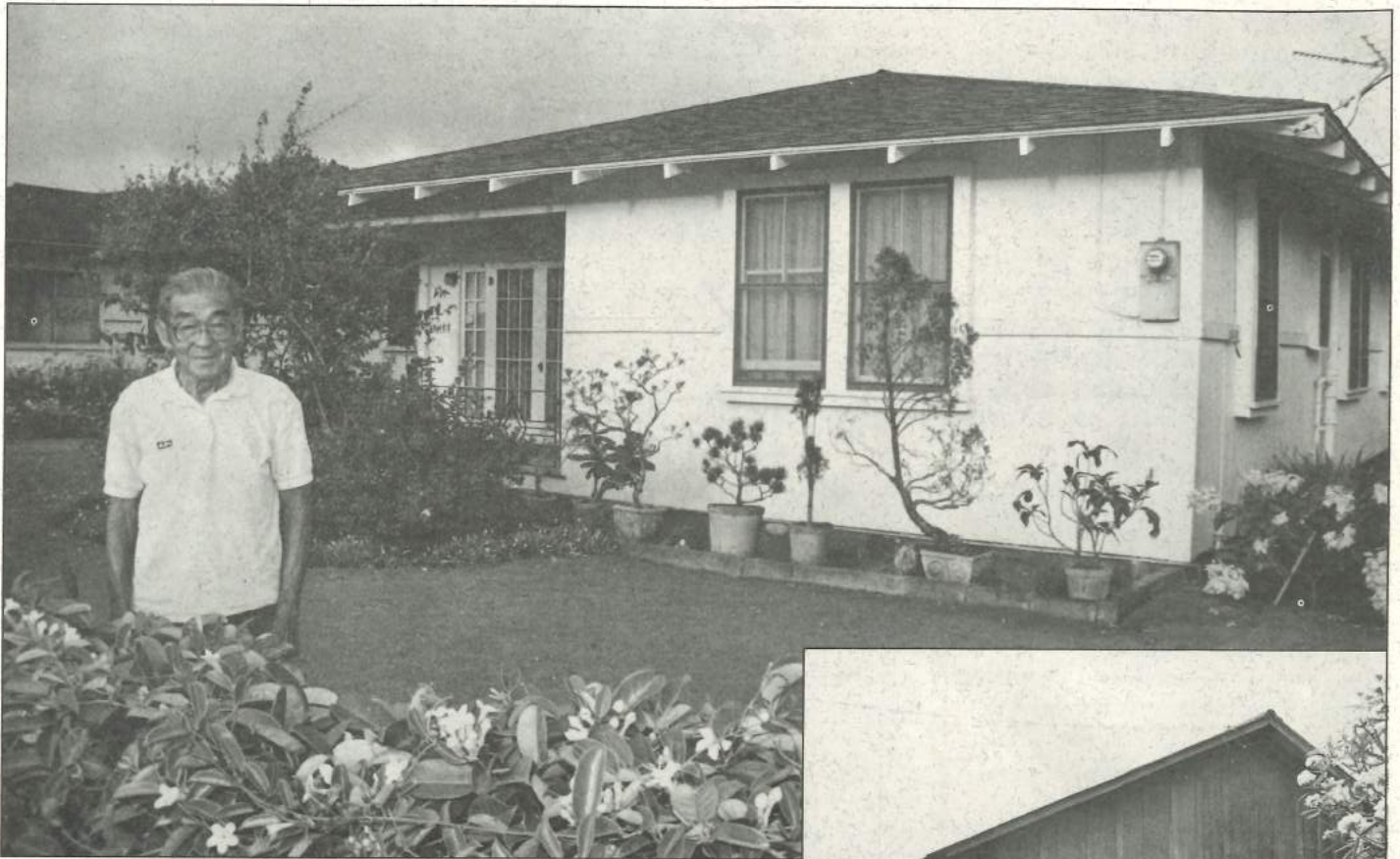
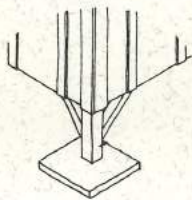


# GUIDELINES FOR REHABBING KAUAI'S OLD HOUSES



**T**hese practical suggestions have been prepared by the Community Housing Resource Board of Kauai to help owners of modest homes protect the long-term value of their buildings.

The recommendations are not complicated or costly. Rather, these are maintenance-oriented guidelines and financially feasible considerations to help owners solve normal wear and tear problems. These guidelines are based on the Secretary of the Interior's Standards for



*Rehabilitation (1983)* which are the foundation for many private rehabilitation and home improvement projects in Hawaii and on the Mainland. Local housing renovation work at Grove Farm Homestead in Lihue provided examples of common upkeep problems and typical repairs necessitated by island environmental conditions — rain, humidity, strong sun, salt-air, mildew, algae and many pests — that contribute to special house upkeep problems.

We hope you will find these home fix-up guidelines useful because, as

time goes by, Kauai's traditional homes, well-built by local carpenters, are growing in value as affordable places to live and income producing property. If maintained properly, these buildings can last for over 100 years.

**COMMUNITY HOUSING RESOURCE BOARD OF KAUAI**  
4193 Hardy Street, Lihue, Kauai, Hawaii 96766. Phone (808) 245-7344





**T**he process of keeping your property in a state of utility through maintenance and repairs is important. Rehabilitation makes possible efficient, continuing use while saving those features of your property that are significant to its original look.

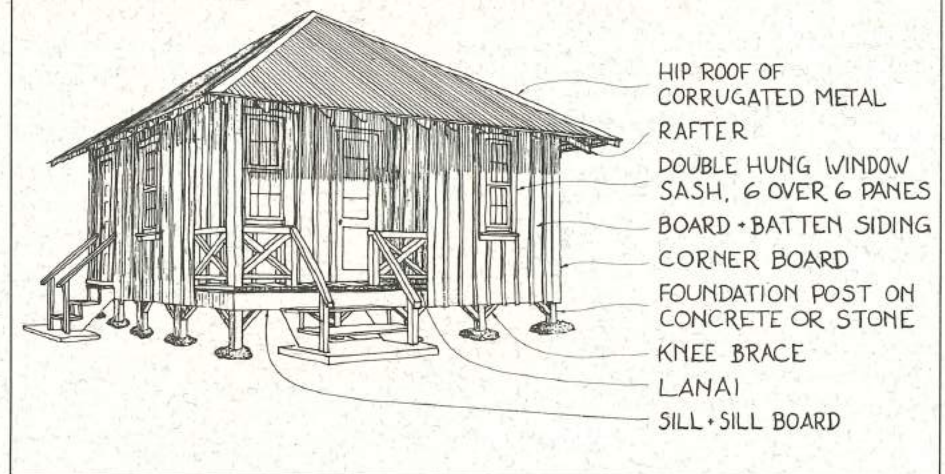
**Remember these useful general guidelines:**

1. Good building maintenance is good housekeeping.
2. Keep as much as possible of original materials.
3. Don't hide the original style.
4. If you have to replace old materials, replace them with similar new materials.



# HISTORICAL NOTES: TWO RESIDENTIAL KAUAI BUILDING TYPES

SINGLE-FAMILY PLANTATION-STYLE HOUSE c. 1920



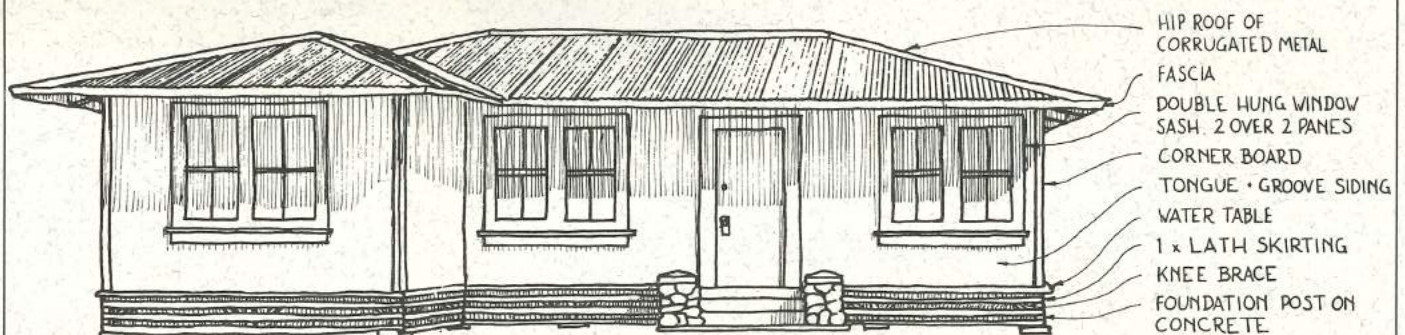
**Plantation-Style Single-Family Cottage, c. 1920**

As the sugar and pineapple plantations began to build single family dwellings, this type of hipped roof, board and batten, single wall cottage became the most popular house form on Kauai.

**Modern Single-Family Dwelling, c. 1940**

In the pre-World War II years, vertical tongue and groove board, single-wall homes were built on Kauai by both plantation and non-plantation owners. These new houses had hipped roofs, but they also had larger windows and a more streamlined exterior appearance than the older plantation-style cottage.

SINGLE-FAMILY HOUSE c. 1940





## GETTING STARTED

# BEGIN WITH A HOUSE CHECK-UP

If you already own an old house, use this checklist for an annual maintenance inspection. If you are going to fix-up an old house, here is an easy

way to evaluate the condition of your building and to record telltale signs of problems that must be treated.

Take care of small things right

away because little problems can become big and expensive.

### CHECK LIST

	YES	NO		YES	NO
<b>1. Structural system:</b>					
Are there any signs of sagging floors?	<input type="checkbox"/>	<input type="checkbox"/>	Is putty around window glass broken and unpainted?	<input type="checkbox"/>	<input type="checkbox"/>
Are any of the foundation posts and footings missing?	<input type="checkbox"/>	<input type="checkbox"/>	Have original window frames and doors been replaced?	<input type="checkbox"/>	<input type="checkbox"/>
Are wooden posts, sills, joists and steps soft when probed with screw driver to test for rot and termite damage?	<input type="checkbox"/>	<input type="checkbox"/>	<b>4. Flooring and lanais:</b>		
Is there material stored underneath the house which prevents good air circulation under the flooring?	<input type="checkbox"/>	<input type="checkbox"/>	Are any floors uneven?	<input type="checkbox"/>	<input type="checkbox"/>
Are there any loose, rotted or missing exterior wall boards or battens?	<input type="checkbox"/>	<input type="checkbox"/>	Does flooring need any repair?	<input type="checkbox"/>	<input type="checkbox"/>
Is vegetation overgrowing the foundation and siding?	<input type="checkbox"/>	<input type="checkbox"/>	Has the original floor been covered?	<input type="checkbox"/>	<input type="checkbox"/>
Does run-off water remain near the foundation?	<input type="checkbox"/>	<input type="checkbox"/>	Are there signs of dampness on floors or around pipes?	<input type="checkbox"/>	<input type="checkbox"/>
Has the building been treated for termites within the past five years?	<input type="checkbox"/>	<input type="checkbox"/>	Are lanai railings in need of repair?	<input type="checkbox"/>	<input type="checkbox"/>
<b>2. Roofing:</b>			<b>5. Painting and staining:</b>		
Does the roof leak?	<input type="checkbox"/>	<input type="checkbox"/>	Has it been more than ten years since your house has been repainted or stained?	<input type="checkbox"/>	<input type="checkbox"/>
Has a new roof been applied directly over old shingles?	<input type="checkbox"/>	<input type="checkbox"/>	Is paint peeling, curling or blistering?	<input type="checkbox"/>	<input type="checkbox"/>
<i>If yes, check for rotted shingles.</i>			What was the original color of the siding and windows and doors?	<input type="checkbox"/>	<input type="checkbox"/>
Is any flashing around the roof loose or missing?	<input type="checkbox"/>	<input type="checkbox"/>	<b>6. Plantings and hedges:</b>		
Does the ridge of the roof sag?	<input type="checkbox"/>	<input type="checkbox"/>	Are trees, bushes or other plants touching the walls or foundations?	<input type="checkbox"/>	<input type="checkbox"/>
<i>If yes, check for rotted rafters.</i>			<b>7. Electrical system:</b>		
Are rain gutters blocked or leaking?	<input type="checkbox"/>	<input type="checkbox"/>	Is there at least one electrical outlet in every room?	<input type="checkbox"/>	<input type="checkbox"/>
<b>3. Doors and windows:</b>			Is there any surface mounted lamp cord extension wiring?	<input type="checkbox"/>	<input type="checkbox"/>
Are any doors difficult to open?	<input type="checkbox"/>	<input type="checkbox"/>	Are multiple cords plugged into a single outlet?	<input type="checkbox"/>	<input type="checkbox"/>
Are there open, separated joints around door frames, window frames or trim?	<input type="checkbox"/>	<input type="checkbox"/>	<b>8. Plumbing:</b>		
			Is water pressure inadequate?	<input type="checkbox"/>	<input type="checkbox"/>
			Are there any leaking pipes, faucets or toilets?	<input type="checkbox"/>	<input type="checkbox"/>

If your answer is yes to any of these questions, please read the following sections on suggested repairs and maintenance.



## ROOFING

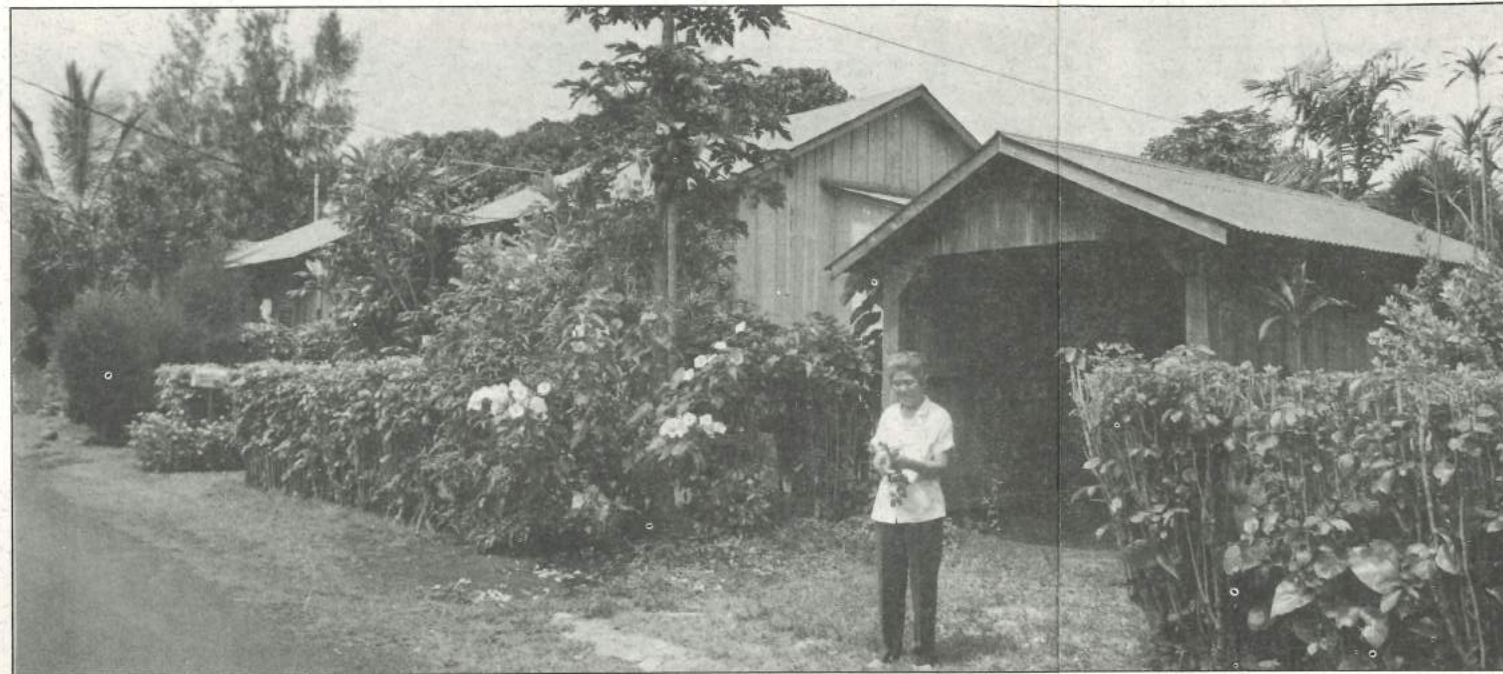
**R**epairs or alterations should not alter the roof pitch or reduce the extent of overhang of the roof eaves.

From both a functional and visual point of view, sound, weather tight roofing is an important element of your house. Maintaining the roof as "cover" is a top priority for every fix-up project because a good roof is the first line of defense against the biggest enemy of every old house: water.

Painted corrugated metal panels, sawn wooden shingles or asphalt shingles are the typical roofing materials found on these residential dwellings, and roofing materials help define the overall look of the house.

The original roofing should be maintained or replaced in kind. Repairs generally will include replacement of extensively deteriorated metal panels or shingles and repairs to flashing and rain gutters. Painted, new corrugated metal, sawn wooden shingles and asphalt shingles all have a maintenance life-cycle of at least 20 years.

It is possible to make temporary repairs to "tin roofs", especially to rusted-out lapping areas, by getting



another piece of the same corrugated stock. Pull the nails, stick the piece of stock in above the deck and then drive nails back in. Asphalt wet patch works pretty well on rusted metal and nail holes, but if your roof regularly leaks, you will need to replace it. Wooden sawn shingles can be renewed to retard the growth

of mould and algae by painting the shingles with diesel truck fuel or commercial shingle oil.

Caulk all loose roof flashing and clean out flashing of roof gutters annually or more often. Remember that gutters protect the siding, doors and windows.

**If you have to completely re-roof your house, take a look at your neighbors' roofs and try to use the same material to keep the look of your street.**

## DOORS & WINDOWS

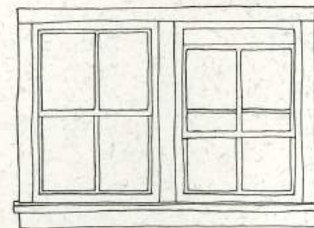
**D**oors and windows are part of the weatherproofing and ventilation of your house, and the design and location of doors and windows are also elements that help give your house its special distinctiveness. Nothing alters the appearance of a house more than changing its doors and windows.

Doors and windows in most older houses become especially vulnerable to deterioration from sun and rain. Wind-driven rain penetrates the door frame and deterioration begins in the frame and in window sills and cracks in the window putty.

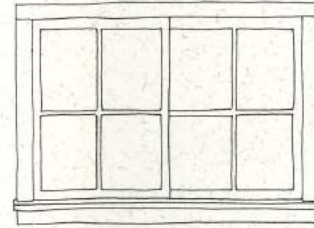
Try to retain and repair the original doors and hardware because of the authenticity of the materials. Replacement porcelain knobs are relatively easy to find by asking around. Locks also can be repaired.

If a replacement door is required, choose one that most closely matches the design of the original door. Avoid reducing or enlarging the original door opening size to install "stock" size doors, and do not change the location of the door or cut new entrances in the wall. Doors should swing freely. If your doors and hinges become too tight, there may be a variety of problems, and you should consult a carpenter. A good way of fixing a tight door is to check underneath the house and possibly jack up the joist or sill to add a new foundation post. Avoid cutting the door.

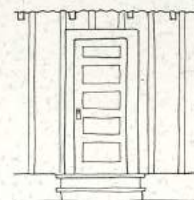
Retain all original windows, and wherever possible, repair the window frame, window sill, double-hung sash and glass. Do not install "stock" windows of another size, and avoid using jalousie windows to replace



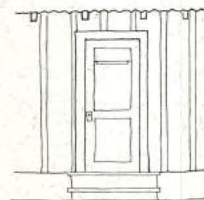
DOUBLE HUNG SASH



SLIDING SASH



5 PANEL DOOR



HALF SCREEN DOOR



SOLID PANEL DOOR

sash. All too often window sash are replaced when little more than scraping and painting repairs are needed. For example, if you find some rot and deterioration at sash corner joints, all is not lost. New pieces can be made, and replacing a few bottom rails of the sash will be less expensive than buying all new windows for the house.

## PAINTING & STAINING

**K**eeping the exterior coated for protection is the most important home owner repair.

Your house should be painted at least once every ten years. Siding, lanai, doors, window trim and "tin roofs" should be repainted or stained in a color as close to the original color as possible. When a change of color is necessary, the color should be in character with other colors found on similar old buildings.

When using stains, use oil-based

penetrating stain and not solid body stain.

Corrugated metal roofing should always be kept painted. Flaking paint can be removed with a wire brush.

An inexpensive treatment of damaged but functional wall boards is to treat them with a mixture of boiled linseed oil and turpentine two or three times, a few days apart, so the oil will penetrate the wood. Repaint a month later.

## FLOORING & LANAIS

**L**anais and porches should neither be enclosed as additional interior space, nor removed. Railings, posts, steps and other lanai and porch details should be retained and kept in good repair as an essential feature of the house. A fresh coat of paint on lanai floors and wooden steps is normally needed every three to five years.

Tongue and groove flooring usually deteriorates just on the end

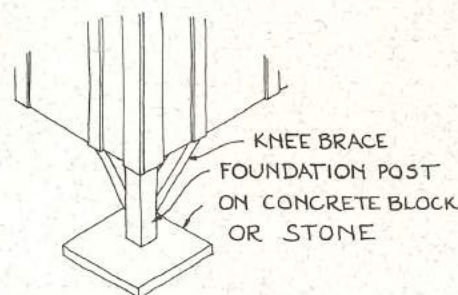
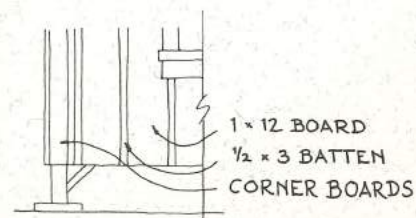
of a board. It is economically and structurally sound to cut the board off usually at the second joist, keeping the rest of the board in place. To take out a tongue and groove board, split it up the middle with a circular saw, and lift the pieces up. To install new tongue and groove, push the new board in from the end, leaving some extra stock on the end to be cut flush with the other board.



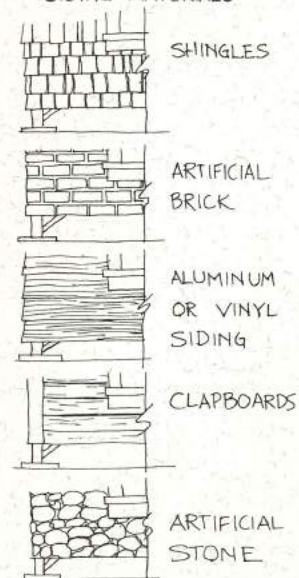


## STRUCTURAL REPAIRS

### SIDING MATERIALS



### NOT RECOMMENDED SIDING MATERIALS



A sound foundation is essential to the maintenance of your house. Moisture and untreated foundation problems can cause irreversible structural damage. Wet wood leads to dry rot and termites.

When repairs are needed to foundations, floor joists and the plate and frame, it's always a good idea to consult an experienced carpenter first. For example, if wooden floor joists have deteriorated because of moisture or termites, you need to determine how much load the support walls should bear before reinforcing old joists with new wood or foundation posts.

In case of foundation posts, allow a minimum of at least 18 inches between the ground and the bottom of floor joists for ventilation and access. Keep the area underneath the house dry.

The wood siding on your house is its "skin". Most houses were of

single-wall construction, and the most common types of siding were 1" x 12" vertical board and batten or 1" x 6" vertical tongue and groove boards.

Damaged siding and sills should be repaired rather than replaced, and home owners can repair surface damaged wallboards themselves with water putty as filler.

Be sure to have the house fumigated every five years. If the exterior siding has deteriorated beyond repair in parts of the house, selective replacement of exterior siding is required. Duplicate the original as closely as possible. With board and batten siding, maintain the original spacing of boards and battens to avoid covering any of the original trim such as corner boards and window and door frames. Use of synthetic materials such as aluminum, vinyl or plastic, over wooden siding, may lead to moisture problems and should be avoided.

## ELECTRICAL SYSTEM & PLUMBING

In setting priorities for repairs to your house, keep in mind that electrical and plumbing work, if needed, should be first choices. Electrical repairs involve life safety, and plumbing repairs will reduce moisture problems in the structure. When making necessary electrical and plumbing repairs, install the

systems in areas that will require the least possible alteration to the house. Continue to use the traditional exposed bulb lighting system on lanai and in carports and garages. Avoid placing electric meters and other equipment, like television antennas, where they can be seen from the street.

## PLANTING & HEDGES

Existing plant materials and varieties should be retained, and new trees, shrubs and flowers should go together with older plantings.

Vegetation growing too close to the structure traps moisture in foundations and siding. Keeping a two-

foot buffer space between plantings and the building is a good idea.

Existing hedges should be maintained. Growing hedges of hibiscus, crotons, panex, spider lilies, or ironwood are preferable to wire and wooden fences.



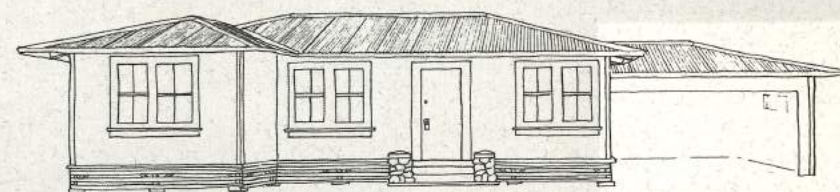
## NEW ADDITIONS & SECONDARY STRUCTURES

The scale, proportions, materials and color of the existing house should guide the design, construction and finish of any expansion of your house.

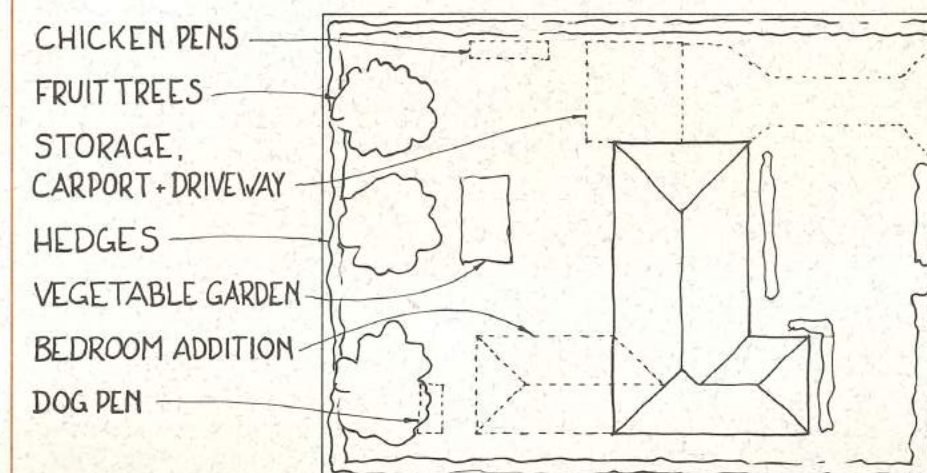
New construction of add-ons for living space, and the addition of secondary buildings — carports, garages and garden equipment buildings —

should be located as inconspicuously as possible.

An addition built to the side or rear of the dwelling will usually have the least impact. Avoid additions that are larger than the existing structure and don't build additions that will damage original building features and details.



### TYPICAL PLOT PLAN



# GUIDELINES FOR REHABBING KAUAI'S OLD HOUSES



# MAKING IT HAPPEN

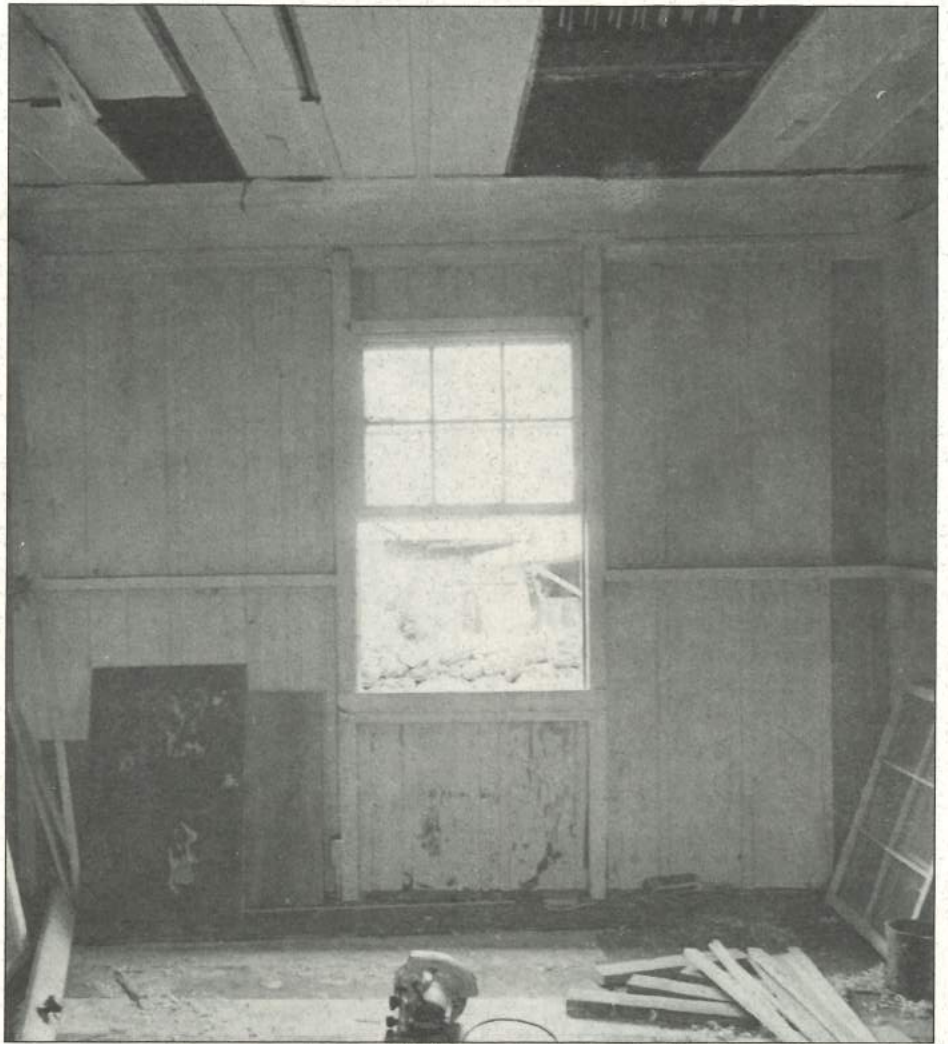
**L**ittle problems can become big and expensive ones if you put them off. You can do quite a bit of work yourself by taking care of things right away. To avoid being overwhelmed, keep the projects small.

Before you do any repairs, even minor ones, ask local people who are involved in old building maintenance for their recommendations.

Make up a list of materials you will need, and check out places listed in the Yellow Pages to get two or three bids. You can save money if you order materials in advance. Remember that repairs are labor intensive and take time, but repairs usually do not require much material.

Residential repairs usually do not require building permits. Permits are not needed for exterior painting, re-roofing (provided you are replacing the same type of roofing material), and cabinet work. Also, spending \$3,000 for additional repairs over a 12 month period is allowed without a permit.

If you plan to do major house renovation repairs in a short period of time, check with the County of Kauai Public Works Department Building Division for building permit and building code requirements.



## MAHALOS



**T**hese guidelines were developed by the Community Housing Resource Board of Kauai with a grant from the U.S. Department of Housing and Urban Development to whom acknowledgement is gratefully made. This fair housing project was initiated and directed by Fred Holthaus of the Kauai County Housing Agency.

The brochure was written and

edited by Barnes Riznik, Director, Grove Farm Homestead and Waioli Mission House, who also serves as a member of the Kauai County Historic Preservation Review Commission. Steve Johnson, Robert Schleck and Richard Candee reviewed the technical content of the text, and Pat Palama prepared it for the printers. Griffin Noyes Associates were responsible for the illustrations, design and layout.