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A HOUSING NEEDS INDEX

FOR OAHU

A SUMMARY

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PRELIMINARY SUMMARY OF FINDINGS

The Policy Committee of the House of Representatives of the State Legislature, acting upon a request from the Committee on Housing, requested the Economic Research Center to examine and propose solutions to the problems involved in constructing an index of housing needs in Hawaii. This project has been carried out by Dr. Sherman J. Maisel of the University of California, a nationally recognized expert in the housing field, with the assistance of various members of the ERC staff. What follows is a preliminary summary of the final report, which presents the major findings and a brief discussion of the methodology. It is being released in this form because of the tremendous legislative and public interest in housing problems at this time. The complete final report is being processed for publication.

Needs Versus Demand

The report differentiates in considerable detail between the "need" for housing and the "demand." Demand concerns the number of housing units that a population would occupy at prevailing market prices, while need relates to the adequacy of a situation in terms of socially established goals or norms.

The forces of the market will, if left to themselves, result in a form of equilibrium in which housing demand is satisfied. This situation may,

however, leave a great deal to be desired from a social point of view. Many families may be in sub-standard houses, they may be overcrowded, or they may be doubled-up. In fact, unsatisfactory conditions in terms of needs are not only possible when demand is fully satisfied but are to be expected because of generally prevailing views as to what housing conditions "ought to be."

Housing Needs Defined and Determined

Housing needs (as distinct from demand) are defined as the gap between the total dwellings required to house the population adequately and the supply which could be made available at some reasonable economic sacrifice. In order to give quantitative expression to this concept, it must be determined what is adequate housing, what are reasonable economic sacrifices, and what supply would be forthcoming at prices falling within the area of reasonable sacrifices. The determination of adequacy and sacrifice require subjective decisions on the part of those responsible for public policy, and needs will vary depending on the decisions which are made. The supply factor is an objective datum, though even this may be influenced by certain types of public policy, e.g., anti-trust action or land reform measures.

Dr. Maisel suggests that the housing supply can be inadequate if (1) people must live in sub-standard dwellings, (2) they are overcrowded, (3) "doubled" households exist, or (4) there are not enough vacancies to

allow normal choice. He suggests as a measure of reasonable sacrifice a payment of either 20 or 25 per cent of a family's income for housing expenditures.

For purposes of the report, sub-standard units included those dwellings reported in the Honolulu Household and Housing Survey of December 1959 as either (1) badly run down, (2) poorly built, or (3) unsafe. The report defines overcrowded units as those containing 1.01 or more persons per room in a dwelling unit or, on a more restricted definition, those with 1.51 or more persons per room. Various sources identified in the main body of the report were drawn upon to establish income distribution and the cost of existing and new dwelling units.

Current Housing Needs

Four alternative measures of existing needs were established. They differ among themselves in terms of where the line is drawn between standard and sub-standard housing, on the one hand, and, on the other, what is considered to be a reasonable sacrifice based on average and minimum costs of housing. In each case, needs arising from anticipated clearance projects are included. These alternative measures of existing needs are as follows:

1. All households in dilapidated dwellings and those containing more than 1.01 persons per room — 27,050

2. All households in dilapidated dwellings and those with 1.51 or more persons per room, plus an allowance for undoubling — 16,450

3. Households in the second category having incomes of less than $7,000 per year — 12,050

4. Tenants in the first category having incomes of less than $5,000 per year — 6,500

The main body of the report explains in detail how these figures were derived. It also shows various characteristics of the families in each group. At the same time, it considers the reasons why one might desire to use one of the definitions and totals in place of any of the others. However, housing needs are large under even the narrowest definition. Exactly how much larger they may be depends on what one considers an inadequate dwelling and what is a reasonable payment in relation to a family's income and resources.

--- Economic Research Center
University of Hawaii
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INTRODUCTION

I was asked by the Economic Research Center of the University of Hawaii to examine the problems which would be met in constructing a "Housing Needs Index" that could be used by the Legislature and other governmental bodies in planning and measuring the impact of public policy in the housing field. It rapidly became apparent that difficulties existed in approach, definition, and data collection. Housing needs had to be differentiated from housing demand. The methods by which the market meets demands had to be examined. Many special surveys and tabulations were required to obtain the figures for measuring needs.

Housing Demand. The terms "demand" and "need" usually refer to two quite distinct problems. Demand concerns the number of housing units that a population would occupy at prevailing market prices. Forces of market supply and demand, left to themselves, result in a form of equilibrium which may, however, leave a great deal to be desired. Many families may be either in substandard houses, or overcrowded, or they may be doubled-up.

Unsatisfactory conditions are possible and are to be expected even when housing demand and supply are in equilibrium. Consider, for example, the situation which would result if half the dwelling units in an area were destroyed and costs of rebuilding were exceedingly high. Many of the families who formerly occupied their own houses would move in together. Others might live in tents, in shacks, or in cars. Houses might be split, space given to boarders, cut into apartments, and other arrangements made to

utilize the remaining space fully. This happened after the San Francisco earthquake, and is a familiar consequence of most disaster situations.

In such circumstances, demand and supply are equated by market forces, but the concept of "need" is introduced to indicate that in some way or other the situation is undesirable.

Housing Needs. The term "housing needs" refers to a subjective or policy decision. In contrast to demand, the standards are not primarily economic, but concern elements such as quality and size. Measuring housing needs requires a judgment or assumption as to what standards of housing are adequate, given current standards of living and potential ability to construct suitable quarters. The standards of housing needs are not fixed. They will vary as customs, social beliefs, and the wealth of an area alter.

Housing needs are defined as the gap between the total dwellings required to house the population adequately and the supply which could be made available at some reasonable economic sacrifice. Critical in the construction of the index is the determination of what is adequate housing and what are reasonable economic sacrifices.

The housing supply can be inadequate (1) if people must live in substandard dwellings, (2) if they are overcrowded, (3) if "doubled" households exist, (4) if there are not enough vacancies to allow normal choices, or (5) if units are pulled down in clearance projects. A reasonable economic sacrifice might be defined as payment of 20 or 25 per cent of the family's income for housing expenditures.

It is possible to take two points of view concerning a needs index:

either that it is the total number of units shown as inadequate, or that it is the wants which exist after the public policy decisions have been made. I discuss primarily the over-all categories, but at the same time attempt to show the variations within each group. How did the present situation arise? Which cases may be expected to cure themselves, judging by the experience of other similar families? Such information is needed for policy decisions; but obviously, a research report cannot set forth what the final needs will be until the policy decisions have been made.

The Index of Housing Needs will depend upon where the line is drawn between standard and substandard housing and what is considered to be a reasonable sacrifice based upon average and minimum costs of housing. Four possibilities, with clearance needs included in each, are presented:

	Total Needs
1. All households in dilapidated dwellings and those containing more than 1.01 persons per room	27,050
2. All households in dilapidated dwellings and those with 1.51 or more persons per room, plus an allowance for undoubling	16,450
3. Households in the second category having incomes of less than $7,000 per year	12,050
4. Households in the first category having incomes of less than $5,000 per year	6,500

why not 2nd category?

The body of this report explains how these figures are derived. It also shows various characteristics of the families in each group. At the same time, it considers the reasons why one might desire to use one of the

definitions and totals in place of any of the others. Housing needs are large under even the narrowest definition. Exactly how much larger they may be depends on what one considers an inadequate dwelling and what is a reasonable payment in relation to a family's income and resources.

MEASURING DEMAND

Normal Growth and Activity. Our first problem in developing a needs index is to examine recent market changes. Does the market appear to have handled current population growth adequately, or is this one of the temporary periods when sudden shifts cause demand to outrun supply? Has construction been sufficient to cut into the backlog of needs? In our analysis, we assume that the market is operating normally if the increase in dwellings exceeds household formation enough to raise slightly the number of vacancies.

Tables 1 and 2 estimate the changes on Oahu in recent years in population, and in households, with the resulting movements in vacancies. The first table, which includes population figures for the entire State, also makes clear why, for the remainder of this study, we deal only with housing needs on the island of Oahu. Population changes on the other islands have put no great pressure on the housing stock. Their housing needs are special, related to disasters, to the change in farm housing, and to the growth of resorts. Their problems must be analyzed individually in terms of the specific areas involved. We therefore deal here with the needs of Oahu alone, even though many of the concepts apply equally well to the other situations.

TABLE 1

Civilian Population Estimates for the State of Hawaii
(In Thousands)

Date	On Oahu			Other Islands	Total for State		
	Military Dependents	Others	Total	Total	Military Dependents	Others	Total
April 1, 1950	20,000	310,000	330,000	147,000	20,000	457,000	477,000
July 1, 1955	50	295	345	138	50	433	483
July 1, 1956	51	316	367	135	51	451	502
July 1, 1957	52	341	393	134	52	475	527
July 1, 1958	52	365	417	131	52	496	548
July 1, 1959	56	381	437	129	56	510	566
April 1, 1960	60	388	448	132	60	520	58

Amount of Change

Date	On Oahu				Other Islands			State			
	Mil. dependents	Others		Total	Natural increase	Migration	Total	Mil. dependents	Others		Total
		Natural Increase	Migration						Natural Increase	Migration	
1950-55	30,000	30,000	-45,000	15,000	12,000	-23,000	-11,000	30,000	42,000	-64	8*
					Annual Rates						
1955-56	1	7	14	22	2	- 5	- 3	1	9	10	19
1956-57	1	7	18	26	3	- 4	- 1	1	10	14	25
1957-58	-	7	17	24	2	- 5	- 3	-	9	12	21
1958-59	4	7	9	20	3	- 5	- 2	4	10	4	18
1959-60	4	7	3	14	3	1	4	4	10	4	18*

* N. B. -- These figures are annual rates and thus do not equal the changes in the totals shown above, some of which include 9-month periods.

Sources: Estimates based on Hawaii State Planning Office: Staff Research Memorandums No. 30, 38; Births and Deaths from State Department of Health. See also: Bank of Hawaii, Employment, Population, and Housing on Oahu, 1951-70, pp. 76-95.

TABLE 2
Estimates of Households by Type
and Vacant Dwelling Units
(In Thousands)

Date	Military	Civilian	Total Households	Vacant Dwelling Units
April 1, 1957	18.500	79.000	97.5	8.9
April 1, 1958	18.5	85.0	103.5	6.9
April 1, 1959	19.8	90.4	110.2	6.6
April 1, 1960	22.1	94.2*00	116.3	9.700

* 13.6 one-person households; 3.1 in units of Hawaii Housing Authority; 77.5 two-or-more person civilian households not in units of HHA.

Source: Estimated for this study from staff memorandum of State Planning Office and from data in Redevelopment and Housing Research.

The rate of increase in dwellings of about one for each three persons added to the population meant a gradual improvement in the persons-per-dwelling ratio for the Island, and some reduction in average household size. The relative stability in vacancies implies that normal demand was being met. If a similar ratio between increased population and dwellings prevails over the next several years, it would offer further evidence that market forces are handling demand. The number of new units needed will vary somewhat depending on whether population is growing because of migration or because births exceed deaths, since migrants tend to consist of smaller families. On the whole, however, if a ratio of one to three prevails, it will indicate a balanced situation.

Vacancies. Honolulu's vacancy rate appears somewhat lower than that of the continental United States as a whole, but falls within the range of vacancies in other standard metropolitan areas. Such a rate may not be quite adequate, however, since Honolulu needs more seasonal vacancies than other large urban areas. A number of apartments are designed to be rented to visitors and are not really available for satisfying the housing needs of the permanent population. For this reason, the number of vacant units should exceed that of other cities by probably one or two per cent. Since, if anything, the vacancy ratio has been somewhat too low during this period, the standing stock may have fluctuated from being in balance to being short of demand by 1,000 or 2,000 units.

Doubling: The Necessity for Families to Share Dwellings. Families or individuals who, under normal social circumstances, would prefer to live in their own separate dwelling units but cannot do so because of lack of adequate housing at prices they can afford are said to be "doubled." They constitute a potential housing need.

Available statistics reveal that "doubling" may be prevalent on Oahu. The 1950 Census showed that 12.3 per cent of Honolulu's couples did not have their own households -- a figure more than twice as high as the national rate. This figure, if accepted literally, would reveal a need for 3,000 to 4,000 additional dwelling units in 1950. That need would have been only partially met by 1960.

A related statistic shows the number of persons per dwelling unit in an area. In 1950 Oahu had 23 per cent more people per dwelling unit than did the United States as a whole. This rate on the Island has improved, but not much more than that of the rest of the country. The number of persons per dwelling unit is still 15 to 20 per cent higher than elsewhere.

Households in Overcrowded or Substandard Units. In showing the distribution of families with a potential housing need, we consider only civilian households of two or more persons who in 1960 were not occupying quarters furnished by the Hawaii Housing Authority. These limits are imposed because we feel it gives a better picture of the true situation.

For the purposes of this report, we consider substandard units to be those dwellings reported as either (1) badly run-down or (2) poorly built or

(3) unsafe in the Honolulu Household and Housing Survey of December 1959. We recognize that units can be substandard for other reasons, such as insufficient plumbing or poor environmental situations. For many purposes, these other definitions of substandard may be preferable. We define overcrowding as either units containing 1.01 or more persons per room in a dwelling unit, or on a more restricted definition -- those with 1.51 or more persons per room.

Table 3 discloses that in 1960 approximately 7,800 (or 10 per cent) civilian households of two or more persons were living in dilapidated units. As one would expect, the percentage of families in substandard units who rented their quarters (19 per cent) was a great deal higher than that for owner-families (5 per cent).

Of those families in dilapidated units, about half lived in quarters with 1.01 or more persons per room. Surprisingly, when we divide renter-families by income levels, the percentage in dilapidated units with incomes under $4,000 was no greater than the percentage with incomes ranging from $4,000 to $6,999. Above that level, however, the rate decreases regularly. Among owners, dilapidation drops steadily with income.

The table shows the percentages and numbers that fall into both categories of overcrowded. Thus, 5,000 families (7 per cent) live in non-dilapidated units but have 1.51 or more persons per room. An additional 1,200 live in an equally crowded condition in dilapidated houses. In the second category -- households having 1.01 to 1.50 persons per room -- approximately 13,600

TABLE 3
Selected Households in 1960 Distributed by Tenure, Income Overcrowding and Dilapidation

Income Class	Normal	Overcrowded not Dilapidated Per Room		Dilapidated not Overcrowded	Overcrowded and Dilapidated Per Room		Total in Class
		1.01-1.50	1.51 or more		1.01-1.50	1.51 or more	
RENTERS							
Number (in Thousands)							
Less than $4,000	2.8	1.1	.7	.7	.4	.4	6.1
$4,000 - 6,999	7.1	2.5	1.2	1.3	1.3	.6	14.0
$7,000 or more	5.7	1.5	.4	.5	.2	*	8.3
Total	15.6	5.1	2.3	2.5	1.9	1.0	28.4
Per Cent Distribution							
Less than $4,000	46	19	12	11	6	6	100
$4,000 - 6,999	51	18	8	10	9	4	100
$7,000 or more	68	18	5	6	*	3	100
Total	55	18	8	9	6	4	100
Per Cent Renters in Class							
Less than $4,000	57	65	64	75	80	91	64
$4,000 - 6,999	36	40	43	71	83	87	43
$7,000 or more	21	27	36	44	42	23	24
Total	31	38	46	64	74	80	37
OWNERS							
Number (in Thousands)							
Less than $4,000	2.2	.6	.4	.2	.1	*	3.5
$4,000 - 6,999	12.4	3.8	1.6	.6	.3	.1	18.8
$7,000 or more	21.0	4.1	.7	.7	.3	.1	26.9
Total	35.6	8.5	2.7	1.5	.7	.2	49.2
Per Cent Distribution							
Less than $4,000	63	16	11	6	3	1	100
$4,000 - 6,999	67	20	9	3	1	*	100
$7,000 or more	79	15	3	2	1	*	100
Total	72	17	6	3	1	1	100
Total Renters and Owners							
Less than $4,000	5.0	1.7	1.1	.9	.5	.4	9.6
$4,000 - 6,999	19.5	6.3	2.8	1.9	1.6	.7	32.8
$7,000 or more	26.7	5.6	1.1	1.2	.5	.1	35.2
Total	51.2	13.6	5.0	4.0	2.6	1.2	77.6

* Less than 1; or ½ of 1 per cent.

(18 per cent) occupy non-dilapidated units, while 2,600 live in dilapidated structures with this degree of crowding.

Looking at it from the other point of view, approximately 51,000, or two-thirds of the families in the city and county of Honolulu live in dwelling units that would be considered adequate, while one-third live in units that might be classified substandard. Only 55 per cent of renter families live in normal units, while for owners the ratio is 72 per cent. Examining the income data, we see a steady improvement in living conditions for both tenants and owners as incomes rise.

Rents Paid for Substandard Housing. Table 4 classifies tenants by the amount of rent they paid in 1960 and by income. There are few standard units at low rents. Of dwellings with rents under $50, 37 per cent are dilapidated and only 33 per cent of families in this rent bracket lived in adequate quarters. In contrast, only 8 per cent of units renting for over $125 were dilapidated and 80 per cent of those paying that much or more in rent had good quarters.

The data also indicate that lower rents mean smaller units, for the units in the lower-rent categories are far more likely to be overcrowded than are those with rents of $125. The average family in Honolulu during this period paid $75 for its rental unit.

We see a few exceptions to the general relationship between high income and high rent. Some high-income families do live in low-rent units, although the opposite is not as likely to be true. The number of low-income families in high-rent units is small and can probably be accounted for by retired or

TABLE 4
Selected Households in 1960 Distributed by Tenure, Income, Overcrowding and Dilapidation, and by Rent Classes
(In Thousands)

Income Class	Normal	Overcrowded not Dilapidated Per Room		Dilapidated not Overcrowded	Overcrowded and Dilapidated Per Room		Total in Class
		1.01-1.50	1.51 or more		1.01-1.50	1.51 or more	
No Cash Rent							
Less than $4,000	.3	.1	*	*	-	-	.5
$4,000 - 6,999	.4	.3	*	*	-	-	.8
$7,000 or more	.2	.2	-	-	-	-	.4
Total	.900	.6	.1	.1	-	-	1.7
$1 - 49							
Less than $4,000	.9	.5	.2	.3	.3	.3	2.5
$4,000 - 6,999	1.2	.7	.3	.4	.6	.3	3.5
$7,000 or more	.2	.2	.2	.1	.1	*	.8
Total	2.3	1.4	.7	.8	1.0	.6	6.8
$50 - 74							
Less than $4,000	.8	.2	.4	.3	-	.1	1.8
$4,000 - 6,999	2.2	1.0	.4	.5	.6	.2	4.9
$7,000 or more	1.2	.5	.1	.1	.1	-	2.0
Total	4.2	1.7	.9	.9	.7	.3	8.7
$75 - 99							
Less than $4,000	.5	.2	.1	*	-	-	.9
$4,000 - 6,999	2.2	.4	.1	.3	.1	.1	3.2
$7,000 or more	1.5	.4	*	*	-	-	1.9
Total	4.2	1.0	.3	.3	.1	.1	6.0
$100 - 124							
Less than $4,000	.3	*	-	-	-	-	.3
$4,000 - 6,999	.4	*	.1	*	-	-	.6
$7,000 or more	.7	*	.1	.2	-	-	1.0
Total	1.4	.1	.2	.2	-	-	1.9
$125 - or more							
Less than $4,000	.1	-	-	-	-	-	.1
$4,000 - 6,999	.6	.1	.1	.1	-	-	.9
$7,000 or more	1.9	.2	-	.1	*	-	2.3
Total	2.6	.3	.1	.2	*	-	3.3

* Less than 1; or ½ of 1 per cent.

similar types of families. A fairly heavy concentration of middle-income groups choose to live in the lowest rental category. Since anyone living in a low-rent unit is not likely to get standard housing, those higher-income families that choose low-rent housing are deliberately electing poor standards.

Units to Replace Those Demolished. The final constituent of potential needs is those units required to replace dwellings subtracted from the housing stock. Every year units are destroyed, burned, or razed to make way for apartments, hotels, or parking lots. Dwellings are split into apartments or merged. The net loss from the private housing stock averaged about 500 dwellings a year for the period 1955-60, and the losses exceeded 800 in 1959.

Do all of these losses signify an equivalent housing need? Our answer is no. Insofar as units are removed through normal market operations, they reflect shifting demands but not a need. Their loss is due to the interaction of supply and demand and fits into the general pattern by which the market adjusts these conditions. They should not be counted in the housing needs index.

For the purposes of a housing needs index, an estimated average loss of 960 private dwellings a year from all sources for the next five years appears reasonable. Of this, public programs would cause a loss of 660 per year. Redevelopment and renewal programs would subtract 500; other public works and public building programs would total 100, and code enforcement 60 per year. Net private demolitions and destruction, or market operations, would amount to 300 per year. All these together account for

the total of 960.

We may estimate that 20 per cent of public programs, or 130 units a year for the next five years will be an addition to needs, while the remainder will activate action on existing needs. Of course, if clearance or similar programs are stepped up, both rates will rise.

SUMMARY OF INADEQUACIES

To summarize existing inadequacies, we present Table 5. It supplies figures for both a broad and narrow definition of overcrowding. Table 3 showed that in 1960 approximately 7,800 dwellings occupied by households of two or more persons were reported as dilapidated.

An additional 5,000 households were reported as living under inadequate conditions because their dwelling units contained 1.51 or more persons per room. If families with 1.01 to 1.50 persons per room are included among the inadequately housed, the total must be enlarged by another 13,600 households. A projected requirement of 130 more units a year to cover public clearance of standard dwellings is another necessary addition. Finally, there are the doubled households and the possibility that a slightly greater vacancy rate might be desirable in the normal stock. As indicated previously, these last are probably not essential if all households with over 1.01 persons per room are counted as part of potential needs, but they might increase the requirements under the narrower definition by 3,000.

These estimates give us a current inventory of inadequacies of either 16,450 or 27,050 under the wider definition. We also see that normal demand would require about 6,600 new units a year if population growth continued to average 19,000 persons yearly.

We must repeat immediately that these figures are not a measure of housing needs. They simply enumerate units which might be defined as substandard under existing criteria of public health and welfare. Total needs cannot be

TABLE 5
Summary of Current Demand and Inadequacies

Normal Demand:

From population movements: 1 new dwelling for each 3 additional persons added to the population

For replacement purposes : 300 dwellings a year for private replacements

Inventory of Inadequacies:

	Narrow Definition	Wider Definition
Dilapidated units	7,800	7,800
Overcrowded, not dilapidated:		
1.51 or more persons per room	5,000	5,000
1.01 to 1.50 persons per room	---	13,600
Undoubling and Additional vacancies	3,000	---
Five years public clearance of standard units	650	650
Total	16,450	27,050

Source: See discussion in text.

measured until these households and their characteristics are compared to the potential market supply at various costs.

The Supply of Standard Quarters. Whether or to what extent the large number of families now living in undesirable conditions represent a housing need depends on what opportunities they have to improve their quarters. Are they living in their present circumstances because they cannot afford decent dwellings or because they prefer to use their incomes otherwise? We have defined need as the gap between the total requirements to house families adequately and the supply which could be made available at some reasonable economic sacrifice.

What opportunities are open to families now in unsatisfactory quarters to better them? Such families can:

1. Rent existing standard rental units.
2. Rent newly constructed rental units.
3. Buy existing standard dwelling units.
4. Buy newly constructed quarters.
5. Rent or buy existing substandard units after they have been improved or rehabilitated.

A housing need exists only if they can find no adequate dwellings from any of these sources at reasonable sacrifice.

The Market in Existing Rental Units. Table 4 reveals the problem that would be faced by a family now in a substandard dwelling which decided to move and rent a standard unit. If it could freely compete for all units in the stock, odds would be 2 to 1 against its finding a standard unit if the

maximum rent it could pay were $50 a month. Even if it could pay as high as $100, the odds would still be against its obtaining an adequate unit.

Of course, this family desiring to move cannot compete freely for all units. Only rarely will a family paying cheap rent vacate a standard unit. Most of the families paying rents in the lower brackets are families who have occupied their dwellings for a long time and have been particularly aided by rent control.

Virtually no standard units in the existing housing stock are available at rents under $75 a month for new or moving families. In the bracket between $75 and $100, most of the available standard stock is in apartment houses reserved primarily for childless couples or some with one or two small children. Among houses for rent, only about 10 per cent can be had for total expenses of under $100 per month, and we may doubt if many of these are adequate. More than half the units available to families with five or more persons rent for over $120. Other people familiar with the market report that if the family numbers more than six members, any kind of rental becomes hard to find.

If a family wanting to move from a substandard unit is small and can afford around $90, it can probably find an adequate unit available in the existing stock. For each additional member of the family, the necessary rent payment will be increased by about $10 a month.

Costs of New Rental Apartment Units. Table 6 shows the approximate building costs and size of new units. On the average, a 450-square-foot, one-bedroom, or minimal new apartment costs between $7,800 and $9,000 to build. Costs increase with size.

This table does not include the cost of land. Land in the city of Honolulu, whether sold in fee or with a value obtained by capitalizing leases at 6 per cent, costs between $3.50 and $5 per square foot. If the sites are built up close to their maximum capacity, the land costs for two-bedroom units would run from $3,000 to $3,500 per unit. One-bedroom land costs would be somewhat less and, of course, the three-bedroom more.

Based on such costs, expected rentals by number of bedrooms are also shown in Table 6. A one-bedroom apartment could, under present conditions, be built to rent for between $100 and $115; a two-bedroom for from $115 to $135, and a three-bedroom for from $155 to $175. These are not de luxe units, but are meant for moderate or middle-income families. Minimum-type units might rent for slightly less.

TABLE 6

Estimated Construction Costs and Rentals
of Apartments in New, Moderate-Type Structures
(1960)

Type of Unit	Construction Costs Per Unit	Monthly Rents
One-bedroom (450 sq. ft.)	$ 7,800 - $ 9,000	$ 100 - $ 115
Two-bedroom (700 sq. ft.)	9,200 - 10,200	115 - 135
Three-bedroom (950 sq. ft.)	12,000 - 13,000	155 - 175

Source: Estimated from - Appraisal Report for the Honolulu Redevelopment Agency by John J. Hulten, MAI, dated June 1, 1960; Reports of the Hawaii Housing Authority; a special survey for this report.

Purchases of Existing One-Family Houses. In 1959 somewhat over 7,000 families bought and moved into new or existing units. In that year approximately 3,800 used houses were transferred. Building permits were issued for a further 3,600 units. Of these, 2,500 newly constructed units were sold, while an additional 1,100 were built on land which the owners purchased, owned previously, or leased.

Table 7 describes the existing houses sold. A little more than 40 per cent of the units which changed hands were in the city of Honolulu, but the majority were outside, concentrated mostly in the nearby suburbs.

Of the total, slightly over 60 per cent were sold on a fee simple basis. The great bulk of the units transferred in the city were in fee simple. In the rest of the Island, the numbers on leased land and on fee simple were nearly even. Minimum prices were just under $12,000. A few cheaper units appeared, but these, it may be assumed, were primarily vacation or week-end structures. At what prices did the bulk of the transactions occur? Less than 20 per cent of existing houses either inside or outside the city were transferred at prices under $15,000. The average price paid was between $20,000 and $21,000, while a large number of houses transferred at over $30,000.

This survey gives results similar to those obtained from reports on the costs of existing houses sold and financed through FHA-insured mortgages. Table 8 shows no units sold for under $10,000. Less than one per cent or, in terms of all transfers, only between 15 and 20 houses were sold for less

TABLE 7
Prices and Characteristics of Existing One-Family
Houses Transferred in the County of Honolulu in 1959
(number of houses)

Size of Lot (in sq. ft.)	City Houses	Suburban Houses	Floor Area (in sq. ft.)	City Houses	Suburban Houses
Under 3500	170	10	under 600	10	20
3500-4499	120	20	600 - 799	130	140
4500-5499	290	130	800 - 999	130	140
5500-6499	100	340	1000 -1099	150	370
6500-7499	10	120	1100 -1199	160	210
7500-8499	230	490	1200 -1399	260	220
8500-9999	110	80	1400 -1599	150	290
10,000 & up	600	980	1600 & over	640	780
Total Houses	1630	2170	Total Houses	1630	2170

Year of Construction	City Houses	Suburban Houses	Selling Price (in dollars)	City Houses	Suburban Houses	Total
Pre-1920	70	10	Under $8,000	--	40	40
1920 - 1929	240	--	$8,000-9,999	--	60	60
1930 - 1939	270	230	10,000-11,999	190	100	290
1940 - 1944	120	160	12,000-13,999	80	140	220
1945 - 1949	190	400	14,000-15,999	130	130	260
1950 - 1953	180	260	16,000-17,999	60	110	170
1954 - 1956	300	530	18,000-19,999	220	350	570
1957 - 1958	260	580	20,000-24,999	320	550	870
			25,000-29,999	380	220	600
Total Houses	1630	2170	30,000 & Over	250	470	720
			Total	1630	2170	3800

Source: A special survey for this study conducted by the University of Hawaii Economic Research Center from records in the Recorder's Office and the Department of Taxation.

TABLE 8
Characteristics of Properties, Transactions, and Mortgagors, for Dwellings with Mortgages Issued by the Federal Housing Administration in 1959

Total Acquisition Cost in Dollars	In Honolulu Percentage Distribution		For the entire U.S. Percentage Distribution	
	New Houses	Existing Houses	New Houses	Existing Houses
Under $10,000	0	0	3.6	17.7
$10,000 -11,999	0.5	0.4	15.8	20.0
12,000 -13,999	0.2	8.1	25.1	21.3
14,000 -15,999	21.1	16.7	24.6	17.0
16,000 -17,999	26.1	21.4	16.2	11.6
18,000 -19,999	17.3	19.6	7.9	6.1
20,000 & over	34.8	33.8	6.8	6.3
Total	100 %	100 %	100 %	100 %
Selected Averages				
Median Cost	$18,246	$18,348	$14,396	$13,153
Average FHA Value	$20,860	$20,108	$14,691	$13,242
Average Market Price of Site	$ 6,375	$ 6,205	$ 2,308	$ 2,364
* Price of Site as Percent of Value	30.6%	30.9%	16.2%	17.9%
Average Size in sq. ft.	1073	1031	1092	1058
Mortgagor's Median monthly income, in dollars	$ 748	$ 729	$ 578	$ 549
Average Monthly mortgage payment, in dollars	$ 121	$ 119	$ 100	$ 95
Average monthly housing expense, in dollars	$ 147	$ 145	$ 126	$ 120
Average Downpayment, in dollars	$ 2,644	$ 3,359	$ 1,385	$ 1,660

Source: Federal Housing Administration, "FHA Homes in 1959: Data for States and Selected Areas on Characteristics of FHA Operations under Section 203".

* How fig. on leased land. (Ref Pg 27)

than $12,000. We note again that between 10 and 15 per cent of sales had prices under $15,000.

Table 8 shows that the average purchaser of existing houses under FHA terms paid approximately $18,350. Because some of these units were on leased land, the actual value of the house including lot was higher, equaling $20,108. The FHA-insured houses cost about 10 per cent less than the average of all dwellings sold.

A major fact brought out by the FHA table is that nearly 31 per cent of the value of used houses sold in Honolulu was attributed to the cost of land. This is in contrast to only an 18 per cent land cost for the entire United States.

New Houses Purchased in 1959. Table 9 gives prices and descriptions of the new houses constructed under building permits issued in 1959. We see that there is not too much difference in the typical characteristics of the new and old. The floor area of the new houses is actually slightly less than that of the existing ones, and on the average the lot sizes are also fractionally smaller. However, far fewer were built on small lots of under 4,500 square feet.

Examining prices, we note a striking difference between the new houses built inside the city and those built outside. The cheapest 20 per cent of houses built outside the city were in about the same price range -- under $15,000 -- as were the sales of existing houses. The average new suburban house, however, sold for $18,000, which is 10 per cent less than the average selling price for existing houses outside the city. We also note that the

TABLE 9
Prices and Characteristics of New One-Family Houses
Constructed in the City and County of Honolulu in 1959
(number of houses)

Estimated Value of New House and Lot (in dollars)	City Houses	Suburban Houses	Total
Under $8,000	--	--	--
$8,000 - 9,999	--	30	30
10,000 -11,999	40	70	110
12,000 -13,999	40	220	260
14,000 -15,999	30	220	250
16,000 -17,999	30	650	680
18,000 -19,999	30	540	570
20,000 -24,999	130	700	830
25,000 -29,999	280	140	420
30,000 & over	420	30	450
Total	1000	2600	3600

Estimated Value of Lots Used in New Construction (in $)	Percentage Distribution
$4,000 - 4,999	6%
5,000 - 5,999	8
6,000 - 6,499	20
6,500 - 7,499	16
7,500 - 8,999	7
9,000 -10,999	4
11,000 -11,999	9
12,000 -13,999	20
14,000 & over	10
Total	100%

Floor Area (in sq. ft.)	All Houses
Under 799	200
800 - 899	400
900 - 999	250
1,000 -1,099	400
1,100 -1,199	450
1,200 -1,299	300
1,300 -1,399	250
1,400 -1,599	500
1,600 & over	850
Total	3600

Size of Lot (in sq. ft.)	All Houses
Under 4,499	50
4,500 -5,499	500
5,500 -6,499	750
6,500 -7,499	350
7,500 -8,499	700
8,500 -9,999	300
10,000 & over	950
Total	3600

Source: A special survey for this study conducted by the University of Hawaii Economic Research Center from sample of building permits using data in the Recorder's Office, the Department of Taxation, FHA, and special reports of builders.

proportion of very expensive houses built during this period was smaller than for all those that changed hands.

What about the prices of land for the new houses? Approximately 40 per cent were built on leased land and 60 per cent on fee simple. The distribution of the land prices for lots that were actually transferred shows 6 per cent at under $5,000, 14 per cent at less than $6,000, and a median price of about $7,500. Forty per cent or more of the lots cost over $10,000.

Expenses of Purchasing and Owning a Home. We can relate the selling prices of new and existing houses to the monthly payments required for them and then to the incomes required for their purchase. This has been done in Table 10.

Let us make some very liberal assumptions as to the sacrifices families would be willing to make to own houses and also as to the availability of financing and down payments for them. Let us assume that families would be willing to pay 25 per cent of their incomes for housing expenses; that the mortgages available to them would have as long a term and as low interest rates as those available on FHA-insured loans; and that the family could afford the going down payments. In Table 10, we can also see the differences which arise if they can get financing only with payments up to 20 per cent of their income.

If these assumptions held true -- and it is a very large if, since such terms are not actually available in the market -- let us next suppose that the lowest priced units will go to those with the lowest incomes. Every household will make a maximum financial effort and will not buy a unit for less

TABLE 10
Potential and Actual Income Distribution of
House Purchasers on Oahu in 1959
(Percentage Distribution)

Type of Purchasers	Under $400	$400-499	$500-599	$600-699	$700-799	$800-999	$1,000 & up	Total
			Monthly Income Levels					
Potential:								
Maximum (25%) payments and perfect match	7%	11%	24%	24%	12%	22%	--	100%
Normal (20%) payments and perfect match	0	7%	9%	16%	18%	34%	16%	100%
Actual:								
FHA new units	1%	13%	15%	13%	16%	24%	18%	100%
FHA existing units	2%	14%	17%	13%	14%	22%	18%	100%

Source: Tables 23, 24, and FHA.

than 25 or 20 per cent of its income. Table 10 shows the results of these assumptions applied to the distribution of new and existing house prices for the units which turned over in the market in 1959. Under the 25 per cent rule, about 7 per cent or 500 houses could have been bought by families with incomes under $400 a month. Eleven per cent of the houses would theoretically have been available to those with incomes between $400 and $500. Under the 20 per cent assumption, no units would have been available for the under-$400 group, while about 500 dwellings could have been bought by those in the next higher bracket.

When we compare the results of these assumptions with the actual distribution of those who did purchase under FHA terms, we see that a merger of the 20 and 25 per cent rules gives a rather close relationship in the brackets for monthly incomes of under $600. Slightly over one per cent of those with incomes under $400 were actually able to buy houses. A shortfall in this bracket is not surprising because the assumptions as to ability to obtain credit, to afford this type of expenditure, and to raise the down payment are too extreme.

Table 10 seems to indicate that in 1959 the average lower or middle-income family in Honolulu that desired to buy a house was making about as great a sacrifice as it possibly could, given the general financial situation and the cost of housing. It also appears clear that the great majority of families in substandard units could not have afforded to buy a house.

RECAPITULATION OF HOUSING NEEDS

We can now put together a series of figures which will enable the analyst to estimate housing needs. Table 5 set forth the expected annual requirements for meeting normal increases in demand. It also showed that around 16,000 civilian families of two or more persons might now be classed as living in inadequate housing situations using a rather narrow definition of overcrowding, while perhaps 27,000 families were badly housed under a wider definition.

The sections on supply indicated that small standard one-bedroom or studio apartments might be rented in the range of $75 to $100 for existing units and slightly above $100 for new units. The rental costs rose rapidly as families needed more space. Tables 7 to 10 showed that it would be virtually impossible to purchase a house on Oahu for which monthly expenses would not exceed $100.

The final estimate of housing needs varies depending on how one defines substandard, overcrowding, and ability to pay.

We have already discussed the first two possibilities and might suggest two others:

1. The wide definition from Table 5 gave 27,050 needed units.
2. The narrower definition produced 16,450 units.
3. A third, still narrower definition would be to consider only families having incomes under $7,000 a year in dilapidated or overcrowded units (1.51 or more persons per room). These come to approximately

9,900. To allow for some undoubling and for needed vacancies, add 1,500 units, plus 650 units for the five years' requirements to replace standard units lost through public clearance. The total under these limitations would show an existing need of 12,050 dwelling units. It could be met either through new construction or renewal.

4. A final, very narrow definition would be to include only those families in dilapidated or overcrowded structures who have annual incomes under $5,000.

If we define overcrowded as those with at least 1.01 persons per room and consider only tenants, the badly-housed group with under $5,000 in income contains 5,900 families. If we adopt this description, since this is the wider definition of overcrowding, we need include no additional requirements for relief of doubled families. The gap between the total requirements for families on Oahu and the number which normal demand could supply at existing costs and present income distributions is 5,900. To this might be added 600 standard units which will be cleared by present programs. The immediate need would thus total 6,500 dwelling units.

When a definition has been agreed upon and a consequent measure of needs has been derived, a useful tool to gauge housing progress will have been forged. Estimates of needs should be revised at periodic intervals. It will then be possible to show in more detail how conditions are changing.

Is the number of inadequately housed families decreasing? If so, is

How many more do we need each year?

the improvement a result of normal market action? Perhaps it results from families with increased incomes being able to afford better housing. Perhaps families who formerly had sufficient incomes have raised the percentage they spend on housing. Perhaps, contrary to recent experience, costs will have fallen. Or it might be the result of public action either through the enforcement of codes, clearance, or the making available of units at lower costs than can be offered through normal market channels.

The housing needs index can serve as a device both for planning policy and for measuring results. The accuracy of its preparation and the definitions adopted should depend upon the specific uses to which it will be put.

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STATE VETERANS' AND LOWER-MIDDLE INCOME HOUSING LOAN PROGRAMS

by

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FOREWORD

This report is in response to a legislative request for a study of the various methods by which an effective home loan program for veterans, low and middle income groups can be established by the State. It was transmitted to the Economic Research Center from the House Policy Committee as a result of requests from the House Committees on Finance and on Veterans, Police and Military Affairs.

The real concern of these legislative committees and other citizens with an effective home loan program stems from a combination of factors: (1) the high cost of home ownership or rental relative to incomes in Hawaii; (2) the higher down payment and monthly costs required for home ownership relative to other localities; (3) the high rate of family formation and consequent desire for home ownership relative to the availability of residential sites.

This report evaluates alternative possibilities for state participation in lending and insurance programs aimed at solution of the above problems. It also considers other types of public action which could have the same effect.

The authors of the report have been permitted to conduct their research in a free academic environment, but would not wish the University or State Administration to be held responsible for any of their findings. It is hoped that the report will be received in that spirit.

Shelley M. Mark
Director

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Introduction

The scope of this paper is limited to state loans and state insurance on loans for veterans' and lower-middle income group housing. The Federal Housing Administration (FHA) and the Federal Veterans Administration (VA) loans will be referred to only in connection with their inadequacy to meet the needs of Hawaii and to serve as a basis for comparison with some of the alternative programs discussed in this report. Rental projects under the Hawaii Housing Authority (HHA) which provide federally-aided low-cost housing for lower income or displaced families do not belong to loan programs as such. However, a modified version intended to help middle income people, although having no particular relationship with loans, is included as one of the other alternatives aimed at solving the housing problems of Hawaii. The remaining alternatives are: the reduction of shipping costs on building supplies, the lowering of construction costs through break-ups of tying contracts, and the leasing or sale of state-owned land for residential use. All of these will be discussed very briefly. A more thorough investigation of the problems involved, especially in the last three, will be necessary before any definite policy recommendations can be made.

Hawaii has a unique housing situation because of extremely high prices of dwelling units relative to peoples' incomes. In general, per capita income and market interest rates in Hawaii are comparable with those on the mainland. But with higher prices, a home purchaser in Hawaii

must pay higher down and monthly payments than he would otherwise on a similar house with the same terms of loan as on the mainland. To lower these payments, three things can be done, i.e., to lower the interest rate, to lengthen the life of the loan, and to cut land and construction costs. Or a combination of the three may be adopted. The state housing loan programs are designed to cope with the first two problems while a more basic solution, as will be argued in this paper, may lie in the third alternative.

This paper is divided into four sections. The first is to establish on the basis of income and housing costs in Hawaii the need for state housing loans. The second lists and explains six alternative loan programs which the state may adopt. They will be analyzed with regard to their relative merits and effectiveness. A third section discusses a number of other alternatives which purport to attack the same housing problems from different angles. Summary and conclusions are presented in the last section.

I. THE NEED FOR STATE HOUSING LOANS

Houses in Hawaii are extremely high-priced compared to those on the mainland. A comparable piece of property costs one-third to two-thirds more in the Fiftieth State. The following is an estimate made by one of the leading appraisers in Honolulu on the comparative cost of houses on Oahu and on the mainland:

Retail Prices of New Houses on Oahu and on the Mainland

	Leasehold		Fee Simple	
	Oahu	Mainland	Oahu	Mainland
Median, lower-cost group	$19,000	-	$25,000	$15,000
Median, middle-cost group	25,000	-	32,500	22,500
Median, higher-cost group	35,000	-	45,000	35,000

It must be kept in mind that houses do vary in construction and location, so that price comparisons are difficult to make. But the above rough estimate serves to indicate the over-all magnitude of price differentials.[1]

Per capita income in Hawaii is, if not slightly lower, about the same as that on the mainland.[2] Likewise, Hawaiian and mainland market interest rates are roughly comparable.[3] However, with higher costs of living in Hawaii than on the mainland, one would expect that people here have less money to save and to spend on housing since a larger portion of their incomes is spent on other essentials of life. High down and monthly payments because of higher prices of houses thus impose serious hardships on the would-be home owners.

For conventional loans, the down payment is usually one-third of the purchase price, plus closing costs. The life of the loan is usually less

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[1]The Economic Research Center is currently undertaking a detailed study of Hawaii's housing needs. This report is expected to be released in the very near future.

[2]See Robert E. Graham, Jr., "General Rise in State Income in 1959," Survey of Current Business, U.S. Department of Commerce, August 1960, pp. 10-17.

[3]See Edward W. Reed, Consumer Financing Costs and Practices in Hawaii, (Economic Research Center, University of Hawaii 1960), p. 32.

than twenty years. A higher purchase price would necessarily require higher down and monthly payments. For example, a $15,000 house on the mainland requires a down payment of $5,000 (plus closing costs). But a similar house would sell at $25,000 in Hawaii, the down payment on which would therefore be $8,333 (plus closing costs). Monthly payments by the home purchaser in Hawaii would also be higher because a larger amount is borrowed ($16,667 as against $10,000). Very few people of the lower and middle-income groups seem to be able to meet the large payments required in Hawaii.[4]

The FHA program makes it possible for home buyers to pay lower down payments. Besides, because of the federal backing of loans, interest charged can be slightly lower than that in the market. At present, the interest rate on FHA loans is 5-1/2 per cent, plus about 1/2 per cent collected by the FHA as mortgage insurance premium, while the market interest rate on mortgages is about 6-1/2 per cent. The federal agency does not lend the money directly, but insures the full amount of the loan.[5]

Even with the FHA loans, however, lower and middle income families in Hawaii may still have difficulty meeting the down and monthly payments required. This is because a larger percentage of the value of the

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[4]All illustrations in this paper are only with respect to newly constructed houses. For existing houses there would be differences in the appraised and market values, thus requiring higher down payments.

[5]The maximum amount insurable by FHA in Hawaii is $28,100.

house is required as a down payment the higher the prices of houses.[6] A $25,000 house in Hawaii would need at least $1,900 as down payment, plus closing costs.[7] This compares with a minimum of only $600 (plus closing costs) on a similar house priced at $15,000 on the mainland.[8] The monthly payments (including the FHA insurance premium) on a 30-year loan would be $140.78 in Hawaii as against $87.75 on the mainland. The private lenders usually specify that in order to qualify under the FHA program the would-be home owner must have a monthly income of at least 4 to 4-1/2 times the sum of monthly payments (including the FHA insurance premium) on the loan, and payments for property taxes and

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[6]Higher statutory limits for FHA insured mortgages have been allowed in Hawaii with the following loan-to-value ratios:

Properties approved for insurance prior to beginning of construction or construction completed one year or more --
up to 97 per cent of appraised value, not exceeding $16,875; plus
up to 90 per cent of value over $16,875; but not in excess of $22,500; plus
up to 70 per cent of value in excess of $22,500, provided that the maximum mortgage limits above-mentioned shall be applicable.

/Source: FHA Instruction Sheet (mimeographed) modifying FHA Booklet No. 2650, "This is the FHA."/

[7]Down payments, as in general practice, are rounded to the next higher $100.

[8]On the mainland the FHA insures mortgages representing up to 97 per cent of $13,500 of the property value as appraised by the FHA, plus 90 per cent of the next $4,500 of appraised value, plus 70 per cent of the remaining value.

fire and other insurance on the house. This, together with the larger down payment, tends to restrict the number of qualified home buyers in Hawaii.

Strangely enough, the land lease system of Hawaii comes to relieve the burden of home buyers in this particular respect. For an annual fee of $150 to $200 the home owner may lease the land. This would permit lower down and monthly payments (including the insurance premium and one-twelfth of the lease fee). For example, if the land for the $25,000 house in the previous paragraph is worth $6,000, the down payment (not including closing costs) could be reduced from $1,900 to $900 if a lease is taken. The monthly payments (including the insurance premium) would then be $110.31 plus one-twelfth of the lease fee, as against $140.78 in the previous illustration.[9] Financially, a home purchaser would be better off by taking a lease, not only because the payments required are lower but also because the lease fees are very low when compared to normal

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[9]Monthly payments are lower because the loan for this house on leased land is only $19,100 instead of $23,100. The down payment on a FHA loan is calculated on the basis of the price of the house plus the value of the lease. The latter is the difference between the 5-1/4 per cent of the value of the land and the annual lease fee capitalized at 5-1/4 per cent for 30 years (when the lease fee is renegotiable after the first 30 years). For example, in the above illustration, the difference between $315 (5-1/4 per cent of the land valued at $6,000) and the $200 annual lease fee is $115. The capitalized value of $115 at 5-1/4 per cent for 30 years is $1,719. This amount is added to $19,000 (the price of the house) to arrive at the minimum down payment required.

charges in the capital market. A $200 fee on a piece of $6,000 land gives the land owner an annual return of only slightly over 3 per cent. Of course, the home owner, not being the owner of the land, would not be able to make capital gains due to accretion of land value. But this is beside the point since we assume that he does not have the resources to buy the land. If he does, he has the choice of purchasing the lot with the house or leasing the land and investing his money elsewhere.

The above discussion is based on the assumption that lease fees remain low during the life of the lease, that the lease is renewable with no substantial increase in fees, and that when acquiring the lease there are no payments required for improvement costs on land or simply for the privilege of leasing the land. In general, lease fees are subject to renegotiation after the first 25 to 30 years of the lease (which usually runs to 50 or 55 years). As long as the land owners are willing to accept lower returns on their land, our analysis will be valid. But there is no assurance that they would act the same way 25 or 50 years later.

If the land owners ask for improvement costs on land or payments for the privilege of leasing the land, the situation is drastically changed. First, both payments are non-repayable and must be amortized over the life of the lease. This would increase the effective monthly payments. Second, private lenders under the FHA program require a payment in full or at least a half of the payment on such initial payments on leased

land. If these initial payments are high, they can easily wipe out the advantages mentioned above of lower down payments and of smaller costs of capital by leasing than by buying the land in fee. Some of the more expensive districts on Oahu do require high initial payments for lease rights. Such provisions are possible only because no land is available for sale in these districts.

As shall be discussed later, the land lease system, although it may in many cases relieve the burden of home buyers with respect to down and monthly payments, could partly be responsible for the high prices of land and houses in Hawaii. By restricting the availability of land, land owners may contribute to the general scarcity of houses, thus keeping the price of houses high.

The VA insures for veteran home owners 60 per cent of the price of the home up to $7,500. Because of this extremely low insured amount and the low interest rate of 4-3/4 per cent allowed (plus 1/2 per cent servicing charge collected by the lending institution), VA loans have little application in the State of Hawaii. The Hawaiian veterans' loan program (Act 211, Session Laws of Hawaii 1953, codified in Chapter 350, Revised Laws of Hawaii 1955) is designed to remedy this situation. Under this program, lenders, when they need funds, may sell their mortgages to the state after the construction of the house is completed. And the maximum amount of the mortgage is raised to $15,000 with the state insuring the full amount above what is insured by the Veterans Administration.

But because of the low interest rate allowed compared with the market, lending institutions tend to sell their mortgage holdings as soon as it is legally possible, keeping the 1/2 per cent servicing charge and passing the loan on to the state. As a result, the $20 million made available for this purpose in 1953 through the issuance of state general obligation bonds have been fully committed by 1959.

Without any question the Hawaiian veterans' loan program has helped many worthy citizens who had in the past contributed their services to the country. But because funds were limited, many qualified applicants were forced to turn to other and more expensive methods of financing. Unless the state permits discounts on Hawaiian veterans' loans, and therefore in effect recognizing the market interest rate, it is questionable whether private funds will make themselves available for any length of time. As it is, the $20 million have already been used up, and further state purchases of veterans' home mortgages must await the appropriation of more funds.[10]

The HHA has a number of federally-aided rental projects to help low income and displaced families. Excellent as these projects are, they can take in only a limited number of families. A fuller description of this program will be presented in Section III. It suffices to mention here that

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[10]The general obligation bonds issued by the State of Hawaii for the veterans' loan program are self-liquidating with the collections of interest and principal on the loans reimbursing the State for the interest and principal due on the bonds.

the maximum annual income permitted of the tenants is very low.

From the above analysis, it is apparent that given the high price of houses in Hawaii, many would-be home buyers have difficulty in meeting the down and monthly payment requirements. Under the FHA loans, a home purchaser must earn more than $700 a month in order to be qualified to buy a house of $25,000. This is on the assumption that his monthly income must be at least four times the monthly payment of $140.78 plus about $35 a month for property taxes and fire insurance. But usually an income of 4-1/2 times is required. In that case, he must earn not less than $790 a month. If he takes a lease on the land and therefore borrows less money, his minimum monthly income required will be less, even though the monthly lease fees must be included in the computation. A $25,000 house (including land) is considered as the median of lower-cost houses in Hawaii. On the other hand, a recent study by the State Taxation Department indicates that less than one-third of Hawaiian families earn annual incomes above $6,000.[11] The need for state assistance is obvious. Of course, families with very low incomes or facing extreme hardships may qualify for the HHA rental projects. But aside from the fact that available rental units are very limited in number, we must also recognize that many people aspire to home ownership and that this is desirable socially.

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[11]Department of Taxation, Hawaii Income Patterns - 1958, (State of Hawaii, 1959), p. 8.

II. ALTERNATIVE LOAN PROGRAMS

As mentioned earlier, the main difficulties of the Hawaiian home buyers are high down and monthly payments. A reduction in the rate of interest will make possible, with the same amount of down payment, lower monthly payments while a lengthening in the life of the loan tends to reduce the down payment, monthly payments, or both. For example, a 30-year net loan of $20,000 will require monthly payments of $113.60 (not including the FHA insurance premium) at 5-1/2 per cent interest. At 4-1/2 per cent, the payments would be $101.34 per month. If the same 5-1/2 per cent interest is charged but the life of the loan is extended from 30 to 40 years, monthly payments (not includinng the FHA insurance premium) on this $20,000 loan would be $103.20. A table showing the monthly payments on a loan of $20,000 at different interest rates and for different number of years is given below.

Monthly Payments* on a Loan of $20,000

	At 4% Interest	At 4-1/2%	At 5%	At 5-1/2%
25 years	$ 105.57	$ 111.17	$ 116.92	$ 123.00
30 years	95.49	101.34	107.37	113.60
35 years	88.56	94.66	100.94	107.60
40 years	83.59	89.92	96.44	103.20

*Not including insurance premiums.

With the lowering of the interest rate and the lengthening of the life of the loan in mind, the State of Hawaii may institute any of the following loan programs to lighten the burden of would-be home buyers. However,

it must be borne in mind that any such program may involve a state subsidy. The relative merits of the various programs will, therefore, also be judged on their fiscal feasibility.

1. State Insurance of Loans

The State of Hawaii may insure mortgages on houses. It may specify the maximum life of the loan and the interest rates which can be charged. To build up a reserve for meeting possible losses, the state may, as does the FHA, collect 1/2 per cent annually as insurance premium. At present, commercial banks in Hawaii, with the exception of the Bank of Hawaii, do not make FHA loans because their funds can earn more in other fields of investment. Furthermore, those financial institutions which do make such loans carry only a very limited portion of their investment portfolio in FHA loans. Consequently, it is very unlikely that the state can attract more private funds into the home insurance market through its insurance program. In addition, it is questionable that the interest rate on such loans could be reduced below the 5-1/2 per cent charged by the FHA or that the life of the loan could be extended beyond 30 years. As a rule, the private lending institutions are only interested in shorter-term loans, and they are already very selective in making FHA loans. The credit backing of the State of Hawaii which is certainly much weaker than that of the federal government cannot be hoped to change the situation. Of course, the state may lower or waive the down payments required. But

this would make the loan even less attractive to the lenders. With less equity in the house, people tend to be more careless in making payments or in the upkeep of houses. Chances of default would be greater. This state insurance program is therefore not promising although it may cost the state very little if the reserve proves to be adequate.[12]

2. State Purchase of Mortgages

The state may sell its general obligation bonds and use the funds so derived to support the Hawaiian veterans' loan program or any similar program to help lower-middle income families. Unless the interest rate allowed on such loans is comparable to the market rate, it is doubtful that any private money will be forthcoming. What eventually will happen is that the lenders will transfer their mortgage holdings to the state as soon as the construction of houses is completed, earning whatever servicing charge is allowed them. A $20 million bond issue, for example, will only be able to finance the purchasing of a thousand $20,000 homes.

With the present credit standing of the State of Hawaii, its general obligation bonds can probably be sold at 4-1/2 per cent interest rate. A minimum of 1/2 per cent of the amount of the loan should be charged annually to cover reserve for losses and incidental costs to the state.

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[12]What amount of reserves would prove to be adequate cannot be foretold, and the premiums required to build up an insurance fund for protecting the lenders must await until some experience had been gained.

Thus, it must be realized that any interest charge which is less than 5 per cent annually (not including the servicing charge of the lenders) actually involves a state subsidy.

The ability of the State of Hawaii to issue general obligation bonds is limited by the ceiling of $60 million set by the state constitution. Debt in excess of this amount and up to 15 per cent of the assessed value of properties within the state may be incurred by a two-thirds vote in both houses of the state legislature. At present, this absolute limit is $273 million. At the end of the calendar year 1960, state general bonds outstanding amounted to $170.4 million, leaving a maximum of $102.6 million which may be borrowed. How much of this amount may be made available for state housing loans is not known. But it could not be very large.

3. State Direct Loans

This is in effect the same as the mortgage purchase program discussed in (2) above, except that now the state engages in making loans directly. Under this program, the state may charge any interest, require any amount of down payment or grant the loan for any number of years. But the probable life of the house itself will set an upper limit to the life of the loan. As mentioned earlier, any interest charge below 5 or 5-1/2 per cent (the rate should be higher as the state is now also servicing the loan) means a state subsidy.

4. State Purchase and Sale of Property

This is a variation of the theme of the Hawaiian veterans' loan program and has been in actual use in the State of California for veterans.[13] The potential home buyer, whether a veteran or any other qualified person, may choose any house he likes and request the state to buy it. The state will pay the full price of the house, including closing costs, and resell the house to the would-be home owner on installment payment basis. The rate of interest to be charged, the down payment to be required, and the length of the loan to be granted may be set by the state according to its regulations. The title of the house is retained by the state until the full amount is paid by the home buyer.

The potential home owner under this Cal-Vet type program has the further advantage of being exempted from the property tax on the house for a number of years because the property belongs to the state until it is fully paid.

Same limitations as given in (2) and (3) apply here, i.e., limited ability of the state to issue general obligation bonds and the probable involvement of a state subsidy.

5. State Participation Loans

This program is similar to the one adopted in the state farm and small

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[13]California, Military and Veterans Code, Chapter 6, Article 3, (1943); commonly called the Cal-Vet Program.

business loans. The state may lend up to 90 per cent of the loan and invite commercial banks or other financial institutions to participate and lend the difference. The private lending institutions will be asked to service the loan. They may be permitted to charge the current market interest rate while the state may charge a lower rate. Thus, the effective rate to the borrower will lie somewhere between the two. For instance, if the state lends 60 per cent of the loan at 5 per cent interest and the bank lends 40 per cent at 6-1/2 per cent, the effective rate will be 5.6 per cent (5% x 60% + 6-1/2% x 40% = 5.6%).

The merit of this program lies in that private funds may be attracted. The effective rate paid by the borrower is higher than what the state receives, but it is below the market rate. Exactly what it will be depends on the proportion of the loan put up by the state and by the private lenders, and on the rates each will charge. The private lender will be able to service the entire loan at very little additional cost since it has to service that portion of the loan which it lends under the participating plan. Another advantage of this program is that it can be arranged in such a way that the private lenders will receive payments first; only after they have collected the full payment of both the principal and the interest will further payments be made to the state. In this way, the down payment required can be waived or the life of the loan can be lengthened. The private lenders take relatively little risks and should be willing to participate in the loan. It is the state which shoulders most of the risk.

6. State Participation in FHA Loans

This is a variation of (5), with the federal government also being brought into the program. The FHA, as usual, will guarantee the loan according to its regulations, but the state can lend the down payment and/or a part of the monthly payments to the home buyer. This is in effect a participating loan with a commercial bank or any other financial institutions lending a part of the loan with a federal guarantee of the loan. The state will lend the other part to make down and monthly payments easier for the home purchaser. For example, if the total life of the loan is 40 years, the private lending institutions may collect payments for the first 30 years, a part of these payments being contributed by the state which will collect its own share during the remaining 10 years.

The advantage of this program over (5) is that this may require even less funds on the part of the state. Most of the loan will come from private sources. Moreover, since the state lends its money in monthly sums, it could be financed by issuing state general obligation bonds in small lots for a number of years instead of by issuing a large block at one time. This will facilitate the marketing of state bonds. On the other hand, this program requires a tremendous amount of work on the part of the state; its administrative cost could be prohibitive. A more serious obstacle is that a revision of the Federal Housing Act is necessary because the current law does not permit co-ownership or having a second mortgage on the FHA loans.

III. OTHER ALTERNATIVES

The six loan programs outlined in the previous section are intended to help the would-be home owners by lowering the down and monthly payments. This is made possible through state action to reduce the effective interest rate to the borrower, to lengthen the life of the loan, or both. We have seen that the first alternative, the state insurance of mortgages, is not very promising, while the next three (the state purchase of mortgages, the state direct loans, and the state purchase and sale of houses) in order to be effective require a large amount of state funds and probably involve state subsidies. With the present limitation on the ability of the state to borrow, it is very doubtful that any significant amount of state funds would be forthcoming. The last alternative, the state participation in FHA loans, may require much less funds from the state, but the complications of administration and, more seriously, the necessity of a change in the federal law offset most of its advantages. The fifth alternative, the state participation loans, permits the use of private funds and at the same time minimizes the administrative work of the state. It is flexible because it allows the participation of the state and a bank or other financial institutions in various proportions. But with the housing situation in Hawaii as it is, how effective will this program be?

Roughly, there are 60,000 families in the State of Hawaii with annual incomes of between $4,000 and $7,000. Of this total, about a half, or

30,000 families, do not own homes.[14] To help these families buy homes of $20,000 under a state participating loan of say, 60 per cent by the state and 40 per cent by private institutions would require $360 million of state funds. It is not conceivable that this amount or any large portion of it could be made available in the foreseeable future.

Furthermore, there always is the danger that with increased demand for houses supported by the state loan programs, the price of houses will skyrocket if no adequate control is exercised by the state. A 10 per cent increase in the price of houses can easily wipe out the advantage to the potential home owner of a drop in the interest rate of one per cent. It takes a tremendous effort on the part of the state to lower the interest by one per cent. But judging from the past experience, a 10 per cent increase in the price of houses is nothing spectacular. It has happened many times before. It is therefore very possible that the state loan programs would only create windfall profits for some people, benefiting the lower-middle income group very little.

Two other possible solutions to the housing problem in Hawaii are

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[14]These figures are only extremely rough approximations arrived at by taking the Honolulu Star Bulletin estimates of the number of Oahu households, their family income breakdown projected to cover the entire state, and the percentage breakdown of home owners and renters. A more reliable estimate could not be obtained because detailed and reliable data are unavailable. See Honolulu Star Bulletin, 1960 Consumer Analysis (Honolulu, Hawaii 1959), pp. 12-13.

the building of more rental units by the state and the reduction of building costs. The former is listed below as the seventh alternative while the latter is subdivided into alternatives (8) to (10).

7. HHA-Type Rental Projects

The HHA administers at present three types of rental projects, but the one which provides low-cost housing to lower-income and displaced families is relevant here. The construction of buildings, mostly apartment units, is financed by the issuance of state revenue bonds. But upon the completion of construction, when certain requirements such as the promise by municipal governments to provide adequate sewage system, schools, and public parks within a specified time are met, the federal government will agree to pay the principal and interest on the bonds. On the other hand, the operating costs of the HHA rental projects must be met by its rental income. As a rule, only families of very low income are qualified to rent a HHA unit. The following table gives the maximum annual income allowed for families of various sizes. The rent, including utilities, is 20 per cent of the monthly income, but the lowest rent is $32 for families with income of $160 per month or below.

Maximum Income for Admission

Net income at time of admission less:

a. An exemption of $100 for each minor member of the family other than the head of the family and his spouse, and

b. the amounts paid by the United States Government for disability or death occurring in connection with military service

shall not exceed the following annual income limits for aided projects:

	Annual Income Limits for Admission		
	Hawaii	Oahu	
		Regular	Special 2/
1 1/ or 2 persons	$ 3000	$ 3400	$ 4250 3/
3 or 4 persons	3200	3600	4500
5 or more persons	3400	3900	4875

1/ Applies only to individual elderly persons at time of admission.
2/ Applies to admission of displaced families and displaced individuals. This also applies to people of continued occupancy.
3/ Applies to individual elderly persons and one-person residual families.

Source: Hawaii Housing Authority, Master Management Resolution No. 318, p. 19.

Since these projects are self-financing so far as operating costs are concerned, the HHA must take in some tenants with higher incomes within the permitted range to offset losses on units rented to families with extremely low incomes. Thus, not all qualified families of very low income can find a roof under the HHA rental units. Besides, the availability of federal aid is limited by the willingness of municipal governments to provide necessary services.

It is possible that the maximum annual income permitted under HHA could be extended to cover families with $4,000 to $7,000 incomes although this would require a change in the federal law. With higher rents from these people (provided they still pay 20 per cent of their monthly incomes in rents), it will be possible for the HHA to shelter more families with very low incomes. The state may subsidize the municipal governments for their costs of developing the community so that more federal funds would be made available.

This program, provided that federal aid can be obtained, has merits in making it possible for people with very low incomes to live in decent places and in easing the pressure on housing in general. But it unavoidably involves the regimentation of people's lives. Many may not like the idea of living in a concentrated area labeled as government subsidized. The immobility of people resulting from the fact that once they have moved into a low-cost unit they may have difficulty in re-locating or have no desire to do so may also be socially and economically undesirable. In addition, as mentioned earlier, people have the desire to own their homes. Rental projects cannot solve this problem.

8. Lowering of Shipping Costs on Building Supplies

It has been alleged by many people that high costs of houses in Hawaii are the results of high shipping costs on building materials, high profits of supply houses made possible by the practice of tying contracts,

the scarcity and high costs of land, and costly subdivision expenses caused by high standards set by municipal governments. Insofar as a high standard for city dwelling is desirable, nothing can be done with respect to the last factor mentioned. But some relief might be obtained through an attack on other problems.

Many complaints are heard that freight rates from the Pacific Northwest, where Hawaii obtains much of the building materials, to Hawaii are very high. Whether this is due to higher unit operating costs or due to monopoly profits is not known. A new barge line, organized to ship lumber from the Pacific Northwest to Hawaii at 20 to 25 per cent less than the current rates,[15] may create more competition and lead to lowering of shipping costs. The determination of a "fair" freight rate is extremely difficult. And it is only through a free operation of the market that such a rate may become effective.[16]

9. Reducing Construction Costs Through Break-Ups of Tying Contracts

It has been alleged that the bonding practice of the building trade, i.e., the practice requiring a contractor to put up a bond insuring that his construction meets the specific city requirements, makes it possible

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[15] The Honolulu Advertiser, November 18, 1960, p. A-1.

[16] See Vernon A. Mund and Fred C. Hung, Interlocking Relationships in Hawaii and Public Regulation of Ocean Transportation (Economic Research Center, University of Hawaii, 1961).

for supply houses to maintain tying contracts. Small contractors usually do not have sufficient funds to put up the bond. Supply houses will offer a small contractor financial help and at the same time require the contractor to buy all of his supplies from them. Bank credit and land lease are usually offered in the same package deal. In return for such services, it is claimed,the supply houses charge higher prices for their supplies. Since a small contractor has few alternatives, he is willing to accept such prices, knowing that he can pass them on to the home buyers. A large contractor may be able to extract favorable terms from the supply houses through shrewd bargaining. But he usually pockets his savings rather than pass the lower costs on to the home purchasers.

How much the cost of a house could be lowered by eliminating the alleged excessive profits of the supply houses if the state takes action to outlaw tying contracts is not known. A more thorough study than this would be necessary to obtain an accurate estimate. But according to one of the leading appraisers in Honolulu, the reduction in cost on a $19,000 house (leasehold) would be as high as $3,000.

10. Lease and Sale of State-Owned Land

The scarcity of land in the State of Hawaii is a factor which contributes to the scarcity of houses and consequently to their high prices. The limited availability of lease land may also be a contributing factor

to the existence of tying contracts. If the state leases or sells its own land for residential use, this would tend to ease the supply situation and may lower the prices of both land and houses. However, the supply of state-owned land on Oahu where the pressure on housing is greatest is rather limited. It is doubtful that a significant result would come from the leasing or sale of state land. It may therefore be necessary for the state to exercise the power of "eminent domain" to force the sale of private land if such action were deemed to be in the public interest.

IV. SUMMARY AND CONCLUSIONS

A number of alternative state loan programs have been suggested. The most promising of these is the state participating loan program which allows the use of private funds and minimizes the amount of administrative work. But for this program to be effective in helping most of the people in the $4,000-$7,000 income bracket who do not presently own their homes (and assuming that it is economically not feasible to help people with incomes below $4,000 to buy their own homes), it would require a tremendous amount of money which is beyond the resources of the state government. Besides, any state loan programs of a large magnitude may result in higher prices of houses, only to provide some people with windfall profits.

The HHA rental projects may be expanded to include families in the $4,000-$7,000 income bracket, but this may have an undesirable effect

of regimentation and immobility.

A more basic solution may lie in the lowering of land prices and construction costs. But a more careful study of these problems is necessary before any policy recommendations can be made.

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A HOUSING NEEDS INDEX FOR OAHU

Preliminary Summary of Findings

The Policy Committee of the House of Representatives of the State Legislature, acting upon a request from the Committee on Housing, requested the Economic Research Center to examine and to propose solutions to the problems involved in constructing an index of housing needs in the State of Hawaii. To accomplish this task, the Economic Research Center retained the services of Dr. Sherman J. Maisel of the University of California, a nationally recognized expert in the housing field. What follows is a preliminary summary of Dr. Maisel's report which is itself not yet in finished form. This summary presents the conclusions of the report and very briefly discusses its methodology. It is being released in this form because of the tremendous legislative and public interest in housing problems at this time. The complete final report is being processed for publication.

Needs Versus Demand

The report differentiates in considerable detail between the "need" for housing and the "demand." Demand concerns the number of housing units that a population would occupy at prevailing market prices, while need relates to the adequacy of a situation in terms of socially established goals or norms.

The forces of the market will, if left to themselves, result in a form of equilibrium in which housing demand is satisfied. This situation may,

however, leave a great deal to be desired from a social point of view. Many families may be in sub-standard houses, they may be overcrowded, or they may be doubled-up. In fact, unsatisfactory conditions in terms of needs are not only possible when demand is fully satisfied but are to be expected because of generally prevailing views as to what housing conditions "ought to be."

Housing Needs Defined and Determined

Housing needs (as distinct from demand) are defined as the gap between the total dwellings required to house the population adequately and the supply which could be made available at some reasonable economic sacrifice. In order to give quantitative expression to this concept, it must be determined what is adequate housing, what are reasonable economic sacrifices, and what supply would be forthcoming at prices falling within the area of reasonable sacrifices. The determination of adequacy and sacrifice require subjective decisions on the part of those responsible for public policy, and needs will vary depending on the decisions which are made. The supply factor is an objective datum, though even this may be influenced by certain types of public policy, e.g., anti-trust action or land reform measures.

Dr. Maisel suggests that the housing supply can be inadequate if (1) people must live in sub-standard dwellings, (2) they are overcrowded, (3) "doubled" households exist, or (4) there are not enough vacancies to

allow normal choice. He suggests as a measure of reasonable sacrifice a payment of either 20 or 25 per cent of a family's income for housing expenditures.

For purposes of the report, sub-standard units included those dwellings reported in the Honolulu Household and Housing Survey of December 1959 as either (1) badly run down, (2) poorly built, or (3) unsafe. The report defines overcrowded units as those containing 1.01 or more persons per room in a dwelling unit or, on a more restricted definition, those with 1.51 or more persons per room. Various sources identified in the main body of the report were drawn upon to establish income distribution and the cost of existing and new dwelling units.

Current Housing Needs

Four alternative measures of existing needs were established. They differ among themselves in terms of where the line is drawn between standard and sub-standard housing, on the one hand, and, on the other, what is considered to be a reasonable sacrifice based on average and minimum costs of housing. In each case, needs arising from anticipated clearance projects are included. These alternative measures of existing needs are as follows:

1. All households in dilapidated dwellings and those containing more than 1.01 persons per room — 27,050

2. All households in dilapidated dwellings and those with 1.51 or more persons per room, plus an allowance for undoubling — 16,450

3. Households in the second category having incomes of less than $7,000 per year 12,050

4. Tenants in the first category having incomes of less than $5,000 per year 6,500

The main body of the report explains in detail how these figures were derived. It also shows various characteristics of the families in each group. At the same time, it considers the reasons why one might desire to use one of the definitions and totals in place of any of the others. However, housing needs are large under even the narrowest definition. Exactly how much larger they may be depends on what one considers an inadequate dwelling and what is a reasonable payment in relation to a family's income and resources.

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State Veterans' and Lower-middle Income Housing Loan Programs

The scope of this paper is limited to state loans and state insurance on loans for veterans' and lower-middle income group housing. The Federal Housing Administration (FHA) and the Federal Veterans' Administration (VA) loans will be covered only in connection with their inadequacy to meet the needs of Hawaii and to serve as a basis for comparison with some of the alternative programs suggested in this report. Rental projects under the Hawaiian Housing Authority (HHA) which provide federal-aided low-cost housing for lower income or displaced families do not belong to loan programs as such. However, a modified version intended to help middle income people as well is included as one of the other alternatives which, though having no particular relationship with loans, are also aimed at solving the housing problems of Hawaii. The rest of the other alternatives are: the reduction of shipping cost on building supplies, the lowering of construction cost through break-ups of tying contracts, and the leasing or sale of state-owned land for residential use. All four will be discussed very briefly. A more thorough investigation of the problems involved, especially in the last three, will be necessary before any definite policy recommendation could be made.

Hawaii has a unique housing situation because of the extremely high prices of dwelling units relative to peoples' income. In general, per capita income and market interest rates in Hawaii are comparable to those on the mainland. But with higher prices a home purchaser in Hawaii must pay higher down and monthly payments than he would on a similar house under same terms of loan on

the mainland. To lower these payments, three things can be done, e.g., to lower the interest rate, to lengthen the life of the loan, and to cut land and construction costs. Or a combination of the three may be adopted. The state housing loan programs are designed to cope with the first two problems while a more basic solution, as will be argued in this paper, may lie in the third alternative.

This paper is divided into four sections. The first is to establish on the basis of income and housing costs in Hawaii the need for state housing loans. The second lists and explains six alternative loan programs which the state may adopt. They will be analyzed with regard to their relative merits and effectiveness. A third section discusses a number of other alternatives which purport to attack the same housing problems from different angles. Summary and conclusions are presented in the last section.

I. The Need for State Housing Loans

Houses in Hawaii are extremely high-priced comparing to the mainland. A similar piece of property costs one-third to two-thirds more in the fiftieth state. The following is an estimate made by one of the leading appraisers in Honolulu on the comparative cost of houses in Oahu, Hawaii and the mainland:

Retail Prices of New Houses in Oahu, Hawaii

And the Mainland

	Leasehold		Fee Simple	
	Oahu, Hawaii	Mainland	Oahu, Hawaii	Mainland
Median, lower-cost group	$19,000	--	$25,000	$15,000
Median, middle-cost group	25,000	--	32,500	22,500
Median, higher-cost group	35,000	--	45,000	35,000

It must be kept in mind that houses do vary in construction and location, thus making price comparison difficult. But the above rough estimate serves to indicate the over-all magnitude of price differentials.[1]

Per capita income in Hawaii is, if not slightly lower, about the same as that in the mainland.[2] Likewise, Hawaiian and mainland market interest rates are roughly comparable.[3] However, with higher cost of living in Hawaii than on the mainland, one would expect that people here have less money available for housing and saving as a larger portion of their income is spent on other essentials of life. High down and monthly payments on account of the high price of houses thus impose serious hardships on the would-be house owners.

For conventional loans, the down payment is usually one-third of the purchase price, plus the closing costs. The life of the loan is below twenty years. Higher purchase price would necessarily require high down and monthly payments. For example, a $15,000 house on the mainland requires a down payment of $5,000 (plus closing costs). But a similar house would sell at $25,000 in Hawaii, the down payment on which would therefore be $8,333 (plus closing costs). Monthly payments by the home purchaser in Hawaii would also be higher because a larger amount is borrowed ($16,667 as against $10,000). Very few people of the lower and middle income group seem to be able to meet the high payments requirement in Hawaii.[4]

The FHA program makes it possible for home buyers to pay lower down payments. Besides, because of federal backing to the loans, interest charged can be slightly lower than it is in the market. At present, the interest rate on FHA loans is 5½%, plus about ½% collected by the FHA as mortgage insurance premium, while market interest rate on mortgages is about 6½%. The federal agent does not lend the money directly, but insures the full amount of the loan.[5] Even under the FHA loans, however, lower and middle income families in Hawaii may still have difficulty meeting the down and monthly payments requirement. This is due to the fact that down payments

under FHA loans are proportionately higher for higher-priced houses.[6] A $25,000 house in Hawaii would need $1,900 as down payment, plus closing costs. This compares with only $450 (plus closing costs) on a similar house at $15,000 on the mainland. The monthly payments (including insurance premium) would be $110.31 in Hawaii as against $88.63 on the mainland. The FHA rules that in order to qualify, the would-be home owner must have a monthly income of at least 4 to 4½ times the amount of monthly payments (including insurance premium) on the house. This, together with the larger down payment, tends to restrict the number of qualified home buyers in Hawaii.

Strangely enough, the land-lease system of Hawaii comes to relieve the burden of home buyers in this particular respect. For an annual fee of $150 to $200, the home owner may lease the land. This, though increasing monthly payments (including insurance premium and one-twelfth of the lease fee), permits a lower down payment. For illustration, if the land for the $25,000 house in the previous paragraph is worth $6,000, down payment (not including closing costs) could be reduced from $1,900 to $800 if a lease is taken. The monthly payments (including insurance premium) would then be $110.92 plus one-twelfth of the lease fee, as against $110.31 in the previous illustration. Economically, a home purchaser is better off by taking a lease, not only because the down payment requirement is lower but also because the lease fees are very low when compared with normal charges in the capital market. A $200 fee on a price of $6,000 land gives an annual return of only slightly over 3%. However, as shall be discussed later, the land lease system could be partly responsible for the hgih price of houses in Hawaii. ~~But~~ restricting the availability of land, land owners may contribute to the general scarcity of houses, thus keeping their prices high.

The VA insures for veteran home owners up to $7,500 on a house priced at $12,500. Because of this extremely low ceiling and the low interest rate of 4 3/4% allowed (plus ½% servicing charge collected by the lending institution), VA loans have little application in the state of Hawaii. The Hawaiian veterans' loan program is designed to remedy this situation. Under this program, the lenders, when they need funds, may sell their mortgage to the state after the construction of the house is completed. And the maximum amount of the mortgage is raised to $15,000 with the state insuring the full amount above what is insured by the federal VA. But because of the low interest rate allowed comparing with the market, the lending institutions tend to sell their mortgage holdings as soon as it is legally possible, keeping the ½% servicing charge and passing the loan on to the state. As a result, the $20 million created for this purpose through the insurance of state general obligation bonds have been exhausted within a short period.

Without any question the Hawaiian veterans' loan program has helped many worthy citizens who had in the past contributed their service to the country. But the limited funds resulted in turning away many qualified applicants. Unless the state permits discount on Hawaiian veterans' loans, therefore in effect recognizing the market interest rate, it is questionable that private funds will make themselves available for any long period of time. As it is now, the $20 million have already been used up. More loans must await the appropriation of more funds.[7]

The HHA has a number of federal-aided rental projects to help low income and displaced families. Excellent as these projects are, they can take in only a limited number of families. A fuller description of this program will be presented in section III. It is suffice to mention here that the maximum

annual income permitted of the tenants is very low.

From the above analysis, it is apparent that given the high price of houses in Hawaii, many would-be home buyers have difficulty in meeting the down and monthly payments requirement. Under the FHA loans, a home purchaser must earn at least $5,295 annually to be qualified to buy a house of $25,000. This is on the assumption that his monthly income must be at least four times the monthly payment of $110.31. But usually a 4½ times income is required. In that case, he must make at least $5,957 annually. If he takes a lease on the land and therefore pays less in down payment, as was illustrated before, his minimum annual income required will even be higher. A $25,000 house (including land) is considered as at the median of lower-cost houses in Hawaii. On the other hand, according to a study made by the Bank of Hawaii, only about one-third of Hawaiian families earn annual income above $6,000.[8] The need for state assistance is obvious. Of course, families with very low income or having extreme hardship may qualify for the HHA rental projects. But aside from the fact that available rental units are very limited in number, we must also recognizd the desire of many people to own their house and from a social point of view, the desirability of home ownership.

II. Alternative Loan Programs

As mentioned earlier, the main difficulties of Hawaiian home buyers are high down and monthly payments. A cut in the rate of interest will allow, with the same amount of down payment, lower monthly payments while a lengthening in the life of the loan tends to reduce down payment, monthly payments, or both. A 30-year loan of $20,000 will require monthly payments of $113.60 (not including insurance premiums) at 5½% interest. At 4½%, the payments would be

$101.34 per month. If the same 5½% interest is charged but the life of the loan is extended from 30 to 40 years, monthly payments (not including insurance premiums) on the $20,000 loan would be $103.20. A table showing the monthly payments on a loan of $20,000 at different interest rates and for different number of years is given as follows:

Monthly Payments* on a Loan of $20,000

	at 4% interest	at 4½%	at 5%	at 5½%
25 years	$105.57	$111.17	$116.92	$123.00
30 years	95.49	101.34	107.37	113.60
35 years	88.56	94.66	100.94	107.60
40 years	83.59	89.92	96.44	103.20

*not including insurance premiums

With the lowering of interest rate and the lengthening of the life of the loan in mind, the State of Hawaii may institute any of the following loan programs to lighten the burden of would-be home buyers. However, it must be realized that any such program may involve state subsidy. The relative merits of the various programs will terefore also be judged on their fiscal feasibility.

1. State Insurance of Loans

Like the FHA, the State of Hawaii may insure mortgages on houses. It may specify the maximum life of the loan and the interest rates which can be charged. To build up reserve for meeting possible losses, the state may, like the FHA, collect ½% annually as insurance premium. At present, commercial banks in Hawaii, with the only exception of the Bank of Hawaii, do not make FHA loans because their funds can earn more in other fields of investment.

Furthermore, for those financial institutions which do make such loans, they carry only a very limited portion of their investment in FHA loans. Consequently, it is very unlikely that the state can attract more private funds into the home insurance market through its insurance program. In addition, it is questionable that the interest rate on such loans could be reduced below the 5½% under the FHA or that the life of the loan can be extended beyond 30 years. As it is now, the lenders have already been very selective in making FHA loans. The credit backing of the State of Hawaii which is certainly much weaker than that of the federal government cannot be hoped to change the situation. Of course, the state may lower or waive the down payment required. But this would make the loan even less attractive to the lenders. With less equity in the house, people tend to be more careless in making payments and in upkeeping the house. The chance of default would be greater. This state insurance program is therefore not promising although it may cost the state very little if the reserve proves to be adequate.[9]

2. State Purchase of Mortgage

The state may sell another amount of its general obligation bonds and use the fund so derived to support the Hawaiian veterans' loan program or any similar program to help lower-middle income families. Unless the interest rate allowed on such loans is comparable to the market rate, it is doubtful that any private money will be forthcoming. What eventually will happen is that the lenders will transfer their mortgage holdings to the state as soon as the construction of the houses is completed, earning whatever servicing charge is allowed them. A $20 million bond issue, for example, will only be able to finance the purchase of a thousand $20,000-homes.

With the present credit standing of the State of Hawaii, its general obligation bonds can probably be sold at 4½% interest rate. A minimum of ½%

of the amount of the loan should be charged annually to cover reserve for losses and incidental costs to the state. Thus, it must be realized that any interest charge which is less than 5% annually (not including the servicing charge of the lenders) actually involves state subsidy.

The ability of the State of Hawaii to issue general obligation bonds is limited by the ceiling of $60 million set by the state constitution. Debt in excess of this amount and up to 15% of the assessed value of properties within the state may be incurred by a two-thirds vote in both houses of the state legislature. At present, this absolute limit is $273 million. At the end of the calendar year 1960, state general bonds outstanding amounted to $170.4 million, leaving a maximum of $102.6 million which may be borrowed. How much of this amount may be made available for state housing loans is not known. But it could not be very large.

3. State Direct Loans

This is in effect the same as the mortgage purchase program discussed in (2) above, except that now the state engages in making loans directly. Under this program, the state may charge any interest, require any amount of down payment or grant the loan for any number of years. But the probable life of the house itself will set an upper limit to the life of the loan. As mentioned earlier, any interest charge below 5 or 5½% (the rate should be higher as the state is now also servicing the loan) means state subsidy.

4. State Purchase and Selling of the Property

This is a variation of the theme of the Hawaiian veterans' loan program and has been in actual use in the State of California for veterans.[10] The potential home buyer, whether a veteran or any other qualified person, may choose any house he likes and request the state to buy it. The state will pay the full price of the house, including the closing costs, and resell the house to the would-be home owner on installment payment. The rate of interest to be charged, the down payment

to be required, and the length of loan to be granted may be set by the state according to its regulations. The title of the house is retained by the state until the full amount is paid up by the home buyer.

The potential home-owner under this program has the further advantage of exemption from property tax on the house for a number of years because the property belongs to the state until it is fully paid off.

Same limitations as given in (2) and (3) apply here, i.e., limited ability of the state to issue general obligation bonds and the probable investment of state subsidy.

5. State Participating Loans

This program is similar to the one adopted in the state farm and small business loans. The state may lend up to 90% of the loan and invite commercial banks or other financial institutions to participate and lend the difference. The private lending institutions will be asked to service the loan and keep the records. They may be permitted to charge the current market interest rate while the state may charge a lower rate. The effective rate to the borrower will lie somewhere in between. For instance, if the state lends 60% of the loan at 5% interest and the bank lends 40% at 6½%, the effective rate will be 5.6% (5% x 60% + 6½% x 40% = 5.6%).

The merit of this program lies in that private funds may be attracted. The effective rate paid by the borrower is higher than what the state receives, but it is below the market rate. Exactly what it will be depends on the relative proportion of the loan put in by the state and the bank, and on the rates each will charge. The bank will be able to service the entire loan and keep the books at very little additional cost since it has to service that portion of the loan which it lends under the participating plan. Another advantage of this program is that it can be arranged in such a way that the bank will receive payments at first; only after the bank has collected full payment in both principal and interest will further payments

go to the state. In this way, the down payment requirement can be waived or the life of the loan can be lengthened. The banks take relatively little risk and should be willing to participate in the loan. It is the state which shoulders most of the risk.

6. State Participation in FHA Loans

This is a variation of (5), with the federal government also involved. The FHA, as usual, will guarantee the loan according to its regulations, but the state can lend the down payment and/or a part of the monthly payments to the home buyer. This is in effect a participating loan with a commercial bank or any other financial institution lending a part of the loan under federal backing. The state will lend the other part to make down and monthly payments easier for the home purchaser. For example, if the total life of the loan is 40 years, the bank may collect payments for the first 30 years, a part of these payments being contributed by the state which will collect its own share during the remaining 10 years.

The advantage of this program over (5) is that this may require even less funds on the part of the state. Most of the loan will come from private sources. Moreover, since the state lends its money in monthly sums, it could be financed by issuing state general bonds in small lots for a number of years instead of by issuing a large block at one time. This will facilitate the marketing of state bonds. On the other hand, this program requires a tremendous amount of work on the part of the state, its administrative cost could be prohibitive.

III. Other Alternatives

The six loan programs outlined in the previous section are intended to help the would-be home owners by lowering the down and monthly payments. This is made possible through state action, by reducing the effective interest rate to the borrower, by lengthening the life of the loan, or both. We have seen that the first alternative, state insurance of mortgage, is not very promising while the next three (state

purchase of mortgages, state direct loan and state purchase and selling of the property) in order to be effective require a large amount of state fund and probably involve state subsidies. With the present limitation on the ability of the state to borrow, it is very doubtful that any significant amount of state fund would be forthcoming. And the political sentiment of the state seems to shy away from direct subsidies. The last alternative, state participation in FHA loans, may require much less fund from the state, but the complication of its administration offsets most of its advantages. The fifth alternative, the state participating loans, permits the use of private funds but at the same time minimizes the administrative work of the state. It is flexible because it allows the participation of the state and the bank or other financial institutions in various proportions. But with the housing situation in Hawaii as it is, how effective is this program?

Roughly, there are 60,000 families in the State of Hawaii which have an annual income between $4,000 and $7,000.[11] Of this total, about half, or 30,000 families, do not own a house.[12] To help these families buy homes of $20,000 under a state participating loan of say, 60% by the state and 40% by private institutions, would require $360 million of state funds. It is not conceivable that this amount or any large portion of it could be made available in the foreseeable future.

Furthermore, there is always the danger that with increased demand for houses supported by the state loan programs, the price for houses will skyrocket if no adequate control is exercised by the state. A 10% increase in the price of houses can easily wipe out the advantage to the potential home owner of a drop in interest rate of 1%. It takes a tremendous effort on the part of the state to lower the interest by 1%. But judging from past experience, a 10% increase in the price of houses is nothing spectacular. It happened many times before. It is therefore very possible that the state loan programs would only create windfall profits for some people, benefiting very little the lower-middle income group.

Two other possible solutions to the housing problem in Hawaii are the building of more rental units by the state and the reduction of building costs. The former is listed below as the seventh alternative while the latter is subdivided into alternatives (8) to (10).

7. HHA-Type Rental Projects

The HHA administers at present three types of rental projects, but only one which provides low-cost housing to lower income and displaced families is relevant here. The construction of the buildings, mostly apartment units, is financed by the issuance of state revenue bond. But upon the completion of construction, when certain requirements like the promise by the municipal governments to provide adequate sewage system, schools, and public parks within a specified period are met, the federal government will agree to pay the principal and interest on the bond. On the other hand, the operating costs of the HHA rental projects must be met by their rental income. As a rule, only families of very low income are qualified to rent a HHA unit. The following table gives the maximum annual income allowed for families of various sizes. The rent, including utilities, is 20% of the monthly income, but the lowest rent is $32 for families with income of $160 or below.

Maximum Income for Admission

1. Net income at time of admission less

   a. An exemption of $100 for each minor member of the family other than the head of the family and his spouse, and

   b. the amounts paid by the United States Government for disability or death occurring in connection with military service

shall not exceed the following annual income limits for aided projects:

Annual Income Limits for Admission

	Hawaii	Oahu	
		Regular	Special 2/
1 1/ or 2 persons	$3000	$3400	$4250 3/
3 or 4 persons	3200	3600	4500
5 or more persons	3400	3900	4875

1/ Applies only to individual elderly persons at time of admission.
2/ Applies to admission of displaced families and displaced individuals. This also applies to people of continued occupancy.
3/ Applies to individual elderly persons and one-person residual families.

Source: Hawaii Housing Authority, Master Management Resolution No. 318

Since these projects are self-financing so far as operating costs are concerned, the HHA must take in some tenants of higher income within the permitted range to offset the loss on units rented to families of extremely low income. Thus, not all qualified families of very low income can find a roof under the HHA rental units. Besides, the availability of federal aid is limited by the willingness of the municipal governments to provide necessary services.

It is possible that the maximum annual income permitted under HHA be extended to cover families with $4,000 to $7,000 income. With higher rental from these people (provided they still pay 20% of their monthly income in rent), it will be possible for the HHA to shelter more families of very low income. The state may subsidize the municipal governments in their cost of developing the community so that more federal funds would be made available.

This program has merits in making it possible for people of very low income to live in decent places and in easing the pressure on housing in general. But it unavoidably involves the regimentation of people's life. Many people may not like the idea of living in a concentrated area, being easily labeled as government subsidized. The immobility of people due to the fact that once they have moved into a low-cost unit and then having difficulty in re-locating may also be socially and economically undesirable. In addition, as mentioned earlier, people have the desire to own their homes. The rental projects cannot solve this problem.

8. Lowering of Shipping Cost on Building Supplies

It has been alleged by many people that high costs of houses in Hawaii are due to the high shipping cost on building materials, high profits of supply houses

made possible by the practice of tying contracts, the scarcity and high cost of land, and the high subdivision cost caused by high standards set by the municipal governments. Insofar as a high standard for city dwelling is desirable, nothing can be done on the last factor mentioned. But some relief might be obtained through an attack on other problems.

The distance between the Pacific northwest, where most of Hawaii's building supplies come from and Hawaii, is about the same as that between the same region and Los Angeles. But freight rates to Hawaii are much higher. How much of this differential is due to higher unit operating costs and how much due to monopoly profits is unknown. But in view of the fact that when a new barge line was organized to ship lumber from the Pacific northwest to Hawaii at 25% lower freight, the Matson Navigation Company immediately lowered its freight rate to match its competitor; it is possible that with more competition, shipping costs would be lowered. The determination of a "fair" freight rate is extremely difficult. And it is only through a free operation of the market that such a rate may become effective.[13]

9. Reducing Construction Cost through Break-ups of Tying Contracts

It has been alleged that the bonding practice of the building trade, i.e., the contractor is required to put up a bond insuring that his construction meets the specific city requirements, makes it possible for supply houses to maintain tying contracts. Small contractors usually do not have sufficient funds to put up the bond. The supply houses will offer their help, but at the same time require that the contractor should buy all his supplies from them. Bank credit and land lease are usually offered in the same package deal. In return for such services, the supply houses charge higher prices for their supplies. Since the small contractor has very little alternatives, he is willing to accept such prices, knowing that he can pass them on to the home buyers. A large contractor may be able to

extract favorable terms from the supply houses through shrewd bargaining. But he usually pockets the profit rather than passing the lower cost on to the home purchasers.

How much of the cost of a house could be lowered by eliminating the excessive profits of the supply houses if the state takes action to outlaw tying contract is not known. A more thorough study than this would be necessary to permit an accurate estimate. But according to one of the leading contractors in Honolulu, the reduction in cost on a $19,000 house (leasehold) could be as high as $3,000.

10. Lease and Sale of State-owned Land

The scarcity of land in the State of Hawaii is a factor which contributes to the scarcity of houses and consequently to their high prices. The limited availability of lease land may also be a contributing factor to the existence of tying contracts. If the state leases or sells its own land for residential use, this would tend to ease the supply situation and may lower the prices of both land and houses. However, the supply of state-owned land in Oahu where the pressure is greatest is rather limited. It is doubtful that a significant effect can result from the leasing or sale of state land. It may therefore be necessary for the state to exercise the power of "eminent domain" to force sale of private land.

IV. Summary and Conclusions

A number of alternative state loan programs have been suggested. The most promising of these is state participating loans which allows the use of private funds and minimizes the amount of administrative work. But to make this effective to help most of the people in the $4,000 - $7,000 income bracket who do not own their homes at present, and assuming that it is economically unfeasible to help people with income below $4,000 to buy a home, it would require a tremendous amount of money which is beyond the resources of the state government. Besides, any state

loan program of large magnitude may result in higher prices of houses, providing some people with windfall profits.

The HHA rental projects are also considered to cover people of $4,000 - $7,000 income bracket, but they may have the undesirable effect of regimentation and immobility.

A more basic solution may lie in lowering land and house costs through the last three alternatives. But a more careful study of these problems is necessary before any policy recommendation could be made.

Housing File

MIDDLE-INCOME HOUSING NEEDS ON OAHU, 1960-1962

HONOLULU REDEVELOPMENT AGENCY
City and County of Honolulu

September 21, 1960

MIDDLE-INCOME HOUSING NEEDS ON OAHU, 1960-1962

Housing must be built for almost 6,400 middle-income households on Oahu during the next twenty-seven months if needs arising from population growth, slum clearance, and other demolition programs are to be met. In addition, adequate housing should be found for more than 19,000 middle-income households now occupying dilapidated or overcrowded quarters. The former group can readily be cared for by existing construction volumes, but significant reduction in the latter group is likely to remain problematical.

This analysis describes middle-income housing needs likely to arise on Oahu between October 1, 1960 and the end of 1962, a twenty-seven month period. "Middle-income" households are defined as those with a family income between $4,000 and $7,000 annually. Dilapidation was based on the presence of one or more critical structural deficiencies reported by occupants. Households in dwelling units with 1.01 or more persons per room were classified as crowded.

The magnitude of housing needs expected to develop on Oahu during the next twenty-seven months is indicated by the following table:

Component	All households	Middle-income households
All components	54,085	26,058
Net household formation	10,761	4,713
Demolition programs	3,597	1,668
Now in substandard housing	39,727	19,677

These estimates, based on a sample of 2,500 Oahu households taken in December 1959, information supplied by various public agencies, and official population projections, are given in greater detail in tables 1 and 2.

Fortunately, the critical housing shortage which has been so evident on Oahu in recent years now appears to be vanishing. The housing supply has been increasing more rapidly than population for the past two years, with an attendant decline in population per unit. The proportion of occupied units with 1.01 or more persons per room has likewise been declining. The number of units advertised for rent, meanwhile, has risen sharply. All of these indexes, reported more fully in tables 3, 4 and 5, indicate a lessening of Oahu's housing problem.

The increased availability of housing has, strangely enough, been accompanied by increasing housing costs. Median rent in Honolulu was $57.84 as recently as January 1956; by December 1959, it had reached $72.71. The median proportion of gross income paid for contract rent in the latter month was 17.9 percent, compared with 16.6 percent a year earlier. The consumers price index in March 1960 stood at an all-time high for all housing items except fuel and light. Dwelling units advertised for rent or sale in the newspapers likewise were much higher in rent or price levels than during previous periods. Additional information appears in tables 3 and 5.

Turnover was quite high. An estimated 28,833 non-dilapidated dwelling units on Oahu were occupied by a different household head in December 1959 than in December 1958. Of this number, about 8,500 were private rental units renting for less than $100 monthly, typically with one or two bedrooms. Detailed statistics on turnover (here defined as units vacated at least once during the year) appear in table 6.

Residential construction volumes continue at high levels. The net increase in dwelling units on Oahu during the twelve-month period ended on April 1, 1960 was 9,951 private, public or military units, compared with 6,199 for the previous year and 4,502 two years earlier. New construction amounted to 10,161 units, likewise well above previous levels. For private housing only, units completed between April 1 and the end of November 1960 will reach an annual rate of about 8,000 units, only slightly less than the all-time record of 8,522 private completions in the twelve-month span ending March 31, 1960. Trends since April 1955 are outlined in table 7.

No immediate let-up in residential construction appears imminent. The Hawaiian Telephone Company listing of residential developments under construction or planned reports 47,313 lots in single-family subdivisions, 313 lots in multi-family subdivisions, 3,663 cooperative apartments, 7,050 conventional apartment units, 1,143 Capehart Act units, and 1,283 Hawaii Housing Authority units. More detail is given in table 8.

The foregoing statistics indicate little likelihood of serious difficulty in meeting the housing needs arising from new household formation or demolition of existing units. The total need created by these factors during the next twenty-seven months will be about 14,400 units, of which about 6,400 will be for households with incomes between $4,000 and $7,000 a year. The all-income estimate is less than half of the turnover for all standard housing on Oahu last year. Net additions to the private housing inventory on Oahu will satisfy this twenty-seven month need in less than twenty-two months at current building rates. Whether these added units will offer sufficient space at reasonably low rents or sales prices is less certain, in view of the continuing upward trend in housing costs.

Relocation of households now in dilapidated or overcrowded housing is a more difficult problem to solve. This group is far larger than that described above, and well beyond the limits imposed by recent turnover rates or construction levels. Many of the households in this category are already paying more than a fifth of gross income for contract rent (which would correspond to about a fourth of net income for gross rent) and hence cannot afford more adequate accommodations (see table 2). The housing of only a portion of this group can be upgraded during the next twenty-seven months.

In summary, the current situation indicates little question that housing can be found for all households displaced by demolition programs or added by population growth or family formation, although not necessarily at prices fully suited to their needs and resources. Relocation of middle-income households now in dilapidated or overcrowded quarters can be accomplished only to a limited degree.

Table 1.--NEW HOUSING UNITS NEEDED FOR OAHU:
OCTOBER 1, 1960 TO DECEMBER 31, 1962

Component	All households	Middle-income ($4,000-$6,999 households only
All components	54,085	26,058
In substandard housing, 1960:		
Dilapidated, not crowded ...	7,701	3,851
Crowded, not dilapidated ...	26,485	12,914
Dilapidated and crowded	5,541	2,912
Demolition, 1960-1962:		
Slum clearance	1,683	551
Highway construction	539	236
School construction	25	11
Private demolition	1,350	600
Other components, 1960-1962:		
Public housing over-income .	-	270
Net household formation	10,761	4,713

Source: Number in substandard housing from present report, table 2. Slum clearance displacement from Honolulu Redevelopment Agency. Highway displacement from State Department of Transportation (income distribution based on December 1959 data for all Oahu households). School construction displacement from State Department of Public Instruction (income based on all Oahu households). Private demolition assumed. Public housing over-income evictions from Hawaii Housing Authority. Net household formation based on provisional population projections by Hawaii State Planning Office, assumed average household size of 3.5 for added population, and same income distribution as entire island. No adjustment made for duplication of those in substandard housing and other components.

TABLE 2.--OCCUPANCY AND CONDITION OF HOUSING, BY INCOME AND RENT-INCOME RATIO OF HOUSEHOLDS, FOR OAHU: DECEMBER 1959

Family income (before taxes) and contract rent as percent of income	All occupied units	Neither crowded nor dilap. 1/	Dilap. but not crowded 1/	Crowded but not dilap. 1/	Both dilap. and crowded 1/	Not reported 2/
All groups.....	117,400	77,296	7,701	26,485	5,541	376
Under $4,000.....	22,212	12,304	1,972	6,199	1,738	-
Under 20 percent.....	2,113	939	141	610	423	-
20 percent or more....	15,356	8,312	1,550	4,320	1,174	-
No cash rent.....	657	470	47	141	-	-
Owner occupancy.....	4,086	2,583	235	1,127	141	-
$4,000 to $6,999.....	51,421	31,604	3,851	12,914	2,912	141
Under 20 percent.....	19,817	10,002	2,113	5,260	2,348	94
20 percent or more....	9,063	6,668	986	1,315	94	-
No cash rent.....	1,174	751	94	329	-	-
Owner occupancy.....	21,367	14,182	657	6,011	470	47
$7,000 or more.....	43,767	33,389	1,878	7,373	892	235
Under 20 percent.....	11,036	7,889	798	1,878	376	94
20 percent or more....	2,113	1,784	235	94	-	-
No cash rent.....	704	423	-	235	47	-
Owner occupancy.....	29,914	23,292	845	5,166	470	141

1/ Crowded units defined as those with 1.01 or more persons per room; dilapidated units, as those with one or more critical deficiencies.

2/ Includes 141 uncrowded units for which condition was not reported and 235 non-dilapidated units for which occupancy per room was not reported.

Source: Special tabulation of survey described in Honolulu Redevelopment Agency, Redevelopment and Housing Research, No. 17, April 1960, pp. 1-27.

Table 3.--CIVILIAN POPULATION PER DWELLING UNIT, MEDIAN RENT, MEDIAN RENT-INCOME RATIO, PERSONS PER ROOM, AND HOUSING PRICE INDEXES, FOR OAHU AND HONOLULU: 1956 TO 1960

Subject	1956	1957	1958	1959	1960
Civilian population per dwelling unit: Oahu[1]	3.60	3.69	3.84	3.78	3.68
Median rent:[2]					
Oahu	(NA)	(NA)	$66.33	$70.33	$76.09
Honolulu	$57.84	$63.06	65.94	69.54	72.71
Median % of income for rent:[2]					
Oahu	(NA)	(NA)	(NA)	16.9	18.7
Honolulu	17.5	17.2	(NA)	16.6	17.9
Percent of units with 1.01 or more persons per room:[2]					
Oahu	(NA)	(NA)	31.9	28.4	27.3
Honolulu	33.8	32.5	32.1	28.3	29.1
Price indexes for Honolulu (March 1943=100):[3]					
Rent	124.8	128.6	132.4	136.1	136.5
Fuel, light	135.7	142.2	144.1	140.9	138.7
House furnishings	142.4	149.0	155.2	160.5	163.6
Household operation	146.6	148.0	156.4	164.1	167.4

NA Not available.
1/ Based on January population estimate and April housing estimate.
2/ January 1956 to 1958, December 1958 and 1959 (for 1959-1960 entries). The rent-income ratio is based on gross income and contract rent.
3/ As of March 15.

Source: Honolulu Redevelopment Agency, Redevelopment and Housing Research, No.17 (April 1960) and No.18 (October 1960); State Department of Labor and Industrial Relations, News Release No.390.

Table 4.--DWELLING UNITS ON OAHU ADVERTISED FOR RENT OR SALE IN THE HONOLULU STAR-BULLETIN: LAST SATURDAY OR SUNDAY OF THE MONTH, AUGUST 1955 TO 1960

Date	Units for rent[1]		Units for sale: number[1]
	Number	Index[2]	
1955: August 27	87	57	216
1956: August 25	82	54	140
1957: August 31	92	60	123
1958: August 30	234	153	125
1959: August 29	123	81	116
1960: April 24	145	98	123
May 29	183	128	85
June 26	181	118	104
July 31	215	152	161
August 28	203	133	106

1/ Excludes units not reporting number of rooms.
2/ 1954-1958 average for month=100. Index not computed for sales housing.

Source: Hawaii Housing Authority.

TABLE 5.--DWELLING UNITS ON OAHU ADVERTISED FOR RENT OR SALE IN THE HONOLULU STAR BULLETIN, BY NUMBER OF BEDROOMS AND AVERAGE RENT OR PRICE: LAST SATURDAY OR SUNDAY OF THE MONTH, AUGUST 1955 TO 1960

Subject	August 27,1955	August 25,1956	August 31,1957	August 30,1958	August 29,1959	August 28,1960
Number of dwelling units						
Units for rent.....	90	87	94	242	129	207
Studio units.....	23	22	14	33	19	26
1-bedroom units.....	36	29	29	99	41	73
2-bedroom units.....	19	20	32	74	36	53
3-bedroom units.....	6	7	13	25	22	47
4-bedroom or more.....	3	4	4	3	5	4
Size not reported.....	3	5	2	8	6	4
Units for sale 1/.....	216	144	125	134	125	116
1-bedroom units.....	12	1	-	-	-	1
2-bedroom units.....	58	30	29	27	22	11
3-bedroom units.....	127	89	78	88	75	82
4-bedroom or more.....	19	20	16	10	19	12
Size not reported.....	-	4	2	9	9	10
Average rent or price 1/						
Units for rent 2/.....	$ 92	$115	$125.78	$103.53	$125.34	$129.79
Studio.....	55	73	63.10	74.94	65.19	105.81
1-bedroom.....	75	92	90.79	89.70	129.98	107.69
2-bedroom.....	132	121	128.09	117.06	130.90	135.56
3-bedroom.....	(3/)	(3/)	211.50	140.00	158.00	163.48
Units for sale 2/.....	$19,117	$22,000	$23,517	$21,716	$26,130	$26,388
2-bedroom.....	15,076	17,500	17,641	18,593	22,069	24,920
3-bedroom.....	19,805	21,200	24,558	21,774	26,513	26,807
4-bedroom or more.....	27,371	32,400	(3/)	(3/)	(3/)	(3/)

1/ Restricted to one-unit structures, land owned, at prices less than $50,000.
2/ Includes sizes not listed separately.
3/ Not reported because of small number reporting amount.

Source: Hawaii Housing Authority

TABLE 6.--TURNOVER OF DWELLING UNITS, BY TENURE, CONTROL, AND MONTHLY AND NUMBER OF ROOMS, FOR OAHU: DECEMBER 1958 TO DECEMBER 1959

(Number of dwelling units occupied in December 1959 by a different household head than in December 1958. Excludes dilapidated dwelling units.)

Tenure, control and monthly rent	Number of Rooms (including kitchen but excluding bath)					
	Total 1/	1 or 2	3	4	5	6 or more
All occ. units.....	28,833	2,489	4,414	8,077	7,185	6,574
Owner occupied units.....	5,964	47	376	657	2,019	2,818
Land owned.....	3,710	-	141	564	1,362	1,597
Land leased.....	2,254	47	235	94	657	1,221
Private rental units.....	14,464	2,254	3,569	4,837	2,442	1,315
No cash rent.....	329	-	-	94	188	47
$1 to $49.....	470	47	94	235	94	-
$50 to $74.....	2,395	704	704	610	282	94
$75 to $99.....	5,306	986	1,503	2,301	470	47
$100 to $124.....	2,818	329	798	1,033	376	235
$125 or more.....	3,146	188	470	564	1,033	892
Other rental units.....	8,406	188	470	2,583	2,724	2,442
Hawaii Hsg. Authority...	1,268	94	188	564	282	141
Armed forces.....	7,138	94	282	2,019	2,442	2,301

1/ Includes 94 units not reporting number of rooms (47 owner occupied on owned land, 47 private rental units in the $100-$124 range).

Source: Same as Table 2.

Table 7.--RESIDENTIAL CONSTRUCTION, CONVERSION AND DEMOLITION, BY CONTROL, FOR OAHU: 1955 TO 1960

Control and period	Net increase	New construction	Conversion (net gain)	Demolition (loss)
Private, H.H.A., and military:				
April 1955-March 1956	3,905	4,338	16	449
April 1956-March 1957	4,090	4,015	394	319
April 1957-March 1958	4,502	5,025	4	527
April 1958-March 1959	6,199	7,068	70	939
April 1959-March 1960	9,951	10,161	-1	209
April 1960-Nov. 1960	(NA)	(NA)	(NA)	(NA)
Private only:				
April 1955-March 1956	4,068	4,254	(NA)	186
April 1956-March 1957	4,103	3,959	221	77
April 1957-March 1958	4,690	4,787	-	97
April 1958-March 1959	5,120	5,516	138	534
April 1959-March 1960	8,522	8,522	(NA)	(NA)
April 1960-Nov. 1960	*5,366	*5,366	(NA)	(NA)

* Annual rate, 8,049 units.
NA Not available.

Source: Honolulu Redevelopment Agency, Redevelopment and Housing Research, No.4 (April 1956), No.8 (April 1957), No.13 (July 1958), No.15 (May 1959), and No.18 (October 1960), City and County of Honolulu, Department of Buildings, monthly reports.

Table 8.--RESIDENTIAL DEVELOPMENTS UNDER CONSTRUCTION OR PLANNED, FOR OAHU: JULY 1, 1960

Kind of housing	Developments	Dwelling units
Private sponsorship:		
Single-family subdivisions	88	*47,313
Multi-family subdivisions	5	*313
Apartment buildings	-	10,713
Cooperative	-	3,663
Other	-	7,050
Public sponsorship:		
Capehart Act	3	1,143
Hawaii Housing Authority	3	1,283
Honolulu Redevelopment Agency	1	108

* Lots rather than dwelling units.

Source: Derived from the Hawaiian Telephone Company, Quarterly Housing Developments Digest (July 1, 1960) and Commercial and Apartment Buildings, Quarterly Digest (July 6, 1960).