has come down to us from the past—the interior elevation of a gable-end grass house drawn in 1838, when such houses were in use, and included in Malo's *Hawaiian Antiquities*.

By superimposing a grid on this drawing we find that the roof slope is 18" in 12"—which accounts for the lofty appearance of many of the grass houses depicted by artists accompanying early voyages of discovery. This slope, much in use today, shows that the early Hawaiians possessed construction logic remarkably like that of today.

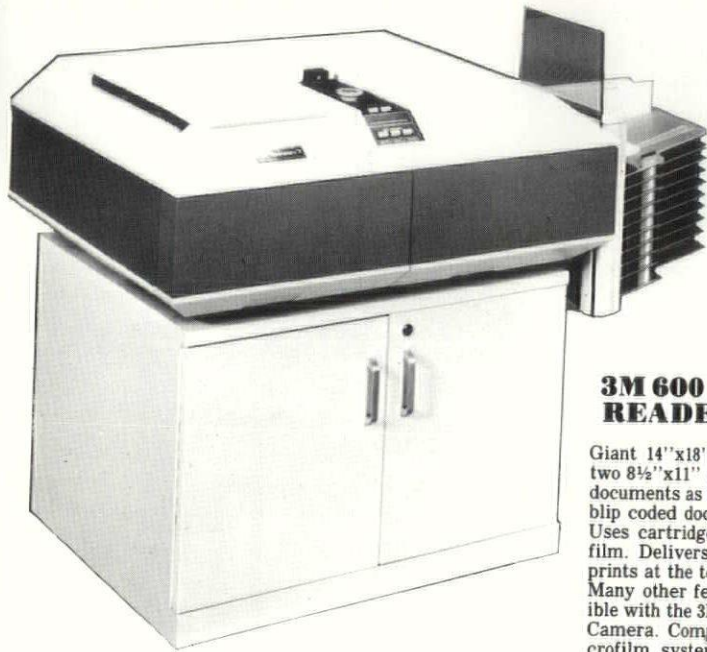
But, as Apple points out, any grass house built today, based on surviving descriptions, can only be said to be such as *could* have been built by the early Hawaiians. This is true of the many grass houses built by the compiler of these notes, including the Hilo Hawaiian Village which, soon after its completion, was washed out to sea by the tidal wave of 1946.



Details at Ridge and Plate



Top-Line, Nationally-Famous, Professional-Quality
Business Products
for business, government, and institutions.

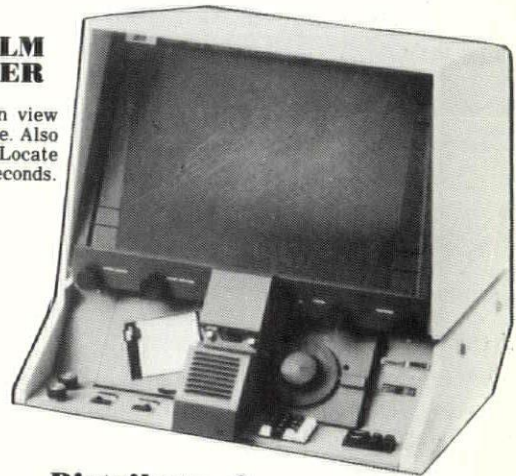


**3M "SECRETARY III"
Plain Paper Copier**

Cut the time it takes to make and collate fine quality copies. Helps everyone who uses it to become more productive. First copy in 4-seconds, subsequent copies every 2.4 seconds! 10-bin collator. Uses ordinary bond paper. Comes with modular mobile storage cabinet, move it where it's needed! Easy-to-use controls, copy quantity dial, many features. We have 15 different copiers designed for the one-man office to the largest corporation.

**3M 600 MICROFILM
READER/PRINTER**

Giant 14"x18" screen. You can view two 8½"x11" documents at once. Also documents as large as 11"x18". Locate blip coded documents in just seconds. Uses cartridges or open spool film. Delivers variable length prints at the touch of a button. Many other features. Compatible with the 3M 3400 Cartridge Camera. Complete line of microfilm systems that can be designed to your specific needs.



**CPT 8000
WORD PROCESSOR**

Easy-to-use, just like a typewriter. Operator can be trained in just a few hours. Information is typed soundlessly on its remarkably readable full-page screen where errors can be corrected instantly and electronically. Black characters on white background move up the screen just like a piece of paper moving through a typewriter. Its dual diskettes store up to 150 pages of information each. The push of a button transfers copy from the screen to a diskette. For printing, the push of another button will locate any particular page on the diskette in seconds. An error-free copy can be produced at the rate of 540 words per minute. Here's the system that will save you time and money on all your typing needs.



Distributor for:

- ★ 3M Copiers
- ★ 3M Microfilm Systems
- ★ 3M Audio-Visual Aids
- ★ CPT Word Processors
- ★ Xerox-Diablo
- Small Business Computers
- ★ Control-o-fax Manual Accounting Systems

These are just three of our many fine business products. See our complete line.

In 1979 we celebrated our silver anniversary. We built a reputation that business firms, government and institutions in Hawaii can count on for the finest in copying machines, microfilm systems, word processors, small business computers, accounting/bookkeeping systems, and audio-visual aids. And we stock a complete line of supplies for all these business products. All our business products are backed up, too, by competent, factory-trained technicians.

with "Equipment Performance Guarantee Agreements" with factory-trained, thoroughly competent service personnel who will keep these business products functioning properly. And we stock a complete line of supplies for all our business products.

Third. Attitude. Whether you buy, lease, or rent our business products, you'll find the pricing fair. But, also, the total support of our entire organization backs up all our business products so you will receive the benefits not only now but in the future.

Our success during these twenty-five years can be attributed to three things.

First. Business products. We sell/lease/rent only top-line, nationally-famous brand name business products of the finest professional quality.

Yes, we're ready to serve you now with 25 years of satisfaction-performance and we're looking to tell an even greater success story on our 50th anniversary!

Second. Service and supplies. All of our business products are backed-up

For more information, or to arrange a demonstration, call 531-5222

Earle M. Alexander, Ltd.

HAWAII'S LARGEST OFFICE MACHINE DEALER

1020 Auahi Street — Honolulu — 531-5222

Hilo 935-3061

Kahului 877-3915

Lihue 245-4041

EMA
BUSINESS
PRODUCTS

AUTHORIZED DISTRIBUTOR

3M | **CPT**

Diablo

Control-o-fax®

IT'S A GAS! WHEN YOU BUILD FOR LESS.

With a Central Gas Water Heating System.

Save money, space, and energy!
Build Central Water Heating into
your next building.

Save Money!

You save on your first costs – \$75 or more a unit! Owners end up paying less too! Because master metering means wholesale gas rates: it's cheaper to serve many than one. And future replacement costs are only a fraction of the alternative.

Save Space!

With Central Gas Water Heating you eliminate individual water heating units. Result? Extra space for a closet, storage or whatever.

Save Energy!

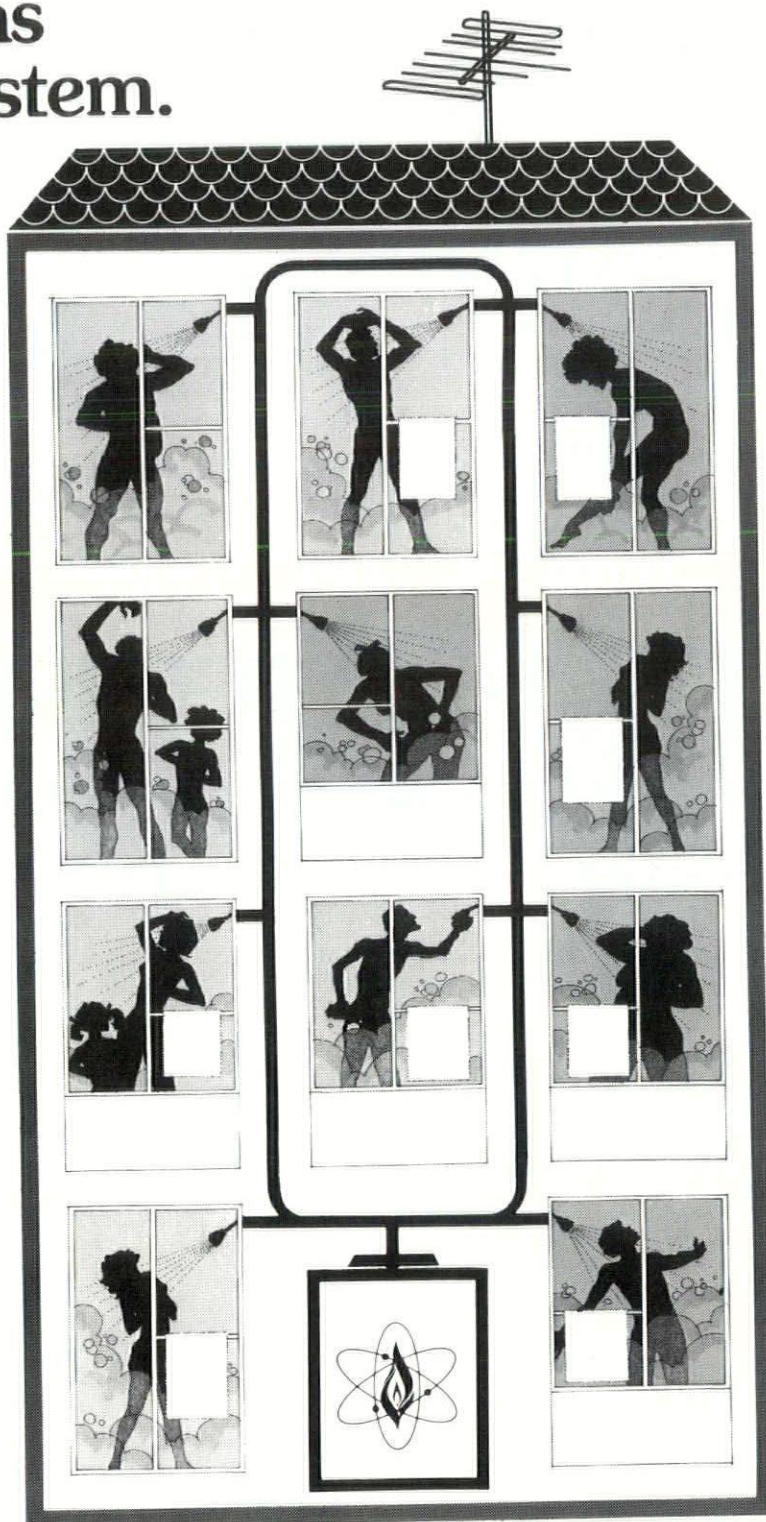
A gas water heater uses 40% less primary energy than an electric one. What's more, Central Gas Water Heating readily adapts to solar energy systems – something that individual electric units can't do.

Call us. Find out all the details that make heating water with Central Gas Water Heating a gas! Charlie Bazell and Ed Inouye.

548-2113.



THE GAS COMPANY
A PACIFIC RESOURCES, INC. COMPANY
515 Kamakee Street Honolulu, Hawaii



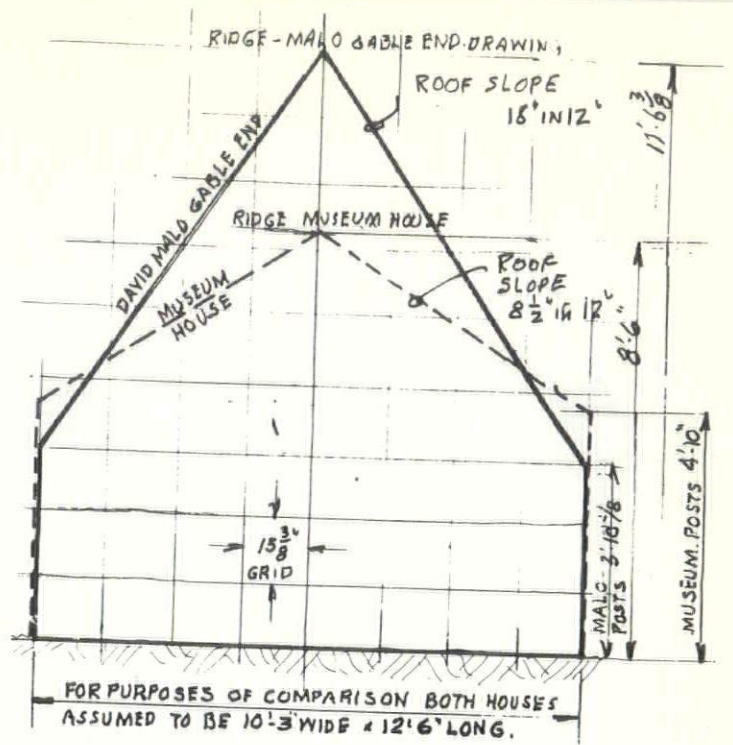
An equal opportunity employer.

The nearest thing we have to an authentic prehistoric grass house is a reconstruction known as the "Museum House," intended to provide an example of this particular Hawaiian art and preserved in the Bishop Museum, Honolulu.

In 1902, Dr. J.F.G. Stokes, then curator of the museum, brought to Honolulu the dismantled frames of three grass houses that were standing on the Knudson land in the Kekaha district of Kauai. Using selected members from the three frames and working in the traditional manner, skilled Hawaiian craftsmen erected the Museum House.

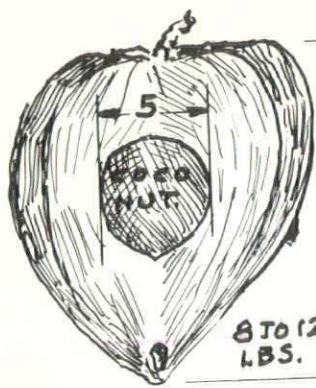
In the process of dismantling the old frames, the lashings made from olona fiber had to be discarded, and were replaced in the reconstruction by lashings made from uki uki grass. The original thatch was replaced by new pili grass thatch, all applied, as mentioned above, in the traditional manner.

The diagram at the right shows a comparison between the roof slope of the gable-ended house of the Malo drawing (18" in 12") and that of the hip roof of the Museum House (approximately 8" in 12"), and indicates that the Hawaiians, too, realized that a small change in proportions made a great change in appearance.



The Museum House

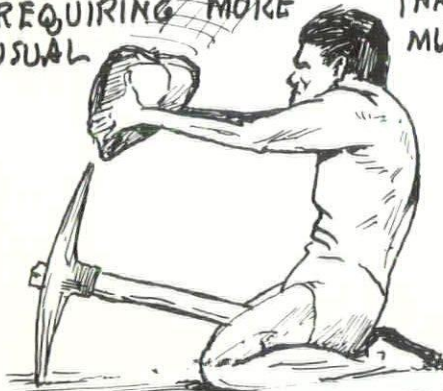
BISHOP MUSEUM



THE FRONDS GLISTEN IN MOONLIGHT AND RUSTLE IN THE TRADE WINDS.

8 TO 12 LBS.

THE NUT IS A SMALL PART OF THE FRUIT AS IT COMES OFF THE TREE. IT IS SURROUNDED BY A VERY TOUGH FIBEROUS HUSK WHICH MUST BE WRENCHED OFF AFTER THE HUSK IS DRIVEN ONTO A PICK. IT IS A HARD JOB REQUIRING MORE THAN USUAL MUSCLE.



THE POINT OF THE PICK ENTERS THE HUSK THRU THE EYE AT THE BOTTOM. CARE MUST BE TAKEN WHEN TEARING OFF THE HUSK, NOT TO BREAK THE BRITTLE SHELL OF THE COCONUT.

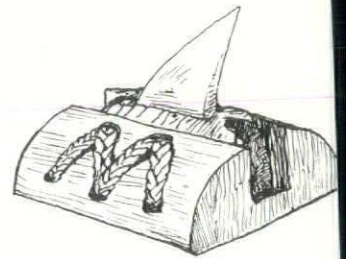


THE OLD TIMERS USED A STOUT STICK DRIVEN INTO THE GROUND.

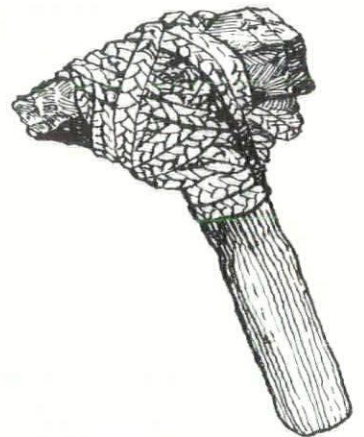


HAWAIIAN COCO PALMS ARE 25-40 FT TALL

THERE ARE STILL SOME MEN WHO CAN CLIMB A PALM IN THE GRAND MANNER - BUT LINEMAN'S SPURS OR MOTORIZED "CHERRY PICKERS" ARE MAKING IT A LOST ART



Shark tooth knife, bamboo knife



The adze

As far as materials were concerned, the Hawaiians at the time of Captain Cook's arrival were living in the Stone Age, without metal to make tools, weapons, implements, or vessels.

Hawaii's substitute for the steel cutting tool was the stone adze, which served as chisel, plane, and saw. This was a shaped piece of rock, or shaft, varying from finger length to about 24 inches and sharpened at one end. It was used for all kinds of chipping, cutting, and carving, for felling trees and hollowing out logs to make canoes, as well as for shaping the ends of house framework and cutting notches for the lashings.

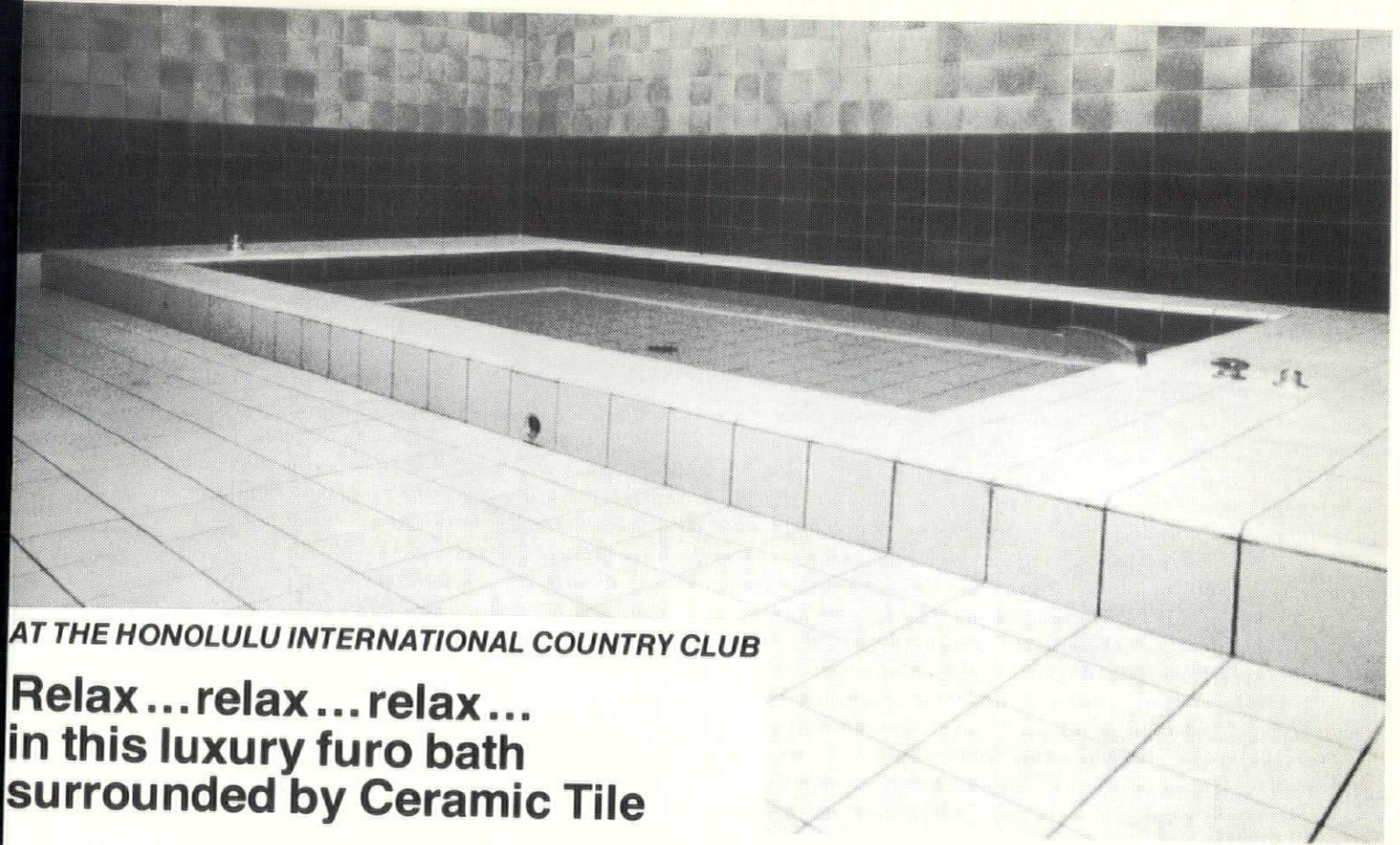
The adze was made from the

hard flintlike rock often found near volcanic craters. This brittle rock had the advantage that it could be sharpened easily and resharpened, along with the disadvantage that no hole for a handle could be made without splitting and breaking the rock at that point.

Sometimes the adze was lashed to a wooden handle, as in the above made from a well-preserved specimen in a private collection. The rock had been worked and chipped to produce deep grooves to accommodate the lashings of olona fiber. The lashings probably had to be replaced frequently, because of the heavy work for which the adze was used, such as the final hollowing out of a hard, heavy koa

log 18 to 20 inches in diameter and more than 20 feet long.

The Hawaiians, lacking iron from which to make nails or spikes, bound the parts of their house frames together with lashings. Lashing material was usually made by rolling the tough inner bark of the olona plant (Hawaiian flax) between the palm of the hand and the upper leg into cord which could then be plaited into a three-strand braid, approximately 3/8" wide and 3/16" thick, called sennit. This was usually done by the women, sitting in a shaded circle and singing as they worked. The huge balls of sennit were to the building of a grass house what the kegs of nails are to the building of a frame house today.



AT THE HONOLULU INTERNATIONAL COUNTRY CLUB

**Relax ...relax...relax...
in this luxury furo bath
surrounded by Ceramic Tile**

Architect: Robert M. Matsushita & Associates, AIA.
Structural Engineer: Nakamura & Tyau, Inc.
General Contractor: Okada Trucking Co. Ltd.

Oahu's newest—some say grandest—private club is the Honolulu International Country Club located on the shores of Salt Lake. A championship golf course, certainly. An international membership. A clubhouse of beauty.

Ceramic Tile is there—at entrances, in lobby and elsewhere, beautifully. But come on inside—a special pride of the club, the Ceramic Tile Japanese-European style bath for relaxed soaking just off the large and roomy locker room. Equipment along the wall for thorough cleansing. Then relax and relax in the soothing water of the pool shown here. That's living—at Stan Himeno's dream come true, the Honolulu International Country Club. And Stan dreamed well when he saw Ceramic Tile helping make it all come true!

CERAMIC TILE ADVANTAGES—SO MANY OF THEM

Yes, architects, interior designers, developers and general contractors in Hawaii are discovering more and more desirable qualities in Ceramic Tile, qualities that are increasing use of the genuine year after year. They are helped, too, by the qualified, reliable contractors who take part in their own industrywide program of promotion of Ceramic Tile. They are ready with ideas, accurate estimates, up to the minute industry developments and on time delivery to fit your schedules.

Contact any of these Promotion Program participants:

- | | | |
|---------------------------------|------------------------------------|--|
| Atlas Tile Inc. 839-7403 | Honolulu Roofing Co. Ltd. 941-4451 | Pacific Terrazzo & Tile Corp. 671-4056 |
| Leo Cecchetto, Inc. 848-2428 | S. Kunishiga Tile 734-3340 | Pacific Tile Co., Inc. 841-8534 |
| Classic Tile Corp. 841-6893 | Lani's Tile Co. 235-1144 | Sato, Robert Ceramic Tile 841-8811 |
| Custom Ceramics 538-3537 | Logan Tile Co. 262-5754 | Tidy Tile 833-3042 |
| Hawaii Tile and Marble 839-5102 | Nan-Cor Tile Company 488-5591 | Wichert Tile Ltd. 955-6631 |

ARCHITECTS, DESIGNERS, BUILDERS, Please Note
Every week in advertising in the Honolulu Sunday Star Bulletin & Advertiser Hawaii's tile contractors call special attention to you with this message:

"Building? Remodeling? Redecorating?
Ask your architect, designer or builder about the beauties and values of Ceramic Tile."

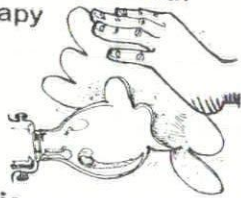


**Ceramic Tile, Marble
& Terrazzo
Belong in Hawaii**

FACTS ON LIGHTING EFFICIENCY

Keep them clean.

The lights you leave on all day or night for safety and security need your occasional attention. You can lose 30-40% of your available light if you let bulbs and fixtures get dirty. Give them the once-over with a cloth and soapy water, once in awhile.



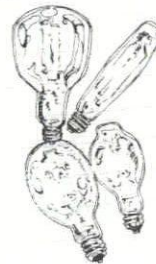
Make them automatic.

You can avoid wasting energy by making your security lighting system automatic. Photo-electric cells or timers will remember to turn the lights off (or on) even when you forget.



New lamps are more efficient.

Check the alternatives to the traditional incandescent bulb. Fluorescent, mercury, metal-halide and sodium lamps may cost more. But, because they produce more light per watt, and last longer, they give you more for your energy dollar.



Use electricity wisely.

When it's time to replace or remodel your present lighting system, don't use guesswork. Be certain on getting the most efficient system for your needs.



HAWAIIAN ELECTRIC

If olona was not growing near the building site, uki uki grass could be worked into cord and braided to make the sennit. Sennit could also be made from the fibers of the coconut husk, but the difficulty of climbing a 35-foot tree, using the tree rings as footholds, of pulling the coconuts loose, and, once more on the ground, the difficulties of tearing the husk from the nut and the time consumed in drying the husks so the fibers could be pulled loose—all this before the process of making the sennit was even begun—made this the least popular material for making lashings.

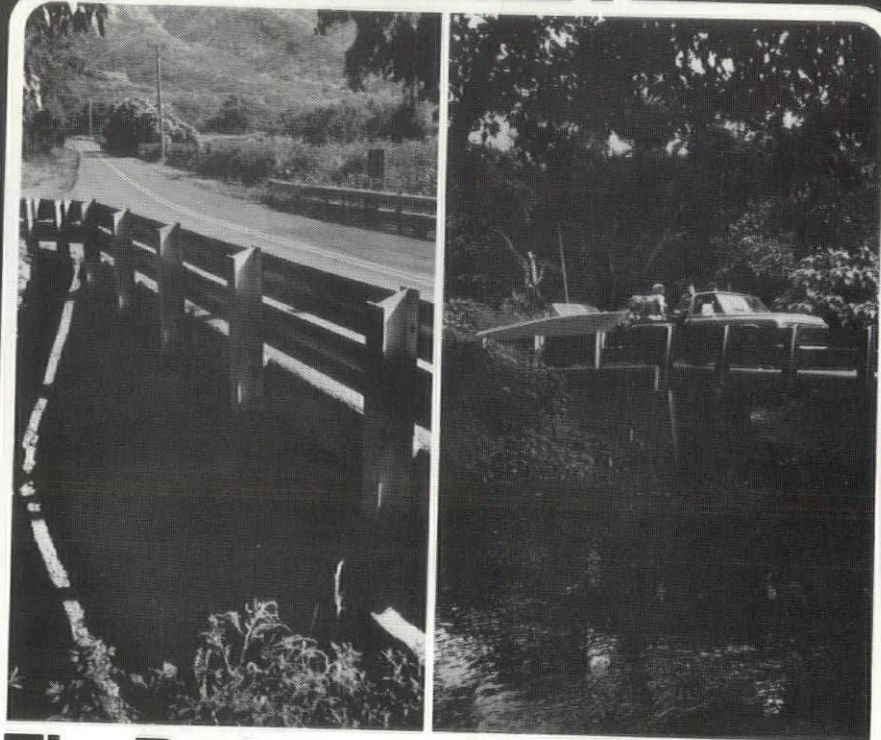


Incidentally, the sennit made from the olona fiber was so strong that the Hawaiians continued to use it long after rope was available.

Another tool used by the Hawaiians was the shark's tooth knife. It was made by lashing a piece of shark's jawbone in which a tooth was still firmly embedded to a small wooden handle. This made a sharp and durable tool with a finer cutting edge than the stone adze. The material to be cut was stretched on a flat wooden block. It is believed that the shark's tooth knife was also used for cutting hair, with the hair held taut and the shark's tooth knife drawn across it in a sawing motion. If this proved too painful, fire was recommended.

Other cutting tools were made of shell. For more delicate operations, such as cutting the umbilical cord at birth or for circumcision, a serrated knife made of bamboo cane was used. This provided the sharpest cutting edge that could be obtained, but since it could not be resharpened, it had to be replaced frequently.

CONCRETE



The Bridges of East Molokai

Precast concrete planks were used to build a number of bridge decks on East Molokai's coastal road, Kamehameha V Highway, at a reasonable cost, in a minimum time, and with virtually no disruption of traffic. These short span bridges, expected to last a lifetime without repair, resurfacing, or the need for re-routing traffic, are an example of what's expected of pre-cast, Hawaiian-Made **concrete**.

Whether it's two lanes on Molokai or six on Oahu, day after day, year after year, **pre-cast concrete** is playing a more important role in filling Hawaii's transportation needs.

Want to know more about why concrete is the way to go?

Call the CCPI Research Library at **833-1882**.



CEMENT AND CONCRETE PRODUCTS INDUSTRY OF HAWAII
Suite 1110 / Control Data Building / 2828 Paa Street / Honolulu, Hawaii 96819

CONCORD INTERNATIONAL

HAWAII BRANCH

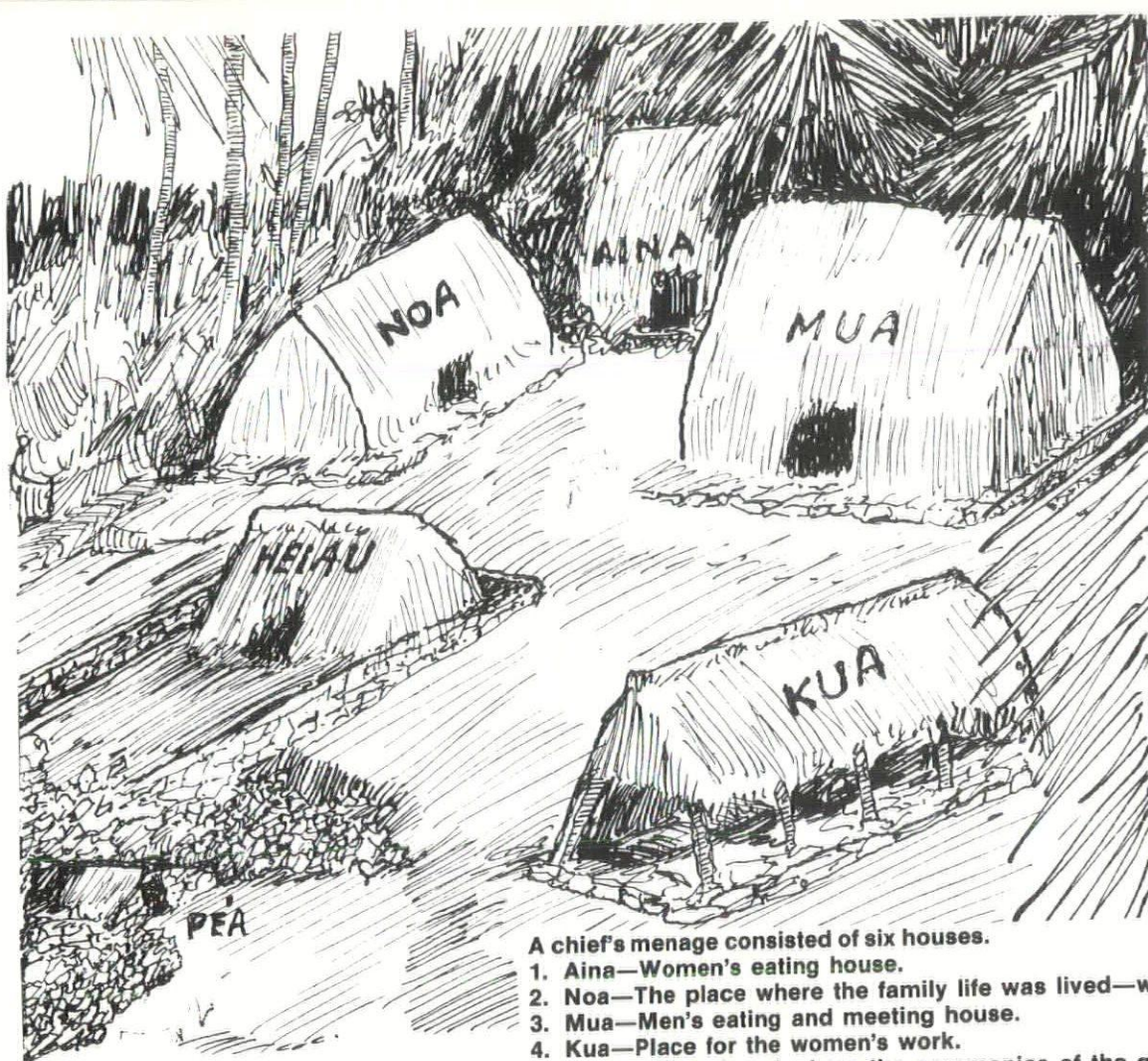
MANUFACTURERS REPRESENTATIVE/DISTRIBUTOR FOR:

- DOW CORNING
 - Silicone Sealants
 - Urethane Foam
 - Caulkings
- AMERICAN DISPENSERS
 - Washroom Accessories
 - Bathroom Accessories
- SCHLAGE LOCKS
- NEF METAL RAILINGS
 - Bronze & Anodized
- LIFE TIME FAUCETS & SINKS
 - Commercial
 - Home
- CLARIDGE
 - Chalkboards
 - Blackboards

FOR INFORMATION AND FREE BROCHURES:

CALL 536-3613

819 South Beretania, Suite 104
Honolulu, Hawaii 96813



A chief's menage consisted of six houses.

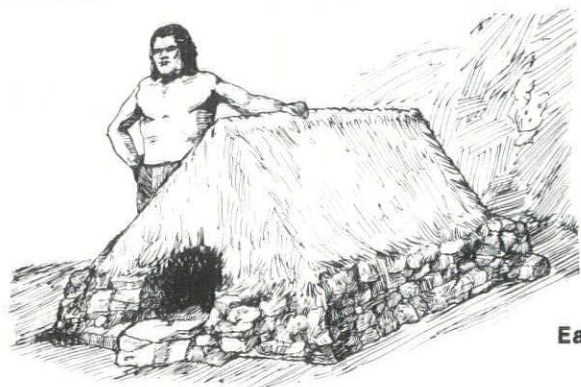
1. Aina—Women's eating house.
2. Noa—The place where the family life was lived—without kapu.
3. Mua—Men's eating and meeting house.
4. Kua—Place for the women's work.
5. Heiau—The chapel where the ceremonies of the gods were performed.
6. Pe'a—Women's retiring house.

Captain Cook, in the journal of his third voyage, describes Kailua-Kona as a village of seven or eight hundred dwellings, mostly small huts. From remaining stone platforms we assume that many were about 6 by 8 feet, with a height of 4 to 5 feet—not high enough for a man to stand erect and just room enough to sit or recline.

Since the Hawaiians lived mostly out-of-doors, these huts were probably used for storage of personal belongings and for occasional protection from heavy weather.

Captain Cook also described some larger structures 12 to 20 feet high and up to 50 feet long. These were probably canoe houses with open ends.

Generally speaking, the grass house was built on a stone platform raised 12 to 18 inches above the surrounding ground level, undoubtedly for drainage purposes. An even surface was achieved by fitting small water-worn pebbles into the spaces between the large stones, then covering the entire



Early house.

floor with sand. A lauhala mat over this made a comfortable place to sit, and a pile of mats and tapa in the corner provided a comfortable place to sleep.

The common man usually had only one house, so placed and built that its ridge would not rise higher than that of any chief or ali'i living nearby.

According to Lorrin Andrews, author of the first Hawaiian-English dictionary, every man of any wealth was supposed to have at least the following houses:

1—The *heiau* (house of worship where the idols were kept).

2—The *mua* (eating house for the husband, kapu to the women).

3—The *noa* (a separate house for the wife but free for the husband to enter; the house of family living).

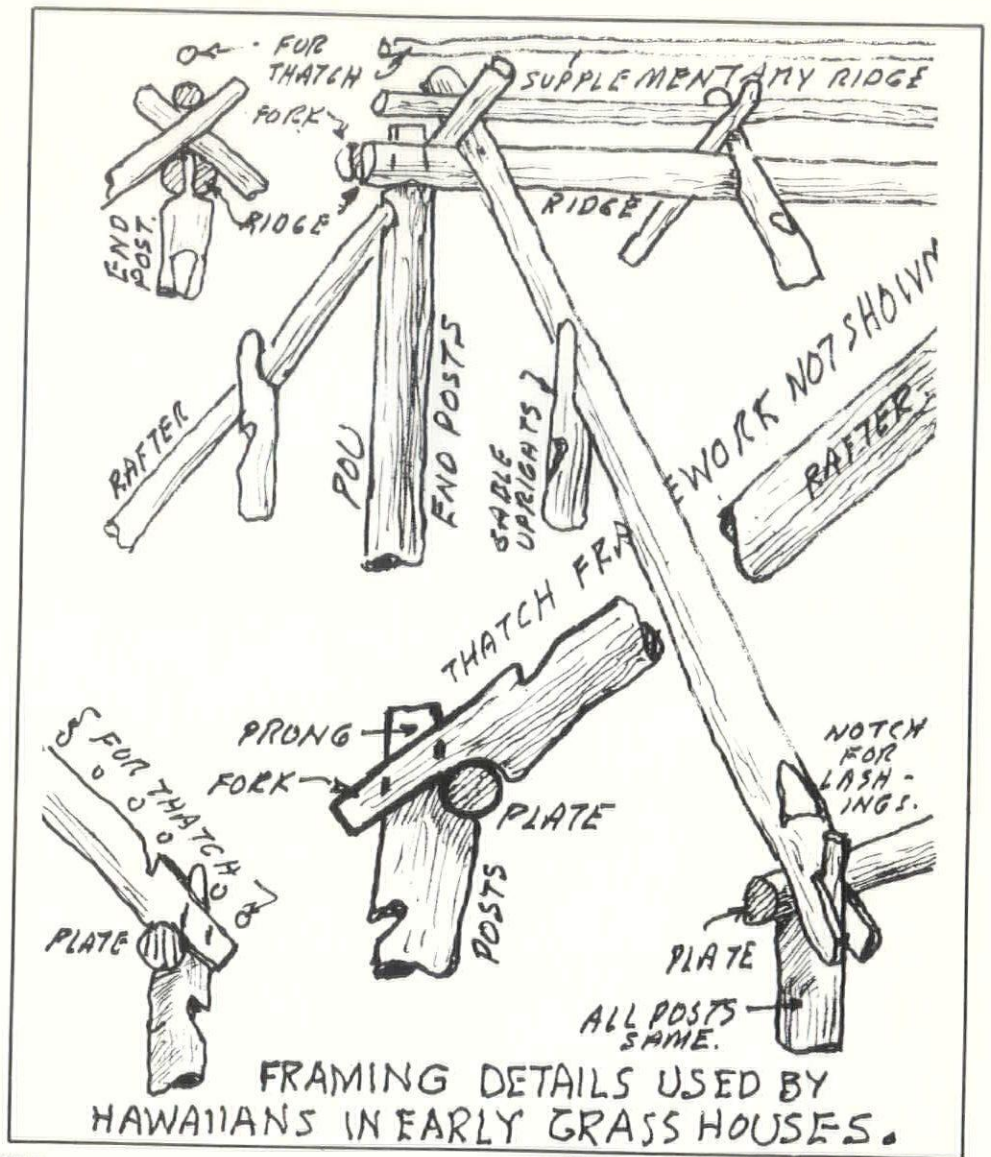
4—The *hale aina* (the women's eating house).

5—The *kua* (a workshop for the women to beat tapa, weave mats, etc.).

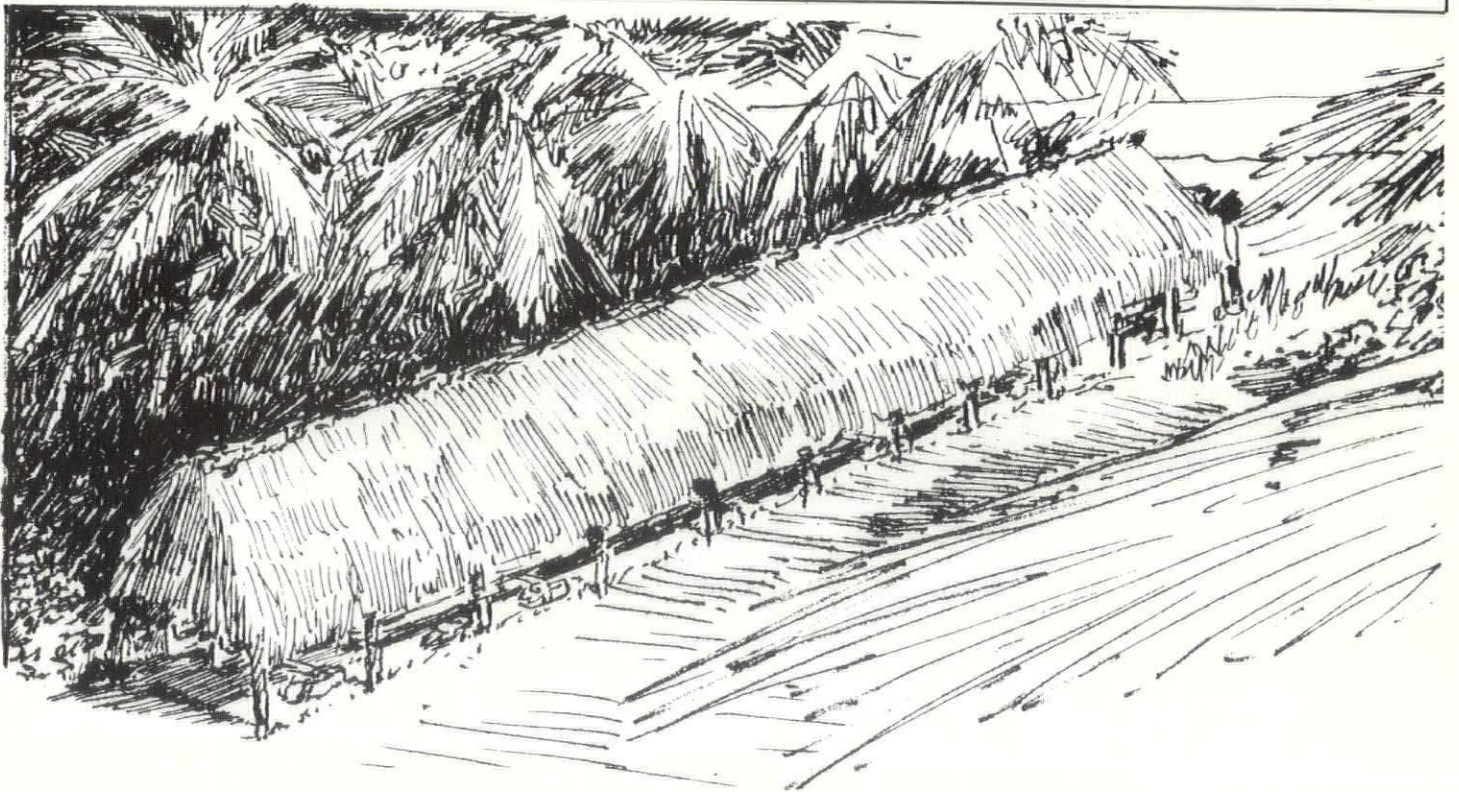
6—The *pe'a* (house of separation for the wife during periods of infirmity).

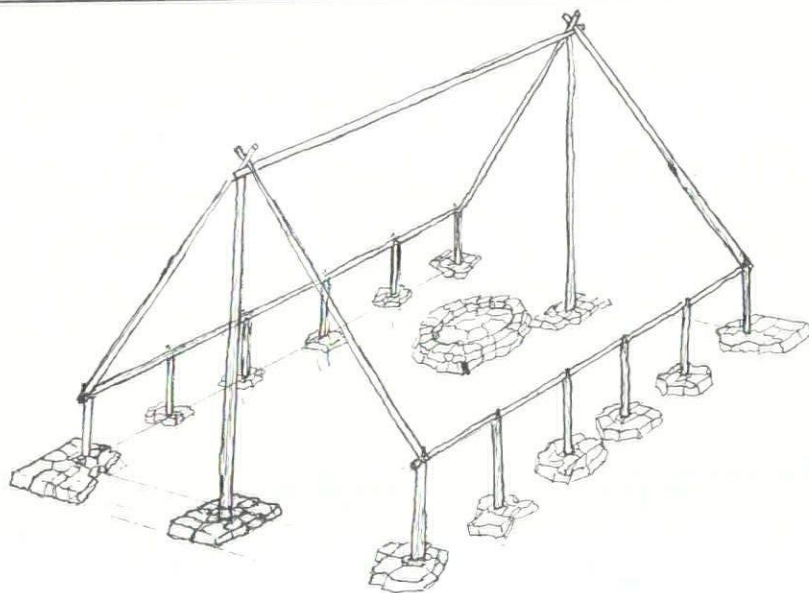
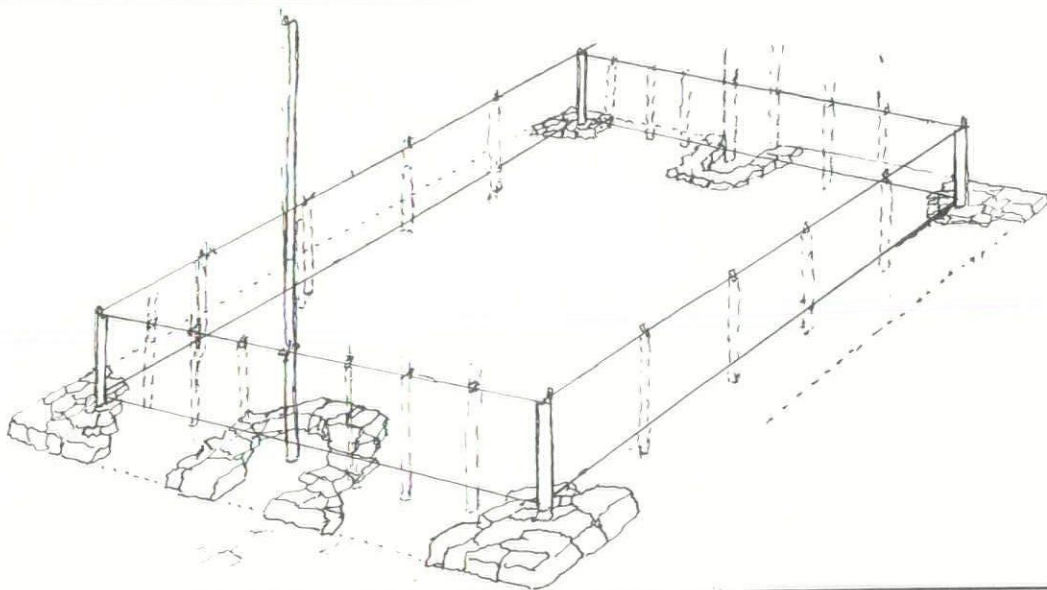
These drawings, taken from Malo's book, show the carpentry details of ridge, rafters, and posts, including the remarkable way in which the rafters and posts were positioned by means of a spikelike tenon protruding upward through a forklike mortise fashioned on the lower end of the rafter.

To this compiler, it is surprising that with all their other structural logic they did not develop the diagonal brace.



FRAMING DETAILS USED BY HAWAIIANS IN EARLY GRASS HOUSES.





After the *kuhikuhi puuone* (architect) had determined the size and location of the house, the wall posts were set. The life of the structure depended on the stability of these posts and the firmness with which they were embedded in the ground.

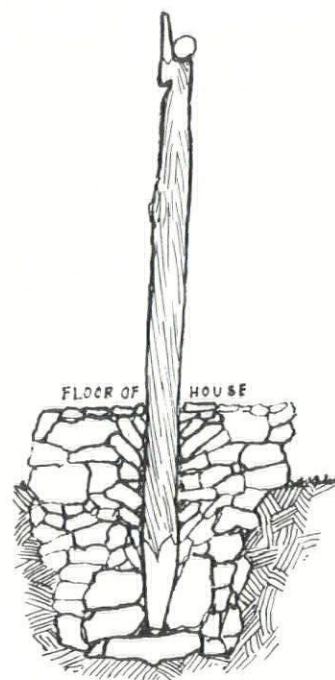
Since the Hawaiian Islands are volcanic in origin and the soil is shallow and hard and full of rocks, and because of the lack of proper digging tools, the embedding of the wall posts was not always as deep as it should have been. This was compensated for by a rock plinth, that is, by building up at the time of setting those portions of the stone platform of the house floor immediately surrounding the posts, by very careful placing of each stone and by frequent tamping.

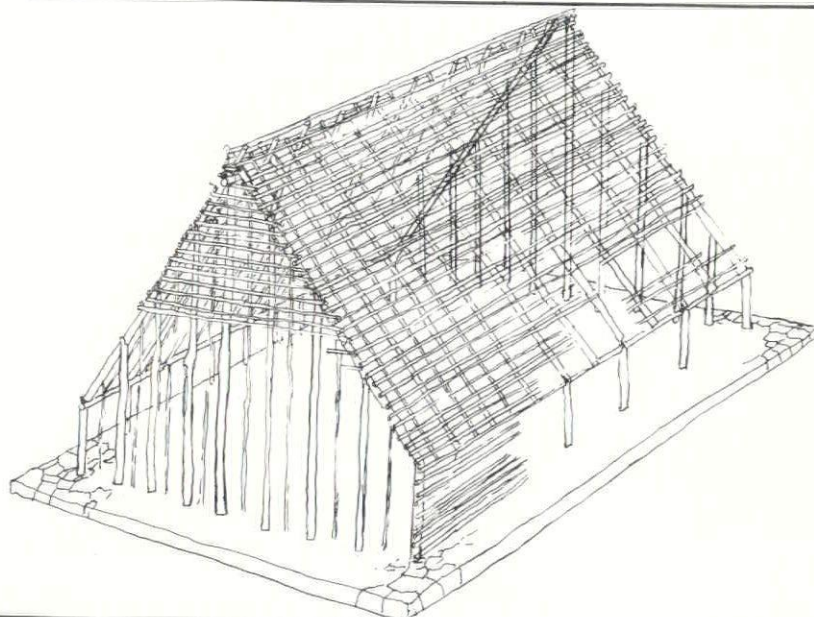
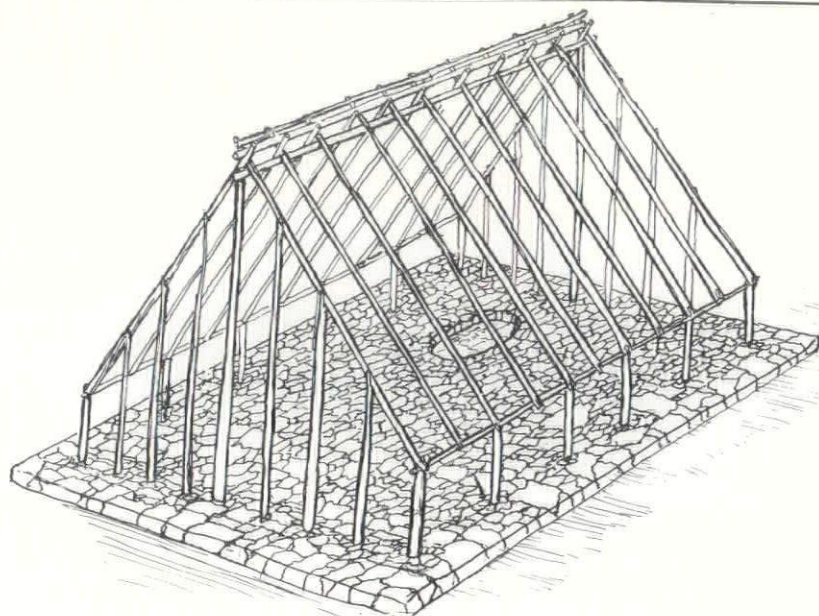
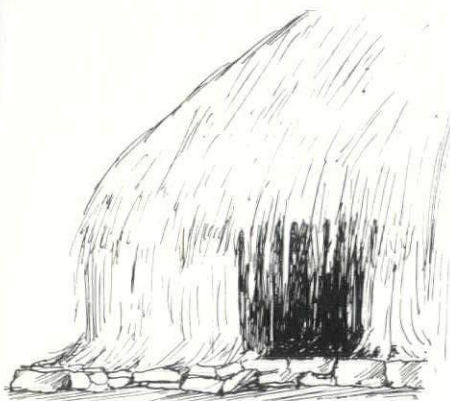
The placing of the intermediate posts was determined by folding the alignment cords into equal

lengths for purposes of spacing.

Since the plate was an uneven natural log, setting the posts was a laborious undertaking. It required first setting the post in its hole, marking it, removing a heavy 6-foot post and trimming it, rearranging the stones, resetting the post while using the horizon as a level, repeating the process time and time again to achieve the proper joining of plate and tops of posts. Any fitting was done on the end that was to be below the ground by trimming and chipping with the stone adze.

Once the plate was in place the posts to support the ridge pole were raised. These posts (*pouhana*) had a special significance for the Hawaiians and were endowed with supernatural powers. The raising of the ridge pole seemed to mark the change from the house as an idea to a house as a reality.





There was nothing unusual about the assembling of the rest of the house frame except the absence of the diagonal brace corner to corner. Apple does indicate a partial brace across the rafters in a diagonal direction, but it does not run corner to corner as does the usual bracing. This lack of effective bracing caused the frame to sag out of shape, the lashings to become loosened, with the result that the house deteriorated much faster than it should have.

When the frame had been completed and lashed together, the entire exterior was covered with small sticks (*aho*) about $\frac{3}{4}$ -inch in diameter, placed horizontally and about one span (the distance between the extended thumb and forefinger tips) apart. It was to this framework of sticks that the thatch would be lashed.

Thatching materials included the leaves of ti, sugar cane, and hala, as well as several grasses. The material most preferred was pili grass because of its reddish color, the odor, the length of its flat-bladed leaf, and the fact that it was longer lasting than most of the other grasses.

According to Peter Buck, in his *Arts and Crafts of Hawaii*, clumps of pili grass up to 5 or 6 feet long, 6 inches wide and 4 inches thick would be lashed to this frame with sennit. Thatching started at the bottom and proceeded upward, much as shingling a house does today.

The thatching of the ridge required very expert craftsmanship to make this area rainproof. Sheaths of the banana plant were added to reinforce this sensitive part of the roof.

During the construction of the house care is taken not to trim the thatch over the doorway. When the house is finished and before the owner occupies it, the ceremony called "the cutting of the navel cord of the house" is performed.

A kahuna or priest, standing outside the house, with an adze in his hand and a block of wood under the untrimmed thatch, begins his chant, at the same time bringing down the adze in cadence with his words.

Following is a prayer used, according to Malo, on the island of Molokai:

"Severed is the piko of the house,
the thatch that sheds the rain,
that wards off the evil influence
of the heavens.

The water spout of Haakula-manu oh!
Cut now!

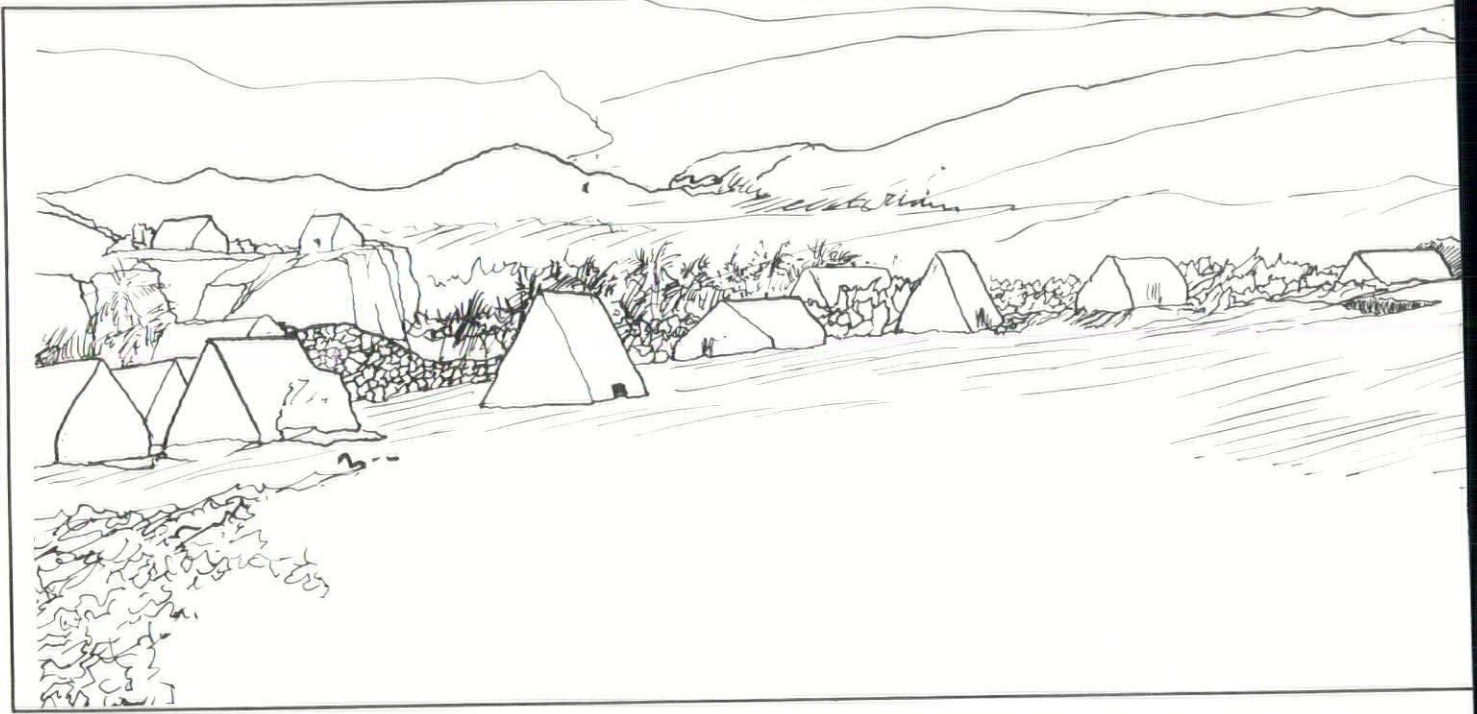
Cut the piko of your house, O Maui-ola
That the house-dweller may prosper
That the guest that enters may have
health,

That the chiefs may have long life.
Grant these blessings to your house,
O Maui-ola!

To live till one crawls hunched up,
Till one becomes bleary-eyed,
Till one lies on the mat,
Till one has to be carried about
in a net,

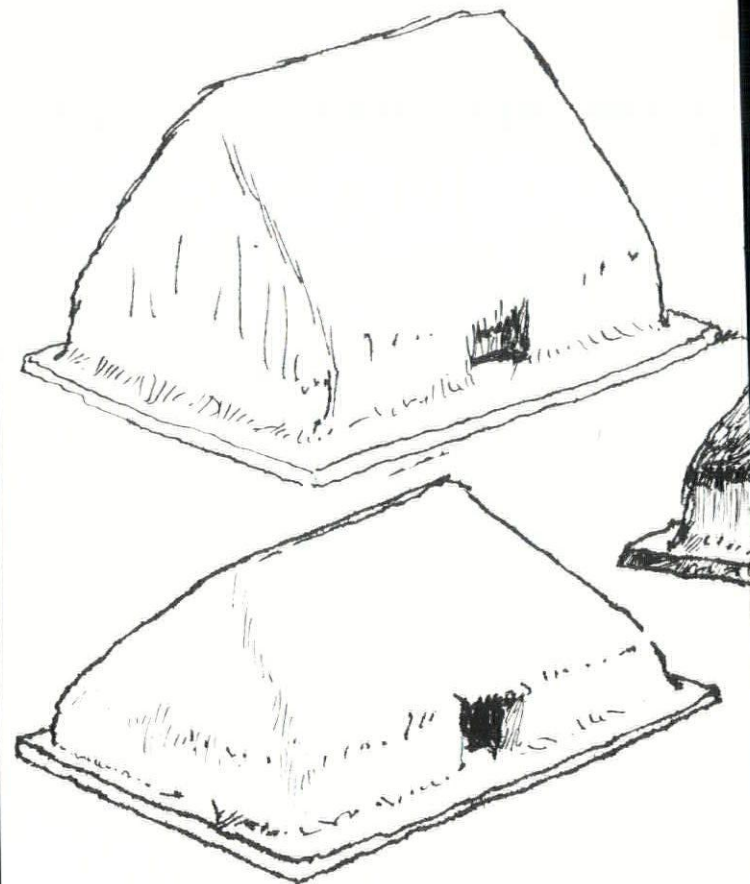
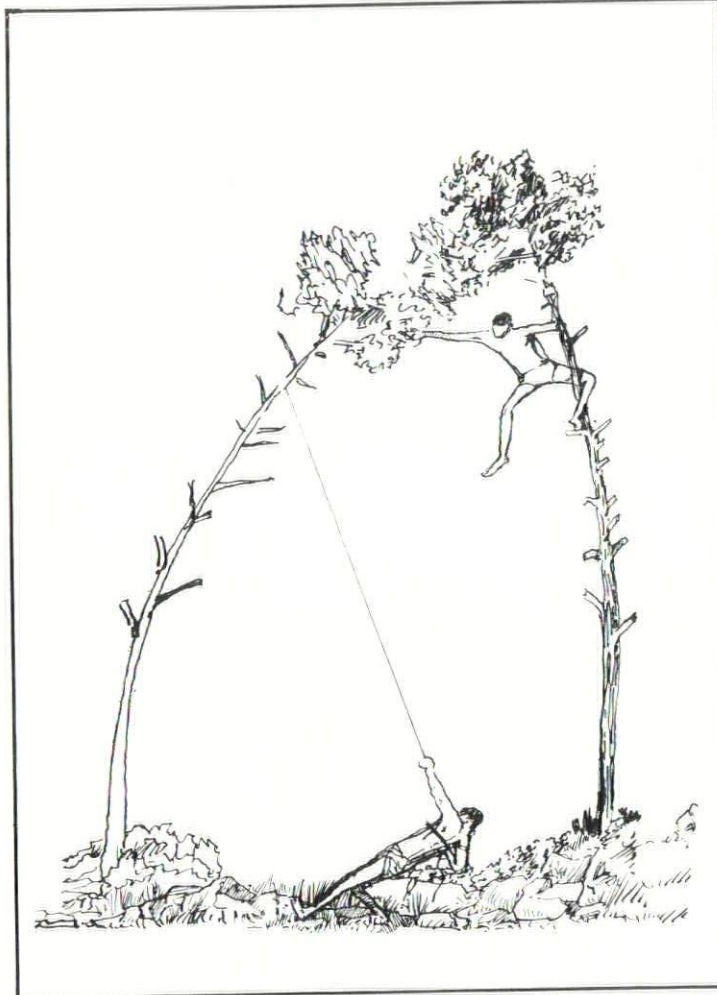
Amama, it is free."

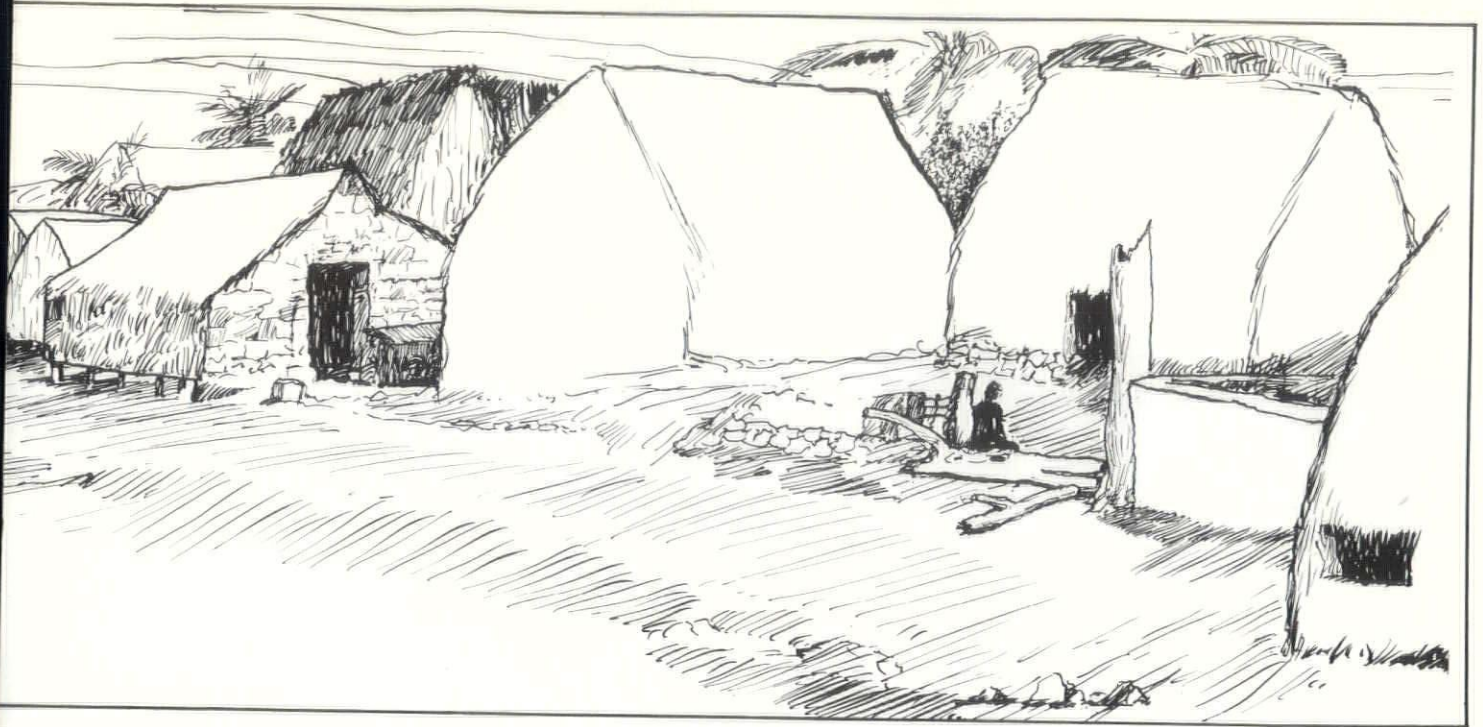
If nothing has happened to disturb the peace of the ceremony, the house is ready to be occupied and the usual luau begins.



The above outline sketch of artist Webber's drawing of the village of Waimea, Kauai, at the time of Captain Cook's first landing in Hawaii in 1778, showing the shapes of roofs most popular then. The houses with curved rafters are numerous. It is from drawings by the artists on these early voyages that we form our views of

many things. It should be remembered, however, that from these drawings made at the scene, the finished engravings were made and printed by other craftsmen. The chances for artistic license are great and the temptation to improve the picture by showing a variety of roof design cannot be discounted.

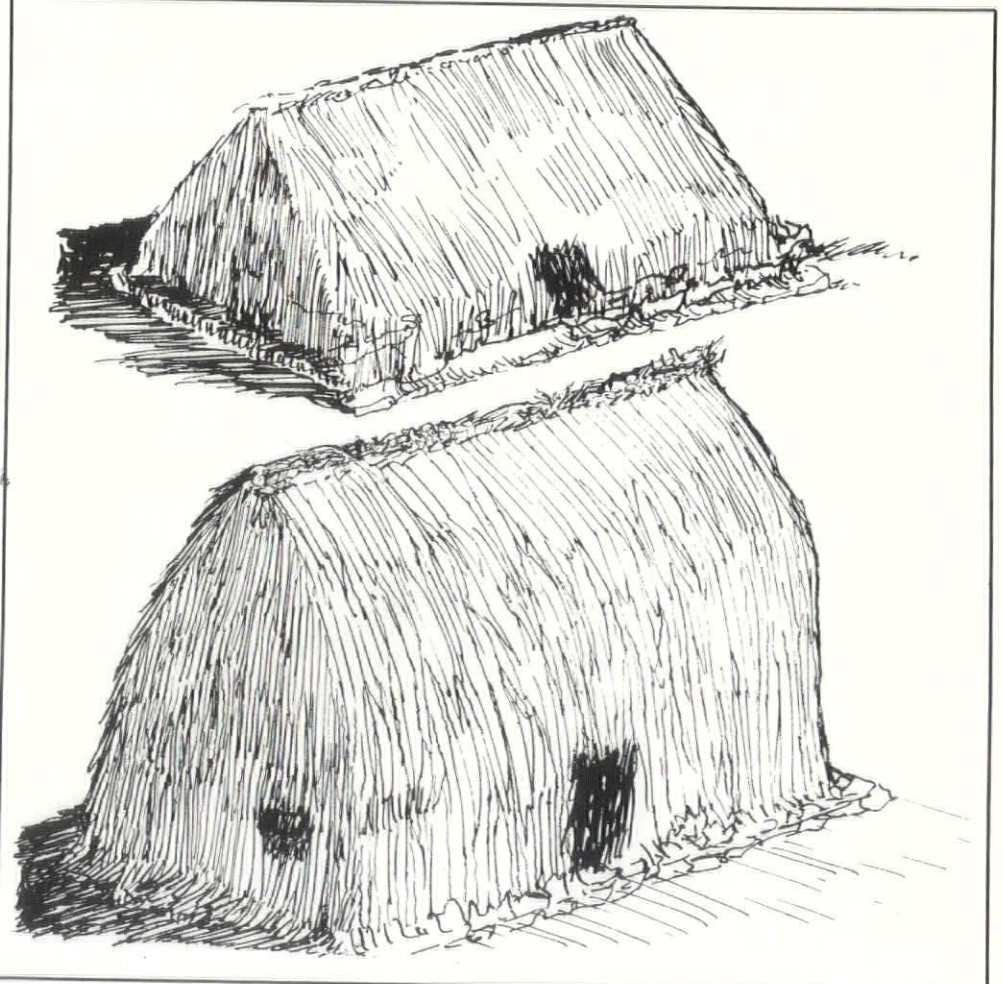


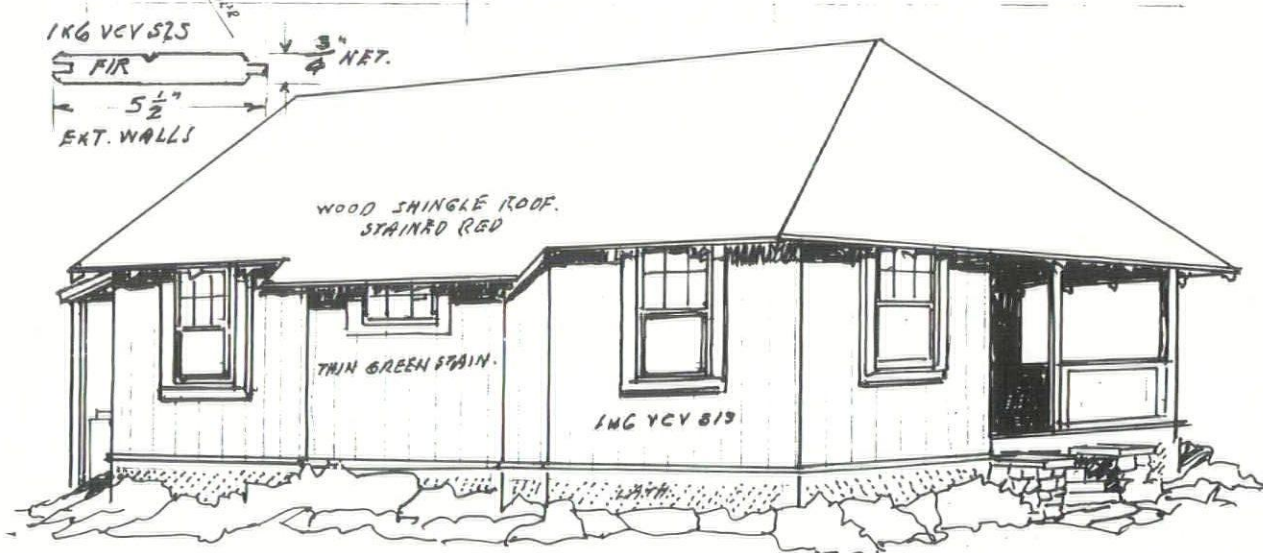
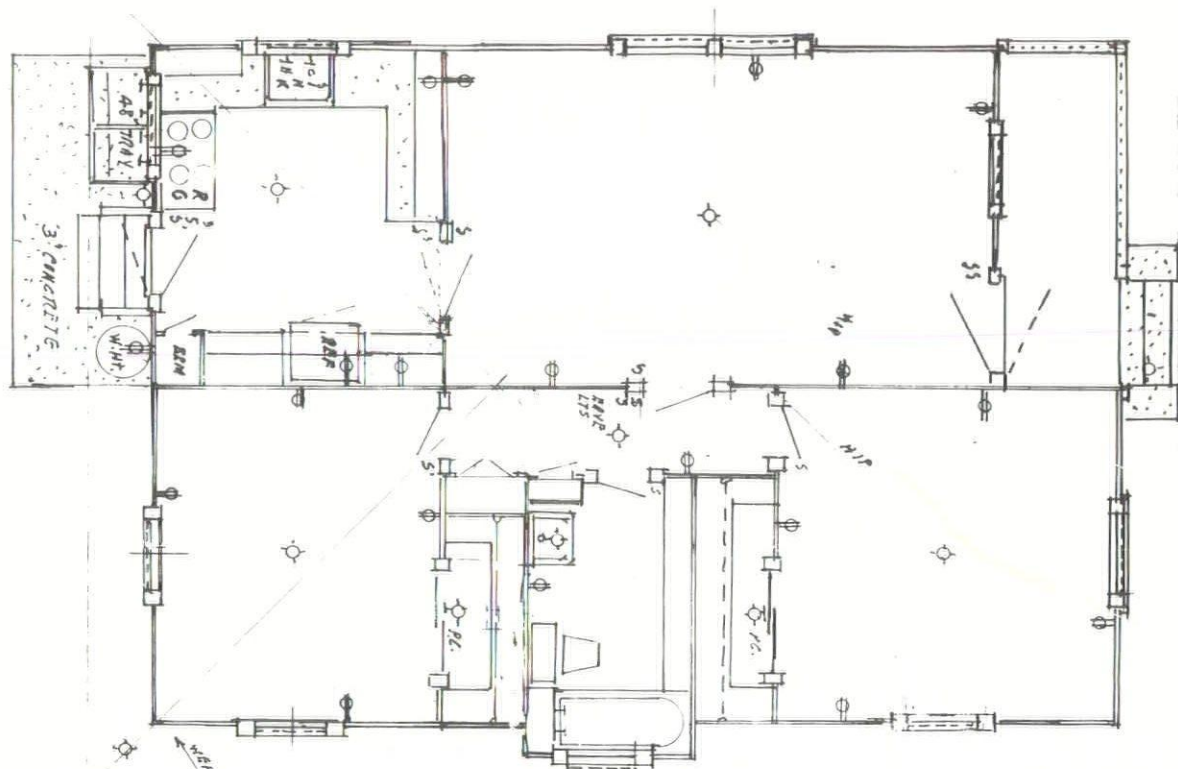


The most popular style of grass house is shown below left. There is only one post hole to be dug at each end; other posts end in the stone wall (without mortar). Rafter ends are covered with stones. There are no wall plates to fit.

These elegant designs below were made by bending

two trees together at the ridge, as shown in the drawing below right, or by bending and holding fresh cut trees to one curve between stakes. The trick is to find two or more trees growing in the proper alignment to warrant attempting a design like this. This design is popular with artists and people who don't like to dig post holes.





The coming of the missionaries in 1820 with their clapboard house marked the beginning of the end of the grass house. The many ways in which the missionary house was superior to the grass house was immediately apparent to both King Kamehameha II and Regent Kāhāmanu. Permission to erect the first clapboard house was delayed several years because it would be a house superior to that of the ruler of the islands.

Materials to build the first lumber houses had to be brought around the Horn, a voyage of several months. With the coming of the first sawmills, this type of construction was speeded up, and with the importation of highly skilled car-

penters among the Oriental laborers, the work of the next hundred years developed a type of dwelling new to Hawaii. Gradually the grass house passed out of the picture.

The new house had walls of a single board in thickness serving to support the roof and to present a finished wall surface both interior and exterior. This required lumber of the highest grade, without knots.

The inborn frugality of the Asian builder led to designs devoid of any semblance of beauty. Everything was done at the lowest cost. The result was the T&G VCV plantation house with bedrooms and bath on one side and kitchen and living room on the other. Everything was done to keep cost as low as pos-

sible.

The lumber found most economical was a 1" by 6" Oregon pine run to tongue and groove and V'd at the joint. For some unknown reason an extra V was run down the center of the board creating the most dismal interior imaginable.

But these houses were cheap. The expanding sugar industry required houses for imported laborers and the T&G VCV house was the ideal economical answer. A vast number were built and many are still in use in plantation camps.

This "godawful Gothic period" lasted well into the 1900s and the small house was neglected by Hawaii's few architects. Then the Halekulani Hotel gave the office of

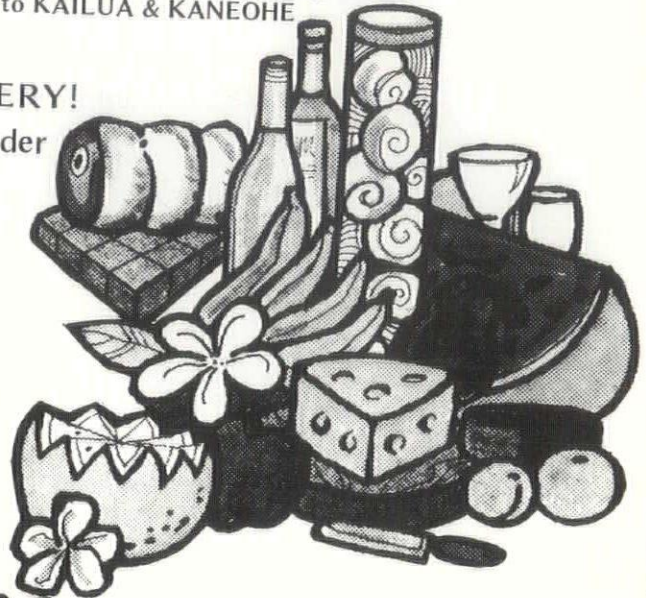
Gourmet Gifts Delivered...

from PEARL CITY TO HAWAII KAI, HONOLULU
to KAILUA & KANEHOE

FREE DELIVERY!

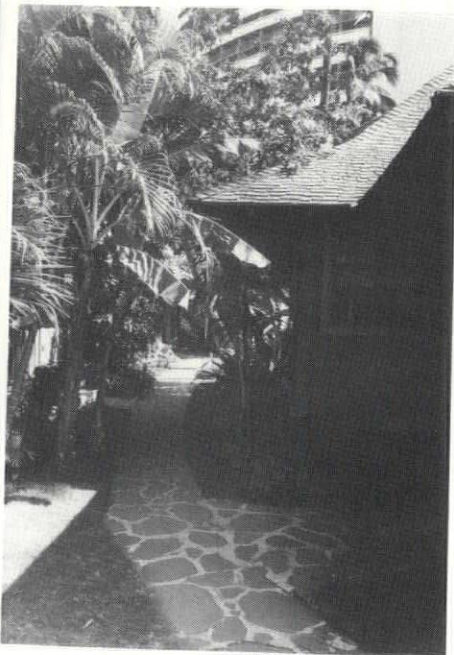
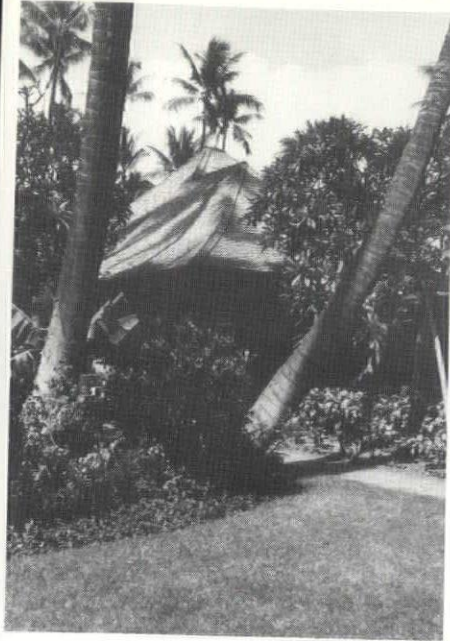
Call in your order
with VISA or
MasterCharge.
734-1957

Prices from
\$15 - \$250.
Including your
favorite spirits.
Come in or call
for gift list.



mac's MARKET
HAWAII'S NEIGHBORHOOD GOURMET STORE

Open Daily 7 AM to 11 PM
3058 Monsarrat Avenue
Phone 734-1957



C.W. Dickey, AIA, the commission to erect three small one-room cottages in the palm grove surrounding the hotel.

Roy Kelly, AIA, then a recent arrival to Hawaii and Dickey's office, was the project architect for the job. He took the double slope roof concept already in the works and modified its slope to the gentler, now familiar, configuration shown above.

This roof design, based on roofs of grass houses to which extra rooms or lanais had been added, was used with variations by other architects and has become part of our regional architecture—the so-called "Hawaiian roof" was inspired by that of the grass house.



"That's a Butler building?"

Yes, that is a Butler building.
In fact, you probably see beautiful Butler buildings all the time and don't know it.

Because Butler buildings offer total design flexibility and can be as tasteful and dramatic as any building.

Yet, they also give you all the important time and money savings

of systems construction.

To learn more about Butler buildings, give us a call.

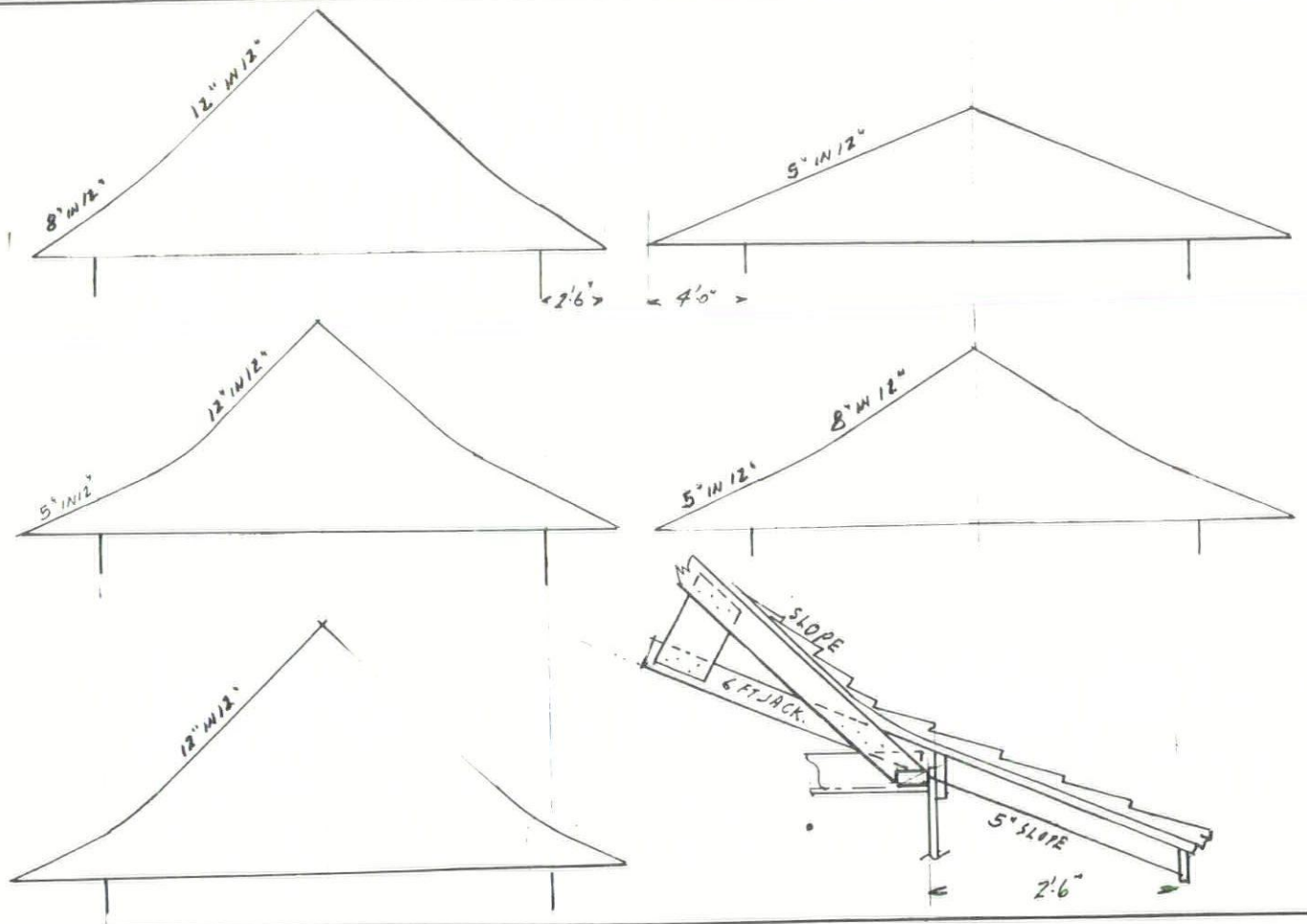
DURA/CONSTRUCTORS, INC.

Lic. No. BC-6744

91-313 Kauhi Street
Ewa Beach, Oahu, Hawaii 96706
(808) 682-4536



86021A



Koa Flooring

by GenuWood™ II

Real Koa. Bonded in durable vinyl.

Elegant Koa flooring, lustrous and warm yet as easy to maintain as a kitchen floor. An invisible shield of tough, easy to clean vinyl protects from scuffs, scratching and spills. GenuWood™ II vinyl bonded Koa flooring is more resistant to abrasion than vinyl tile and vinyl asbestos, and will not show wear or traffic patterns. GenuWood™ II sandwiches carefully selected Koa veneers between a thick surface layer of permanently bonded, invisible, moisture resistant vinyl and core layers of fiberglass and vinyl.

Available in Hawaii for immediate delivery in 4" x 48" planks and random planks. Used in high traffic commercial areas and in homes in Hawaii for many years. Proven. Practical. Oak, walnut, and teakwood also stocked.

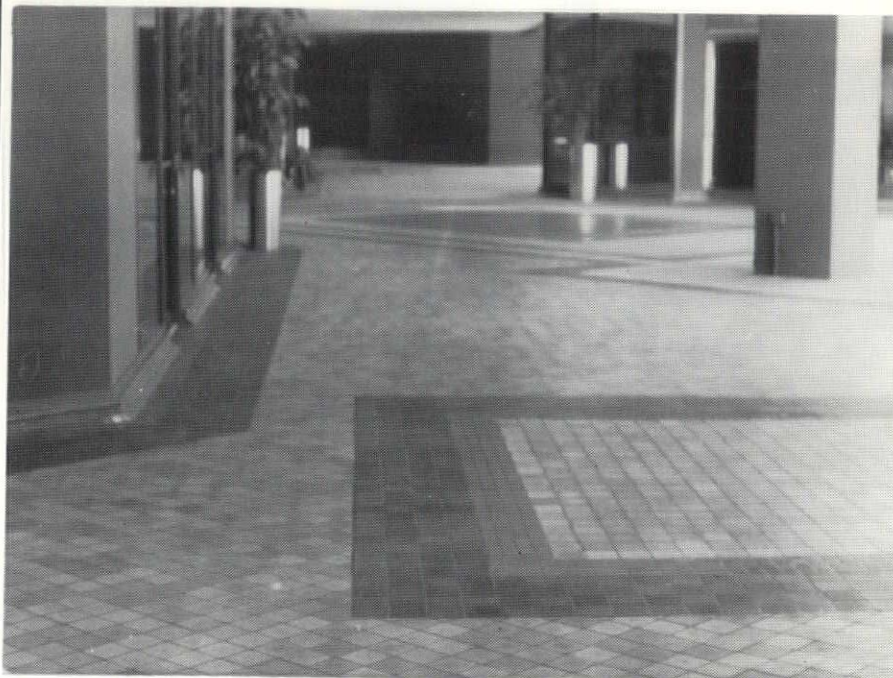
paul rasmussen inc. VISIT OUR NEW SHOWROOM
 422 Keawe St. / Honolulu
 Phone 521-3818

The use of the double slope roof on the small house spread throughout the architectural profession. The T&G VCV cottage was usually built with a roof slope of 6" in 12". Experiments with slopes as low as 4" in 12" were part of the trend toward low broad lines, assisted by wide 4-foot eaves on even the smallest houses. The growing use of sliding sash and doors, allowed wide open spaces and created deep cool interiors.

The structural details needed for the double-pitch roof with wide eaves required a lot of study and went through the usual phase of development to find the best combination of line and economy. The closer the point of change in the roof—the knuckle—came to the exterior wall line the less attractive the roof became, but the easier it was to construct. The break in pitch is best made one half of the distance between the ridge and the outer edge of the roof.

The pleasing effect was achieved by using a 5" slope in the lower part of the roof and eaves with an 8" slope in the steeper part up to the ridge. Actual details of construction for such a roof are shown on page 20.

Grosvenor Center Goes Lahaina



The Lahaina Series of unglazed pavers, that is.

Here in the courtyard—as in the entrance portion shown above—the “yellow brick road” (as named by designing architect Joe Farrell of Architects Hawaii) is given a fabric or pattern that zigzags through the mall adding color, design and breadth to the entire area. The 4"×4" unglazed field pavers in five colors are accented by borders of 2"×2" red glazed tile manufactured to the same thickness at the architect's specifications.

You and your clients are welcome to visit our showroom to study our complete line of beautiful ceramic tile.

Central Pacific Supply

2855 Kaihikapu Street (Mapunapuna District)
Honolulu, Hawaii 96819 • Phone 839-1952

ADDS local messenger service

ADDS up to delivery savings

- SAVE GAS
- SAVE TIME

— We're efficient —

17 Years in the messenger business

DAILY CONTINUOUSLY

Hawaii Kai	Airport
Waipahu	Mapunapuna
Pearlridge	Downtown
Kailua	

Other delivery areas also available from offices to job sites

Call or write for rate card Phone: 946-1565



1400 Kapiolani Blvd. Suite C8 Honolulu, Hi.

If you do business in Hawaii . . .

and want to keep track of your clients, or need to glance at building permits, tax liens, foreclosures, public hearings, real estate trans-

actions or any of a number of scintillating bits of information

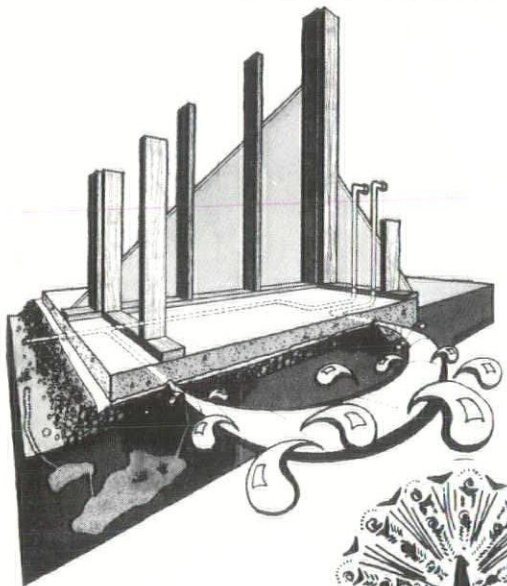


**PACIFIC
BUSINESS
NEWS**

. . . we have news for you

For information call 521-0021.

PERMANENT TERMITE PROTECTION



Now a PATENTED SYSTEM is available which gives lifetime protection from subterranean termites. The Peacock Underground Termite Control System.

This proven, low cost system has a lifetime, transferrable guarantee. It is installed prior to slab pour and allows periodic re-treatment of sub slab soil.



Peacock Roofing & Termite Co., Ltd.
2726 Wai Wai Loop, Honolulu, Hawaii 96819
Phone 836-1741

These sketches show that the "Hawaiian roof" simply cannot be made to fit comfortably onto a two-story building. It would seem that the spirit of the grass house does not choose to inhabit any building that is so obviously an import by visitors.

However, on a large palatial residence, where the building sprawls all over the lot it can soften the whole picture in a most attractive way.

Building codes in Hawaii require that the lower story of a two-story building must be of stud wall construction. This is probably to assure adequate load-bearing capabilities in the design. However, it is interesting to examine this point.

An 8-foot-long stud wall presents, for load-bearing purposes:

5 pcs. 2" x 4" 1½" x 3½" = 5.25 x 5 = 26.25 sq. in. cross section bearing surface, O.P. while an 8-foot-long single 1¼" x 8" T&G V'd wall presents 95 x 1 = 95 sq. in. cross section bearing surface.

Lateral bending of single walls is prevented by outside girts and intersecting partitions and case work. Single walls, when properly braced, can provide three times the load-bearing capabilities of a stud wall.

To an architect who has been used to stud wall construction the single board wall at first glance appears flimsy and too casual for professional use. This attitude usually gives way to the realization that it is admirably suited to subtropical architecture and that with the proper attention to mill work quite acceptable houses can be built.

Because the walls are only one inch thick the window frames are built entirely on the exterior of the house, protruding about 4 inches. This is one of the conditions that single wall construction cannot avoid and one might as well accept it.

Of course, the lateral strength of the single board wall must be supported by longitudinal bracing.

However, all two-story frame buildings in Hawaii must have stud walls in the lower story.

The framing details shown here are the result of much experimentation to provide satisfactory solutions.



Amelco Elevator Service.

You're sure of the ups and downs. No runarounds.

You get BOTH the fastest service in emergencies AND the lowest cost for complete preventive maintenance. A good safe way to go. Take a look at your elevator service costs now. Then get a fast free estimate of the savings. Call 845-3291

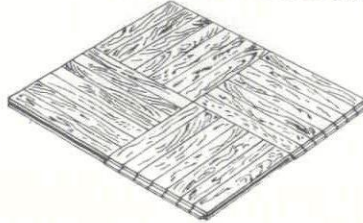


Amelco Elevator An Hawaiian Company
2308 Pahounui Drive / Honolulu, Hawaii 96819 / Phone 845-3291

SOLID KOA

PARQUET by PENN WOOD

Solid Refinishable Hawaiian Koa



- Each square precision milled w/tongue & groove to exacting tolerances. Surface area 6" x 6" thickness is 5/16".

- From high on Mauna Loa on the Big Island of Hawaii koa logs are hand selected & harvested.
- The timber is brought to Hilo, sawed into planks and air dried.
- From Hilo they begin their long ocean & overland journey to Pennwood Products in Pennsylvania where the planks are kiln dried & precision milled into glue-to-concrete parquet.
- Now stocked here in Honolulu our solid Koa Parquet is ready for a joyous reunion with your home.



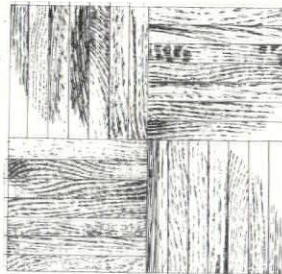
SANDERS TRADING COMPANY, INC.
HARDWOOD FLOORING

1211 kona street • Honolulu, Hawaii 96814
533-6794

*New from the world's largest
manufacturer of Parquet Flooring!*

**ACRYLIC IMPREGNATED/OAK
PARQUET FLOORING**

**Solid Oak
Parquet
Floor
Covering**



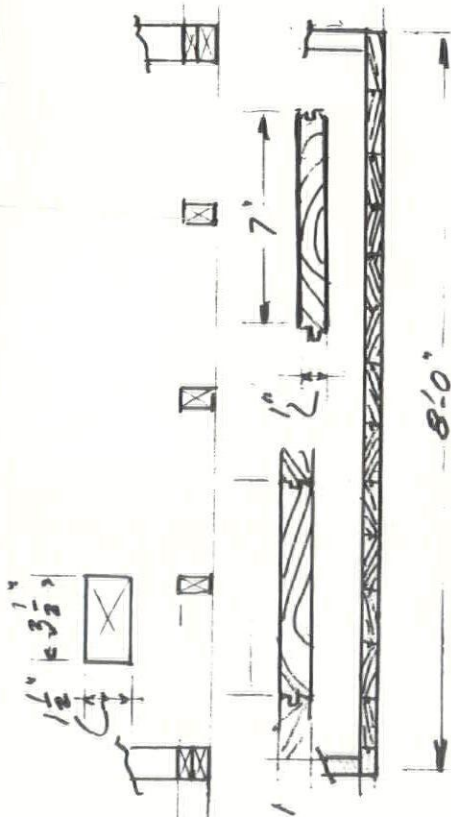
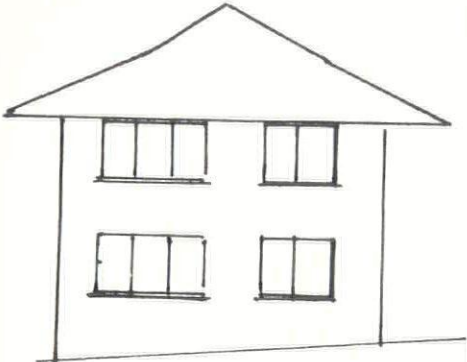
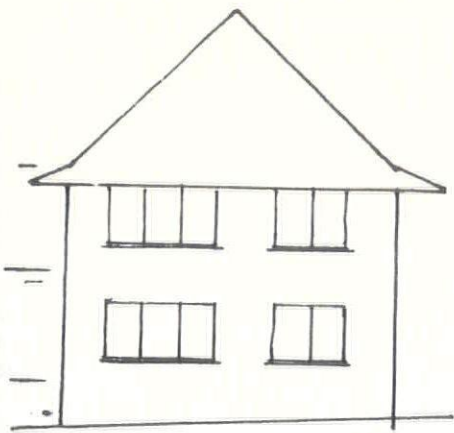
Hartco

- Virtually immune to wear, and extremely simple to maintain Hartco/Acrylic is the answer for heavy traffic.
- Liquid acrylic plastic is forced into the porous structure of oak to form a composite material with both the performance advantages of acrylic plastic & the esthetic appeal of fine hardwood.
- Tongue & grooved — no on-the-job sanding
- Flush Joint — No bevel edge dirt trap
No tripping potential
- Totally finished — no on-the-job conditioning



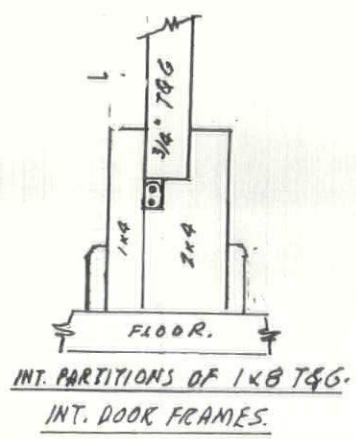
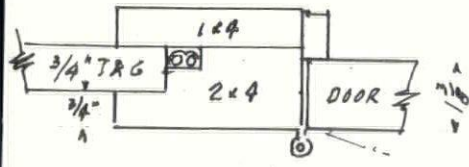
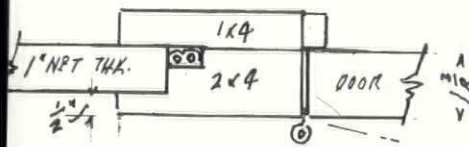
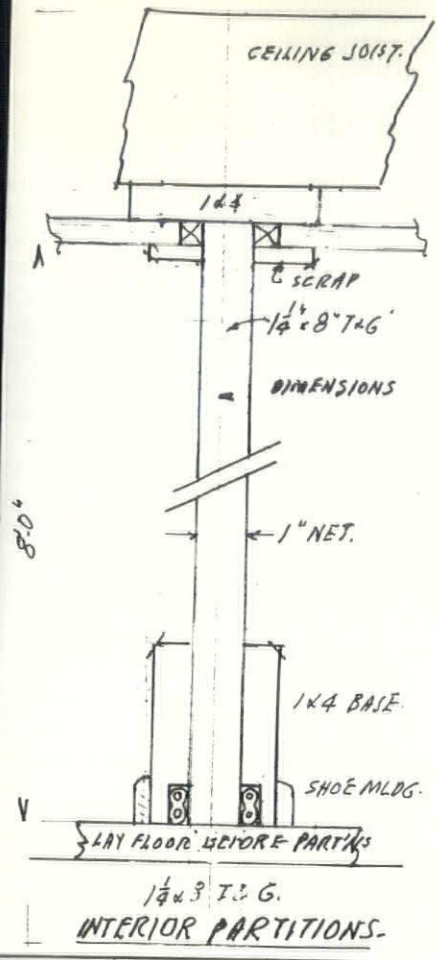
SANDERS TRADING COMPANY, INC.
HARDWOOD FLOORING

1211 kona street • Honolulu, Hawaii 96814
533-6794



STUD WALL

SINGLE
WALL



The Lasting Joys of the Fireside
 ... can be yours with a custom designed masonry
 fireplace of brick, natural stone, or lava rock
 built to your design or ours.



We offer state wide building and maintenance services as well as a complete selection of accessories—tool sets, wood holders, grates, bellows and custom screens. See our wide range of freestanding metal and glass fireplaces.

Call for consultation and installation.

Lic #'s 6209 or 2334 **FIREPLACE HAWAII INC.**
 137 Hekili St. • Kailua, Hawaii • Ph. 261-9744 / 54 Waianuenue St. • Hilo, Hawaii • Ph. 935-9693

The Lanier No Problem™ Typewriter.

It does more than just type.

Want to get your typing back faster than ever before? **NO PROBLEM**

Want a typewriter that can add and subtract columns of numbers? **NO PROBLEM**

The Lanier No Problem is a multi-electronic typewriter with extraordinary powers. You get your work back fast because your secretary types rough drafts on a TV-like screen instead of paper. Changes and corrections are made right on the screen. So no erasures. No false starts.

The No Problem electronic typewriter can perform *additional* tasks by inserting different Lanier Smart Discs.™

Want to add or subtract columns of numbers? Insert the Financial Smart Disc.

Other Smart Discs enable your No Problem to sort long lists, prepare personalized standard documents, and even keep track of your firm's timekeeping.

Want to see Lanier No Problem Typing in action? **NO PROBLEM.**
 Send us the information below and a Lanier representative will call for an appointment.

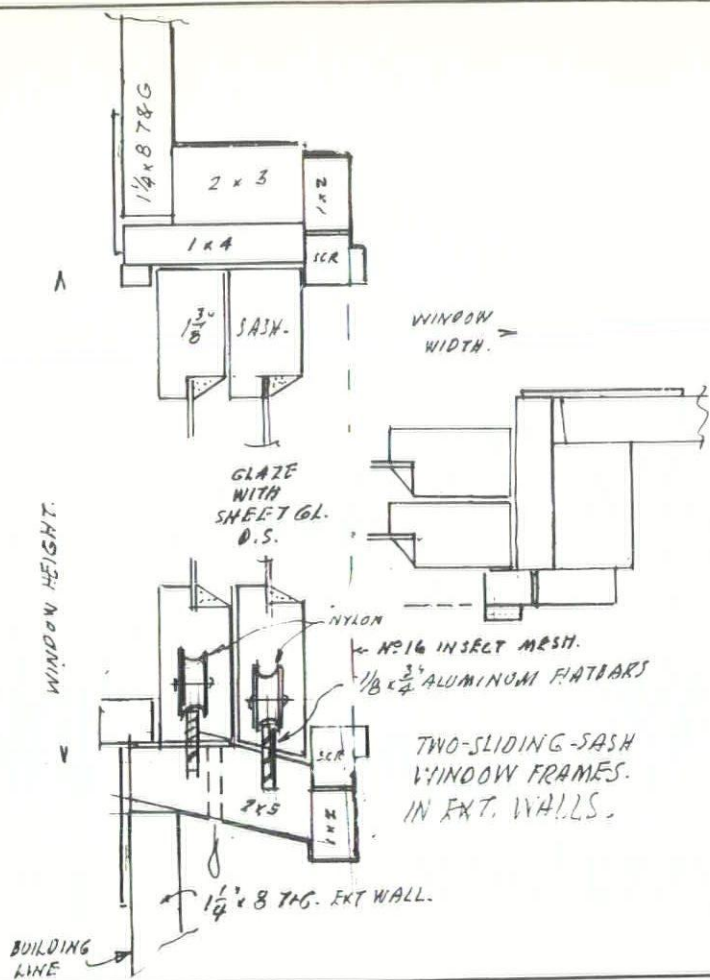
Name _____ Title _____
 Phone _____ Best time to call _____
 Firm Name _____
 Address _____ County _____
 City _____ State _____ Zip _____
 What kind of typing or word processing are you using now? _____

Lanier Business Products Center of Hawaii
 Suite 248, 1221 Kapiolani Blvd., Honolulu, Hawaii 96814
 Phone: 523-7061 Division of Servco Pacific Inc.



Lanier Business Products Center of Hawaii
 Suite 248, 1221 Kapiolani Blvd., Honolulu, Hawaii 96814
 Division of Servco Pacific Inc.

Phone: **523-7061**



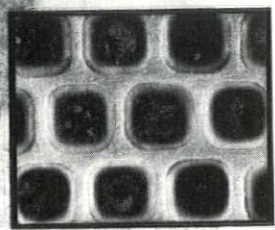
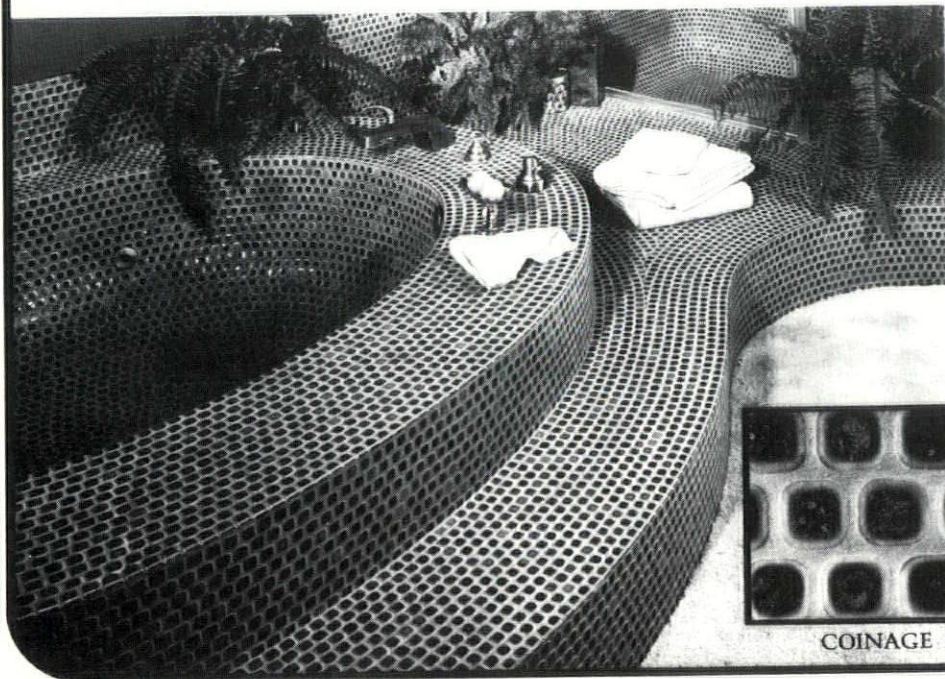
The thread running through this collection of notes seems to be "Hold onto that 'something' which comes down to us from the grass house."

The grass house, in its early fragile form could not meet the demands of today's living. It could not support the TV antenna and there was no place for the car or the rubbish cans, not to mention a bathroom. It had to go—but somehow we let it go reluctantly. The duty of perpetuating any of its charm fell squarely on the shoulders of Island architects.

The small house—and the typical grass house was small according to Captain Cook—does not present many opportunities for architectural embellishment. The roof design is about the only place where originality can be exercised without being obvious. The double pitch roof was the result, inspired by the roof line when a lanai or other floor area was added without raising the ridge height.

A construction detail is offered here to show how it has been accomplished. There are many designs, but a profile resembling this combination of slopes was very popular with homeowners.

When you specify LATCO you go with a winner.



COINAGE

Coinage was the LATCO tile, tile contractor Herman Schock of Northridge, California, specified for this award-winning Roman bath.

But LATCO Valencia did the honors in his award-winning kitchen. And LATCO Rajah reigned supreme in his award-winning bar. All part of the Ceramic Tile Institute's 1978 Judge's Award for the best use of tile in a single-family dwelling.

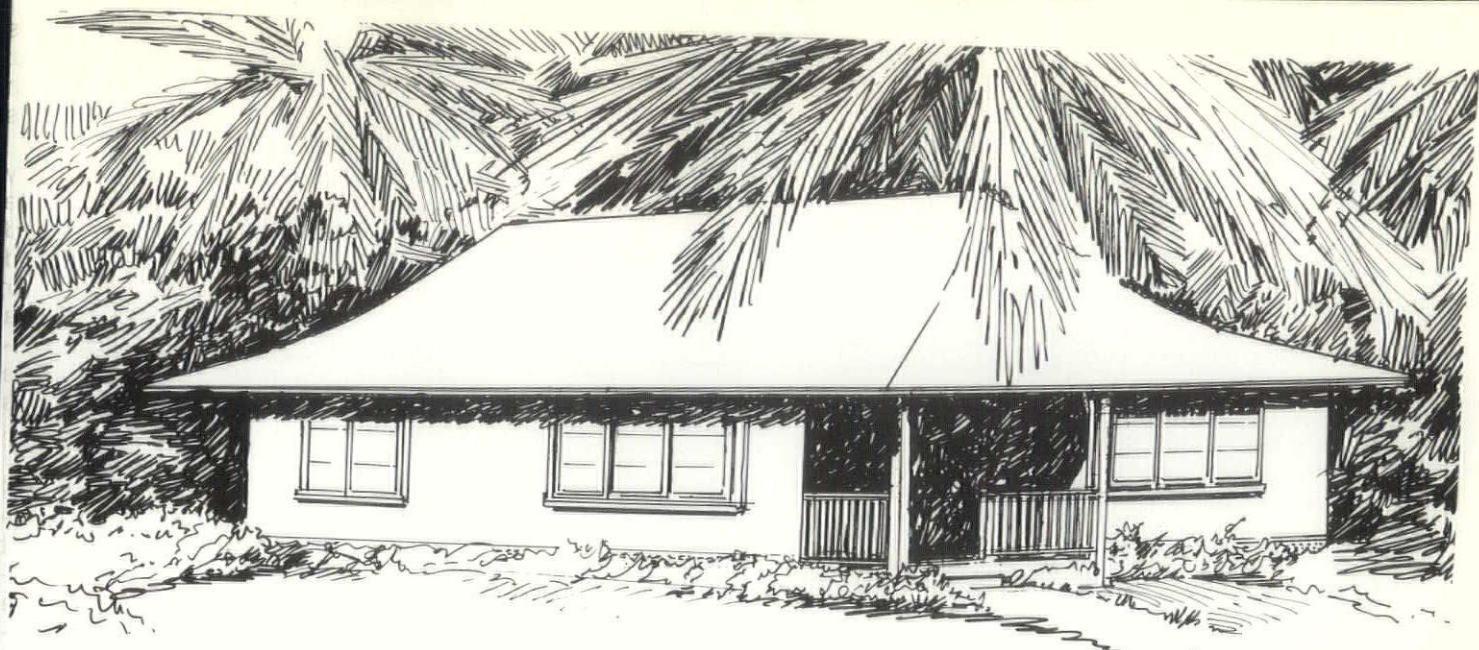
Schock uses LATCO because, after 11 awards in 11 years, he knows it's a winner.

Let us introduce you to the LATCO winners' circle of specialty tiles.

Distributed by

Coast Enterprises of Hawaii, Inc.

3159 Koapaka Street 836-2677



BISHOP MUSEUM

There are other touches, such as the generous use of dry wall masonry of lava rock, the shoji from Japan, and the jalousie from Australia.

Hawaii is the gathering place. Our people have come from many places bringing their ways and customs with them. From these many cultures something new is emerging. In the case of architecture, the small dwelling has made the greatest strides, benefiting from

the deep regard a man has for his own home as well as that of his host. In Hawaii we want to keep something of the grass house with us always, out of respect for those who first came to these islands and made it possible for us to come later, to enjoy their charm, part of which was, and still is, the image of the grass house.

Island people favor the one-story dwelling, even if the area is quite large. This seemingly automatic

rejection of the two-story building as un-Hawaiian supports the idea that the grass house is still with us—in the form of the small single dwelling, unpretentious and comfortable, charming in its simplicity and grace of line, a fitting place for gracious people to live, a people who have given the whole world a word to add to its vocabularies—aloha. HA

Ray Morris



As a young man Ray Morris was obsessed by two strong desires: (1) to escape from the New York area and to come to the Hawaiian Islands to live and work; and (2) to use his talents to help the man of modest means have a home of his own. Both of these dreams have come true. He has lived in Hawaii since 1926, and as an architect—ten years in the home building department of Lewers & Cooke, Ltd., and later in private practice—he has planned hundreds of the homes that dot the hills and valleys of Oahu. From the living room window of his own modest home in Kaimuki, each night at dusk he can look up the slopes of Wilhelmina Rise and St. Louis Heights and watch the lights go on in homes he

planned and built.

Morris spent the World War I years building submarines in Bridgeport, Connecticut, then came West to San Francisco. There, as an employee of the Pacific Manufacturing Co., he was put in charge of the millwork for a certain home in Honolulu: La Pietra. In this connection he met F.D. Lowrey of Lewers & Cooke, Ltd., and confided his desire to come to the Islands.

Lowrey was not encouraging but Morris came anyway, arriving in Honolulu via the S.S. Ventura in May 1926 with \$97 in his pocket. Of the ten jobs offered him during the first ten days after this arrival, he chose to help create a home building department for Lewers & Cooke, Ltd.

To this day he has not forgotten how Lowrey steered Lewers & Cooke through the years of the great depression of 1929 without

letting go of a single employee.

He joined the local eight-member branch of the American Institute of Architects as an associate member and served many years as its secretary. In 1929 he received his Territorial Architectural License No. 188.

Morris opened his own office in 1936. One of the first executive orders of World War II forbade the sale of building materials to private individuals and this put a stop to home building. He spent the war years working with the Hawaii Housing Authority and when the war was over he went back into private practice.

Morris has always been interested in the Hawaiian grass house as a symbol of graceful simplicity and sought to incorporate in his own designs whatever lines and touches he could.

Because of this respect for and interest in grass houses, he was selected to plan and build the rather extensive Hawaiian Village in Hilo. The Village was wiped out shortly after its completion by the 1946 tidal wave. He was also "grass house architect" for the Ulu Mau Village built by the Honolulu Junior Chamber of Commerce.

When he volunteered to put an issue of Hawaii Architect together dealing with the development of the "Hawaiian House" we were excited and welcomed his work. Obviously, that work was considerable and well spent.

For many years Morris's cartoons, usually based on the humorous side of Island life, have amused Star-Bulletin readers. Some of that flair is seen on the preceding pages. He has also been active, as set designer and stage manager, in hundreds of amateur theatrical productions. He and his wife, playwright Aldyth Morris, have one son, Richard, a graduate of MIT who is with the Jet Propulsion Laboratories in Pasadena, California.

Keeping Hawaii Plastered

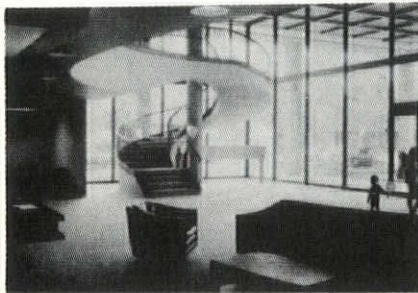


EYE APPEALING CURVED STAIRWAY

Next time you're in the American Savings and Loan office in the Pan Am Building on Kapiolani, look at this skillfully sculptured in metal lath and plaster stairway.

The curved sections wed to veneer baseboard on the suspended ceiling area, all finished with 3000 psi imperial plaster.

Also, in the Loan Office, serving as a background, is a Hawaiian motif Fresco of wet lime plaster.



Call Don Morganello for plastering information.
847-4321

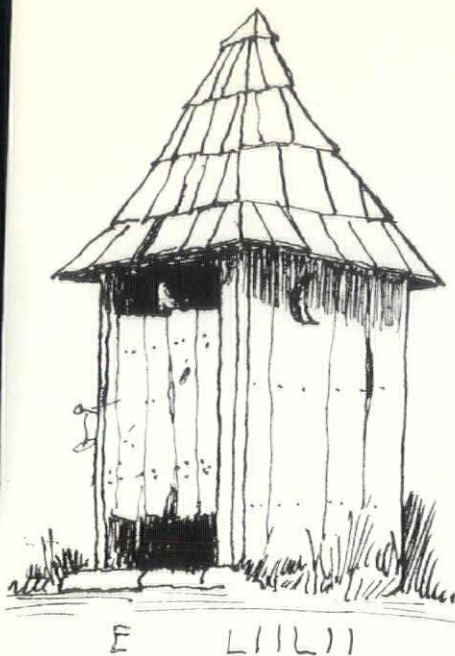
**PACIFIC BUREAU for
LATHING & PLASTERING**
905 Umi St. - Rm. 303

CLASSIFIED NOTICES

Call 521-0021 to place a classified ad. \$3.50 per line +4% tax, 4 line minimum, approximately 5 words per line. Payment must accompany order.

A/E BOOKS

New and used—bought and sold. Some new titles now in stock: Architectural monographs: #2 Hector Guimard, #3 James Gowan, #Alvar Aalto, #5 Michael Graves. A.D. Profiles: #16 Bruce Goff, #17 Les Beaux Arts . . . plus many more—and you will enjoy browsing through Honolulu's largest selection of secondhand A/E titles, too! Mary Hartman's Bookstore, Bookstore 1164 Fort St. Mall across from Our Lady of Peace Cathedral. Open Monday-Saturday.



**HAWAII ARCHITECT
ADVERTISERS INDEX
DECEMBER 1979**

ADDS MESSENGER SERVICE	21
AIRPORT RAMADA INN	34
EARLE M. ALEXANDER, LTD.	5
ALOHA AIRLINES	25, 26, 27, 28
ALOHA STATE SALES	33
AMELCO ELEVATOR	22
BYRON II	34
C.C.P.I.	11
CENTRAL PACIFIC SUPPLY	21
COAST ENTERPRISES OF HAWAII	30
COLUMBIA INN	35
CONCORD INTERNATIONAL	11
CORAL REEF RESTAURANT	34
CREPERIE DE TOURAINE	34
FIREPLACE HAWAII	29
FLAMINGO RESTAURANTS	35
GASCO, INC.	6
HTH CORPORATION/PAGODA	35
HAWAII BUTLER BUILDERS	19
HAWAIIAN ELECTRIC	10
IMUA BUILDER SERVICES	36
LANIER BUSINESS PRODUCTS OF HAWAII	29
LIKE LIKE DRIVE INN	34
M'S COFFEE TAVERN	34
MAC'S MARKET	19
MIRAMAR HOTEL	35
OLLIE'S TROLLEY	34
PACIFIC BUREAU FOR LATHING AND PLASTERING	32
PACIFIC FOOD SERVICES	35
PEACOCK ROOFING & TERMITE	22
PAUL RASMUSSEN, INC.	20
RAY'S SEAFOOD	34
RENOWN RESTAURANT	35
SANDERS TRADING COMPANY	23
TERUYA RESTAURANT, INC.	35
TILE, MARBLE & TERRAZZO	9
WOODSHED RESTAURANT	35



Bomanite

**An exciting concrete way
to save up to 70%!**

Bomanite transforms a plain slab of gray concrete into a colorful, dimensional surface that has the look and feel of brick, tile and stone. Bomanite's 15 proprietary pattern-imprinting tools, 12 wear-resistant colors and special application techniques... combined with the skills and facilities of your local Bomanite contractor... give you a choice of 300 exciting ways to start making an impression on concrete.

Use it outside as an economical paving surface that adds color, dimension and beauty to any area. Use it inside as an attractive flooring at a fraction of the cost of expensive masonry surfaces and slow, hand-laid methods. Whether you use it instead of brick, tile or stone to save money, or instead of plain concrete to add value... you're ahead both ways.

SINCE 1966 BOMANITE HAS BEEN EXCITING IN HAWAII...

Victoria Ward Office Bldg. • Kings Alley • Watumull Offices
Pacific Trade Center • Waterfront Village • Hawi Civic Ctr.
Whalers Village Theater • Punahou Tower • 1010 Wilder Apts.
U.H. Music Facility • Maili Cove • Pearl One • Newtown Estate
Kukui Plaza • Aloha Towers • Prince Kuhio Federal Building
Schuman Carriage • Whalers Wharf • Gentry Pacific • Kailua
Village Center • Manoa Marketplace • Kuakini Medical Center
Waikiki International Plaza • Laborer's Union Headquarters
Newell Bennett • Emil Offer • Harrison Tenney • Bernard Bays
Edward Sultan • Joseph Farrell • Francis Moniz • Jim Nabors
M. J. Sullivan • Pat Hart • Richard J. Hull • Lloyd Osborne
Walton Shim • Richard W. Tully • Fannin-Hill • Del Courtney

LICENSED CONTRACTOR

Bomanite Of Hawaii
1136 UNION MALL Ste 106
HONOLULU • Phone 521-8227

SALES REPRESENTATIVE

Aloha State Sales Co.
2829 AWAALOA STREET
HONOLULU • Phone 833-2731



Where to go For BUSINESS DINING



RESTAURANTS & CATERING

relax at ray's . . .

. . . after all, isn't that
what *lunch* is all about?



y's ray's ray's seafood restaurant

4th floor/waikiki shopping plaza/2250 kalakaua
validated parking/reservations **923-5717**

M's
**Coffee Tavern and
Cheerio Room**

Breakfast - Lunch - Cocktails
in the heart of Downtown.

M's Coffee Tavern 6:30-2 P.M.	Cheerio Room OPEN 9:00 A.M.
-------------------------------------	-----------------------------------

"No Sir, there is nothing which
has yet been contrived by men,
by which so much happiness is
produced, as by a good tavern
or inn."
Samuel Johnson

the sky's the limit...



full salad bar
delicious hot entrees • desserts • bar
menu service available 11:30 a.m. - 2 p.m.

3253 N. Nimitz • at the airport

We're building a reputation not resting on one.

CONSISTENTLY GOOD
CHINESE FOOD . . .

CHINESE AND AMERICAN FOOD

Coral Reef

Restaurant and lounge

Mauka side next to Woolworth
1259 ALA MOANA CENTER

Open from 11 AM to 9:30 PM
Sundays 11 AM to 3 PM
Phone: 949-3500

Now Serving
Hot and Spicy
Dishes for Dinner



DOWNTOWN - UNION MALL
DOWNTOWN DELIVERY 10 a.m. to 2 p.m.
531-0579
Open 7:00 am-6:00 pm Sat 7:00 am-4:00 pm



Like Like

Drive Inn Restaurant
open 24 hours!

Order ANYTHING on our Extensive Menu ANYTIME!

Have dinner in the morning, breakfast at night!

**We're NOT on the
Like Like Hwy!**

735 Keeaumoku

Waikiki Shopping Plaza - 4th Floor
Crêperie De Touraine

WINES AND COCKTAILS
Lunch from \$3.50 - Dinner from \$5.50
Open 11 AM to 11 PM - 7 Days
Validated Parking
Tel. 923-1128

*A TASTE OF FRENCH
COUNTRY COOKING IN PARADISE
Thin crepes filled with your favorite
meat, seafood, vegetables, fresh fruit
and ice cream!*

BYRON III

A GREAT WATERING HOLE—Elegant
Atmosphere, Bountiful Cocktails,
Superb Food and Excellent Service

Luncheons, 11:00-3:00
Dinners served from 5 p.m.
Cocktails served from 10 a.m.
1259 ALA MOANA CENTER
TELEPHONE 949-8855

OCEANSIDE IN THE ALCOVE BY THE TRAVOLATOR





Where to go For BUSINESS DINING



RESTAURANTS & CATERING

Columbia Inn

645 KAPIOLANI BLVD.
"TOP OF THE BOULEVARD"

Restaurant-Bar-Coffee Shop

OPEN 24 HRS.
(except the wee hours of Monday morning)



The Business Lunch Can Be Better Than Ever



PAGODA

FLOATING RESTAURANT

1525 Rycroft St Phone 941-6611

HTZ CORPORATION



Arthur's

Luncheon served from 11AM to 2PM,
Monday thru Friday. Cocktails till closing
at 10 PM. Light lunches on Saturdays.
In the Davies Pacific Center, on
Merchant and Alakea Sts. Phone 521-7133.

A Flamingo Restaurant

The Woodshed

Quiet, cozy atmosphere—perfect for business lunches or dinners. Meeting room available for larger gatherings.

STEAKS • SEAFOOD • COCKTAILS

11 am to 2 pm Mon. thru Sat.	SALAD BAR
Hours: 5 pm to 9 pm Sun. thru Thurs.	—with lunch
5 pm to Midnite Fri. & Sat.	and dinner

1820 Algoroba St. Tel. 946-1421
(1/2 blocks ewa of McCully St.)



QUALITY SEAFOOD

Whether you prefer a spacious dining room providing ocean and mountain views, a cozy cocktail lounge, a more secluded table in a tucked away loft, or a place to have a private party

Orson's Restaurant has all four. Select your own hours for leisurely dining. Continuous service from 11 a.m.

1050 ALA MOANA BLVD at the
WARD WAREHOUSE
(2nd floor - Bldg. B)
Overlooking Kewalo Basin
521-5681

Now, we're open till midnight.

We cordially invite you to come and enjoy our fine family dining during our new extended hours:

Monday - Friday, 6 a.m. to midnight;
Saturday, 8 a.m. to midnight;
Sunday, 8 a.m. to 9 p.m.

 **teruya's** 1333 River Street
Phone 533-1218

TAKE A MILANESE LUNCHBREAK *Break away from the office.*

Have Northern Italian — or Continental — lunch or dinner with us. Any day. Buon gusto!

RENOWN MILANO

Lunch 11 a.m.-3 p.m. • Dinner 5:30-11:00 pm
Happy Hours 3-6 p.m., 10 p.m.-midnight
Discovery Bay Shopping Center
Ph. 947-1933, 947-2562 • Validated parking at rear



Breakfast • Lunch • Dinner
Open Daily 6:00 A.M.
Dinner Show—"Oriental Fantasy"

PRETTY GREAT PRETTY GREAT PRETTY GREAT

THE parrot house

HOTEL MIRAMAR
HAWAII
2345 Kuhio Avenue
Phone: 922-2077
Validated Parking

00060 1 4 GAC
ADMINISTRATOR, COMPONENT AFFIA
AMERICAN INST. OF ARCHITECTS
1735 NEW YORK, NW
WASHINGTON DC 20007

Good things in store!



A beautiful interior in Christopher II at the Hyatt Regency.



Alioto's Restaurant & Cocktail Lounge

From the casework and fixturing departments of IMUA have come some of the fine trappings that surround Hawaii's shoppers as they browse or buy. You compose the architectural ingredients, IMUA will translate your work in beautiful and convenient terms. Good ideas become good business.

Recommend us. You do yourself a favor. And we, of course, appreciate the confidence. We work hard to earn it.

833-1811



BUILDER SERVICES, LTD.

Plant, Warehouse, and Yard at
855 Ahua St., Honolulu 96819