Analysis of the

TUCSON, ARIZONA HOUSING MARKET

as of August 1, 1966

A Report by the
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
FEDERAL HOUSING ADMINISTRATION
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Field Market Analysis Service
Federal Housing Administration
Department of Housing and Urban Development

Foreword

As a public service to assist local housing activities through clearer understanding of local housing market conditions, FHA initiated publication of its comprehensive housing market analyses early in 1965. While each report is designed specifically for FHA use in administering its mortgage insurance operations, it is expected that the factual information and the findings and conclusions of these reports will be generally useful also to builders, mortgagees, and others concerned with local housing problems and to others having an interest in local economic conditions and trends.

Since market analysis is not an exact science, the judgmental factor is important in the development of findings and conclusions. There will be differences of opinion, of course, in the interpretation of available factual information in determining the absorptive capacity of the market and the requirements for maintenance of a reasonable balance in demand-supply relationships.

The factual framework for each analysis is developed as thoroughly as possible on the basis of information available from both local and national sources. Unless specifically identified by source reference, all estimates and judgments in the analysis are those of the authoring analyst and the FHA Market Analysis and Research Section.

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ANALYSIS OF THE TUCSON, ARIZONA, HOUSING MARKET AS OF AUGUST 1, 1966

Summary and Conclusions

1. Nonagricultural wage and salary employment in the Tucson Housing Market Area (HMA) increased from 54,600 in 1956 to 79,400 in 1962. Annual increases ranged from a low of 1,600 between 1957 and 1958 to a high of 6,600 between 1961 and 1962. Employment declined by about 3,700 between 1962 and 1964, however, mostly in manufacturing and construction. The average number of wage and salary workers in the first seven months of this year is 4,000 above the same period in 1965, an indication that employment again is beginning to expand at a moderate rate. During 1965, unemployment in the HMA averaged 6.2 percent of the work force, a slight improvement over the 1964 ratio of 6.5 percent. If the 4.6 percent rate experienced so far this year is maintained, it will be the lowest reported since 1957, when 4.1 percent were unemployed.

   Nonagricultural employment in the HMA is expected to increase by 5,000 in the next two years. Most of the increase is expected to take place in the nonmanufacturing sector of the economy. Government employment will account for the largest numerical increase in employment, although there is a possibility of slower growth after mid-1967 because of a levelling off of military strength and civilian employment at Davis-Monthan Air Force Base.

2. The current median income of all families in the Tucson HMA is $7,000, after deduction of federal income tax; the median for renter households of two or more persons is $5,700. Currently, an estimated 21 percent of all families and 30 percent of the renter households of two or more persons have after-tax incomes of less than $4,000 a year, while seven percent of all families and four percent of all renter households of two or more persons receive annual after-tax incomes of $15,000 or more.

3. The Tucson HMA has a population of 336,400 at present, an increase of 70,750 (27 percent) since April 1960. An estimated 246,500 persons, over 73 percent of the HMA total, reside in the city of Tucson. Most of the growth in the population of the area occurred between 1960 and 1962 because of gains in military and military-related activities. The population of the HMA is expected to increase by 17,600 in the next two years to a level of 354,000 by August 1968. Most of the projected increase in population is expected to occur in the next twelve months because of the possibility that recent increases in government employment and in the number of military personnel will slow somewhat after mid-1967.

4. Currently, there are 98,200 households (occupied housing units) in the Tucson HMA, an increase of 20,750 since April 1960. Based on the anticipated increase in population, there will be 103,700 households in the HMA by August 1968, an increase of 5,500 above the current estimate.

5. There are 111,700 housing units in the HMA at the present time, the result of the construction of 24,450 new units and the addition of 3,200 mobile homes since April 1, 1960, less 1,150 units removed from the inventory because of demolitions and other inventory changes. Over two-fifths of all units authorized in the HMA between January 1960 and August 1966 were in multifamily structures.

6. There are 10,200 nonseasonal, nondilapidated vacant housing units in the Tucson HMA now available for sale or rent, an over-all vacancy ratio of 9.4 percent. An estimated 2,300 of the units are available for sale, a homeowner vacancy rate of 3.3 percent; the remaining 7,900 units are available for rent, a rental vacancy ratio of 20.0 percent. The current homeowner vacancy rate has increased slightly since 1960, but the current rental vacancy ratio is nearly double the 11.1 percent ratio reported in April 1960.

7. The volume of privately-owned net additions to the sales housing inventory that will meet the needs of new household growth and result in a more acceptable demand-supply balance is approximately 1,250 units annually during the next two years. In addition, mobile homes are expected to provide housing for about 1.5 percent of the household growth. The demand for new sales houses is distributed by price range on page 30. Most new construction should continue to be presold, particularly in the price ranges in which the overhang of acquired properties is concentrated.

8. The current excess of standard vacant rental units is sufficient to satisfy all of the quantitative demand and almost all of the qualitative demand for new rental housing during the next two years. The production of new rental housing in large numbers in the next two years will prevent a reduction of the current sizable surplus of rental housing in almost all locations, rent ranges, and unit sizes. Under these circumstances, only rental projects designed to satisfy a specific demand not now being met should be considered for construction. The amount of such demand likely will be minimal; in any case, the demand should be clearly evident before construction is started. This conclusion does not relate to demand for public low-rent housing or rent-supplement accommodations.

ANALYSIS OF THE TUCSON, ARIZONA, HOUSING MARKET AS OF AUGUST 1, 1966

Housing Market Area

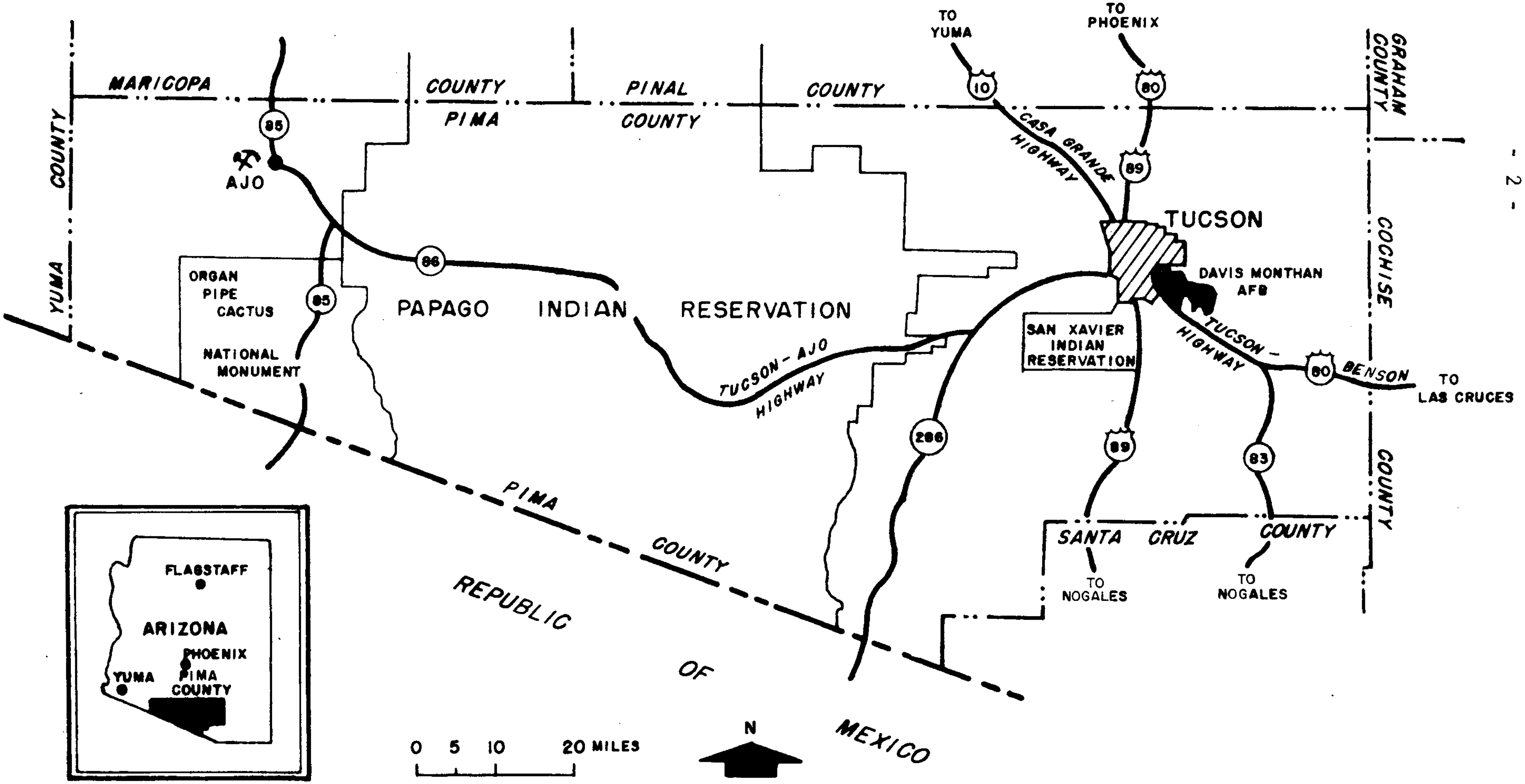
The Tucson Housing Market Area (HMA) is defined as Pima County, Arizona, and is coextensive with the Tucson Standard Metropolitan Statistical Area (SMSA) as defined by the Bureau of the Budget and the Tucson Labor Market Area as defined by the Bureau of Employment Security. Pima County is located in southern Arizona, with part of the southern boundary on the international border between the United States and the Republic of Mexico (see map on page 2). The April 1960 Census reported that nearly 86 percent of the population in the HMA resided in the city of Tucson and nearby suburban areas. Indian reservations, national forests, and national monuments comprise about two-thirds of the 9,250 square miles in the county.

The Southern Pacific Railroad, several bus lines, including Continental Trailways and Greyhound, and over a dozen interstate trucking firms provide transportation facilities for the area. Transcontinental, regional, and local air service is provided by American, Trans World, Continental, Apache, Frontier and Aeronaves de Mexico Airlines. Main highways serving the area include U.S. Highways 80 and 89 and State Highways 84 and 86.

Commutation between the HMA and nearby counties is not significant. At the time of the 1960 Census only 680 workers were commuting into the HMA from nearby areas. Nearly 60 percent of the in-commuters came from Maricopa County. About one-half of the 1,600 out-commuters traveled to Pinal County, the southern portion of which is near the city of Tucson.

Demographic and housing data pertaining to the rural farm population have not been excluded from this analysis, inasmuch as that segment of the population comprised only one percent of the total population in 1960.

TUCSON, ARIZONA, HOUSING MARKET AREA



Economy of the Area

Character and History

Before World War II, the Tucson economy was agriculturally-oriented. In 1941, Davis-Monthan Air Force Base was established as a base of operations for bombers. The impact of World War II and the expansion of the military and military-related activities stimulated growth in trade, transportation, and the service industries. However, it was not until the 1950's that the Tucson area began to grow rapidly. In that decade the rate of population growth averaged nearly 12,450 a year--almost double the average growth of 6,850 persons a year during the 1940's.

There are several reasons for the rapid development of the Tucson area since 1950. Rising incomes and increased mobility in the nation have led to the development of Tucson as a tourist and health center, resulting in increased employment in trade and services. Each year thousands of persons spend the winter in Tucson because of the moderate climate. Persons who need a warm, relatively dry climate for health reasons also are attracted to the Tucson area. Davis-Monthan Air Force Base has played an important role in the local economy since the early 1940's. The military population, including uniformed personnel and their dependents, currently exceeds 25,000, over seven percent of the total population in the HMA. The military payroll exceeded $31 million in 1965. The University of Arizona also is an important asset to the Tucson area. The increase in the number of full-time students at the University has averaged about 1,000 a year for the past several years. Current enrollment totals almost 22,000 full- and part-time students.

Hughes Aircraft Company is by far the largest private employer in the relatively small manufacturing segment of the local economy. Manufacturing employment accounted for only eight percent of total wage and salary employment in the HMA in 1965, the smallest proportion in the last ten years. Government accounted for nearly 28 percent of all nonagricultural wage and salary employment in 1965, reflecting the importance of the University of Arizona and Davis-Monthan Air Force Base. The trade and service industries with 23 percent and 18 percent respectively, were the second and third largest employment sources last year.

Employment

Current Estimate. Total nonagricultural employment in the Tucson HMA average(92,400 in the first seven months of 1966, according to preliminary data compiled by the Employment Security Commission of Arizona (see table I). The total includes 79,600 wage and salary workers and 12,800 persons in other nonagricultural jobs. Agricultural employment, with an average of 1,700 jobs through the first seven months of this year, has declined over the past ten years because of technological developments in crop and livestock production.

Past Trend. Based on annual average data, nonagricultural wage and salary employment in the Tucson area increased from 54,600 in 1956 to 79,400 in 1962, an increase of 24,800 (45 percent), or an average of 4,125 annually (see table II). Year-to-year increases ranged from a low of 1,600 between 1957 and 1958 to a high of 6,600 between 1961 and 1962. However, the Tucson economy experienced a considerable slowdown between 1962 and 1965. Moderate declines in wage and salary employment of 1,100 and 2,600 occurred between 1962 and 1963 and between 1963 and 1964. A small gain of 300 occurred between 1964 and 1965 only because the employment situation improved significantly in the last four months of the year. It is apparent, however, that the Tucson economy again is beginning to expand at a moderate rate. The average number of wage and salary workers in the first seven months of this year (79,600) is 4,000 above the same period in 1965.

Growth in nonagricultural wage and salary employment has depended entirely upon the nonmanufacturing sector of the economy. During the 1956-1965 period, nonmanufacturing employment increased by 24,900 (55 percent), an average of 2,775 a year. The trend was down in 1963, however, and moderate increases of only 100 and 700 occurred in the succeeding two years. Based on January through July figures for 1965 and 1966, nonmanufacturing employment increased by 3,100, an increment that, if maintained, would represent the largest gain reported since the 1961-1962 gain.

Employment by Industry. Manufacturing employment in the Tucson HMA accounted for only eight percent of total wage and salary employment in 1965, down from nearly 18 percent in 1956. The 1965 average of 6,200 is 3,700 (37 percent) below the ten-year peak of 9,900 reported in 1957. Changes in the level of manufacturing employment have resulted principally from fluctuations in employment at Hughes Aircraft Company. Manufacturing employment in the HMA increased by 800 between 1961 and 1962, with most of the gain occurring at Hughes Aircraft Company and at small manufacturing concerns working on the installation of Titan II missile sites near Tucson. These activities were completed in 1962, and manufacturing employment declined by 3,000 in the next three years. Manufacturing employment averaged 7,000 in the first seven months of 1966, an increase of 900 over the same period in 1965. Most of the increase occurred because Hughes Aircraft Company was awarded a contract by the U.S. Army to do research and development work for a proposed anti-tank missile.

In 1965, nearly 28 percent of the total wage and salary employment in the HMA was in government. Government employment increased by 10,500, an average of 1,175 annually, between 1956 and 1965, reflecting the growth at the University of Arizona and the importance of Davis-Monthan Air Force Base to the local community. Employment in trade and services increased by 5,200 and 5,500, respectively, during the same period. Although mining was the smallest nonmanufacturing category in 1965, the development of a new copper mine south of Tucson by the Anaconda Company has provided several hundred jobs in the past two years. Construction employment has dropped sharply since 1962, largely as a result of completion of the Titan II missile bases in 1962 and a decline in both residential and commercial construction since 1963.

The Employment Participation Rate is the ratio of nonagricultural employment to the total population. In the Tucson HMA, the rate was 30.57 percent in 1960, and it is estimated to have declined to 27.08 percent at the present time. It is probable that the participation rate increased slightly until 1962 or 1963 when the completion of the missile sites, a decline in residential and commercial construction, and layoffs at Hughes Aircraft Company resulted in an increase in unemployment and a decline in the total civilian work force. Since 1963, population has increased at a much faster rate than employment. The increase in population since 1963 includes elderly persons, college students, and uniformed military personnel, only a small percentage of whom are employed at civilian jobs. The participation rate is expected to continue to decline in the next two years, but at a much slower rate than in the 1963-1966 period.

Principal Employment Sources

Manufacturing. The Hughes Aircraft Company, which located in the Tucson area in 1951, is the largest private employer in the HMA. Employment at the plant depends largely on defense contracts. In the past year, Hughes Aircraft Company has been awarded several contracts totaling $27.7 million for research and development on TOW, the Army's proposed anti-tank missile. Some of this work is being done in Tucson and some at another Hughes facility in California. Other manufacturing concerns in the Tucson area are much smaller. According to the Industrial Department of the Tucson Chamber of Commerce, only two other manufacturing companies, the American Smelting and Refining Company and the Krueger Manufacturing Company, employ over 500 workers.

Nonmanufacturing. Government employment provided 30 percent of all nonmanufacturing jobs in the HMA in 1965 and has accounted for 42 percent of the increase in nonmanufacturing employment in the past ten years. According to data published by the Tucson Chamber of Commerce, four of the five largest employers in the HMA are in the government category. These include the Pima County Public Schools, the University of Arizona, the city government of Tucson, and the Pima County government. The county school system currently employs over 5,000 persons. Employment at the University of Arizona is about 5,000, including part-time student employees. The student body, including full- and part-time students, is expected to be about 21,700 in September 1966, up from 12,700 in 1960. Enrollment is expected to exceed 30,000 by 1975. Two other nonmanufacturing concerns, the Southern Pacific Railroad and the Tucson Medical Center, employ over 1,000 workers each at the present time.

Military. Davis-Monthan Air Force Base, the only military establishment in the Tucson area, is adjacent to the city of Tucson on the southeast. The base continues to be an important Strategic Air Command (SAC) installation. The history of Davis-Monthan dates back to 1919 when a municipal airport was established in Tucson. Actual construction at the airfield by the Army Signal Corps did not begin until 1927. Shortly after the start of World War II, the base was expanded and utilized as a heavy bombardment training station. In October 1945, the last B-29 bomber unit was deactivated. The base was then designated an Air Techical Service Command storage area. Currently, a large portion of the base is alloted to the Air Material Command for the storage, disposition, and scrapping of obsolete aircraft. Because of the relatively dry climate in the Tucson area, Davis-Monthan is considered an excellent facility for the long-term storage of aircraft.

Davis-Monthan serves as the home base for a Strategic Aerospace Division, a U-2 Reconnaissance Wing, a Strategic Missile Wing, and a Combat Crew Training Wing. The Military Aircraft Storage and Disposal Center also is located there. The storage and disposition activity at the base has increased recently because some aircraft are being transferred to Davis-Monthan from the Naval Air Facility located at Litchfield Park near Phoenix. That facility began to be deactivated in 1964, and is scheduled to be closed by July 1, 1967.

As of August 1, 1966, the assigned military strength at Davis-Monthan AFB was 7,025, an increase of 250 since January 1966 (see table III). The current strength figure is 1,725 (32 percent) above the January 1963 strength. Much of the increase since 1963 reflects a buildup in support of the military effort in Southeast Asia. A portion of the increase that has occurred this year reflects an increase in the number of student pilots assigned to the Combat Crew Training Wing, with training periods ranging from one to six months. It is expected that the permanent party strength at the base in November of this year will be 500 above the January 1966 total. The number of military personnel being transferred to Davis-Monthan from the Litchfield Park Naval Air Facility is negligible.

Federal civil service employment at Davis-Monthan Air Force Base, also shown in table III, was reported to be 1,675 on July 1, 1966, an increase of 550 above the January 1965 total of 1,125. Some of the increase has occurred because the Litchfield Park Naval Air Facility is being shut down. To date, about 135 civilians have transferred to Davis-Monthan from Litchfield, and another 60 are expected to transfer by the spring of 1967. A portion of the increase in civilian employment at Davis-Monthan also reflects the hiring of civilians to replace uniformed military personnel. There are approximately 200 other civilians working at Davis-Monthan presently, including about 90 who are working on construction and service contracts. The other 110 are non-appropriated fund civilian employees, such as those working at the base post exchange.

Unemployment

The Employment Security Commission of Arizona reported that there was an average of 6,000 unemployed workers in the Tucson HMA in 1965, representing an unemployment ratio of 6.2 percent (see table I). This is a slight improvement over the 1964 rate of 6.5 percent (6,300 workers). Data compiled for the first seven months of this year show that unemployment averaged 4,500, or 4.6 percent of the work force. If this rate is maintained through 1966, it would be the lowest since the 4.1 percent unemployment ratio reported for 1957. Although the number of unemployed persons has declined somewhat in the past year, past experience suggests that the level of unemployment may not decline much further. Even during the boom years of 1961 and 1962, unemployment in the HMA averaged 5,300 (5.7 percent) and 4,900 (4.9 percent), respectively.

Future Employment Prospects

During the 1962-1965 period, declines occurred both in nonagricultural wage and salary employment and in the total civilian work force. However, based on data for the first seven months of 1966, it appears that wage and salary employment this year may surpass the ten-year high reported in 1962. In the first seven months of 1966, wage and salary employment was 4,000 above the corresponding period in 1965. Over one-fifth of the increase occurred in manufacturing. Reportedly, employment at Hughes Aircraft Company has doubled since the first of this year as a result of defense contracts awarded to the firm. Unless the company is awarded additional contracts in the next two years, however, it is unlikely that further gains in manufacturing employment in the HMA will be significant. In the nonmanufacturing sector of the economy, moderate increases are expected in trade and services. Government employment, which includes workers in federal, state, and local government offices and in education, will account for the largest numerical increase in wage and salary employment, although there is a possibility of slower growth in this sector in the latter half of 1967 and 1968 because of a leveling off of military strength and civilian employment at Davis-Monthan Air Force Base. Mining employment has increased somewhat in the past two years, and continued moderate growth is expected in the next two years because the Anaconda Company is expected to continue developing its Twin Butte mine south of Tucson. The mine may be producing by 1970. Reportedly, the company is also planning to transfer some of its scientists and technicians from Anaconda, Montana, to its Tucson location over the next few years.

Over-all, an increase of 5,000 in nonagricultural employment in the next two years appears reasonable. The increase expected in the next twelve months probably will exceed somewhat the average 2,500 a year during the two-year period. As in the recent past, most of the increase is expected to occur in government, trade, services, and mining. Very little increase is expected in the other categories of employment in the next two years.

Income

Family Income. The current median annual income of all families in the Tucson HMA, after deduction of federal income tax, is about $7,000, and the median annual after-tax income of renter households[1/] is $5,700. As seen in the distribution in table IV, about 21 percent of all families and 30 percent of renter households in the HMA currently have after-tax incomes of less than $4,000. About 13 percent of all families and six percent of renter households have after-tax incomes above $12,500 a year. By 1968, the median after-tax incomes of Tucson area residents are expected to increase to $7,400 for all families and to $6,000 for renter households.

1/ Excludes one-person renter households.

Demographic Factors

Population

Housing Market Area. The population of the Tucson HMA is approximately 336,400 at the present time, an increase of 70,750 (27 percent) since April 1960. Most of the growth in the population of the HMA occurred between 1960 and 1962. The relatively low rate of growth since 1962 is related to the lower level of employment since 1962. The total population of the HMA increased even more rapidly during the 1950's. The population nearly doubled during that decade, increasing from 141,200 in 1950 to 265,660 in 1960.

The following table shows over-all changes in population in the Tucson HMA since April 1950 and a two-year projection to 1968. Details for the city of Tucson and the remainder of Pima County are shown in table V.

Changes in Population
Tucson, Arizona, Housing Market Area
April 1, 1950-August 1, 1968

Date	Total population	Average annual change from preceding date
April 1, 1950	141,216	-
April 1, 1960	265,660	12,444
August 1, 1966	336,400	11,150
August 1, 1968	354,000	8,800

Sources: 1950 and 1960 Censuses of Population.
1966 and 1968 estimated by Housing Market Analyst.

City of Tucson. An estimated 246,500 persons, nearly 73 percent of the HMA total, reside in Tucson at present. A special census conducted by the Bureau of the Census counted 236,900 persons in the city in October 1965. The special census also reported that two-thirds of the increase in population in the city between April 1960 and October 1965 occurred as the result of annexations, the largest of which took place just prior to the special census enumeration. The population of the city experienced an exceptional increase during the 1950's, from 45,450 persons in 1950 to 212,900 in 1960. Substantially all of the increase occurred in areas annexed during the decade.

Remainder of Pima County. Despite annexation activity by the city of Tucson, nearly 53 percent of the April 1960-August 1966 increase in population in the HMA occurred in the unincorporated area of the HMA. The population in the balance of the county declined by nearly 43,000 between April 1950 and April 1960, primarily a reflection of annexations by the city. However, it is likely that the segment of the population living in the county outside the immediate Tucson area and not affected by the annexations increased moderately during the decade.

Seasonal Factors. The population of the HMA increases by several thousand each year between November and February because many persons establish temporary residence in the HMA to take advantage of the climate. During the rest of the year most of the people in the HMA who are not year-round residents are tourists traveling through the Tucson area. Therefore, the rates of population growth occurring between April 1950-April 1960 and April 1960-August 1966 are fairly comparable since these months are seasonal minimums. The average rate of population increase in the HMA during the 1950's (12,450 persons a year) was nearly 12 percent above the rate experienced since April 1960 (11,150 annually).

Estimated Future Population Growth. Based on the increase in employment anticipated in the next two years, an average of 2,500 annually, and expected moderate increases in the number of elderly persons, military personnel, and college students, the total population of the HMA is expected to increase by 17,600 in the next two years to a level of 354,000 by August 1968. Because of the possibility that recent increases in government employment and in the number of military personnel will slow somewhat after mid-1967, most of the projected increase is expected to occur in the next twelve months.

1/ As used in this analysis, all average annual percentage changes have been derived through the use of a formula designed to calculate the annual rate of change on a compound basis.

Natural Increase and Migration. According to Bureau of the Census data, the Tucson HMA was one of only sixteen SMSA's that had a net in-migration between April 1950 and April 1960 equal to at least half of its 1950 population. Tucson was ranked fourteenth, with in-migration during the 1950's equal to about 57 percent of the 1950 population. As shown in the table below, net in-migration totaled about 80,500 between April 1950 and April 1960, equal to 65 percent of the total population increase. In-migration has been almost as significant since 1960, accounting for 61 percent of the increase in population between April 1960 and August 1966. However, net in-migration averaged nearly 8,050 during the 1950's, somewhat above the 6,800 average experienced between 1960 and 1966. Based on trends in employment discussed earlier in this report, it is likely that the rate of in-migration was much higher in the early 1960's than in recent years.

Components of Population Change
Tucson, Arizona, Housing Market Area
April 1, 1950-August 1, 1966

Source of change	April 1, 1950-April 1, 1960	April 1, 1960-August 1, 1966
Net natural increase	43,949	27,700
In-migration	80,495	43,050
Total change	124,444	70,750

Sources: 1950 and 1960 Censuses of Population; U.S. Bureau of the Census, Current Population Reports, Series P-23, No.7; and Arizona State Department of Health.

Military and Military-connected Civilian Population. Military and military-related activities have been an important part of the Tucson area since the early 1940's. Currently, the segment of the population consisting of the military and military-connected civilians (plus dependents) is estimated to total 28,400 persons, or eight percent of the total population. The total includes 20,650 persons in military households and 7,750 civilians. The military population has increased somewhat since 1960 in support of the military commitment in Southeast Asia. Conversely, the number of military-connected civilians in the HMA at the present time has declined sharply since the construction of the Titan II missile sites was completed in 1962.

Households

Housing Market Area. As of August 1966, there are an estimated 98,200 households (occupied housing units) in the Tucson HMA. Since April 1960, when the census enumerated 77,450 households in the county, the number of households has increased by 20,750 (27 percent), with the bulk of the 1960-1966 increase consisting of high gains in the 1960-1962 period, followed by a relatively low rate of gain in the next three years. During the 1950' the number of households in the HMA rose from 41,150 in April 1950 to 77,45 in April 1960, an increase of 88 percent. A portion of the total increase between April 1950 and April 1960 reflects a change in census definition from "dwelling unit" in 1950 to "housing unit" in 1960. The following table shows over-all household changes in the HMA since April 1950 and a two-year projection to 1968. Details for the city of Tucson and the remainder of Pima County are shown in table V.

Changes in Households
Tucson, Arizona, Housing Market Area
April 1, 1950-August 1, 1968

Date	Total households	Average annual change from preceding date
April 1, 1950	41,157	-
April 1, 1960	77,426	3,627
August 1, 1966	98,200	3,275
August 1, 1968	103,700	2,750

Sources: 1950 and 1960 Censuses of Housing.
1966 and 1968 estimated by Housing Market Analyst.

City of Tucson. There are 73,600 households in the city at the present time, nearly three-fourths of the HMA total. The number of households in the city increased by 10,300 during the 1960-1966 period, including households added by annexations (see table V). During the 1950-1960 decade, the number of households in the city increased by nearly 49,500 (358 percent). Areas annexed during the decade accounted for substantially all of this increase.

Remainder of Pima County. Over one-half of the increase in the number of households between 1960 and 1966 occurred outside Tucson. There are 24,600 households in the HMA outside the city at the present time, an increase of nearly 10,450 (74 percent) since 1960. Annexation activity by the city of Tucson reduced the number of households in the unincorporated area of the county from 27,350 to 14,100 between April 1950 and April 1960.

Estimated Future Household Growth. Based on the anticipated increase in population in response to projected increases in employment, on moderate increases in the number of elderly persons, military personnel, and college students, and on the assumption that the average household size will continue to decline slowly, it is estimated that by August 1968 there will be 103,700 households in the HMA, an increase of 5,500 over the present total. The projected annual rate of increase is somewhat above the 1962-1966 annual increment, but undoubtedly is well below the increase that occurred between 1960 and 1962. Most of the increase in households is expected in the Tucson area. How much of the increase occurs in the city will depend somewhat on annexations.

Household Size. As shown in table V, the average size of all households in the HMA is 3.30 persons at the present time, a decline from 3.33 persons in 1960. The average size is smaller in the city of Tucson (3.24 persons) than in the rest of the HMA (3.50 persons) because the city contains a comparatively higher proportion of smaller households, such as elderly couples and students. During the 1950-1960 decade,the average number of persons per household in the county increased from 3.26 to 3.33 in spite of the restraining influence of a change in census definition from "dwelling unit" in 1950 to "housing unit" in 1960. The decline in the average household size between 1960 and 1966 reflects, in large part, a decline in the birth rate and an increasing proportion of one- and two-person households in the area. By 1968, it is estimated that the average household in the HMA will contain 3.29 persons.

Military and Military-connected Civilian Households. There are an estimated 6,850 military and military-connected civilian households in the HMA currently, consisting of 4,500 military households and 2,350 civilian households. Most of the military-connected civilian households live in or near the city of Tucson. No civilian households are accommodated in military-controlled housing at Davis-Monthan Air Force Base. Based on data obtained from the family housing survey conducted at Davis-Monthan in March 1966, an estimated 30 percent of the military households live off-post in owner-occupied housing (including trailers), 58 percent live in rental housing off-post, and 12 percent live in military-controlled housing on the base.

Based on data obtained locally, it is estimated that military and military-connected civilian households both may increase by an additional 150 by mid-1967. The increase expected in the number of military households reflects a build-up in permanent strength and additional student pilots. The increase in civilian households is expected to come through transfers from the Naval Air Facility near Phoenix and the hiring of civilians to replace uniformed military personnel in some job classifications. No information is available on possible increases in military and civilian strength after mid-1967. The extent of any increases probably will depend on the military situation in the Far East.

Housing Market Factors

Housing Supply

Current Estimate. As of August 1966, there are an estimated 111,700 housing units in the HMA, a net addition of nearly 26,500 units (31 percent) since April 1960, or an average net increase of 4,175 a year (see table VI). The increase between April 1960 and August 1966 was the result of the construction of 24,450 new units and the addition of 3,200 mobile homes, less 1,150 units removed from the inventory because of demolition and other inventory changes.

Past Trend. Between April 1950 and April 1960 the number of housing units in the area increased by 37,900 (80 percent), from 47,300 in 1950 to 85,200 in 1960. The average annual increase during the 1950's (3,800 units) was 10 percent below the April 1960-August 1966 annual average. Moreover, a portion of the 1950-1960 increase reflected a conceptual change from "dwelling unit" as used in the 1950 Census to "housing unit" as used in the 1960 Census.

Characteristics of the Supply. The housing supply in the Tucson HMA consists largely of one-unit structures, although the proportion has declined somewhat since 1960. At the present time, an estimated 86,100 housing units (77 percent of the total) are one-unit structures. There are 8,000 trailer homes in the area, seven percent of all housing units. In April 1960 nearly 85 percent of the inventory (72,350 units) were one-unit structures. Almost six percent (4,800) were trailers. The proportion of units in structures of two units or more has increased since 1960, rising from less than 10 percent to nearly 16 percent at present. The increase in the number and proportion of multifamily units in the HMA since 1960 reflects the high level of new multifamily construction in the past six years, particularly in 1962 and 1963. The composition of the housing inventory by units in structure for 1960 and 1966 is summarized in the following table.

The Housing Inventory by Units in Structure
Tucson, Arizona, Housing Market Area
April 1, 1960 and August 1, 1966

Units in structure	Number of units: April 1, 1960	Number of units: August 1, 1966	Percentage of total: 1960	Percentage of total: 1966
One	72,349	86,100	84.9	77.1
Two to four	5,495	8,500	6.5	7.6
Five or more	2,568	9,100	3.0	8.1
Trailers	4,802	8,000	5.6	7.2
Total	85,214[a]	111,700	100.0	100.0

a/ Differs slightly from the count of all units (85,216) because units in structure were enumerated on a sample basis.

Sources: 1960 from U.S. Census of Housing.
1966 estimated by Housing Market Analyst.

Based on 1960 Census of Housing data, building permits, demolitions, and other changes in the inventory since 1960, it is estimated that 25 percent of the housing supply in the Tucson HMA at the present time has been added since April 1960. About 40 percent of the current inventory was built during the 1950's. The rapid growth of the Tucson area is reflected in the fact that only 15 percent of the current housing inventory was built prior to 1940.

Percentage Distribution of the Housing Inventory
By Year Structure Was Built
Tucson, Arizona, Housing Market Area
As of August 1, 1966

Year built[a]	HMA total
April 1, 1960-August 1, 1966	25
1950-March 31, 1960	40
1940-1949	20
1930-1939	7
1929 or earlier	8
Total	100

a/ The basic census data contain an unknown degree of error in "year built", occasioned by the accuracy of response to enumerators' questions as well as errors caused by sampling.

Sources: 1960 Census of Housing and estimates by Housing Market Analyst.

The condition of the housing inventory has improved a little since 1960 because of the demolition of some substandard units and the upgrading of some existing units. Of the 111,700 housing units in the HMA at the present time, less than seven percent are believed to be dilapidated or lacking in one or more plumbing facilities. In April 1960, nearly 8,150 units, or 10 percent of the inventory, were dilapidated or lacked one or more plumbing facilities.

Residential Building Activity

Past Trends. Building activity in the Tucson HMA has declined sharply in the past three years. Authorizations dropped from the 1963 peak of nearly 5,900 to 3,150 units in 1964, then declined still further to 1,950 in 1965. Authorizations for privately-financed units in the first seven months of 1966 totaled 890; in the same period in 1965, 1,375 privately-financed units were authorized. The trends in annual authorizations since 1960 for the city of Tucson and the remainder of Pima County are shown in table VII. About 53 percent of the units authorized since January 1, 1960 were in the unincorporated areas of the HMA.

Except for a small increase between 1961 and 1962, single-family authorizations in the HMA have declined continuously since 1960. The number of single-family authorizations declined by one-third, from 3,600 to 2,400, between 1960 and 1963, and the 1965 total (1,225) was nearly 50 percent below the 1963 level. Indications are that the 1966 level of authorizations will be even lower. Only 500 single-family units were authorized by building permits in the first seven months of 1966; in the corresponding period a year earlier, 780 single-family units were authorized. Nearly three-fourths of the 14,700 single-family units authorized since January 1, 1960 were built in the unincorporated areas of the county, but many of these units subsequently were added to the city of Tucson through annexations.

Multifamily authorizations have declined even more sharply than those of single-family units, from 59 percent of the total in 1963 (3,500 units) to 37 percent in 1965 (720 units). Units in two- to four-family structures have declined sharply from the 1,750 total in 1963, a figure that included the 1,150-unit Tucson Green Valley elderly housing project. Fewer than 10 percent of total authorizations in 1964 and 1965 were for units in two- to four-family structures. Units authorized in five- or more-family structures totaled 590 in 1965, a drop of nearly two-thirds over a two-year period. Excluding the Tucson Green Valley project, only 16 percent of the multifamily authorizations in the HMA between January 1960 and August 1966 were outside the city.

Units Under Construction. Based on the postal vacancy survey conducted late in June 1966, on building permit information, and on personal observations, it is estimated that there are approximately 700 housing units under construction in the HMA at present, including 200 sales units and 500 rental units. The number of rental units under construction includes the 200-unit C.W. Chamber Homes public low-rent housing project. The project was not under construction at the time of the postal vacancy survey.

Demolitions. Approximately 1,150 housing units have been removed from the housing inventory since January 1960 through demolitions, changes in use, and other inventory changes. Some of these units were demolished in the older downtown section of Tucson as the result of code enforcement, and some other demolitions have taken place east of the University of Arizona to allow expansion of the campus. Based on data obtained from local sources, it is estimated that 500 housing units will be demolished in the HMA in the next two years, including about 215 units in the Pueblo Center Redevelopment Project.

Tenure of Occupancy

Current Estimate. Compared with 1950-1960 experience, the trend to owner-occupancy has slowed since 1960. At present, nearly 68 percent of the 98,200 occupied housing units in the county are occupied by owners. In April 1960 about 66 percent of the occupied inventory was owner-occupied (see table VI).

Past Trend. There was a fairly significant increase in the proportion of owner-occupancy in the Tucson area between April 1950 and April 1960, from less than 58 percent to nearly 66 percent. During the decade the number of renter families increased from 17,500 to 26,600, but the proportion of renter-occupancy declined from 42 percent in 1950 to 34 percent in 1960. Many of these families were accommodated in single-family units because the increase in the number of renter families was far in excess of the number of multifamily units built in the HMA during the decade.

Vacancy

1960 Census. In April 1960, there were 4,775 vacant housing units available for sale or rent in the Tucson HMA, a net vacancy ratio of 5.8 percent (see table VI). Based on the number of sales and rental units available at that time (1,450 and 3,325 respectively), net homeowner and renter vacancy ratios were 2.8 percent and 11.1 percent. The vacant and available housing inventory was of fairly good quality. Only two percent of the vacant sales units and seven percent of the vacant rental units lacked some plumbing facility. Reflecting the high degree of seasonal occupancy during the winter months, the 1960 Census reported that over one-half of the available rental units had been vacant for less than one month.

Postal Vacancy Survey. A postal vacancy survey conducted by the Tucson Post Office in June 1966 covered nearly 88,700 possible deliveries, about 79 percent of the housing inventory in the HMA. The survey counted nearly 7,525 vacancies, or 8.5 percent of all units surveyed (see table VIII). A total of 3,500 vacancies were classified as residences, a vacancy factor of 4.7 percent; the remaining vacancies were in apartments, a vacancy ratio of 27.9 percent. The survey also counted nearly 440 units under construction. The survey was taken during a period of the year in which the level of vacancies was at a seasonal peak.

Three other postal vacancy surveys have been conducted in the Tucson HMA since May 1960. The results of these surveys, including the one conducted in June 1966, are shown in table IX. It is interesting to note that the over-all vacancy ratio in March 1966 (5.9 percent) is comparable with the 5.7 percent ratio in May 1960 and the 5.5 percent vacancy ratio in June 1962. However, the March 1966 survey was taken at a time when the level of vacancies in the HMA was relatively low because of seasonal occupancy. The 1960 and 1962 surveys are comparable with the June 1966 survey in that the level of vacancies was at a seasonal high. Vacancy ratios are higher during the summer than in the winter in the Tucson area, and the fact that the March 1966 vacancy ratio is about the same as those reported in the two preceding surveys indicates that the over-all level of vacancies has risen. The increase in vacancies occurred despite the fact that the level of multifamily construction in the HMA declined sharply in 1964 and 1965, an indication that much of the multifamily housing produced in 1962 and 1963 was not absorbed.

It is important to note that the postal vacancy survey data are not entirely comparable with the data published by the Bureau of the Census because of differences in definition, area delineations, and methods of enumeration. The census reports units and vacancies by tenure, whereas the postal vacancy survey reports units and vacancies by type of structure. The Post Office Department defines a "residence" as a unit representing one stop for one delivery of mail (one mailbox). These are principally single-family homes, but include row houses and some duplexes and structures with additional units created by conversion. An "apartment" is a unit on a stop where more than one delivery of mail is possible. Postal surveys omit vacancies in limited areas served by post office boxes and tend to omit units in subdivisions under construction. Although the postal vacancy survey has obvious limitations, when used in conjunction with other vacancy indicators the survey serves a valuable function in the derivation of estimates of local market conditions.

Other Vacancy Indicators. The Tucson Federal Savings and Loan Association has conducted periodic rental vacancy surveys in the Tucson area since 1963. The surveys exclude projects with fewer than 10 or more than 200 units and also exclude several elderly housing projects built in the last few years which have had a high level of vacancies. However, the survey does cover many other units built in the HMA since 1960. A comparison of the survey results suggests that rental vacancies in the HMA have declined a little in the last three years, although the current total still is excessive in view of the current and prospective growth rates in the area. In February 1966, only 5.4 percent of nearly 4,100 units surveyed were vacant, an improvement over the 14.0 percent vacancy factor reported in February 1965 (see table X). It is likely that some of the decline occurred because of an increase in the number of winter tourists.

Several surveys also have been conducted in July, a period of the year in which the level of vacancies is at a seasonal high. Based on the July surveys, the 23.4 percent vacancy ratio in 1966 is the lowest reported in the last four years. Increases in employment during the past year have contributed to the decline in the vacancy factor. Informed local sources report that much of the decline in the level of rental vacancies, particularly in the past year, can be attributed to the rapid growth of the summer school program at the University of Arizona and to the continued increase in the number of military personnel at Davis-Monthan, most of whom are living off-base.

Current Estimate. Based primarily on the results of the postal vacancy surveys, on other vacancy data obtained in the Tucson area, and on field investigation, it is judged that the current level of both sales and rental vacancies is excessive, although some improvement in the vacancy situation has occurred in the past year. As of August 1, 1966, there are an estimated 10,200 housing units in the HMA available for sale or rent. Of this total, 2,300 are available for sale, a homeowner vacancy ratio of 3.3 percent; the remaining 7,900 units are available for rent, a rental vacancy rate of 20.0 percent. The current estimate of the number of available vacant units in the HMA is above the level of vacancies reported in the June 1966 postal vacancy survey, even after adjusting the survey results to reflect total possible deliveries in the HMA. The difference can be attributed to the fact that a large elderly housing project with over 900 vacancies was not covered by the postal survey. It was mentioned earlier in the report that there is a seasonal fluctuation in vacancies in the Tucson HMA, with a low point during the winter due to an increase in the number of temporary winter residents, and a high point during the summer. It can be expected, therefore, that vacancies will decline during the winter months.

Sales Market

General Market Conditions. The market for sales housing in the Tucson HMA has declined substantially in recent years, as reflected in the fact that while single-family authorizations have declined almost continuously since 1960, the current level of vacancies has increased in the last six years. Authorizations declined even during the 1960-1962 boom period, from 3,600 units in 1960 to 2,600 in 1962. The decline from 2,400 units in 1963 to only 1,225 in 1965 was caused primarily by a decline in employment, but a high rate of rental construction in 1962 and 1963 also was a contributing factor. Speculative homebuilding has dropped sharply, and at the present time there are only a few builders in the HMA doing a significant amount of tract building. Despite the continuing decline in single-family construction and the moderate increase in employment in the last year, there still is a considerable surplus of vacant sales housing in the HMA over and above the number required in an area of moderate population growth and a high degree of seasonal occupancy.

Since the rapid growth of the Tucson area began in the early 1950's, most of the growth in the city has been to the east, although in the last few years some development has occurred northward toward the foothills of the Santa Catalina Mountains. Over 60 percent of the houses surveyed in the last three FHA unsold inventory surveys were priced to sell for less than $15,000.

Unsold Inventory of New Homes. In January of the last three years, the Phoenix FHA Insuring Office surveyed subdivisions in which five or more houses had been completed in the twelve-month period preceding the date of the survey. A comparison of the results of the surveys with the number of units authorized during the same period suggests that roughly two-fifths of the single-family construction in the HMA in recent years occurred in small subdivisions or on scattered lots and were not included in the surveys.

The January 1966 survey covered fewer than 25 subdivisions, most of which were in the city of Tucson or in nearby unincorporated areas of the county. Nearly 550 units had been completed in the subdivisions in 1965, of which two-thirds (370 units) were built speculatively, not significantly different from the ratio of speculative construction volume reported in the two earlier surveys (see table XI). Only 10 percent of the 180 speculatively-built homes were unsold in January 1966. The January 1964 and January 1965 surveys both reported much higher ratios of unsold speculative construction (21 percent and 33 percent, respectively).

The January 1966 survey counted fewer than five houses that had remained unsold for more than a year, while the January 1965 survey counted 45 such houses. The sharp reduction in the number of sales houses that have remained on the market for a long period of time and the reduction in the ratio of unsold speculatively-built new construction from 33 percent to 10 percent in one year, coupled with the levelling off in the number of foreclosures, are indications that most of the sales housing built in the HMA since 1964 has been satisfactorily absorbed.

FHA Home Mortgages

Foreclosures. The number of foreclosures of FHA-insured home properties in the HMA increased sharply between 1962 and 1965. The high level of single-family construction between 1960 and 1962 never was completely absorbed, and, although construction declined sharply between 1963 and 1965, the high vacancy level and the decline in employment led to a softening of sales prices in the HMA. As a result, many prospective sellers were unable to sell their homes without taking a loss. There are current indications that the rise of foreclosure activity has stopped, albeit after reaching a high level. There were about 290 foreclosures of FHA-insured mortgages on home properties in the area in the first six months of 1966, the same as in the last six months of 1965. The total for both periods is below the 340 reported in the first six months of 1965.

The trend of foreclosures of FHA-insured home mortgages is shown below. Although additional data on foreclosures are not available, discussions with local mortgagees suggest that delinquencies and foreclosures among conventionally-financed homes also have been significant.

Trend of Foreclosures, FHA-insured Home Mortgages
Tucson, Arizona, Housing Market Area
Annual Totals, 1960-1965

Year	Mortgages foreclosed[a]
1960	8
1961	25
1962	110
1963	153
1964	345
1965	622
First six months	
1965	337
1966	286

a/ Includes home mortgage forclosures under all Sections of the National Housing Act.

Source: FHA Division of Research and Statistics.

Outlook. The average of 2,900 single-family units authorized during the 1960-1962 period preceded a drop in employment that began when the Titan II missile sites were completed in 1962. This resulted in a glut of sales housing that has not been satisfactorily reduced, even though the volume of single-family construction has declined sharply in recent years. However, there are indications that the sales market in the HMA has stabilized somewhat in the past year. It appears that most sales housing built in the HMA since early in 1965 has been satisfactorily absorbed because construction volume was moderate and because employment has been increasing at a moderate rate since the latter half of 1965. The trend in foreclosures in the HMA, when analyzed in conjunction with observations made by informed local persons, indicates that the market for existing homes is beginning to strengthen. Despite these encouraging signs, it is apparent that the over-all level of sales vacancies must be reduced further to bring the market into better balance. Census data for 1960, the results of four postal vacancy surveys conducted since that time, and the current estimate of the number of available vacant sales houses indicate that the number of sales vacancies in the HMA still is at an excessive level. A continued low volume of new construction in the next two years would accommodate the new household growth expected in the Tucson area as a result of moderate increases in employment and would permit the gradual absorption of many of the vacant sales units in the inventory at the present time.

Rental Market

General Market Conditions. Most of the multifamily units in the HMA at the present time have been built since 1960. The boom started with the authorization of 1,175 multifamily units in 1961, followed by authorizations of over 5,900 units in the next two years. Multifamily activity then declined rapidly. A total of 1,300 multifamily units were authorized in 1964 and 720 in 1965. In the first seven months of this year only 390 privately-financed multifamily units were authorized.

The rental market in the HMA is extremely weak at present. The overproduction of multifamily units in the early 1960's was followed by a decline in employment and an abrupt slowdown in the rate of population growth. The over-supply of rental housing in the HMA has been evident for the past three years, as reflected in the wide variety of rental accommodations available in almost all areas, types of projects, and monthly gross rent ranges. Vacancies have been high not only in the summer but also in the winter tourist season. Recent increases in occupancy have been significant only in rental units near the University of Arizona and Davis-Monthan Air Force Base, reflecting the increase in student enrollment and the fact that military personnel are being housed in the private market because of the lack of on-base facilities. Recent postal vacancy surveys and rental studies conducted both by the FHA and by private groups all reflect the excess supply of rental housing in the HMA.

Urban Renewal

The Pueblo Center Redevelopment Project (Arizona R-8) was approved in March 1966. The project area, which includes a portion of the downtown business district and extends south for several blocks, is bounded roughly by Fourteenth Street on the south, Washington and Pennington Streets on the north, and by portions of Meyer, Church, Convent, and Stone Avenues on the east (see map on next page). Granada Avenue and U.S. Interstate Route 10 form the western boundary of the project area.

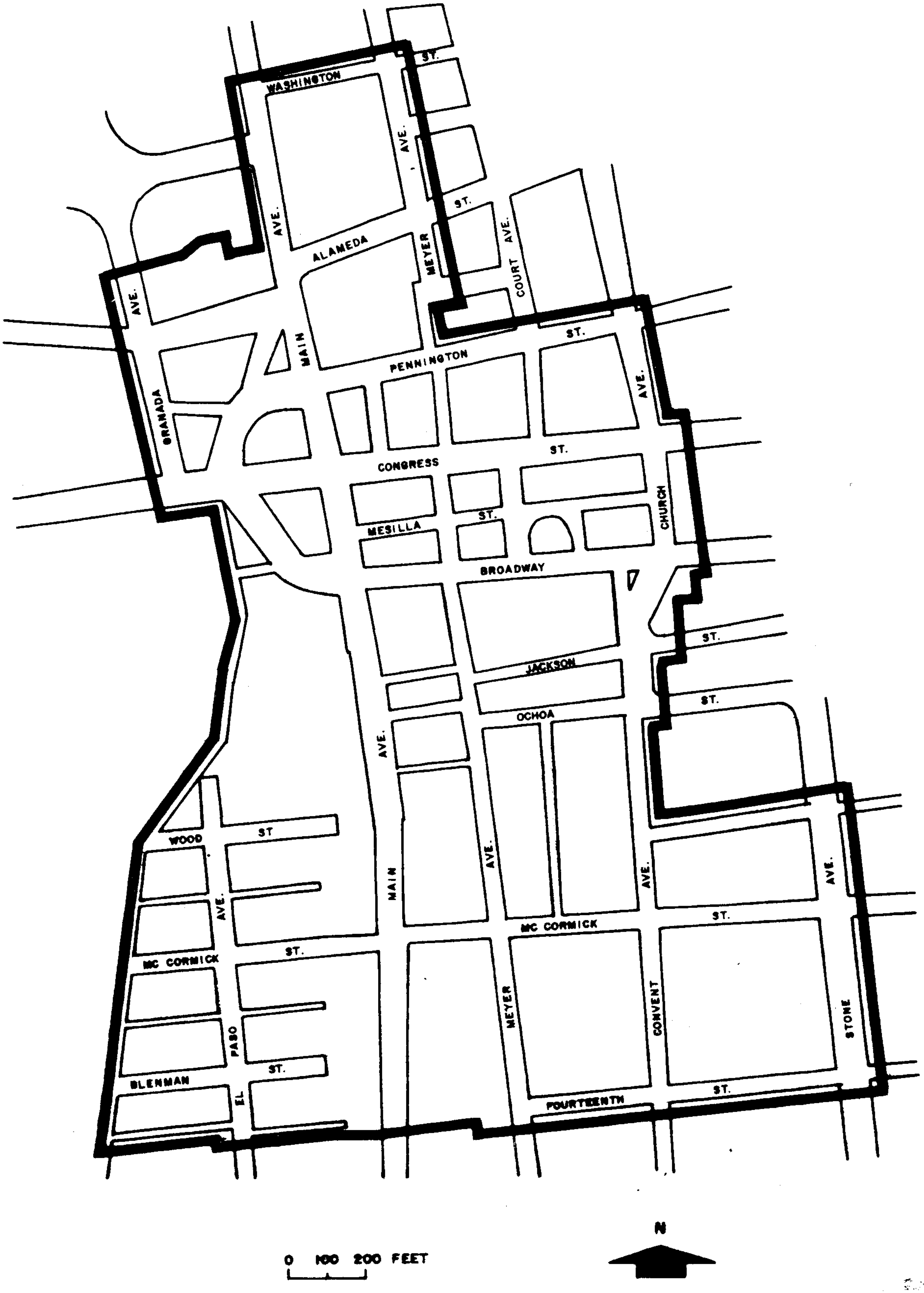
The project area of 79 acres contains a mixture of commercial and residential uses, interspersed with vacant land zoned for residential use. There are approximately 260 buildings in the renewal area, of which 230 are considered to be substandard. Planned land re-use in the project site is for a convention center, a government office complex, commercial buildings, and public parks. A survey made in the renewal area in the summer of 1965 reported a total of 140 families and 75 individuals who will have to be relocated. There is no residential re-use planned, and these persons will be relocated elsewhere. Many of these families and individuals can qualify for public low-rent housing and can be accommodated in either the existing La Reforma project or in the C.W. Chamber Homes project currently under construction.

Military Housing

The inventory of military-controlled housing at Davis-Monthan Air Force Base includes 550 privately-financed units (Vandenburg Village) and six units of appropriated-fund housing for senior officers. The 556 units include 231 two-bedroom units, 270 three-bedroom units, and 55 four-bedroom units. All of the units are considered adequate as public quarters.

In order to accommodate a portion of the recent increase in military strength at the base, the Air Force has leased some units in Escalante Gardens, a garden-type apartment project located about two miles from the base. All of the units are furnished. In late July 1966 the Air Force had 100 units at the project under lease and was negotiating to lease an additional 40 units. Other military personnel recently assigned to Davis-Monthan either have been assigned to barracks or are living in private rental housing off-base.

PUEBLO CENTER REDEVELOPMENT PROJECT
CITY OF TUCSON, ARIZONA



Public Housing

There is one existing public low-rent housing project in the Tucson HMA at the present time. Construction of a second project was started in June 1966. The existing project, La Reforma, contains 20 one-bedroom units, 64 two-bedroom units, 56 three-bedroom units, and 20 four-bedroom units, a total of 160 units.

The C.W. Chamber Homes, a 200-unit project, is under construction at the present time and is scheduled for completion in September 1967. This project will have 40 one-bedroom units, 88 two-bedroom units, 36 three-bedroom units, and 36 four-bedroom units and will accommodate a portion of the 200 applicants who are currently on the waiting list maintained by the local housing authority and some families displaced by public action in the nearby Pueblo Center Redevelopment Project.

Demand for Housing

Quantitative Demand

The demand for additional housing in the Tucson HMA during the next two years is based primarily on the level of household growth (2,750 a year). As in the recent past, however, it is expected that about 15 percent of the household increment during the forecast period will be housed in mobile homes. The remaining household growth, an average of a little less than 2,350 annually, must be adjusted for the number of housing units expected to be lost from the inventory through demolitions and other inventory changes and on the need to reduce current vacancies to a level that reflects a more balanced demand-supply relationship in the market. Consideration also must be given to the current tenure composition of the inventory and to the continuing trend from renter- to owner-occupancy. After giving consideration to each of these factors, an average annual demand for 1,250 new units all sales housing, is forecast for each of the next two years. The estimate excludes possible need for public low-rent housing or rent-supplement accommodations.

The average annual demand for 1,250 sales houses over the forecast period represents an extension of the low level of construction reached during the 1960-1965 decline. In 1965, a total of 1,225 units were authorized, and in the first seven months of 1966 single-family units were authorized at an annual rate of 860. The January 1966 unsold inventory survey indicated that new construction in 1965 was absorbed fairly well, and there are indications that the level of foreclosures in the HMA has peaked in the last year and may be starting to decline. Some local realtors report that sales prices of existing homes are firming. The continued low level of new construction and the increases in employment in the last year undoubtedly have contributed to this stabilized situation, and the provision of an average of 1,250 units annually in the forecast period, coupled with anticipated increases in employment, should restore a reasonable demand-supply relationship in the sales market by the end of the forecast period.

Based on the anticipated rate of renter household formation during the forecast period, roughly 800 new rental units a year would be required to meet the quantitative needs of the market. However, there is a surplus of private rental housing in the HMA at the present time in practically all price ranges, unit sizes, and locations. Only in the areas around the University of Arizona and Davis-Monthan AFB has the rental market shown much improvement in the past year. Moreover, the current excess of adequate vacant rental units is so great that it will be impossible to correct the current market imbalance within a two-year period unless unanticipated large increases in population occur. Although the rental market has been extremely weak for the past three years, a total of 1,300 multifamily units were authorized in 1964 and 720 in 1965. The construction industry cannot be expected to stop production completely for the next few years but it is apparent that, unless production is curtailed sharply, the excess of vacant rental units will not be absorbed within a reasonable period of time. Construction of new units may be warranted only in exceptional cases, such as the production of a limited number of units designed to meet an element of demand that is not now being satisfied. The amount of such demand is likely to be minimal, and the market should be definitely established before construction is started.

Qualitative Demand

Sales Housing. Based on the distribution of families by current annual after-tax income, on the proportion of income that Tucson area families typically pay for sales housing, and on recent market experience, the demand for new sales houses is expected to approximate the sales price pattern presented in the following table.

Estimated Annual Demand for New Sales Housing
Tucson, Arizona, Housing Market Area
August 1, 1966 - August 1, 1968

Price range	Number of units	Percent of total
Under $12,500	350	28
$12,500 - 14,999	200	16
15,000 - 17,499	240	19
17,500 - 19,999	160	13
20,000 - 24,999	180	14
25,000 and over	120	10
Total	1,250	100

The foregoing distribution differs from that in table XI, which reflects only selected subdivision experience in the last three years. It must be noted that the survey data do not include new construction in subdivisions with less than five completions during the year, nor do they reflect individual or contract construction on scattered lots. It is likely that the more expensive housing construction, and some of the lower-value homes, are concentrated in the smaller building operations which are quite numerous. The preceding demand estimates reflect all home building and indicate a greater concentration in some price ranges than a subdivision survey would reveal.

Table I

Civilian Work Force Components
Tucson, Arizona, Housing Market Area
Annual Averages, 1956-1965
(in thousands)

Year	Civilian work force	Unemployment Number	Unemployment Percent	Workers on strike	Total employment	Agricultural employment	Nonagricultural employment Total	Nonagricultural employment Wage and salary	Nonagricultural employment Other[a/]
1956	71.2	2.6	3.7	-	68.6	3.1	65.5	54.6	10.9
1957	75.8	3.1	4.1	-	72.7	2.5	70.2	58.9	11.3
1958	79.4	4.8	6.0	0.1	74.5	2.6	71.9	60.5	11.4
1959	84.2	4.0	4.8	0.1	80.1	2.3	77.8	66.0	11.8
1960	87.9	4.5	5.1	-	83.4	2.2	81.2	69.2	12.0
1961	92.4	5.3	5.7	-	87.1	2.0	85.1	72.8	12.3
1962	99.0	4.9	4.9	-	94.1	1.9	92.2	79.4	12.8
1963	98.6	5.7	5.8	0.1	92.8	1.8	91.0	78.3	12,7
1964	96.3	6.3	6.5	-	90.0	1.8	88.2	75.7	12.5
1965	96.5	6.0	6.2	0.3	90.2	1.7	88.5	76.0	12.5
First seven months									
1965	96.6	6.4	6.6	0.4	89.8	1.7	88.1	75.6	12.5
1966	98.6	4.5	4.6	0.1	94.1	1.7	92.4	79.6	12.8

Note: In some years, subtotals may not add to totals because of rounding.

a/ Includes self-employed persons, unpaid family workers, and domestics.

Source: Employment Security Commission of Arizona.

Table II

Nonagricultural Wage and Salary Employment by Type of Industry
Tucson, Arizona, Housing Market Area
Annual Averages, 1956-1965
(in thousands)

Industry	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	First seven months 1965	First seven months 1966
Total wage and salary employment	54.6	58.9	60.5	66.0	69.2	72.8	79.4	78.3	75.7	76.0	75.6	79.6
Manufacturing	9.7	9.9	8.9	9.2	8.4	8.4	9.2	9.3	6.6	6.2	6.1	7.0
Nonmanufacturing	44.7	49.2	51.6	56.8	60.8	64.4	70.3	69.0	69.1	69.8	69.5	72.5
Mining and quarrying	2.1	2.4	2.3	2.6	2.9	3.1	3.4	3.2	3.3	3.6	3.4	3.9
Contract construction	4.7	5.4	5.6	6.9	6.9	7.8	9.8	6.5	5.9	5.3	5.4	5.4
Trans., comm., pub. utilities	5.3	5.3	5.1	5.2	5.2	5.1	5.3	5.4	5.3	5.2	5.3	5.1
Wholesale & retail trade	12.2	13.2	13.6	14.8	15.8	16.3	17.3	17.4	17.1	17.4	17.2	18.1
Finance, ins., & real estate	1.8	2.1	2.4	2.6	2.9	3.1	3.4	3.7	3.8	3.7	3.6	3.7
Services & miscellaneous	8.2	9.1	10.0	11.0	12.2	12.9	13.6	13.9	13.9	13.7	13.8	14.2
Government	10.4	11.7	12.6	13.7	14.9	16.1	17.5	18.9	19.8	20.9	20.8	22.1

Note: In some years, subtotals may not add to totals because of rounding.

Source: Employment Security Commission of Arizona.

Table III

Assigned Military Strength and Federal Civil Service Employment
Davis-Monthan Air Force Base, Tucson, Arizona
January 1, 1957-August 1, 1966

Date		Assigned military strength		Federal civil service employment		Total, military and civilian	
		Total	Change in total	Total	Change in total	Total	Change in total
January 1,	1957	6,179	-	1,078	-	7,257	-
"	1958	6,475	296	995	-83	7,470	213
"	1959	6,635	160	996	1	7,631	161
"	1960	6,399	-236	981	-15	7,380	-251
"	1961	4,031	-2,368	1,030	49	5,061	-2,319
"	1962	4,330	299	1,147	117	5,477	416
"	1963	5,304	974	1,122	-25	6,426	949
"	1964	6,752	1,448	1,303	181	8,055	1,629
"	1965	6,861	109	1,118	-185	7,979	-76
"	1966	6,774	-87	1,399	281	8,173	194
August 1,	1966	7,020	246	1,668a/	269	8,688	515

a/ As of July 1, 1966.

Source: Department of the Air Force.

Table IV

Percentage Distribution of All Families and Renter Households by Estimated Annual Income
After Deduction of Federal Income Tax
Tucson, Arizona, Housing Market Area, 1966 and 1968

Annual after-tax income	1966 income: All families	1966 income: Renter households[a/]	1968 income: All families	1968 income: Renter households[a/]
Under $2,000	7	9	6	8
$ 2,000 - 2,999	6	9	6	9
3,000 - 3,999	8	12	7	11
4,000 - 4,999	9	12	9	11
5,000 - 5,999	10	12	9	11
6,000 - 6,999	10	12	9	11
7,000 - 7,999	11	10	10	10
8,000 - 8,999	9	7	9	8
9,000 - 9,999	7	5	7	6
10,000 - 12,499	10	6	12	7
12,500 - 14,999	6	2	7	3
15,000 and over	7	4	9	5
Total	100	100	100	100
Median	$7,000	$5,700	$7,400	$6,000

a/ Excludes one-person renter households.

Source: Estimated by Housing Market Analyst.

Table V

Population and Household Changes
Tucson, Arizona, Housing Market Area
April 1, 1950-August 1, 1966

	April 1, 1950	April 1, 1960	August 1, 1966	Average annual change 1950-1960 Number	Percent[a]	1960-1966 Number	Percent[a]
Population							
Tucson	45,454	212,892	246,500	16,743	15.4	5,300	2.4
Rest of HMA	95,762	52,768	89,900	-4,299	-5.9	5,850	8.6
HMA total	141,216	265,660	336,400	12,444	6.3	11,150	3.8
Households							
Tucson	13,816	63,303	73,600	4,949	15.2	1,625	2.5
Rest of HMA	27,341	14,123	24,600	-1,322	-6.6	1,650	8.9
HMA total	41,157	77,426	98,200	3,627	6.3	3,275	3.8
Household size							
Tucson	3.06	3.27	3.24				
Rest of HMA	3.36	3.56	3.50				
HMA total	3.26	3.33	3.30				

a/ Derived through the use of a formula designed to calculate the rate of change on a compound basis.

Sources: 1950 and 1960 Censuses of Population and Housing.
1966 estimated by Housing Market Analyst.

Table VI

Components of the Housing Inventory
Tucson, Arizona, Housing Market Area
April 1, 1950-August 1, 1966

Supply, tenure, and vacancy	April 1, 1950	April 1, 1960	August 1, 1966	Average annual change[a/] 1950-1960 Number	1950-1960 Pct.[b/]	1960-1966 Number	1960-1966 Pct.[b/]
Total housing supply	47,294	85,216	111,700	3,792	5.9	4,175	4.4
Total occupied units	41,157	77,426	98,200	3,627	6.3	3,275	3.9
Owner-occupied	23,661	50,810	66,600	2,715	7.6	2,500	2.0
Percent owner	57.5	65.6	67.8	-	-	-	-
Renter-occupied	17,496	26,616	31,600	912	4.2	790	2.8
Percent renter	42.5	34.4	32.2	-	-	-	-
Total vacant housing units	6,137	7,790	13,500	165	2.4	900	8.8
Available	2,897	4,778	10,200	188	5.0	860	12.2
For sale	512	1,446	2,300	93	10.0	130	7.5
Percent	2.1	2.8	3.3	-	-	-	-
For rent	2,385	3,332	7,900	95	3.4	720	14.0
Percent	12.0	11.1	20.0	-	-	-	-
Other vacant[c/]	3,240	3,012	3,300	-23	-0.7	45	1.5

a/ Subtotals may not add to totals because of rounding.
b/ Derived through the use of a formula designed to calculate the annual rate of change on a compound basis.
c/ Includes vacant seasonal units, dilapidated units, units rented or sold and awaiting occupancy, and units held off the market.

Sources: 1950 and 1960 Censuses of Housing.
1966 estimated by Housing Market Analyst.

Table VII

New Housing Units Authorized by Building Permits
Tucson, Arizona, Housing Market Area
Annual Totals, 1960-1965

	City of Tucson				Rest of HMA				HMA total			
Year	Single-family	Two-to four-family	Five-or more-family	Total	Single-family	Two-to four-family	Five-or more-family	Total	Single-family	Two-to four-family	Five-or more-family	Total
1960	1,237	222	445	1,904	2,351	62	8	2,421	3,588	284	453	4,325
1961	889	253	819	1,961	1,641	39	56	1,736	2,530	292	875	3,697
1962	691	297	1,863	2,851	1,906	50	208	2,164	2,597	347	2,071	5,015
1963	527	485	1,262	2,274	1,876	1,267	478	3,621	2,403	1,752	1,740	5,895
1964	309	290	896	1,495	1,540	62	53	1,655	1,849	352	949	3,150
1965	213	110	369	692	1,019	23	220	1,262	1,232	133	589	1,954
First seven months												
1965	145	68	301	514	635	16	213	864	780	84	514	1,378
1966	107	47	426a/	580	395	65	47	507	502	112	473	1,087a/

a/ Includes 200 units of public housing.

Sources: Annual data for 1960 through 1965 from the Bureau of the Census, Construction Reports, C-40. Monthly data for 1965 and 1966 from Tucson City Building Department and Pima County Zoning Office.

Table VIII

Tucson, Arizona, Area Postal Vacancy Survey

June 28, 1966

Postal area	Total residences and apartments: Total possible deliveries	Vacant units: All	Vacant units: %	Vacant units: Used	Vacant units: New	Under const.	Residences: Total possible deliveries	Vacant units: All	Vacant units: %	Vacant units: Used	Vacant units: New	Under const.
The Survey Area Total	88,680	7,515	8.5	6,609	906	435	74,305	3,505	4.7	3,268	237	215
Main Office	2,492	440	17.7	440	-	1	1,848	240	13.0	240	-	1
Branches:												
Davis-Monthan AFB	555	50	9.0	50	-	-	-	-	-	-	-	-
South Tucson	8,038	529	6.6	514	15	7	6,212	342	5.5	329	13	7
Stations:												
Annex	15,651	1,300	8.3	1,114	186	78	13,088	453	3.5	421	32	24
East Broadway	12,992	1,013	7.8	990	23	52	11,373	562	4.9	555	7	9
Emery Park	8,799	521	5.9	463	58	36	8,252	360	4.4	302	58	34
Rincon	10,782	566	5.2	481	85	81	10,040	513	5.1	428	85	81
Speedway	17,040	2,088	12.3	1,583	505	92	12,975	517	4.0	509	8	17
University	12,331	1,008	8.2	974	34	88	10,517	518	4.9	484	34	42

Postal area	Apartments: Total possible deliveries	Vacant units: All	Vacant units: %	Vacant units: Used	Vacant units: New	Under const.	House trailers: Total possible deliveries	Vacant: No.	Vacant: %
The Survey Area Total	14,375	4,010	27.9	3,341	669	220	6,952	577	8.3
Main Office	644	200	31.1	200	-	-	-	-	-
Branches:									
Davis-Monthan AFB	555	50	9.0	50	-	-	-	-	-
South Tucson	1,826	187	10.2	185	2	-	918	78	8.5
Stations:									
Annex	2,563	847	33.0	693	154	54	3,848	347	9.0
East Broadway	1,619	451	27.9	435	16	43	117	5	4.3
Emery Park	547	161	29.4	161	-	2	858	52	6.1
Rincon	742	53	7.1	53	-	-	1	-	-
Speedway	4,065	1,571	38.6	1,074	497	75	909	81	8.9
University	1,814	490	27.0	490	-	46	301	14	4.7

The survey covers dwelling units in residences, apartments, and house trailers, including military, institutional, public housing units, and units used only seasonally. The survey does not cover stores, offices, commercial hotels and motels, or dormitories; nor does it cover boarded-up residences or apartments that are not intended for occupancy.

The definitions of "residence" and "apartment" are those of the Post Office Department, i. e.: a residence represents one possible stop with one possible delivery on a carrier's route; an apartment represents one possible stop with more than one possible delivery.

Source: FHA postal vacancy survey conducted by collaborating postmaster(s).

Table IX

Summary of Postal Vacancy Surveys
Tucson, Arizona, Housing Market Area
Selected Dates, 1960-1966

Units surveyed	Residences	Apartments	Total, all units
May 1960	61,978	7,581	69,559
June 1962	64,863	14,155	79,018
March 1966	76,411	13,976	90,387
June 1966	74,305	14,375	88,680
Vacant units reported			
May 1960	2,314	1,660	3,974
June 1962	2,079	2,230	4,309
March 1966	3,074	2,230	5,304
June 1966	3,505	4,010	7,515
Percent vacant			
May 1960	3.7	21.9	5.7
June 1962	3.2	15.8	5.5
March 1966	4.0	16.0	5.9
June 1966	4.7	27.9	8.5

Source: Postal vacancy surveys conducted by the Tucson Post Office.

Table X

Results of Rental Vacancy Surveys
Tucson, Arizona, Housing Market Area
Selected Dates, 1963-1966

Date	Size of unit: Efficiency Percent vacant	One-bedroom Percent vacant	Two-bedroom: One-bath Percent vacant	Two-bedroom: Two-bath Percent vacant	Three-bedroom Percent vacant	Four-bedroom Percent vacant	Total, all units: Number surveyed	Total, all units: Percent vacant
July 1963	-	-	-	-	-	-	-	45.5
October 1963	26.8	38.8	35.9	25.1	32.3	0.0	-	29.4
February 1964	6.7	8.7	18.0	20.4	34.8	-	3,137	14.6
July 1964	37.8	35.6	32.7	27.1	33.2	-	3,224	33.7
October 1964	31.0	33.0	24.0	28.0	28.0	-	3,548	28.2
February 1965	8.7	14.7	14.5	10.6	19.4	0.0	3,751	14.0
July 1965	28.1	37.7	24.7	30.6	9.2	11.1	3,986	30.2
November 1965	16.7	23.9	20.8	19.6	11.8	0.0	-	20.8
February 1966	4.5	3.6	7.2	6.7	8.0	0.0	4,089	5.4
July 1966	23.9	25.9	22.4	21.0	16.0	0.0	4,137	23.4

Source: Tucson Federal Savings and Loan Association.

Table XI

New Homes Completed in Selected Subdivisions[a/]
Tucson, Arizona, Housing Market Area
As of January 1, of 1964, 1965, and 1966

Sales price	Total completions Number	Total completions Percent	Pre-sold	Speculative construction Total	Speculative construction Number sold	Speculative construction Number unsold	Speculative construction Percent unsold
			Houses completed in 1963				
Under $12,500	484	26	351	133	91	42	32
$12,500 - 14,999	751	41	434	317	277	40	13
15,000 - 17,499	280	15	173	107	77	30	28
17,500 - 19,999	221	12	184	37	30	7	19
20,000 - 24,999	68	4	54	14	9	5	36
25,000 and over	31	2	6	25	16	9	36
Total	1,835	100	1,202	633	500	133	21
			Houses completed in 1964				
Under $12,500	285	30	166	119	89	30	25
$12,500 - 14,999	219	23	160	59	30	29	49
15,000 - 17,499	260	28	194	66	54	12	18
17,500 - 19,999	92	10	89	3	2	1	33
20,000 - 24,999	33	3	32	1	0	1	100
25,000 and over	52	6	34	18	3	15	83
Total	941	100	675	266	178	88	33
			Houses completed in 1965				
Under $12,500	148	27	79	69	56	13	19
$12,500 - 14,999	107	20	55	52	48	4	8
15,000 - 17,499	119	22	76	43	43	0	0
17,500 - 19,999	78	14	67	11	11	0	0
20,000 - 24,999	63	11	59	4	4	0	0
25,000 and over	31	6	29	2	1	1	50
Total	546	100	365	181	163	18	10

a/ Covers all subdivisions in which five or more houses were completed in the preceding twelve months.

Source: Annual Unsold Inventory Survey of New Homes, conducted by the Phoenix FHA Insuring Office.