AN EXPLORATION OF CHANGES IN RESIDENTIAL LOCATIONAL CHOICE AS MEASURED BY HOUSEHOLD HEAD'S JOURNEY TO WORK FOR 1974 AND 1977

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Preface

This study was my first attempt at exploratory research, and as such, has been very enlightening. In this type of study, one is never quite sure where to turn or how to approach the subject at hand. In the case of housing and commuting behavior, there were so many overlapping, yet diverse elements that it was easy to get carried away with the possibilities that presented themselves. On the other hand, as my committee members kept reminding me, this was not supposed to be a life's work, just a master's thesis, so it had to be necessarily limited in what could be addressed. Essentially the main thrust of this study was to have been to determine whether the rising costs of commuting had influenced the housing location choices of our nation, i.e. were people adjusting their home-work distance by moving closer to their workplace. While the present study approaches this question indirectly, the data did not lend itself to longitudinal study of particular households and their commuting behavior since it is based on housing units. Also, before exploring peoples' attitudes about their commuting and housing choices, it was necessary to determine if any changes had actually taken place in the time period studied.

I want to first of all thank my thesis advisor, Dr. Margaret Weber, for her encouragement and guidance in preparing this thesis, and for making my two years as a graduate research assistant such a meaningful experience. I also want to express my appreciation to my thesis committee members, Dr. Kay Stewart for her constant support and many

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Thanks to my husband, Tim, for his love and understanding. Also, I want to thank my family for standing behind me despite their reservations about the value of so much education. To my friends, especially Bill Braun, Mary Dee Dickerson, Lisa Wafford, Sue Williams and Paula Lenhart, a special thanks for all the sharing of good and bad times which helped me to keep things in perspective throughout these last couple of years.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

The journey to work by the household head has long been a topic of discussion for economists, sociologists, geographers, urban planners and others who were interested in spatial movement, behavioral adjustments to the environment, residential location and so on. The home-work separation has been studied in terms of commuting theories, econometric models and mobility/migration theories. Today the journey to work has taken on a new significance as our nation faces economic constraints of rising prices and projected shortages of fuel for transportation.

The private automobile opened up a whole new way of life for workers, who were no longer forced to choose employment near their homes or move in order to take advantage of job opportunities. Suburban sprawl--America's answer to the good life--allowed people to have all the ammenities of life outside the city such as clean air and open spaces and still enjoy the jobs and opportunities of urban life. Rural residents could remain on their land, farm part-time and still commute to jobs elsewhere. All regions of the United States were affected, and today the majority of all workers travel from home to work by private automobily--many of them alone.

Past studies on residential mobility have indicated that proximity to the place of employment seems to be of little importance to most households (Goodman, 1974; Gallogly, 1974; Morris and Winter, 1978).

Many people have chosen to commute longer distances to work in order to choose housing based on factors related to family income, household size, neighborhood ammenities and type of dwelling--usually single-family, detached housing is preferred. Such choices became viable because of the increased use of the private automobile.

Economists, urban planners, sociologists and policy-makers have long been interested in commuting and locational theories. The use of modeling is one means of dealing with the complexities of residential housing and transportation decisions (Kain, 1975; Hirsch, 1977; Morris and Winter, 1978). There are also various theories on residential mobility and the propensity of households to move that relate to the household' decision-making process in housing selection, locational choices and satisfaction with houing based on various socio-demographic variables (Rossi, 1955; Foote et al., 1960; Morris and Winter, 1978). Housing decisions are based on many interrelated factors. Adding the dimension of rising energy costs for the journey to work makes decision-making an even more complex problem for households and policy-makers alike.

Statement of Problem

The widespread use of the private automobile, vast networks of roadways and availability of gasoline have allowed Americans great flexibility in their residential locational choice. Many people have chosen to commute longer distances to work in order to increase their range of housing choices. The trade-off between commuting costs and locational choice could generally be justified when ammenities of the location were analyzed along with the convenience and relatively low cost of driving a private automobile to and from the workplace.

With today's rising transportation costs, the journey to work and its relationship to the household's location needs even greater attention. The economic aspects as well as differences among the regions of the United States, metropolitan/nonmetropolitan disparities and consequences of the transportation mode used should all be carefully studied to determine their importance to the future of housing locational decisions and the journey to work. The U.S. Bureau of Census in conjunction with the Department of Housing and Urban Development gather data yearly on various aspects of housing and transportation. Some of these data from the Annual Housing Survey were utilized for this study.

Purpose and Objectives

The purpose of this study was to examine the effect of the journey to work on residential locational choice of households in terms of commuting distance and time traveled by the household head from 1974 to 1977. The following objectives were identified for this study:

1. To compare the a) categorized one-way distance and b) categorized time of housedold heads' journeys to work in 1974 with 1977.
2. To analyze the categorized journey to work distance for 1974 and 1977 by a) transportation mode used, b) region of the United States, c) Standard Metropolitan Statistical Area (SMSA) versus Non-SMSA residence, d) categorized property value to income ratios, and e) rent as percentage of income categories.
3. To analyze the categorized time of journey to work for 1974 with 1977 by a) transportation mode used, b) region of the

United States, c) SMSA versus Non-SMSA residence, d) categorized property value to income ratios, and e) rent as percentage of income categories.

4. To analyze the control variables of a) mode of travel and region of the United States by SMSA/Non-SMSA residence, b) categorized property value to income ratios and region of the United States by SMSA/Non-SMSA residence, and c) rent as percentage of income categories and region of the United States by SMSA/Non-SMSA residence.

Research Questions

1. Did the categorized, one-way distance traveled by household heads in the journey to work change significantly from 1974 to 1977?
2. Did the categorized, one-way time traveled by household heads in the journey to work change significantly from 1974 to 1977?
3. Did the relationship between the distance traveled by household heads in the journey to work in 1974 and 1977 vary by type of transportation mode used?
4. Did the relationship between the distance traveled by household heads in the journey to work in 1974 and 1977 vary by region of the U.S.?
5. Did the relationship between the distance traveled by household heads in the journey to work in 1974 and 1977 differ by location inside and outside SMSA's?
6. Did the relationship between the distance traveled by household heads in the journey to work in 1974 and 1977 vary

according to property value to income ratios for homeowners?

7. Did the relationship between the distance traveled by household heads in the journey to work in 1974 and 1977 vary according to rent as percentage of income for renters?
8. Did the relationship between the time traveled by household heads in the journey to work in 1974 and 1977 vary by transportation mode used?
9. Did the relationship between the time traveled by household heads in the journey to work in 1974 and 1977 vary by region of the U.S.?
10. Did the relationship between the time traveled by household heads in the journey to work for 1974 and 1977 differ by location inside and outside SMSA's?
11. Did the relationship between the time traveled by household heads in the journey to work for 1974 and 1977 vary according to property value to income ratio for homeowners?
12. Did the relationship between the time traveled by household heads in the journey to work for 1974 and 1977 vary according to rent as percentage of income for renters?
13. Did the transportation modes used by household heads in the journey to work for different regions of the United States differ by location inside and outside SMSA's?
14. Did the categorized property value to income ratios for home owners in different regions of the U.S. differ by location inside and outside SMSA's?
15. Did the rent as percentage of income categories for renters in different regions of the United States differ by location inside and outside SMSA's?

Assumptions

The following assumptions were necessary in order to conduct this study:

1. It was assumed that households considered commuting costs in the choice of residential location and the economic trade-offs involved.
2. It was assumed that the variables selected were sufficient measures of journey to work and the residential locational choice.
3. It was assumed that energy prices will remain high and continue to rise faster than other wholesale prices in the immediate future (Miernyk, 1978), making the journey to work an important consideration in residential choice.

Limitations

The following were limitations of this study:

1. This study dealt specifically with the years of 1974 and 1977. This was a relatively short time span and the impact of the energy situation on decisions about the journey to work may not be fully realized in the data collected.
2. The present study dealt with the journey to work for the heads of households only.
3. Actual transportation costs were not used in the analysis of the journey to work. Time, distance and travel mode used were the main variables analyzed in terms of the daily commute.
4. Generalizations about the behavior of households across broad categories of space such as the United States and use of large

sample sizes tend to blur distinctions among diverse groups in specific settings. The very size of the data base used in this study made it difficult to distinguish subtle changes that may have taken place in small areas and gave only the "big picture" of what happened from 1974 to 1977, in terms of the journey to work and housing location.

5. Participation in the Annual Housing Survey was voluntary. People who consented to being interviewed by the Census Bureau personnel could conceivably be different from those who refused to be interviewed.
6. In the Annual Housing Survey, housing units were essentially longitudinally linkable, but households were not.

Definitions

The following terms were operationally defined for use in this study.

1. Commuting is regular travel by the head of household in the journey to and from work.
2. Head of household refers to

> the person regarded as the head by members of the household. However, if a married woman living with her husband is reported as the head, her husband was considered the head for the purpose of simplifying the tabulations (U.S. Department of Commerce, Bureau of the Census and U.S. Department of Housing and Urban Development, 1976, p. APP. 4).

3. Housing locational decisions refer to the household choices to move or stay in present housing based on rational exploration of possible alternatives and cost factors.

4. Journey to work is the average one-way time and/or distance traveled by the head of household from place of residence to the workplace.
5. Private transportation refers to vehicular movement by a privately owned automobile.
6. Property Value to Income Ratio refers to the homeowner's value of land, dwelling unit and any other durable goods associated with property in relation to the household income.
7. Public transportation refers to any vehicle used for the journey to work except the privately-owned automobile and includes trains, busses/streetcars, subways/els and taxicabs.
8. Rent as Percentage of Income refers to the renter household's payment for monthly rent as compared to the household's monthly income.
9. Region of the United States refers to the U.S. Census Bureau designations of region and includes four major breakdowns of the United States (see Appendix A).
10. Residential housing costs refer to housing expenses that depend on how far a household is located from the workplace(s) and the quantity and quality of residential space that is consumed.
11. Residential locational choice is the place a household decides to live based on affordability of the residence, ammenities of the unit and location and the wants and needs of the household members.
12. Residential mobility refers to the

moving to a different dwelling within the local area (with a single labor market or housing market): it usually involves adjustments of actual housing conditions to better meet housing needs; one of the housing adjustment behaviors (Morris and Winter, 1978, p. 81).

13. Rural housing is residential housing not designated as urban housing (see below).

14. Standard Metropolitan Statistical Area (SMSA) is an area designated by the Office of Management and Budget; it generally is made up of one entire county or several counties; it must include at least one core city (or in certain cases, an effective community) of 50,000 or more inhabitants . . . (U.S. Department of Housing and Urban Development, 1979, p. 6).

15. Non-SMSA is any place that does not conform to the U.S. Housing and Urban Development definition of SMSA.

16. Transportation costs refer to the costs in monetary terms based on distance and time traveled in the journey to work, as a trade-off in the housing locational decision.

17. Urban housing refers to all residential housing units located within one of the following places:

(a) 2500 inhabitants or more and incorporated as cities, burroughs (except Alaska), and towns (except the New England States, New York, and Wisconsin), but excluding those housing units in the rural portions of extended cities; (b) unincorporated places of 2500 inhabitants or more; and (c) other territory, incorporated or unincorporated, included in urbanized areas (U.S. Department of Commerce, Bureau of the Census, and the U.S. Department of Housing and Urban Development, 1976, p. APP-2).

CHAPTER II

REVIEW OF LITERATURE

Introduction

Economists, sociologists, geographers, planners and others have studied the locational decision in terms of mobility theory and from the standpoint of commuting theories of minimization of home-work separation, structural and ecological models. These theories form part of the background for this study of housing locational decisions in terms of the head of household's journey to work. Of particular importance is the transportation mode used in commuting since it has been found that most commuters travel to work in private automobiles, many of them alone.

Past studies, particularly in mobility and migration, have shown that location in relation to the workplace is of minimal importance in the housing decision (Gallogly, 1974; Morris and Winter, 1978). However, economics have always played an important role in the housing decision and length of commute. Recently the economics of the journey to work have gained even greater importance as the cost of personal travel by automobile have risen dramatically. Some socioeconomic factors that have been found to be important are age, income group, family type and ethnic background, among other factors (Abu-Lughod and Foley, 1960). The household characteristic of tenure, too, is important to the housing decisions made and location of the unit.

Another factor that has been found to be significant in the housing locational decision and the commute to work was the location of the residence. Of particular importance was metropolitan/nonmetropolitan residence and in the region of the United States in which the household resides. Some studies have found that residents in the West pay more in housing and transport costs than residents in other regions (Hoch, 1972; Chinitz and Dusansky, 1972). In addition, differences have been found in the commuting costs between residents in metropolitan and nonmetropolitan areas (Gladhart, 1977). Coates and Weiss (1975) state that rising energy costs will probably put severe constraints on rural residents who must commute long distance.

Vast amounts of data are collected each year on various aspects of the American public's behavior by both public and private agencies. Of note, in relation to commuting, are management records and traffic studies, but the most common and easily accessible data are gathered by the U.S. Bureau of the Census (Schnore, 1960). In 1973, the U.S. Bureau of the Census joined with the Department of Housing and Urban Development (HUD) in conducting the first Annual Housing Survey. The Survey included questions on many aspects of housing quality and quantity; social, demographic and economic aspects of the respondents; and also included questions which dealt with energy issues from the standpoint of residential energy use and transportation to work by household heads. The unit of measurement in the housing unit itself, not the household and in succeeding years, efforts were made to survey the same units, if they existed, in order to keep track of America's housing stock. Data from the Annual Housing Survey Public Use Data Tapes were used in this study in order to examine housing locational choices and journey to work over time and for the major regions of the United States.

Journey to Work and Locational Choice

Commuting and Mobility Theory

The journey to work has been studied in terms of residential location in relation to selected industries, socioeconomic variables, transportation modes, mobility, and migration. Most of the research on commuting has been comducted in urban areas, though some researchers have shown interest in commuting patterns of particular rural areas (Beyer, 1951; Clemente and Summers, 1974). The primary theories developed to explain the relationship between residential locational choice and the journey to work are theories of mobility and migration in relation to workplace accessibility and the hypothesis of least effort, economic or structural models, and historic or ecological models.

Mobility is sometimes hypothesized to be an adjustment to the separation of home and workplace. It assumes that families consider the distance between home and work when choosing to move, and implies "that families are concerned about the distance household heads travel to work" (Catanese, 1970, p. 446). However, most studies of residential mobility do not support this hypothesis.

Gallogly (1974) found that accessibility to the workplace seemed only to serve as a "constraining factor in determining an acceptable radius within which the housing market may be explored" (p. 260). Morris and Winter (1978) state that,

> Most locational variables (location per se rather than the character of the location) appear to be relatively unimportant in housing choice. Probably the least important of the locational variables is the relation of the housing unit to the place of employment. Ordinarily, people only require that it be within commuting distance. It is quite clear that quality of the physical and social environment is more important in

> the choice of a dwelling unit. Families are choosing to live in the suburbs, even though it may mean costly (in terms of time and money) commuting from home to work (pp. 138-139).

Goodman (1974) agrees, "Accessibility to the place of work is not a major factor in residential site selection" (p. 104). He further states that the high costs of commuting in terms of time and money do not have a significant effect on people's propensity to move closer to work and that the average move was to a location that was slightly less accessible to the workplace. This would probably mean an increase in commuting time and costs, which was not of particular concern to the respondents in his study. It should be noted, however, that Goodman's study was conducted between 1969 and 1971, well before the 1973 oil embargo.

Deutchman (1972) found that "the most significant variables influencing mobility were the household characteristics of age of head and persons per household and the location variables of tenure (own-rent) and place utility (environmental matchup)." He found that only about eight percent of his respondents gave as reasons for moving "to be nearer employment or more convenient" (p. 349). Catanese (1970) found similar results and concluded that, while

> it could not be determined why families did not consider the distance to work to be an important reason for moving . . . It could well be that families considered distance to work to be important in their decision-making for moving, but somehow they lost sight of its importance when compared with the vast array of other reasons for moving (p. 449).

The theory of work trip distance and time minimization is one of the more well-known and accepted economic theories of commuting. According to Catanese, "The embodiment of a unified behavioral theory of work trip minimization is found in the hypothesis which states that families act as work minimizers by trying to live close to the workplace of the household head" (p. 441). Carroll (1952) was an early proponent of the

theory, but Schnore in 1954 says that,

> if the tendency to minimize effort is assumed to be constant throughout the population, it appears that the hypothesis offers a plausible explanation of the concentration of residences near work sites but fails to account for the equally obvious scatter away from these sites (p. 337).

According to Catanese, while the "ideal minimum distance can be computed for a given family or group . . . it is not generally the same as the observed distance from the home to the household heads' workplace" (p. 442). Despite these criticisms, the theory of workplace to home minimization is still widely used by planners and others who study commuting behavior.

The economic structural theory states that households often face a trade-off between transportation and housing costs. "Usually the further out the land is located in suburbia, the lower its price; at the same time, travel costs increase" (Hirsch, 1977, p. 268). According to Kain (1975), "It is assumed that the unit price the household must pay per unit of residential space of a stated quality and ammenity decreases monotonically from its workplace" (p. 32). Kain calls the sum of monthly rent and journey to work costs (including time and money considerations) the "gross price per unit of housing" (p. 7), and he says that household location is determined by finding the least cost location based on preference for and price of residential space, along with price and preference for other goods and household income. Schnore (1954) agrees with the assumption of the cost of occupancy of a site declining with distance from an activity center and goes on to say that "transport costs are assumed to increase with distance, at an approximately proportional rate, although significantly modified by the method of transport used" (p. 342).

A third economic theory of commuting is historical or ecological modeling. According to Wilson (1979), this theory focuses on the rental value of housing rather than the consumption of land like the structural model. Its basic assumption is that "accessibility to workplace is mroe strongly determined by characteristics of available housing than by individual attributes" (p. 89). In general, this means that the constraint is not within the respondents with their wants and needs, but rather in terms of what housing is available within the area of a work site's area.

As Wilson points out, however, "in general, none of the existing models, considered alone, are able to explain the relationship between workplace location and residential consumption patterns" (p. 93). Taken together, though, they do give some insights into the complex relationship between journey to work and the housing locational choice. While the theory of work trip minimization may have been valid to some degree in the past, it will probably become even more important as transportation and commuting costs rise. The same is true of accessibility to the workplace for the household head. The trade-off that Kain and others speak about in terms of housing costs versus transportation costs could change dramatically over the next several years. The next section deals with another important aspect of the journey to work which, in many ways, may be one of the most important factors in economic terms. The mode of transportation used in commuting has had a significant impact, in recent years, on residential location and the commute to work.

Transportation Mode Used in Journey to Work

Until gasoline prices started to rise, the use of the automobile

for commuting to and from work had steadily risen as industrial and business firms became more decentralized and extensive highway and street building made long distance commuting to work more viable. About 53 percent of metropolitan commuters drive to work alone in their cars with another 21 percent riding as passengers while "only about eight percent use buses, streetcars or subways" (Starling, 1979, p. 237). The percentage of commuters who drive or ride in automobiles is even higher in some areas where mass transit is limited or not available. According to Ross and Darmstadter (1980),

> For many years, the price of fuel did not increase much with respect to other costs. Indeed, the real price of gasoline declined gradually through 1973, when the sharp price hike restored the price to about its 1957 level (p. 22).

During the 1973 oil embargo, in many parts of the United States, particularly the Northeast and Western regions, there were long lines at the fuel pumps, daily price hikes and eventually, even temporary programs of gas rationing in the areas hardest hit. American dependence on the private automobile was accentuated as never before.

Analysis of transportation costs with respect to mode of travel has shown automobile travel to be significantly higher than any other form of transportation, especially when one travels alone in the automobile (Reeder, 1956), but Reeder cautions that this does not necessarily argue for the use of public transportation, as planners and traffic experts often do, because "the use of the automobile is now considered a necessity by many Americans. It has, to be sure, become part of the urban way of life, tied in with the growing separation of work-place from place of residence" (p. 59). Morris and Winter (1978) confirm this observation,

> An automobile appears to be a necessity rather than a luxury. Thus, ready access to community facilities and places of employment is easy to attain. The importance of location could be greatly altered if automobile transport becomes expensive (pp. 138-139).

According to Houstoun (1981), "with declining densities [of housing], public transportation has become less available to more people. Local plans and regulations increasingly require that movement among activities be accomplished through the use of private motor vehicles" (p. 76). The lack of availability of public transportation may be less important than the overall attitudes of the American public. Starling (1974) and others agree that it will take a good deal of convincing to get Americans to use their automobiles less. However, with the coming of the energy shortage, a new awareness seems to be taking shape. Houstoun (1981) states, "Five years ago America remained mesmerized by the inexorable growth of automobile travel. Today builders report that half of all potential purchaser want their homes closer to work" (p. 75), but he adds that time, more than money, may be responsible for this shift. He says, however, that households are now paying larger portions of their income for transportation and housing and that people have generally less money to spend for durable goods and savings. This fact, along with changing lifestyles (fewer children, dual wage-earners, etc.) may be causing a change in peoples' housing needs. His article suggests that there needs to be a balance between residences and employment opportunities in both metropolitan and nonmetropolitan areas, brought on by sound planning policies at the local, regional and state levels in order to give households the option of living closer to the workplace rather than commuting long distances. Wilson (1979) agrees,

> the influence of workplace location on residential decision making involves not only journey-to-work consideration but also the negative externalities associated with living adjacent to major employment centers. Metropolitan residents who want to maximize consumption of residential services and avoid commercial and industrial spillover effects have no real choice of living close to their workplace (p. 73).

The common use of the private automobile for the commute to and from work has had far-reaching effects on Americans and their choice of residential location. People are no longer tied to main transportation routes nor are they forced to live in undesirable locations in order to insure employment. However, with the coming of the 1973 oil embargo, the days of cheap gasoline and abundant supplies of energy were gone. While it will probably take a good deal of convincing to get Americans to use their automobiles less--particularly in their journey to work, adjustments will be made. How people make these adjustments could have important implications on residential locational choice.

Determinants of Residential Housing Decisions

The choice of a place of residence is part of the complex decision-making process of households and involves many considerations. A good deal of research has been done on the process of decision-making. Paolucci, Hall and Axinn (1977) studied families from an ecological perspective which views organisms and environments in interaction. They found that, "Families perceive and interpret messages from their environment on the basis of past experience and new information. They selectively decide what to do and behave accordingly" (p. 2). In relation to decisions on housing, Morris and Winter (1978) say, "Housing decisions are more likely than others to both deeply affect all family members and require their participation to produce satisfactory housing behavior"

(p. 56). How families or households make housing decisions is based on several factors, but economics have always been of major importance. According to Abu-Lughod and Foley (1960),

> housing decisions are related to changes in the family's needs and resources . . . The complex of needs, aspirations, limitations, and personal tastes which could conceivably influence the choice of dwelling are staggering to contemplate in detail (p. 95).

However, they do say that certian characteristics--chiefly age, income group, family type, and ethnic background--lead great segments of the population to share roughly the same goals in housing.

Socioeconomic Status, Housing Location and the Journey to Work

Socioeconomic status is particularly important in the housing decision and it can be measured in various ways. Important variables usually used in such a measurement include education, occupation, income, and for housing and mobility studies, tenure. According to Catanese (1970), "family income was found to be the most significant measure of all socioeconomic characteristics for the family" (p. 449), because it was correlated to some degree with all the socioeconomic variables he studied. Generally, one hypothesis states that families with high incomes are more likely to live closer to their place of work since they have a wider range of choices for their housing location. This is based on the theory of minimization of work distance to place of residence, as well as the economic stuctural theory.

An alternative hypothesis is based on sociological studies of commuting behavior. In his study, Catanese found that "distance to work varied somewhat directly with income. Distance to work was longer for

higher-income families than for lower-income families" (p. 450). This study was based on two urban regions, however, so the findings may not be applicable to non-urban areas.

Wheeler (1967) says that metropolitan transportation studies conducted since the late 1950's have given evidence that those in high status occupations tend to travel longer distances to work than lower-status workers, though this relationship weakens or reverses for cities and towns of smaller size. Reeder found no significant differences in income and time/distance traveled in the journey to work in his 1956 Spokane study, but he did find a significant difference among occupational status categories with persons in upper socioeconomic categories tending to travel less time between home and work than respondents in lower socioeconomic occupational categories. Again, the study was limited to corporate limits of the city and may not be generalizable to non-urban areas.

According to the literature, the poor tend to pay more, proportionately for their housing than middle- or upper-income groups. The U.S. Department of Housing and Urban Development's Housing Our Families (1980) states,

> Actual housing costs for low-income groups are much higher than the hypothetical measure and indicate that most rental households with incomes under $10,000 spend more than 25 percent of their income on housing with nearly one-quarter spending more than 35 percent. As for homeowners with incomes less than $10,000, most who have a mortgage spend more than 25 percent of their income on housing (p. 2-2).

Birch (1970) says, "Even during the 1960's, housing prices advanced relative to incomes. Furthermore, housing price increases were greatest at the lowest end of the scale" (pp. 3-14). The higher proportionate costs borne by lower-income groups has implications for location and

commuting in that they are already burdened with disproportionately large housing costs and the added burden of rising commuting costs may be even more difficult for them as a group than for those with higher incomes.

Tenure, i.e. whether a household owns or rents its housing, does not necessarily relate to the size of the housing cost burden, but Morris and Winter (1978) say, "analysis of housing income ratios should deal with differences in income that result from differences in housing tenure" (p. 234). Birch says that, "An estimate of households paying unusually high housing costs should consider both renters and owners (p. 4-4). According to Butler and Kaiser (1971), "Previous residential experience, especially tenure, provides a consistantly strong relationship to residential choice in predictions of mobility" (p. 483). Pickvance (1973) states that "Income is the means by which an individual pays for tenure of his dwelling . . . [though] the status of a person's occupation is taken into account" (p. 281). He cites two studies which show evidence of a relationship between tenure and income and they both report the higher the household income the more likely it is to own its housing.

The importance of socioeconomic characteristics relate to the fact that excessive housing costs, especially for those in the lower income levels, severely constrain the housing locational choices available and in turn limit other choices of economic importance as they relate to the journey to work. As Catanese (1970) pointed out, higher income families do not generally face as severe a constraint to their housing choices as lower-income families. Birch says they concentrate on the lowerincome households "on the assumption that a high-income family spending a

larger percentage of its income for rent has, by choice, passed up opportunities for adequate housing at a lower cost" (pp. 4-5). These differences have important implications for the household in terms of its location and its journey to work.

Regional and Metropolitan/NonMetropolitan Location and the Journey to Work

The comparison of regions and metropolitan/nonmetropolitan areas in terms of differences in journey to work and residential location is made particularly difficult by the diversity of inter-regional districts. However, acknowledging the gross nature of such comparisons and recognizing "the limitations inherent in the use of broad categories of place of work in the published tabulations of the Bureau of Census" (Goldstein and Mayer, 1964, p. 279), or any large body of collected data, one may be able to determine overall trends that do not become apparent when working with data from a limited geographical area. Reeder (1956) stated that, "we need research in cities of different size, or different ecological organization or pattern, or different economic bases, and in different regions of the country" (p. 63). While he was probably talking about many small, comprehensive studies, it also seems practical to look at the larger picture before breaking down the various components of journey to work and residential locational choice.

Regional Difference

"Regions" in this paper refer to U.S. Bureau of the Census regions, and include the following: Northeast, North Central, South, and Western regions (see Appendix A). Thygerson et al. (1978) state,

> Region has a major influence on housing affordability. Only 10 percent of the homebuyers in the West bought homes costing less than $30,000, while this percentage was 16 percent in the Northeast, 20 percent in the South, and 25 percent in the North Central region. Median net worth of homebuyers in the West is $49,000, while that in the North-east is $28,000, that in the South is $29,100, and that in the North Central region is $22,400 (p. 7).

These findings reflect regional cost of living differences in general, with the West much higher than the rest of the country. Hoch (1972) also found rents and transport costs to be much higher in the West than any of the other regions, and explains this may be due to a price effect or a possible difference in quality of housing. Hoch studied the journey to work in terms of transportation costs for renters versus homeowners by city size and region of the United States and found that "viewing transport cost and rent as joint costs, both can be expected to increase with city size" across regions, though viewed alone, transport expenditures tend to decrease with city size by region (p. 316).

The regional differences found in terms of the journey to work generally relate to the pattern of urban and metropolitan growth within the regions. Chinitz and Dusansky (1972) studied patterns of urbanization within regions of the United States and compared these patterns with the patterns of metropolitanization in the same regions. For a summary of their 1960 figures broken down into major regions and subregions, see Table I. They explain that, while percentage urban and percentage metropolitan correlate somewhat, they do correlate exactly because there are "many urban places outside metropolitan areas and many rural places intside metropolitan areas" (p. 289). They say, also, that "the basic argument is that the level of urbanization in a region is a function of a set of regional characteristics, such as industry structure, density of population, rates of growth, income, racial composition"

TABLE I

REGIONAL COMPARISON OF URBANIZATION
AND METROPOLITANIZATION FOR 1960

Region	% Urbanization	% Metropolitanization
Northeast	73.6	81.5
New England	75.1	79.6
Mid-Atlantic	72.1	83.5
Northcentral	61.7	55.2
East North Central	67.3	67.1
West North Central	56.0	43.3
South	51.9	46.1
South Atlantic	47.6	48.7
East South Central	43.5	36.0
West South Central	64.6	53.5
West	64.3	64.5
Mountain	60.4	48.8
Pacific	68.3	80.1

Source: Chinitz, B. and Dusansky, R. The patterns of urbanization within regions of the United States. Urban Studies, 1972, 9 (3), 289-297.

(p. 290). All of these variables have implications for patterns of settlement which in turn influence housing location and the length of journey to work. Clemente and Summer (1974) point out that,

> metropolitan structure exerts a strong influence on commuting patterns, but due to the gross nature of available data, most researchers have been unable to remove the effects of the

> ecological arrangement of the communities they analyzed. . . of course, just as ecological patterns influence commuting in metropolitan areas so are they important in nonmetropolitan regions. For example, in rural areas, unlike large cities, there is no spatially continuous housing available. Rather, small towns and villages act as housing nodes (p. 217).

Metropolitan/Nonmetropolitan Differences

Since World War II, we have seen rapid growth of suburbs and a shift of population from the central business districts (CBD's) toward the peripheral areas of the city. According to Kain (1975), several researchers have concluded that

> the rapid suburbanization following the end of World War II and the lower density character of this growth are largely attributable to the growth in per capita income, to declines in the marginal cost of commutation, and to a postponement of the major impacts of these forces during World War II. [While other investigators] alleged that rapid postwar increases in car ownership and use, extensive investments in urban highways, and a corresponding neglect of urban transit systems were responsible for the rapid changes in urban spatial structure (p. 3).

People found themselves in an era of prosperity which allowed more flexibility in their housing locational choices. Residences could be spread far into the countryside and no longer needed to be clustered close to the central business districts or along existing transportation lines to ensure employment. According to Goldstein and Mayer (1964), "the possiblity of commuting and thereby greatly extending the area in which job opportunities can be found without residential mobility provides an important alternative to migration. At the same time, [it] also permits members of the labor force to move away from their places of work to more desirable residential locations while still retaining their old jobs" (pp. 278-279).

Foote (1960) discusses some of the advantages to households living farther from the city center,

> The first choice involved in deciding where to live has become how far out to go. There are also disadvantages, like commuting time, in moving toward the periphery, but on a net basis these have been on the wane. . . . The average journey to work has steadily lengthened, which implies that living in a more desirable location has either become more important or more feasible or both (pp. 328-329).

While there are advantages to moving out from centers of activity and away from the workplace, rising transportation costs may be making these trade-offs less viable than before fuel prices started to rise.

Most journey to work studies have been in terms of urbanized areas, and Clemente and Summers (1974) found that "the model of metropolitan commuting is not applicable to nonmetropolitan areas" in terms of the following variables: socioeconomic status, age and "length of employment upon distance between place of residence and place of work" (p. 212). Gladhart (1977) found that while there were no important differences in the residential energy useage between people living in urban versus rural areas, the "rural families used 42% more gasoline for private automobiles that did urban families" and "two and one half times as much gasoline per month for work as did urban families" (p. 272). Coates and Weiss (1975) state that

> given the rising cost of gasoline. . . even mainstream Americans who prefer to live in small towns and rural areas are likely to suffer from constraints on their mobility [access to jobs] in the future because of their lower incomes and virtual necessity of traveling long distances to work" (p. ES-1).

Of note in this discussion, are the findings offered in the 1980 Handbook of Agricultural Charts which says that metropolitan household heads traveled a median of 22 minutes and eight miles in 1975 as compared to nonmetropolitan workers whose travel distance (median) was 40 percent less and took one-third less time (p. 26).

In terms of rents and transport costs, Hoch (1972) found that transport expenditures ran in the opposite direction from housing expenditures and decreased with city size, though when considering transportation cost and rent as joint costs, both were expected to increase with city size. Thygerson, Jacobe, and Parliment (1978) agree that city size has an influence on housing costs, "Over 30 percent of homes purchased in nonmetropolitan areas cost less than $30,000 as compared to 9.6 percent in the largest metropolitan areas" (p. 7). They also say that the incomes of homebuyers vary considerably between metropolitan and nonmetropolitan areas.

The 1980 Handbook of Agricultural Charts (U.S. Department of Agriculture, 1980) states that "Nearly three-fourths of nonmetropolitan housing is owner-occupied. Renting is considerably less common in rural than urban areas, and continues to decline slowly" (p. 29). The figures show that in 1970, 61 percent of metropolitan residents owned their housing as compared to 72.9 percent of nonmetropolitan residents. Single family dwellings represent 79.4 percent of all dwellings in non-metropolitan areas as compared to 61.5 percent in metropolitan areas.

In addition, the location of the unit will have an important effect on the cost and quality of the housing. According to Birch (1973),

> As might be expected, the intensity of different forms of housing deprivation varies from place to place. . . households living in physically inadequate units are concentrated outside the nation's metropolitan areas, and conversely that those suffering a high rent burden are more concentrated within them (p. 4-11).

"Many people live in rural areas and commute to work. Some farm parttime and hold another job in an urban or developed area" (Woods, 1978, p. 1). In some cases, this commute can be quite costly because of

the long distances they must travel to find jobs that pay wages comparable to those paid in urban industrial areas. According to Gessaman and Sisler (1976), "Rural residents appear consciously to weigh benefits of rural living against these commuting costs and to decide in favor of rural locations" (p. 7). Though some households choose to live in rural areas despite their higher commuting cost burden, others have little choice.

> Most rural Americans, even those with automobiles, suffer from the lack of alternative means of mobility because they generally must travel long distances to work and to services and ammenities and pay a disproportionate share of limited incomes for transportation (Coates and Weiss, 1975, p. P-2).

This problem of economics is not limited to rural residents. According to Wilson (1979), for some "metropolitan residents, particularly those with low incomes, residential choice is dictated by the availability of housing they can afford, and thus they may have little choice of any locational attributes" (p. 73). In addition, the institutional environment, which includes environmental factors such as the tax system and zoning ordinances, influences the availability and accessibility of housing (Hirsch, 1977). The amount of available residential space becomes even more restricted in urban areas because of limited space, which in turn causes a higher cost per unit of that space. Wingo and Evans (1977) state,

> Urban rent theory argues that land values will vary inversely with transportation costs, or distance, from the center to the margin of the city. Since that distance will tend to vary with size of city, the sum of an individual's rent and commuting costs will also vary with size of city (p. 16).

Gessaman and Sisler (1976) predict, "Higher average levels of commuting may be expected in the future as the population becomes more widely spread across the countryside and expense per mile of travel increases"

(p. 7). Despite this prediction, the costs of private transportation may change enough in the near future to counteract any substantial savings in housing costs or perceived ammenities that may have prompted households to move farther from their place of employment.

Regional and metropolitan/nonmetropolitan differences in the journey to work and location differences can have important effects on the commuting behavior of the residents. The rising costs of transportation to and from the workplace will affect most commuters in most places in one way or another. While it is probably too early to define specific trends, the study of transportation mode used, socioeconomic class, regional and metropolitan/nonmetropolitan differences and examination of commuting behavior, in general, should yield some valuable information on the journey to work and its influence on housing locational choice.

Summary

The journey to work and its relationship to housing location has been studied in terms of various commuting and mobility theories. For the most part, past studies have found that distance to work was not a major consideration in residential locational decisions. Socioeconomic considerations are generally considered to be important aspects of the housing decision and the economic aspects have become even more important in relation to commuting because of rising energy costs of travel by private automobile.

The private automobile in the journey to work is considered by some researchers to be more of a necessity than a luxury. It is the most widely used mode of transportation in the work trip and there is little indication that its importance will lessen in the near future. The

rising costs of commuting in terms of both time and money may affect the household's view of the journey to work.

Some of the important factors of residential location to be considered in this study are the journey to work differences between metropolitan and nonmetropolitan areas, differences among the four main Census regions of the United States, the socioeconomic factors of household income and tenure and the transportation mode used in the journey to work.

CHAPTER III

METHOD AND PROCEDURE

Introduction

This research was conducted using selected variables and a ten percent subsample of observations from the National Annual Housing Survey Public Use Tapes for 1974 and 1977. The Annual Housing Survey (AHS) was conducted each year using direct personal interview by Census Bureau Personnel. For this study, variables that related to the journey to work and residential locational choice were chosen for the analysis. Of particular importance were the distances and times of the heads of households' journeys to work and the principal transportation mode used. In addition, the differences between regional and SMSA/Non-SMSA residences property value to income for homeowners and rent as percentage of income for renters were studied. Data were analyzed by chi-square tests of significant differences and in some cases, gamma was used to elaborate the two main variables by a series of control variables.

Samples

The AHS Samples

Units included the Annual Housing Surveys were based on the 1973 Annual Housing Survey, which was, in turn based on the 1970 Census. The data collected on housing units were essentially longitudinal, with the

exception of the 1973 data and for units which had been added to or removed from the housing stock through construction or because they were destroyed, condemned or in some way no longer habitable. While the units included in the sample did not change appreciably from year to year, household movement made the data only comparable in terms of housing units.

The original units in the 1973 AHS were selected in several stages of sampling. First, a sample of Census Bureau Enumeration Districts (ED's) were selected with the probability of selection of an ED based, proportionately, on its 1970 population. Next, each sample ED was divided into a cluster of four neighboring housing units. The 1970 Bureau of the Census lists of addresses were used where possible to obtain the addresses to be included. In ED's where addresses were incomplete or inadequate, especially rural areas, area sampling was used for selection of housing clusters. Area sampling was accomplished by dividing the ED into segments with well-defined boundaries where there was an expected size of four or multiple of four units and were further divided to provide segments with four housing units each.

In order to account for newly constructed units each year, a sample of units was selected from building permits issued since the previous year's survey. Within each sample Primary Sampling Unit (PSU), the permits were ordered chronologically by month issued and divided into clusters of approximately four units each. They were then sampled at the rate of two per 1366. The overall sampling rate used to create the 1973 AHS sample was about one in 1366 units.

The Annual Housing Surveys were based on 461 sample areas (called Primary Sampling Units, or PSU's) which cover all 50 states and the

District of Columbia. For 1974, approximately 71,300 sample housing units were eligible for interview and 70,600 were eligible in 1977. In 1974, the refusal rate was about fifteen percent and for 1977, it was about five percent of the non-interviews.

The areas (PSU's) sampled in 1974 and 1977 were selected by the following procedure; the PSU's were grouped into 376 strata, 156 of which included only one PSU, usually larger SMSA's. These were called self-representing (SR) since the sample from this area represents only that PSU. The remaining 220 strata consist of grouped PSU's and are called non-self-representing (NSR). From each NSR stratum, one PSU was chosen based on the proportionate probability to the 1970 Census population of the PSU. The 220 selected PSU's from the NSR were then divided into 110 pairs and one stratum was chosen at random for each pair. From this stratum, an additional PSU was chosen independently of the PSU's already chosen. In 25 instances, the same PSU was chosen twice which resulted in an additional 85 NSR for a total of 461 PSU's or sample areas.

The segments of four housing units from the SR and NSR sampling types were then split into two parts. Two housing units were selected for surveying and two were held in reserve. The segments selected from the area sampling frame were not split, but rather, every other sample segment of four housing units was surveyed and the others were held in reserve. From 1974 onward, however, the AHS attempted to improve its estimates for rural housing characteristics by doubling the number of sampling units used. This was accomplished by including the reserve sample in the survey if the segment was in a rural area. This brought the overall probability of sampling for rural areas to two in 1366,

while the overall probability of selecting a sample housing unit in urban areas remained at one in 1366.

In 1976, a Coverage Improvement Program was incorporated into the AHS to alleviate a number of coverage deficiences (See U.S. Department of Commerce, Current Housing Reports Survey: 1977--Urban and Rural Housing Characteristics, Part E, p. APP-45). Yearly additions to the AHS from new construction had increased the total sample size to about 81,000. The sample was reduced by about seven percent to about 75,000 and efforts are continuing to keep each year's sample at about 76,000. The overall probability of selection became about one in 1472 for urban units and about one in 736 for rural units.

Ten Percent Subsample Used for this Study

A ten percent, random sub-sample was computer-selected from the total AHS samples for each of the two years studied. This resulted in a sub-sample size of 9454 units for 1974 with 1713 missing observations and 9631 units for 1977 with 1910 missing observations. The missing observations represented numbers where units had once been part of the AHS sample, but had been deleted. In addition, for each year, there were people who did not fit into the designated categories, whose surveys were not useable, or for some other reason were "not applicable." In 1974, this group was 36.6 percent of the sub-sample and it was 47.9 percent in the 1977 sub-sample. General characteristics of the respondents in the sub-samples are exhibited in Table II. The table gives sociodemographic characteristics of the household heads, housing characteristics, number of household cars, and location of residence in terms of SMSA/Non-SMSA and urban/rural differences, all by percentages,

for each of the years sampled. Most of the houshold heads had had some high school education, were thirty years old or older, married, white and male. Most of the housholds had one or more family cars. Many owned or were buying their residence (this was 61.3 percent for 1974 but went down to 51.3 percent for 1977). From 1974 to 1977, the percentage of respondents in the lower income categories declined, but they increased in the upper income categories. More of the respondents were residents of rural areas and/or lived in SMSA's than were rural residents and/or living in a non-SMSA area. For this sample, the difference in urbanization and metropolitanization was slight, so only the SMSA residence versus non-SMSA residence was used in the analysis.

In order to verify that the ten percent sub-sample was similar to the original data, a comparison was made with (1) a one percent sample drawn from the original data and (2) data from the Current Housing Reports (U.S. Department of Commerce) for 1974 and 1977 on selected pertinent variables. The three samples compare favorably on the following variables: principal mode of transportation used, and one-way distance and time traveled by the houshold head in the journey to work (Table III).

Instrumentation

The Annual Housing Survey is a "joint undertaking of the U.S. Department of Housing and Urban Development (HUD) and the Bureau of the Census" (U.S. Department of HUD, 1979, p. 5). It was first conducted in 1973 and is an effort by the federal government to determine quantity and quality of America's living environments in a comprehensive and timely manner. According to the U.S. Department of HUD (1979),

> The Annual Housing Survey consists of two parts: (1) a national sample of housing units from urban and rural areas to be examined every year; and (2) metropolitan area samples from 60 selected Standard Metropolitan Statistical Areas (SMSA's), including the largest and many of the smaller, fast-growing ones, with one-fourth of them examined every fourth year (p. 6).

The first Annual Housing Survey data for the nation as a whole were available in early 1975 (conducted from August to October, 1974).

According to the 1979 U.S. Department of HUD publication, A Guide to the Annual Housing Survey, the Survey was designed to fulfill several needs. Some of these are:

> -Permit a year-to-year comparison of the number of housing units in the United States, broken down by type, location, and whether renter- or owner-occupied or vacant.
>
> -Give comparative information on the price of housing and on the level of rents.
>
> -Determine to what extent those people who move during the year upgrade their housing.
>
> -Provide information on where "movers" come from and the reasons for their move (p. 7).

Only a small percentage of the available data were utilized for this study. Samples of the instruments used in the 1974 and 1977 Surveys are included in Appendix B.

Methodology

The original data for the Housing Survey were gathered by Census Bureau interviewers. An introductory letter was sent to inform the residents of the purpose of the study and alert them to the impending visit by interviewers. Households in the selected units that were occupied were directly interviewed. For unoccupied units, information was obtained from landlords, rental agents, or neighbors (U.S. Department

TABLE II

SELECTED CHARACTERISTICS OF SAMPLE BY YEAR*

Characteristics	1974	1977
	%	%
Education of Household Head		
No School	.68	.71
Kindergarten-Grade 8	20.59	14.21
Grades 9-12	45.58	36.36
1-4 Years of College	18.16	18.36
5+ Years of College	6.09	6.13
Age of Household Head		
14-29	16.81	14.60
30-44	23.98	21.81
45-59	24.29	18.69
60+	26.02	20.67
Marital Status of Household Head		
Married	63.45	50.93
Widowed	12.39	9.60
Divorced/Separated	7.87	8.51
Never Married	7.39	6.73
Race of Household Head		
White	81.77	66.90
Black	8.26	7.68
Other	1.07	1.19
Sex of the Household Head		
Male	71.42	58.53
Female	19.68	17.24
Number of Household Cars		
None	14.04	58.53
One	44.37	36.03
Two	25.65	22.29
Three	4.83	4.81
Four or More	1.22	1.22
Not Applicable	9.89	24.23
Tenure		
Own or Buying	61.27	51.28
Rent for Cash	26.65	22.32
No Cash Rent	3.18	2.17
Urban/Rural Residence		
Urban	57.35	59.53
Rural	42.65	40.47

TABLE II (Continued)

Characteristics	1974	1977
	%	%
Income		
0-$10,000	43.90	31.30
10,001-20,000	31.79	25.66
20,001-30,000	9.57	12.06
30,001-40,000	3.02	4.24
40,001-49,999	0.91	1.76
50,000+	0.93	1.75
SMSA/Non-SMSA Residence		
SMSA	56.08	57.48
Non-SMSA	43.92	42.52

*Note: Percentages will not add up to 100 percent due to "not applicable" responses. Except where noted, these percentages are 8.90 for 1974 and 24.23 for 1977.

TABLE III

COMPARISON OF THREE VARIABLES, BY PERCENTAGES, FROM THE CURRENT HOUSING REPORTS (CHR) WITH THE TEN PERCENT SAMPLE AND THE ONE PERCENT SAMPLE

Variable	1974			1977		
	CHR N=50639	10% Samp. N=4328	1% Samp. N=436	CHR N=51699	10% Samp. N=4035	1% Samp. N=425
Principal Trans. Mode Used:						
Drives Self	69.0	68.8	68.8	70.1	71.0	71.8
Carpool	14.1	14.4	13.3	16.2	16.3	17.6
Mass. Trans.	5.9	4.5	5.5	5.4	4.1	2.6
Bike/Motor-cycle	1.1	0.9	0.2	0.5	0.3	0
Taxicab	2.1	0.3	1.1	0.1	0.2	0
Walks Only	3.9	4.3	3.2	3.7	3.8	4.2
Other means	1.9	2.0	0.9	0.4	0.4	1.4
Works @ Home	3.0	4.2	5.7	2.3	3.6	2.3
Not Reported	0.7	0.7	1.1	0.3	0.3	0

TABLE III (Continued)

Variable	1974			1977		
	CHR N=50639	10% Samp. N=4328	1% Samp. N=436	CHR N=51699	10% Samp. N=4035	1% Samp. N=425
One-Way Distance to Work:						
1 mile	13.3	15.1	16.7	8.3	8.2	8.9
1-4 miles	23.1	21.5	22.5	26.7	24.1	27.3
5-9 miles	20.5	20.5	20.4	17.0	17.4	12.9
10-29 miles	30.2	30.0	26.1	27.1	28.0	23.8
30-40 miles	5.1	5.4	5.7	4.2	5.3	6.6
50 miles	1.9	2.4	3.4	1.3	1.5	3.1
One-Way Distance to Work:						
Works @ Home	-	-	-	2.6	3.6	2.3
No Fixed Place	4.2	3.9	3.4	11.6	11.1	13.9
Not Reported	1.6	1.7	1.6	1.1	0.8	1.2
One-Way Time to Work:						
15 min.	38.4	39.0	42.7	31.5	30.3	34.3
15-29 min.	29.8	29.1	28.0	30.9	31.3	24.9
30-44 min.	15.5	15.1	11.2	13.4	14.0	12.0
45-59 min.	5.7	5.7	6.0	4.8	4.8	4.9
60-89 min.	3.8	3.9	4.6	3.2	3.3	6.3
90 min.	1.2	1.7	1.8	1.1	1.0	0.9
Works @ Home	-	-	-	2.6	3.6	2.3
No Fixed Place	4.2	3.9	3.4	11.6	11.1	13.9
Not Reported	1.3	1.5	2.3	0.3	0.5	0.2

of HUD, 1979). All information gathered was strictly confidential, and aggregated to protect individual and household privacy. In addition, participation was voluntary and required the consent of the participant. The data gathered were compiled and made available to the public in the form of the Current Housing Reports (U.S. Department of Commerce, 1976; 1979) which gives selected types of information of the characteristics

of the respondents and various aspects of the survey. In addition, all of the data were also transferred to computer data tapes by Columbia University personnel and made available to the public. The most common form of compilation is longitudinally linkable data from the years which have been completed and data are available for both the National sample and the SMSA's which have been surveyed. The years of 1974 and 1977 were chosen for this study. Complete data for the nation as a whole was first available in 1974, and 1977 was the most recent year with complete data available. The data used were taken from the AHS Public Use data tapes which contain longitudinally linked national data for 1974 through 1979. Data from 1978 and 1979 contained only the U.S. Bureau of the Census core data and did not contain data that were complete enough to be utilizied for this study. Only 15 of the over 600 available variables were used.

Research Design and Analysis

This study was designed to explore the head of household's journey to work in terms of residential locational patterns. First of all, the categorized one-way commuting distances traveled by household heads were compared for differences from 1974 to 1977. The categorized one-way commuting times were also compared for differences from 1974 to 1977. The chi-square statistic was used to determine significant differences among the proportions of commuters in the distance and time categories over time.

Then these main relationships (time and distance with year) were analyzed in terms of several control variables, including: transportations mode used in the journey to work by household head, regions of the

United States, whether the household lived inside or outside an SMSA, and the tenure to income variables of property value to income ratio for homeowners and rent as percentage of income for renters (see Figure 1). First the chi-square statistic was used to test the differences found in the categories of the control variable in terms of categories of the main variable, one at a time. This process was used to test the relationships among the distance and time variables for 1974 and 1977 in terms of the control variables mentioned above and in a further analysis of some of the relationships of the control variables among themselves.

Main Variables	Control Variables
Year	Transportation Mode
Distance	Region
Time	SMSA/Non-SMSA
	Property Value to Income
	Rent as Percentage of Income

Figure 1. Selected Variables: Main and Control

The process of elaboration was used with the gamma statistic to test for significant associations among the categories of each control variable in terms of the main relationship being studied. Mueller et al. (1977) states that elaboration is "the analysis of the relationship between two categorized variables within subdivisions of a third (and possibly a fourth or fifth) variable" (p. 223). In this type of analysis, two types of relationships are studied. First, the relationship between the two main variables are "partialled out" in terms of categories of the control variable of interest. The calculated gamma values

for each of these partial associations was examined for similarities. Then the "marginal relationships" between the control variable and each of the main variables is tested for significance using chi-square. In all cases, the level of significance for chi-square was established as $p < .01$ as the minimum acceptable for this research. For example, the first elaboration examined the original relationship between distance traveled to work between 1974 and 1977 and was partialled out for the control variable of mode of travel, i.e. for each category of transportation mode used (drive alone, carpool, public transit or other), the relationship among distances traveled between 1974 and 1977 were examined. The the marginal relationships of transportation mode used by year and transportation mode used by distances traveled were examined. Figure 2 shows this analysis graphically. It should be noted that the relationships are connected with a circled "equals" sign. This is to alert the reader to the fact that this is not necessarily a true arithmetic equations where one side equals the other side. Though originally designed to be additive, this only holds true for certain statistics such as theta. In this case, using the gamma statistic, the elaboration represents a way of looking at the variables to determine the extent of association that holds true for the original relationship when introducing a third, control variable. For this example, the control variable is the mode of transportation used with the categories of "drives alone," "carpools," "public transit," and "other" means partialled out.

Summary

Data from the National Housing Survey Public Use data tapes were analyzed for the years 1974 and 1977 in terms of the household heads'

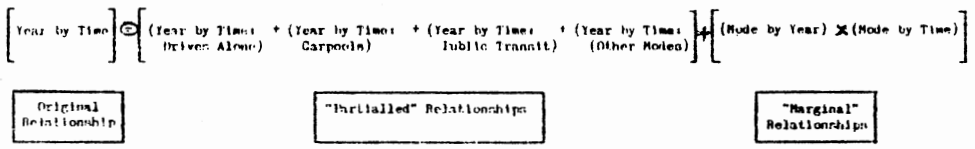

Figure 2. Example of Elaboration using the Variables of Year, Time Traveled and Mode of Transporation Used

journey to work and residential location. A ten percent sample of the AHS sample was utilized, giving a total sample size of 9545 for 1974 and 9641 for 1977. Discounting missing data, the actual sample sizes available for research were approximately 7832 for 1974 and 7721 for 1977. Comparisons of the three main variables utilized in this research on the ten percent sample and a one percent sample also drawn from the data tapes with data from the Current Housing Reports (U.S. Department of Commerce, 1976 and 1979) for 1974 and 1977 published by HUD and the Bureau of the Census revealed no substantial differences among the percentages found in the three sources of data.

The data were analyzed first in terms of differences among the categories for times and distances traveled by year for household heads. The chi-square statistic was used to measure the strength of these differences. Then these main variables were elaborated in terms of several control variables, including transportation mode used, region of the U.S., SMSA/Non-SMSA residence, and two tenure to income variables. The gamma statistic was used to examine the relationships among the categories of the control variable for each partial association tested. The marginal relationships were tested using the chi-square statistic. The level of significance of chi-square used for this research was $p < .01$.

CHAPTER IV

ANALYSIS OF DATA

Introduction

This chapter contains the analysis of data. The chi-square statistic was used to test the significance of differences among the pertinent variables. Due to the large sample size, however, several of the relationships were significant at the 0.0001 level, though with varying degress of strength. Consequently the data were further analyzed by elaboration and the gamma statistic was used to "partial out" the relationship between the two main variables across the categories of a third (control) variable. The possible relationship between each control variable with either of the main variables (or "marginal relationship") was also examined.

Analysis by Research Question

Each research question was analyzed separately. The first two questions were based on a comparison of differences from 1974 to 1977 among the categories of distance and time traveled by household heads in their journey to work. Figure 1 illustrates the variables used in this study. Analysis of the marginal relationships between 1974 and 1977 and the control variables including tranpsortation mode used in the journey to work, region of the United States, SMSA/Non-SMSA residence, property value to income and rent as a percent of income follow. The data were

analyzed in preparation for the later analysis of the main variables by the control variables in order to better understand the "partial" relationships studied in the final sections. Chi-square was utilized for these analyses.

The remaining analyses consisted of the "partial" relationships of two variables in relation to categories of a third (control) variable. Questions three through seven dealt with distance traveled by year in terms of the control variables of transportation mode, region of the United States, metropolitan/non-metropolitan residence and the two tenure to income variables. Questions eight through thirteen consisted of the time traveled by year in the journey to work analyzed by categories of the same control variables as were used in the distance analyses. The final questions explore some of the relationships among the control variables themselves. The questions in these sections were analyzed first in terms of differences among the categories of the control variable for the two main variables using the chi-square statistic. Then they were further analyzed in terms of association using the gamma statistic across categories of the control variable.

Distance to Work by Year

> Question 1: Did the categorized, one-way distance traveled by household heads in the journey to work change significantly from 1974 to 1977?

For both 1974 and 1977, people who work at home were included in the "less than 1 mile" category. Comparison of the distances traveled to work by household heads in 1974 to 1977 showed a decrease in the proportions among commuters in several categories but not in the "1-4 mile" "10-19 mile" and "30-39 mile" categories. Of particular note was

the decrease in commuters who traveled more than 50 miles to the workplace. There was a substantial increase in the percentage of commuters whose workplace varies (2.3 percent in 1974 as compared to 4.8 percent commuters in 1977). This group of commuters was removed from the analysis in order to better examine changes in the actual distance traveled. The differences among the distances of journey to work by household heads between 1974 and 1977 were significant (Table IV).

Time To Work by Year

> Question 2: Did the categorized, one-way time traveled by household heads in the journey to work change significantly from 1974 to 1977?

For both 1974 and 1977 people who worked at home were included in the "less than 15 minute" category. The times spent in the journey to work by household heads were compared for 1974 and 1977 (Table V). There was a decrease in the percentages of commuters for each time category from 1974 to 1977 except in the "15-29 minute" category where the percentage remained about the same for both years. There was a substantial increase noted in the percentages of commuters whose workplace varied (2.5 percent in 1974 as compared to 5.8 percent for 1977). This group was removed from the analysis in order to study actual times and how they may have changed. The chi-square analysis revealed a significant difference in the time spent in the journey to work between 1974 to 1977.

Marginal Relationships

The marginal relationships were the crosstabulations of the various control variables by each of the main variables used in the following

TABLE IV

JOURNEY TO WORK DISTANCE BY YEAR

Distances in Miles	1974	1977
	%	%
Less than 1 mile	16.1	13.4
1-4 miles	22.8	27.3
5-9 miles	21.3	19.8
10-19 miles	21.3	23.3
20-29 miles	9.7	8.5
30-39 miles	4.2	4.4
40-49 miles	1.8	1.6
Over 50 miles	2.8	1.7
N	4087	3553

$\chi^2=37.49$, df=7, $p<0.0001$

TABLE V

JOURNEY TO WORK TIME BY YEAR

Time in Minutes	1974	1977
	%	%
Less than 15 min.	41.2	38.4
15-29 min.	30.8	35.4
30-44 min.	16.0	15.9
45-59 min.	6.1	5.4
60-89 min.	4.1	3.7
Over 90 min.	1.8	1.2
N	4097	3567

$\chi^2=23.13$, df=5, $p<0.0003$

sections. These particular analyses were included here because they were of general interest to more than one of the questions analyzed later in the paper and to give a better picture of the overall characteristics of the relationships studied. In each case, the control variables were studied in terms of change from 1974 to 1977. The other marginal tables that were pertinent to specific questions were included in that section for easier interpretation.

The first relationship of interest was the transportation mode used in the journey to work by year. For transportation mode used, carpooling included respondents who drove or rode with others in a private automobile. Public transportation included railroads, buses/streetcars, subways/els and taxicabs. The "other" category included walking, riding a bicycle/motorcycle, or any other means of movement not included in the above categories. This analysis looked at changes from 1974 to 1977 in the proportions of commuters using each of the four categories of transportation mode. There was a significant difference among the travel modes used from 1974 to 1977 (Table VI).

The second relationship to be analyzed was the proportion of respondents by region for 1974 to 1977. The regions used included the U.S. Bureau of the Census Regions: Northeast, North Central, South and West. (Figure 3, Appendix A). The chi-square value was significant (Table VII).

The proportions of respondents who lived inside and outside Standard Metropolitan Statistical Areas (SMSA's) were also analyzed by year. Inclusion in an SMSA is based on the U.S. Bureau of the Census definition of an SMSA (p. 9). There were no significant differences in the proportions of SMSA/Non-SMSA respondents for 1974 and 1977 (Table VIII).

TABLE VI

TRANSPORTATION MODE USED BY YEAR

Transportation Mode	1974	1977
	%	%
Drives Alone	69.3	71.2
Carpools	14.5	16.4
Public Transportation	4.7	4.3
Other	11.5	8.1
N	4296	4024

χ^2=30.14, df=3, p<0.0001

TABLE VII

REGION OF THE UNITED STATES BY YEAR

Region	1974	1977
	%	%
Northeast	22.7	20.6
North Central	26.4	26.6
South	34.6	35.1
West	16.3	17.7
N	7832	7721

χ^2=12.86, df=3, p<0.0049

The last two control variables which were analyzed by year were the tenure to income variables. These two variables were calculated to determine the housing cost burden of a household based on it's tenure status. The one for homeowners was called property value to income

TABLE VIII

SMSA/NON-SMSA RESIDENCE BY YEAR

Residence Status	1974	1977
	%	%
SMSA	56.1	57.5
Non-SMSA	43.9	42.5
N	8830	6723

χ^2=3.11, df=1, p<0.0776

ratio. It was based on the household's reported property value in relation to reported income. The other, for renters, was based on rent as percentage of income. The actual ratios and percentages were categorized into high and low, based on the hypothetical measure commonly used. The measure of 25 percent or a ratio of .25 was considered the maximum percentage that a household should pay for its housing. This translates into an actual 25 percent of income for renters, but for homeowners, this was equivalent to spending approximately two-and-one-half times the yearly income on a dwelling. The high category included all values over 25 percent (renters) or the ratio of .25 (homeowners). Both of these tenure to income variables were analyzed in terms of the proportions of respondents for the years 1974 to 1977. A significant difference was found in the proportions by year (Tables IX and X).

The foregoing analysis of selected marginal relationships was conducted to clarify the following questions. The sections that follow contain analyses of the data by research question. These analyses include the chi-square test of differences and elaboration of the main variables by the control variables using the gamma statistic.

TABLE IX

PROPERTY VALUE TO INCOME BY YEAR

Property Value to Income	1974	1977
	%	%
Low	66.7	61.5
High	33.3	38.5
N	2975	2922

χ^2 = 17.26, df=1, p<0.0001

TABLE X

RENT AS PERCENTAGE OF INCOME BY YEAR

Rent as Percentage of Income	1974	1977
	%	%
Low	65.5	58.3
High	34.5	41.7
N	1679	1605

χ^2=20.37, df=3, p<0.0001

Distance to Work and Year by Transportation Mode Used

Questions 3: Did the relationship between the distance traveled by household heads in the journey to work in 1974 to 1977 vary by type of transportation mode used?

The distance traveled by household heads in 1974 and 1977 was analyzed in terms of the primary transportation mode used by the household head in the journey to work. The percentages of commuters who used the

various modes of transportation differed significantly between 1974 and 1977 for those who drove alone and for commuters in the "other" category, but was not significant for those who carpooled or used public tranportation. The percentages of commuters who drove alone decreased for the following categories: "under 1 mile," "5-9 miles," and in the categories over 20 miles, except in the "40-49 mile" category where the percentage stayed about the same. The most substantial change in the "other" category of commuters was the increase in the percentages of commuters who traveled less than one mile to the workplace. All of the other categories of distance showed a decrease in the percentage of commuters in the "other" category (Table XI).

Examination of the partial relationships among the distances traveled by year for mode of transportation used showed that only the commuters in the "other" category had a moderately significant, negative gamma value. Among the other three categories, there was a consistency across the years but the gamma values were negative and low. A negative gamma meant that from 1974 to 1977 there was a decrease in the distance traveled to work, on the average, for commuters in this study. More information on the characteristics of the commuters in the "other" category would be necessary to determine why it was significant (Table XI).

There was a significant difference among the travel modes used by household heads for both years combined over the categorized distances traveled. Over 80 percent of the commuters in the "other" category traveled less than one mile in their journey to work. Many of these commuters include bicyclists and walkers so shorter distances were logical for them. Most of the commuters in the other three categories

TABLE XI

DISTANCE TRAVELED AND YEAR BY
MODE OF TRANSPORTATION USED

Distance	Mode of Transportation							
	Drive Alone[a]		Carpool[b]		Public[c]		Other[d]	
	1974 %	1977 %	1974 %	1977 %	1974 %	1977 %	1974 %	1977 %
Under 1 mile	8.9	7.3	4.3	2.6	2.5	0.6	78.2	87.9
1-4 miles	25.5	30.5	18.8	21.7	28.5	35.9	9.1	8.3
5-9 miles	24.3	22.8	19.5	17.4	22.3	19.5	5.1	0.3
10-19 miles	23.9	25.0	27.6	28.4	24.4	21.4	4.0	1.6
20-29 miles	9.7	7.7	13.3	15.5	14.2	10.7	1.9	1.0
30-39 miles	4.2	3.9	7.0	8.5	2.5	5.0	0.4	0.3
40-49 miles	1.2	1.5	4.7	2.4	2.5	3.8	0.2	0.0
Over 50 miles	2.3	1.3	4.8	3.5	3.1	3.1	1.1	0.6
N	2797	2495	501	580	197	159	473	315

[a] $\chi^2=31.59$, df=7, $p<0.0001$, $\gamma = -0.042$
[b] $\chi^2=11.91$, df=7, $p<0.1035$, $\gamma = -0.008$
[c] $\chi^2=6.91$, df=7, $p<0.4389$, $\gamma = -0.033$
[d] $\chi^2=21.69$, df=7, $p<0.0029$, $\gamma = -.337$

traveled between one and thirty miles, one-way, to their workplace (Table XII).

TABLE XII

DISTANCE TRAVELED AND MODE OF TRANSPORTATION USED

Distance	Mode of Transportation			
	Drive Alone %	Carpool %	Public %	Other %
Under 1 mile	8.16	3.47	1.69	82.11
1-4 miles	27.83	20.24	31.74	8.76
5-9 miles	23.60	18.45	21.07	3.17
10-19 miles	24.41	28.03	23.03	3.05
20-29 miles	8.71	14.39	12.64	1.52
30-39 miles	4.04	7.71	3.65	0.38
40-49 miles	1.34	3.56	3.09	0.13
Over 50 miles	1.89	4.15	3.09	0.89
N	5292	1181	356	788

$\chi^2=3362.21$, df=21, $p<0.0001$

A significant difference among the modes of transportation used in the journey to work by household heads was found in terms of distance traveled and year. The "other" category of commuters was moderately correlated with the distance and year. Transportation modes used were significantly different for the distances traveled by household heads.

Distance to Work and Year by Region of the U.S.

> Question 4: Did the relationship between the distance traveled by household heads in the journey to work in 1974 and 1977 vary by region of the U.S.?

The distances traveled by household heads in 1974 and 1977 were analyzed by region of the United States. There was no significant difference among the four regions (Northeast, North Central, South and West) in terms of distance traveled by year. The general pattern in the proportions of commuters in the distance categories by year were somewhat similar for all regions. However, the Western region was the most similar between the two years in terms of the distance traveled as compared to the other regions, where the differences between the years tended to be more substantial.

The relationship between regions for distance traveled and year was not significantly correlated. There was an inconsistency noted among the gamma values with the gammas for two regions positive and two were negative, but no elaboration by region was found (Table XIII). "No elaboration" meant that the original relationship between the distance traveled and year remained essentially the same across categories of the control variable, region, and that region was negligibly related to year and distance traveled.

There was a significant difference in the proportions of commuters in the various categories of distance traveled by commuters in different regions of the United States, with the two years combined. There tended to be a higher percentage of commuters from the North Central region in the "under 1 mile" category and a higher percentage of Westerners in the "1-4 mile" category. The Northeast region had a higher percentage of commuter in the "10-19 mile" category (Table XIV).

TABLE XIII

DISTANCE TRAVELED AND YEAR BY
REGION OF THE U.S.

Distance	Region							
	Northeast[a]		North Central[b]		South[c]		West[d]	
	%		%		%		%	
	1974	1977	1974	1977	1974	1977	1974	1977
Under 1 mile	12.1	11.4	20.7	15.9	16.3	12.6	13.1	13.1
1-4 miles	20.9	28.2	22.4	27.6	23.2	27.0	24.9	26.9
5-9 miles	21.7	18.6	19.0	20.0	22.0	19.9	22.7	20.6
10-19 miles	25.0	25.3	22.9	22.9	19.4	23.2	22.6	22.0
20-29 miles	11.2	7.6	8.6	8.1	9.5	8.3	9.0	10.3
30-39 miles	4.4	4.8	3.6	3.6	4.3	5.3	3.9	3.3
40-49 miles	1.7	1.7	1.4	1.2	1.9	1.6	1.5	2.2
Over 50 miles	3.0	2.4	1.4	0.7	3.4	2.1	2.3	1.9
N	940	708	1112	991	1348	1203	687	651

[a] $\chi^2=17.00$, df=7, $p<0.0174$, $\gamma=-0.070$
[b] $\chi^2=14.74$, df=7, $p<0.0395$, $\gamma=0.008$
[c] $\chi^2=21,79$, df=7, $p<0.0028$, $\gamma=0.016$
[d] $\chi^2=3.55$, df=7, $p<0.8291$, $\gamma=-0.008$

No significant difference was found among the regions in terms of the distances traveled by household heads for 1974 and 1977. No elaboration by region was found. The marginal relationship between distance traveled and region was significant.

TABLE XIV

DISTANCE TRAVELED AND
REGION OF THE U.S.

Distance	Region			
	Northeast %	North Central %	South %	West %
Under 1 mile	11.83	18.45	14.54	13.08
1-4 miles	23.97	24.82	25.01	25.86
5-9 miles	20.39	19.45	20.97	21.67
10-19 miles	25.12	22.92	21.21	22.27
20-29 miles	9.65	8.37	8.94	9.64
30-39 miles	4.55	3.61	4.78	3.59
40-49 miles	1.70	1.33	1.76	1.79
Over 50 miles	2.79	1.05	2.78	2.09
N	1648	2103	2551	1338

$\chi^2=70.78$, df=21, $p<0.0001$

Distance to Work and Year by

SMSA/Non-SMSA Residence

> Question 5: Did the relationship between the distance traveled by household heads in the journey to work in 1974 and 1977 differ by location inside and outside SMSA's?

There was a significant difference in the proportions of household heads in the categories of distance traveled from 1974 to 1977 for the residents of SMSA's but there was not a significant difference for those who lived outside SMSA's. While the percentages of commuters in each

distance category decreased or stayed about the same between 1974 and 1977 for the Non-SMSA residents, there were increases in the following categories for those who lived inside SMSA's: "1-4 miles," "30-39 miles," and "40-49 miles," while the other categories showed an overall decrease in the proportions of commuters. Analysis of the relationship among the distances traveled by year for the residents inside and outside SMSA's by the gamma statistic showed a negative relationship which was consistent for both SMSA/Non-SMSA residence. However, the gamma values were small and were considered negligible (Table XV).

TABLE XV

DISTANCE TRAVELED AND YEAR
BY SMSA/NON-SMSA RESIDENCE

Distance	SMSA[a]		Non-SMSA[b]	
	1974 %	1977 %	1974 %	1977 %
Under 1 mile	10.3	8.5	24.6	21.4
1-4 miles	22.6	27.2	22.9	27.6
5-9 miles	25.3	22.3	15.0	15.6
10-19 miles	25.3	27.0	17.4	17.3
20-29 miles	10.7	8.6	7.9	8.3
30-39 miles	3.3	4.1	5.2	4.8
40-49 miles	1.1	1.4	2.6	1.9
Over 50 miles	1.4	0.9	4.4	3.1
N	2469	2211	1618	1342

[a] $\chi^2=30.53$, df=7, $p<0.0001$, $\gamma=-0.014$
[b] $\chi^2=15.15$, df7, $p<0.0341$, $\gamma=-0.009$

There was a significant difference among the proportions of SMSA and Non/SMSA commuters in the distance traveled for 1974 and 1977 combined. The only distance categories where the percentages of respondents who lived outside SMSA's were substantially higher than the proportions of respondents inside SMSA's were the "under 1 mile" and "over 50 mile" categories. In the remaining categories, the SMSA proportions were higher or approximately equal to the Non-SMSA percentages (Table XVI).

TABLE XVI

DISTANCE TRAVELED BY SMSA/NON-SMSA RESIDENCE

Distance	SMSA	Non-SMSMA
	%	%
Under 1 mile	9.47	23.18
1-4 miles	24.79	25.03
5-9 miles	23.91	15.24
10-19 miles	26.11	17.33
20-29 miles	9.68	8.07
30-39 miles	3.68	5.03
40-49 miles	1.22	2.30
Over 50 miles	1.15	3.82
N	4680	2960

$\chi^2=443.50$, df=7, $p<0.0001$

While a significant difference was indicated for residents inside SMSA's in terms of the proportions of commuters in the distance categories by year, no significant difference was found for commuters who reside outside SMSA's. There was not a significant relationship between SMSA/Non-SMSA residence and the distance traveled by year. The marginal relationship between SMSA/Non-SMSA residence and distance traveled for 1974 and 1977 combined was significant.

Distance to Work and Year by Property Value to Income Ratio

> Question 6: Did the relationship between the distance traveled by household heads in the journey to work in 1974 and 1977 vary according to property vale to income ratio for homeowners?

The proportions of homeowner household heads differed significantly in terms of distance traveled in 1974 versus 1977 for respondents who reported their property value to income ratio as .25 or less. However, for homeowners whose property value to income ratio was greater than .25, there was no significant difference in the distances traveled for 1974 and 1977. There were no striking differences between the proportions of commuters from 1974 to 1977, in the "low" category. Most of the percentages stayed about the same with the exception of the decrease in commuters in the "under 1 mile" category and increased in proportions in the "1-4 mile" and "10-19 mile" categories. The gamma values were positive and low, indicating no correlation between the categories of property value to income in terms of distance traveled by year (Table XVII). The differences between the "high" and "low" categories of property value to income ratios were not significant in terms of the distance traveled by the household with the two years combined (Table XVIII).

TABLE XVII

DISTANCE TRAVELED AND YEAR BY PROPERTY VALUE TO INCOME RATIO

Distance	Property Values to Income			
	Low[a]		High[b]	
	1974 %	1977 %	1974 %	1977 %
Under 1 mile	11.3	7.1	12.5	8.6
1-4 miles	22.9	25.9	24.5	25.8
5-9 miles	21.7	21.2	21.2	21.5
10-19 miles	23.6	26.6	21.9	24.7
20-29 miles	11.5	10.1	11.9	10.5
30-39 miles	4.7	5.7	3.5	6.0
40-49 miles	1.9	1.5	1.8	1.2
Over 50 miles	2.4	1.9	2.7	1.7
N	1567	1302	511	582

[a] $\chi^2=22.37$, df=7, $p<0.0022$, $\gamma=0.029$
[b] $\chi^2=11.04$, df=7, $p<0.1370$, $\gamma=0.043$

There was a significant difference only for the low category of property value to income in terms of the distance traveled in the journey to work by household heads for 1974 and 1977. There was no elaboration between the two categories of property value to income and distance traveled by year. There was no significant difference among the distances in proportions of respondents who reported high versus low property value to income ratios.

TABLE XVIII

DISTANCE TRAVELED BY PROPERTY VALUE TO INCOME RATIO

Distance	Property Value to Income	
	Low %	High %
Under 1 mile	9.38	10.43
1-4 miles	24.26	25.16
5-9 miles	21.47	21.32
10-19 miles	24.96	23.42
20-29 miles	10.91	11.16
30-39 miles	5.15	4.85
40-49 miles	1.71	1.46
Over 50 miles	2.16	2.20
N	2869	1093

$\chi^2=2.43$, df=7, $p<.9325$

Distance to Work and Year by Rent as Percentage of Income

Question 7: Did the relationship between the distance traveled by household heads in the journey to work in 1974 and 1977 vary according to rent as percentage of income for renters?

No significant difference was indicated between 1974 and 1977 in terms of distance traveled when rent as percentage of income was controlled. The gamma values indicated a negative, but essentially negligible relationship between the categories of the control variable, rent as percentage of income, and the proportions of respondents in each of the

distance categories by year (Table XIX). The marginal relationship between the proportions of household heads who reported a high rent as percentage of income as compared to those who reported low on this variable was not significant in relation to the distances traveled to work (Table XX).

There was no significant difference found between the high and low categories of renters who traveled various distances in their journey to

TABLE XIX

DISTANCE TRAVELED BY YEAR BY RENT AS PERCENTAGE OF INCOME

Distance	Rent as Percentage of Income			
	Low[a]		High[b]	
	1974 %	1977 %	1974 %	1977 %
Under 1 mile	11.48	12.30	17.47	13.87
1-4 miles	28.47	33.78	27.05	36.45
5-9 miles	23.21	20.89	20.21	20.97
10-19 miles	22.97	20.15	23.29	21.29
20-29 miles	7.42	7.70	6.85	5.48
30-39 miles	3.11	2.22	3.08	0.97
40-49 miles	1.67	1.78	1.03	0.65
Over 50 miles	1.67	1.19	1.03	0.32
N	836	675	292	310

[a] $\chi^2=7.65$, df=7, $p<0.3640$, $\gamma = -0.073$
[b] $\chi^2=10.94$, df=7, $p<0.1414$, $\gamma = -0.074$

work. In addition, no relationship between the categories of the control variable were found in terms of the distance to year relationship. The marginal relationship between the rent as percentage of income and the distances traveled by household heads in the journey to work was not significant.

Time of Travel to Work and Year by Transportation Mode Used

Question 8: Did the relationship between the time traveled by household heads in the journey to work in 1974 and 1977 vary by transportation mode used?

TABLE XX

DISTANCE TRAVELED BY RENT AS PERCENTAGE OF INCOME

Distance	Rent as Percentage of Income	
	Low %	High %
Under 1 mile	11.85	15.61
1-4 miles	30.84	31.89
5-9 miles	22.17	20.60
10-19 miles	21.71	22.26
20-29 miles	7.54	6.15
30-39 miles	2.71	1.99
40-49 miles	1.72	0.83
Over 50 miles	1.46	0.66
N	1511	602

$\chi^2=12.02$, df=7, $p<0.0999$

The time of the journey to work for household heads in 1974 and 1977 was significantly different for commuters who drove alone but was not significant for the other three categories. For the commuters who drove alone, the general trend noted was a decrease in all categories of time except in the "15-29 minute" one where a slight increase was noted. However, for the categories of times traveled between the years, the proportion of carpoolers and those who used public transportation had mixed results. Both had an increase in commuters who traveled "30-44 minutes" from 1974 to 1977, and carpoolers had an increase in the proportion of commuters who were in the "45-59 minute" category (Table XXI).

The gamma values were low and indicated no elaboration of time traveled for household heads by year in terms of the transportation mode used. The marginal relationship between the times traveled was significant beyond the 0.0001 level. Of particular note was the large proportion of commuters in the "other" category who travel less than 15 minutes to work or work at home. In addition, about 50 percent of the people who traveled by public transportation lived 15-44 minutes from their workplace. The largest percentage of commuters who drove or carpooled traveled less than 45 minutes in their journey to work (Table XXII).

A significant difference was indicated for the time traveled by household heads in the journey to work from 1974 to 1977 for commuters who drive alone to work but no significant difference was indicated for commuters who carpool, use public transportation or other means of travel. No elaboration by transportation mode was indicated for times traveled by year. The marginal relationship between the time of travel for the two years combined by transportation mode used was significant.

TABLE XXI

TIME TRAVELED AND YEAR BY MODE
OF TRANSPORTATION USED

Time	Mode of Transportation							
	Drive Alone[a]		Carpool[b]		Public[c]		Other[d]	
	1974 %	1977 %	1974 %	1977 %	1974 %	1977 %	1974 %	1977 %
Less than 15 min.	39.8	37.9	24.9	23.9	9.4	6.1	84.1	86.1
15-29 min.	34.2	39.5	34.9	34.4	23.9	25.1	9.3	9.4
30-44 min.	16.5	14.7	21.3	24.1	20.9	29.5	3.6	2.8
45-59 min.	5.3	4.5	8.8	9.9	20.4	13.5	1.1	0.3
60-89 min.	3.0	2.6	7.1	5.8	16.9	19.6	0.9	0.7
Over 90 min.	1.2	0.8	3.0	1.9	8.5	6.1	1.1	0.7
N	2802	2499	602	584	201	163	473	318

[a] $\chi^2=19.35$, df=5, $p<0.017$, $\gamma = -0.011$
[b] $\chi^2=3.94$, df=5, $p<0.5583$, $\gamma = 0.009$
[c] $\chi^2=7.46$, df=5, $p<0.1884$, $\gamma = -0.014$
[d] $\chi^2=2.327$, df=5, $p<0.8024$, $\gamma = -0.085$

TABLE XXII

TIME TRAVELED BY MODE OF TRANSPORATION USED

Time	Mode of Transportation			
	Drive Alone %	Carpool %	Public %	Other %
Less than 15 min.	38.92	24.37	7.97	84.96
15-29 min.	36.71	34.65	24.45	9.36
30-44 min.	15.66	22.68	24.73	3.29
45-59 min.	4.90	9.36	17.31	0.76
60-89 min.	2.81	6.49	18.13	0.76
Over 90 min.	1.00	2.45	7.42	0.88
N	5301	1186	364	791

χ^2=1363.90, df=15, p<0.0001

Time of Travel to Work and Year by Region of the U.S.

Question 9: Did the relationship between the time traveled by household heads in the journey to work in 1974 and 1977 vary by region of the U.S.?

The times traveled to work by household heads in 1974 and 1977 were analyzed by regions of the United States. The proportions of respondents in the various categories by year were significantly different only for the Southern region. The respondents in the other three regions, the Northeast, North Central and West, were not significantly different on these variables. However, of note is the fact that in all regions, the proportions of commuters in many cases decreased or remained about

the same for the categories of time traveled between 1974 and 1977 (Table XXIII).

The partial association among the times traveled by the household heads by year indicated an inconsistency with the Northeast and the North Central having gammas which were small and negative and for the South and West, the gammas were small and positive. Since all of the gamma values were small, however, no elaboration by region of the United States was indicated (Table XXIII).

The marginal relationship between regions of the United States and the times traveled by household heads in the journey to work was significant. Approximately 90 percent of all the commuters in each region travel less than 45 minutes, one-way, in their journey to work, though the percentage is close to 84 percent for those in the Northwest region. The main differences seem to be in the higher categories of time. For commuters in the Northeast, about 15 percent of the respondents travel greater than 45 minutes, one-way, to work. The percentages are smaller for the other three regions (Table XXIV).

There was a significant difference in the journey to work times traveled by year for the Southern region, but no significant difference was indicated in the other three regions. No elaboration by region was indicated, but there were reversed signs on the gamma values which may need further investigation. The relationship between time traveled by household heads and region of the United States was significant.

Time of Travel to Work and Year by SMSA/Non-SMSA Residence

> Question 10: Did the relationship between the time traveled by household heads in the journey to work in 1974 and 1977 differ by location inside and outside SMSA's?

TABLE XXIII

TIME TRAVELED AND YEAR BY REGION OF THE U.S.

Time	Region of the U.S.							
	Northeast[a]		North Central[b]		South[c]		West[d]	
	1974 %	1977 %	1974 %	1977 %	1974 %	1977 %	1974 %	1977 %
Less than 15 min.	32.8	32.8	45.9	43.9	43.0	36.4	41.7	39.8
15-29 min.	32.5	34.7	29.6	35.0	29.1	36.1	33.7	35.6
30-44 min.	17.5	18.9	15.5	12.7	16.0	16.9	14.8	15.5
45-59 min.	7.7	6.1	5.9	5.5	5.6	5.6	4.9	4.3
60-89 min.	7.3	5.2	2.3	2.5	3.9	3.9	2.8	3.7
Over 90 Min.	2.2	2.4	0.7	0.4	2.2	1.2	2.2	1.1
N	943	710	1117	1000	1348	1206	689	651

[a] $\chi^2=5.50$, df=5, $p<0.3580$, $\gamma = -0.032$
[b] $\chi^2=9.25$, df=5, $p<0.0984$, $\gamma = -0.002$
[c] $\chi^2=20.90$, df=5, $p<0.0008$, $\gamma = 0.060$
[d] $\chi^2=4.44$, df=5, $p<0.4882$, $\gamma = 0.016$

TABLE XXIV

TIME TRAVELED AND REGION OF THE U.S.

Time	Region of the U.S.			
	Northeast %	North Central %	South %	West %
Less than 15 min.	32.79	44.97	39.90	40.75
15-29 min.	33.39	32.17	32.42	34.63
30-44 min.	18.09	14.17	16.44	15.15
45-59 min.	7.02	5.72	5.60	4.63
60-89 min.	5.41	2.41	3.92	3.21
Over 90 min.	2.30	0.57	1.72	1.64
N	1653	2117	2554	1340

$\chi^2=114.64$, df=15, $p<0.0001$

The proportions of respondents in the categorized times traveled by household heads from 1974 and 1977 was significantly different for residents who lived outside SMSA's, but no significant difference was found for SMSA residents. There was an overall decrease in the proportions of commuters in all time categories with the exception of the "15-29 minute" categories for both SMSA and Non-SMSA residents (Table XXV).

There was a reversal of signs on the gamma values in the partial association between SMSA/Non-SMSA residence in terms of times traveled by year. However, the gamma values were negligible, therefore no elaboration by SMSA/Non-SMSA residence was found (Table XXV).

TABLE XXV

TIME TRAVELED AND YEAR BY SMSA/
NON-SMSA RESIDENCE

Time	SMSA[a]		Non-SMSA[b]	
	1974 %	1977 %	1974 %	1977 %
Less than 15 min.	34.3	31.3	51.9	50.1
15-29 min.	35.5	39.5	23.6	28.7
30-44 min.	18.6	18.4	12.1	11.7
45-59 min.	6.7	6.1	5.1	4.2
60-89 min.	3.7	3.8	4.7	3.6
Over 90 min.	1.3	0.9	2.7	1.6
N	2476	2223	1621	1344

[a] $\chi^2=10.11$, df=5, $p<0.0720$, $\gamma=0.018$
[b] $\chi^2=14.58$, df=5, $p<0.0123$, $\gamma= -0.010$

There was a significant difference between SMSA and Non-SMSA residents in terms of their commuting times. A larger percentage of the commuters outside SMSA's traveled less than 15 minutes to work, while a larger percentage of the SMSA residents traveled in the 15 minute to 44 minute range in their journey to work. For both SMSA and Non-SMSA residents, about 88 percent of the commuters traveled less than 45 minutes (Table XXVI).

There was a significant difference in the proportions of commuters in the various times traveled by year for residents in Non-SMSA areas, but this was not significant for SMSA residents. Despite a negative versus a positive gamma value for the SMSA/Non-SMSA relationship with

TABLE XXVI

TIME TRAVELLED AND SMSA/
NON-SMSA RESIDENCE

Time	SMSA	Non-SMSA
	%	%
Less than 15 min.	32.86	51.10
15-29 min.	37.37	25.94
30-44 min.	18.49	11.91
45-59 min.	6.45	4.69
60-89 min.	3.75	4.18
Over 90 min.	1.08	2.18
N	4699	2965

χ^2=298.48, df=5, p<0.0001

time traveled and year, the values were negligible. The difference between SMSA and Non-SMSA residents in terms of their commuting times was significant.

Time of Travel to Work and Year by
Property Value to Income Ratio

> Question 11: Did the relationship between the time traveled by household heads in the journey to work in 1974 and 1977 vary according to property value to income ratio for homeowners?

There was a significant difference in time traveled by household heads from 1974 and 1977 for respondents who reported their property value to income ratio as .25 or less. However, there was no significant differences for those whose property value to income was greater than

.25. The source of this difference seemed to be in the first two categories of the time variable for the "low" property value to income group. There was a decrease in proportions of commuters in the "less than 15 minute" category and an increase in the "15-29 minute" category (Table XXVII).

TABLE XXVII

TIME TRAVELED AND YEAR BY PROPERTY VALUE TO INCOME

Time	Property Value to Income Ratio			
	Low[a]		High[b]	
	1974 %	1977 %	1974 %	1977 %
Less than 15 min.	38.3	31.3	36.7	37.8
15-29 min.	33.4	39.3	34.6	34.0
30-44 min.	17.2	17.7	16.6	18.2
45-59 min.	6.	6.7	7.8	5.3
60-89 min.	3.5	3.7	3.1	3.9
Over 90 min.	1.7	1.2	1.2	0.7
N	1568	1307	512	582

[a] $\chi^2=18.44$, df=5, $p<0.0024$, $\gamma=0.079$
[b] $\chi^2=4.33$, df=5, $p<0.5028$, $\gamma= -0.022$

Despite a reversal in the signs on the gamma values, no elaboration was found for time traveled by year in terms of the property value to income ratio (Table XXVII). No significant difference was found in time traveled by property value to income ratios (Table XXVIII).

TABLE XXVIII

TIME TRAVELED BY PROPERTY VALUE TO INCOME

Time	Property Value to Income	
	Low %	High %
Less than 15 min.	35.10	37.29
15-29 min.	36.10	34.28
30-44 min.	17.43	17.46
45-59 min.	6.30	6.49
60-89 min.	3.62	3.56
Over 90 min.	1.46	0.91
N	2875	1094

$\chi^2=3.68$, df=5, $p<0.5967$

A significant difference was found in terms of the time traveled by household heads for 1974 versus 1977 for homeowners who reported a .25 ratio of property value to income, but no significant difference was indicated for those who reported a property value to income of greater than .25. No elaboration by property value to income was indicated in terms of the time traveled by year. There was no significant difference between the "high" and "low" categories of property value to income in the time traveled to work for the household heads.

Time of Travel to Work and Year by

Rent as Percentage of Income

> Question 12: Did the relationship between the time traveled by household heads in the journey to work in 1974 and 1977 vary according to rent as percentage of income for renters?

No significant differences were found for either the "high" or "low" categories of rent as percentage of income in terms of the time traveled by the household head in the journey to work for 1974 and 1977. In addition, the gamma values were (both) low and negative which indicated a consistency between the categories, but no elaboration was indicated by this variable for time traveled by year (Table XXIX). There were no significant differences indicated between the categories of rent as percentage of income across categories of time traveled (Table XXX).

Transportation Mode Used for the Journey

to Work and Region of the U.S. by

SMSA/Non-SMSA Residence

> Question 13: Did the transportation modes used by household heads in the journey to work in different regions of the U.S. differ by location inside and outside SMSA's?

The transportation modes used by household heads in the journey to work for the four regions of the United States were analyzed in terms of proportions of commuters who live in SMSA and Non-SMSA residences. The differences were found to be significant. Of note was the discrepancy in the percentages of commuters who used public transportation and lived within SMSA's as opposed to those who lived outside SMSA's. This is particularly substantial for commuters in the Northeast, where a larger

TABLE XXIX

TIME TRAVELLED AND YEAR BY RENT
AS PERCENTAGE OF INCOME

Time	Rent as Percentage of Income			
	Low[a]		High[b]	
	1974 %	1977 %	1974 %	1977 %
Less than 15 min.	41.3	39.8	39.1	39.8
15-29 min.	29.6	35.5	32.0	39.2
30-44 min.	16.9	15.3	17.0	12.1
45-59 min.	5.7	5.0	6.8	5.4
60-89 min.	4.8	3.4	3.7	2.9
Over 90 min.	1.7	0.9	1.4	0.6
N	840	678	294	314

[a] $\chi^2=8.60$, df=5, $p<0.1263$, $\gamma = -0.027$
[b] $\chi^2=6.39$, df=5, $p<0.2703$, $\gamma = -0.076$

overall percentage of commuters used public transportation. Also of interest was the fact that the "other" category seems to be more frequently indicated by residents outside SMSA's. This category included walking, riding a bicycle or motorcycle, and so on (Table XXXI).

No elaboration was indicated for transportation modes used across regions of the U.S. for SMSA/Non-SMSA residents. However, a consistant, negative gamma value was found. The marginal relationships included an examination of regional differences in terms of SMSA/ Non-SMSA residence, and transportation mode used by SMSA/Non-SMSA residence. Both

TABLE XXX

TIME TRAVELED BY RENT AS PERCENTAGE OF INCOME

Time	Rent as Percentage of Income	
	Low %	High %
Less than 15 min.	40.65	39.47
15-29 min.	32.28	35.69
30-44 min.	16.21	14.47
45-59 min.	5.40	6.09
60-89 min.	4.15	3.29
Over 90 min.	1.32	0.99
N	1518	608

χ^2=4.070, df=5, p<0.5393

relationships were significant. The South had a substantially larger percentage of respondents in the Non-SMSA category than in the SMSA category when compared to the other three regions, followed by the North Central region. More commuters use public transportation in SMSA's than in Non-SMSA's (Tables XXXII and XXXIII).

A significant difference was found in the transportation modes used by household heads from the four regions of the United States by SMSA/ Non-SMSA residence. No elaboration by SMSA/Non-SMSA residence was found. The marginal relationship between region and SMSA/Non-SMSA residence was significant as was the relationship between the transportation modes

TABLE XXXI

TRANSPORTATION MODES AND REGION OF THE U.S. BY SMSA/NON-SMSA RESIDENCE

Transportation Mode	SMSA[a]				Non-SMSA[b]			
	Northeast %	North Central %	South %	West %	Northeast %	North Central %	South %	West %
Drives Alone	63.9	74.5	73.9	75.0	69.1	65.9	67.6	70.2
Carpools	12.7	13.9	16.4	13.0	16.6	12.3	20.2	16.7
Public	16.2	3.9	4.1	3.3	1.8	0.2	0.7	0.5
Other	7.2	7.7	5.6	8.7	12.5	19.6	11.5	12.6
N	1279	1359	1412	1067	512	929	1373	389

[a] $\chi^2=245.31$, df=9, $p<0.0001$, $\gamma= -0.0130$
[b] $\chi^2=51.43$, df=9, $p<0.0001$, $\gamma= -0.033$

TABLE XXXII

SMSA/NON-SMSA RESIDENCE BY
REGION OF THE U.S.

Region	SMSA	Non-SMSA
	%	%
Northeast	25.9	16.1
North Central	25.3	28.1
South	28.1	43.8
West	20.7	12.1
N	8830	6723

χ^2=616.68, df=3, p<0.0001

TABLE XXXIII

TRANSPORTATION MODE USED BY
SMSA/NON-SMSA RESIDENCE

Transportation Mode	SMSA	Non-SMSA
	%	%
Drives Alone	71.8	67.7
Carpool	14.1	17.5
Public	6.9	0.6
Other	7.2	14.2
N	5117	3203

χ^2=282.34, df=3, p<0.0001

used in the journey to work by household heads inside and outside of SMSA's.

Property Value to Income and Region of the U.S. by SMSA/Non-SMSA Residence

Question 14: Did the categorized property value to income ratios for homeowners in different regions of the U.S. differ by location inside and outside SMSA's?

For homeowners inside and outside SMSA's the differences in property value to income between regions was found to be significant for the residents of SMSA's only. No significant difference was found for the Non-SMSA's between these two variables. Of note were the substantially lower percentages of homeowners who lived outside SMSA areas for the Western and Northeastern regions as compared to the other two regions, particularly the Southern region. On the other hand, the percentages in the "high category" for SMSA's were evenly distributed among the regions in the SMSA areas (Table XXXIV). The marginal relationship between SMSA/Non-SMSA residence and the property value to income ratio was not significant (Table XXXV).

There was a significant difference between the high and low categories of property value to income by region of the U.S. for SMSA residents only. No elaboration by the SMSA variable was indicated. There was no significant difference between the categories of the property value to become variable for SMSA/Non-SMSA residences.

Rent as Percentage of Income and Region of the U.S. by SMSA/Non-SMSA Residence

Question 15: Did the rent as percentage of income categories

TABLE XXIV

PROPERTY VALUE TO INCOME AND REGION OF THE U.S. BY SMSA/NON-SMSA AREAS

Region	SMSA[a]		Non-SMSA[b]	
	Low %	High %	Low %	High %
Northeast	21.8	23.1	16.1	16.4
North Central	30.5	24.9	28.3	27.3
South	30.0	26.1	43.9	43.5
West	17.7	25.9	11.7	12.8
N	2283	1498	1274	842

[a] $\chi^2=40.15$, df=3, $p<0.0001$, $\gamma=0.078$
[b] $\chi^2=0.75$, df=3, $p<0.8606$, $\gamma=0.014$

TABLE XXXV

PROPERTY VALUE TO INCOME RATIOS BY SMSA/NON-SMSA RESIDENCE

Property Value to Income Ratio	SMSA	Non-SMSA
	%	%
Low	50.38	60.21
High	39.62	39.79
N	3781	2116

$\chi^2=0.017$, df=1, $p<0.8964$

for renters in different regions of the U.S. differ by location inside and outside SMSA's?

There were no significant differences between the high and low categories of rent as percentage of income by region of the U.S. for residents inside or outside SMSA's. The partial association did not indicate an elaboration by SMSA/Non-SMSA residence but the signs on the gammas were reversed, (Table XXXVI). The rent as percentage of income variable was not significantly different by SMSA/Non-SMSA residence (Table XXXVII).

There were no significant differences between the SMSA/Non-SMSA residences in terms of the rent as percentage of income by region of the U.S. No elaboration by SMSA was indicated, but a negative and a positive

TABLE XXXVI

RENT AS PERCENTAGE OF INCOME

Region	SMSA[a]		Non-SMSA[b]	
	Low %	High %	Low %	High %
Northeast	30.5	32.2	13.9	18.0
North Central	23.2	19.7	25.6	27.2
South	25.6	24.0	46.9	40.0
West	20.7	24.2	13.7	14.7
N	1451	939	583	305

[a] $\chi^2=10.97$, df=9, $p<0.2779$, $\gamma=0.016$
[b] $\chi^2=7.52$, df=6, $p<0.2752$, $\gamma= -0.077$

TABLE XXXVII

RENT AS PERCENTAGE OF INCOME BY
SMSA/NON-SMSA RESIDENCE

Rent as Percentage of Income	SMSA	Non-SMSA
	%	%
Low	60.58	65.58
High	39.22	34.32
N	2390	888

χ^2=8.74, df=3, p<0.0330

gamma was noted by category. No significant differences were indicated between the rent as percentage of income by region for SMSA/Non-SMSA residences.

Summary

Pertinent variables were chosen for analysis in terms of the head of households journey to work from 1974 to 1977. Of particular importance were the distance and time traveled and the mode of transportation used. These aspects of the commuting behavior were analyzed in terms of region of the United States, whether the residence was located in an SMSA or Non-SMSA area, and tenure to income variables. Chi-square was used to determine significance of the various relationships in terms of differences indicated. Since the sample was large, there tended to be significant difference among many of the relationships. Elaboration by the control variables on the main variables of distance traveled by year and times traveled by year was used to test for associations among

the variables of interest. Then the marginal relationships between the control variable and each of the main variables of relationship was analyzed by chi-square for significant differences.

CHAPTER V

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The purpose of this research was to explore the relationship between locational choice and the journey to work. Americans have chosen to make the automobile the main transportation mode used in commuting to work (Starling, 1979). Higher gasoline prices and projected shortages have made decisions about the head of household's home to work separation more important in recent years (Houstoun, 1981). In addition to the transportation mode used by the household heads in the journey to work, regional and metropolitan/nonmetropolitan differences were examined. Hoch (1972) and others have found regional differences in housing and transport costs, with people in the Western region paying significantly more for these items than people in other regions pay. Gladhart (1977) found that, while there was little difference in the residential energy useage of rural families as compared to urban families, rural families used almost 50 percent more gasoline for their private automobiles and about two-and-a-half times as much fuel in their commute to work. Coates and Weiss (1975) agree that the rising costs of gasoline are likely to put severe constraints on commuters from small towns and rural areas, especially when they must travel long distances to take advantage of job opportunities. On the other hand, the 1980

Handbook of Agricultural Charts (U.S. Department of Agriculture) says that the median distance and time traveled was greater for metropolitan household heads than for nonmetropolitan household heads. Hoch found that transport expenditures varied inversely with housing expenditures and furthermore, decreased with city size. However, considered together, housing and transport costs were expected to increase with city size.

Tenure and housing costs were also found to differ regionally and in terms of metropolitan versus non-metropolitan residence. According to the USDA 1980 Handbook of Agricultural Charts, about three-fourths of nonmetropolitan housing is owned as compared to about 61 percent of metropolitan housing. In addition, single-family dwellings were more common in nonmetropolitan areas than in metropolitan areas. Physically inadequate units were more commonly found in nonmetropolitan areas, but higher rent burdens were more often found in metropolitan areas.

The poor in any area generally pay proportionately more for their housing than other income groups so they tend to be the ones with the most severe constraints as costs rise (Birch, 1970; U.S. Department of HUD, 1980). This is especially true in terms of the journey to work and housing locational choice (Catanese, 1970). According to Houstoun (1981), people are paying more, in general, for housing and transportation, leaving less money for the purchase of durable goods and savings. As Catanese pointed out, higher income families do not face as severe a constraint on their housing choices as lower income families, to whom the journey to work may take on more significance, particularly from the economic standpoint.

Each year, vast amounts of data are collected on housing, transportation and social characteristics of the American public. For this

study, the Annual Housing Survey data collected jointly by HUD and the U.S. Bureau of the Census, were utilized to explore various aspects of the journey to work commute by household heads, and its relationship to the residental locational decision.

Summary of Findings

An overall decline in the proportion of commuters who traveled longer distances and times in the journey to work was noted from 1974 to 1977. The decline was especially noticeable for those traveling over 40 miles and greater than 30 minutes. There was also an increase from 1974 to 1977 in the proportions of commuters whose workplace varied.

For both distance and time, there was a slight increase from 1974 to 1977 in the proportions of commuters who drove alone or carpooled. Public transportation proportions stayed about the same but the proportions of commuters who used other forms of movement such as walking, biking or other means of travel declined. There was a slight but overall decrease in distance and time traveled to work for those who drove alone in private automobiles or used travel modes other than the private automobile or public transit, from 1974 to 1977. Little change was found for those using public transport or for those who carpooled.

Only the Southern region of the United States showed any substantial differences in the proportions of commuters in the various distance and time categories from 1974 to 1977. While some changes were noted in the North Central and Northeastern regions for distance and time traveled from 1974 to 1977, there were essentially no differences found in the Western region. However, it should be noted that about 45 percent of the commuters in the West traveled less than 15 minutes to work.

About 50 percent of the Non-SMSA commuters traveled less than 15 minutes and less than 5 miles to work or worked at home, as compared to about 30 percent of the SMSA residents. Beyond the 15 minute and 5 mile categories, however, the proportion of SMSA residents were substantially greater than Non-SMSA's, except for those who traveled greater than 50 miles. For SMSA residents, there was an overall decrease in the distance traveled from 1974 to 1977. For the Non-SMSA residents, there was a substantial, overall decrease in the time traveled in the journey to work from 1974 to 1977.

Property value to income for homeowners and rent as percentage of income were both analyzed in terms of distance and time traveled in the journey to work by year. The changes found in this study were in the "low" categories where respondents were paying 25 percent or less of their income on housing for renters or their property value to income ratio was .25 or less for homeowners. The changes, however, did not indicate any clear trends for distance or time traveled from 1974 to 1977 even though the differences were found to be significant statistically.

Generally, most people drive alone to work in their private automobiles, with carpooling a far second. The Northeast region was the only region where public transit was used to any degree and this only in the SMSA areas. Very little public transit is used in Non-SMSA areas and this may have as much to do with a lack of availability as preference by commuters. In Non-SMSA areas, the "other" types of travel such as walking, riding a bike or motorcycle, and so on tended to be more common. Most of the commuters in the "other" category traveled less than one mile and less than 15 minutes to work. In general, most

commuters travel less than 20 miles in their journey to work and a larger proportion of people carpooled at the longer distances.

Conclusions

The Annual Housing Survey data tapes presented some unique challenges for this research study. Use of broad categories, as for example, regions, allowed such diverse states as Montana, California and Hawaii to be lumped together in one category. Some form of cancellation of commuting effects would most likely be expected in such a case. Perhaps it would have been more practical if these areas could have been subdivided further to identify specific commuting behaviors for which explanations could have been proposed.

In the case of SMSA/Non-SMSA residents, the comparisons were also difficult to interpret. Cities as diverse as Chicago, Illinois and Lawton, Oklahoma were compared with nonmetropolitan areas across the country. In addition, the AHS introduces something of a bias by doubling its sample of rural housing units as compared to urban housing units. The findings which suggest that the Southern region was the only one where significant differences were found in commuting patterns may have been a function of the fact that the Southern region was essentially more rural than other regions, and therefore may be somewhat over-represented in the Non-SMSA differences found.

Another aspect of the data tapes considered was the fact that, in dealing with housing units, the movement into and out of specific units goes on every day. While one person may be making an adjustment in location by moving out of a unit, a consequent adjustment is made when someone else moves into that unit. In this way, adjustments in housing,

whether for reasons of commuting costs or whatever, are constantly being made and may have the effect of canceling each other out. This is especially true when one is dealing with as large and diverse a sample as was used here.

In addition, the property value to income ratio was not an accurate measure of yearly housing costs, though rent as percentage of income was probably a more accurate measure. However, with the fluctuations in housing costs in various locations of the U.S., differences in rents and rent controls, inflation and housing appreciation all contributing to this ratio or percentage, there could be some question as to what is really involved here. If it were all dealt with in constant dollars, if some of the fluctuations mentioned could be controlled and if one were talking about an area where the population or sample was more or less homogeneous in terms of their sociodemographic characteristics, then these types of variables may have had more meaning than what could be found here. This is not to say that tenure and income are not vital parts of the household's locational decision, but rather that perhaps the two combined together do not yield the kind of information which each may have given if used separately.

According to the findings of this study, there was an overall decline in the one-way categorical distances and times traveled by household heads in the journey to work from 1974 to 1977. This supported the theory of worktrip minimization based on adjustments to economic constraints. However, it cannot be assumed that the decrease was based solely on the rising costs of commuting to work. As Catanese (1970), Gallogly (1974) and Morris and Winter (1978) pointed out, accessibility to the workplace was not necessarily an important factor in

housing locational choice. Further analysis of these findings to determine mobility patterns, reasons for moving and/or changing jobs and the socioeconomic characteristics associated with decisions of housing location should be undertaken. Also of importance would be the determination of the value, to the household, of the head's journey to work time and distance compared to satisfaction with their current housing.

Of note, too, in this study, was the substantial increase in the percentage of commuters whose workplace varied and in the percentage of respondents who were categoriezed as "not applicable." These were unanticipated findings, and may reflect recent adjustments to the rising costs of commuting. Respondents may have rejected employment that was too far away to commute economically, and accepted employment closer to their homes. On the other hand, relocation of industries and businesses into the suburbs was mentioned in the literature as having an effect on commuting patterns. Often people in the inner cities find it difficult or impossible to follow their jobs because of the expense of traveling longer distances to the workplace. In addition, the unavailability of public transportation outside of major metropolitan areas (Kain, 1975; Houstoun, 1981) could cause a severe constraint to those who do not own private automobiles.

As Starling (1979) pointed out, most commuters travel to work in private automobiles, and many of these travel alone. The findings of this study confirm this generalization. However, for most categories of distance and time traveled by household heads, there was an overall decrease in the percentage of commuters who drive alone from 1974 to 1977, and a slight increase in carpooling was noted in some categories. Carpooling beyond the forty mile distance was not very common. Perhaps

it was difficult to find persons with whom to share driving at such distances. As Houstoun (1979) said, public transportation is becoming less accessible to more people and the findings of this study show that there was an overall decrease in the use of public transportation from 1974 to 1977. The data do not indicate, however, whether this decline is due to lack of availability or choices made by commuters.

Regional differences in journey to work and residential locational choice were noted in the literature (Hoch, 1972; Chinitz and Dusansky, 1972; Thygerson et al., 1978). The most common finding cited was that housing and transport costs were highest in the West, followed by the Northeast, South and North Central region. From this, one would expect to find greater adjustments to be made in the home-work separation in the Western region, followed by the other three regions in order of the size of housing costs following the economic theories of structural, and even more, of ecological modeling (Wilson, 1979). According to the findings of this study, the home-work separation changed substantially only for the Southern region. Perhaps the expectation of change in the West had already taken place before these data were collected. If indeed the housing and transport costs have been higher in the West over a long period of time, adjustments may have gradually been made all along. The fact that such a large percentage of the Western commuters travel less than 15 minutes to work or work at home tended to support this idea. As for the changes noted in the South, and to a lesser degree, in the Northeast and North Central, the adjustments may have been more likely to be in response to the rising costs of commuting than was true in the West where transport costs were already higher before the oil embargo of 1973.

Clemente and Summers (1974) noted that metropolitan structure, as well as residence in metropolitan versus nonmetropolitan areas influenced commuting patterns. Some researchers (Gladhart, 1977; Coats and Weiss, 1975) have found that commuters in nonmetropolitan areas tend to spend more for gasoline in their worktrips due to longer distances traveled. Hoch (1972) found that city size also had an influence on transport and housing costs. The expectation, then, may be that commuters outside SMSA's would feel the constraint of rising transport costs more acutely than those inside metropolitan areas and adjustments of the workplace to home separation would follow. However, Gessaman and Sisler (1976) found that rural residents choose to live outside metropolitan areas in spite of the higher commuting costs and Wilson (1979) argued that metropolitan residents, particularly those in the lower income levels have little choice in housing location and that their housing choices were dictated by available housing they could afford rather than locational atributes. The findings of this study do not necessarily support the assumption that Non-SMSA residents travel farther in their journey to work. In fact, over half of these respondents traveled less than 15 minutes and almost half traveled less than five miles or worked at home. However, there was a slightly larger percentage of Non-SMSA residents who traveled over 50 miles to their place of work. Interestingly, there was a decrease from 1974 to 1977 in the distance traveled by commuters within SMSA's and a decrease in time traveled by commuters outside SMSA's. Perhaps time was a more important element in the NonSMSA resident's commuting decisions than distance, while distance may have become more of a consideration for commuters in SMSA's where ease of movement had become restricted. In the case of

congested metropolitan areas, time and distance may not be as closely related in the journey to work as in nonmetropolitan areas.

Socioeconomic status was cited in the literature as important to the housing locational decision (Abu-Lughod and Foley, 1960). Catanese (1970) found that income was the most significant of the socioeconomic variables because it was correlated to some degree with most other socioeconomic variables. According to the U.S. Department of HUD (1980) the poor pay proportionately more for their housing than higher income groups and Catanese, Wheeler (1967) and Reeder (1956) found differences in commuting based on socioeconomic variables. Homeownership, or tenure, was not found to relate directly to income (Birch, 1973), but Pickvance (1973) found that income and occupational status were important variables in whether a household is able to pay for costs of owning its dwelling. In this study, homeowners were not actually compared to renters, but similar findings in the commuting behavior by each group were found. In terms of distance and time traveled, the "high" property value to income and "high" rent as percentage of income would both be expected to show the most change over time due to the added strain of higher transportation costs. However, the most substantial decreases from 1974 to 1977 in distances and times traveled by household heads in the journey to work were in the "low" category. Though the changes noted were substantial, no clear trends were indicated. Here again, perhaps the expected changes in time and distance traveled for those in the "high" category may have already been made. The respondents who pay more than the prescribed housing costs may have found it necessary to make adjustments in their travel expenses before the costs of commuting rose sharply in 1973. This could indicate that further price increases

could put an even greater strain on already strained budgets, causing further evaluation of housing locational choices.

The findings of this study would seem to indicate some adjustments to the home-work separation, but beyond this, one would need to do a good deal more research to determine the extent to which the rising costs of transportation for the journey to work has influenced housing locational choices. In addition, choices concerning housing and transportation are made within the framework of an individual's or household's lifestyle and resources. No one factor can be given precedence over any of the other factors. However, economic constraints are real and, as the price of commuting increases, consideration concerning the length of the journey to work will inevitably enter into the housing locational decision.

Recommendations

Journey to work and housing locational decisions are highly complex and encompass many different fields of study. The rising cost of energy for transportation is only a small part of the broad subject of housing locational choice. In view of these observations and the researcher's experiences with this project, the following recommendations are made.

1. While analysis of the country as a whole can possibly illuminate broad categorical changes and overall trends in commuting behavior, a more in-depth study of a smaller geographical area, where controls can be placed on the nature of the data gathered, would be helpful in determining actual cause and effect relationships between consumer decisions and overt behavior.

2. Inclusion of analysis of socioeconomic data of the respondents would be helpful in determining whether such variables as age, sex or education of the household head had an effect on housing choices and the length of the journey to work.
3. Attitudinal data such as satisfaction with the house and/or neighborhood of residence, propensity to move due to rising transportation costs and household views on the energy situation, in general, would have strengthened the findings of this study.
4. If the research were to be replicated, commuting trends over time could be more easily measured by studying household changes rather than studying the housing unit and changes that occurred as a result of the household living in that unit.
5. The time period from 1974 to 1977, though chosen mostly due to the availability of data, was a relatively short time span in which to study such drastic changes as residential mobility in response to rising gasoline prices. Further analysis should be conducted as data becomes available.
6. Working with a data base as large and complex as the Annnual Housing Survey data tapes can be frustrating, time-comsuming and very rewarding but the use of such data should be approached with the understanding that it will never contain all the questions that the researcher wants to ask nor will the questions necessarily focus on the aspects of one's research in the most practical manner. However, there is a good deal to be learned from the use of such sources and as long as their limitations are recognized, they can be valuable in research such as this.

7. More in-depth study should include a closer examination of the relationship between time and distance traveled with the transportation mode used. Further clarification of findings could be strengthened if costs of transportation were utilized. In addition, further study could focus on the reasons for the increase in commuters whose workplace varied to determine if this was another form of adjustment to rising transportation costs.

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APPENDIXES

APPENDIX A

U.S. CENSUS BUREAU REGIONS AND GEOGRAPHIC DIVISIONS OF THE UNITED STATES

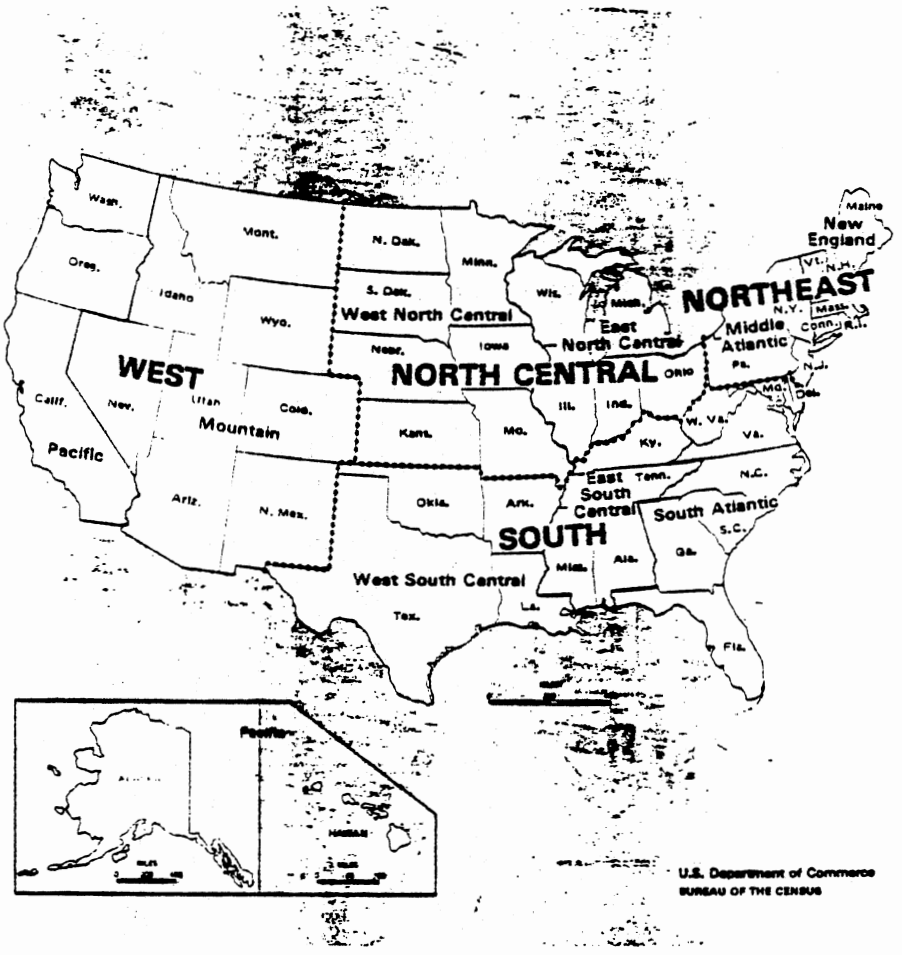
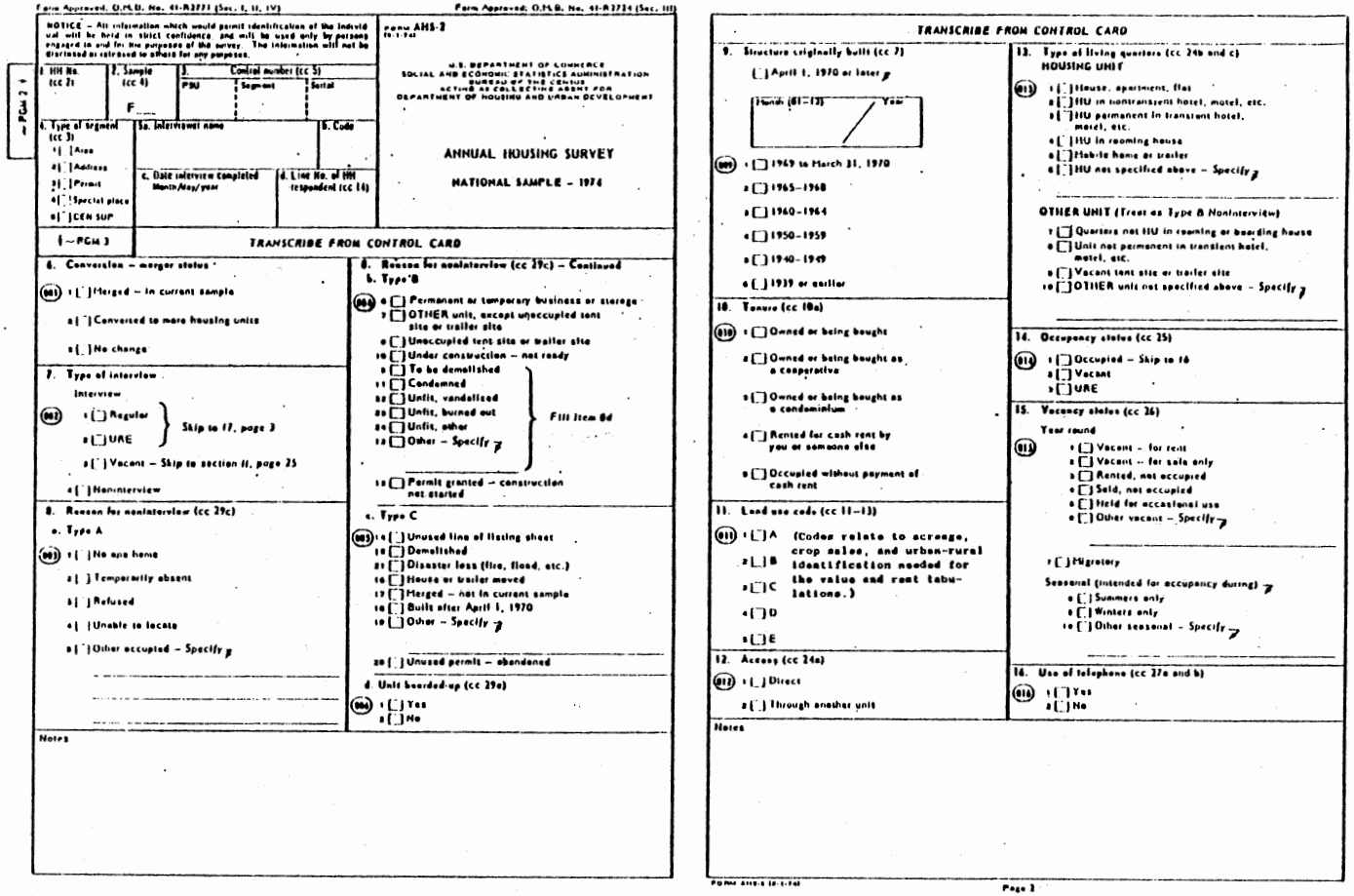


Figure 3. U.S. Census Bureau Regions and Geographic Divisions of the United States

APPENDIX B

EXAMPLES OF ANNUAL HOUSING SURVEY INSTRUMENTS USED IN 1974 AND 1977

FACSIMILE OF THE ANNUAL HOUSING SURVEY QUESTIONNAIRE: 1974



Form Approved. O.M.B. No. 41-R3771 (Sec. I, II, IV)

Form Approved. O.M.B. No. 41-R3734 (Sec. III)

NOTICE – All information which would permit identification of the individual will be held in strict confidence and will be used only by persons engaged in and for the purposes of the survey. The information will not be disclosed or released to others for any purpose.

FORM AHS-2 (10-1-74)

U.S. DEPARTMENT OF COMMERCE
SOCIAL AND ECONOMIC STATISTICS ADMINISTRATION
BUREAU OF THE CENSUS
ACTING AS COLLECTING AGENT FOR
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

ANNUAL HOUSING SURVEY

NATIONAL SAMPLE – 1974

1. HH No. (cc 2)
2. Sample (cc 4) F___
3. Control number (cc 5) — PSU | Segment | Serial
4. Type of segment (cc 3): 1 Area; 4 Address; 5 Permit; 6 Special place; 8 CEN SUP
5a. Interviewer name
5b. Code
5c. Date interview completed — Month/day/year
5d. Line No. of HH respondent (cc 14)

→ PGM 2 →

→ PGM 3

TRANSCRIBE FROM CONTROL CARD

6. Conversion – merger status (001): 1 Merged – in current sample; 2 Converted to more housing units; 3 No change

7. Type of interview: Interview (002): 1 Regular, 2 URE — Skip to 17, page 3; 3 Vacant – Skip to section II, page 25; 4 Noninterview

8. Reason for noninterview (cc 29c)
a. Type A (003): 1 No one home; 2 Temporarily absent; 3 Refused; 4 Unable to locate; 5 Other occupied – Specify
b. Type B (004): 6 Permanent or temporary business or storage; 7 OTHER units, except unoccupied tent site or trailer site; 9 Unoccupied tent site or trailer site; 10 Under construction – not ready; 11 To be demolished; 12 Condemned; 22 Units, vandalized; 23 Units, burned out; 24 Units, other; 13 Other – Specify — Fill item 8d
c. Type C (005): 14 Unused line of listing sheet; 15 Demolished; 21 Disaster loss (fire, flood, etc.); 16 House or trailer moved; 17 Merged – not in current sample; 18 Built after April 1, 1970; 19 Other – Specify; 20 Unused permit – abandoned
d. Unit boarded-up (cc 29e) (006): 1 Yes; 2 No

Notes

TRANSCRIBE FROM CONTROL CARD

9. Structure originally built (cc 7)
April 1, 1970 or later
Month (01–12) / Year
(009): 1 1969 to March 31, 1970; 2 1965–1968; 3 1960–1964; 4 1950–1959; 5 1940–1949; 6 1939 or earlier

10. Tenure (cc 10a) (010): 1 Owned or being bought; 2 Owned or being bought as a cooperative; 3 Owned or being bought as a condominium; 4 Rented for cash rent by you or someone else; 5 Occupied without payment of cash rent

11. Land use code (cc 11–13) (011): 1 A (Codes relate to acreage, crop sales, and urban-rural identification needed for the value and rent tabulations.); 2 B; 3 C; 4 D; 5 E

12. Access (cc 24a) (012): 1 Direct; 2 Through another unit

13. Type of living quarters (cc 24b and c)
HOUSING UNIT (013): 1 House, apartment, flat; 2 HU in nontransient hotel, motel, etc.; 3 HU permanent in transient hotel, motel, etc.; 4 HU in rooming house; 5 Mobile home or trailer; 6 HU not specified above – Specify
OTHER UNIT (Treat as Type B Noninterview): 7 Quarters not HU in rooming or boarding house; 8 Unit not permanent in transient hotel, motel, etc.; 9 Vacant tent site or trailer site; 10 OTHER unit not specified above – Specify

14. Occupancy status (cc 25) (014): 1 Occupied – Skip to 16; 2 Vacant; 3 URE

15. Vacancy status (cc 26)
Year round (015): 1 Vacant – for rent; 2 Vacant – for sale only; 3 Rented, not occupied; 4 Sold, not occupied; 5 Held for occasional use; 6 Other vacant – Specify; 7 Migratory
Seasonal (intended for occupancy during): 8 Summers only; 9 Winters only; 10 Other seasonal – Specify

16. Use of telephone (cc 27a and b) (016): 1 Yes; 2 No

Notes

FORM AHS-2 (10-1-74)

Page 3

FACSIMILE OF THE ANNUAL HOUSING SURVEY QUESTIONNAIRE: 1974 (Continued)

Section 1 – OCCUPIED UNITS (Include URE's)

17. When did . . . (head) move into this house (apartment)?
(017) Month (01–12) / Year
After April 1, 1970 ?
1 ☐ 1965 to April 1, 1970
2 ☐ 1960 to 1964
3 ☐ 1950 to 1959
4 ☐ 1949 or earlier
} Skip to 20

18. In which county and State did . . . (head) live on April 1, 1970?
_____ County
_____ State
OR
(018) 0 ☐ Outside the United States – Skip to 20

19. Did . . . (head) live inside the limits of a city, town or village?
(019) 1 ☐ Yes – Name of place ?
_____
2 ☐ No
(020)

20. Was . . . (head) in the U.S. Armed Forces on April 1, 1970?
(021) 1 ☐ Yes
2 ☐ No

CHECK ITEM A

Mark all 3 parts (See item 17)
(1) Household head lived here last 90 days . . . . . (022) 1 ☐ Yes 2 ☐ No
(2) Household head lived here last winter . . . . . (023) 1 ☐ Yes 2 ☐ No
(3) Household head moved here during the last 12 months . . . . (024) 1 ☐ Yes 2 ☐ No

21a. How many living quarters, both occupied and vacant, are there in this house (building)?
(025)
1 ☐ Mobile home or trailer
2 ☐ One, detached from any other house
3 ☐ One, attached to one or more houses
4 ☐ 2
5 ☐ 3 or 4
} Skip to 21d
6 ☐ 5 to 9
7 ☐ 10 to 19
8 ☐ 20 to 49
9 ☐ 50 or more
} Skip to 22a

b. Is your mobile home (trailer) anchored, that is, secured with tiedowns or by other means?
(026) 1 ☐ Yes
2 ☐ No
3 ☐ Don't know

OBSERVATION
c. Is the mobile home in a group of 4 or more mobile homes?
(027) 1 ☐ Yes
2 ☐ No
} Skip to 23

OBSERVATION
d. Is any part of this property used as a commercial establishment?
(028) 1 ☐ Yes
2 ☐ No

OBSERVATION
e. Is any part of this property used as a medical or dental office?
(029) 1 ☐ Yes
2 ☐ No

Section 1 – OCCUPIED UNITS (Include URE's) – Continued

22a. How many stories (floors) are in this house (building)? (Exclude basement)
(030) 1 ☐ 1 to 3 – Skip to 23
2 ☐ 4 to 6
3 ☐ 7 to 12
4 ☐ 13 or more

OBSERVATION
b. Is there a passenger elevator in this building?
(031) 1 ☐ Yes
2 ☐ No

23. How many rooms do you have in your house (apartment)? Do not count bathrooms, porches, balconies, foyers, halls, or half-rooms.
(032) _____ Number

24. Does each room in your house (apartment) have a working electric wall outlet (wall plug)?
(033) 1 ☐ Yes
2 ☐ No

25. How many bedrooms do you have in your house (apartment)? Count rooms used mainly for sleeping even if used for other purposes.
(034) _____ Number
OR
0 ☐ None – Skip to 28

26a. Is it necessary to pass through anyone's bedroom to get from one room to another – excluding bathrooms?
(035) 1 ☐ Yes – Skip to Check Item B
2 ☐ No

b. Is it necessary to pass through anyone's bedroom to get to the bathroom?
(036) 1 ☐ Yes
2 ☐ No

CHECK ITEM B

(See cc 15a) Do not count persons with usual residence elsewhere unless entire household is URE.
☐ Household has 1 or 2 persons – Skip to 28
☐ Household has 3 or more persons – Ask 27a

27a. Are any bedrooms used for sleeping by 3 or more persons?
☐ Yes – How many bedrooms are used for sleeping by 3 or more persons?
(037) 1 ☐ 1 bedroom
2 ☐ 2 or more bedrooms
3 ☐ No – Skip to 28

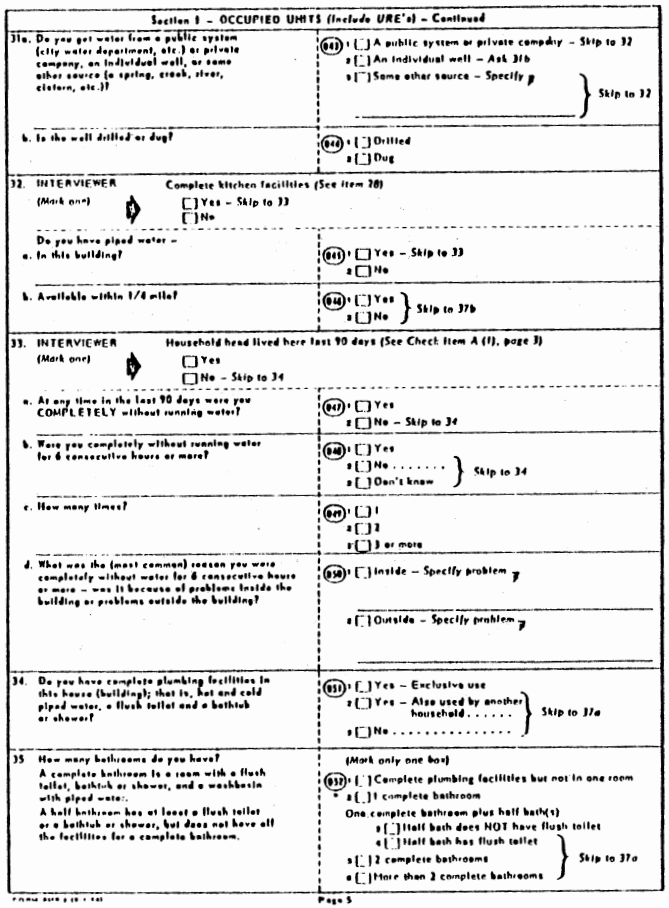
b. Are any of the persons who use this bedroom (these bedrooms) 13 years of age or older?
(038) 1 ☐ Yes
2 ☐ No

28. Do you have complete kitchen facilities in this house (building); that is, a kitchen sink with piped water, a refrigerator and a range or a cookstove?
(039) 1 ☐ Yes – Exclusive use
2 ☐ Yes – Also used by another household
3 ☐ No – Skip to 30

29a. Are the kitchen sink, refrigerator, and range or cookstove all in usable condition?
(040) 1 ☐ Yes – Skip to 30
2 ☐ No

b. Which of the items are not in usable condition?
(Mark all that apply)
(041) 1 ☐ Kitchen sink
2 ☐ Refrigerator
3 ☐ Range or cookstove

30. Which fuel is used most for cooking?
(042) Gas
1 ☐ From underground pipes serving the neighborhood
2 ☐ Bottled, tank or LP
3 ☐ Electricity
4 ☐ Fuel oil, kerosene, etc.
5 ☐ Coal or coke
6 ☐ Wood
7 ☐ Other fuel
8 ☐ No fuel used



Section 1 – OCCUPIED UNITS (Include URE's) – Continued

31a. Do you get water from a public system (city water department, etc.) or private company, an individual well, or some other source (a spring, creek, river, cistern, etc.)?
(643) 1 ☐ A public system or private company – Skip to 32
2 ☐ An individual well – Ask 31b
3 ☐ Some other source – Specify ▶ _____ } Skip to 32

b. Is the well drilled or dug?
(644) 1 ☐ Drilled
2 ☐ Dug

32. INTERVIEWER (Mark one) ▶ Complete kitchen facilities (See item 30)
☐ Yes – Skip to 33
☐ No

Do you have piped water –
a. In this building?
(645) 1 ☐ Yes – Skip to 33
2 ☐ No

b. Available within 1/4 mile?
(646) 1 ☐ Yes
2 ☐ No } Skip to 37b

33. INTERVIEWER (Mark one) ▶ Household head lived here last 90 days (See Check Item A (1), page 3)
☐ Yes
☐ No – Skip to 34

a. At any time in the last 90 days were you COMPLETELY without running water?
(647) 1 ☐ Yes
2 ☐ No – Skip to 34

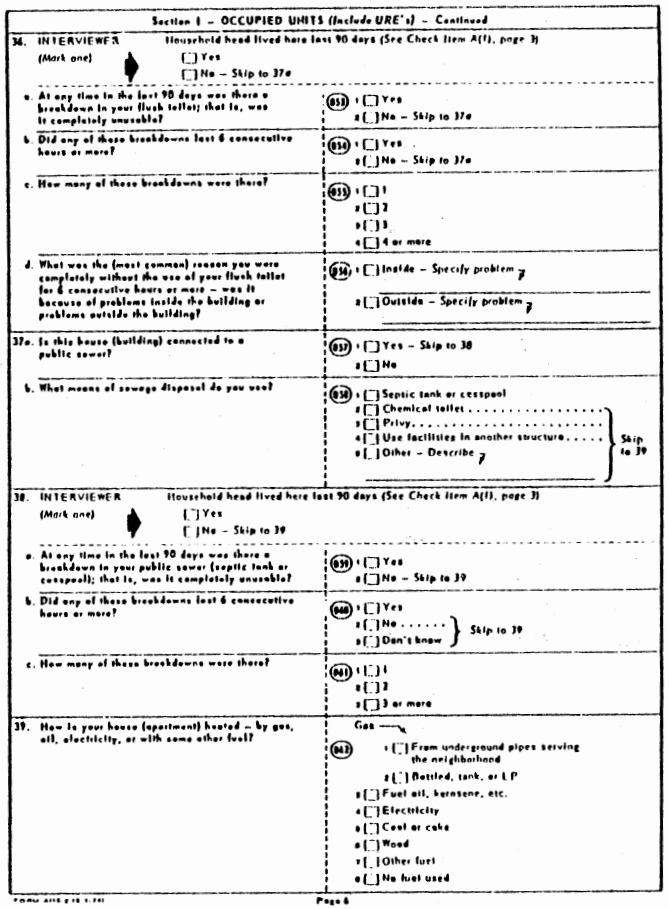
b. Were you completely without running water for 6 consecutive hours or more?
(648) 1 ☐ Yes
2 ☐ No
3 ☐ Don't know } Skip to 34

c. How many times?
(649) 1 ☐ 1
2 ☐ 2
3 ☐ 3 or more

d. What was the (most common) reason you were completely without water for 6 consecutive hours or more – was it because of problems inside the building or problems outside the building?
(650) 1 ☐ Inside – Specify problem ▶ _____
2 ☐ Outside – Specify problem ▶ _____

34. Do you have complete plumbing facilities in this house (building); that is, hot and cold piped water, a flush toilet and a bathtub or shower?
(651) 1 ☐ Yes – Exclusive use
2 ☐ Yes – Also used by another household
3 ☐ No } Skip to 37a

35. How many bathrooms do you have?
A complete bathroom is a room with a flush toilet, bathtub or shower, and a washbasin with piped water.
A half bathroom has at least a flush toilet or a bathtub or shower, but does not have all the facilities for a complete bathroom.
(Mark only one box)
(652) 1 ☐ Complete plumbing facilities but not in one room
2 ☐ 1 complete bathroom
One complete bathroom plus half bath(s)
3 ☐ Half bath does NOT have flush toilet
4 ☐ Half bath has flush toilet
5 ☐ 2 complete bathrooms
6 ☐ More than 2 complete bathrooms } Skip to 37a



Section 1 – OCCUPIED UNITS (Include URE's) – Continued

36. INTERVIEWER (Mark one) ▶ Household head lived here last 90 days (See Check Item A(1), page 3)
☐ Yes
☐ No – Skip to 37a

a. At any time in the last 90 days was there a breakdown in your flush toilet; that is, was it completely unusable?
(653) 1 ☐ Yes
2 ☐ No – Skip to 37a

b. Did any of these breakdowns last 6 consecutive hours or more?
(654) 1 ☐ Yes
2 ☐ No – Skip to 37a

c. How many of these breakdowns were there?
(655) 1 ☐ 1
2 ☐ 2
3 ☐ 3
4 ☐ 4 or more

d. What was the (most common) reason you were completely without the use of your flush toilet for 6 consecutive hours or more – was it because of problems inside the building or problems outside the building?
(656) 1 ☐ Inside – Specify problem ▶ _____
2 ☐ Outside – Specify problem ▶ _____

37a. Is this house (building) connected to a public sewer?
(657) 1 ☐ Yes – Skip to 38
2 ☐ No

b. What means of sewage disposal do you use?
(658) 1 ☐ Septic tank or cesspool
2 ☐ Chemical toilet
3 ☐ Privy
4 ☐ Use facilities in another structure
5 ☐ Other – Describe ▶ _____ } Skip to 39

38. INTERVIEWER (Mark one) ▶ Household head lived here last 90 days (See Check Item A(1), page 3)
☐ Yes
☐ No – Skip to 39

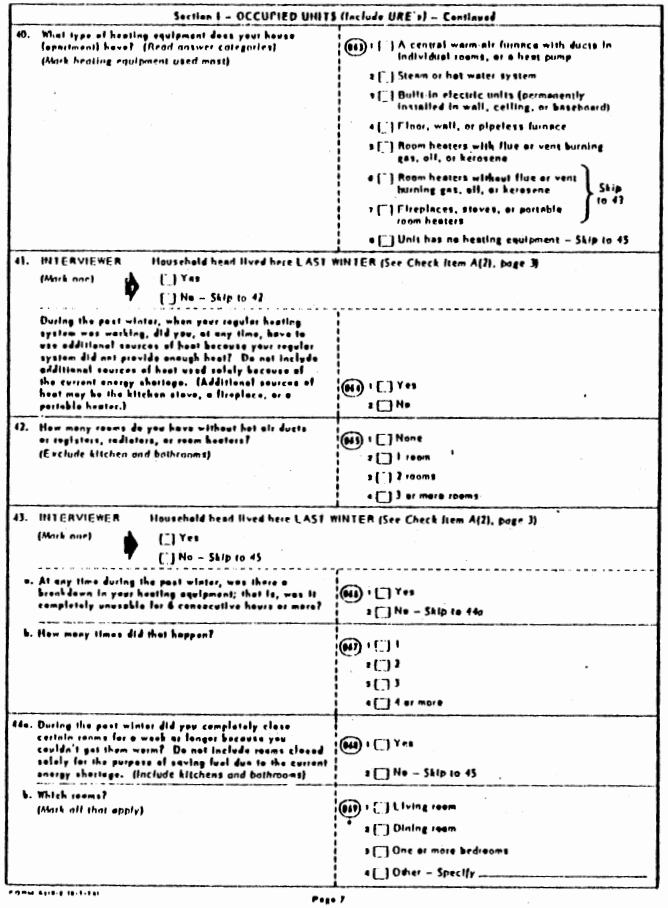
a. At any time in the last 90 days was there a breakdown in your public sewer (septic tank or cesspool); that is, was it completely unusable?
(659) 1 ☐ Yes
2 ☐ No – Skip to 39

b. Did any of these breakdowns last 6 consecutive hours or more?
(660) 1 ☐ Yes
2 ☐ No
3 ☐ Don't know } Skip to 39

c. How many of these breakdowns were there?
(661) 1 ☐ 1
2 ☐ 2
3 ☐ 3 or more

39. How is your house (apartment) heated – by gas, oil, electricity, or with some other fuel?
Gas
(662) 1 ☐ From underground pipes serving the neighborhood
2 ☐ Bottled, tank, or LP
3 ☐ Fuel oil, kerosene, etc.
4 ☐ Electricity
5 ☐ Coal or coke
6 ☐ Wood
7 ☐ Other fuel
8 ☐ No fuel used

FACSIMILE OF THE ANNUAL HOUSING SURVEY QUESTIONNAIRE: 1974 (Continued)



Section 1 – OCCUPIED UNITS (Include URE's) – Continued

40. What type of heating equipment does your house (apartment) have? (Read answer categories) (Mark heating equipment used most)

(063)
1 [ ] A central warm-air furnace with ducts to individual rooms, or a heat pump
2 [ ] Steam or hot water system
3 [ ] Built-in electric units (permanently installed in wall, ceiling, or baseboard)
4 [ ] Floor, wall, or pipeless furnace
5 [ ] Room heaters with flue or vent burning gas, oil, or kerosene
6 [ ] Room heaters without flue or vent burning gas, oil, or kerosene } Skip to 43
7 [ ] Fireplaces, stoves, or portable room heaters
8 [ ] Unit has no heating equipment – Skip to 45

41. INTERVIEWER (Mark one) ▶ Household head lived here LAST WINTER (See Check Item A(2), page 3)
[ ] Yes
[ ] No – Skip to 42

During the past winter, when your regular heating system was working, did you, at any time, have to use additional sources of heat because your regular system did not provide enough heat? Do not include additional sources of heat used solely because of the current energy shortage. (Additional sources of heat may be the kitchen stove, a fireplace, or a portable heater.)

(064) 1 [ ] Yes
2 [ ] No

42. How many rooms do you have without hot air ducts or registers, radiators, or room heaters? (Exclude kitchen and bathrooms)

(065)
1 [ ] None
2 [ ] 1 room
3 [ ] 2 rooms
4 [ ] 3 or more rooms

43. INTERVIEWER (Mark one) ▶ Household head lived here LAST WINTER (See Check Item A(2), page 3)
[ ] Yes
[ ] No – Skip to 45

a. At any time during the past winter, was there a breakdown in your heating equipment; that is, was it completely unusable for 6 consecutive hours or more?

(066) 1 [ ] Yes
2 [ ] No – Skip to 44a

b. How many times did that happen?

(067)
1 [ ] 1
2 [ ] 2
3 [ ] 3
4 [ ] 4 or more

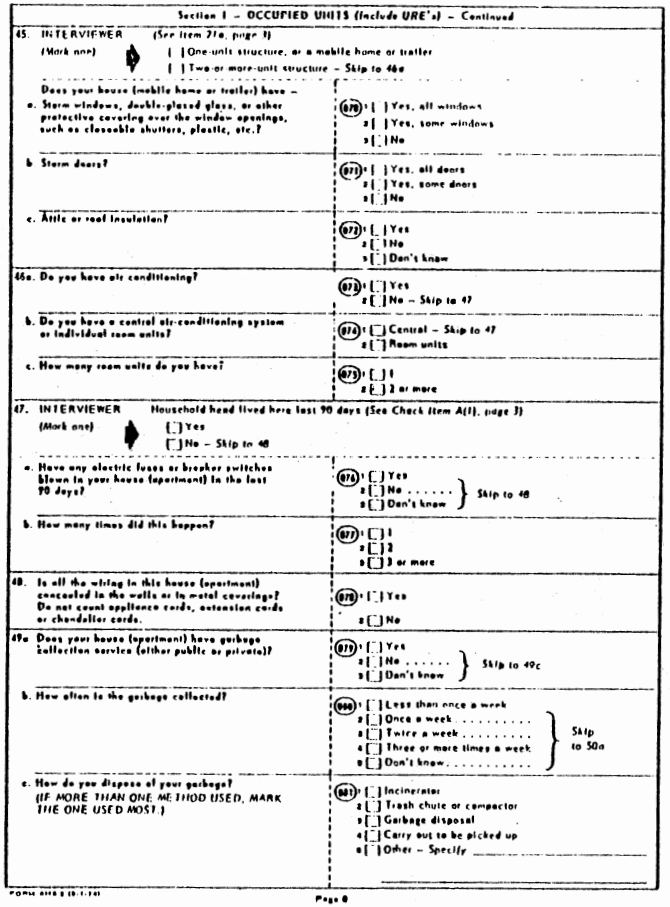
44a. During the past winter did you completely close certain rooms for a week or longer because you couldn't get them warm? Do not include rooms closed solely for the purpose of saving fuel due to the current energy shortage. (Include kitchens and bathrooms)

(068) 1 [ ] Yes
2 [ ] No – Skip to 45

b. Which rooms? (Mark all that apply)

(069)
1 [ ] Living room
2 [ ] Dining room
3 [ ] One or more bedrooms
4 [ ] Other – Specify _____

Page 7



Section 1 – OCCUPIED UNITS (Include URE's) – Continued

45. INTERVIEWER (See Item 7(a, page 1) (Mark one) ▶
[ ] One-unit structure, or a mobile home or trailer
[ ] Two-or-more-unit structure – Skip to 46a

Does your house (mobile home or trailer) have –

a. Storm windows, double-glazed glass, or other protective covering over the window openings, such as closeable shutters, plastic, etc.?

(070)
1 [ ] Yes, all windows
2 [ ] Yes, some windows
3 [ ] No

b. Storm doors?

(071)
1 [ ] Yes, all doors
2 [ ] Yes, some doors
3 [ ] No

c. Attic or roof insulation?

(072)
1 [ ] Yes
2 [ ] No
3 [ ] Don't know

46a. Do you have air conditioning?

(073)
1 [ ] Yes
2 [ ] No – Skip to 47

b. Do you have a central air-conditioning system or individual room units?

(074)
1 [ ] Central – Skip to 47
2 [ ] Room units

c. How many room units do you have?

(075)
1 [ ] 1
2 [ ] 2 or more

47. INTERVIEWER (Mark one) ▶ Household head lived here last 90 days (See Check Item A(1), page 3)
[ ] Yes
[ ] No – Skip to 48

a. Have any electric fuses or breaker switches blown in your house (apartment) in the last 90 days?

(076)
1 [ ] Yes
2 [ ] No } Skip to 48
3 [ ] Don't know

b. How many times did this happen?

(077)
1 [ ] 1
2 [ ] 2
3 [ ] 3 or more

48. Is all the wiring in this house (apartment) concealed in the walls or in metal coverings? Do not count appliance cords, extension cords or chandelier cords.

(078)
1 [ ] Yes
2 [ ] No

49a Does your house (apartment) have garbage collection service (either public or private)?

(079)
1 [ ] Yes
2 [ ] No } Skip to 49c
3 [ ] Don't know

b. How often is the garbage collected?

(080)
1 [ ] Less than once a week
2 [ ] Once a week
3 [ ] Twice a week
4 [ ] Three or more times a week } Skip to 50a
5 [ ] Don't know

c. How do you dispose of your garbage? (IF MORE THAN ONE METHOD USED, MARK THE ONE USED MOST.)

(081)
1 [ ] Incinerator
2 [ ] Trash chute or compactor
3 [ ] Garbage disposal
4 [ ] Carry out to be picked up
5 [ ] Other – Specify _____

Page 8

FACSIMILE OF THE ANNUAL HOUSING SURVEY QUESTIONNAIRE: 1974 (Continued)

Section 1 – OCCUPIED UNITS (*Include URE's*) – Continued

50a. Is there a basement in this house (building)? (A basement is an enclosed space in which persons can walk upright under all or part of the building) (002) 1 ☐ Yes 2 ☐ No – Skip to 51

b. Does the basement show any signs of water having leaked in from the outside? (003) 1 ☐ Yes 2 ☐ No 3 ☐ Don't know

51. Does the roof of this house (building) leak? (004) 1 ☐ Yes 2 ☐ No 3 ☐ Don't know

52a. Does this house (apartment) have open cracks or holes in the interior walls or ceiling? (*Do not include hairline cracks*) (005) 1 ☐ Yes 2 ☐ No

b. Does this house (apartment) have holes in the floor? (006) 1 ☐ Yes 2 ☐ No

53a. Is there any broken plaster or peeling paint on the ceiling or inside walls? (007) 1 ☐ Yes 2 ☐ No – Skip to 54

b. Is the area of broken plaster or peeling paint larger than this paper? (*SHOW QUESTIONNAIRE*) (008) 1 ☐ Yes 2 ☐ No

54. INTERVIEWER (*Mark one*)
☐ If "Yes" was marked to any of the five previous questions (50b, 51, 52a, and b, and 53a) – Ask 54
☐ "No" marked in all of the above items – Skip to 55

Is . . . (*Specify the condition(s) mentioned in any of the five previous questions*) so objectionable that you would like to move from this house? (009) 1 ☐ Yes 2 ☐ No

55. INTERVIEWER (*Mark one*) Household head lived here last 90 days (*See Check Item A(1), page 3*)
☐ Yes
☐ No – Skip to Check Item C

a. At any time in the last 90 days have you seen any mice or rats, or signs of mice or rats in this house (building)? (010) 1 ☐ Yes 2 ☐ No – Skip to Check Item C

b. Is this house (building) serviced by an exterminator regularly, only when needed, irregularly, or not at all? (011) 1 ☐ Regularly 2 ☐ Only when needed 3 ☐ Irregularly 4 ☐ Not at all

CHECK ITEM C

TENURE (*cc Item 10*)

OWNED OR BEING BOUGHT
(*See Item 25a, page 3*) ☐ One unit structure, or a mobile home or trailer – Skip to 57 ☐ Two-or-more unit structure – Skip to 67

☐ OWNED AS A COOPERATIVE OR CONDOMINIUM – Skip to 67

RENTED FOR CASH
(*See Item 21a, page 3*) ☐ One-unit structure – Skip to 57 ☐ Two-or-more-unit structure, or a mobile home or trailer – Skip to 68

☐ OCCUPIED WITHOUT PAYMENT OF CASH RENT – Ask 56

Section 1 – OCCUPIED UNITS (*Include URE's*) – Continued

56a. Do you occupy these quarters without payment of cash rent because they are provided as part of a job (performed by any household member), or provided by a friend or relative, or for some other reason? (012) 1 ☐ Provided by job 2 ☐ Provided by friend or relative 3 ☐ Other . . . . . } Skip to 57

b. Is the job performed farm-related or nonfarm-related? A farm-related job includes a tenant farmer, farm manager, farm laborer or foreman, etc.; a nonfarm-related job includes a minister, janitor, resident manager, etc. (013) Farm related 1 ☐ Tenant farmer (rent in crops and/or livestock) 2 ☐ Farm manager 3 ☐ Farm laborer or farm foreman 4 ☐ Other – Specify ➤ _____ 5 ☐ Nonfarm related

(*If rural transcribe from cc Item 11b. If urban ask or fill by observation.*)
57. Does this place have 10 acres or more? (014) 1 ☐ Yes 2 ☐ No

CHECK ITEM D

(*See Check Item C, page 9*)

OWNED OR BEING BOUGHT
If this is a –
☐ One-unit structure on less than 10 acres and there is no commercial establishment or medical or dental office on the property ("No" in Items 21d and e, page 3) – Ask 58
☐ Mobile home or trailer on less than 10 acres – Ask 59a
☐ All others – Skip to 67

RENTED FOR CASH
If this is a –
☐ One-units structure on less than 10 acres – Skip to 68
☐ One-unit structure on 10 acres or more – Skip to 77

OCCUPIED WITHOUT PAYMENT OF CASH RENT
If this is a –
☐ One-units structure on less than 10 acres – Skip to 69
☐ One-unit structure on 10 acres or more – Skip to 77
☐ Two-or-more-unit structure, or a mobile home or trailer – Skip to 69

58. How much do you think this property, that is, house and lot, would sell for on today's market? (015) *SHOW FLASHCARD B*
1 ☐ Less than $2,500
2 ☐ $ 2,500– $ 4,999
3 ☐ 5,000– 7,499
4 ☐ 7,500– 9,999
5 ☐ 10,000– 12,499
6 ☐ 12,500– 14,999
7 ☐ 15,000– 17,499
8 ☐ 17,500– 19,999
9 ☐ 20,000– 24,999
10 ☐ 25,000– 29,999
11 ☐ 30,000– 34,999
12 ☐ 35,000– 39,999
13 ☐ 40,000– 49,999
14 ☐ 50,000– 59,999
15 ☐ 60,000 or more
} Skip to 61

FACSIMILE OF THE ANNUAL HOUSING SURVEY QUESTIONNAIRE: 1974 (Continued)

Section I – OCCUPIED UNITS (Include URE's) – Continued

59a. Do you own the mobile home site or is it rented?
(094) 1 [ ] Owned – Skip to 60a
2 [ ] Rented

b. What is the MONTHLY rent for the site?
(097) $ _____ .00 Per month

60a. In what year did you acquire this mobile home (trailer)?
(098) 19 _____

b. Was the mobile home (trailer) NEW when you acquired it?
(099) 1 [ ] Yes
2 [ ] No

c. When you acquired this mobile home (trailer) what was the purchase price? Do not include price of site or closing costs.
(100) $ _____ .00 Purchase price
0 [ ] Not purchased

61a. Do you have a mortgage or similar debt on this property (mobile home or trailer), or do you own it free and clear? (Consider payments for mobile homes or trailers as similar debt.)
(101) 1 [ ] Mortgage or similar debt
2 [ ] Owned free and clear – Skip to 63a

62. In regard to the mortgage or similar debt –

a. What are the required payments to the lender? If more than one mortgage (or debt) on this property, give sum of payments. (If there are separate loans on the mobile home and its site, combine amounts.)
(102) $ _____ .00
PER
(103) 1 [ ] Month
2 [ ] Year
[ ] Other – Specify _____

b. Do the required payments include –
(1) Real estate taxes on this property?
(104) 1 [ ] Yes
2 [ ] No

(2) Fire and hazard insurance?
(105) 1 [ ] Yes
2 [ ] No

c. Is the mortgage (or debt) insured by Federal Housing Administration, guaranteed by the Veterans Administration, insured by the Farmers Home Administration, or insured by a private mortgage insurance company?
(106) 1 [ ] Yes, by Federal Housing Administration
2 [ ] Yes, by Veterans Administration
3 [ ] Yes, by Farmers Home Administration
4 [ ] Yes, by private mortgage insurance company
5 [ ] No
} Skip to 64

63a. Did you place or assume a mortgage (or debt) when you acquired this property?
(107) 1 [ ] Yes – Skip to 64
2 [ ] No

b. How did you acquire this property?
(108) 1 [ ] Inheritance or gift
2 [ ] Paid all cash
3 [ ] Other manner – Specify _____

Page 11

Section I – OCCUPIED UNITS (Include URE's) – Continued

64. Do you pay for –

a. (1) Electricity?
(109) 1 [ ] Yes
2 [ ] No, electricity not used – Skip to b(1)

(2) What is the average MONTHLY cost?
(110) $ _____ .00

b. (1) Gas?
(111) 1 [ ] Yes
2 [ ] No, gas not used – Skip to c(1)

(2) What is the average MONTHLY cost?
(112) $ _____ .00

c. (1) Oil, coal, kerosene, wood, etc.?
(113) 1 [ ] Yes
2 [ ] No, these fuels not used or obtained free – Skip to d(1)

(2) What is the YEARLY cost?
(114) $ _____ .00

d. (1) Fire and hazard insurance? (Also include if part of mortgage payments.)
(115) 1 [ ] Yes
2 [ ] No – Skip to e(1)

(2) What is the YEARLY cost?
(116) $ _____ .00

e. (1) Real estate taxes? (Also include if part of mortgage payments.)
(117) 1 [ ] Yes
2 [ ] No – Skip to f(1)

(2) What is the YEARLY cost? (Do not include taxes in arrears from previous years.)
(118) $ _____ .00

f. (1) Water and sewage disposal separately from real estate taxes?
(119) 1 [ ] Yes
2 [ ] No or payment included in real estate taxes – Skip to g(1)

(2) What is the YEARLY cost?
(120) $ _____ .00

g. (1) Garbage and trash collection separately from real estate taxes?
(121) 1 [ ] Yes
2 [ ] No or payment included in real estate taxes – Skip to 65

(2) What is the YEARLY cost?
(122) $ _____ .00

Page 12

FACSIMILE OF THE ANNUAL HOUSING SURVEY QUESTIONNAIRE: 1974 (Continued)

Section I – OCCUPIED UNITS (Include URE's) – Continued

65. During the past 12 months –

a. (1) Were any additions made to your property such as a room, basement, porch, or garage?
(123) 1 [ ] Yes
2 [ ] No – Skip to b(1)

(2) Did any job cost $100 or more?
(124) 1 [ ] Yes
2 [ ] No

b. (1) Have any alterations been made to your property such as remodeling the kitchen or a bathroom, installing walks, driveways, fences, storm windows or doors, or planting trees or shrubbery?
(125) 1 [ ] Yes
2 [ ] No – Skip to c(1)

(2) Did any job cost $100 or more?
(126) 1 [ ] Yes
2 [ ] No

c. (1) Have you had any replacement jobs on your property such as resurfacing the roof or outer walls, replacing gutters or downspouts, or replacing or installing fixed heating, electrical, or plumbing equipment? (Do not include appliances such as clothes washers, refrigerators, window air conditioners, etc.)
(127) 1 [ ] Yes
2 [ ] No – Skip to d(1)

(2) Did any job cost $100 or more?
(128) 1 [ ] Yes
2 [ ] No

d. (1) Have you made any repairs on your property such as painting or papering a room, or patching a driveway or broken fence?
(129) 1 [ ] Yes
2 [ ] No – Skip to 66a

(2) Did any job cost $100 or more?
(130) 1 [ ] Yes
2 [ ] No

66a. In the next 12 months, do you plan to make any additions, alterations, replacements, or repairs of the type I just asked you about?
(131) 1 [ ] Yes
2 [ ] No
3 [ ] Don't know } Skip to 67

b. Do you expect any job to cost $100 or more?
(132) 1 [ ] Yes
2 [ ] No
3 [ ] Don't know

67. Do you have a garage or carport on this property which is currently available for your use?
(133) 1 [ ] Yes
2 [ ] No } Skip to 77

68. What is the MONTHLY rent?
(If rent is not paid by the month, mark the time period covered, compute MONTHLY rent in "Notes" space, and enter monthly rent on the line provided.)
(Do not include site rent for mobile homes if it is paid separately.)
(134) $ _____ .00 Per month
(135) 1 [ ] More frequently than once a month
2 [ ] Less frequently than once a month
3 [ ] Once a month
Notes

Section I – OCCUPIED UNITS – (Include URE's) – Continued

69. INTERVIEWER *(See item 71a, page 3)*
(Mark one) [ ] Mobile home or trailer
[ ] All others – Skip to 70

a. Do you own the mobile home site or is it rented?
(136) 1 [ ] Owned – Skip to 70
2 [ ] Rented

b. Is the site rent included with the rent for the mobile home?
(137) 1 [ ] Yes
2 [ ] No

c. What is the MONTHLY rent for the site?
(138) $ _____ .00

70. Is this house (apartment) in a public housing project; that is, is it owned by a local housing authority or other public agency?
(139) 1 [ ] Yes – Skip to 72
2 [ ] No

71. Are you paying a lower rent because the Federal, State, or local Government is paying part of the cost?
(140) 1 [ ] Yes
2 [ ] No

72. (In addition to your rent) do you pay for –

a. (1) Electricity?
(141) 1 [ ] Yes
2 [ ] No, included in rent or supplied free
3 [ ] No, electricity not used } Skip to b(1)

(2) What is the average MONTHLY cost?
(142) $ _____ .00

b. (1) Gas?
(143) 1 [ ] Yes
2 [ ] No, included in rent or supplied free
3 [ ] No, gas not used } Skip to c(1)

(2) What is the average MONTHLY cost?
(144) $ _____ .00

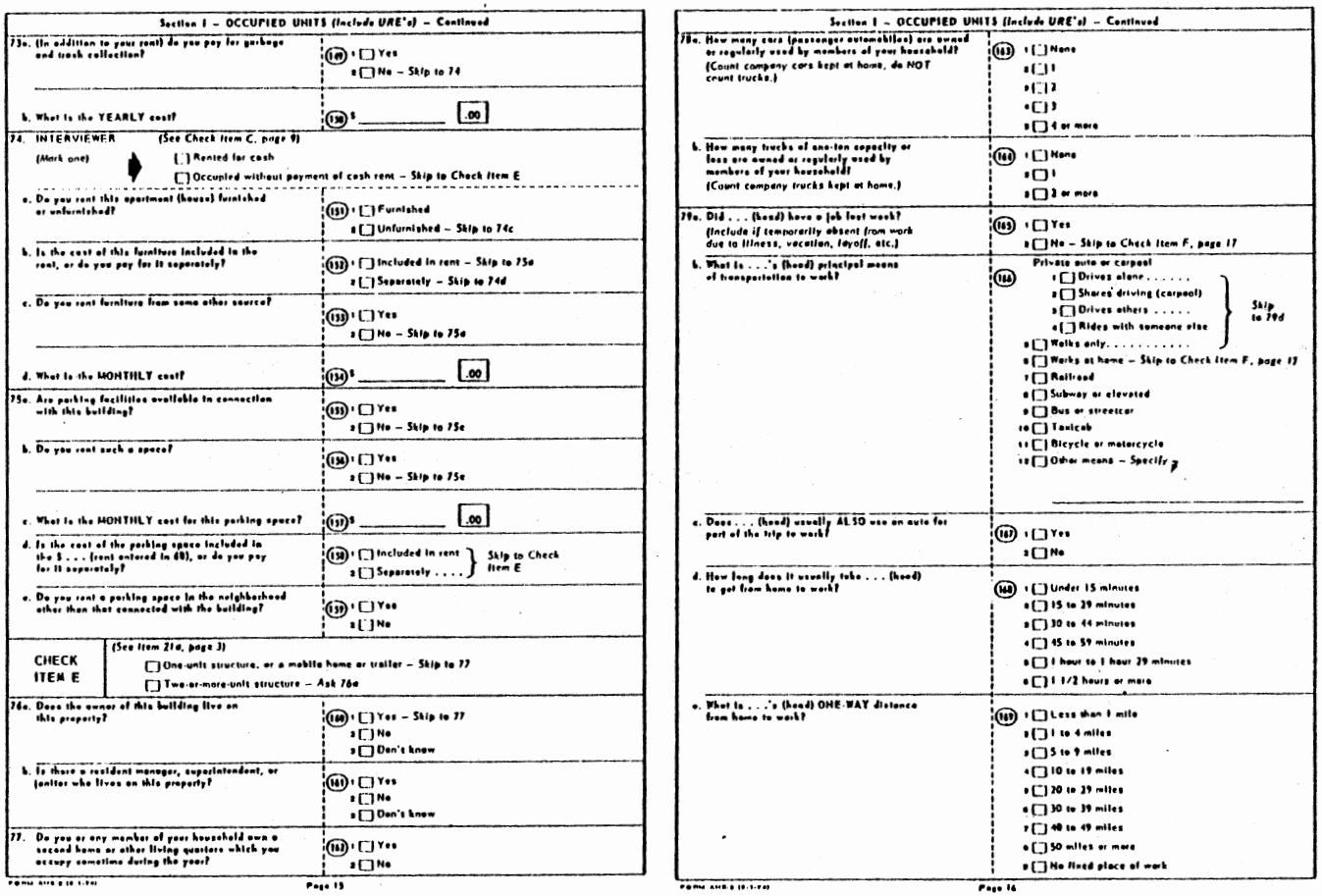
c. (1) Water?
(145) 1 [ ] Yes
2 [ ] No, included in rent or no charge – Skip to d(1)

(2) What is the YEARLY cost?
(146) $ _____ .00

d. (1) Oil, coal, kerosene, wood, etc.?
(147) 1 [ ] Yes
2 [ ] No, included in rent
3 [ ] No, these fuels not used or obtained free } Skip to 73a

(2) What is the YEARLY cost?
(148) $ _____ .00

FACSIMILE OF THE ANNUAL HOUSING SURVEY QUESTIONNAIRE: 1974 (Continued)



Section 1 – OCCUPIED UNITS (Include URE's) – Continued

73a. (In addition to your rent) do you pay for garbage and trash collection? (149) 1 ☐ Yes 2 ☐ No – Skip to 74

b. What is the YEARLY cost? (150) $ _____ .00

74. INTERVIEWER (See Check Item C, page 9) (Mark one) ☐ Rented for cash ☐ Occupied without payment of cash rent – Skip to Check Item E

c. Do you rent this apartment (house) furnished or unfurnished? (151) 1 ☐ Furnished 2 ☐ Unfurnished – Skip to 74c

b. Is the cost of this furniture included in the rent, or do you pay for it separately? (152) 1 ☐ Included in rent – Skip to 75a 2 ☐ Separately – Skip to 74d

c. Do you rent furniture from some other source? (153) 1 ☐ Yes 2 ☐ No – Skip to 75a

d. What is the MONTHLY cost? (154) $ _____ .00

75a. Are parking facilities available in connection with this building? (155) 1 ☐ Yes 2 ☐ No – Skip to 75c

b. Do you rent such a space? (156) 1 ☐ Yes 2 ☐ No – Skip to 75c

c. What is the MONTHLY cost for this parking space? (157) $ _____ .00

d. Is the cost of the parking space included in the $ . . . (rent entered in 68), or do you pay for it separately? (158) 1 ☐ Included in rent 2 ☐ Separately . . . . } Skip to Check Item E

e. Do you rent a parking space in the neighborhood other than that connected with the building? (159) 1 ☐ Yes 2 ☐ No

CHECK ITEM E (See Item 21a, page 3) ☐ One-unit structure, or a mobile home or trailer – Skip to 77 ☐ Two-or-more-unit structure – Ask 76a

76a. Does the owner of this building live on this property? (160) 1 ☐ Yes – Skip to 77 2 ☐ No 3 ☐ Don't know

b. Is there a resident manager, superintendent, or janitor who lives on this property? (161) 1 ☐ Yes 2 ☐ No 3 ☐ Don't know

77. Do you or any member of your household own a second home or other living quarters which you occupy sometime during the year? (162) 1 ☐ Yes 2 ☐ No

Page 15

Section 1 – OCCUPIED UNITS (Include URE's) – Continued

78a. How many cars (passenger automobiles) are owned or regularly used by members of your household? (Count company cars kept at home, do NOT count trucks.) (163) 1 ☐ None 2 ☐ 1 3 ☐ 2 4 ☐ 3 5 ☐ 4 or more

b. How many trucks of one-ton capacity or less are owned or regularly used by members of your household? (Count company trucks kept at home.) (164) 1 ☐ None 2 ☐ 1 3 ☐ 2 or more

79a. Did . . . (head) have a job last week? (Include if temporarily absent from work due to illness, vacation, layoff, etc.) (165) 1 ☐ Yes 2 ☐ No – Skip to Check Item F, page 17

b. What is . . .'s (head) principal means of transportation to work? (166) Private auto or carpool 1 ☐ Drives alone . . . . . 2 ☐ Shares driving (carpool) 3 ☐ Drives others . . . . . 4 ☐ Rides with someone else } Skip to 79d 5 ☐ Walks only . . . . . 6 ☐ Works at home – Skip to Check Item F, page 17 7 ☐ Railroad 8 ☐ Subway or elevated 9 ☐ Bus or streetcar 10 ☐ Taxicab 11 ☐ Bicycle or motorcycle 12 ☐ Other means – Specify _____

c. Does . . . (head) usually ALSO use an auto for part of the trip to work? (167) 1 ☐ Yes 2 ☐ No

d. How long does it usually take . . . (head) to get from home to work? (168) 1 ☐ Under 15 minutes 2 ☐ 15 to 29 minutes 3 ☐ 30 to 44 minutes 4 ☐ 45 to 59 minutes 5 ☐ 1 hour to 1 hour 29 minutes 6 ☐ 1 1/2 hours or more

e. What is . . .'s (head) ONE-WAY distance from home to work? (169) 1 ☐ Less than 1 mile 2 ☐ 1 to 4 miles 3 ☐ 5 to 9 miles 4 ☐ 10 to 19 miles 5 ☐ 20 to 29 miles 6 ☐ 30 to 39 miles 7 ☐ 40 to 49 miles 8 ☐ 50 miles or more 9 ☐ No fixed place of work

Page 16

FACSIMILE OF THE ANNUAL HOUSING SURVEY QUESTIONNAIRE: 1974 (Continued)

Section I – OCCUPIED UNITS (*Include URE's*) – Continued

CHECK ITEM F

[ ] URE household (See cc Item 25) – Skip to 102, page 22

(See Check Item A(1), page 3)

[ ] Head moved here during the last 12 months – Ask 80

[ ] Head has lived here 12 months or longer – Skip to Check Item H, page 21

80. What was the address of . . .'s (head) previous residence?

Address (Number and street)

City or town

County State ZIP code

OR

(178) 1 [ ] Outside the United States

81. What is the main reason . . . (head) moved from his previous residence?
(*Write all reasons mentioned below, and then mark the main reason.*)

EMPLOYMENT

(171)
1 [ ] Job transfer
2 [ ] Entered or left U.S. Armed Forces
3 [ ] Retirement
4 [ ] New job or looking for work
5 [ ] Commuting reasons
6 [ ] To attend school
7 [ ] Other

FAMILY

(171)
8 [ ] Needed larger house or apartment
9 [ ] Widowed
10 [ ] Separated
11 [ ] Divorced
12 [ ] Moved to be closer to relatives
13 [ ] Newly married
14 [ ] Family increased
15 [ ] Family decreased
16 [ ] Wanted to establish own household
17 [ ] Other

OTHER

(171)
18 [ ] Neighborhood overcrowded
19 [ ] Change in racial or ethnic composition of neighborhood
20 [ ] Wanted better neighborhood
21 [ ] Wanted to own residence
22 [ ] Lower rent or less expensive house
23 [ ] Wanted better house
24 [ ] Displaced by urban renewal, highway construction, or other public activity
25 [ ] Displaced by private action
26 [ ] Schools
27 [ ] Wanted to rent residence
28 [ ] Wanted residence with more conveniences
29 [ ] Natural disaster
30 [ ] Wanted change of climate
31 [ ] Other

Section I – OCCUPIED UNITS (*Include URE's*) – Continued

82a. Was . . . (head) the head of the household in his previous residence at the time he moved?

(172) 1 [ ] Yes

[ ] Respondent is the head – Skip to INTERVIEWER INSTRUCTION

[ ] Respondent is not the head – Ask 82b

2 [ ] No – Skip to Check Item H, page 21

b. Were you also a member of . . .'s (head) household in the previous residence?

(173) 1 [ ] Yes
2 [ ] No

INTERVIEWER INSTRUCTION: If the respondent is the head, or "Yes" was marked in 82b – Ask questions 83–98 in terms of "your" previous residence. If "No" was marked in 82b – Ask questions 83–98 in terms of "head's" previous residence.

83. How many rooms were in . . .'s (your) (head) previous residence? Do not count bathrooms, porches, balconies, halls, foyers, or half-rooms.

(174) _____ Number

84. How many bedrooms were in . . .'s (your) (head) previous residence? Count rooms used mainly for sleeping, even if used for other purposes.

(175) _____ Number
0 [ ] None

85. How many persons were in . . .'s (your) (head) previous residence at the time . . . (you) (head) moved?

(176) _____ Number

86. Did . . . (you) (head) have complete plumbing facilities in . . .'s (your) (head) previous residence (building); that is, hot and cold piped water, a flush toilet, and a bathtub or shower?

[ ] Yes – Were those facilities used by . . .'s (your) (head) household only?

(177)
1 [ ] Yes – Exclusive use
2 [ ] No – Also used by another household
3 [ ] No

87. How many living quarters, both occupied and vacant, were in the building where . . .'s (your) (head) previous residence was located?

(178)
1 [ ] Mobile home or trailer
2 [ ] One, detached from any other house
3 [ ] One, attached to one or more houses
4 [ ] 2
5 [ ] 3 or 4
6 [ ] 5 to 9
7 [ ] 10 to 19
8 [ ] 20 to 49
9 [ ] 50 or more

88. Was . . .'s (your) (head) previous residence –

(179)
1 [ ] Owned or being bought

Owned or being bought by someone in the household?

A cooperative which was owned or being bought by someone in the household? . . . . . 2 [ ] A cooperative

A condominium which was owned or being bought by someone in the household? . . . . . 3 [ ] A condominium

Skip to Check Item H, page 21

Rented for cash rent by you or someone else? . . . . . 4 [ ] Rented for cash

Occupied without payment of cash rent? . . . . . 5 [ ] Occupied without payment of cash rent

FACSIMILE OF THE ANNUAL HOUSING SURVEY QUESTIONNAIRE: 1974 (Continued)

Section I – OCCUPIED UNITS (*Include URE's*) – Continued

CHECK ITEM G — TENURE OF PREVIOUS RESIDENCE (*See item 88, page 18*)

OWNED OR BEING BOUGHT (*See item 87, page 18*)
- ☐ One-unit structure – Ask 89a
- ☐ Two-or-more-unit structure, or a mobile home or trailer – Skip to Check Item H, page 21

RENTED FOR CASH OR OCCUPIED WITHOUT PAYMENT OF CASH RENT (*See item 87, page 18*)
- ☐ One-unit structure – Skip to 91
- ☐ Two-or-more-unit structure, or a mobile home or trailer – Skip to 92

89a. Was that house on a place of 10 acres or more? (180) 1 ☐ Yes – Skip to Check Item H, page 21; 2 ☐ No

b. Was there a commercial establishment or medical or dental office on the property? (181) 1 ☐ Yes – Skip to Check Item H, page 21; 2 ☐ No

90. What was the value of that property when . . . (you) (head) moved; that is, about how much did that property (house and lot) sell for, or would it have sold for, had it been for sale?

SHOW FLASHCARD B

(182)
1 ☐ Less than $2,500
2 ☐ $ 2,500–$ 4,999
3 ☐ 5,000– 7,499
4 ☐ 7,500– 9,999
5 ☐ 10,000– 12,499
6 ☐ 12,500– 14,999
7 ☐ 15,000– 17,499
8 ☐ 17,500– 19,999
9 ☐ 20,000– 24,999
10 ☐ 25,000– 29,999
11 ☐ 30,000– 34,999
12 ☐ 35,000– 39,999
13 ☐ 40,000– 49,999
14 ☐ 50,000– 59,999
15 ☐ 60,000 or more

Skip to Check Item H, page 21

91. Was that house on a place of 10 acres or more? (183) 1 ☐ Yes – Skip to Check Item H, page 21; 2 ☐ No

92. INTERVIEWER (*See item 88, page 18*)

(Mark one) ➧ ☐ Rented for cash – Ask 92; ☐ Occupied without payment of cash rent – Skip to 93

What was the MONTHLY rent for . . .'s (your) (head) previous apartment (house)? (*If rent was not paid by the month, write the amount and the time period covered in the "Notes" space, then compute MONTHLY rent and enter on the line provided.*) (*Include rent for mobile homes if it was paid separately.*)

(184) $ _____ .00 Per month

Notes

93. Was that house (apartment) in a public housing project; that is, was it owned by a local housing authority or other public agency? (185) 1 ☐ Yes – Skip to 95; 2 ☐ No

94. Did . . . (you) (head) pay a lower rent because the Federal, State, or local Government was paying part of the cost? (186) 1 ☐ Yes; 2 ☐ No

Section I – OCCUPIED UNITS (*Include URE's*) – Continued

95. (In addition to rent), did . . . (you) (head) also pay for –

a. (1) Electricity? (187) 1 ☐ Yes; 2 ☐ No, included in rent or supplied free; 3 ☐ No, electricity not used — Skip to b(1)

(2) What was the average MONTHLY cost? (188) $ _____ .00

b. (1) Gas? (189) 1 ☐ Yes; 2 ☐ No, included in rent or supplied free; 3 ☐ No, gas not used — Skip to c(1)

(2) What was the average MONTHLY cost? (190) $ _____ .00

c. (1) Water? (191) 1 ☐ Yes; 2 ☐ No, included in rent or no charge – Skip to d(1)

(2) What was the YEARLY cost? (192) $ _____ .00

d. (1) Oil, coal, kerosene, wood, etc.? (193) 1 ☐ Yes; 2 ☐ No, included in rent; 3 ☐ No, these fuels not used or obtained free — Skip to 96a

(2) What was the YEARLY cost? (194) $ _____ .00

96a. (In addition to rent), did . . . (you) (head) also pay for garbage and trash collection? (195) 1 ☐ Yes; 2 ☐ No – Skip to 97

b. What was the YEARLY cost? (196) $ _____ .00

97. INTERVIEWER (*See item 88, page 18*)

(Mark one) ➧ ☐ Rented for cash; ☐ Occupied without payment of cash rent – Skip to Check Item H, page 21

a. Did . . . (you) (head) rent the apartment (house) furnished or unfurnished? (197) 1 ☐ Furnished; 2 ☐ Unfurnished – Ask 97c

b. Was the cost of the furniture included in the rent or did . . . (you) (head) pay for it separately? (198) 1 ☐ Included in rent – Skip to 98a; 2 ☐ Separately – Ask 97d

c. Did . . . (you) (head) rent furniture from some other source? (199) 1 ☐ Yes; 2 ☐ No – Skip to 98a

d. What was the MONTHLY cost? (200) $ _____ .00

FACSIMILE OF THE ANNUAL HOUSING SURVEY QUESTIONNAIRE: 1974 (Continued)

Section I – OCCUPIED UNITS (*Include URE's*) – Continued

98a. Were parking facilities available in connection with the building? (201) 1 ☐ Yes; 2 ☐ No – Skip to 98e

b. Did . . . (you) (head) rent such a space? (202) 1 ☐ Yes; 2 ☐ No – Skip to 98e

c. What was the MONTHLY cost for that parking space? (203) $ _____ .00

d. Was the cost of the parking space included in the $ . . . (rent entered in 92), or did . . . (you) (head) pay for it separately? (204) 1 ☐ Included in rent; 2 ☐ Separately } Skip to Check Item H

e. Did . . . (you) (head) rent a parking space in the neighborhood other than that connected with the building? (205) 1 ☐ Yes; 2 ☐ No

CHECK ITEM H — INTERVIEWER READ: The following questions are concerned with different aspects of your present neighborhood.

99a. Here is a list of conditions which many people have in the vicinity of their homes. Which, if any, do you have? (*If respondent is uncertain, vicinity may be defined as the area within a quarter of a mile of respondent's property.*)	b. Does it (condition) bother you?	c. Is it so objectionable that you would like to move from the neighborhood?
(1) Street or highway noise? (206) 1 ☐ Yes – Ask b; 2 ☐ No	1 ☐ Yes – Ask c; 2 ☐ No	1 ☐ Yes; 2 ☐ No
(2) Heavy traffic? (207) 1 ☐ Yes – Ask b; 2 ☐ No	1 ☐ Yes – Ask c; 2 ☐ No	1 ☐ Yes; 2 ☐ No
(3) Streets or roads continually in need of repair, or open ditches? (208) 1 ☐ Yes – Ask b; 2 ☐ No	1 ☐ Yes – Ask c; 2 ☐ No	1 ☐ Yes; 2 ☐ No
(4) Roads impassable due to snow, water, etc.? (209) 1 ☐ Yes – Ask b; 2 ☐ No	1 ☐ Yes – Ask c; 2 ☐ No	1 ☐ Yes; 2 ☐ No
(5) Inadequate street lighting? (210) 1 ☐ Yes – Ask b; 2 ☐ No	1 ☐ Yes – Ask c; 2 ☐ No	1 ☐ Yes; 2 ☐ No
(6) Neighborhood crime? (211) 1 ☐ Yes – Ask b; 2 ☐ No	1 ☐ Yes – Ask c; 2 ☐ No	1 ☐ Yes; 2 ☐ No
(7) Trash, litter, or junk in the streets or roads, on empty lots, or on properties in this neighborhood? (212) 1 ☐ Yes – Ask b; 2 ☐ No	1 ☐ Yes – Ask c; 2 ☐ No	1 ☐ Yes; 2 ☐ No
(8) Boarded-up or abandoned structures? (214) 1 ☐ Yes – Ask b; 2 ☐ No	1 ☐ Yes – Ask c; 2 ☐ No	1 ☐ Yes; 2 ☐ No
(9) Occupied housing in rundown condition? (213) 1 ☐ Yes – Ask b; 2 ☐ No	1 ☐ Yes – Ask c; 2 ☐ No	1 ☐ Yes; 2 ☐ No
(10) Commercial, industrial, or other non-residential activities? (216) 1 ☐ Yes – Ask b; 2 ☐ No	1 ☐ Yes – Ask c; 2 ☐ No	1 ☐ Yes; 2 ☐ No
(11) Odors, smoke, or gas? (217) 1 ☐ Yes – Ask b; 2 ☐ No	1 ☐ Yes – Ask c; 2 ☐ No	1 ☐ Yes; 2 ☐ No
(12) Noise from airplane traffic? (218) 1 ☐ Yes – Ask b; 2 ☐ No	1 ☐ Yes – Ask c; 2 ☐ No	1 ☐ Yes; 2 ☐ No

Section I – OCCUPIED UNITS (*Include URE's*) – Continued

100. The following questions are concerned with neighborhood services.

a. Do you have adequate or satisfactory –		b. Is it so inadequate or unsatisfactory that you would like to move from the neighborhood?
(1) Public transportation?	(219) 1 ☐ Yes; 2 ☐ No – Ask b; 3 ☐ Don't know	(220) 1 ☐ Yes; 2 ☐ No
(2) Schools?	(221) 1 ☐ Yes; 2 ☐ No – Ask b; 3 ☐ Don't know	(222) 1 ☐ Yes; 2 ☐ No
(3) Neighborhood shopping such as grocery stores or drug stores?	(223) 1 ☐ Yes; 2 ☐ No – Ask b; 3 ☐ Don't know	(224) 1 ☐ Yes; 2 ☐ No
(4) Police protection?	(225) 1 ☐ Yes; 2 ☐ No – Ask b; 3 ☐ Don't know	(226) 1 ☐ Yes; 2 ☐ No
(5) Fire protection?	(227) 1 ☐ Yes; 2 ☐ No – Ask b; 3 ☐ Don't know	(228) 1 ☐ Yes; 2 ☐ No
(6) Hospitals or health clinics?	(229) 1 ☐ Yes; 2 ☐ No – Ask b; 3 ☐ Don't know	(230) 1 ☐ Yes; 2 ☐ No

101a. In view of all the things we have talked about, how would you rate this **NEIGHBORHOOD** as a place to live – would you say it is excellent, good, fair or poor? (231) 1 ☐ Excellent; 2 ☐ Good; 3 ☐ Fair; 4 ☐ Poor

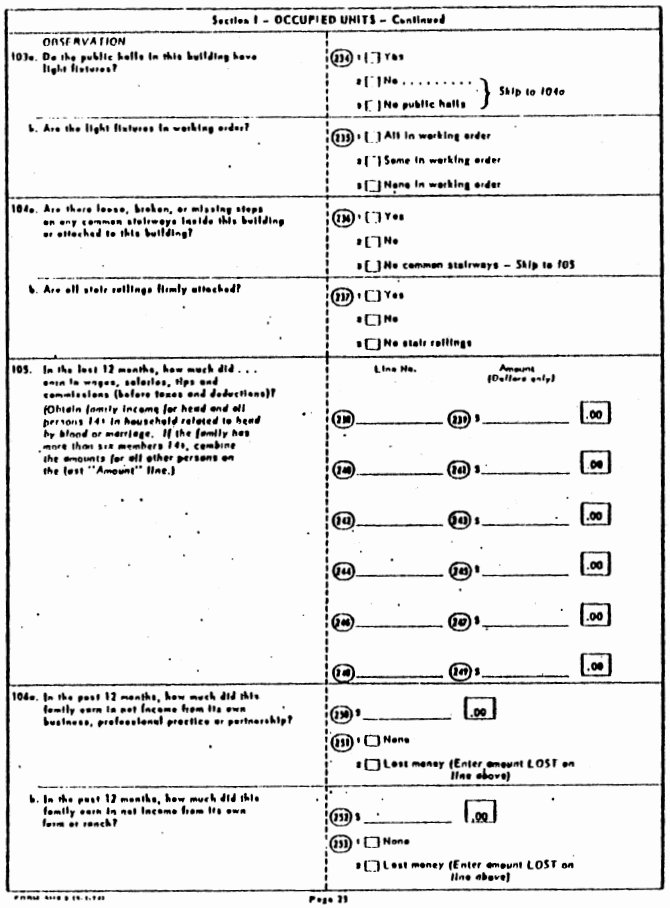
b. How would you rate this **HOUSE** (building) as a place to live – would you say it is excellent, good, fair or poor? (232) 1 ☐ Excellent; 2 ☐ Good; 3 ☐ Fair; 4 ☐ Poor

OBSERVATION

102. Are there any buildings that appear to be abandoned and or are there any buildings with windows broken or boarded-up on this street? (233) 1 ☐ Yes; 2 ☐ No

CHECK ITEM I (See Item 7, page 1)
- ☐ URE Household – *END AHS-7 QUESTIONS*
- (See Item 21a, page 3)
- ☐ A one-unit structure, or a mobile home or trailer – Skip to 105
- ☐ Two-or-more-unit structure – Go to 103a

FACSIMILE OF THE ANNUAL HOUSING SURVEY QUESTIONNAIRE: 1974 (Continued)



Section 1 – OCCUPIED UNITS – Continued

OBSERVATION

103a. Do the public halls in this building have light fixtures?
(234) 1 [ ] Yes
2 [ ] No
3 [ ] No public halls } Skip to 104a

b. Are the light fixtures in working order?
(235) 1 [ ] All in working order
2 [ ] Some in working order
3 [ ] None in working order

104a. Are there loose, broken, or missing steps on any common stairways inside this building or attached to this building?
(236) 1 [ ] Yes
2 [ ] No
3 [ ] No common stairways – Skip to 105

b. Are all stair railings firmly attached?
(237) 1 [ ] Yes
2 [ ] No
3 [ ] No stair railings

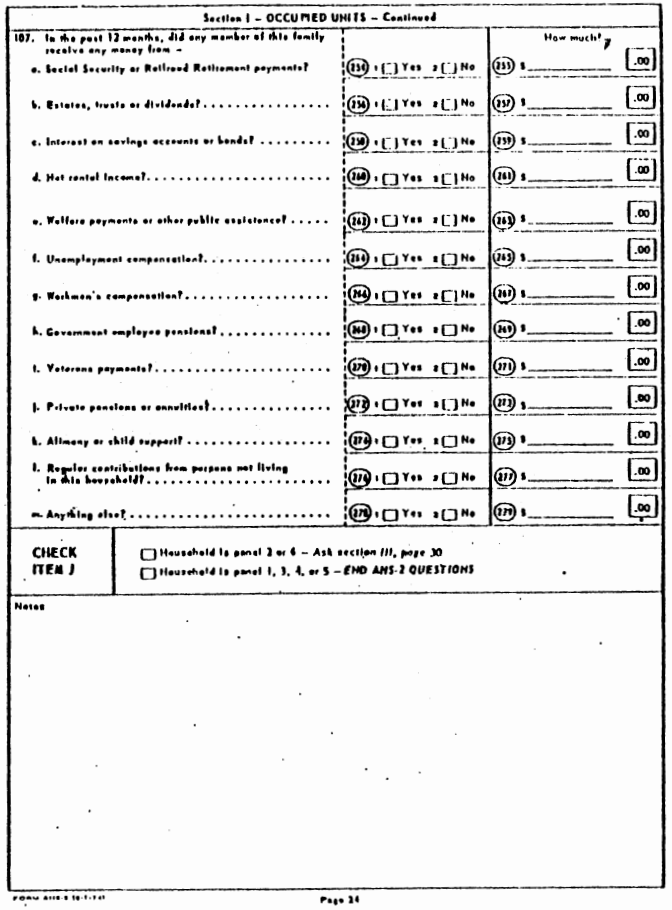
105. In the last 12 months, how much did . . . earn in wages, salaries, tips and commissions (before taxes and deductions)? (Obtain family income for head and all persons 14+ in household related to head by blood or marriage. If the family has more than six members 14+, combine the amounts for all other persons on the last "Amount" line.)

Line No.	Amount (Dollars only)
(238) ____	(239) $ ____ .00
(240) ____	(241) $ ____ .00
(242) ____	(243) $ ____ .00
(244) ____	(245) $ ____ .00
(246) ____	(247) $ ____ .00
(248) ____	(249) $ ____ .00

106a. In the past 12 months, how much did this family earn in net income from its own business, professional practice or partnership?
(250) $ ____ .00
(251) 1 [ ] None
2 [ ] Lost money (Enter amount LOST on line above)

b. In the past 12 months, how much did this family earn in net income from its own farm or ranch?
(252) $ ____ .00
(253) 1 [ ] None
2 [ ] Lost money (Enter amount LOST on line above)

Page 33



Section 1 – OCCUPIED UNITS – Continued

107. In the past 12 months, did any member of this family receive any money from –

		How much?
a. Social Security or Railroad Retirement payments?	(254) 1 [ ] Yes 2 [ ] No	(255) $ ____ .00
b. Estates, trusts or dividends?	(256) 1 [ ] Yes 2 [ ] No	(257) $ ____ .00
c. Interest on savings accounts or bonds?	(258) 1 [ ] Yes 2 [ ] No	(259) $ ____ .00
d. Net rental income?	(260) 1 [ ] Yes 2 [ ] No	(261) $ ____ .00
e. Welfare payments or other public assistance?	(262) 1 [ ] Yes 2 [ ] No	(263) $ ____ .00
f. Unemployment compensation?	(264) 1 [ ] Yes 2 [ ] No	(265) $ ____ .00
g. Workmen's compensation?	(266) 1 [ ] Yes 2 [ ] No	(267) $ ____ .00
h. Government employee pensions?	(268) 1 [ ] Yes 2 [ ] No	(269) $ ____ .00
i. Veterans payments?	(270) 1 [ ] Yes 2 [ ] No	(271) $ ____ .00
j. Private pensions or annuities?	(272) 1 [ ] Yes 2 [ ] No	(273) $ ____ .00
k. Alimony or child support?	(274) 1 [ ] Yes 2 [ ] No	(275) $ ____ .00
l. Regular contributions from persons not living in this household?	(276) 1 [ ] Yes 2 [ ] No	(277) $ ____ .00
m. Anything else?	(278) 1 [ ] Yes 2 [ ] No	(279) $ ____ .00

CHECK ITEM J
[ ] Household is panel 2 or 6 – Ask section III, page 30
[ ] Household is panel 1, 3, 4, or 5 – END ANS-2 QUESTIONS

Notes

Page 34

FACSIMILE OF THE ANNUAL HOUSING SURVEY QUESTIONNAIRE: 1974 (Continued)

Section II – VACANT UNITS

1. How many months has this house (apartment) been vacant?
(280) 1 ☐ Less than 1 month
2 ☐ 1 month up to 3 months
3 ☐ 3 months up to 6 months
4 ☐ 6 months up to 12 months
5 ☐ 1 year up to 2 years
6 ☐ 2 years or more

2a. How many living quarters, both occupied and vacant, are there in this house (building)?
(281) 1 ☐ Mobile home or trailer – Skip to 4
2 ☐ One, detached from any other house
3 ☐ One, attached to one or more houses
4 ☐ 2
5 ☐ 3 or 4
6 ☐ 5 to 9
7 ☐ 10 to 19
8 ☐ 20 to 49
9 ☐ 50 or more
} Skip to 3a

OBSERVATION
b. Is any part of this property used as a commercial establishment?
(282) 1 ☐ Yes
2 ☐ No

OBSERVATION
c. Is any part of this property used as a medical or dental office?
(283) 1 ☐ Yes
2 ☐ No

OBSERVATION
3a. How many stories (floors) are in this house (building)? (Exclude basement)
(284) 1 ☐ 1 to 3 – Skip to 4
2 ☐ 4 to 6
3 ☐ 7 to 12
4 ☐ 13 or more

OBSERVATION
b. Is there a passenger elevator in this building?
(285) 1 ☐ Yes
2 ☐ No

4. How many rooms are in this house (apartment)? Do not count bathrooms, porches, balconies, foyers, halls or half-rooms.
(286) _____ Number

5. Does each room in this house (apartment) have a working electric wall outlet (wall plug)?
(287) 1 ☐ Yes
2 ☐ No

6. How many bedrooms are in this house (apartment)?
(288) _____ Number
OR
9 ☐ None – Skip to 8

7a. Is it necessary to pass through a bedroom to get from one room to another, excluding bathrooms?
(289) 1 ☐ Yes – Skip to 8
2 ☐ No

b. Is it necessary to pass through a bedroom to get to the bathroom?
(290) 1 ☐ Yes
2 ☐ No

8. Does this house (building) have complete kitchen facilities; that is, a kitchen sink with piped water, a refrigerator, and a range or a cookstove?
☐ Yes – Are these facilities only for the use of the intended occupants?
(291) 1 ☐ Yes – Exclusive use
2 ☐ No – Also used by another household
3 ☐ No

Section II – VACANT UNITS – Continued

9a. Does the water for this house (apartment) come from a public system (city water department, etc.) or private company, an individual well, or some other source (a spring, creek, river, cistern, etc.)?
(292) 1 ☐ A public system or private company – Skip to 10
2 ☐ An individual well
3 ☐ Some other source – Skip to 10

b. Is the well drilled or dug?
(293) 1 ☐ Drilled
2 ☐ Dug

10. Does this house (building) have complete plumbing facilities; that is, hot and cold piped water, a flush toilet and a bathtub or shower?
☐ Yes – Are these facilities only for the use of the intended occupants?
(294) 1 ☐ Yes – Exclusive use – Ask 11
2 ☐ No – Also used by another household – Skip to 12a
3 ☐ No – Skip to 12a

11. How many bathrooms does this house (apartment) have?
A complete bathroom is a room with a flush toilet, a bathtub or shower, and a washbasin with piped water.
A half bathroom has at least a flush toilet or a bathtub or shower, but does not have all the facilities for a complete bathroom.
(Mark only one box)
(295) 1 ☐ Complete plumbing facilities but not in one room
2 ☐ 1 complete bathroom
One complete bathroom plus half bath(s):
3 ☐ Half bath does NOT have flush toilet
4 ☐ Half bath has flush toilet
5 ☐ 2 complete bathrooms
6 ☐ More than 2 complete bathrooms

12a. Is this house (building) connected to a public sewer?
(296) 1 ☐ Yes – Skip to 13
2 ☐ No

b. What means of sewage disposal does it have?
(297) 1 ☐ Septic tank or cesspool
2 ☐ Chemical toilet
3 ☐ Privy
4 ☐ Use facilities in another structure
5 ☐ Other – Describe _____

13. What type of heating equipment does this house (apartment) have?
(If more than one, mark MAIN type of heating equipment)
(298) 1 ☐ A central warm-air furnace with ducts to individual rooms, or a heat pump
2 ☐ Steam or hot water system
3 ☐ Built-in electric units (permanently installed in wall, ceiling, or baseboard)
4 ☐ Floor, wall, or pipeless furnace
5 ☐ Room heaters with flue or vent burning gas, oil, or kerosene
6 ☐ Room heaters without flue or vent burning gas, oil, or kerosene
7 ☐ Fireplaces, stoves, or portable room heaters
8 ☐ Unit has no heating equipment
} Skip to 15a

14. How many rooms are there without hot air ducts or registers, radiators, or room heaters?
(Exclude kitchen and bathrooms)
(299) 1 ☐ None
2 ☐ 1 room
3 ☐ 2 rooms
4 ☐ 3 rooms or more

FACSIMILE OF THE ANNUAL HOUSING SURVEY QUESTIONNAIRE: 1974 (Continued)

Section II – VACANT UNITS – Continued

15a. Does this house (apartment) have air conditioning?
(300) 1 [ ] Yes
2 [ ] No – Skip to 16

b. Does it have a central air-conditioning system or individual room units?
(301) 1 [ ] Central – Skip to 16
2 [ ] Room units

c. How many room units?
(302) 1 [ ] 1
2 [ ] 2 or more

16. Is all wiring in this house (apartment) concealed in the walls or in metal coverings? Do not count appliance cords, extension cords, or chandelier cords.
(303) 1 [ ] Yes
2 [ ] No

17. Is there a basement in this house (building)? (A basement is an enclosed space in which persons can walk upright under all or part of the building)
(304) 1 [ ] Yes
2 [ ] No

CHECK ITEM A

VACANCY STATUS (cc item 26)

FOR SALE ONLY

(See item 2a, page 25)
[ ] One-unit structure – Ask 18
[ ] Two-or-more-unit structure, or a mobile home or trailer – Skip to 20

FOR RENT

(See item 2a, page 25)
[ ] One unit structure – Ask 18
[ ] Two-or-more-unit structure, or a mobile home or trailer – Skip to 21

[ ] **ALL OTHERS** (Other vacants, units rented or sold, units held for occasional use and similar units) – Skip to Check Item C

(If rural transcribe from cc item 11b. If urban ask or fill by observation.)
18. Does this place have 10 acres or more?
(305) 1 [ ] Yes, 10 acres or more
2 [ ] No, less than 10 acres

CHECK ITEM B

VACANT FOR SALE ONLY

If this is a –

[ ] One-unit structure on less than 10 acres and there is no commercial establishment or medical or dental office on the property (Items 2b and 2c, page 25) – Ask 19

[ ] All others – Skip to 20

VACANT FOR RENT

If this is a –

[ ] One-unit structure on less than 10 acres – Skip to 21

[ ] One-unit structure on 10 acres or more – Skip to 26a

Section II – VACANT UNITS – Continued

19. What is the sale price asked for this property?
SHOW FLASHCARD B
(306)
1 [ ] Less than $2,500
2 [ ] $ 2,500 – $ 4,999
3 [ ] 5,000 – 7,499
4 [ ] 7,500 – 9,999
5 [ ] 10,000 – 12,499
6 [ ] 12,500 – 14,999
7 [ ] 15,000 – 17,499
8 [ ] 17,500 – 19,999
9 [ ] 20,000 – 24,999
10 [ ] 25,000 – 29,999
11 [ ] 30,000 – 34,999
12 [ ] 35,000 – 39,999
13 [ ] 40,000 – 49,999
14 [ ] 50,000 – 59,999
15 [ ] 60,000 or more

20. Is there a garage or carport on this property which is available for the use of occupants?
(307) 1 [ ] Yes
2 [ ] No } Skip to 26a

21. What is the MONTHLY rent?
(If rent is not to be paid by the month, mark the time period covered, compute the monthly rent in the "Notes" space, and enter the monthly rent on the line provided.)
(Include site rent for mobile homes if it is to be paid separately.)
(308) $ _____ .00 Per month
(309) 1 [ ] More frequently than once a month
2 [ ] Less frequently than once a month
3 [ ] Once a month
Notes

22. Is this house (apartment) in a public housing project; that is, is it owned by a local housing authority or other public agency?
(310) 1 [ ] Yes
2 [ ] No

23. In addition to rent, does the renter also pay for –

a. Electricity?
(311) 1 [ ] Yes
2 [ ] No, included in rent
3 [ ] No, electricity not used

b. Gas?
(312) 1 [ ] Yes
2 [ ] No, included in rent
3 [ ] No, gas not used

c. Water?
(313) 1 [ ] Yes
2 [ ] No, included in rent or no charge

d. Oil, coal, kerosene, wood, etc.?
(314) 1 [ ] Yes
2 [ ] No, included in rent
3 [ ] No, these fuels not used or obtained free

24. In addition to rent, does the renter also pay for garbage and trash collection?
(315) 1 [ ] Yes
2 [ ] No

FACSIMILE OF THE ANNUAL HOUSING SURVEY QUESTIONNAIRE: 1974 (Continued)

Section II – VACANT UNITS – Continued

CHECK ITEM C (See item 3a, page 25)
- ☐ One-unit structure, or a mobile home or trailer – Skip to 26a
- ☐ Two-or-more-unit structure – Ask 25a

25a. Does the owner of this building live on this property?
(316) 1 ☐ Yes – Skip to 26a
2 ☐ No
3 ☐ Don't know

b. Is there a resident manager, superintendent or janitor who lives on this property?
(317) 1 ☐ Yes
2 ☐ No
3 ☐ Don't know

OBSERVATION

26a. Is the unit boarded-up?
(318) 1 ☐ Yes
2 ☐ No

OBSERVATION

b. Are there any buildings (other than this building) that appear to be abandoned and/or are there any buildings with windows broken or boarded-up on this street?
(319) 1 ☐ Yes
2 ☐ No

CHECK ITEM D (See item 3a, page 25)
- ☐ One-unit structure, or a mobile home or trailer – END INTERVIEW
- ☐ Two-or-more-unit structure – Ask 27a

OBSERVATION

27a. Do the public halls in this building have light fixtures?
(320) 1 ☐ Yes
2 ☐ No
3 ☐ No public halls } Skip to 28a

b. Are the light fixtures in working order?
(321) 1 ☐ All in working order
2 ☐ Some in working order
3 ☐ None in working order

28a. Are there loose, broken, or missing steps on any common stairways inside this building or attached to this building?
(322) 1 ☐ Yes
2 ☐ No
3 ☐ No common stairways – END INTERVIEW

b. Are all stair railings firmly attached?
(323) 1 ☐ Yes
2 ☐ No
3 ☐ No stair railings } END INTERVIEW

Notes

Section III – PURCHASES AND OWNERSHIP (Automobiles and Home Appliances)

Now I have some questions about vehicles and household items you might have.

1. Does anyone in this family own a car or station wagon?
(324) 1 ☐ Yes – How many? _____
2 ☐ No

2. Does anyone in your family own any other 4 wheel vehicle such as a pickup truck, passenger van, jeep type vehicle, or other similar vehicle?
(325) 1 ☐ Yes – How many? _____
2 ☐ No

Ask 3–19 for each vehicle owned. Ask for four newest if more than four are owned.

	☐ Newest vehicle	☐ Second newest vehicle
3. What kind of vehicle is your (newest vehicle, second newest vehicle) – a car, station wagon, truck or what?	(326) 1 ☐ Car, station wagon 2 ☐ Pickup truck 3 ☐ Passenger van (with windows) 4 ☐ Motor home (self contained) 5 ☐ Other vehicle	(327) 1 ☐ Car, station wagon 2 ☐ Pickup truck 3 ☐ Passenger van (with windows) 4 ☐ Motor home (self contained) 5 ☐ Other vehicle
4. What is the model year?	(328) 19 _____	(329) 19 _____
5. How many cylinders does it have?	(330) 1 ☐ None (rotary) 3 ☐ Six 2 ☐ Four 4 ☐ Eight	(331) 1 ☐ None (rotary) 3 ☐ Six 2 ☐ Four 4 ☐ Eight
6. Was this vehicle new or used when you purchased it?	(332) 1 ☐ New – Skip to 8 2 ☐ Used – Ask 7	(333) 1 ☐ New – Skip to 8 2 ☐ Used – Ask 7
7. Was it purchased from an automobile dealer or a private party?	(334) 1 ☐ Auto dealer 2 ☐ Private party	(335) 1 ☐ Auto dealer 2 ☐ Private party
8. Is it used for any business purpose other than driving to and from work?	(336) 1 ☐ Yes – Ask 9 2 ☐ No – Skip to 10	(337) 1 ☐ Yes – Ask 9 2 ☐ No – Skip to 10
9. About what percentage of the mileage for this vehicle is for business purposes other than driving to and from work?	(338) _____ %	(339) _____ %
10. Was this vehicle purchased within the past 12 months; that is, since (month), 1973?	(340) 1 ☐ Yes – Skip to 13 2 ☐ No – Ask 11	(341) 1 ☐ Yes – Skip to 13 2 ☐ No – Ask 11
11. In what year was it purchased?	(342) 19 _____	(343) 19 _____
12. How many thousands of miles was this vehicle driven during the past 12 months?	(344) _____ ,000 (Go to next vehicle or question 20)	(345) _____ ,000 (Go to next vehicle or question 20)
13. In what month was it purchased?	(346) _____	(347) _____
14. How many thousands of miles has this vehicle been driven since you purchased it?	(348) _____ ,000 0 ☐ Less than 1,000	(349) _____ ,000 0 ☐ Less than 1,000
15. How much did the car cost after any deduction for a trade in?	(350) $ _____ .00	(351) $ _____ .00
16. How much was your trade in allowance?	(352) $ _____ .00 OR 1 ☐ No trade-in – Go to next vehicle or q.20, page 32	(353) $ _____ .00 OR 1 ☐ No trade-in – Go to next vehicle or q.20, page 32
17a. Twelve months ago; that is, in (month), 1973, did you own the vehicle that you traded in?	(354) 1 ☐ Yes 2 ☐ No	(355) 1 ☐ Yes 2 ☐ No
b. What type of vehicle was it?	(356) 1 ☐ Car, station wagon 2 ☐ Pickup truck 3 ☐ Passenger van (with windows) 4 ☐ Motor home (self contained) 5 ☐ Other vehicle	(357) 1 ☐ Car, station wagon 2 ☐ Pickup truck 3 ☐ Passenger van (with windows) 4 ☐ Motor home (self contained) 5 ☐ Other vehicle
18. What was the model year?	(358) 19 _____	(359) 19 _____
19. How many cylinders did it have?	(360) 1 ☐ None (rotary) 3 ☐ Six 2 ☐ Four 4 ☐ Eight	(361) 1 ☐ None (rotary) 3 ☐ Six 2 ☐ Four 4 ☐ Eight

FACSIMILE OF THE ANNUAL HOUSING SURVEY QUESTIONNAIRE: 1974 (Continued)

Section III – PURCHASES AND OWNERSHIP (Automobiles and Home Appliances) – Continued

	☐ Third newest vehicle	☐ Fourth newest vehicle
3. What kind of vehicle is your (third newest vehicle, fourth newest vehicle) – a car, station wagon, truck or what?	(362) 1☐ Car, station wagon 2☐ Pickup truck 3☐ Passenger van (with windows) 4☐ Motor home (self contained) 5☐ Other vehicle	(363) 1☐ Car, station wagon 2☐ Pickup truck 3☐ Passenger van (with windows) 4☐ Motor home (self contained) 5☐ Other vehicle
4. What is the model year?	(364) 19 ____	(365) 19 ____
5. How many cylinders does it have?	(366) 1☐ None (rotary) 2☐ Four 3☐ Six 4☐ Eight	(367) 1☐ None (rotary) 2☐ Four 3☐ Six 4☐ Eight
6. Was this vehicle new or used when you purchased it?	(368) 1☐ New – *Skip to 8* 2☐ Used – *Ask 7*	(369) 1☐ New – *Skip to 8* 2☐ Used – *Ask 7*
7. Was it purchased from an automobile dealer or a private party?	(370) 1☐ Auto dealer 2☐ Private party	(371) 1☐ Auto dealer 2☐ Private party
8. Is it used for any business purpose other than driving to and from work?	(372) 1☐ Yes – *Ask 9* 2☐ No – *Skip to 10*	(373) 1☐ Yes – *Ask 9* 2☐ No – *Skip to 10*
9. About what percentage of the mileage for this vehicle is for business purposes other than driving to and from work?	(374) ____ %	(375) ____ %
10. Was this vehicle purchased within the past 12 months; that is, since (month), 1973?	(376) 1☐ Yes – *Skip to 13* 2☐ No – *Ask 11*	(377) 1☐ Yes – *Skip to 13* 2☐ No – *Ask 11*
11. In what year was it purchased?	(378) 19 ____	(379) 19 ____
12. How many thousands of miles was this vehicle driven during the past 12 months?	(380) ____ .000 *(Go to next vehicle or question 20)*	(381) ____ .000 *(Go to question 20)*
13. In what month was it purchased?	(382) ____	(383) ____
14. How many thousands of miles has this vehicle been driven since you purchased it?	(384) ____ .000 0☐ Less than 1,000	(385) ____ .000 0☐ Less than 1,000
15. How much did the car cost after any deduction for a trade-in?	(386) $ ____ .00	(387) $ ____ .00
16. How much was your trade-in allowance?	(388) $ ____ .00 OR 1☐ No trade in – *Go to next vehicle or q.20, page 32*	(389) $ ____ .00 OR 1☐ No trade in – *Go to q.20, page 32*
17a. Twelve months ago, that is, in (month), 1973, did you own the vehicle that you traded in?	(390) 1☐ Yes 2☐ No	(391) 1☐ Yes 2☐ No
b. What type of vehicle was it?	(392) 1☐ Car, station wagon 2☐ Pickup truck 3☐ Passenger van (with windows) 4☐ Motor home (self contained) 5☐ Other vehicle	(393) 1☐ Car, station wagon 2☐ Pickup truck 3☐ Passenger van (with windows) 4☐ Motor home (self contained) 5☐ Other vehicle
18. What was the model year?	(394) 19 ____	(395) 19 ____
19. How many cylinders did it have?	(396) 1☐ None (rotary) 2☐ Four 3☐ Six 4☐ Eight	(397) 1☐ None (rotary) 2☐ Four 3☐ Six 4☐ Eight

Section III – PURCHASES AND OWNERSHIP (Automobiles and Home Appliances) – Continued

20. (Not including any vehicles which you have traded-in), have you sold or otherwise disposed of a vehicle within the past 12 months; that is, since (month), 1973?	(398) 1☐ Yes – *Ask 21 (If more than one, ask 21 for most recently disposed of vehicle)* 2☐ No – *Skip to Check Item A*
21. Did you own this vehicle 12 months ago, that is, in (month), 1973?	(399) 1☐ Yes – *Ask 22* 2☐ No – *Skip to Check Item A*
22. What type of vehicle was it?	(400) 1☐ Car, station wagon 2☐ Pickup truck 3☐ Passenger van (with windows) 4☐ Motor home (self contained) 5☐ Other vehicle
23. What was the model year?	(401) 19 ____
24. How many cylinders did it have?	(402) 1☐ None (rotary) 2☐ Four 3☐ Six 4☐ Eight

CHECK ITEM A *(See section I, items 40a–c, page 8)*

☐ Household has one or more room air conditioners – *Ask 25a*

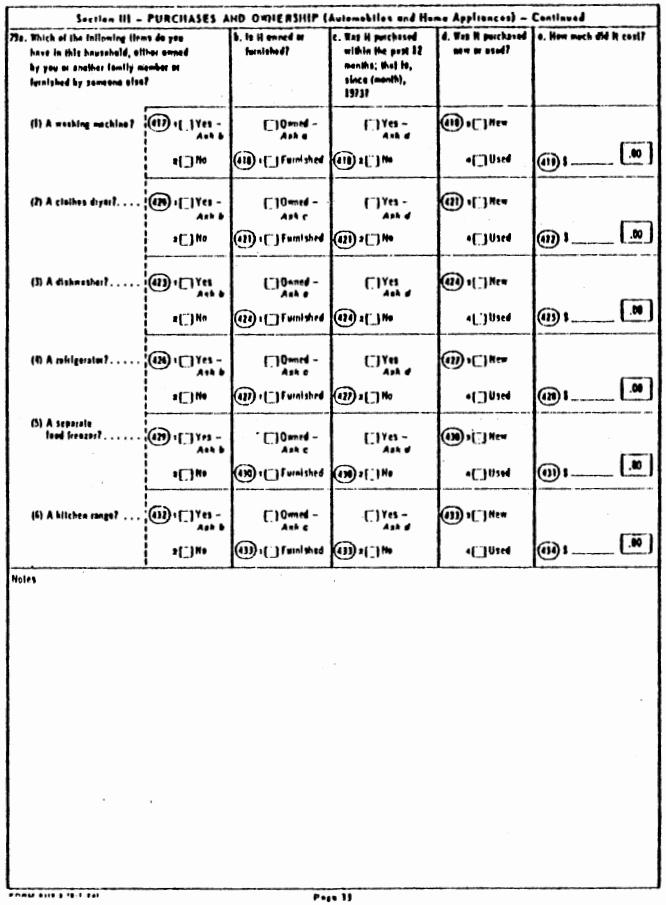
☐ Household has central air conditioning only

☐ Household has no air conditioning

} *Skip to 26*

		First unit	Second unit
25a.	Within the past 12 months; that is, since (month), 1973 have you or another family member purchased a room air conditioner?	(403) 1☐ Yes – How many? 1☐ 1 2☐ 2 or more 3☐ No – *Skip to 26*	
b.	Was it purchased new or used?	(404) 1☐ New 2☐ Used	(405) 1☐ New 2☐ Used
c.	How much did it cost?	(406) $ ____ .00	(407) $ ____ .00
26.	How many black and white television sets do you have in your home?	(408) 1☐ None 2☐ One 3☐ Two 4☐ Three or more	
27.	How many color television sets do you have in your home?	(409) 1☐ None 2☐ One 3☐ Two 4☐ Three or more	
28a.	Have you or another family member purchased a television set within the past 12 months, that is, since (month), 1973?	(410) 1☐ Yes – How many? 1☐ 1 2☐ 2 or more 3☐ No – *Skip to 29a*	
		First set	Second set
b.	Was it a black and white or color set?	(411) 1☐ Black and white 2☐ Color	(412) 1☐ Black and white 2☐ Color
c.	Was it purchased new or used?	(413) 1☐ New 2☐ Used	(414) 1☐ New 2☐ Used
d.	How much did it cost?	(415) $ ____ .00	(416) $ ____ .00

FACSIMILE OF THE ANNUAL HOUSING SURVEY QUESTIONNAIRE: 1974 (Continued)

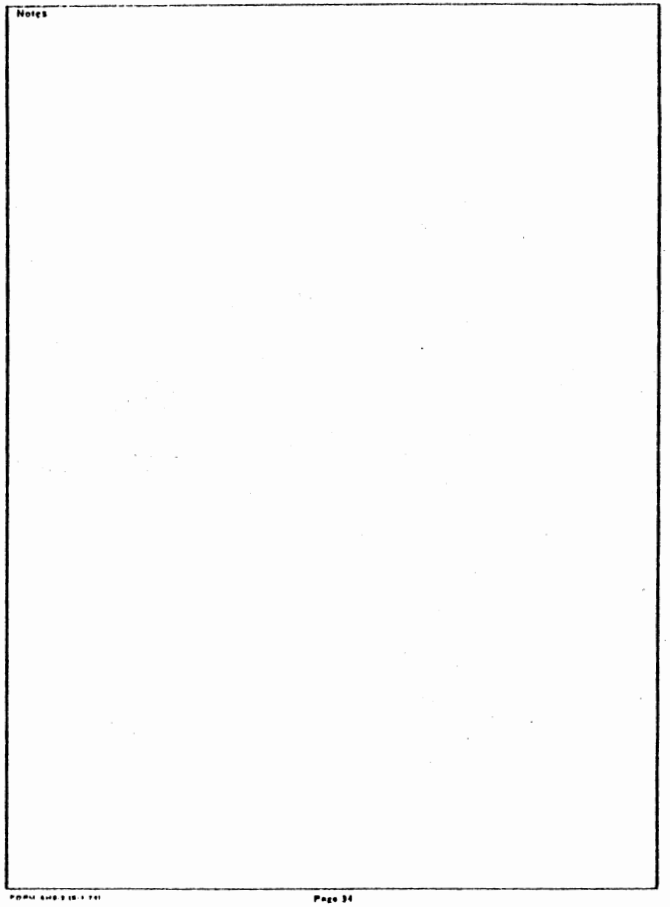


Section III – PURCHASES AND OWNERSHIP (Automobiles and Home Appliances) – Continued

75a. Which of the following items do you have in this household, either owned by you or another family member or furnished by someone else?		b. Is it owned or furnished?	c. Was it purchased within the past 12 months; that is, since (month), 1973?	d. Was it purchased new or used?	e. How much did it cost?
(1) A washing machine?	(417) ▫ Yes – Ask b ▫ No	▫ Owned – Ask a (418) ▫ Furnished	▫ Yes – Ask d (419) ▫ No	(419) ▫ New ▫ Used	(419) $ ____ .00
(2) A clothes dryer?	(420) ▫ Yes – Ask b ▫ No	▫ Owned – Ask c (421) ▫ Furnished	▫ Yes – Ask d (421) ▫ No	(421) ▫ New ▫ Used	(422) $ ____ .00
(3) A dishwasher?	(423) ▫ Yes Ask b ▫ No	▫ Owned – Ask a (424) ▫ Furnished	▫ Yes Ask d (424) ▫ No	(424) ▫ New ▫ Used	(425) $ ____ .00
(4) A refrigerator?	(426) ▫ Yes – Ask b ▫ No	▫ Owned – Ask a (427) ▫ Furnished	▫ Yes Ask d (427) ▫ No	(427) ▫ New ▫ Used	(428) $ ____ .00
(5) A separate food freezer?	(429) ▫ Yes – Ask b ▫ No	▫ Owned – Ask c (430) ▫ Furnished	▫ Yes – Ask d (430) ▫ No	(430) ▫ New ▫ Used	(431) $ ____ .00
(6) A kitchen range?	(432) ▫ Yes – Ask b ▫ No	▫ Owned – Ask c (433) ▫ Furnished	▫ Yes – Ask d (433) ▫ No	(433) ▫ New ▫ Used	(434) $ ____ .00

Notes

Page 33



Notes

Page 34

FACSIMILE OF THE ANNUAL HOUSING SURVEY QUESTIONNAIRE: 1974 (Continued)

Section IV – HOUSEHOLD PERSON'S PAGE

TRANSCRIBE FROM CONTROL CARD

1. Line number of household respondent (cc 14 or AHS-2, Item 5d) (435)

2. Ethnic origin (cc 23) (436)
- 1 [ ] Mexican-American
- 2 [ ] Chicano
- 3 [ ] Mexican
- 4 [ ] Mexicano
- 5 [ ] Puerto Rican
- 6 [ ] Cuban
- 7 [ ] Central or South American
- 8 [ ] Other Spanish – Specify 7 _____
- 9 [ ] Other – Specify _____

3. Highest grade completed by head (cc 23n) (437)
- 0 [ ] Never attended school

Grades K through Twelve
- 1 [ ] Kindergarten
- 2 [ ] First
- 3 [ ] Second
- 4 [ ] Third
- 5 [ ] Fourth
- 6 [ ] Fifth
- 7 [ ] Sixth
- 8 [ ] Seventh
- 9 [ ] Eighth
- 10 [ ] Ninth
- 11 [ ] Tenth
- 12 [ ] Eleventh
- 13 [ ] Twelfth

College (Academic years) (437)
- 14 [ ] C1
- 15 [ ] C2
- 16 [ ] C3
- 17 [ ] C4
- 18 [ ] C5
- 19 [ ] C6 or more

~ PGM 4 →

HOUSEHOLD CHARACTERISTICS

4a. Line number	4b. Relationship to household head (cc 15b)	OFFICE USE ONLY	4c. Age (cc 18)	4d. Marital status (For persons 14+) (cc 19) 1 – Married 2 – Widowed 3 – Divorced 4 – Separated 5 – Never married ENTER CODE	4e. Race (cc 20) 1 – White 2 – Negro 3 – Other ENTER CODE	4f. Sex (cc 21) CIRCLE ONE Male	Female
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2

Page 35

Section IV – HOUSEHOLD PERSON'S PAGE – Continued

TRANSCRIBE FROM CONTROL CARD (BEGIN TRANSCRIPTION ON PAGE 35)

~ PGM 4 →

HOUSEHOLD CHARACTERISTICS – Continued

4a. Line number	4b. Relationship to household head (cc 15b)	OFFICE USE ONLY	4c. Age (cc 18)	4d. Marital status (For persons 14+) (cc 19) 1 – Married 2 – Widowed 3 – Divorced 4 – Separated 5 – Never married ENTER CODE	4e. Race (cc 20) 1 – White 2 – Negro 3 – Other ENTER CODE	4f. Sex (cc 21) CIRCLE ONE Male	Female
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2
						1	2

Notes

Page 36

Facsimile of the Annual Housing Survey Questionnaire: 1977

(Sec. I-III) Form Approved: O.M.B. No. 041-R-1593

(Sec. IV) Form Approved: O.M.B. No. 041-S-77069

PGM 1

1. Control number (cc 1) — PSU | Segment | Serial

2. HH No. (cc 2)

3. Sample (cc 4) (Circle one) — F1 or F2

NOTICE – All information which would permit identification of the individual will be held in strict confidence, and will be used only by persons engaged in and for the purposes of the survey. The information will not be disclosed or released to others for any purpose.

FORM AHS-2 (10-20-77)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
ACTING AS COLLECTING AGENT FOR
DEPARTMENT OF HOUSING AND
URBAN DEVELOPMENT
AND FEDERAL HOUSING ADMINISTRATION

ANNUAL HOUSING SURVEY

NATIONAL SAMPLE – 1977

4. Type of segment (cc 3)
1 [ ] Area
2 [ ] Address
3 [ ] Permit
4 [ ] Special place
5 [ ] CEN-SUP

5a. Interviewer name

b. Code

c. Date interview completed Month/day/year

d. Line No. of HH respondent (cc 10)

6a. Status of unit

(001) 1 [ ] Unit in sample last enumeration period – Skip to 7
[ ] Unit in sample for first time this enumeration period – Fill item 6b

b. Reason for adding sample unit

(001) 2 [ ] New construction
3 [ ] Mobile home moved in
4 [ ] House moved in
5 [ ] Unit resulted from structural conversion
6 [ ] Conversion of nonresidential unit
7 [ ] Other – Specify

7. Type of interview

Interview

(002) 1 [ ] Regular – (One or more "Y's" in cc 11c)
2 [ ] URE – (All "N's" in cc 11c) .... } Skip to Check Item A, page 13
3 [ ] Vacant – Skip to item 7a, page 4
4 [ ] Noninterview

Section I (TRANSCRIBE FROM CONTROL CARD)

8. Reason for noninterview (cc 40d)

a. Type A

(003) 1 [ ] No one home
2 [ ] Temporarily absent
3 [ ] Refused
4 [ ] Unable to locate
5 [ ] Other occupied – Specify

b. Type B

(003) 10 [ ] Unit for nonresidential use (e.g., business, school, or commercial storage)
11 [ ] OTHER unit, except unoccupied site for mobile home or tent } Fill item 8e
12 [ ] Unoccupied site for mobile home or tent
13 [ ] Under construction – not ready
14 [ ] Scheduled to be demolished
15 [ ] Condemned or occupancy prohibited by law
16 [ ] Interior exposed to the elements
17 [ ] Unit severely damaged by fire
18 [ ] Other – Specify } Fill items 8d and e
19 [ ] Permit granted – construction not started

8. Reason for noninterview (cc 40d)

c. Type C

(003) 30 [ ] Unit eliminated in structural conversion
31 [ ] Demolished
32 [ ] Disaster loss (flood, tornado, etc.)
33 [ ] Disaster loss – fire
34 [ ] House or mobile home moved
35 [ ] Merged – not in current sample
36 [ ] Built after April 1, 1970
37 [ ] Other – Specify
38 [ ] Unused permit – abandoned

d. Unit boarded-up (cc 40e)

(004) 1 [ ] Yes
2 [ ] No

(Fill for Type B's only)

e. Status of structure

(005) 1 [ ] Structure has no habitable housing unit
2 [ ] Structure has one or more habitable housing units

Section I – Continued

QUESTIONNAIRE ITEMS TO BE FILLED FOR NONINTERVIEWS	TYPE A	TYPE B	TYPE C	QUESTIONNAIRE ITEMS TO BE FILLED FOR VACANT UNITS	
	I.D. Items 1* 2-5d** 6-7 Section I items 8a 10 11 13 14	I.D. Items 1* 2-5d** 6-7 Section I items 8b 8d and e (Where appropriate) 10 11 13	I.D. Items 1* 2-5d** 6-7 Section I items 8c		I.D. Items 1* 2-7** Section I items 9-11 13 14 Section IIA, page 3 Section IIB, pages 4-7

*NOTE – Fill item 1 only if AHS-2 is not labeled or if control number on label is incorrect.

**NOTE – In item 5d enter the relationship of the person providing the information for the noninterview or vacant; e.g., landlady or neighbor. If no one was consulted, leave item 5d blank.

TRANSCRIBE FROM CONTROL CARD

9. Structure originally built (cc 6)
[ ] April 1, 1970 or later

(005) Month (01-12) / Year

OR

(006) 1 [ ] 1969 to March 31, 1970
2 [ ] 1965-1968
3 [ ] 1960-1964
4 [ ] 1950-1959
5 [ ] 1940-1949
6 [ ] 1939 or earlier

10. Access (cc 9a)

(007) 1 [ ] Direct
2 [ ] Through another unit

11. Type of living quarters (cc 9b and c)
HOUSING UNIT

(008) 1 [ ] House, apartment, flat
2 [ ] HU in nontransient hotel, motel, etc.
3 [ ] HU permanent in transient hotel, motel, etc.
4 [ ] HU in rooming house
5 [ ] Mobile home or trailer with NO permanent room added
6 [ ] Mobile home or trailer WITH one or more permanent rooms added
7 [ ] HU not specified above – Specify

OTHER UNIT (Treat as Type B Noninterview)

8 [ ] Quarters not HU in rooming or boarding house
9 [ ] Unit not permanent in transient hotel, motel, etc.
10 [ ] Unoccupied tent site or trailer site
11 [ ] OTHER unit not specified above – Specify

12. OFFICE USE ONLY

13. Land use code (cc 37a-d)

(009) 1 [ ] A
2 [ ] B
3 [ ] C
4 [ ] D
5 [ ] E

14. Occupancy status (cc 40c)

(010) 1 [ ] Occupied – Skip to Section IIIA, page 8
2 [ ] Vacant – Skip to Section IIA, page 3
3 [ ] URE – Skip to Section IIIA, page 8

NOTES

FORM AHS-2 (10-20-77)

Page 2

Facsimile of the Annual Housing Survey Questionnaire: 1977 — Continued

PGM 2

Section IIA – VACANT UNITS

TRANSCRIBE FROM CONTROL CARD

1a. Number of living quarters (cc 27a)
(012)
1 [ ] Mobile home or trailer (no permanent room attached) – Skip to 3
2 [ ] One, detached from any other building } Go to b
3 [ ] One, attached to one or more buildings }
4 [ ] 2 } Skip to c
5 [ ] 3 or 4 }
6 [ ] 5 to 9 }
7 [ ] 10 to 19 } Skip to 2a
8 [ ] 20 to 49 }
9 [ ] 50 or more }

b. Other living quarters on property (cc 27d)
(013)
1 [ ] Yes
2 [ ] No

c. Commercial establishment on property (cc 27e)
(026)
1 [ ] Yes
2 [ ] No

d. Medical or dental office on property (cc 27f)
(027)
1 [ ] Yes
2 [ ] No

2a. Number of stories (floors) (cc 29a)
(011)
1 [ ] 1 to 3 – Skip to 3
2 [ ] 4 to 6
3 [ ] 7 to 12
4 [ ] 13 or more

b. Passenger elevator (cc 29b)
(032)
1 [ ] Yes
2 [ ] No

3. Number of rooms (cc 30)
(031) _____ Rooms

4. Working electric wall outlet (wallplug) in all rooms (cc 31)
(034)
1 [ ] Yes
2 [ ] No

5. Concealed wiring (cc 32)
(035)
1 [ ] Yes
2 [ ] No

6a. Source of water (cc 33a)
(036)
1 [ ] A public system or private company – END TRANSCRIPTION
2 [ ] An individual well – Go to b
3 [ ] Some other source – Specify – END TRANSCRIPTION

b. Type of well (cc 33b)
(037)
1 [ ] Drilled
2 [ ] Dug

END OF TRANSCRIPTION

Section IIB – VACANT UNITS

7a. Is this unit intended for year-round use, for occupancy only on a seasonal basis or for use by migrant workers?
(241)
[ ] YEAR ROUND – Ask b
Seasonal
10 [ ] Summers only . . . . . } Skip to 8
11 [ ] Winters only . . . . . }
12 [ ] Other seasonal – Specify in Notes on page 7 . . . . }
9 [ ] Migratory – Skip to 8

b. Is this house (apartment) for rent, for sale only, rented not occupied, sold not occupied, held for occasional use, or something else?
(241)
1 [ ] Vacant – for rent
Vacant – for sale only
2 [ ] Regular ownership
3 [ ] Condominium ownership
4 [ ] Cooperative ownership
5 [ ] Rented, not occupied
6 [ ] Sold, not occupied
7 [ ] Held for occasional use
8 [ ] Other vacant – Specify _____

8. How many months has this house (apartment) been vacant?
(039)
1 [ ] Less than 1 month
2 [ ] 1 month up to 2 months
3 [ ] 2 months up to 6 months
4 [ ] 6 months up to 12 months
5 [ ] 1 year up to 2 years
6 [ ] 2 years or more

9. How many bedrooms are in this house (apartment)?
(058) _____ Bedrooms
OR
0 [ ] None – Skip to 11

10a. Is it necessary to go through anyone's bedroom to get to any bathroom?
(059)
1 [ ] Yes
2 [ ] No

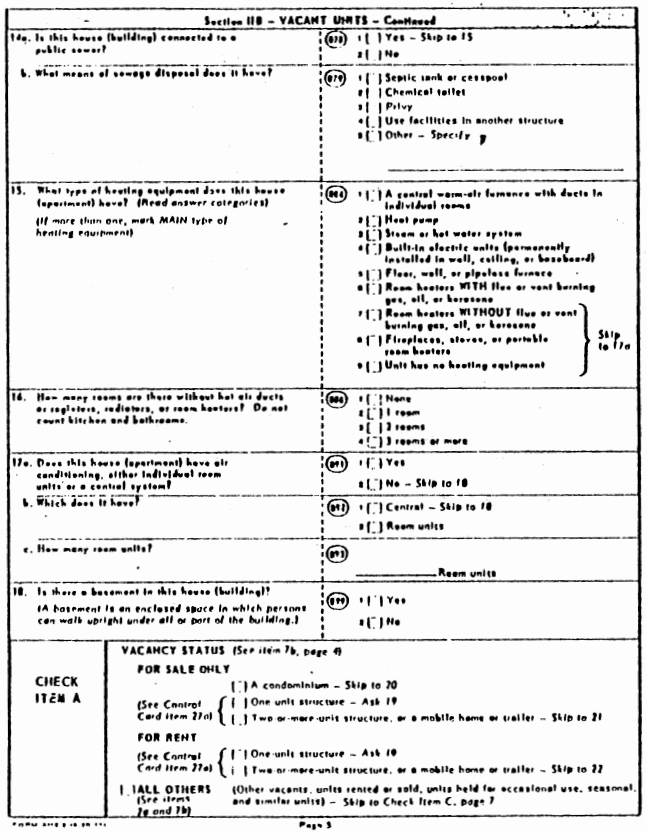
b. Is it necessary to go through anyone's bedroom to get to any other room?
(060)
1 [ ] Yes
2 [ ] No

11. Does this house (building) have complete kitchen facilities; that is, a kitchen sink with piped water, a refrigerator, and a range or a cookstove?
[ ] Yes → Are these facilities only for the use of the intended occupants?
(063)
1 [ ] Yes – Used for this household only
2 [ ] No – Also used by another household
3 [ ] No

12. Does this house (building) have complete plumbing facilities; that is, hot and cold piped water, a flush toilet and a bathtub or shower?
[ ] Yes → Are these facilities only for the use of the intended occupants?
(072)
1 [ ] Yes – Used for this household only – Ask 13
2 [ ] No – Also used by another household – Skip to 14a
3 [ ] No – Skip to 14a

13. How many complete bathrooms and half bathrooms does this house (apartment) have?
A complete bathroom is a room with a flush toilet, bathtub or shower, and a washbasin with piped water.
A half bathroom has at least a flush toilet or a bathtub or shower, but does not have all the facilities for a complete bathroom.
(Mark only one box)
(073)
1 [ ] Complete plumbing facilities but not in one room
2 [ ] 1 complete bathroom
3 [ ] 1 complete bathroom plus a half bath with no flush toilet
4 [ ] 1 complete bathroom plus a half bath with flush toilet
5 [ ] 2 complete bathrooms
6 [ ] More than 2 complete bathrooms

Facsimile of the Annual Housing Survey Questionnaire: 1977 — Continued



Section IIB – VACANT UNITS – Continued

14a. Is this house (building) connected to a public sewer? (978) 1 [ ] Yes – Skip to 15; 2 [ ] No

b. What means of sewage disposal does it have? (979) 1 [ ] Septic tank or cesspool; 2 [ ] Chemical toilet; 3 [ ] Privy; 4 [ ] Use facilities in another structure; 5 [ ] Other – Specify

15. What type of heating equipment does this house (apartment) have? (Read answer categories) (If more than one, mark MAIN type of heating equipment) (984) 1 [ ] A central warm-air furnace with ducts to individual rooms; 2 [ ] Heat pump; 3 [ ] Steam or hot water system; 4 [ ] Built-in electric units (permanently installed in wall, ceiling, or baseboard); 5 [ ] Floor, wall, or pipeless furnace; 6 [ ] Room heaters WITH flue or vent burning gas, oil, or kerosene; 7 [ ] Room heaters WITHOUT flue or vent burning gas, oil, or kerosene; 8 [ ] Fireplaces, stoves, or portable room heaters; 9 [ ] Unit has no heating equipment } Skip to 17a

16. How many rooms are there without hot air ducts or registers, radiators, or room heaters? Do not count kitchen and bathrooms. (986) 1 [ ] None; 2 [ ] 1 room; 3 [ ] 2 rooms; 4 [ ] 3 rooms or more

17a. Does this house (apartment) have air conditioning, either individual room units or a central system? (991) 1 [ ] Yes; 2 [ ] No – Skip to 18

b. Which does it have? (992) 1 [ ] Central – Skip to 18; 2 [ ] Room units

c. How many room units? (993) _____ Room units

18. Is there a basement in this house (building)? (A basement is an enclosed space in which persons can walk upright under all or part of the building.) (999) 1 [ ] Yes; 2 [ ] No

CHECK ITEM A — VACANCY STATUS (See item 7b, page 4)

FOR SALE ONLY
[ ] A condominium – Skip to 20
(See Control Card item 27a) [ ] One unit structure – Ask 19; [ ] Two or more unit structure, or a mobile home or trailer – Skip to 21

FOR RENT
(See Control Card item 27a) [ ] One unit structure – Ask 19; [ ] Two or more unit structure, or a mobile home or trailer – Skip to 22

[ ] ALL OTHERS (See items 7a and 7b) (Other vacants, units rented or sold, units held for occasional use, seasonal, and similar units) – Skip to Check Item C, page 7

Page 5

Section IIB – VACANT UNITS – Continued

(If rural transcribe from CC item 37b. If urban ask or fill by observation.) 19. Does this place have 10 acres or more? (989) 1 [ ] Yes, 10 acres or more; 2 [ ] No, less than 10 acres

CHECK ITEM B

VACANT FOR SALE ONLY
If this is a –
[ ] One-unit structure on less than 10 acres and there is no commercial establishment or medical or dental office on the property (Control Card items 27e and f) – Ask 20
[ ] All others – Skip to 27a

VACANT FOR RENT
If this is a –
[ ] One-unit structure on less than 10 acres – Skip to 22
[ ] One-unit structure on 10 acres or more – Skip to 27a

20. What is the sale price asked for this property (condominium unit)? SHOW FLASHCARD B (110) 1 [ ] Less than $5,000; 2 [ ] $ 5,000 – $ 7,499; 3 [ ] 7,500 – 9,999; 4 [ ] 10,000 – 12,499; 5 [ ] 12,500 – 14,999; 6 [ ] 15,000 – 17,499; 7 [ ] 17,500 – 19,999; 8 [ ] 20,000 – 24,999; 9 [ ] 25,000 – 29,999; 10 [ ] 30,000 – 34,999; 11 [ ] 35,000 – 39,999; 12 [ ] 40,000 – 49,999; 13 [ ] 50,000 – 59,999; 14 [ ] 60,000 – 74,999; 15 [ ] 75,000 – 99,999; 16 [ ] 100,000 – 124,999; 17 [ ] 125,000 – 149,999; 18 [ ] 150,000 or more

21. Is there a garage or carport on this property which is available for the use of occupants? (943) 1 [ ] Yes; 2 [ ] No } Skip to 27a

22. What is the MONTHLY rent? (If rent is not to be paid by the month, mark the time period covered, compute the monthly rent in the "Notes" space, and enter the monthly rent on the line provided.) (Include site rent for mobile homes if it is to be paid separately.) (146) $ _____ .00 Per month

(147) 1 [ ] More frequently than once a month; 2 [ ] Less frequently than once a month; 3 [ ] Once a month

Notes

23. Is this house (apartment) in a public housing project; that is, is it owned by a local housing authority or other public agency? (151) 1 [ ] Yes; 2 [ ] No

24. In addition to rent, does the renter also pay for –

a. Electricity? (153) 1 [ ] Yes; 2 [ ] No, included in rent; 3 [ ] No, electricity not used

b. Gas? (155) 1 [ ] Yes; 2 [ ] No, included in rent; 3 [ ] No, gas not used

c. Water? (157) 1 [ ] Yes; 2 [ ] No, included in rent or no charge

d. Oil, coal, kerosene, wood, etc.? (159) 1 [ ] Yes; 2 [ ] No, included in rent; 3 [ ] No, these fuels not used or obtained free

25. In addition to rent, does the renter also pay for garbage and trash collection? (161) 1 [ ] Yes; 2 [ ] No

Page 6

Facsimile of the Annual Housing Survey Questionnaire: 1977 – Continued

Section IIB – VACANT UNITS – Continued

CHECK ITEM C	(See Control Card item 27a) [ ] One-unit structure, or a mobile home or trailer – Skip to 27a [ ] Two-or-more-unit structure – Ask 26a

Question	Answer
26a. Does the owner of this building/Do you (if speaking to the owner) live on this property?	(172) 1 [ ] Yes – Skip to 27a 2 [ ] No 3 [ ] Don't know
b. Is there a resident manager, superintendent or janitor who lives on this property?	(173) 1 [ ] Yes 2 [ ] No 3 [ ] Don't know
OBSERVATION 27a. Is the unit boarded-up?	(240) 1 [ ] Yes 2 [ ] No
OBSERVATION b. Are there any buildings (other than this building) that appear to be abandoned and/or are there any buildings with windows broken or boarded-up on this street?	(239) 1 [ ] Yes 2 [ ] No

CHECK ITEM D	(See Control Card item 27a) [ ] One-unit structure, or a mobile home or trailer – Skip to Check Item E [ ] Two-or-more-unit structure – Ask 28a

Question	Answer
OBSERVATION 28a. Do the public halls in this building have light fixtures?	(242) 1 [ ] Yes 2 [ ] No .... } Skip to 29a 3 [ ] No public halls } Skip to 29a
b. Are the light fixtures in working order?	(243) 1 [ ] All in working order 2 [ ] Some in working order 3 [ ] None in working order
29a. Are there loose, broken, or missing steps on any common stairways inside this building or attached to this building?	(244) 1 [ ] Yes 2 [ ] No 3 [ ] No common stairways – Skip to 30
b. Are all stair railings firmly attached?	(245) 1 [ ] Yes 2 [ ] No 3 [ ] No stair railings
OBSERVATION – Fill for 2 or more unit structures 30. How many stories (floors) are there from the main entrance of the building to the main entrance of the apartment?	(289) 1 [ ] None, on same floor 2 [ ] One (up or down) 3 [ ] Two or more (up or down)

CHECK ITEM E	[ ] "Urban" box marked in Control Card item 37a – End AHS-2 Interview and go to Control Card item 39 BOTH "Rural" box marked in Control Card item 37a AND [ ] "Yes" in Control Card item 37c or 37d – Ask 31 [ ] "No," "NA" or "DK" in Control Card item 37c or 37d – End AHS-2 Interview and go to Control Card item 39

Question	Answer
31. During the past 12 months did sales of crops, livestock and other farm products from this place amount to $1,000 or more?	(425) 1 [ ] Yes } End AHS-2 Interview and go to Control Card item 39 2 [ ] No } End AHS-2 Interview and go to Control Card item 39

FORM AHS-2 (1-28-77)

Section IIIA – OCCUPIED UNITS (Include URE)

TRANSCRIBE FROM CONTROL CARD

1. Line number of household respondent (cc 10)

(011) ________

HOUSEHOLD CHARACTERISTICS – DO NOT LIST URE'S ("N" IN 11C) UNLESS ENTIRE HOUSEHOLD IS URE

2a. Line number (cc 10)	2b. Relationship to household head (cc 11b) INCLUDE HEAD	OFFICE USE ONLY		2c. Age (cc 14)	2d. Marital status (For persons 14+) (cc 15) 1 – Married, 2 – Widowed, 3 – Divorced, 4 – Separated, 5 – Never married ENTER CODE	2e. Race (cc 16) 1 – White, 2 – Negro, 3 – Other ENTER CODE	2f. Sex (cc 17) CIRCLE ONE Male	Female
							1	2
							1	2
							1	2
							1	2
							1	2
							1	2
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(PCM 3)

FORM AHS-2 (1-28-77)

Facsimile of the Annual Housing Survey Questionnaire: 1977 — Continued

PGM 4

Section IIIA – OCCUPIED UNITS (Include URE) – Continued

TRANSCRIBE FROM CONTROL CARD

3. Highest grade completed by head (cc 19)

(017)
- 0 [ ] Never attended school
- 1 [ ] Kindergarten
- 2 [ ] First
- 3 [ ] Second
- 4 [ ] Third
- 5 [ ] Fourth
- 6 [ ] Fifth
- 7 [ ] Sixth
- 8 [ ] Seventh
- 9 [ ] Eighth
- 10 [ ] Ninth
- 11 [ ] Tenth
- 12 [ ] Eleventh
- 13 [ ] Twelfth

College (Academic years)
- 14 [ ] C1
- 15 [ ] C2
- 16 [ ] C3
- 17 [ ] C4
- 18 [ ] C5
- 19 [ ] C6 or more

4. Ethnic origin (cc 20)

(018)
- 1 [ ] Mexican-American
- 2 [ ] Chicano
- 3 [ ] Mexican
- 4 [ ] Mexicano
- 5 [ ] Puerto Rican
- 6 [ ] Cuban
- 7 [ ] Central or South American
- 8 [ ] Other Spanish – Specify
- 9 [ ] Other – Specify _____

5. When head moved in (cc 21)

After April 1, 1970

(019) Month (01–12) / Year

OR

(020)
- 1 [ ] 1965 to April 1, 1970
- 2 [ ] 1960 to 1964
- 3 [ ] 1950 to 1959
- 4 [ ] 1949 or earlier

} Go to 6

NOTES

Page 9

Section IIIA – OCCUPIED UNITS (Include URE) – Continued

TRANSCRIBE FROM CONTROL CARD

6. Tenure (cc 25a)

(022)
- 1 [ ] Owned or being bought
- 2 [ ] Owned or being bought as a cooperative
- 3 [ ] Owned or being bought as a condominium
- 4 [ ] Rented for cash by you or someone else

} Skip to 8a

- 5 [ ] Occupied without payment of cash rent

7a. Why no cash rent (cc 26a)

(023)
- 1 [ ] Provided by job
- 2 [ ] Provided by friend or relative
- 3 [ ] Other .....

} Skip to 8a

8b. Type of job (cc 26b)

Farm related

(024)
- 1 [ ] Tenant farmer (rent in crops and/or livestock)
- 2 [ ] Farm manager
- 3 [ ] Farm laborer or farm foreman
- 4 [ ] Other – Specify _____

- 5 [ ] Nonfarm related

Notes

Page 10

Facsimile of the Annual Housing Survey Questionnaire: 1977 — Continued

Section IIIA – OCCUPIED UNITS (Include URE) – Continued

TRANSCRIBE FROM CONTROL CARD

8a. Number of living quarters (cc 27a)	(027) 1 [ ] Mobile home or trailer (no permanent room attached) 2 [ ] One, detached from any other building — Skip to 8d 3 [ ] One, attached to one or more buildings — Skip to 8d 4 [ ] 2 — Skip to 8e 5 [ ] 3 or 4 — Skip to 8e 6 [ ] 5 to 9 7 [ ] 10 to 19 8 [ ] 20 to 49 9 [ ] 50 or more — Skip to 10a
b. Anchored mobile home (cc 27b)	(028) 1 [ ] Yes 2 [ ] No 3 [ ] Don't know
c. In group of 4 or more mobile homes (cc 27c)	(029) 1 [ ] Yes 2 [ ] No — Skip to 9a
[ ] Renter-occupied – Skip to 8e d. Other living quarters on property (cc 27d)	(030) 1 [ ] Yes 2 [ ] No
e. Commercial establishment on property (cc 27e)	(031) 1 [ ] Yes 2 [ ] No
f. Medical or dental office on property (cc 27f)	(032) 1 [ ] Yes 2 [ ] No — Skip to 10a
9a. Year mobile home (trailer) acquired (cc 28a)	(033) 19 ____
b. Mobile home (trailer) new when acquired (cc 28b)	(034) 1 [ ] Yes 2 [ ] No
c. Purchase price (cc 28c)	(035) $ ____ . 00 Purchase price 0 [ ] Not purchased — Skip to 11
10a. Number of stories (floors) (cc 29a)	(036) 1 [ ] 1 to 3 – Skip to 11 2 [ ] 4 to 6 3 [ ] 7 to 12 4 [ ] 13 or more
b. Passenger elevator (cc 29b)	(037) 1 [ ] Yes 2 [ ] No
11. Number of rooms (cc 30)	(038) ____ Rooms
12. Working electric wall outlet (wall plug) in each room (cc 31)	(039) 1 [ ] Yes 2 [ ] No
13. Concealed wiring (cc 32)	(040) 1 [ ] Yes 2 [ ] No

Page 11

Section IIIA – OCCUPIED UNITS (Include URE) – Continued

TRANSCRIBE FROM CONTROL CARD

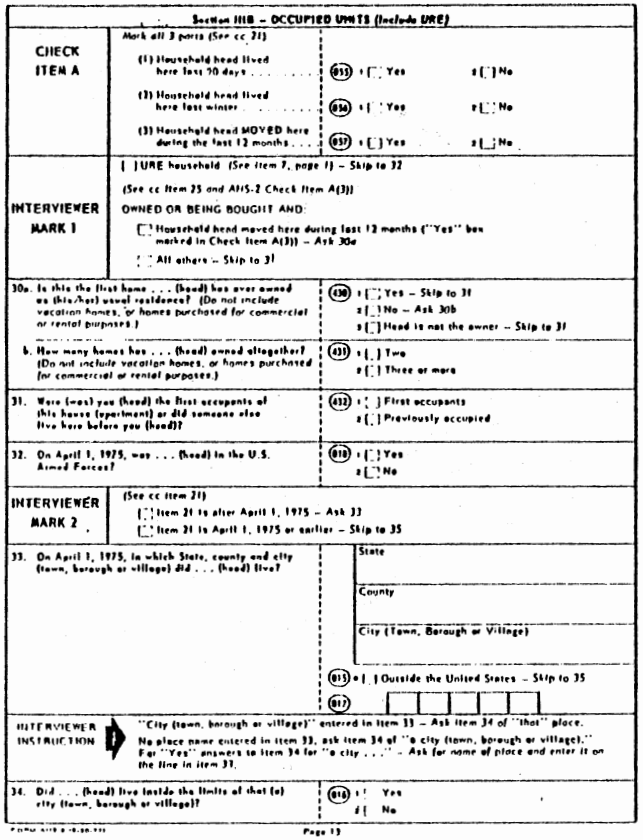
14a. Source of water (cc 33a)	(041) 1 [ ] A public system or private company – Skip to 15a 2 [ ] An individual well – Fill 14b 3 [ ] Some other source – Specify – Skip to 15a
b. Type of well (cc 33b)	(042) 1 [ ] Drilled 2 [ ] Dug
[ ] Two-or-more unit structure – Skip to 16 15a. Storm windows (cc 34a)	(043) 1 [ ] Yes, all windows 2 [ ] Yes, some windows 3 [ ] No
b. Storm doors (cc 34b)	(044) 1 [ ] Yes, all doors 2 [ ] Yes, some doors 3 [ ] No
c. Attic or roof insulation (cc 34c)	(045) 1 [ ] Yes 2 [ ] No 3 [ ] Don't know
[ ] Rented for cash or occupied without payment of cash rent – Skip to 17 16. Garage or carport available (cc 35)	(046) 1 [ ] Yes 2 [ ] No
17. Cooking fuel (cc 36)	Gas (047) 1 [ ] From underground pipes serving the neighborhood 2 [ ] Bottled, tank, or LP 3 [ ] Electricity 4 [ ] Fuel oil, kerosene, etc. 5 [ ] Coal or coke 6 [ ] Wood 7 [ ] Other fuel 8 [ ] No fuel used
18. Use of telephone (cc 38a)	(048) 1 [ ] Yes 2 [ ] No

END OF TRANSCRIPTION

NOTES

Page 12

Facsimile of the Annual Housing Survey Questionnaire: 1977 – Continued



Section IIIB – OCCUPIED UNITS (Include URE)

CHECK ITEM A

Mark all 3 parts (See cc 21)

(1) Household head lived here last 10 days . . . . . (035) 1 [ ] Yes 2 [ ] No

(2) Household head lived here last winter . . . . . (036) 1 [ ] Yes 2 [ ] No

(3) Household head MOVED here during the last 12 months . . . (037) 1 [ ] Yes 2 [ ] No

INTERVIEWER MARK 1

[ ] URE household (See item 7, page 1) – Skip to 32

(See cc item 25 and AHS-2 Check Item A(3))

OWNED OR BEING BOUGHT AND:

[ ] Household head moved here during last 12 months ("Yes" box marked in Check Item A(3)) – Ask 30a

[ ] All others – Skip to 31

30a. Is this the first home . . . (head) has ever owned as (his/her) usual residence? (Do not include vacation homes, or homes purchased for commercial or rental purposes.) (038) 1 [ ] Yes – Skip to 31 2 [ ] No – Ask 30b 3 [ ] Head is not the owner – Skip to 31

b. How many homes has . . . (head) owned altogether? (Do not include vacation homes, or homes purchased for commercial or rental purposes.) (039) 1 [ ] Two 2 [ ] Three or more

31. Were (was) you (head) the first occupants of this house (apartment) or did someone else live here before you (head)? (040) 1 [ ] First occupants 2 [ ] Previously occupied

32. On April 1, 1975, was . . . (head) in the U.S. Armed Forces? (010) 1 [ ] Yes 2 [ ] No

INTERVIEWER MARK 2

(See cc item 21)

[ ] Item 21 is after April 1, 1975 – Ask 33

[ ] Item 21 is April 1, 1975 or earlier – Skip to 35

33. On April 1, 1975, in which State, county and city (town, borough or village) did . . . (head) live?

State

County

City (Town, Borough or Village)

(013) 0 [ ] Outside the United States – Skip to 35

(017)

INTERVIEWER INSTRUCTION

"City (town, borough or village)" entered in item 33 – Ask item 34 of "that" place.

No place name entered in item 33, ask item 34 of "a city (town, borough or village)." For "Yes" answers to item 34 for "a city . . ." – Ask for name of place and enter it on the line in item 33.

34. Did . . . (head) live inside the limits of that (a) city (town, borough or village)? (018) 1 [ ] Yes 2 [ ] No

Section IIIB – OCCUPIED UNITS (Include URE)

35. How many bedrooms do you have in your house (apartment)? Count rooms used mainly for sleeping even if used for other purposes (034) _____ Bedrooms OR 0 [ ] None – Skip to 38

36a. Is it necessary to go through anyone's bedroom to get to any bathroom? (035) 1 [ ] Yes 2 [ ] No

b. Is it necessary to go through anyone's bedroom to get to any other room? (044) 1 [ ] Yes 2 [ ] No

CHECK ITEM B

(See cc 11c) Do not count persons with usual residence elsewhere unless entire household is URE.

[ ] Household has 1 or 2 persons – Skip to 38

[ ] Household has 3 or more persons – Ask 37a

37a. Are any bedrooms used for sleeping by 3 or more persons? [ ] Yes ⟶ How many bedrooms are used for sleeping by 3 or more persons? (061) 1 [ ] 1 bedroom 2 [ ] 2 or more bedrooms 3 [ ] No – Skip to 38

b. Are any of the persons who use this bedroom (these bedrooms) 13 years of age or older? (062) 1 [ ] Yes 2 [ ] No

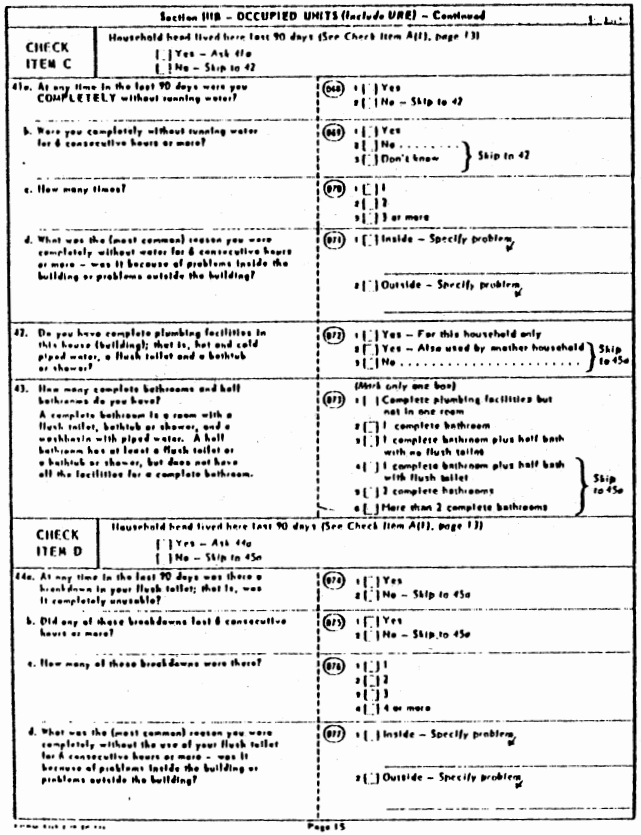
38. Do you have complete kitchen facilities in this house (building); that is, a kitchen sink with piped water, a refrigerator and a range or a cookstove? (063) 1 [ ] Yes – For this household only 2 [ ] Yes – Also used by another household 3 [ ] No – Skip to 40

39. Are the kitchen sink, refrigerator, and range or cookstove all in usable condition? (064) 1 [ ] Yes – Skip to Check Item C 2 [ ] No

40. Do you have piped water – a. In this building? (066) 1 [ ] Yes – Skip to Check Item C 2 [ ] No

b. Available within 1/4 mile? (067) 1 [ ] Yes 2 [ ] No } Skip to 45b

NOTES



Section IIIB – OCCUPIED UNITS (Include URE) – Continued

CHECK ITEM C — Household head lived here last 90 days (See Check Item A(1), page 13)
[ ] Yes – Ask 41a
[ ] No – Skip to 42

41a. At any time in the last 90 days were you COMPLETELY without running water? (040) 1 [ ] Yes 2 [ ] No – Skip to 42

b. Were you completely without running water for 6 consecutive hours or more? (069) 1 [ ] Yes 2 [ ] No 3 [ ] Don't know } Skip to 42

c. How many times? (070) 1 [ ] 1 2 [ ] 2 3 [ ] 3 or more

d. What was the (most common) reason you were completely without water for 6 consecutive hours or more – was it because of problems inside the building or problems outside the building? (071) 1 [ ] Inside – Specify problem 2 [ ] Outside – Specify problem

42. Do you have complete plumbing facilities in this house (building); that is, hot and cold piped water, a flush toilet and a bathtub or shower? (072) 1 [ ] Yes – For this household only 2 [ ] Yes – Also used by another household 3 [ ] No } Skip to 45a

43. How many complete bathrooms and half bathrooms do you have?
A complete bathroom is a room with a flush toilet, bathtub or shower, and a washbasin with piped water. A half bathroom has at least a flush toilet or a bathtub or shower, but does not have all the facilities for a complete bathroom.
(Mark only one box) (073) 1 [ ] Complete plumbing facilities but not in one room 2 [ ] 1 complete bathroom 3 [ ] 1 complete bathroom plus half bath with no flush toilet 4 [ ] 1 complete bathroom plus half bath with flush toilet 5 [ ] 2 complete bathrooms 6 [ ] More than 2 complete bathrooms } Skip to 45a

CHECK ITEM D — Household head lived here last 90 days (See Check Item A(1), page 13)
[ ] Yes – Ask 44a
[ ] No – Skip to 45a

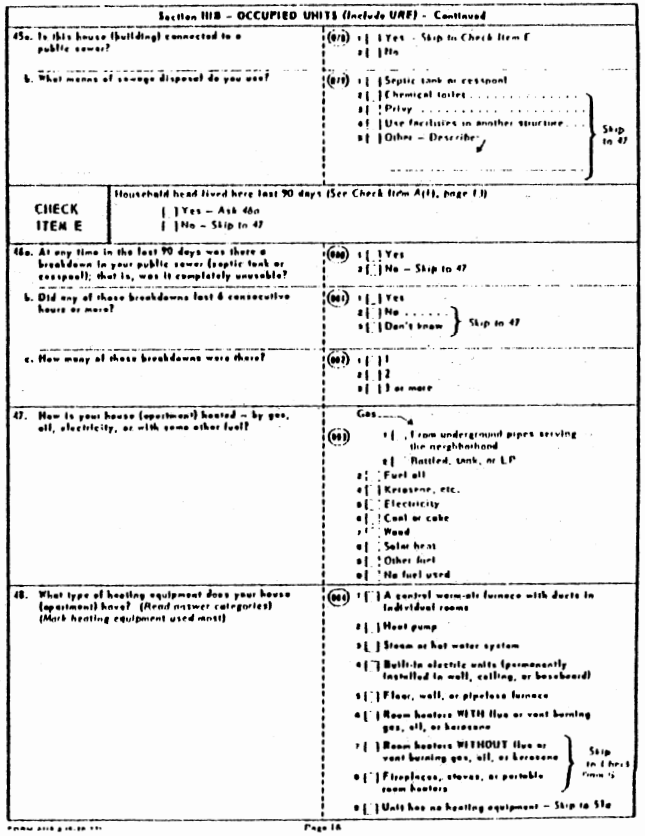
44a. At any time in the last 90 days was there a breakdown in your flush toilet; that is, was it completely unusable? (074) 1 [ ] Yes 2 [ ] No – Skip to 45a

b. Did any of these breakdowns last 6 consecutive hours or more? (075) 1 [ ] Yes 2 [ ] No – Skip to 45a

c. How many of these breakdowns were there? (076) 1 [ ] 1 2 [ ] 2 3 [ ] 3 4 [ ] 4 or more

d. What was the (most common) reason you were completely without the use of your flush toilet for 6 consecutive hours or more – was it because of problems inside the building or problems outside the building? (077) 1 [ ] Inside – Specify problem 2 [ ] Outside – Specify problem

Page 15



Section IIIB – OCCUPIED UNITS (Include URE) – Continued

45a. Is this house (building) connected to a public sewer? (078) 1 [ ] Yes – Skip to Check Item E 2 [ ] No

b. What means of sewage disposal do you use? (079) 1 [ ] Septic tank or cesspool 2 [ ] Chemical toilet 3 [ ] Privy 4 [ ] Use facilities in another structure 5 [ ] Other – Describe: } Skip to 47

CHECK ITEM E — Household head lived here last 90 days (See Check Item A(1), page 13)
[ ] Yes – Ask 46a
[ ] No – Skip to 47

46a. At any time in the last 90 days was there a breakdown in your public sewer (septic tank or cesspool); that is, was it completely unusable? (080) 1 [ ] Yes 2 [ ] No – Skip to 47

b. Did any of these breakdowns last 6 consecutive hours or more? (081) 1 [ ] Yes 2 [ ] No 3 [ ] Don't know } Skip to 47

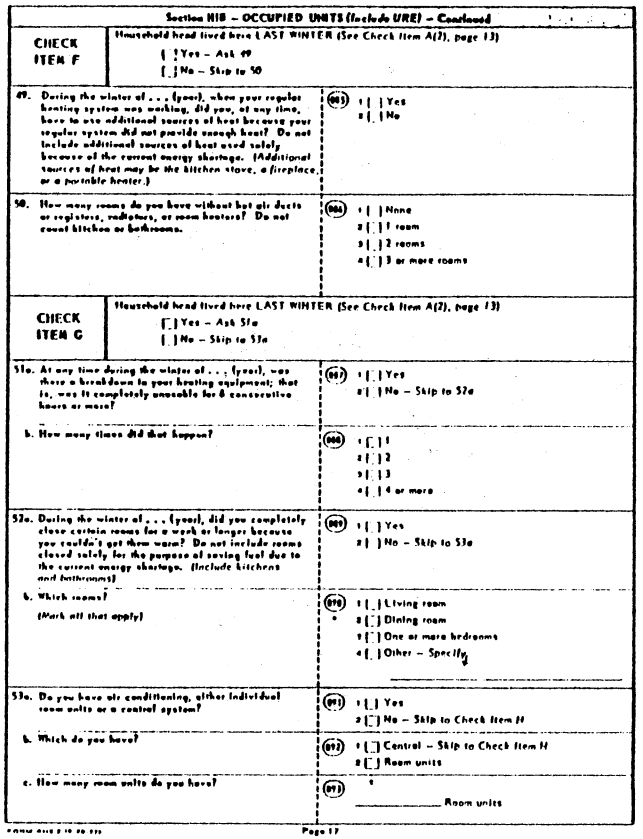
c. How many of these breakdowns were there? (082) 1 [ ] 1 2 [ ] 2 3 [ ] 3 or more

47. How is your house (apartment) heated – by gas, oil, electricity, or with some other fuel? (083) Gas— 1 [ ] From underground pipes serving the neighborhood 2 [ ] Bottled, tank, or LP 3 [ ] Fuel oil 4 [ ] Kerosene, etc. 5 [ ] Electricity 6 [ ] Coal or coke 7 [ ] Wood 8 [ ] Solar heat 9 [ ] Other fuel 10 [ ] No fuel used

48. What type of heating equipment does your house (apartment) have? (Read answer categories) (Mark heating equipment used most) (084) 1 [ ] A central warm-air furnace with ducts to individual rooms 2 [ ] Heat pump 3 [ ] Steam or hot water system 4 [ ] Built-in electric units (permanently installed in wall, ceiling, or baseboard) 5 [ ] Floor, wall, or pipeless furnace 6 [ ] Room heaters WITH flue or vent burning gas, oil, or kerosene 7 [ ] Room heaters WITHOUT flue or vent burning gas, oil, or kerosene 8 [ ] Fireplaces, stoves, or portable room heaters } Skip to Check Item 15 9 [ ] Unit has no heating equipment – Skip to 51a

Page 16

Facsimile of the Annual Housing Survey Questionnaire: 1977—Continued



Section HIB – OCCUPIED UNITS (Include URE) – Continued

CHECK ITEM F

Household head lived here LAST WINTER (See Check Item A(2), page 13)

[ ] Yes – Ask 49
[ ] No – Skip to 50

49. During the winter of . . . (year), when your regular heating system was working, did you, at any time, have to use additional sources of heat because your regular system did not provide enough heat? Do not include additional sources of heat used solely because of the current energy shortage. (Additional sources of heat may be the kitchen stove, a fireplace, or a portable heater.)

(965) 1 [ ] Yes
2 [ ] No

50. How many rooms do you have without hot air ducts or registers, radiators, or room heaters? Do not count kitchen or bathrooms.

(966) 1 [ ] None
2 [ ] 1 room
3 [ ] 2 rooms
4 [ ] 3 or more rooms

CHECK ITEM G

Household head lived here LAST WINTER (See Check Item A(2), page 13)

[ ] Yes – Ask 51a
[ ] No – Skip to 53a

51a. At any time during the winter of . . . (year), was there a breakdown in your heating equipment; that is, was it completely unusable for 6 consecutive hours or more?

(967) 1 [ ] Yes
2 [ ] No – Skip to 52a

b. How many times did that happen?

(968) 1 [ ] 1
2 [ ] 2
3 [ ] 3
4 [ ] 4 or more

52a. During the winter of . . . (year), did you completely close certain rooms for a week or longer because you couldn't get them warm? Do not include rooms closed solely for the purpose of saving fuel due to the current energy shortage. (Include kitchens and bathrooms)

(969) 1 [ ] Yes
2 [ ] No – Skip to 53a

b. Which rooms?

(Mark all that apply)

(970) 1 [ ] Living room
2 [ ] Dining room
3 [ ] One or more bedrooms
4 [ ] Other – Specify

53a. Do you have air conditioning, either individual room units or a central system?

(971) 1 [ ] Yes
2 [ ] No – Skip to Check Item H

b. Which do you have?

(972) 1 [ ] Central – Skip to Check Item H
2 [ ] Room units

c. How many room units do you have?

(971) _____ Room units

Page 17

Section HIB – OCCUPIED UNITS (Include URE) – Continued

CHECK ITEM H

Household head lived here last 90 days (See Check Item A(1), page 13)

[ ] Yes – Ask 54a
[ ] No – Skip to 55a

54a. Have any electric fuses or breaker switches blown in your house (apartment) in the last 90 days?

(974) 1 [ ] Yes
2 [ ] No . . . . . } Skip to 55a
3 [ ] Don't know

b. How many times did this happen?

(975) 1 [ ] 1
2 [ ] 2
3 [ ] 3 or more

55a. Does your house (apartment) have garbage collection service (either public or private)?

(976) 1 [ ] Yes
2 [ ] No . . . . . } Skip to 55c
3 [ ] Don't know

b. How often is the garbage collected?

(977) 1 [ ] Less than once a week
2 [ ] Once a week . . . . . }
3 [ ] Twice a week . . . . . } Skip to 56a
4 [ ] Three or more times a week
5 [ ] Don't know . . . . . }

c. How do you dispose of your garbage?

(If more than one method used, mark the one used most.)

(978) 1 [ ] Incinerator
2 [ ] Trash chute or compactor
3 [ ] Garbage disposal
4 [ ] Carry out to be picked up
5 [ ] Other – Specify

56a. Is there a basement in this house (building)? (A basement is an enclosed space in which persons can walk upright under all or part of the building.)

(979) 1 [ ] Yes
2 [ ] No – Skip to 57

b. Does the basement show any signs of water having leaked in from the outside?

(980) 1 [ ] Yes
2 [ ] No
3 [ ] Don't know

57. Does the roof of this house (building) leak?

(981) 1 [ ] Yes
2 [ ] No
3 [ ] Don't know

58a. Does this house (apartment) have open cracks or holes in the interior walls or ceiling? (Do not include hairline cracks)

(982) 1 [ ] Yes
2 [ ] No

b. Does this house (apartment) have holes in the floors?

(983) 1 [ ] Yes
2 [ ] No

59a. Is there any area of broken plaster on the ceiling or inside walls which is larger than this piece of paper?

(SHOW CLOSED INTERVIEWER INFORMATION CARD BOOKLET)

(984) 1 [ ] Yes
2 [ ] No

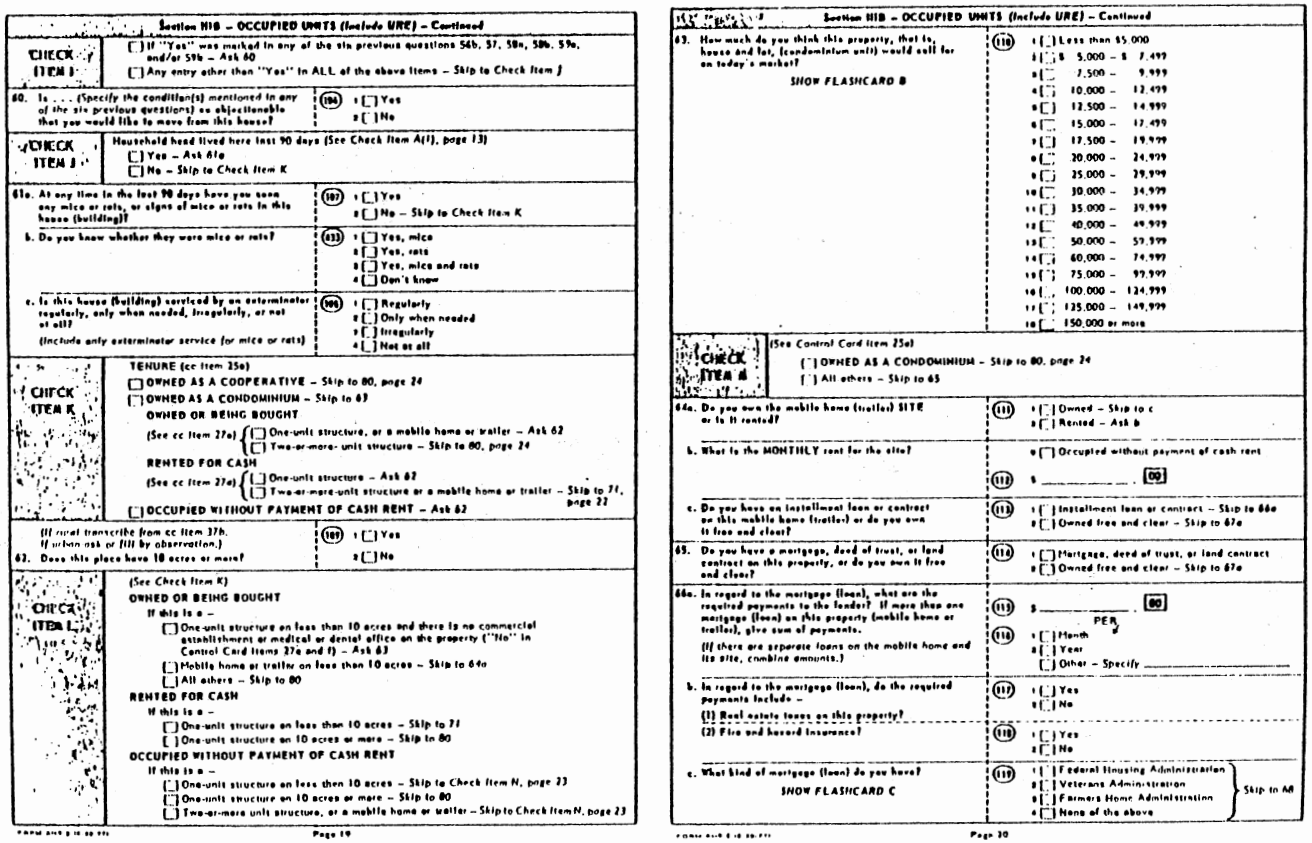
b. Is there any area of peeling paint on the ceiling or inside walls which is larger than this piece of paper?

(SHOW CLOSED INTERVIEWER INFORMATION CARD BOOKLET)

(985) 1 [ ] Yes
2 [ ] No

Page 18

Facsimile of the Annual Housing Survey Questionnaire: 1977 — Continued



Section H1B – OCCUPIED UNITS (Include URE) – Continued

CHECK ITEM I
- ☐ If "Yes" was marked in any of the six previous questions 56b, 57, 58a, 58b, 59a, and/or 59b – Ask 60
- ☐ Any entry other than "Yes" in ALL of the above items – Skip to Check Item J

60. Is . . . (Specify the condition(s) mentioned in any of the six previous questions) so objectionable that you would like to move from this house? (104) 1 ☐ Yes 2 ☐ No

CHECK ITEM J
Household head lived here last 90 days (See Check Item A(f), page 13)
- ☐ Yes – Ask 61a
- ☐ No – Skip to Check Item K

61a. At any time in the last 90 days have you seen any mice or rats, or signs of mice or rats in this house (building)? (107) 1 ☐ Yes 2 ☐ No – Skip to Check Item K

b. Do you know whether they were mice or rats? (033) 1 ☐ Yes, mice 2 ☐ Yes, rats 3 ☐ Yes, mice and rats 4 ☐ Don't know

c. Is this house (building) serviced by an exterminator regularly, only when needed, irregularly, or not at all? (Include only exterminator service for mice or rats) (006) 1 ☐ Regularly 2 ☐ Only when needed 3 ☐ Irregularly 4 ☐ Not at all

CHECK ITEM K
TENURE (cc Item 25a)
- ☐ OWNED AS A COOPERATIVE – Skip to 80, page 24
- ☐ OWNED AS A CONDOMINIUM – Skip to 63

OWNED OR BEING BOUGHT (See cc Item 27a)
- ☐ One-unit structure, or a mobile home or trailer – Ask 62
- ☐ Two-or-more- unit structure – Skip to 80, page 24

RENTED FOR CASH (See cc Item 27a)
- ☐ One-unit structure – Ask 62
- ☐ Two-or-more-unit structure or a mobile home or trailer – Skip to 71, page 22

☐ OCCUPIED WITHOUT PAYMENT OF CASH RENT – Ask 62

(If rural transcribe from cc Item 37b. If urban ask or fill by observation.)
62. Does this place have 10 acres or more? (109) 1 ☐ Yes 2 ☐ No

CHECK ITEM L
(See Check Item K)

OWNED OR BEING BOUGHT
If this is a –
- ☐ One-unit structure on less than 10 acres and there is no commercial establishment or medical or dental office on the property ("No" in Control Card items 27a and f) – Ask 63
- ☐ Mobile home or trailer on less than 10 acres – Skip to 64a
- ☐ All others – Skip to 80

RENTED FOR CASH
If this is a –
- ☐ One-unit structure on less than 10 acres – Skip to 71
- ☐ One-unit structure on 10 acres or more – Skip to 80

OCCUPIED WITHOUT PAYMENT OF CASH RENT
If this is a –
- ☐ One-unit structure on less than 10 acres – Skip to Check Item N, page 23
- ☐ One-unit structure on 10 acres or more – Skip to 80
- ☐ Two-or-more unit structure, or a mobile home or trailer – Skip to Check Item N, page 23

Page 19

Section H1B – OCCUPIED UNITS (Include URE) – Continued

63. How much do you think this property, that is, house and lot, (condominium unit) would sell for on today's market? SHOW FLASHCARD B (110)
1 ☐ Less than $5,000
2 ☐ $ 5,000 – $ 7,499
3 ☐ 7,500 – 9,999
4 ☐ 10,000 – 12,499
5 ☐ 12,500 – 14,999
6 ☐ 15,000 – 17,499
7 ☐ 17,500 – 19,999
8 ☐ 20,000 – 24,999
9 ☐ 25,000 – 29,999
10 ☐ 30,000 – 34,999
11 ☐ 35,000 – 39,999
12 ☐ 40,000 – 49,999
13 ☐ 50,000 – 59,999
14 ☐ 60,000 – 74,999
15 ☐ 75,000 – 99,999
16 ☐ 100,000 – 124,999
17 ☐ 125,000 – 149,999
18 ☐ 150,000 or more

CHECK ITEM M
(See Control Card item 25a)
- ☐ OWNED AS A CONDOMINIUM – Skip to 80, page 24
- ☐ All others – Skip to 65

64a. Do you own the mobile home (trailer) SITE or is it rented? (111) 1 ☐ Owned – Skip to c 2 ☐ Rented – Ask b

b. What is the MONTHLY rent for the site? (112) 0 ☐ Occupied without payment of cash rent $ _____ .00

c. Do you have an installment loan or contract on this mobile home (trailer) or do you own it free and clear? (113) 1 ☐ Installment loan or contract – Skip to 66a 2 ☐ Owned free and clear – Skip to 67a

65. Do you have a mortgage, deed of trust, or land contract on this property, or do you own it free and clear? (114) 1 ☐ Mortgage, deed of trust, or land contract 2 ☐ Owned free and clear – Skip to 67a

66a. In regard to the mortgage (loan), what are the required payments to the lender? If more than one mortgage (loan) on this property (mobile home or trailer), give sum of payments. (If there are separate loans on the mobile home and its site, combine amounts.) (115) $ _____ .00 PER (116) 1 ☐ Month 2 ☐ Year ☐ Other – Specify _____

b. In regard to the mortgage (loan), do the required payments include –
(1) Real estate taxes on this property? (117) 1 ☐ Yes 2 ☐ No
(2) Fire and hazard insurance? (118) 1 ☐ Yes 2 ☐ No

c. What kind of mortgage (loan) do you have? SHOW FLASHCARD C (119)
1 ☐ Federal Housing Administration
2 ☐ Veterans Administration
3 ☐ Farmers Home Administration
4 ☐ None of the above
– Skip to A8

Page 20

Facsimile of the Annual Housing Survey Questionnaire: 1977 – Continued

Section IIIB – OCCUPIED UNITS (Include URE) – Continued

67a. Did you place or assume a mortgage (loan) when you acquired this property (mobile home)?
(120) 1 [ ] Yes – Skip to 68
2 [ ] No

b. How did you acquire this property (mobile home)?
(121) 1 [ ] Inheritance or gift
2 [ ] Paid all cash
3 [ ] Other manner – Specify _____

68. Do you pay for –

a. (1) Electricity?
(122) 1 [ ] Yes
2 [ ] No, electricity not used – Skip to b(1)

(2) What is the average MONTHLY cost?
(123) $ _____ . [00]

b. (1) Gas?
(124) 1 [ ] Yes
2 [ ] No, gas not used – Skip to c(1)

(2) What is the average MONTHLY cost?
(125) $ _____ . [00]

c. (1) Oil, coal, kerosene, wood, etc.?
(126) 1 [ ] Yes
2 [ ] No, these fuels not used or obtained free – Skip to d(1)

(2) What is the YEARLY cost?
(127) $ _____ . [00]

d. (1) Fire and hazard insurance? (Also include if part of mortgage payments.)
(128) 1 [ ] Yes
2 [ ] No – Skip to e(1)

(2) What is the YEARLY cost?
(129) $ _____ . [00]

e. (1) Real estate taxes? (Also include if part of mortgage payments.)
(130) 1 [ ] Yes
2 [ ] No – Skip to f(1)

(2) What is the YEARLY cost? (Do not include taxes in arrears from previous years.)
(131) $ _____ . [00]

f. (1) Water supply and sewage disposal, separately from real estate taxes?
(132) 1 [ ] Yes
2 [ ] No or payment included in real estate taxes – Skip to g(1)

(2) What is the YEARLY cost?
(133) $ _____ . [00]

g. (1) Garbage and trash collection, separately from real estate taxes?
(134) 1 [ ] Yes
2 [ ] No or payment included in real estate taxes – Skip to 69a

(2) What is the YEARLY cost?
(135) $ _____ . [00]

Page 21

Section IIIB – OCCUPIED UNITS (Include URE) – Continued

69a. During the past 12 months –

(1) Were any additions made to your property such as a room, basement, porch, or garage?
(136) 1 [ ] Yes
2 [ ] No – Skip to b(1)

(2) Did any job cost $200 or more?
(137) 1 [ ] Yes
2 [ ] No

b. (1) Have any alterations been made to your property such as remodeling the kitchen or a bathroom, installing walks, driveways, fences, storm windows or doors, or planting trees or shrubbery?
(138) 1 [ ] Yes
2 [ ] No – Skip to c(1)

(2) Did any job cost $200 or more?
(139) 1 [ ] Yes
2 [ ] No

c. (1) Have you had any replacement jobs on your property such as resurfacing the roof or outer walls, replacing gutters or downspouts, or replacing or installing flood heating, electrical, or plumbing equipment? (Do not include appliances such as clothes washers, refrigerators, window air conditioners, etc.)
(140) 1 [ ] Yes
2 [ ] No – Skip to d(1)

(2) Did any job cost $200 or more?
(141) 1 [ ] Yes
2 [ ] No

d. (1) Have you made any repairs on your property such as painting or papering a room, or patching a driveway or broken fence?
(142) 1 [ ] Yes
2 [ ] No – Skip to 70a

(2) Did any job cost $200 or more?
(143) 1 [ ] Yes
2 [ ] No

70a. In the next 12 months, do you plan to make any additions, alterations, replacements, or repairs of the type I just asked you about?
(144) 1 [ ] Yes
2 [ ] No . . . . . } Skip to 80
3 [ ] Don't know

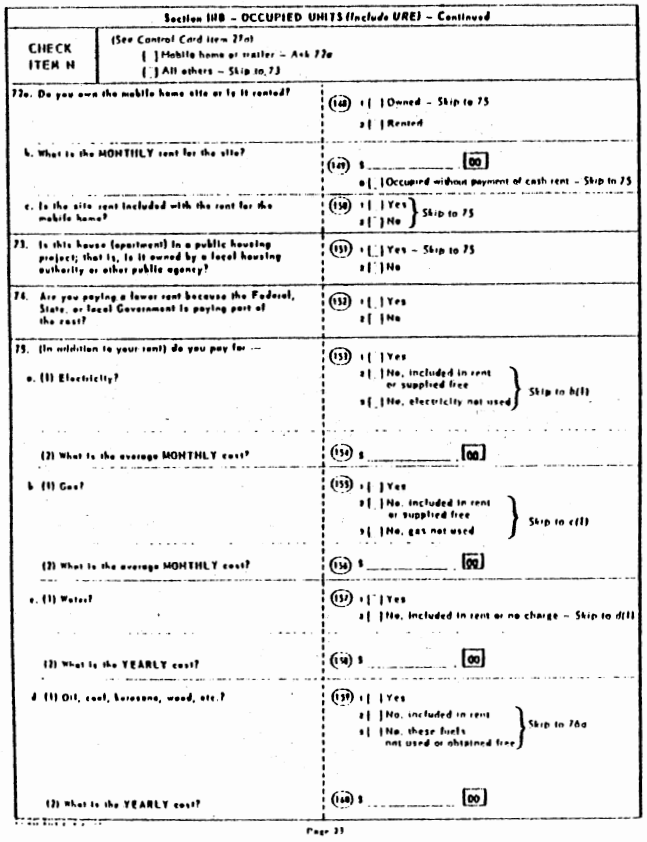
b. Do you expect any job to cost $200 or more?
(145) 1 [ ] Yes . . . .
2 [ ] No . . . . . } Skip to 80
3 [ ] Don't know

71. What is the MONTHLY rent?
(If rent is not paid by the month, mark the time period covered, compute MONTHLY rent in "Notes" space, and enter monthly rent on the line provided.)
(Do not include site rent for mobile homes if it is paid separately.)
(146) $ _____ [ ] Per month
(147) 1 [ ] More frequently than once a month
2 [ ] Less frequently than once a month
3 [ ] Once a month

Notes

Page 22

Facsimile of the Annual Housing Survey Questionnaire: 1977 – Continued



Section IIIB – OCCUPIED UNITS (Include URE) – Continued

CHECK ITEM N (See Control Card item 27a)
[ ] Mobile home or trailer – Ask 72a
[ ] All others – Skip to 73

72a. Do you own the mobile home site or is it rented? (148) 1 [ ] Owned – Skip to 75; 2 [ ] Rented

b. What is the MONTHLY rent for the site? (149) $ ____ .00; 0 [ ] Occupied without payment of cash rent – Skip to 75

c. Is the site rent included with the rent for the mobile home? (150) 1 [ ] Yes; 2 [ ] No } Skip to 75

73. Is this house (apartment) in a public housing project; that is, is it owned by a local housing authority or other public agency? (151) 1 [ ] Yes – Skip to 75; 2 [ ] No

74. Are you paying a lower rent because the Federal, State, or local Government is paying part of the cost? (152) 1 [ ] Yes; 2 [ ] No

75. (In addition to your rent) do you pay for —

a. (1) Electricity? (153) 1 [ ] Yes; 2 [ ] No, included in rent or supplied free; 3 [ ] No, electricity not used } Skip to b(1)

(2) What is the average MONTHLY cost? (154) $ ____ .00

b (1) Gas? (155) 1 [ ] Yes; 2 [ ] No, included in rent or supplied free; 3 [ ] No, gas not used } Skip to c(1)

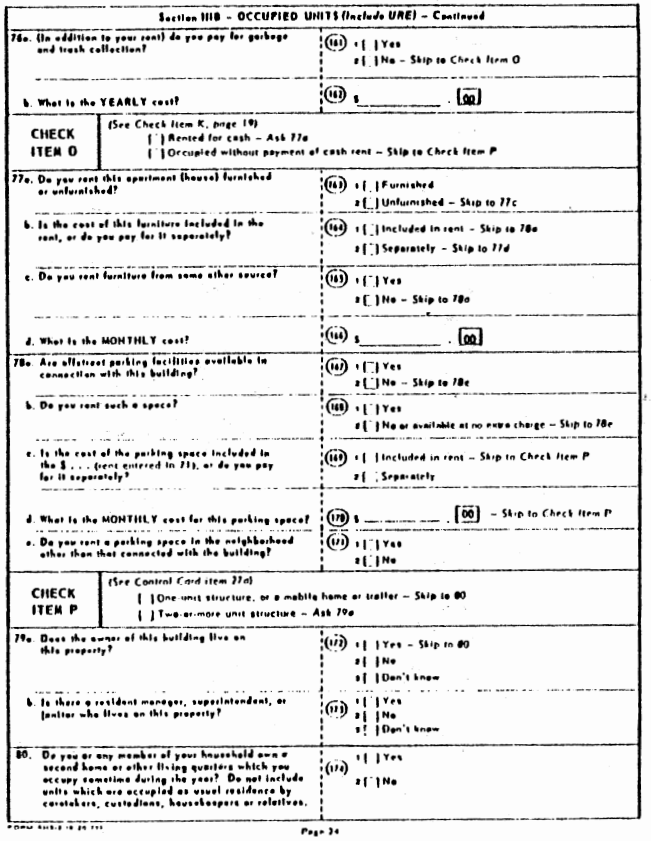
(2) What is the average MONTHLY cost? (156) $ ____ .00

c. (1) Water? (157) 1 [ ] Yes; 2 [ ] No, included in rent or no charge – Skip to d(1)

(2) What is the YEARLY cost? (158) $ ____ .00

d (1) Oil, coal, kerosene, wood, etc.? (159) 1 [ ] Yes; 2 [ ] No, included in rent; 3 [ ] No, these fuels not used or obtained free } Skip to 76a

(2) What is the YEARLY cost? (160) $ ____ .00



Section IIIB – OCCUPIED UNITS (Include URE) – Continued

76a. (In addition to your rent) do you pay for garbage and trash collection? (161) 1 [ ] Yes; 2 [ ] No – Skip to Check Item O

b. What is the YEARLY cost? (162) $ ____ .00

CHECK ITEM O (See Check Item K, page 19)
[ ] Rented for cash – Ask 77a
[ ] Occupied without payment of cash rent – Skip to Check Item P

77a. Do you rent this apartment (house) furnished or unfurnished? (163) 1 [ ] Furnished; 2 [ ] Unfurnished – Skip to 77c

b. Is the cost of this furniture included in the rent, or do you pay for it separately? (164) 1 [ ] Included in rent – Skip to 78a; 2 [ ] Separately – Skip to 77d

c. Do you rent furniture from some other source? (165) 1 [ ] Yes; 2 [ ] No – Skip to 78a

d. What is the MONTHLY cost? (166) $ ____ .00

78a. Are off-street parking facilities available in connection with this building? (167) 1 [ ] Yes; 2 [ ] No – Skip to 78c

b. Do you rent such a space? (168) 1 [ ] Yes; 2 [ ] No or available at no extra charge – Skip to 78c

c. Is the cost of the parking space included in the $ . . . (rent entered in 73), or do you pay for it separately? (169) 1 [ ] Included in rent – Skip to Check Item P; 2 [ ] Separately

d. What is the MONTHLY cost for this parking space? (170) $ ____ .00 – Skip to Check Item P

e. Do you rent a parking space in the neighborhood other than that connected with the building? (171) 1 [ ] Yes; 2 [ ] No

CHECK ITEM P (See Control Card item 27a)
[ ] One-unit structure, or a mobile home or trailer – Skip to 80
[ ] Two-or-more unit structure – Ask 79a

79a. Does the owner of this building live on this property? (172) 1 [ ] Yes – Skip to 80; 2 [ ] No; 3 [ ] Don't know

b. Is there a resident manager, superintendent, or janitor who lives on this property? (173) 1 [ ] Yes; 2 [ ] No; 3 [ ] Don't know

80. Do you or any member of your household own a second home or other living quarters which you occupy sometime during the year? Do not include units which are occupied as usual residence by caretakers, custodians, housekeepers or relatives. (174) 1 [ ] Yes; 2 [ ] No

Facsimile of the Annual Housing Survey Questionnaire: 1977 — Continued

Section NIB – OCCUPIED UNITS (Include URE) – Continued

81a. How many cars or passenger automobiles are owned or regularly used by members of your household?
(Count company cars kept at home, do NOT count trucks.)

(175)
1 [ ] None
2 [ ] 1
3 [ ] 2
4 [ ] 3
5 [ ] 4 or more

b. How many trucks of one-ton capacity or less are owned or regularly used by members of your household?
(Count company trucks kept at home.)

(176)
1 [ ] None . . .
2 [ ] 1 . . . . .
3 [ ] 2 or more

Skip to Check Item Q, page 76

82. FOR OFFICE USE

NOTES

Section IIIB – OCCUPIED UNITS (Include URE) – Continued

CHECK ITEM Q

[ ] URE household (See Item 7, page 1) – Skip to 105, page 31
(See Check Item A(3), page 13)
[ ] Head moved here during the last 12 months – Ask 83
[ ] Head has lived here 12 months or longer – Skip to 102a, page 30

83. The following questions are about the place where . . . (head) lived before moving here. What was the address of . . .'s (head) previous residence?

Address (Number and street)

City or town

County | State | ZIP code

OR

(177) 1 [ ] Outside the United States – Skip to 102a, page 30

84. What is the main reason . . . (head) moved from his previous residence?
(Write all reasons mentioned below, and then mark the main reason.)

EMPLOYMENT
(178)
1 [ ] Job transfer
2 [ ] Entered or left U.S. Armed Forces
3 [ ] Retirement
4 [ ] New job or looking for work
5 [ ] Commuting reasons
6 [ ] To attend school
7 [ ] Other

FAMILY
(179)
8 [ ] Needed larger house or apartment
9 [ ] Widowed
10 [ ] Separated
11 [ ] Divorced
12 [ ] Moved to be closer to relatives
13 [ ] Newly married
14 [ ] Family increased
15 [ ] Family decreased
16 [ ] Wanted to establish own household
17 [ ] Other

OTHER
(180)
18 [ ] Neighborhood overcrowded
19 [ ] Change in racial or ethnic composition of neighborhood
20 [ ] Wanted better neighborhood
21 [ ] Wanted to own residence
22 [ ] Lower rent or less expensive house
23 [ ] Wanted better house
24 [ ] Displaced by urban renewal, highway construction, or other public activity
25 [ ] Displaced by private action
26 [ ] Schools
27 [ ] Wanted to rent residence
28 [ ] Wanted residence with more conveniences
29 [ ] Natural disaster
30 [ ] Wanted change of climate
31 [ ] Other

Facsimile of the Annual Housing Survey Questionnaire: 1977 – Continued

Section IIIB – OCCUPIED UNITS (*Include URE*) – Continued

85a. Was . . . (head) the head of the household in his previous residence at the time he moved? (170)
- 1 [ ] Yes
  - 1 [ ] Respondent is the head – Skip to INTERVIEWER INSTRUCTION
  - 2 [ ] Respondent is not the head – Ask 85b
- 2 [ ] No – Skip to 107a, page 30

b. Were you also a member of . . . 's (head) household in the previous residence? (180)
- 1 [ ] Yes
- 2 [ ] No

INTERVIEWER INSTRUCTION ➧ If the respondent is the head, or "Yes" was marked in 85b – Ask questions 86–101 in terms of "your" previous residence. If "No" was marked in 85b – Ask questions 86–101 in terms of "head's" previous residence.

86. How many rooms were in . . . 's (your) (head) previous residence? Do not count bathrooms, porches, balconies, halls, foyers, or half-rooms. (181) _____ Number

87. How many bedrooms were in . . . 's (your) (head) previous residence? Count rooms used mainly for sleeping, even if used for other purposes. (182) _____ Number
- 0 [ ] None

88. How many persons were in . . . 's (your) (head) previous residence at the time . . . (you) (head) moved? (183) _____ Number

89. Did . . . (you) (head) have complete plumbing facilities in . . . 's (your) (head) previous residence (building), that is, hot and cold piped water, a flush toilet, and a bathtub or shower? (184)
- [ ] Yes → Were those facilities used by . . . 's (your) (head) household only?
  - 1 [ ] Yes – Used for that household only
  - 2 [ ] No – Also used by another household
- 2 [ ] No

90. How many living quarters, both occupied and vacant, were in the building where . . . 's (your) (head) previous residence was located? (185)
- 1 [ ] Mobile home or trailer (no permanent room attached)
- 2 [ ] One, detached from any other building
- 3 [ ] One, attached to one or more buildings
- 4 [ ] 2
- 5 [ ] 3 or 4
- 6 [ ] 5 to 9
- 7 [ ] 10 to 19
- 8 [ ] 20 to 49
- 9 [ ] 50 or more

91a. Was . . . 's (your) (head) previous residence owned or being bought by someone in the household? (186)
- [ ] Yes → Was it owned as a cooperative or condominium?
  - 1 [ ] No – Skip to Check Item R
  - 2 [ ] Yes, a cooperative – Skip to 107a, page 30
  - 3 [ ] Yes, a condominium – Skip to 93
- [ ] No – Ask 91b

b. Was it rented for cash rent or occupied without payment of cash rent? (196)
- 1 [ ] Rented for cash
- 2 [ ] Occupied without payment of cash rent

Section IIIB – OCCUPIED UNITS (*Include URE*) – Continued

CHECK ITEM R

TENURE OF PREVIOUS RESIDENCE (*See item 91, page 27*)

OWNED OR BEING BOUGHT (*See item 90, page 27*)
- 1 [ ] One-unit structure – Ask 92a
- 2 [ ] Two-or-more unit structure, or a mobile home or trailer – Skip to 107a, page 30

RENTED FOR CASH OR OCCUPIED WITHOUT PAYMENT OF CASH RENT (*See item 90, page 27*)
- 1 [ ] One unit structure – Skip to 94
- 2 [ ] Two-or-more unit structure, or a mobile home or trailer – Skip to Check Item S

92a. Was that house on a place of 10 acres or more? (187)
- 1 [ ] Yes – Skip to 102a, page 30
- 2 [ ] No

b. Was there a commercial establishment or medical or dental office on the property? (188)
- 1 [ ] Yes – Skip to 102a, page 30
- 2 [ ] No

93. What was the value of that property when . . . (you) (head) moved; that is, about how much did that property (house and lot) (condominium unit), sell for, or would it have sold for, had it been for sale?

SHOW FLASHCARD B (189)
- 1 [ ] Less than $5,000
- 2 [ ] $ 5,000 – $ 7,499
- 3 [ ] 7,500 – 9,999
- 4 [ ] 10,000 – 12,499
- 5 [ ] 12,500 – 14,999
- 6 [ ] 15,000 – 17,499
- 7 [ ] 17,500 – 19,999
- 8 [ ] 20,000 – 24,999
- 9 [ ] 25,000 – 29,999
- 10 [ ] 30,000 – 34,999
- 11 [ ] 35,000 – 39,999
- 12 [ ] 40,000 – 49,999
- 13 [ ] 50,000 – 59,999
- 14 [ ] 60,000 – 74,999
- 15 [ ] 75,000 – 99,999
- 16 [ ] 100,000 – 124,999
- 17 [ ] 125,000 – 149,999
- 18 [ ] 150,000 or more

→ Skip to 102a, page 30

94. Was that house on a place of 10 acres or more? (190)
- 1 [ ] Yes – Skip to 102a, page 30
- 2 [ ] No

CHECK ITEM S (*See item 91b, page 27*)
- [ ] Rented for cash – Ask 95
- [ ] Occupied without payment of cash rent – Skip to 96

95. What was the MONTHLY rent for . . . 's (your) (head) previous apartment (house)? (191) $ _____ 00 Per month

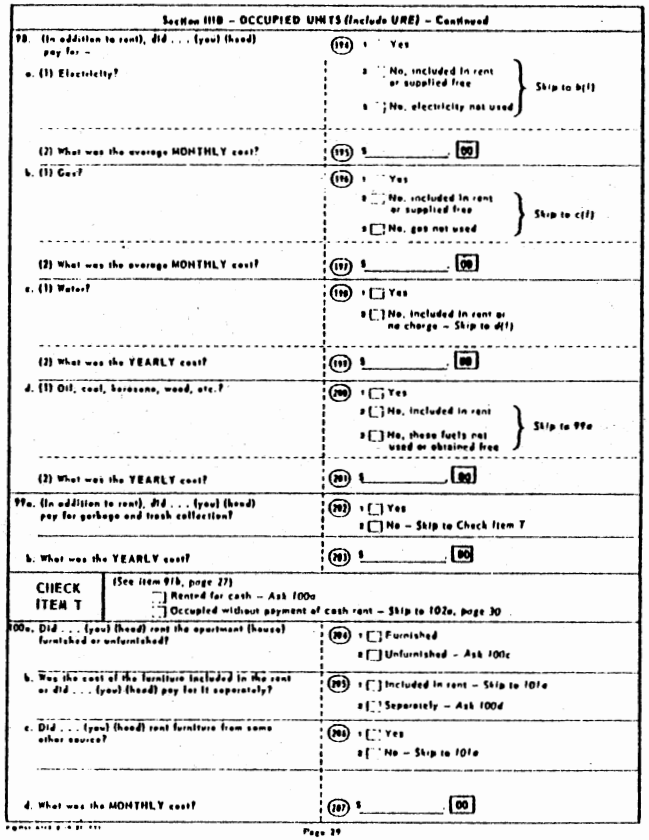
If rent was not paid by the month, write the amount and the time period covered in the "Notes" space, then compute MONTHLY rent and enter on the line provided.) (Include site rent for mobile homes if it was paid separately.)

NOTES

96. Was that house (apartment) in a public housing project; that is, was it owned by a local housing authority or other public agency? (192)
- 1 [ ] Yes – Skip to 98
- 2 [ ] No

97. Did . . . (you) (head) pay a lower rent because the Federal, State, or local Government was paying part of the cost? (193)
- 1 [ ] Yes
- 2 [ ] No

Facsimile of the Annual Housing Survey Questionnaire: 1977 — Continued



Section IIIB – OCCUPIED UNITS (Include URE) – Continued

98. (In addition to rent), did . . . (you) (head) pay for –

a. (1) Electricity? (194) 1 ☐ Yes; 2 ☐ No, included in rent or supplied free; 3 ☐ No, electricity not used } Skip to b(1)

(2) What was the average MONTHLY cost? (195) $ ____ .00

b. (1) Gas? (196) 1 ☐ Yes; 2 ☐ No, included in rent or supplied free; 3 ☐ No, gas not used } Skip to c(1)

(2) What was the average MONTHLY cost? (197) $ ____ .00

c. (1) Water? (198) 1 ☐ Yes; 2 ☐ No, included in rent or no charge – Skip to d(1)

(2) What was the YEARLY cost? (199) $ ____ .00

d. (1) Oil, coal, kerosene, wood, etc.? (200) 1 ☐ Yes; 2 ☐ No, included in rent; 3 ☐ No, these fuels not used or obtained free } Skip to 99a

(2) What was the YEARLY cost? (201) $ ____ .00

99a. (In addition to rent), did . . . (you) (head) pay for garbage and trash collection? (202) 1 ☐ Yes; 2 ☐ No – Skip to Check Item T

b. What was the YEARLY cost? (203) $ ____ .00

CHECK ITEM T (See item 91b, page 27) ☐ Rented for cash – Ask 100a ☐ Occupied without payment of cash rent – Skip to 102a, page 30

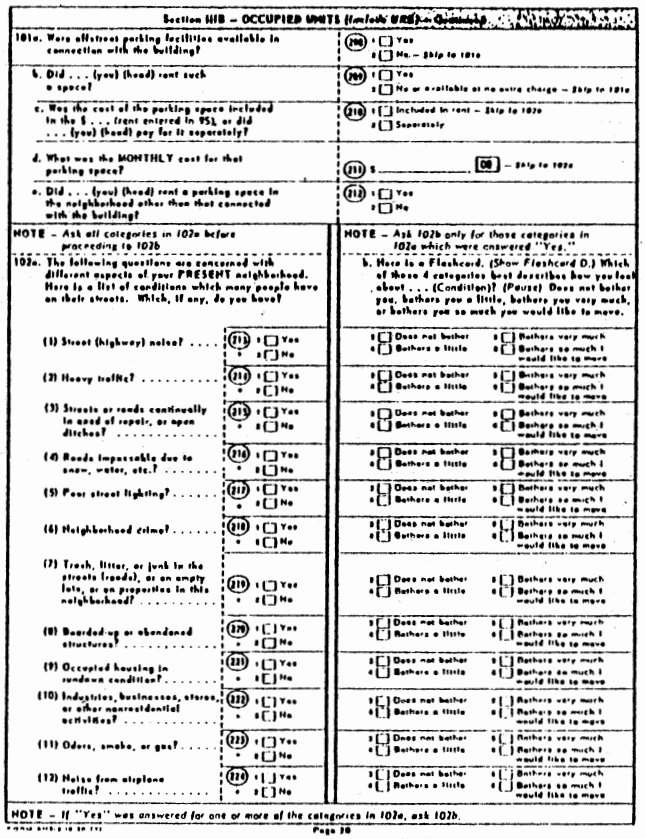
100a. Did . . . (you) (head) rent the apartment (house) furnished or unfurnished? (204) 1 ☐ Furnished; 2 ☐ Unfurnished – Ask 100c

b. Was the cost of the furniture included in the rent or did . . . (you) (head) pay for it separately? (205) 1 ☐ Included in rent – Skip to 101a; 2 ☐ Separately – Ask 100d

c. Did . . . (you) (head) rent furniture from some other source? (206) 1 ☐ Yes; 2 ☐ No – Skip to 101a

d. What was the MONTHLY cost? (207) $ ____ .00

Page 29



Section IIIB – OCCUPIED UNITS (Include URE) – Continued

101a. Were offstreet parking facilities available in connection with the building? (208) 1 ☐ Yes; 2 ☐ No. – Skip to 101e

b. Did . . . (you) (head) rent such a space? (209) 1 ☐ Yes; 2 ☐ No or available at no extra charge – Skip to 101e

c. Was the cost of the parking space included in the $ . . . (rent entered in 95), or did . . . (you) (head) pay for it separately? (210) 1 ☐ Included in rent – Skip to 102a; 2 ☐ Separately

d. What was the MONTHLY cost for that parking space? (211) $ ____ .00 – Skip to 102a

e. Did . . . (you) (head) rent a parking space in the neighborhood other than that connected with the building? (212) 1 ☐ Yes; 2 ☐ No

NOTE – Ask all categories in 102a before proceeding to 102b

NOTE – Ask 102b only for those categories in 102a which were answered "Yes."

102a. The following questions are concerned with different aspects of your PRESENT neighborhood. Here is a list of conditions which many people have on their streets. Which, if any, do you have?

b. Here is a Flashcard. (Show Flashcard D.) Which of these 4 categories best describes how you feel about . . . (Condition)? (Pause) Does not bother you, bothers you a little, bothers you very much, or bothers you so much you would like to move.

(1) Street (highway) noise?	(213) 1 ☐ Yes; 2 ☐ No	1 ☐ Does not bother; 2 ☐ Bothers a little	3 ☐ Bothers very much; 4 ☐ Bothers so much I would like to move
(2) Heavy traffic?	(214) 1 ☐ Yes; 2 ☐ No	1 ☐ Does not bother; 2 ☐ Bothers a little	3 ☐ Bothers very much; 4 ☐ Bothers so much I would like to move
(3) Streets or roads continually in need of repair, or open ditches?	(215) 1 ☐ Yes; 2 ☐ No	1 ☐ Does not bother; 2 ☐ Bothers a little	3 ☐ Bothers very much; 4 ☐ Bothers so much I would like to move
(4) Roads impassable due to snow, water, etc.?	(216) 1 ☐ Yes; 2 ☐ No	1 ☐ Does not bother; 2 ☐ Bothers a little	3 ☐ Bothers very much; 4 ☐ Bothers so much I would like to move
(5) Poor street lighting?	(217) 1 ☐ Yes; 2 ☐ No	1 ☐ Does not bother; 2 ☐ Bothers a little	3 ☐ Bothers very much; 4 ☐ Bothers so much I would like to move
(6) Neighborhood crime?	(218) 1 ☐ Yes; 2 ☐ No	1 ☐ Does not bother; 2 ☐ Bothers a little	3 ☐ Bothers very much; 4 ☐ Bothers so much I would like to move
(7) Trash, litter, or junk in the streets (roads), or on empty lots, or on properties in this neighborhood?	(219) 1 ☐ Yes; 2 ☐ No	1 ☐ Does not bother; 2 ☐ Bothers a little	3 ☐ Bothers very much; 4 ☐ Bothers so much I would like to move
(8) Boarded-up or abandoned structures?	(220) 1 ☐ Yes; 2 ☐ No	1 ☐ Does not bother; 2 ☐ Bothers a little	3 ☐ Bothers very much; 4 ☐ Bothers so much I would like to move
(9) Occupied housing in rundown condition?	(221) 1 ☐ Yes; 2 ☐ No	1 ☐ Does not bother; 2 ☐ Bothers a little	3 ☐ Bothers very much; 4 ☐ Bothers so much I would like to move
(10) Industries, businesses, stores, or other nonresidential activities?	(222) 1 ☐ Yes; 2 ☐ No	1 ☐ Does not bother; 2 ☐ Bothers a little	3 ☐ Bothers very much; 4 ☐ Bothers so much I would like to move
(11) Odors, smoke, or gas?	(223) 1 ☐ Yes; 2 ☐ No	1 ☐ Does not bother; 2 ☐ Bothers a little	3 ☐ Bothers very much; 4 ☐ Bothers so much I would like to move
(12) Noise from airplane traffic?	(224) 1 ☐ Yes; 2 ☐ No	1 ☐ Does not bother; 2 ☐ Bothers a little	3 ☐ Bothers very much; 4 ☐ Bothers so much I would like to move

NOTE – If "Yes" was answered for one or more of the categories in 102a, ask 102b.

Page 30

Facsimile of the Annual Housing Survey Questionnaire: 1977 -- Continued

Section IIIB – OCCUPIED UNITS *(Include URE)* – Continued

NOTE – *Ask ALL categories in 103a before proceeding to 103b.*

103. The following questions are concerned with neighborhood services.

a. Do you have satisfactory –

		NOTE – *Ask 103b only for those categories in 103a which were answered "No."*
(1) Public transportation?	(225) 1 [ ] Yes 2 [ ] No 3 [ ] Don't know	(226) 1 [ ] Does not bother 2 [ ] Bothers a little 3 [ ] Bothers very much 4 [ ] Bothers so much I would like to move
(2) Schools?	(227) 1 [ ] Yes 2 [ ] No 3 [ ] Don't know	(228) 1 [ ] Does not bother 2 [ ] Bothers a little 3 [ ] Bothers very much 4 [ ] Bothers so much I would like to move
(3) Neighborhood shopping such as grocery stores or drug stores?	(229) 1 [ ] Yes 2 [ ] No 3 [ ] Don't know	(230) 1 [ ] Does not bother 2 [ ] Bothers a little 3 [ ] Bothers very much 4 [ ] Bothers so much I would like to move
(4) Police protection?	(231) 1 [ ] Yes 2 [ ] No 3 [ ] Don't know	(232) 1 [ ] Does not bother 2 [ ] Bothers a little 3 [ ] Bothers very much 4 [ ] Bothers so much I would like to move
(5) Outdoor recreation facilities such as parks, playgrounds or swimming pools?	(233) 1 [ ] Yes 2 [ ] No 3 [ ] Don't know	(234) 1 [ ] Does not bother 2 [ ] Bothers a little 3 [ ] Bothers very much 4 [ ] Bothers so much I would like to move
(6) Hospitals or health clinics?	(235) 1 [ ] Yes 2 [ ] No 3 [ ] Don't know	(236) 1 [ ] Does not bother 2 [ ] Bothers a little 3 [ ] Bothers very much 4 [ ] Bothers so much I would like to move

NOTE – *If "No" was answered for one or more categories in 103a, ask 103b.*

104a. In view of all the things we have talked about, how would you rate this NEIGHBORHOOD as a place to live – would you say it is excellent, good, fair, or poor? (237) 1 [ ] Excellent 2 [ ] Good 3 [ ] Fair 4 [ ] Poor

b. How would you rate this HOUSE (building) as a place to live – would you say it is excellent, good, fair, or poor? (238) 1 [ ] Excellent 2 [ ] Good 3 [ ] Fair 4 [ ] Poor

OBSERVATION

105. Are there any buildings that appear to be abandoned and or are there any buildings with windows broken or boarded-up on this street? (239) 1 [ ] Yes 2 [ ] No

CHECK ITEM U

[ ] URE Household (See item 7, page 1) – Ask 106

(See Control Card item 27a) [ ] A one-unit structure, or a mobile home or trailer – Skip to 109

[ ] Two-or-more-unit structure – Skip to 107a

Section IIIC – OCCUPIED UNITS *(Include URE)* – Continued

(Ask for URE Households only)

106 Is this UNIT intended for year-round use, for occupancy only on a seasonal basis or for use by migrant workers? (241) 1 [ ] YEAR ROUND (occupied temporarily at time of interview) — Skip to 112, page 33

Seasonal: 10 [ ] Summers only; 11 [ ] Winters only; 12 [ ] Other seasonal – Specify in notes

9 [ ] Migratory

OBSERVATION

107a. Do the public halls in this building have light fixtures? (242) 1 [ ] Yes 2 [ ] No 3 [ ] No public halls — Skip to 108a

b. Are the light fixtures in working order? (243) 1 [ ] All in working order 2 [ ] Some in working order 3 [ ] None in working order

108a. Are there loose, broken, or missing steps on any common stairways inside this building or attached to this building? (244) 1 [ ] Yes 2 [ ] No 3 [ ] No common stairways – Skip to 109

b. Are all stair railings firmly attached? (245) 1 [ ] Yes 2 [ ] No 3 [ ] No stair railings

109. In the last 12 months, how much did . . . earn in wages, salaries, tips and commissions (before taxes and deductions)? (Obtain family income for head and all persons 14+ in household related to head by blood, marriage, or adoption. If the family has more than six members 14+, combine the amounts for all other persons on the last "Amount" line.)

	Line No.	Amount (Dollars only)
(a)	(246)	(247) $ .00
(b)	(248)	(249) $ .00
(c)	(250)	(251) $ .00
(d)	(252)	(253) $ .00
(e)	(254)	(255) $ .00
(f)	(256)	(257) $ .00

110a. In the past 12 months, how much did this family (you) earn in net income from its (your) own business, professional practice or partnership? (Exclude income previously reported in item 109.) (258) $ .00 (259) 1 [ ] None 2 [ ] Lost money (Enter amount LOST on line above)

b. In the past 12 months, how much did this family (you) earn in net income from its (your) own farm or ranch? (Exclude income previously reported in items 109 and 110a.) (260) $ .00 (261) 1 [ ] None 2 [ ] Lost money (Enter amount LOST on line above)

Facsimile of the Annual Housing Survey Questionnaire: 1977 – Continued

Section IIIB – OCCUPIED UNITS – Continued

NOTE – Ask 111a for all categories before asking 111b.

(Obtain family income for head and all persons 14+ in household related to head by blood, marriage, or adoption.)

111a. In the past 12 months, did any member of this family (you) receive any money from –

NOTE – Ask 111b only for those categories in 111a which were answered "Yes."

111b. How much was received from (source of income) in the past 12 months?

(1) Social Security or Railroad Retirement payments?	(262) 1 [ ] Yes 2 [ ] No	(263) $	.00
(2) Estates, trusts or dividends?	(264) 1 [ ] Yes 2 [ ] No	(265) $	.00
(3) Interest on savings accounts or bonds?	(266) 1 [ ] Yes 2 [ ] No	(267) $	.00
(4) Net rental income?	(268) 1 [ ] Yes 2 [ ] No	(269) $	.00
(5) Welfare payments or other public assistance?	(270) 1 [ ] Yes 2 [ ] No	(271) $	.00
(6) Unemployment compensation?	(272) 1 [ ] Yes 2 [ ] No	(273) $	.00
(7) Workmen's compensation?	(274) 1 [ ] Yes 2 [ ] No	(275) $	.00
(8) Government employee pensions?	(276) 1 [ ] Yes 2 [ ] No	(277) $	.00
(9) Veterans payments?	(278) 1 [ ] Yes 2 [ ] No	(279) $	.00
(10) Private pensions or annuities?	(280) 1 [ ] Yes 2 [ ] No	(281) $	.00
(11) Alimony or child support?	(282) 1 [ ] Yes 2 [ ] No	(283) $	.00
(12) Regular contributions from persons not living in this household?	(284) 1 [ ] Yes 2 [ ] No	(285) $	.00
(13) Anything else?	(286) 1 [ ] Yes 2 [ ] No	(287) $	.00

NOTE – If "Yes" was answered for one or more of the categories in 111a, ask 111b.

OBSERVATION – Fill for mobile home in group of 6 or more.

112. How many mobile homes are in this group? (288) 1 [ ] 6–99 2 [ ] 100 or more

OBSERVATION – Fill for 2 or more unit structures

113. How many stories (floors) are there from the main entrance of the building to the main entrance of the apartment? (289) 1 [ ] None, on same floor 2 [ ] One (up or down) 3 [ ] Two or more (up or down)

CHECK ITEM V

[ ] URE Household (See item 7, page 1) – Skip to Check Item AA, page 39 (See Control Card item 11h)

[ ] Household contains only family members – Skip to Check Item W, page 36

[ ] Household contains persons 14+ NOT RELATED TO THE HEAD by blood, marriage or adoption – Ask 114, page 34

Section IIIB – OCCUPIED UNITS – Continued

114. In the last 12 months, how much did . . . earn in wages, salaries, tips and commissions (before taxes and deductions)? →

(Obtain income for persons 14+ in household NOT RELATED TO HEAD by blood, marriage or adoption.)

115a. In the past 12 months, how much did . . . earn in net income from his/her own business, professional practice or partnership? →

b. In the past 12 months, how much did . . . earn in net income from his/her own farm or ranch? →

NOTE – Ask 116b for each "Yes" response in 116a. Ask 116a (and 116b, as appropriate) for all categories before asking 116c.

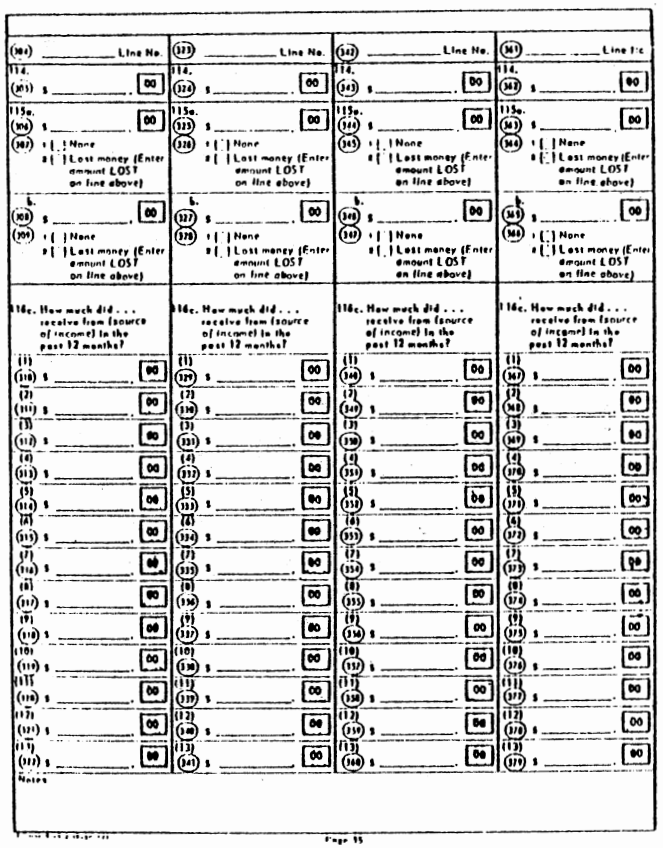
116a. In the past 12 months did . . . (names of persons 14+ NOT RELATED TO HEAD by blood, marriage or adoption) receive any money from –

116b. Who received this type of income? (Enter line numbers)

(1) Social Security or Railroad Retirement payments?	(290) 1 [ ] Yes 2 [ ] No	
(2) Estates, trusts or dividends?	(291) 1 [ ] Yes 2 [ ] No	
(3) Interest on savings accounts or bonds?	(292) 1 [ ] Yes 2 [ ] No	
(4) Net rental income?	(293) 1 [ ] Yes 2 [ ] No	
(5) Welfare payments or other public assistance?	(294) 1 [ ] Yes 2 [ ] No	
(6) Unemployment compensation?	(295) 1 [ ] Yes 2 [ ] No	
(7) Workmen's compensation?	(296) 1 [ ] Yes 2 [ ] No	
(8) Government employee pensions?	(297) 1 [ ] Yes 2 [ ] No	
(9) Veterans payments?	(298) 1 [ ] Yes 2 [ ] No	
(10) Private pensions or annuities?	(299) 1 [ ] Yes 2 [ ] No	
(11) Alimony or child support?	(300) 1 [ ] Yes 2 [ ] No	
(12) Regular contributions from persons not living in this household?	(301) 1 [ ] Yes 2 [ ] No	
(13) Anything else?	(302) 1 [ ] Yes 2 [ ] No	

NOTES

Facsimile of the Annual Housing Survey Questionnaire: 1977 —Continued



(304) _____ Line No.	(323) _____ Line No.	(342) _____ Line No.	(361) _____ Line No.
114. (305) $ _____ .00	114. (324) $ _____ .00	114. (343) $ _____ .00	114. (362) $ _____ .00
115a. (306) $ _____ .00 (307) ▫ [ ] None ▫ [ ] Lost money (Enter amount LOST on line above)	115a. (325) $ _____ .00 (326) ▫ [ ] None ▫ [ ] Lost money (Enter amount LOST on line above)	115a. (344) $ _____ .00 (345) ▫ [ ] None ▫ [ ] Lost money (Enter amount LOST on line above)	115a. (363) $ _____ .00 (364) ▫ [ ] None ▫ [ ] Lost money (Enter amount LOST on line above)
b. (308) $ _____ .00 (309) ▫ [ ] None ▫ [ ] Lost money (Enter amount LOST on line above)	b. (327) $ _____ .00 (328) ▫ [ ] None ▫ [ ] Lost money (Enter amount LOST on line above)	b. (346) $ _____ .00 (347) ▫ [ ] None ▫ [ ] Lost money (Enter amount LOST on line above)	b. (365) $ _____ .00 (366) ▫ [ ] None ▫ [ ] Lost money (Enter amount LOST on line above)
116c. How much did . . . receive from (source of income) in the past 12 months?	116c. How much did . . . receive from (source of income) in the past 12 months?	116c. How much did . . . receive from (source of income) in the past 12 months?	116c. How much did . . . receive from (source of income) in the past 12 months?
(1) (310) $ _____ .00	(1) (329) $ _____ .00	(1) (348) $ _____ .00	(1) (367) $ _____ .00
(2) (311) $ _____ .00	(2) (330) $ _____ .00	(2) (349) $ _____ .00	(2) (368) $ _____ .00
(3) (312) $ _____ .00	(3) (331) $ _____ .00	(3) (350) $ _____ .00	(3) (369) $ _____ .00
(4) (313) $ _____ .00	(4) (332) $ _____ .00	(4) (351) $ _____ .00	(4) (370) $ _____ .00
(5) (314) $ _____ .00	(5) (333) $ _____ .00	(5) (352) $ _____ .00	(5) (371) $ _____ .00
(6) (315) $ _____ .00	(6) (334) $ _____ .00	(6) (353) $ _____ .00	(6) (372) $ _____ .00
(7) (316) $ _____ .00	(7) (335) $ _____ .00	(7) (354) $ _____ .00	(7) (373) $ _____ .00
(8) (317) $ _____ .00	(8) (336) $ _____ .00	(8) (355) $ _____ .00	(8) (374) $ _____ .00
(9) (318) $ _____ .00	(9) (337) $ _____ .00	(9) (356) $ _____ .00	(9) (375) $ _____ .00
(10) (319) $ _____ .00	(10) (338) $ _____ .00	(10) (357) $ _____ .00	(10) (376) $ _____ .00
(11) (320) $ _____ .00	(11) (339) $ _____ .00	(11) (358) $ _____ .00	(11) (377) $ _____ .00
(12) (321) $ _____ .00	(12) (340) $ _____ .00	(12) (359) $ _____ .00	(12) (378) $ _____ .00
(13) (322) $ _____ .00	(13) (341) $ _____ .00	(13) (360) $ _____ .00	(13) (379) $ _____ .00

Notes

Page 15

Section IIIB – OCCUPIED UNITS – Continued

CHECK ITEM W

(See Control Card item 25a)

▫ [ ] OWNED or BEING BOUGHT (Regular, condominium, or cooperative ownership) – Ask 117a

▫ [ ] Rented for cash or occupied without payment of cash rent – Skip to 117b

117a. Do you have insurance on your home and its contents for any of the following?

(1) Theft and burglary	(379) ▫ [ ] Yes	▫ [ ] No	▫ [ ] Don't know
(2) Floods	(380) ▫ [ ] Yes	▫ [ ] No	▫ [ ] Don't know
(3) Earthquakes	(381) ▫ [ ] Yes	▫ [ ] No	▫ [ ] Don't know

Skip to 118a after filling 117a

b. Do you have insurance on your household contents (furniture and belongings) for any of the following?

(1) Fire	(382) ▫ [ ] Yes	▫ [ ] No	▫ [ ] Don't know
(2) Theft and burglary	(384) ▫ [ ] Yes	▫ [ ] No	▫ [ ] Don't know
(3) Hazards such as flood, or earthquake	(383) ▫ [ ] Yes	▫ [ ] No	▫ [ ] Don't know

118a. At your present address have you ever applied for and been refused automobile insurance, fire insurance, theft insurance, or hazard insurance such as flood, or earthquake, etc., BECAUSE OF WHERE YOU LIVE?

(385) ▫ [ ] Yes
▫ [ ] No . . . . . } Skip to 119
▫ [ ] Don't know

b. What type of insurance coverage have you been refused because of where you live?

(387) ▫ [ ] Automobile only
▫ [ ] Fire only
▫ [ ] Theft and burglary only
▫ [ ] Hazard only
▫ [ ] Fire and hazard
▫ [ ] Theft and hazard
▫ [ ] Any other combination

NOTES

Page 16

Facsimile of the Annual Housing Survey Questionnaire: 1977 – Continued

PGM 5

Section IIIB – OCCUPIED UNITS – Continued

119. Did . . . (head) have a job last week?
(332) 1 [ ] Yes
2 [ ] No – *Skip to Check Item Z, page 39*

120. What is . . . 's (head) principal means of transportation to work?
(390) 1 [ ] Truck . . . . . } – 2
2 [ ] Car or carpool
(391) 1 [ ] Drives alone
2 [ ] Shares driving
3 [ ] Drives others
4 [ ] Rides with someone else
(390) 5 [ ] Walks only
6 [ ] Works at home – *Skip to Check Item Z, page 39*
7 [ ] Railroad
8 [ ] Subway or elevated
9 [ ] Bus or streetcar
10 [ ] Taxicab
11 [ ] Motorcycle
12 [ ] Bicycle
13 [ ] Other means – *Specify* _____

121. Does . . . (head) usually **REPORT** to the same location to begin work each day?
(393) 1 [ ] Yes
2 [ ] No – *Skip to Check Item Z, page 39*

122. Does . . . (head) work in an incorporated city, town, borough or village?
(394) 1 [ ] Yes
2 [ ] No . . . . . } *Skip to 124*
3 [ ] Don't know

123. Does . . . (head) live in the same city, town, borough or village that he/she works in?
(397) 1 [ ] Yes
2 [ ] No

124. How long does it usually take . . . (head) to get from home to work?
(399) _____ Minutes

125. What is . . . 's (head) **ONE-WAY** distance from home to work?
(400) _____ Miles OR
0 [ ] Less than 1 mile

CHECK ITEM X
[ ] Head works 5 miles or more from home (*item 125 is 5 miles or more*) – *Ask 126a*
[ ] All others – *Skip to Check Item Z, page 39*

PGM 6

Section IIIB – OCCUPIED UNITS – Continued

126a. Does . . . (head) have any objections to the distance (he/she) travels to get to work? (403) 1 [ ] Yes – *Skip to c* 2 [ ] No – *Ask b*

b. What would you say your reasons are for living 5 or more miles from . . . 's (head) place of work?
Is it because –
(1) You like the neighbors in your present neighborhood? (404) 2 [ ] Yes 1 [ ] No
(2) You like your house (apartment)? (405) 1 [ ] Yes 2 [ ] No
(3) Your present home is close to good schools, or church? (406) 1 [ ] Yes 2 [ ] No
(4) Your present home is convenient to shops, recreation, and similar facilities? (407) 1 [ ] Yes 2 [ ] No
(5) Your present home is close to the jobs of others (besides the head) in your family? (408) 2 [ ] Yes 1 [ ] No
(6) You can afford your present home? (409) 1 [ ] Yes 2 [ ] No
(7) You're used to your present home, or you're comfortable, or you've always lived here? (410) 2 [ ] Yes 1 [ ] No
(8) Some other reason I have not already mentioned? (411) 1 [ ] Yes – *Specify reason(s)* – _____ 2 [ ] No – *Ask c* (*Skip to Note above item 127*)

c. What are the reasons you don't live closer to . . . 's (head) place of work?
Is it because –
(9) You don't like any houses which are closer to work? (412) 2 [ ] Yes 1 [ ] No
(10) You would not like to live among the type of people in the neighborhoods which are closer to work? (413) 1 [ ] Yes 2 [ ] No
(11) The neighborhoods closer to work have poor schools or lack churches? (414) 2 [ ] Yes 1 [ ] No
(12) The neighborhoods closer to work are inconvenient to shops, recreation, or other similar facilities? (415) 1 [ ] Yes 2 [ ] No
(13) The neighborhoods closer to . . . 's (head) work are too far from other family members' jobs? (416) 1 [ ] Yes 2 [ ] No
(14) You cannot afford housing in neighborhoods closer to work? (417) 1 [ ] Yes 2 [ ] No
(15) There is no closer housing available? (418) 2 [ ] Yes 1 [ ] No
(16) You don't like change; it's trouble to move? (419) 1 [ ] Yes 2 [ ] No
(17) . . . (head's) present job is temporary, or . . . (head) expects to change jobs? (420) 2 [ ] Yes 1 [ ] No
(18) Some other reason I have not already mentioned? (421) 1 [ ] Yes 2 [ ] No
Specify reason(s) – _____

NOTE *If 2 or more "Yes" answers in categories (1)–(18), ask item 127. If "Yes" only in c(14), go to Check Item Y. All others go to Check Item Z.*

127. In view of all of the reasons we have talked about (*Specify "Yes" answers mentioned in (1)–(18) above*), which reason would you say is the most important reason you live 5 or more miles from . . . 's (head) work? (424) _____ Reason number

CHECK ITEM Y
[ ] "Yes" in item 126c(14) and "No" in item 123 – *Ask 128*
[ ] All others – *Skip to Check Item Z*

128. You said you cannot afford housing in neighborhoods closer to work – Would . . . (head) move to the place where he/she works if housing were available which he/she could afford? (398) 1 [ ] Yes
2 [ ] No
3 [ ] Don't know

Facsimile of the Annual Housing Survey Questionnaire: 1977 — Continued

Section IIIB – OCCUPIED UNITS (Include URE) – Continued

CHECK ITEM Z

(1) (See Check Item N, page 3A)

[ ] Owned or being bought – Go to Check Item Z(2)

[ ] Rented for cash or occupied without payment of cash rent – Skip to Check Item AA

(2) (See Check Item A(3), page 1)

[ ] Head moved here during the last 12 months – Go to Check Item Z(3)

[ ] Head did not move here in last 12 months – Skip to Check Item AA

(3) (See item 66a, page 20)

[ ] Amount "DK" "NA" or "Refused" entered in item 66a – Ask 129a

[ ] Item 66a is blank – Skip to Check Item AA

129a. Earlier you told me that this property is mortgaged. When you acquired this property did you originate (place) a new mortgage or assume an existing mortgage? (428) 1 [ ] Originated mortgage; 2 [ ] Assumed mortgage – Skip to Check Item AA

b. At the time you acquired this property, what was the amount of the mortgage? Do not include second trusts, or any other loan associated with the property. (429) $ ____ .00

CHECK ITEM AA

[ ] "Urban" box marked in Control Card item 37a – Skip to Check Item BB

BOTH "Rural" box marked in Control Card item 37a AND

[ ] "Yes" in Control Card item 37c or 37d – Ask 130

[ ] "No," "NA" or "DK" in Control Card item 37c or 37d – Skip to Check Item BB

130. During the past 12 months did sales of crops, livestock and other farm products from this place amount to $1,000 or more? (430) 1 [ ] Yes; 2 [ ] No

CHECK ITEM BB

(See item 7, page 1)

[ ] URE Household – Go to Control Card item 38a

[ ] Regular Interviewed – Go to Section IV

NOTES

Section IV – ENERGY CONSERVATION

REFERENCE CHECK ITEM

(1) (See Control Card item 37a)

Number of living quarters

1 [ ] Mobile home or trailer or a one-unit structure (box 1, 2 or 3 marked in item 37a)

2 [ ] Two-or-more unit structure (box 4, 5, 6, 7, 8, or 9 marked in item 37a) – Skip to part (5)

(2) (See Control Card item 34a)

Storm windows

1 [ ] "Yes, all windows" or "Yes, some windows" (box 1 or 2 marked in item 34a)

2 [ ] "No" (box 3 marked in item 34a)

(3) (See Control Card item 34b)

Storm doors

1 [ ] "Yes, all doors" or "Yes, some doors" (box 1 or 2 marked in item 34b)

2 [ ] "No" (box 3 marked in item 34b)

(4) (See Control Card item 34c)

Attic or roof insulation

1 [ ] "Yes" (box 1 marked in item 34c)

2 [ ] "No" or "Don't know" (box 2 or 3 marked in item 34c)

(5) (See Section IIIB item 48, page 16)

Heating equipment

1 [ ] Box 1, 2, 3, 4 or 5 marked in item 48

2 [ ] Box 6, 7 or 8 marked in item 48

3 [ ] Box 9 marked in item 48

INTRODUCTION The following questions are concerned with heating equipment and insulation.

CHECK ITEM A

(See Control Card item 25 and Reference Check Item)

Owned or being bought AND

[ ] Box 9 marked in Reference Check Item – Ask 1

[ ] All others – Skip to Check Item B → PGM 7

1. What is the age of your furnace? (435) 1 [ ] 0–3 years; 2 [ ] 4–10 years; 3 [ ] 11–20 years; 4 [ ] 21–40 years; 5 [ ] 41 years or more; 6 [ ] Don't know

2a. During the past 12 months, has any maintenance been done or modifications been made to your furnace? (436) 1 [ ] Yes; 2 [ ] No

b. Do you have a maintenance contract for your furnace? (437) 1 [ ] Yes; 2 [ ] No

CHECK ITEM B

(See Reference Check Item)

1 [ ] Unit has no heating equipment (Box 11 marked in Reference Check Item) – Skip to 4a

2 [ ] All others – Ask 3a

Facsimile of the Annual Housing Survey Questionnaire: 1977 – Continued

Section IV – ENERGY CONSERVATION – Continued

3a. Is there a thermostat in your living quarters which controls your heat? (438) 1 [ ] Yes 2 [ ] No – Skip to 4a

b. Does this thermostat have a clock-operated setting so that the temperature can be lowered automatically? (439) 1 [ ] Yes – Skip to 4a 2 [ ] No

c. During the heating season do you ever change the temperature setting on the thermostat or do you keep the same setting all the time? (440) 1 [ ] Change setting 2 [ ] Keep uniform setting all the time – Skip to 4a

d. Do you change it occasionally, that is, 3 or fewer days of the week, or do you change it regularly, that is, 4 or more days of the week? (441) 1 [ ] Occasionally 2 [ ] Regularly 3 [ ] Don't know

4a. Do you have hot piped water in this house (apartment)? (442) 1 [ ] Yes 2 [ ] No – Skip to Check Item C

b. Which fuel is used most for heating the water? (443) Gas ——— 1 [ ] From underground pipes serving the neighborhood 2 [ ] Bottled, tank or LP 3 [ ] Electricity 4 [ ] Fuel oil 5 [ ] Kerosene 6 [ ] Coal or coke 7 [ ] Solar heat 8 [ ] Other fuel – Specify _____ 9 [ ] No fuel used

CHECK ITEM C (See Reference Check Item)
One-unit structure or mobile home or trailer (Box 1 in Reference Check Item) AND
[ ] All or some storm windows (Box 3 in Reference Check Item) – Ask 5
[ ] No storm windows (Box 4 in Reference Check Item) – Skip to Check Item D
[ ] All others – Go to Control Card Item 38a

5. During the past 12 months were any storm windows, double-glazed glass, or other protective covering, such as closeable shutters, plastic, etc., installed over the window openings on this house? (444) 1 [ ] Yes 2 [ ] No

CHECK ITEM D (See Reference Check Item)
[ ] All or some storm doors (Box 5 in Reference Check Item) – Ask 6
[ ] No storm doors (Box 6 in Reference Check Item) – Skip to Check Item E

6. During the past 12 months were any storm doors installed on this house? (445) 1 [ ] Yes 2 [ ] No

CHECK ITEM E (See Reference Check Item)
[ ] "Yes" for attic or roof insulation (Box 7 in Reference Check Item) – Ask 7a
[ ] "No" or "Don't know" for attic or roof insulation (Box 8 in Reference Check Item) – Skip to 7c

Section IV – ENERGY CONSERVATION – Continued

7a. During the past 12 months was attic or roof insulation added or installed? (446) 1 [ ] Yes 2 [ ] No – Skip to 7c

b. How much insulation was ADDED or INSTALLED to the attic or roof – was it less than 3 inches, 3 up to 6 inches, or 6 inches or more? (447) 1 [ ] Less than 3 inches 2 [ ] 3 up to 6 inches 3 [ ] 6 inches or more 4 [ ] Don't know

c. During the past 12 months was any insulation added or installed in the exterior walls? (448) 1 [ ] Yes 2 [ ] No

9. During the past 12 months was caulking or weatherstripping added to the exterior doors or windows? (449) 1 [ ] Yes 2 [ ] No 3 [ ] Don't know

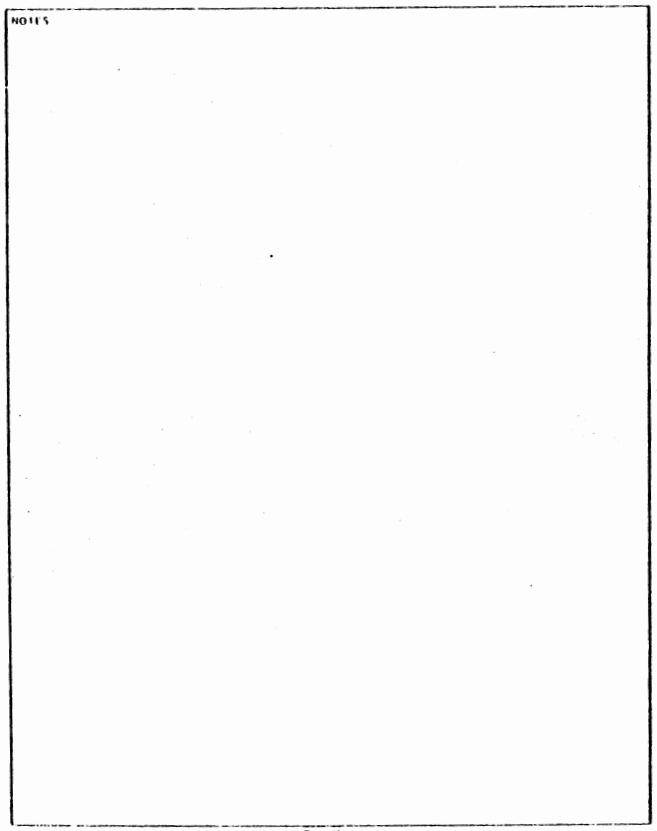
9. In addition to the types of thermal (heat) insulation already asked about, was any other thermal (heat) insulation added or installed in the house during the past 12 months, such as insulating hot water pipes or the hot water heater, or insulating floors or crawl spaces? (450) 1 [ ] Yes 2 [ ] No

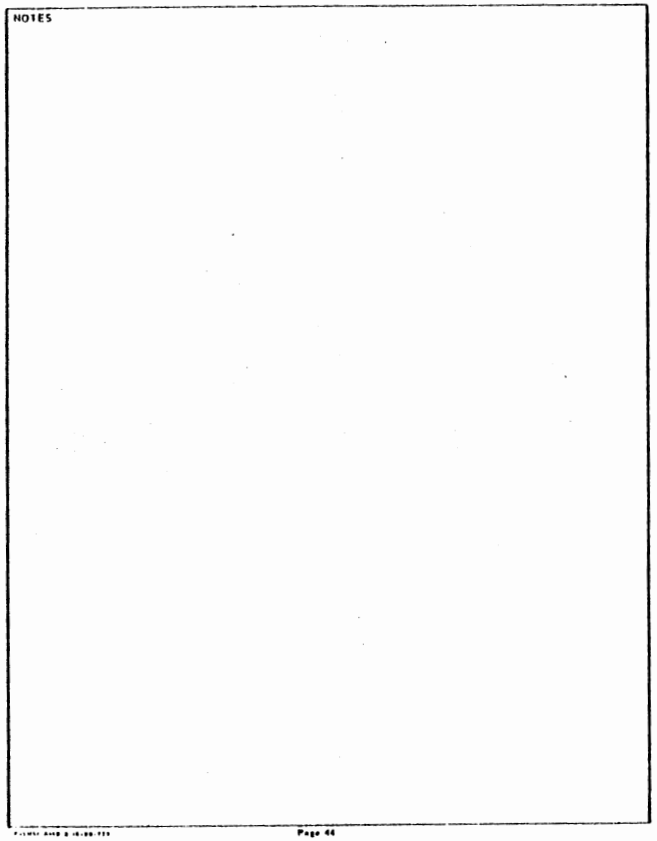
CHECK ITEM F (Refer to Control Card Item 25a)
[ ] Owned or being bought AND
[ ] "Yes" marked in any of 5, 6, 7a, 7c, 8 or 9 above – Ask 10
[ ] All others – Go to Control Card item 38a

10. What was the total cost of the (Specify "Yes" answers mentioned in items 5, 6, 7a, 7c, 8 and 9 above) which was added or installed during the past 12 months? (451) 1 [ ] $ 1 – 49 2 [ ] 50 – 99 3 [ ] 100 – 199 4 [ ] 200 – 399 5 [ ] 400 or more 6 [ ] Don't know 7 [ ] No charge, or none } Go to Control Card item 38a

NOTES

Facsimile of the Annual Housing Survey Questionnaire: 1977 --Continued





VITA2

Pauline Agusta Stromberg Snyder

Candidate for the Degree of

Master of Science

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