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Codebook for the Annual Housing Survey Data Base

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NOTE: Readers already familiar with the survey are encouraged to refer to pages iii and xiii of the Introduction to find the main changes in the survey. Page iv shows when each metropolitan area is now surveyed.

## CODEBOOK FOR THE

## ANNUAL HOUSING SURVEY

## DATA BASE

Louise Hadden
Mireille Leger

April 1989

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The AHS Data Project staff is especially thankful to Paul Burke, Department of Housing and Urban Development, for his assistance and guidance throughout the preparation of the Codebook. John D. Sneed originally developed the documentation in 1977. Columbia University staff, under the direction of Andrew D. Beveridge, maintained and greatly enhanced the Codebook from 1978-1981.

Also greatly appreciated is the cooperation of several staff members of the Census Bureau, in particular the technical assistance of Dennis Schwanz, Richard Kreinsen, and Richard Bartlett.

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"Building Value into Housing Program," November 1980.
The pictures are not grouped by subject and are not necessarily related to the sections where they are printed.

The Annual Housing Survey (AHS) collects data every other year on the Nation's people and homes. Also, the AHS continuously collects data on major metropolitan areas, coming back to each area about once every four years. The Census Bureau conducts these interviews for the US. Department of Housing and Urban Development (HUD). Most interviews are face to face, and the rest by telephone.

Until 1981, the AHS collected national data every year, instead of every other year. Also, the survey changed its name in 1984 to the American Housing Survey. Throughout this codebook we continue to use the term Annual Housing Survey.

This Codebook describes the AHS variables for 35 surveys from 1973 to 1993, although data files have not yet been released for all years. Significant changes to the samples, the questionnaires, the geographic boundaries and the coding conventions became necessary over the years. The authors have tried to use a consistent format and highlight changes as appropriate. Suggestions to improve the documentation and to facilitate the use of AHS data are welcome. A User Comment form is provided at the end of this Codebook.

AHS interviews ask about age, sex, income, highrises, houses, mobile homes, vacant homes, etc. Depending on the kind of home, the AHS queries homeowners about repairs and mortgages, recent movers about the home they left and why they moved, workers about their commute. A typical interview has over 500 items, all described in this Codebook. The table of contents shows the range of topics covered.

It is especially interesting that the survey goes back to the same housing units year after year. Therefore, the AHS is ideal for analyzing the flow of households through housing. It is also useful for any studies of people, since it has detailed data on both children and adults, nationally and in most large cities.

The Annual Housing Survey has two separate parts: (a) a national survey of housing units throughout the country, and (b) surveys in selected metropolitan areas (see map on page iii). Each


Woodrow Wilson House, District of Columbia (1915). The architect placed wo extrior lighwedls along the party wals of this house. They provide light to spaces that need light but not necessarily a view, such as stairwells, a pamry, a closet, buthrooms. and hallwass. What appears to be a large arched window near the center of the draving is actually a borrow tight ithuminuting the suir landing between the first and second floors.

metropolitan survey has 3,000-15,000 interviews, spread over 7-12 months. Metropolitan interviews in each area start in the spring of one year and end the next winter (except in 1984, when all interviews were done in the fall). Table 1 shows past and future surveys of each area.

The national survey covers $50,000-80,000$ homes, a completely different sample from the homes in the metropolitan survey. These national interviews are conducted in the fall. One basic sample, growing slightly to include new homes, was visited every fall from 1973-81, then again in 1983. Then the AHS drew a new sample from the 1980 Census to use in 1985, 1987, 1989, 1991, and 1993.

To help analyze changes over time, the national survey tapes from 1974-83 can be purchased either separately or merged, with the 9 years of data on each home linked together. To measure more recent changes, each 1985 interview will come with the 1980 Census Questionnaire for the same unit, and will be linked to 1987 and later AHS interviews when they become available. For example, these linked files permit you to count units of poor quality each year and determine which ones improved or declined the next year. Similarly, the metropolitan surveys can be ordered separately or linked.

The national AHS added a special sample of neighbors starting in 1985 (and again in 1989 and 1993). This neighbor sample covers the 10 nearest neighbors around each of 680 AHS homes in urban areas. The neighbor sample, which has 6,800 units in 680 clusters,

TABLE 1
Metropolitan and National Samples of the Amerlcan Housing Survey 1974-1991
*(Sample slzes shown at bottom of table)
PMSA
WHEN EACH AREA WAS SURVEYED
CODE TYPE 74-6 77-9 80-3 84-7 88-91

-TYPE": S=SMSA. PaPMSA, MoMSA, C=CMSA. THE NUMBER OF PMSAS INCLUOED IS ALSO SHOWN.


|  |  |  | SURV | Y YEAR |  | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NUMBER | OF AREAS | (total | ING 72 | PMSAS) |  | 19 | 21 | 20 | 20 | 15 | 15 | 15 | 15 | 12 | 13 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| - SAMPLE | SIZE IN | StARRED | AREAS | (000s) |  | 15 | 15 | 16 | 15 | 16 | 18 | 15 |  |  | 9 |  | 7 |  |  |  |  |  |  |
| SAMPL | E SIZE IN | N OTHER | AREAS | (0005) |  | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 |
|  | TOTA | $\checkmark$ SAMPL | E SIZE | (000s) |  | 132 | 147 | 150 | 142 | 114 | 121 | 111 | 73 | 51 | 64 | 47 | 55 | 36 | 36 | 36 | 36 | 36 | 36 |
|  |  | haracte | RS PER | RECORO |  | 431 | 730 | 895 | 920 | 933 | 1248 | 1437 | 1437 | 1692 | 1098 | 2215 | 2215 | 2215 | 2215 | 2215 | 2215 | 2215 | 2215 |
| MIL | LIDNS OF | CHARAC | Cters per | R file |  | 57 | 107 | 134 | 431 | 106 | 151 | 160 | 105 | 86 | 70 | 104 | 122 | 80 | 80 | 80 | 80 | 80 | 80 |
| MILLIONS | OF CHAR | S. FOR | SMALLES | St AREA |  | 2 | 4 | 4 | 5 | 5 | 7 | 7 | 7 | 7 | 4 | 9 | 9 | 7 | 7 | 7 | 7 | 7 | 7 |
|  |  |  | SURVE | Y YEAR | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 |
|  | BASIC NA | TIONAL | SAMPLE | (000s) | 60 | 61 | 61 | 62 | 59 | 59 | 60 | 61 | 59 |  | 59 |  | 46 |  | 48 |  | 50 |  | 52 |
|  | RUR | AL SUPP | LEMENT | (000s) |  | 16 | 17 | 18 | 48 | 19 | 19 | 49 | 2 |  | 19 |  |  |  | 6 |  |  |  | 6 |
|  | NE IGH3OR | OR SUPP | PEMENT | (0005) |  |  |  |  |  |  |  |  |  |  |  |  | 7 |  |  |  | 10 |  |  |
|  | TOTAL NA | TIONAL | SAMPLE | (000s) | 60 | 77 | 78 | 80 | 77 | 78 | 79 | 80 | 50 |  | 78 |  | 53 |  | 54 |  | 60 2735 |  | 58 2235 |
|  |  | HARACTE | ERS PER | RECORO | 399 | 771 | 810 | 812 | 994 | 1489 | 990 | 1710 | 1440 |  | 1482 |  | 2235 |  | 2235 |  | 2235 |  | 2235 |
| M1L | LIONS OF | CHARAC | Cters Per | R File | 24 | 59 | 63 | 65 | 77 | 116 | 78 | 137 | 86 |  | 1 16 |  | 118 |  | 121 |  | 134 |  | 130 |

A NEW NATIONAL SAMPLE WAS USED STARTING IN 198S. 1980 CENSUS RECOROS ARE AVAIGABLE ON THIS SAMPLE. TO GIVE IT SOME HISTORY.

[^0]lets users compare adjacent units, occupants of those units, and changes over time. The neighbor sample includes all the same questions as the regular national sample, and will be released on the same tape. The Geography section of this Codebook describes the codes that identify the neighbor cases.

In most national AHS surveys, when there is no neighbor sample there is an extra sample of rural units for more accurate rural estimates. Table 2 shows the number of units interviewed each year, while the bottom portion of Table 1 shows the sample sizes for 1985 and 1987 and expected sample sizes for future years.

## TABLE 2

NUMBER OF NATIONAL CASES BY INTERVIEW STATUS, BY YEAR

|  | Interview <br> (Occupied) | Interview <br> (URE) | Interview <br> (Vacant) $^{2}$ | Nom- <br> Interview | Total | Dates of <br> Interviews |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1973 | 46,814 | 379 | 4,352 | $\mathbf{N A}$ | 51,545 | $7 / 25 / 73-11 / 05 / 73$ |
| 1974 | 60,883 | 829 | 6,887 | 34,412 | 103,011 | $7 / 29 / 74-11 / 04 / 74$ |
| 1975 | 61,362 | 459 | 7,079 | 34,111 | 103,011 | $9 / 29 / 75-12 / 31 / 75$ |
| 1976 | 63,136 | 432 | 7,28 | 32,015 | 103,011 | $9 / 20 / 76-1 / 14 / 77$ |
| 1977 | 58,727 | 369 | 7,172 | 36,743 | 103,011 | $10 / 17 / 77-2 / 13 / 78$ |
| 1978 | 59,710 | 366 | 7,401 | 35,534 | 103,011 | $9 / 26 / 78-2 / 06 / 79$ |
| 1979 | 60,881 | 406 | 7,707 | 34,017 | 103,011 | $8 / 28 / 79-12 / 21 / 79$ |
| 1980 | 62,007 | 482 | 7,806 | 32,716 | 103,011 | $8 / 13 / 80-12 / 29 / 80$ |
| 1981 | 47,777 | 312 | 5,383 | 49,539 | 103,011 | $8 / 04 / 81-1 / 15 / 82$ |
| 1983 | 60,680 | 486 | 7,785 | 34,060 | 103,011 | $7 / 28 / 83-1 / 20 / 84$ |
| 1985 | 43,104 | 470 | 5,257 | 5,065 | 53,896 | $8 / 28 / 85-12 / 31 / 85$ |

${ }^{1}$ Usual Residence Elsewhere Occupants that usually live elsewhere are asked selected questions only.
${ }^{2}$ Interviews are conducted with landlords, managers, etc., and cover a subset of the questions only.
${ }^{3}$ Prior to 1985, the count of non-interviews includes units not yet in the sample, units dropped from the sample, and units missing from the sample. In 1985, a completely new sample of units was interviewed. The count of non-interviews therefore includes only units missing from the sample.

## PUBLICATIONS

HUD and the Census Bureau publish tabulations from each survey. There are six books for each national survey from 1973-83, and one book for each later national survey. There is also a book for each metropolitan area whenever it is surveyed. Each book costs between $\$ 5$ and $\$ 10$. For further information write to: HUD USER, Box 6091 Rockville, MD 20850 or call (800) 245-2691 or (301) 251-5154.

Each National Book (Series H-150) shows data for the U.S., four Census regions, Blacks and Hispanics. Books cover different topics, as follows:

| Topics | Breakdown | Identifier | Years <br> Available |
| :---: | :---: | :---: | :---: |
| General | By all topics | - | 1985-1993 |
| General | By Suburban, Central City <br> \& Non-Metropolitan Areas | Part A | 1973-1983 |
| General | By Urban and Rural | Part $E$ | 1974-1983 |
| General | By Rent, House Value \& Family Income | Part C | 1973-1983 |
| General | For Recent Movers Only | Part D | 1973-1983 |
| Housing \& Neighborhood Quality | Summary | Part B | 1973-1977 |
| Housing \& | By Rent, House Value | Part B | 1978-1983 |
| Neighborhood Quality | \& Family Income | Part F | 1973-1977 |
| Energy | Summary (Equipment, Fuels, Utility Costs, Commuting) | Part F | 1978-1983 |

Starting in 1985, most of the information is contained in a single book. To order National Books, specify series H-150, the part (if before 1985) and the year desired.

A Metropolitan Book (Series H-170) is prepared for each area each time it is surveyed (see Table 1). To order, specify Series H-170, the area and the year. There is also one summary book each year, with all the areas in that year's survey. To order the summary, specify Series H-171 and the year.

Books for the most recent year are usually in stock at HUD USER, which provides them for a handling charge of $\$ 3$ per copy.

If HUD USER does not have the volumes you want, the most recent four years may be available from Data User Services Division, Bureau of the Census, Washington, DC 20233, telephone (301) 763-4100. The U.S. Government Printing Office (GPO) may also have recent volumes: U.S. Govemment Printing Office, Washington, DC 20402, telephone (202) 783-3238. All volumes are available on microfiche for $\$ 2-\$ 4$ per volume from the Census address just given.

If none of these sources has the volumes you need, all can be photocopied by HUD USER at $\$ 5$ for 1-25 pages, $\$ 8$ for 26-100 pages, $\$ 13$ for 101-200 pages, and $\$ 6$ per 100 pages (or portion thereof) for orders over 200 pages.

In addition to this Codebook, the AHS Data Project sells a Directory and copies of the questionnaires used in the surveys. The Directory provides unweighted frequency distributions for each variable every year, a cross reference to locations on all the tapes and questionnaires, and information on allocation variables. It may be ordered by using the order form at the end of this Codebook

Additional detailed tabulations not normally published can be prepared on hard copy by the AHS Data Project, Abt Associates Inc., 55 Wheeler Street, Cambridge, MA 02138; telephone (617) 492-7100.

The cost of preparing custom tabulations and Data Displays varies depending on the complexity of the request, the size of the file(s) to be used in the preparation of the run, the number of output pages and the amount of art work involved for Data Displays. A simple crosstabulation such as the one presented below can be prepared for $\$ 250$. Any additional tables using the same input file can be produced for little additional cost.

| 1983 NATIONAL STATISTICS |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TABLE OF NUNITS BY BEDRMS CONTROLLING FOR REGION=NORTHEAST |  |  |  |  |  |  |  |  |
| NUNITS | BEDPMS |  |  |  |  |  |  |  |
| FREOUENCT PERCENT ROW PCT |  |  |  |  |  |  |  |  |
| ONE/DET | 77812 | 424538 | 2127946 | 4724477 | 2013058 | 363411 | 100626 |  |
|  | 0.67 | 3.68 | 18.46 | 40.98 | 17.46 | 3.15 | 100626 0.87 | 9831868 85.28 |
|  | 0.79 | 4.32 | 21.64 | 48.05 | 20.47 | 3.70 | 1.02 |  |
|  | 87.34 | 87.09 | 81.99 | 83.44 | 91.96 | 92.05 | 90.04 |  |
| ONE/ATT | 11277 | 62906 | 467513 | 937375 | 175924 | 31398 | 11125 | 1697518 |
|  | 0.10 | 0.53 | 4.05 | 8.13 | 1.53 | 0.27 | 0.10 | 14.72 |
|  | 0.66 | 3.71 | 27.54 | 55.22 | 10.36 | 1.85 | 0.66 |  |
|  | 12.66 | 12.91 | 18.01 | 16.56 | 8.04 | 7.95 | 9.96 |  |
| TOTAL | 89089 | 487444 | 2595459 | 5661852 | 2188982 | 394809 | 111751 |  |
|  | 0.77 | 4.23 | 22.51 | 49.11 | 18.99 | 3.42 | 0.97 | $100.00$ |

Data displays requiring more programming time or, graphic services such as the ones presented below, are also available.

The Single population in
Selected Metropolitan Areas (in 000's)


SOURCE AMS Metrocontan Avea Simomes 1801. Durison of
mouling and Dernograonc Anarrand uS Deopriment of moub ing and uram Oevolocment.

The AHS Data Project is administered by Abt Associates Inc., a research firm specializing in economic analysis, evaluation of social programs and market research. The Housing Area staff has had intensive experience in using the AHS data in various analyses. The staff is available to assist you in defining your data needs, in planning your analyses or conducting analyses tailored to your specific needs.

## TECHNICAL ASSISTANCE AND CONSULTATION

The AHS Data Project staff will answer your questions about the content, the format, the reliability and the applicability of the AHS data to your specific research or business needs. They may suggest other sources of data as appropriate. The AH'S Data Project has been in operation for over 10 years and may be able to refer you to others who have used the AHS data for a similar purpose and may be willing to share their experience with you in addressing a special issue. Furthermore, the AHSS Data Project can draw on Abt Associates staff members' experience to help you resolve a research issue. Consultations beyond 2 hours will be provided for a fee, reflecting the costs of labor and materials.

## DATA FILES

Data files are available from several sources:

- Complete files from the Census Bureau cost $\$ 175$ per reel of tape. For further information, contact: Data Users Services Division, Census Bureau, Washington, DC 20233 or call (301) 763-4100.
- Census Tapes are also available at the Inter-University Consortium for Political and Social Research (ICPSR). ICPSR is a membership-based organization. Tapes are available at no cost to members and for a charge to nonmembers. To inquire on availability and prices, phone ICPSR at (313) 764-2570 or write ICPSR, University of Michigan, Arn Arbor, Michigan 48106.
- A variety of standard files are available from the AHS Data Project at Abt Associates. Others can be prepared according to user specifications. Prices vary from $\$ 150$ to $\$ 2,400$. To make programming easier, machine readable documentation is provided in SAS, SPSS, or FORTRAN. Smaller files designed to be used on personal computers can be prepared on diskettes instead of tapes.

The data tapes prepared by Abt Associates differ in several ways from the files available from the Census Bureau and ICPSR:

- Abt files are available in a common layout (fixed field lengths and order of variables) from year to year, while Census file layouts are different each year. Thus, the record length of Census files is slightly shorter, since Abt always leaves space for questions that are on some questionnaires but not on all. Note that Abt standard files do not include one-time AHS supplements (like the 1978 disability questions). These are available by special order from Abt (see discussion under "AHS Supplements" below), while they are usually included in standard Census files.
- Abt files are available with a fixed number of records from year to year, while Census record counts change as units are added by new construction or lost by demolition or other causes of attrition. Abt files include dummy records for years before a unit joined the sample or after it dropped out. Users of Abt yearly files have the option of specifying whether they desire these dummy records to be included or excluded from their files.
- Some analysis was performed on these files, and obvious errors were corrected in the Abt tapes. For example, geography variables which cannot change from one year to another were compared, and discrepancies resolved.

Because of the additional processing that has been done, Abt files for individual years are more expensive than Census files. We encourage researchers who do not need data linked across years or standardized formats to buy Census files; researchers who do need linked or standardized data, or want extracts of data, should purchase Abt files.

AHS files can be very large, and existing software packages may be expensive to use. A more efficient package, the BOAT Package, is available from the AHS Data Project with appropriate documentation. This package can handle any data on computers, from micros to super-computers. It is also easy to use. A sample table prepared with this package is shown below.

| OCCUPIED HOMES IN SELECTED METROPOLITAN AREAS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Btrmingham | Buffalo Niagara F. | Providence Pawtucket | San Jose | TOTAL |
| TOTAL | 328.000 | 447.000 | 357.000 | 483.000 | -. 615.000 |
| Lead Pipes (pre1920) | 14,000 | 103.000 | 95,000 | 11.000 | 223.000 |
| Avg Yrs betw. Moves | 23 | 26 | 24 | 16 | 22 |
| \% Owner-Oceupted | 69 | 65 | 62 | 59 | 63 |
| Average Income | 22.486 | 22.776 | 25.673 | 41.479 | 28.949 |
| Sample Size | 3.281 | 3,511 | 3.626 | 3.794 | 14.212 |
| BOAT Package American riou | , Monday, using Survey | $\begin{aligned} & \text { August } 1,19 \\ & \text { y } 1984 \mathrm{~S} \end{aligned}$ | 988, 2:56 |  | 14.212 Cas |

## HOW TO USE THIS CODEBOOK

When you receive a data tape you should receive (a) this Codebook showing the meaning of each variable, (b) a "layout" showing the columns where each variable appears on the tape, and (c) a page showing whether your tape has density of 6,250 or 1,600, is coded in Ebcdc or Ascii, etc. Use items (b) and (c) to read the tape at your computer center. Then you can use (a), this Codebook, to choose the specific variables you want to analyze.
For example, if you wanted to compare housing costs in good and bad neighborhoods, you would turn to the table of contents and find that there are specific sections on "Neighborhood" and "Housing Cost." Each of these sections begins with some text describing the information available. Then each section has a list of the individual questions that have been asked, and the codes for each answer. You would choose an appropriate measure of neighborhood quality, such as HOWN, which is an overall measure of satisfaction, or CRIME which is a specific question about crime, or any of a variety of other questions. Similarly, in the cost section, ZSMHC is an overall measure of monthly housing costs, and there are separate questions on mortgage costs, rent, taxes, etc. If you already know the name of a variable, perhaps from another researcher, you can find it quickly in the alphabetical index at the end of the Codebook. For each question, be careful of homes where a question is not applicable, such as vacant homes, demolished homes, newly built homes, etc. The list of codes for each variable shows these situations. For example, the code 9 in CRIME means not applicable, and 8 means not answered (the respondent refused, or the interviewer forgot to ask the question).

When you finish preparing a table, compare the total number of units you get to an AHS publication, to be sure you have run the tape correctly. Numbers should match fairly closely, except in high categories of financial variables, where the top code given on the tape is limited to protect confidentiality.

When using AHS data tapes, users should remember to weight data with the variable WEIGHT, which is documented in the Sample Status section of this Codebook On national tapes, correct samples should be chosen by using the variable RURREC in the Geography section of this Codebook. The analyst should also be aware that standard errors calculated by most statistical analysis packages underestimate the actual standard errors. For corrections, see Chapter 1.

This codebook summarizes data from 35 surveys as compactly as possible, to show when comparable data are available and to show what each code means. Variables are presented in broad subject groupings. Each grouping has an introduction with a brief description of its content. New variables and variables that continue to be available after 1983 are highlighted in the Codebook by using a bolder type face to print the variable name and variable description. In several sections, tables have been added to show skip patterss for the variables. To keep the Codebook small, we have not reprinted the individual questions, but we have tried to note major changes in phrasing. From 1984 on, most of the questionnaire is unchanging, so we have reprinted the major part of the 1985 National questionnaire. The sample shows questions for occupied units. It does not show sections for non-interviews or unoccupied units and does not include supplemental questions which vary from survey to survey. Copies of complete surveys are printed in the AHS Publications or may be obtained from Abt Associates.

A QUICK GUIDE TO THIS CODEBOOK:

| $\begin{aligned} & 73 N-93 N \\ & 745-93 S \end{aligned}$ | Nurber of Reom | Aif Conditioners |
| :---: | :---: | :---: |
|  | 1 | 1 Uni: |
|  | 2 | 2 units |
|  | 3 | 3 Units |
|  | 4 | 4 Units |
|  | 5 | 5 Units |
|  | 6 | 6 Units |
|  | 7 | 7 Units |
|  | 8 | g Or More Units |
|  | 9 | Not Applicaole |

Variable Number
and Variable Name
The variable number provides a convenient reference. The variable name attempts to describe the content of the variable. Whenever possible, questions in the new questionnaire were assigned the same name as in earlier surveys, even if the question was modified.

## Surveys

This entry documents the years and surveys for which the variable is available. A year followed by an " N " means that the variable is available in the National Survey, and a year followed by an " S " indicates that it is available in the Metropolitan Statistical Area survey. For the National Survey, users should remember that starting in 1981, the Survey was conducted only in odd years. A range of 1974 N -1993N, therefore, indicates that the variable is available each year from 1974 through 1981 and odd years thereafter.

## Variable Description

This entry describes the variable as briefly and accurately as possible. Users should refer to the actual question in the Questionnaire to understand the exact intent of the question.

## Codes

Response categories and coding conventions have changed over the years for many variables. These changes are documented through the use of separate columns. The column heading indicates the survey years for which each coding convention is applicable.

## Page on

Questionnaire
This entry provides the page number on selected questionnaires. Entries include the last year it was available in the old questionnaires (generally 1983) and the first year it is available in the redesigned questionnaires (generally 1984S and 1985N). A blank means the question was not available. " G " means the variable was computer generated. " C " means the item comes from the control card rather than the Questionnaire. If a question appears on more than one page on the questionnaire, e.g., on page 4 for single family units and on page 15 for multifamily units, the page on which the question appears the first time is reported. The Directory (see below) reports every page number and covers all surveys.

Notes are included to clarify a definition, to highlight important wording, changes in respondents across years and other facts which may affect the comparability or reliability of the variable.

It should be noted that the documentation of the 1984-1993 surveys has been prepared on the basis of the Questionnaires and preliminary documentation from the Census Bureau. The exact codes for some variables may be inaccurate, since the Census Bureau may change its coding specifications during the data preparation phase. The Codebook has been reviewed against actual data for the 1984 and 1985 N surveys and will continue to be reviewed as AHS files are released by the Census Bureau.

As complements to this Codebook, the AHS Data Project sells a Directory and copies of the questionnaires used in the surveys. The Directory provides unweighted frequency distributions for each variable every year, a cross reference to locations on all the tapes and questionnaires, and information on allocation variables. It may be ordered with the order form on the back of the title page.

## SPECIAL CONSIDERATIONS

## Summary Variables

The AHS tapes contain some variables which were generated by the Census Bureau. These variables are identified by showing " $G$ " instead of a page number under "Page" on the Questionnaire. Most of these variable names start with the letter Z. Experience from previous research and from reports from AHS users indicates that these variables should be used with care, since they may not always meet the specific needs of a given analysis. In a few instances, where specific problems have been identified, a note is included in the documentation. In other cases, it is recommended that researchers consider the option of deriving their own variables, since in most instances the raw variables are also available in the data files. The AHS Data Project staff will be happy to assist with any questions on summary variables.

## Major Definition <br> Changes from Past Surveys

Starting in the 1984 AHS and 1980 Census, vacant mobile homes count as housing units; previously they did not. Starting in the 1984 AHS, the cost of housing is collected for all units; previously cost was not collected on units with more than 10 acres nor on owner-occupied units in multi-unit buildings such as duplexes or condominiums. Starting in the 1984 AHS, the total housing cost of renters (ZRENT) includes property insurance, if any; previously it
did not. The variable ZRENT has been combined with the variable for owners' costs as ZSMHC, and utility variables have similarly been combined. Starting in the 1984 AHS, the variable WEIGHT is available for non-interviews as well as interviews. Several geography variables, tenure, units in structure, etc., have changed coding. Check the chapters of this book Also, in the 1984 AHS and 1980 Census, a household that reaches its home through someone else's home is not a separate household; previously it was one if each of the two households had complete, separate kitchen facilities. Starting in the 1984 AHS and 1980 Census, a household where 9 or more people are unrelated to the householder is not counted as a housing unit and is omitted from the AHSS; previously the limit was 5 or more. Starting in the 1980 AHS and Census, the householder can be any adult whose name is on the title or lease of the home; previously the term was head of household, and was arbitrarily the husband in husband-wife families.

Treatment of
Missing Data
There are three sources of missing data in the Annual Housing Survey: non-interviewed units, questions that did not apply to the unit, and unanswered questions that did apply to the unit. Non-interviewed units (refusals, cannot locate, etc.) have their weights spread among other units for which an interview was completed. This process is discussed in more detail in the Sample Status section and Chapter 2. Questions that do not apply (e.g., rent on an owned unit) are given "not applicable" codes. Unanswered questions are identified by allocation variables or by "not answered" codes.

In general, the label "Not Answered" indicates that the question was applicable to the particular unit, but an answer was not provided. For some variables, the data base includes a code for "not answered" (usually "8", "98"). For other variables, the Census Bureau assigns, or "allocates," responses to unanswered questions by copying the responses of the last similar unit processed. Groups of units considered "similar" are shown in the Sample Status section. The groups are usually based on tenure, race, sex and general unit descriptors. Units are processed in geographic order, so the last similar unit is normally nearby. This procedure preserves the distribution of responses within a variable, and preserves the mean. However, allocated data should be avoided when you compare variables or look at changes over time.

There is also a possibility that two answers are inconsistent. If so, one will be edited. For example, if rent is filled in on an owned unit, it will be changed to "Not Applicable." Where the correct answer cannot be determined, the question will be treated as not answered. The data base virtually always shows when allocations are done. Starting in 1984, the data base also shows when edits
are done. The Sample Status section explains this process more fully.

Table 3 shows the variables which are most frequently allocated or edited. A variable is included in the table if it was allocated or edited 1,000 or more times in 1985. The number of cases allocated in 1983 is shown in the last column. Percentages are based on the number of applicable cases, rather than total cases. Both the number of allocations and edits are shown in the Questionnaire Directory for all variables. Recoded variables may exhibit an even higher percentage of allocations, since all or several variables used in their computation may be subject to allocation. For example, in 1983, the Questionnaire Directory shows that there were 7,447 allocations of various components of gross rent.

The label "Not Applicable" includes three types of non-responses: (1) the interview did not take place, (2) the unit was not in the sample and a dummy record was created, and (3) the question was not intended to be asked of the respondent, as determined by the skip pattern. The skip patterns used in the Annual Housing Survey Questionnaires are very complex. Because of cost constraints it was not possible to document these patterns for all variables in this version of the codebook Several tables have been added to this revised version of the Codebook to assist users in following the conventions used by the Census Bureau in coding some of the more complex skip patterns. The tables are useful to identify changes in skip patterns and universes across years. Where researchers find more "not applicable" cases than would be expected due to vacant units, non-interviews, or other obvious skip patterns, they should trace the precise skip instructions in the questionnaire.

In using the codebook, users will notice that more than one "not applicable" code may appear for the same year (e.g., 9 and 99). This occurs for those variables which changed field length over the years in the Census tapes. As mentioned above, the Abt tapes are processed in a constant layout for all years. In such cases, the smaller code (e.g., 9) identifies cases which were on the original Census tape and to whom the question was not applicable. The larger code (e.g.,99) was filled in by Abt on dummy cases which represent years before a case joined the sample or after it dropped out.

## AHS and Census Data

Users should note that there are differences between the Annual Housing Survey data and the 1970/80 Census data. Some of the reasons include extensive use of self-enumeration in the Census in, contrast to personal interviews in the American Housing Survey; the sampling variability of the estimates from the American Housing Survey and, to a smaller extent, of the sample

TABLE 3
MOST FREQUENTLY ALLOCATED AND EDITED VARIABLES


[^1]data from the Census; and other nonsampling errors associated with each survey.

Differences may also be attributed to differences in basic definitions, such as the definition of a housing unit. These differences have been noted in the Introduction to the section in which the variable is documented.


Data on geography describe the geographic location of the unit (region, SMSA. state, county) and the type of place in which it is located (e.g., urban/rural, SMSA/non-SMSA, central eity/ suburb, place size). Users should be aware that changes in some geographic boundaries and coding conventions have occurred between 1983 and 1984. These changes are highlighted in the discussion below and are documented for each variable in this section.

If data from the national file are being used, it is important to note that normally cases for which the vartable "RURREC" does not equal 1 should be excluded, since including these cases would wrongly double-count some units. These extra cases are only included on the file for special analyses of neighboring units and rural units, that are explained in Chapter 3. Section 1.5, Rural Weights, and Chapter 2, Section 3.6, Neighbor Sample. The variables REGION, STATE, COUNTY, LOT (size) and CROPSL (to identify farms) are consistent from 1973-1993. More counties are identified from 4984 on.

The vartables SMSA, ZMETRO, METRO, URBAN, and POP (population) changed in 1984. From 1973-1983 they are based on the 1971 boundaries of metropolitan areas and cities, and the 1970 populations. From 1984 to 1993 they are based on 1983 boundaries of metropolitan areas and cities, and 1980 populations. Exceptions are the SMSA code and the center city code (METRO) on 1984-1993 metropolitan surveys: METRO is still based on 1971 boundaries. SMSA now covers all the area surveyed in the metropolitan survey, including parts which have different metropolitan codes. Detailed metropolitan codes are shown in the variable PMSA, except where confidentiality prevents. (See Table 4).


#### Abstract

A few changes in coding conventions started in 1984. One important changes is a new variabie "degree" which shows climate severity, to help understand utility costs. A map is provided on the next page.




Census Region. The boundaries of the four Census regions are shown below.



#### Abstract

Urbanized Areas, Other Urban, and Rural Residence--An urbanized area is made up of a central city and its surrounding settled urban fringe which together have a population of 50,000 or more and a density of usually at least 1,000 people per square mile or 1.6 persons per acre. "Other urban" means places outside an urdanized area that have more than 2,500 innabitants. Housing units not classified as urbanized or other urban are defined as rural housing.


Identification of MSAs and Central Cities in the AHS files--Prior to 1984, SMSAs were identified in the AHS National data files if the SMSA population exceeded 250.000 inhabitants. A central city indicator was provided for these identified SMSAs only if both the population of the central city and the population of the balance of the SMSA each exceeded 250,000 inhabitants.

Starting in 1985N, the variable METRO always shows whether cases are in the central city or suburbs, and whether suburban units are in urbanized, other urban or rural suburbs. If the central cities of a metropolitan area have more than 100,000 people, then the metropolitan area is identified for these central city cases. Similarly if the urbanized suburbs in a metropolitan area have over 100,000 cases, then metropolitan area is identified for these suburban cases. Thus the metropolitan code may be available for central cities, urbantzed suburbs, or both. (See the variable SMSA in this section for a complete listing of identified metropol than areas and the number of sample cases in each area, broken down by central city and urbanized suburbs if appropriate.)


#### Abstract

To summarize, in $74 \mathrm{~N}-83 \mathrm{~N}$, specific metropolitan areas over 250,000 people were always identified, and center city/suburb was identified where it did not breach confidentiality. In $85 N-93 N$, center city/suburb/urbanized location is always identified, but specific metropolitan areas are identified only where this does not breach confidentiality. See Figure 1 (next page) and Table 4 at the end of this section for a comparison of the geographic variables before and after 1984.


Since 1983, the Census Bureau distinguishes Detween Primary Metropolitan Statistical Areas (PMSAS) and Metropolitan Statistical Areas (MSAS). PMSAs are component parts of Consolidated Metropol itan Statistical Areas (e.g., Lowell. Massachusetts is a PMSA that is part of the Boston-Lawrence-Lowell CMSA). When an area is neither composed of subareas nor part of a larger area, it is called an MSA. The former term SMSA (Standard Metropolitan Statistical Area) was used regardless of whether an area was part of a larger area.

Outside New England, a Metropolitan Statistical Area is a county or group of counties of 50,000 innabitants or more, or "twin cities" with a combined population of at least 50,000. In addition to the county or counties containing such a city or cities, contiguous counties are included in an MSA if, according to certain criteria, they are socially and economically integrated with the central eity. Each MSA must include at least one central city, or central county. In the New England states, MSAs consist of towns and cities instead of counties, but otherwise the rules are similar.

Counties-County codes are only available in the metropolitan files. The primary divisions of most states are termed counties; in Louistana, the corresponding areas are termed parishes. Alaska has county equivalents defined by the state. Four states (Maryland, Missouri, Nevada, and Virginia) contain one or more cities that are independent of any county; for statistical purposes, these independent cities are treated as county equivalents.

Zones--Zone codes are only available tn the metropolitan files. A zone is defined for the AHS only as a socio-economically homogeneous area of more than 100.000 inhabitants. It does not necessarily correspond to a geographic subdivision although in almost all cases, each identified zone is equivalent to a group of Census tracts. A zone may follow the boundaries of a county or cover a portion of a county. It may also cover several counties or townships or portions of several counties. The areas included in a zone are not always adjacent. Maps showing the boundaries of each zone are available for the 44 areas in the survey except New York and New Jersey. They can be purchased from Abt Associates. Taole 4 shows the identification numbers of the zones available for each MSA. These subareas are not intended for use in separate analysis, but rather as analytic building blocks to analyze specific types of areas in MSA for affferent purposes. The limited sample size in each zone precludes reliable analysis of any single zone.


Farm-Nonfarm Residence-In rural areas through 1983, occupied housing units were Classified as farm units if they are located on places of 10 or more acres from Which sales of farm products amounted to $\$ 50$ or more during the $12-m o n t h$ period prior to the interview or on places of less than 10 acres from which sales of farm products amounted to $\$ 250$ or more during the $12-m o n t h$ period prior to the interview. Starting in 1984, units are classified as farm units if the sales amounted to 51.000 or more. Dceupied units in rural territory which do not meet the definition for farm housing are classified as nonfarm. All vacant units in rural areas also are Classified as nonfarm. The farm-nonfarm classification is based on information in the interview, and therefore can change from year to year.

```
Figure 1: COMPARISON OF NATIONAL GEOGRAPHIC VARIABLES
```

Coding of Two Variables for Different Types of Areas on the 1985-1993 National Tapes


| CENTER CITIES | A | METRO 1 | $\sin A$ |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | $x \times x$ | The 4-digit numerle Code is given on central city cases as long as central cities total over 100,000 people. |
|  |  |  | 9999 | Otherwise |
| SUBUR8S |  |  |  |  |
| Urbanized Areas | B | 2 | $x \times 0 \times$ | The 4-digit numeric code is given on urbanized suburb cases as long as urbanized suburbs total over 100,000 people. |
|  |  |  | 9999 | Otherwise |
| Other Urban | C | 3 | 9999 |  |
| Rural | 0 | 4 | 9999 |  |
| NON-METROPOL I TAN |  |  |  |  |
| Urbanized Areas | $E$ | 5 | 9999 |  |
| Other Urban | $F$ | 6 | 9999 |  |
| Rural | G | 7 | 9999 |  |

```
Figure 1: COMPARISON OF NATIONAL GEOGRAPHIC VARIABLES (continued)
```

1974-1983 National Tapes


## Spocial Rural Oversample

METROPOL ITAN AREA
Over 250,000 Peoole
Special Rural Oversample
Area Where Either Suburbs or Center City has under 250,000 People
Area where Each has over 250,000 People Center Cities Suburbs
Under 250,000 People
Center Citles
Suburbs - Urban
Suburos - Rural
NON-HETROPOLITAN AREA
Urban
Rural

RURREC OETRO METRO UREN POP SNGA

| A | 2 | 1 | 9 | $2-5:$ | 9 | 9999 |
| :--- | :--- | :--- | :--- | :---: | :--- | :--- |
| $\mathbf{B}$ | 1 | 1 | 9 | 9 | 9 | Given | Given

ceser

ote that from 1974 to 1983, central city and uroan/rural indicators are suppressed in some cases.
-There are few cases coded i in this cell, interviewed in error. They have zero weight.

* Hote that 9 eisewhere mans suppressed, but in this call it means 2500-4999.




| $74 N-93 N$ | $M$ |
| :---: | :---: |
| $74 S-93 S$ | $T$ |
|  | 5 |
|  | 4 |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Metropoiftan Areas
$\frac{83 N}{G} \quad \frac{835}{G} \quad \frac{845}{G} \quad \frac{85 N}{G}$

The former variable name, SMSA, was retained in the file Starting in 1984, however, this variable includes PMSA and MSA codes as appropriate. The 1971 boundaries are used for 1974 through 1983. The 1983 boundaries are used starting in 1984. The five first columns give the number of cases in Central City, Suburb or in Total to show which parts of each metropolitan area have been identified, until 1983 and later.

(Continued On Next Page)

[^2]| $86^{165}$ |  |  | 29 |  | 3280 | 3280 | Hartford, CT |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 115 | 77 | 43 | 3320 | 3320 | Honolulu, HI |
| 392 |  | 267 | 398 | 183 | 3360 | 3360 | Houston, TX |
|  | 71 |  |  |  | 3400 |  | Huntington-Asnland. WV-KY- |
| 194 |  | 95 | 158 | 26 | 3480 | 3480 | Indiamapolis, IN |
|  | 67 |  | 35 |  | 3560 | 3560 | Jackson. MS |
|  | 163 |  | 120 |  | 3600 | 3600 | Jacksonville, FL |
| 60 |  | 81 | 45 | 77 | 3640 | 3640 | Uersey City, Nu |
|  |  |  | 27 | 31 |  | 3660 | Johnson City-Kingsport-Bri |
|  | 69 |  |  |  | 3680 |  | Johnstown, PA |
| 141 |  | 214 | 122 | 143 | 3760 | 3760 | Kansas City, MO-KS |
|  | 135 |  | 56 | 35 | 3840 | 3840 | Knoxvilie, TN |
|  |  |  | 17 | 44 |  | 3965 | Lake County, IL |
|  |  |  |  | 37 |  | 3980 | Lakeland-Winter Haven, FL |
|  | 78 |  |  | 18 | 4000 | 4000 | Lancaster, PA |
|  | 96 |  | 41 |  | 4040 | 4040 | Lansing-East Lansing. MI |
|  | 171 |  | 45 | 73 | 4120 | 4120 | Las Vegas, NV |
|  |  |  | 20 | 17 |  | 4160 | Lawrence-Haverhill, MA-NH |
|  |  |  | 47 |  |  | 4280 | Lexington-Fayette, KY |
|  | 112 |  | 66 |  | 4400 | 4400 | Little Rock-North Little R |
|  | 65 |  |  |  | 4440 |  | Lorain-Elyria, OH |
| $\begin{array}{r} 860 \\ 93 \end{array}$ |  | 1023 | 802 | 712 | 4480 | 4480 | Los Angeles-Long Beach, CA |
|  |  | 109 |  |  | 4520 |  | Louisville, KY-IN |
|  | 90 |  | 41 |  | 4720 | 4720 | Madison, WI |
|  |  |  | 38 |  |  | 4880 | Mcallen-Edinourgh-Mission, |
|  |  |  |  | 33 |  | 4900 | Melbourne-Titusville-Palm |
|  | 207 |  | 146 | 27 | 4920 | 4920 | Mempnis, TN-AR-MS |
| 95 |  | 353 | 143 | 233 | 5000 | 5000 | Miami-Hialean, FL |
|  |  |  | 135 |  |  | 5015 | Middlesex-Somerset-Hunterd |
| 170 |  | 193 | 132 | 90 | 5080 | 5080 | Milwaukee, WI |
| 184 |  | 281 | 198 | 219 | 5120 | 5120 | Minneapolis-St. Paul, MN |
|  | 127 |  | 70 |  | 5160 | 5160 | Moblie. AL |
|  |  |  | 26 |  |  | 5170 | Modesto, CA |
|  |  |  |  | 158 |  | 5190 | Monmouth-ocean, NJ |
|  |  |  | 31 |  |  | 5240 | Montgomery, AL |
|  | 174 |  | 103 |  | 5360 | 5360 | Nashville. TN |
|  |  |  |  | 462 |  | 5380 | Nassau-Suffolk, NY |
|  | 83 |  | 55 | 33 | 5480 | 5480 | New Haven-Meriden, CT |
| 150 |  | 143 | 119 | 96 | 5560 | 5560 | New Orieans, LA |
| 978 |  | 863 | 1514 | 206 | 5600 | 5600 | New York City, NY |
| 77 |  | 336 | 68 | 259 | 5640 | 5640 | Newark, Nu |
|  | 68 |  |  |  | 5680 |  | Newport News-Hampton, VA |
|  |  |  | 229 |  |  | 5720 | Norfolk-Virginia Beach-New |
| 95 |  | 96 |  |  | 5720 |  | Norfolk-Portsmouth, VA |
|  |  |  | 139 | 267 |  | 5775 | Oakland, CA |
| 133 |  | 81 | 120 | 73 | 5880 | 5880 | Oklahoma City, OK |
|  | 139 |  | 72 | 32 | 5920 | 5920 | Omaha, NE-IA |
|  | 166 |  | 27 | 108 | 5960 | 5960 | Oriando, FL |
|  | 138 |  | 34 | 53 | 6000 | 6000 | Oxnard-Ventura, CA |
| 71 |  | 232 |  |  | 6040 |  | Paterson-Clifton-Passaic. |
|  |  |  |  | 42 |  | 6080 | Pensacola, FL |
|  | 88 |  | 29 | 25 | 6120 | 6120 | Peoria, IL |
| 458 |  | 709 | 445 | 476 | 6160 | 6160 | Philadelohia, PA-NU |
| 212 |  | 238 | 296 | 71 | 6200 | 6200 | Phoenix, 42 |
| 124 |  | 442 | 88 | 262 | 6280 | 6280 | Pittsburgh, PA |
| 124 |  | 241 |  |  | 6440 |  | Portland, OR-WA |
| 85 |  | 155 | 41 | 69 | 6480 | 6480 | Providence, RI |
|  |  |  | 86 |  | (6640) | 6640 | Raleigh-Durham, NC |
|  | 90 |  |  |  | 6680 |  | Reading, PA |
|  | 157 |  |  |  | 6760 |  | Richmond-Petersourg, VA |
| 78 |  | 148 | 57 | 87 | 6840 | 6840 | Rochester, NY |
|  | 60 |  | 25 |  | 6880 | 6880 | Rockford, IL |
| 87 |  | 197 | 98 | 110 | 6920 | 6920 | Sacramento, CA |
| 143 |  | 430 | 121 | 195 | 7040 | 7040 | St. Louls, MO-IL |
|  |  |  |  | 23 |  | 7090 | Salem-Gloucester, MA |
|  | 70 |  | 29 |  | 7120 | 7120 | Salinas-Seaside-Monterey, |
|  | 161 |  | 69 | 191 | 7160 | 7160 | Salt Lake City-Ogden, UT |
|  | 256 |  | 190 | 24 | 7240 | 7240 | San Antonio. TX |
| 102 |  | 341 | 74 | 217 | 7280 | 6780 | Riverside-Şan Bernardino, |
| 238 |  | 263 | 226 | 175 | 7320 | 7320 | San Diego, CA |
| 298 |  | 598 | 177 | 177 | 7360 | 7360 | San Francisco, CA |
| 124 |  | 211 | 127 | 133 | 7400 | 7400 | San vose, CA |
|  | 70 |  | 37 |  | 7480 | 7480 | Santa Bardara-Santa Maria- |
|  |  |  | 26 |  |  | 7500 | Santa Rosa-Petaluma, CA |
|  |  |  |  | 38 |  | 7510 | Sarasota, FL |
|  |  |  | 42 | 56 |  | 7560 | Scranton-wilkes Barre, PA |

REF\#
NAME

| PMSA |
| :--- |
| PA | CMSA



SURVEYS
DESCRIPTION

[^3]Number Does Not Correspond To Real Census More Than 20 Sample Cases In Tract Then Cases Are Split Between Two Pseudo Tract Numbers With No More eudo Tract. If a Tract Crosses a City Line. Each Section is Treated as a Separate

Taole 4: GEOGRAPHIC CODES ON AHS MSA FILES
The following table provides a list of all the geographic areasi identified on the MSA Tapes. Counties and parts of counties have been grouped together on the tapes to avoid identification of the respondents. Each group is described separately below, along with the codes for its geographic variables (SMSA, PMSA. STATE, COUNTY, ZONE, and METRO) and its sample size.

Below means the area is shown in more detail.
Above means the area is included in a ine above.
Partly means a portion of the area was included earlier, but new area was added. NA means the area was not interviewed in a particular wave.
Yes means the area was interviewed, but we do not yet know the sample size.
When a metro area grew after 1983, you may sometimes want data just for the old area: omit any new zones, for a zone that has partly new area and partly old, omit new cases, and multiply weights of the old cases in those zones by:

| Birmingham | 1.06 |
| :--- | :--- |
| Memphis | 1.02 |
| Newport News | 1.11 |
| Providence | 1.20 |


|  |  |  | S | $\begin{aligned} & c \\ & 0 \end{aligned}$ |  | M | NUMBER OF CASES |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5 | P | T | U | $z$ | E |  |  |  |  |
|  | M | M | A | N | 0 | $T$ |  |  |  |  |
|  | 5 | S | $T$ | $T$ | $N$ | $R$ | FIRST | SECOND | THIRD | FOURTH |
| MSA NAME | A | A | E | $Y$ | E | 0 | WAVE | WAVE | WAVE | WAVE |
|  |  |  |  |  |  |  | ( 74 ) | (77) | (80) | NA |
| Albany-Schenectady-Troy, NY |  |  |  |  |  |  | 5,464 | 5,182 | 5,736 | NA |
| Albany, Schenectady \& Troy Cities | 160 |  | 36 | 999 |  | $\ddagger$ | 2.037 | 1.892 | 2.042 | NA |
| In Albany, Rennselaer, \& Schenectady Counties |  |  |  |  |  |  |  |  |  |  |
| Balance Albany, Schenectady, \& Rennselaer Cos.; All Saratoga Co. | 160 |  | 36 | 999 |  | 3 | 3.427 | 3,290 | 3,694 | NA |
|  |  |  |  |  |  |  | (76) | (80) | NA | NA |
| Allentown-Bethlehem-Easton, PA-Nu |  |  |  |  |  |  | 5.022 | 5.208 | NA | NA |
| All Lehigh Co, PA Incl. Allentown | 240 |  | 42 | 077 |  | 9 | 2,355 | 2,457 | NA | NA |
| All Northampton Co., PA, Incl. | 240 |  | 99 | 999 |  | 9 | 2,667 | 2,751 | NA | NA |
|  |  |  |  |  |  |  | (74) | (77) | (81) | (86) |
| Anaheim-Santa Ana-Garden Grove PMSA |  |  |  |  |  |  | 5,154 | 5,531 | 4,939 | 3,300 |
| Anaheim, Santa Ana, \& Garden Grove Cities in Orange County | 360 | 360 | 06 | 999 | 1,2,104 | 1 | 1,447 | 1.449 | 1,219 | Yes |
| Balance Orange County | 360 | 360 | 06 | 999 | 101-110 | 3 | 3,707 | 4.082 | 3,720 | Yes |
|  |  |  |  |  |  |  | (75) | (78) | (82) | (87) |
| Atlanta, GA MSA |  |  |  |  |  |  | 15,002 | 15.537 | 4,250 | 3.300 |
| Atlanta in Fulton \& Dekalb Cos. | 520 | 520 | 13 | 888 |  | 1 | 7,35 1 | 7,175 | 1. 173 | Below |
| Balance of Fulton \& Dekalb Cos. | 520 | 520 | 13 | 888 |  | 3 | 4,332 | 4,533 | 1. 558 | Below |
| All Cobb, Clayton, \& Gwinnett Cos. | 520 | 520 | 13 | 999 |  | 3 | 3, 319 | 3,829 | 1,519 | Below |
| Cobb county | 520 | 520 | 13 | 067 | 102-103 | 3 | Above | Above | Above | Yes |
| Butts, Coweta, Fayette, Henry \& Spalding Counties | 520 | 520 | 13 | 888 | 112 | 3 | NA | NA | NA | Yes |
| Gwinnett County | 520 | 520 | 13 | 135 | 105 | 3 | Above | Above | Above | Yes |
| Barrow, Newton, Rockdale \& Walton Counties | 520 | 520 | 13 | 888 | 113 | 3 | NA | NA | NA | Yes |
| Cherokeee, Douglas, Forsyth \& Paulding Counties | 520 | 520 | 13 | 888 | 111 | 3 | NA | NA | NA | Yes |
| Clayton County | 520 | 520 | 13 | 063 | 110 | 3 | ADove | Above | Above | Yes |
|  |  |  |  |  |  |  | (75) | (79) | (83) | (87) |
| Baitimore, MD MSA |  |  |  |  |  |  | 5.270 | 5.436 | 4.287 | 3,300 |
| Baltimore City | 720 | 720 | 24 | 510 | 001-006 | 1 | 2,092 | 2,027 | 1,626 | yes |
| Baltimore County | 720 | 720 | 24 | 005 | 102-106 | 3 | 1,573 | 1,641 | 1.307 | Yes |
| All Harford, Carroll, Howard, \& Anne Arundel Counties | 720 |  | 24 | 999 |  | 3 | 1,605 | 1,768 | 1.354 | Below |
| Anne Arundel \& Queen Anne's Cos. | 720 | 720 | 24 | 888 | 109-111 | 3 | Partly | Partly | Partiy | yes |
| Carroll \& Howard Cos | 720 | 720 | 24 | 888 | 101. 108 | 3 | Above | Above | above | Yes |
| Harford County | 720 | 720 | 24 | 025 | 107 | 3 | Above | Above | Above | yes |





| , | 5 | P | S | $\begin{aligned} & C \\ & 0 \\ & U \end{aligned}$ | Z | M E | NUMBER OF CASES |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | M | A | N | 0 | $T$ |  |  |  |  |
|  | S | S | T | T | N | R | FIRST | SECOND | THIRD | FOURTH |
| MSA NAME | A | A | $\varepsilon$ | Y | E | 0 | WAVE | WAVE | WAVE | WAVE |
|  |  |  |  |  |  |  | (75) | (77) | (81) | NA |
| Madison, WI |  |  |  |  |  |  | 5,394 | 5,258 | 4. 604 | NA |
| All Dane County Incl. Madison | 4720 |  | 55 | 999 |  | 9 | 5.394 | 5.258 | 4,604 | NA |
|  |  |  |  |  |  |  | (74) | (77) | (80) | (84) |
| Memphis, TN-AR |  |  |  |  |  |  | 4,462 | 4,936 | 5,452 | 4,25 ${ }^{-}$ |
| All Shelby Co, TN, Incl. Memphis, All Crittenden County, AR | 4920 |  | 99 | 999 |  | 9 | 4,462 | 4,936 | 5,452 | Below |
| Memphis in Shelby County, TN | 4920 | 4920 | 47 | 157 | 001-005 | 1 | Above | Above | Above | Yes |
| Balance Shelby Co., Tipton Co.., | 4920 | 4920 | 99 | 999 | 101 | 3 | Partly | Partly | Partiy | Yes |

Miami-Fort Lauderdale, FL CMSA
Miami in Dade County
Fort Lauderdale in Broward Co. Hollywood City in Broward Co.
Balance Dade County
Balance Broward County

Milwaukee, WI
Milwaukee City in Milwaukee County Balance Milwaukee County
Waukesha, Washington \&
Ozaukee Cos.
Waukesha County
Washington \& Ozaukee cos. $50805080 \quad 55999 \quad 1033$

Minneapolis-St. Paul, MI
Minneapolis in Hennepin County
Balance Hennepin County
St. Paul in Ramsey County
Balance Ramsey County, all Anoka
Dakota, Washington Cos.
Balance Ramsey County
Anoka Co., MN
Dakota Co., MN
Washington Co., MN
Carver, Chisago, Isanti, Scott \&
Wright Cos.. MN, and
St. Croix Co., WI

```
New Orleans, LA
New Orleans City in Orleans Parish
Balance Orleans Parish; All
    Jefferson, St. Bermard, &
    Tammany Parishes
Orleans Parish
St. Tammany Parish
Jefferson, St. Bernard,
    St. Charles & St. John the
    Baptist Parishes
```

New York-Nassau-Suffolk, NY PMSAs Bronx County in New York City Kings Co (Brooklyn) in NYC
New York Co (Mannattan) in NYC
Queens County in New York City
Nassau County
Richmond County (Staten Is.) NYC Suffolk County
Rockland \& Westcnester Counties
Rockland County
Westchester County
Orange \& Putnam Cos

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| 5560 | 22 | 071 |  |  |
| 5560 | 22 | 999 |  | 3 |
|  |  |  |  |  |
| 5560 | 5560 | 22 | 071 | $001-005$ |
| 5560 | 5560 | 22 | 103 | 101 |
| 5560 | 5560 | 22 | 999 | $102-104$ |
|  |  | 3 |  |  |


| (75) | (79) | (83) | (86) |
| :---: | :---: | :---: | :---: |
| 5.010 | 5.575 | 4,258 | 3.300 |
| 1,215 | 1,243 | 915 | Yes |
| NA | NA | NA | Yes |
| NA | NA | NA | Yes |
| 3,795 | 4,332 | 3,343 | Yes |
| NA | NA | NA | Yes |
| (75) | (79) | (84) | (88) |
| 5,229 | 5,54 1 | 4.250 | 3.300 |
| 2,709 | 2,712 | Yes | Yes |
| 1.218 | 1,301 | Yes | Yes |
| 1,308 | 1.528 | Below | Below |
| Above | Above | Yes | Yes |
| Above | Above | Yes | Yes |
| (74) | (77) | (81) | (85) |
| 5,040 | 4,827 | 4,330 | 3,800 |
| 1.357 | 1. 194 | 989 | Yes |
| 1.338 | 1.363 | 1,254 | Yes |
| 909 | 799 | 671 | Yes |
| 1,436 | 1,471 | 1,416 | Below |
| Above | Above | Above | Yes |
| Above | Above | Above | Yes |
| Above | Above | Above | Yes |
| Above | Above | Above | Yes |
| NA | NA | NA | Yes |

(86)

3,300
Below
Below

| 4.281 | 3.300 |
| :--- | :--- |
| 2.059 | Below |
| 2.222 | Below |
|  |  |
| Above | Yes |
| Above | Yes |
| Partly | Yes |


| (76) | (80) | (83) | (87) |
| :---: | :---: | :---: | :---: |
| 16,121 | 14,823 | 8,573 | 3,300 |
| 1.389 | 1,243 | 994 | Yes |
| 2,387 | 2,159 | 1.759 | Yes |
| 2,013 | 1,833 | 1. 522 | Yes |
| 1.892 | 1,681 | 1.402 | Yes |
| 2.833 | 2,616 | 922 | Yes |
| 272 | 262 | 217 | Yes |
| 2,727 | 2,633 | 936 | Yes |
| 2, 624 | 2,396 | 821 | Below |
| Above | Above | Above | Yes |
| Above | Above | above | Yes |
| NA | NA | NA | Yes |



[^4]


**Formerly included in the Tacoma area
***Tacoma is now included with the Seattle-Everett-Tacoma CMSA
Notes: $G=$ Variable is computer generated, and is not present on the questionnaire. ++ = Variable is present on a supplemental page to the questionnaire. $C C=$ Variable is present on the control card for the unit.

## Plans

Fundamental to the concept is the establishmeat of reinforced concrete block party walls subdividing the developer's parcel into $100^{\prime}$ loag lots. One end of these walls abuts a principal access street, while the other terminates at a service alley running behind
each lot.
Each $20^{\prime}$ lot width is modularly coordinated to accommodate standard building materials and can be infilled with studios, and one, two, and three bedroom units of one or two stories. A uniform one story streetwall screens

## the empty lots and ongoing construction from

 community view. By this scheme the developer/builder can sell lots at various stages of development, ranging from empty lots with only basie site services to completed houses of varying size and plan. The homeowner has a corresponding advantage of reducing initialcosts by self-constructing all or a portion of his own house.



Unit $B$
Unit $E$
Unit E
(First Fioor)
(Second Floor)

This section documents a broad range of data items. Basic unit data include occupancy status, tenure status, and building descriptors such as the size and age of the unit, the type of ilving quarters present, the number of floors, and the presence of nonresidential units within the building. Other data include the number of household cars, the availability of parking facilities, and the presence of elevators. Items on the general characteristics of previous residence are included in the Mobility section. The information contained in this section, together with the information presented in the Geography and Sample Status sections, is especially relevant for selecting cases to be included in a specific analysis. The variables documented in this section are, for the most part, available for all units in the sample. Exceptions are indicated in the documentation of spectfic variables.

Eligible Housing Unit

At the time the sample was selected, living quarters were classified as either housing units or group quarters. Housing units are included in the Annual Housing Survey; group quarters are not.

Housing Units--A housting unit is a house, an apartment, a group of rooms, a single room, a trailer, a tent, or a boat, occupied or intended for occupancy as separate living quarters. Separate living quarters are those in which the occupants (1) live and eat separately from all other persons in the structure and (2) have direct access from the outside of the building or through a common hali which is used or intended to be used by the occupants of another unit or by the general public. Living quarters do not have direct access if the only entrance to the unit is through a room or hall of another unit. Any group of rooms which has no direct access is combined with the unit it is entered through. Units whose occupants live or eat with occupants of anotner unit similarly are combined with the other unit. Thus the occupants of a unit may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements (except as described in the section on Other Units below).

Vacant units intended for occupancy as separate living quarters are housing units if they have direct access. Both occupied units and vacant units intenced for occupancy are counted in the housing inventory. Vacant mobile homes, cabins, tents, or boats which are intended for occupancy are included. Vacant sites for trailers or tents, however, are not counted as housing units. Similarly, nousedoats, yachts, travel trailers or campers used only for vacations or for overflow sleeping quarters are not part of the inventory.

These definitions conform to the definitions used in the 1980 Census. In the 1970 Census, sligntly different definttions were used. When the AHS survey was first designed in 1973, it used the 1970 Census definitions, which differed on two points from the definitions presented above. A nousing unit did not need to have direct access, as long as it had complete kitchen facilities for the exclusive use of the occupants. Mobile homes, trailers, tents, caves, boats, railroad cars, and the like, were not counted if they were URE1 or vacant. (They appeared on the AHS data tapes with a weight of zero.) When the Census Bureau modified its definition for the 1980 Census, these changes were not immediately implemented in the AHS. The 1970 definitions continued to be used through 4983. The new definitions were adopted for the 1984 and subsequent surveys. Therefore users must be aware of differences in definitions between the AHS data collected before 1984 and the AHS data for subsequent years. Furthermore, users interested in comparing data from the AHS and data from the Census must remember that the definitions for the 1980-1983 AHS surveys differ from the definitions used in the 1980 Census.

Other Units-oother unfts are located in special places, such as institutions, student dormitories, and boarding houses, where the residents have their own room, group of rooms, or beds and also have some common facilities, such as dining halls, lobdies, living rooms, or recreational areas. Some of the rooms or groups of rooms in these places are always classified as other units, even though they have direct access. Other rooms or groups of rooms are classified as other units only if they do not meet the housing unit definition.

For example, a boarding house is an establishment with five or more units for
rent that serves meals to residents, who pay a combined rate for rent and
meals. A combination boarding house has five or more units for rent and serves
meals to some of the residents (boarders) but only rent to others (roomers)
The quarters for boarders are always considered other units. The quarters occupied by roomers, the manager or other resident employees are housing units if they meet the nousing unit definition.

In a hospital or other institution, the rooms reserved for the patients are classified as other units, while the living quarters intended for occupancy by resident staff, employees and guests of patients are considered housing units if they meet the housing unit definition.

Other units are located most frequently in institutions, boarding houses, military barracks, college dormitories, fraternity and sorority houses, hospitals, monasteries, convents, and ships.

Interviewers are provided with very detailed instructions to determine whether a unit should be classified as a housing unit or an other unit. For example, a migratory worker's camp consists of quarters for five or more seasonal or temporary workers engaged in agricultural activities. A tent camp is considered an other unit if it consists of five or more tents or sites for five or more tents.

Information on the housing charactertstics of other units is not collected in the American Housing Survey. In the 1980 Census places with eight or fewer nonrelatives are counted as housing units, while places with nine or more nonrelatives of the person in charge are classified as other units (group quarters). The Census does contain data on group quarters.

Rules for Hotels--occupled rooms or suites of rooms in notels, motels, and similar places are classified as nousing units oniy when occupied by permanent residents, i.e., persons who consider the hotel as their usual place of residence or have no usual place of residence elsewhere. Vacant rooms or suites of rooms are classified as housing units only if located in hotels, motels, and similar places in which 75 percent or more of the accommodations are occupied by permanent residents.

Type of Interview--The Annual Housing Survey is conducted on a sample of adaresses, not persons or families. An interview is conducted with the occupants of housing units only. Occupants of group quarters are not interviewed There are three categories of interviews.

1. Regular--Sample unit is a housing unit and it is occupied by one or more persons whose usual place of residence is the sample unit. If the occupants are temporarily absent, for example on vacation, the unit is still considered occupled. Interviews are normally spread over several months. so an interview can be obtained when the household returns. Eligible respondents are household members 16 years of age or older.
2. URE--Sample unit is a housing unit and it is occupied by persons who all have a usual residence elsewhere (URE). Eligible respondents are knowledgeable occupants 16 years of age or older. Most AHS questions are asked for URE Units. In general, all questions related to the unit and the neighborhood are asked in URE interviews. Questions referring to the oceupants of the units (household composition and income) as well as questions designed for recent movers are not asked in URE tnterviews. Published data often merge UREs with vacant units, but the data base and this codebook always treat the two separately.
3. Vacant--Sampie unit is an unoccupied housing unit that has the interior protected against the elements, has no sign or other indication that it is condemned or to be demolished and is not being used for commercial, farm or other nonrestdential purposes. New units not yet occupied are classified as vacant housing units if construction has reached a point where all exterior windows and doors are installed and final usable floors are in piace. Landlords, owners, or building managers are eligible respondents. If this type of respondent is unavallable, a neignbor may be interviewed. Only a subset of questions is available for vacant units. Questions cover the overall characteristics of the unit, the value of the unit for owneroccupied units, and the rent charged for the unit and the utilities included in the rent for rental units.
```
Tenure--A housing unit is "owner occupied" if the owner or co-owner lives in the
unit, even if it is mortgaged or not fully paid for. A cooperative or condo
minium unit is "owner occupied" only if the owner or co-owner lives in it. All
other occupied units are classified as "renter occupied." including units rented
for cash rent and those occupied without payment of cash rent.
```

Cooperatives and Condominiums-In a condominium, people own their units
individually and have joint ownership of some or all common areas such as the
land, hallways, entrances, elevators, etc. "Time-shared" condominiums are
included in this definition.
A cooperative is owned by a corporation. Sharehoiders have ownership of all the
units as well as the common areas. Each shareholder of the cooperative is
entitled to occupy or rent out an individual unit, but does not own that unit
directly.

Cooperative or condominium ownership may apply to various types of structures including single-family houses, rowhouses, townhouses, etc., as well as apart ment buildings.

Owned Second Home-A second home may be a single-family house, vacation cottage, hunting cabin, ski lodge, etc. which is owned and held for use sometime during the year by the owner or members of his household. Second homes may also be owned in partnership with members of a different household or on a time-sharing basis. Included are second homes which are sometimes rented or leased on a short-term basis to other persons but are principaily held for the owner's occasional use during the year. In 1985, the National Survey included a series of questions for second homes. See Second Home section.

Units in structure--In determining the number of housing units in a structure, all units, both occupied and vacant, are counted.

A structure is a separate building if it has either open space on all sides or is separated from other structures by dividing walls that extend from the bottom of the foundation to the roof. The figures are subject to error, especially in row houses, because the respondent may not know whether walls go from bottom of foundation to roof, or whether units share an attic crawl space, which would qualify the row house as a multiunit building. Starting in 1984, questions are asked of the respondent to determine whether the unit shares an attic, basement or boiler with another unit. This information allows the Census Bureau to more accurately define the number of units in a structure.

Structures containing only one housing unit are further classified as detached or attached. A one-unit structure is detached if it has open space on all four sides even though it has an adjoining shed or garage. A one-unit structure is attached if it has one or more walls extending from ground to roof which divide it from other adjoining structures, such as in row houses, townhouses, etc.

Mobile homes and traiters form a separate category. Mobile homes and trailers were originally constructed to be towed on their own chassis. These include double-wides, expandables, and single-wides. Although designed without permanent foundations, they may be placed on foundations. Travel tratlers, campers intended for mounting on pick-up trucks. tent campers with collapsible sides or self-propelled vehicles such as motor homes, prefabs or modular homes are not classified as motile homes, unless they are used as year-round housing in their present location. Before 1983 when one or more rooms had been added to a mobile home or trailer, it was classified as a one-unit structure. If, however, only a poren or shed had been added, it was still counted as a mobile home or trailer. After 1984, modile homes with one or more permanent rooms are included as mobile nomes.

```
Year Structure Bu\lt--"Year structure built" refers to when the building was
first constructed, not when it was remodeled, added to, or converted. For
mobile nomes and trailers, the manufacturer's model year was assumed to be the
year built. The data are based on the respondent's estimate and are, therefore.
subject to the respondent's knowledge of the year the building was constructed.
```

Basement--A structure has a basement if there is enclosed space, at ieast partially underground, in which persons can walk upright under all or part of the building. Starting in 1984, respondents are asked more specific questions about the basement and type of foundations for units not having a basement.

Garage or carport on property--The garage or carport must be available for use by the occupants of the housing unit; i.e.. members of the household could use it for parking even if it is currently used as a storage area for items such as lawn equipment or furniture. It may be attached to the house or completely unattached, but it must be on the property. Excluded are garages or carports that have been converted to other uses such as living quarters, an area used for business purposes, an area rented to someone eise or an area that for some reason cannot be used for parking. Starting in 1984, a garage is reported for a rental unit only if it is included in the rent.

Offstreet parking--Offstreet parking is available if there is a driveway or a parking lot available for use by the household. Starting in 1984, offstreet parking is recorded only if the parking space is included in the rent.

Cars and trucks--Cars and trucks include passenger cars, station wagons, vans, pickups and small parcel trucks of one-ton capacity or less which are owned, being bought or regularly used by members of the household which are ordinarily kept at home. The purpose of the question is to count the number of venicles available to housenold members for day-to-day transportation. Vehicles which are rented or leased for one month or more are included, as well as business venicles or company cars which are regularly used for non-business purposes. Vehicles used exclusively for business or for recreational activities (e.g., dunebuggies), government-owned cars and junk cars used for parts are not included. The item should not be used to reflect the number of privately owned automobiles or trucks or the number of housenolds owning such venicles.

```
Notes: G = Variable is computer generated, and is not present on the questionnaire.
        ++ = Variable is present on a supplemental page to the questionnaire.
    CC = Variable is present on the control card for the unit.
```




```
Notes: G = Variable is computer generated, and is not present on the questionnaire.
    ++ = Variaole is present on a supplemental page to the questionnaire.
    CC = Variaole is present on the control card for the unit.
```


## GENERAL (Continued)



Characteristics of Household in Unit in 1970 or 1980 from the 1970 Census and the household which lived in this unit in 1980 for cases added to the sample after 1983 This household may not be the same as the household living in the unit at the time of the interview. If the unit was vacant in 70 (or 80 ), the variable provides information about the vacancy of the unit in 1970 or 1980. The codes applicable to sample cases selected from the 1970 Census are presented in the first table below. While the codes for cases $c$ awn from the 1980 Census are provided in the second table. Users should note that the characteristics describing units differ for the two samples.

| FAMILY SIZE AT UNIT IN 1970 |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Family Income | 1 |  | 2 |  | 3 |  | -4 |  | 5 |  |
| At Unit | Owned | Rented | Rented | Owned | Owned | Rented | Rented | Owned | Owned | Rented |
| In 1970 | In 70 | In 70 | In 70 | In 70 | In 70 | In 70 | In 70 | In 70 | In 70 | In 70 |
| Under \$3,000 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| \$3-5,999 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 |
| \$6-9,999 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| \$ 10-14.999 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 |
| \$15,000+ | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |

Note: for Family Size 2 and 4, the information is presented before the
information for owners. This was done on purpose and is not a typographical error.

|  | Low Value vacants (Rent under $\$$ or Value under $\$ 15,000$ ) |
| :---: | :---: |
| 52 | Medium Value Vacants (Rent of \$80-119 or Value of $\$ 15,000$ to 24,999 ) |
| 53 | High Value vacants (Rent of \$120+ or Value of $\$ 25,000+$ ) |
| 54 | Residual vacants (Those not for sale or rent; includes seasonal and migratory vacants) |
| 55 | Housing Unit in Group Quarters (see Appendix $A$ for definition of Group Quarters) |
| 56 | Other Group Quarters which was not a housing unit in 1970, but became a housing unit since then |


| UNIT RENTED IN 1980 |  |  |  | UNIT OWNED IN 1980 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CONTRACT RENT | NO OF | ROOMS | IN UNIT | VALUE | NO OF | ROOMS | IN UNIT |
| IN 1980 | 1-3 | 4-5 | $6+$ | IN 1980 | 1-3 | 4-5 | 6+ |
| <\$100 | 101 | 102 | 103 | <\$20,000 | 130 | 129 | 128 |
| \$ 100-149 | 106 | 105 | 104 | \$20.000-\$29.999 | 131 | 132 | 133 |
| \$150-199 | 107 | 108 | 109 | \$30,000-\$34,999 | 136 | 135 | 134 |
| \$200-249 | 112 | 111 | 110 | \$35,000-\$39,999 | 137 | 138 | 139 |
| \$250-299 | 113 | 114 | 115 | \$40,000-\$49,999 | 142 | 141 | 140 |
| \$300-349 | 118 | 117 | 116 | \$50,000-\$64,999 | 143 | 144 | 145 |
| \$350-399 | 119 | 120 | 121 | \$65,000-\$79,999 | 148 | 147 | 146 |
| \$400 or more | 124 | 123 | 122 | \$80,000-\$99,999 | 149 | 150 | 151 |
|  |  |  |  | \$ 100, 000-\$149,000 | 154 | 153 | 152 |
|  |  |  |  | \$150,000 or more | 155 | 156 | 157 |
| NA | 125 | 126 | 127 | NA | 160 | 159 | 158 |
|  |  | $\begin{aligned} & 161 \\ & 162 \end{aligned}$ | Group Group | ers Population I-I | nstit | tional | ized |

[^5] $C C=$ Variable is present on the control card for the unit.



GENERAL (Cont inued)



[^6]
## Integrated Design Concepts

Project Sponsor: Huth-Wesnood Bulders
Akron. Ohio
Project Designer:
Envirunmental Destpn Alternatives --trchtects Akron. Ohio
Consultants: City of Akron-Building Depariment
Nathonal ESP-Energy Procac:: Lown Plumbing Corpuratoon


Steven Winter Associates, Inc., Building Value into Housing 1980 Awards, A compendium of winning Submissions Under HUD's 1980 "Building Value into Housing Program", November, 1980.


#### Abstract

Data in this section include the unit size, the number of rooms, bedrooms, bath rooms and other rooms in the unit, the number of persons per room and information on additions and major alterations undertaken in the last two years. Information on equipment acquisition and addition of storm windows and insulation is documented in the next section (kitchen, piumbing, Cooling and Heating Equipment).


#### Abstract

Until 1978, information on number of rooms and number of bedrooms was collected each year for the National Sample. Starting in 1978, the information is obtained from respondents who indicated that a change in number of rooms or bedrooms had occurred since the last interview. If a change was not reported, the variable was assigned the information from the previous year. From 1984 on, the questions are again asked of the respondent.


Items related to previous residence are presented in the past and future Home section. In general, the variables are available for all units. Information on renovations, however, is available for owner-occupied units only. prior to 1984, renovation variables were available for one-unit structures only (including mobile homes, except in 1983) on less than 10 acres with no doctors or commercial establishments. Starting in 1984 , the information is available for all Twner-occupied units.

Unit Size-Starting in 1984, the AHS provides information on the size of the unit. Included are basements and finished attics. Excluded are unfintshed attics, carports, attached garages, and porches that are not protected from the elements. The information is obtatned from the respondent and by exterior measurements if the respondent authorizes the interviewer to do so. Interviewers are given very specific instructions on how to elicit the information from the respondent and on how to measure the unit from the exterior. If the respondent does not know the total square footage of the unit, the interviewer ei icits information on a floor or room basis, records the length and width for each floor and provides sketches of the units. This information is reviewed by the Census Bureau and used to compute the square footage of the unit. The variable MEASUR indicates whether the interviewer was authorized to ottatn outside measurements or whether the square footage recorded in the AHS file is oased exclusively on information provided by the respondent.


#### Abstract

Rooms-Rooms counted include whole rooms used for living purposes, such as living rooms, dining rooms, bedrooms, kitchens, finished attic or basement rooms, recreation mooms, permanentiy enclosed basement rooms, permanentiy enclosed porches that are suitable for year-round use, and lodgers' rooms. Also


 included are rooms used for offices by a person living in the unit.A partially divided room, such as a dinette next to a kitchen or living room, is a separate room only if there is a partition from floor to ceiling, but not if the partition conststs only of shelves or cabinets. A dining area in a L-shaped living room is not recorded as a dining room and not counted as a room.

Not included in the count of rooms are bathrooms, halis, foyers or vestibules, balconies, closets, alcoves, pantries, strip or pullman kitchens, laundry or furnace rooms, unfinished attics or basements, other unfinished space used for storage, open porches, trailers used only as bedrooms, and offices used only by persons not living in the unit.

If a room is used by occupants of more than one unit, the room is included with the unit from which it is most easily reached.

Bedrooms-The number of bedrooms in a housing unit is the count of rooms used mainly for sleeptng, even if also used for other purposes. Rooms reserved for sleeping, such as guest rooms, even though used infrequently, are counted as bedrooms. On the other hand, rooms used mainly for other purposes, even though used also for sieeping, such as a living room with a hideaway bed, or an extra bedroom used for storage, are not considered bedrooms. A housing unit consisting of only one room, such as a one-room efficiency apartment, is classified by definition as having no bedroom.

> Full Bathrooms--A unit has a full complete bathroom if it has a room with a flush toilet and bathtub or shower and a sink, as well as hot and cold piped water in the structure for the exciusive use of the occupants of the unit. A nalf bathroom has either a flush toilet or a bathtub or shower for exclusive use, but does not have all the facilities for a complete bathroom.

Porcn, balcony, deck--A porch, deck, or balcony must be attached to the unit, not only to the building. It can be open or enclosed and must be at least four Dy four feet. An enclosed porch used for year-round living and reported as a room is not reported as a porch to avoid double counting.

```
Crowding--Until 1983, a variable reporting the number of persons per room was
provided in the AHS files. This variable can be created for subsequent years.
Other measures can be computed by using the household composition variables.
Several measures have been used to measure crowding or appropriateness of the
space in the unit relative to the number of persons in the housenold. 0me mea-
sure is based on the number of persons per room (not more than 1.O or 1.5 per
sons per room), another on the number of persons per bedroom (not more than 2
persons per bedroom). The latter has sometimes been elaborated by relating the
requirements to family composition (for example, by requiring that persons of
the opposite sex [other than husband and whfe or young children] have separate
bedrooms).
```

Renovations--Renovations include work completed after the original construetion. work which has begun but was never completed is not reported, unless the work is currently in progress. Additions are restricted to the sample unit. Remodeling includes replacing or adding installed equipment. Major equipment includes heating equipment, water heaters and heat pumps. Appliances such as portable dishwashers which are simply plugged and not installed are not included.


#### Abstract

Other major repairs or improvements include any work done to the sample unit. It does not include detached garage, outdoor swimming pools, free standing decks or any other struetures on the property, but outside the sample unit.

Cost of Renovation--The dollar amount reported or specified in the questions, e.g., $\$ 500$ or more, includes the total cost of labor and materials. but does not include estimated labor charges for work performed by the occupants or provided free of charge.


The information is available for owner-oceupied units only. prior to tg83. it was available only for one-unit structures with no medical/dental offices or commercial establishments located on less than 10 acres.

REF\#
0069

## DESCRIPTION


$74 N-81 N 73 N$
83N 85N-93N

74S-93S

| $0-5$ | 0 | None |
| ---: | ---: | :--- |
|  |  | None To 5 Bedrooms <br> 0 |
|  | $1-9$ | 1 To 9 Bedrooms |
|  |  | 6 Or More Bedrooms |
| 99 | 10 | 10 Or More Bedrooms |

Note: Starting in 1985s, top codes will be the 97 th percentile of each metropolitan area. Beginning in 1987 N , the top code is the 97 th percentile for the entire national sample.
0076 BDRMSC $78 \mathrm{~N}-81 \mathrm{~N}$ Change In No. Of Rms Mainly for Sleeping Since Last Int. $\frac{81 \mathrm{~N}}{3}$
Yes
No
Not Sure
Not Answered
Not ADPlicable


[^7]

0093 NEWROF | $85 N-93 N$ |
| :--- |
| $845-93$ |

All Or Part Of Roof Replaced In Last 2 Years
$\frac{84 S}{15}$
$\frac{85 N}{16}$
$\frac{84 S}{15}$$\frac{85 N}{16}$

0094 HHROF 85N-93N
Hhld Member Worked To Replace All Or Part Of Roof
Yes
84S-935
No
Not Answered
Not Applicable

| 0095 | NEWADD | $85 N-93 N$ |
| :--- | :--- | :--- |
| 0096 | NEWKIT | $845-93 S$ |
| 0097 | NEWBTH |  |
| 0098 | NEWSID |  |
| 0099 | OTHFIX |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
| 0100 | ADD | $74 N-77 N$ |
| 0101 | MAUADD | $80 N$ |
| 0102 | ALT | $83 N$ |
| 0103 | MAUALT | $755-815$ |
| 0104 | REP |  |
| 0105 | MAUREP |  |
| 0106 | FIX |  |
| 0107 | MAUFIX |  |


| New Additions Built In Last 2 Years <br> Kitchen Added or Remodeled In Last 2 Years <br> Bathroom(s) Added Or Remodeled In Last 2 Years <br> Siding Replaced Or Added In Last 2 Years <br> Other Major Repairs/Improvements >\$500 Ea In Last 2 Yrs <br> Standard Codes for All Variables are: <br> 1 Yes, Work Done, Not known By Whom <br> 2 No, Work Described Not Done <br> 3 Yes, Work Done, By Household Member <br> 4 Yes, Work Done, Not By Household Member <br> 8 Not Answered <br> 9 Rental Unit Or Non-Interview |  |  |
| :---: | :---: | :---: |
|  | 83N | 815 |
| Additions to Property In Last 12 Months | 21 | 22 |
| Additions To Property Cost \$100-\$500 Or More | 21 | 22 |
| Alterations To Property In Last 12 Months | 21 | 22 |
| Alterations to Property Cost \$100-\$500 Or More | 21 | 22 |
| Replacements On Property In Last 12 Months | 21 | 22 |
| Replacements on Property Cost \$100-\$500 Or More | 21 | 22 |
| Repairs to Property In Last 12 Months | 21 | 22 |
| Repairs To Property Cost \$100-\$500 Or More | 21 | 22 |


| 845 | $85 N$ |
| ---: | ---: |
| 15 | 16 |
| 15 | 16 |
| 15 | 16 |
| 15 | 16 |
| 15 | 16 |



[^8]
# Structurally Innovative Fourplex 




#### Abstract

This section documents kitchen and bathroom facilities, plumbing, cooling and heating equipment. It also contains information on energy conservation features. such as storm windows and insulation, and on recent installations of major equipment. Facilities present in the previous restdence are included in the Past and Future Homes section. For data on fuels used to operate equipment discussed in this section and on utility costs, refer to the fuels and Utility Costs section. In general, the variables are avallable for all units in the sample.


Telephone avallable-A housing unit has a telephone if there is one available to the occupants of the unit for receiving calls. The telephone may be located outside or inside the housing unit, and one telephone may serve the occupants of several units. Note that this definition is different from the 1980 Census. which counts a telephone only if it is inside the specific housing unit.

Complete kitchen facilities-A unit has complete kitchen facilities when it has all three of the following for the exclusive use of the occupants of the unit: (1) an installed sink with piped water, (2) a mecnanical refrigerator, (3) built in burners, not portable, and (4) an oven. Through 1983 the oven was not part of the definition. All kitchen factitties must be located in the structure. They need not be in the same room. Quarters with only portable cooking equipment are not considered as having a range or stove. An fcebox is not included as a mechanical refrigerator.

The kitchen facilities are for the exclusive use of the occupants when they are used only by the occupants of one housing unit, including lodgers or other unrelated persons living in the unit. When a structure consists of only one housing unit, all equipment located inside the structure is classified, by definition, for exclusive use.

For vacant units from which one or all of the kitchen facilities have been removed, the $k i t c h e n$ facilities used by the last occupant are to be reported.

Complete plumbing facilities--A unit has "complete plumbing facilities" if it has hot and cold piped water inside the unit as well as a flush toilet and a bathtub or shower inside the structure for the exclusive use of the occupants of the housing unit. All plumbing facilities must be located in the unit but they need not be in the same room. Note that plumbing facilities are considered complete if they are located in the structure in which the untt is located. while in the Census, facilities are complete only if they are inside the specific housing unit. Plumbing facilities are shared if they are also for the use of the occupants of other housing units.

Source of water or water supply--"A public system or private company" refers to a common source supplying running water to six or more housing units. The water may be supplied by a city, county, water district, or private water company, or it may be obtained from a well which supplies six or more housing units. If a well provides water for five or fewer housing units, it is classified as an "individual well". Water sources such as springs, creeks, rivers, cisterns, ponds, or lakes are included in the "other" category.

Sewage disposal--A "puolic sewer" is connected to a city, county, sanitary district. neighborhood, or subdivision sewer system. It may be operated by a government body or private organization. A "septic tank or cesspool" is an underground tank or pit used for disposal of sewage which serves five or fewer units. Small sewage treatment plants, which in some localities are called neignborhood septic tanks, are classified as public sewers.

Air conditioning--Atr conditioning is defined as the cooling of air by a refrigeration unit; excluded are evaporative coolers, fans, or blowers which are not connected to a refrigeration unit. A "room unit" is an individual air conditioner which is installed in a window or an outside wall and is generally intended to cool one room, although it may sometimes be used to cool more than one room. A "central system" is a central installation which air-conditions the entire nousing unit. In an apartment butlaing, a central system may cool all apartments in the building; each apartment may have its own central system; or there may be several systems, each providing central air conditioning for a group of apartments. A central installation with individual room controls is a central air-conditioning system

Heating equipment--"Warm-air furnace" refers to a central system which provides warm air through ducts leading to various rooms. An "electric heat pump" refers to an electric ali-in-one neating-cooling system which utilizes indoor and outdoor coils, a refrigerator, and a compressor to provide heating in the winter and cooling in the summer. Only heat pumps that are centrally installed with ducts to the rooms are included in this category. "Steam or hot water" refers to a central heating system in which heat from steam or not water is delivered through radiators or other outlets. "Built-in electric units" are permanently installed in floors, walls, ceilings, or baseboards. A "floor, wall, or other pipeless furnace or bulit-in hot air heater without ducts" delivers warm air to the room right above the furnace or to the room(s) on one or both sides of the wall in which the furnace is installed.
"Room heaters with flue" include circulating heaters, convectors, radiant gas heaters and other nonportable heaters that burn gas, oil, kerosene, or other liquid fuels, and connect to a flue, vent, or chimney to remove smoke and fumes. "Room heaters without flue" include any room heaters that burn gas, oil. or kerosene and do not connect to a flue, vent, or chimney. Starting in 1984 , fireplaces, stoves and electric portable heaters are reported separately. Before 1984, they were reported as a group and include room heaters that burn coal, coke, charcoal, wood or other solids. It also includes portable electric heaters that get current from an electrical wall outlet. According to interviewer instructions, portable heaters burning liquid fuel should be included under "fireplaces, etc.". not under "room heaters without flue", but the questionnaire does not mention the portability distinction, so some portable room heaters may be classified "room heaters", while others are classified "fire places, etc."

For vacant units from which the heating equipment had been removed, the equipment used by the last occupants is to be reported.

Installation of major equipment--Includes heating equipment, central air condi-
tioning, dehumidifers, portable disnwashers, water heaters, etc. The equipment
must be installed at the time of the interview.

Storm doors/windows and insulation added--Storm windows include windows which were completely replaced with windows made of double or triple glass and windows Which were purchased but not yet installed. Insulation includes foam, weather stripping, and caulking. Plastic taped over windows in the winter, but removed in the summer, is not included.

## Floor Plans

The four living units, consisting of two twobedroom and two duplex four-bedroom versions, are arranged with "daytime" spaces along the southern exposure, where views and direct heat gain are most important. Cluster-
ing of baths and kitchens permits use of one economical plumbing wall to serve all four units.

Each living unit has its own remote entry to maximize personal privacy. The larger du-
plexes have terraces. Family and living rooms can be interchangeably located according to the homeowner's wishes.

Foor Plans
Apartment Areas. Two bedroom- 828 sq ft.
Four bedroom- 1.728 Four bedroom-1.728 sq.ft.



[^9]EQUIPMENT (Continued)



[^10]


0163 HADDL | $73 N-83 N$ |
| :---: |
| $745-83 S$ |$\quad$ Used Additional Heating Equipment Past Winter

$\frac{83 N}{46} \quad \frac{835}{28}$
2 No
9 Not Applicable
Supplemental Heating Equipment

| 0164 | SAFUR | $84 N-93 N$ |
| :--- | :--- | :--- |
| 0165 | SHPMP | $805-815$ |
| 0166 | SSTEAM | $84 S-93 S$ |
| 0167 | SELECT |  |
| 0168 | SPLF |  |
| 0169 | SFLIN |  |
| 0170 | SFLOT |  |
| 0171 | SFRPL |  |
| 0172 | SSTOVE |  |
| 0173 | SPORTH |  |
| 0174 | SHOTH |  |

Supp 1 Heat-Centrl Wrm Air Furn W/Ducts
Supp 1 Heat From Heat Pump
Supp 1 Heat From Steam/Hot Water System
Suppl Heat From Electric Units
Suppl Heat From Floor/Wall/Pipelss Furn
Suppl Heat From Vented Room Heater(s)
Suppl Heat From Unvented Room Heater(s)
Suppl Heat From Fireplace Without Inserts
Suppl Heat From Stoves
Suppi Heat From Portable Room Heaters
Suppl Heat From Other Source(s)

| $85 N$ |
| ---: |
| 8 |
| 8 |
| 8 |
| 8 |
| 8 |
| 8 |
| 8 |
| 8 |
| 8 |
| 8 |
| 8 |

Standard Codes For All Variabies Are:
O No Supplemental Heating Equipment of The
Type Specified
Supplemental Heating Equipment of The
Type Specified
9 Not Applicable
variabies have been recoded in t980S
conform to coding conventions used in 19815.
nat in $1980-815$ SFRPL does not distinguish
eplaces with inserts and fireplaces without.
1984 , two variables are available to
between the two types of fireplaces
below).
Heating Equipment

Note: These variables have been recoded in 4980 S so that they conform to coding conventions used in 19815. Also note that in 1980-815, SFRPL does not distinguish between fireplaces with inserts and fireplaces without. Starting in 1984, two variables are available to distinguish between the two types of fireplaces (see SFRPLI below).


[^11]


Notes: $G=$ Variable is computer generated, and is not present on the questionnaire.

$C C=$ Variable is present on the control card for the unit.



#### Abstract

Data in these sections include a measure of overall quality of the unit, residents' satisfaction with the unit, deficiencies outside and inside the unit (e.g., leaks, holes, cracks, Dlown fuses, equipment oreakdowns) and in the common halls (such as non-working light fixtures or loose railings), and the cost of routine maintenance to the unit. The costs of routine maintenance are included to compute the "monthly housing costs" summary variable for owners (see Housing Costs section).


#### Abstract

Housing Adequacy--A summary measure of housing quality is provided in the aHS files starting in 1984. The criteria used to create this three-scale index are presented in detail at the end of this section, following the definitions. Programming commands are also provided to assist users in recreating the measure for earlier years.


#### Abstract

Satisfaction with House/Apartment--Respondents are asked to rate their house/ apartment as a place to 1 ive. The rating systems ehanged after 1983. scale rating system in earlier years was changed to a ten-scale rating system, in which ten is most satisfied and one is least satisfied.


#### Abstract

Costs of Routine Maintenance--Routine maintenance consists of regular main tenance activities necessary for the preventive care of the structure, property and installed equipment. Repairs include painting, papering, floor sanding, restoration of some shingles, fixing water pipes, repairing the furnace, water heater, fences, gutters and decks, removal of trees, termite inspection, etc. The cost amounts include the cost of all activities performed in the last 12 months. The variable is available for allowner occupied untts from 1984 on.


[^12]Exterior structural conditions--These data are provided by odservation. A
sagging roof is reported if it is substantial and can be seen without climbing on the roof. Missing roof materials include rotted, broken or missing shingles, tiles, slates, etc. caused by extensive damage from fire, storm or serious neglect. Holes are reported if missing materials expose the interior of the Unit to the elements. Missing materials on the walls and chimney do not have to expose the interior of the unit to the elements to be reported. The defects may have been caused by fire, storm, flood, neglect or vandalism. Boarded-up Windows include both windows and doors which are covered by board, brick, metal or other material. Broken windows are reported if several panes are missing or broken. Foundation defects include large cracks, holes, and rotted, loose or missing material. None of the above defects are reported if the conditions are due to construction activities, unless it is obvious that the work has been abandoned.

Signs of basement water leakage--Signs of basement water leakage are recorded. Water leakage is present if the basement shows signs of water having leaked in from the outside, even if the signs only appear when it rains or during other similar situations. "No water leakage" means that the basement shows no signs of water leakage, or that the signs of water leakage are caused by a problem inside the structure such as faulty plumbing. If the basement shows-signs of water having leaked in from the outside but the problem causing the leakage has been corrected, the unit was classified as having no basement leakage. Starting in 1984, the ttem is avallable if the respondent reported a water leakage in the last 12 months.

Leaking roof--Units with "water leakage" are those in which the roof shows signs of water having leaked in from the outside or where the roof leaks when it rains. "No water leakage" means that the roof shows no signs of water having leaked in from the outside, or that the roof shows signs of water leakage but the problem causing the leakage has been corrected. If the signs of water leakage are caused by a problem inside the structure such as faulty piumbing the unit is classified as having no basement leakage. Starting in t984, this item is available if the respondent reported that water did lead from the outside in the last 12 montins.


#### Abstract

Other Leakages--Starting in 1984, data are available on water leakages through the walls and around the windows as well as leakages caused by faulty water pipes, plumbing backups or other causes. Leakages through broken or detertorated windows are counted, while water leakages which came in through an open window are excluded. Leakages are reported if they occurred in the last 12


 months.Interior walls and ceilings-Data are collected on whether there are open cracks or holes and broken plaster or peeling paint on the interior walls or ceilings of a housing unit. Included are cracks or holes that do not go all the way through to the next room or to the outdoors. Hairline cracks or cracks that appear in the walls or ceilings but are not large enough for a fingernail file to be inserted, and very small holes caused by nails or other similar objects are not considered to be open eracks or holes.

Broken piaster or peeling paint must be on the inside walls or ceilings, and at least one area of the broken plaster or peeling paint must be larger than 8 inches by 11 inches.

Interior floors--Data are collected on whether there are holes in the interior floors of a housing untt. The holes do not have to go through the floor. Excluded are very small holes caused by nails or other similar objects.


```
Electric wiring--A nousing unit is classified as naving exposed electric wiring
if the unit has any wiring that is not enclosed, either in the walls or in metal
coverings located in living areas only. Extension cords and other types of
wiring that extend from a wall outlet to an appliance or lamp are not considered
as exposed wiring.
```

Electric wall outlets--A housing unit is classified as having electric wall outlets in each room if there is at least one working electric wall outlet or wall plug in each room of the unit. A working electric wall outlet or wall plug is one that is in operating condition, i.e., can be used when needed. If a room does not have an electric wall outlet, an extension cord used in place of a wall outlet is not considered to be an electric wall outlet.

Programming Commands for Measures of Inadequacy

A wide body of 1 iterature exists on the definition and measurement of housing quality. Quality measures have included measures of inadequacy, minimal criteria of physical adequacy, overcrowding, excessive housing cost burden, and levels of housing amenities. Aggregations, summary ratings, hedonic indices and other econometric techniques have been used to derive indications of quality. The AHS survey includes many questions related to housing deficiencies (lack of heat, breakdowns, leaks, holes, etc.) and relatively fewer questions on better than average houses.

A three level index of physical problems is shown below:

```
1 = adequate
2 = moderately inadequate
3= seriously inadequate
```

Starting with the 1984 survey, it is coded in the variable ZADEO and will be inciuded in the AHS Publications. It uses variables which were present consistently in past $A H S$ surveys, so that the index can be completed for comparisons across time. Definitions are provided following the Programming Commands.

```
The index can be programmed by the commands shown on the next page. These
commands should be adapted to the particular computer language or software
package you are using. The commands shown in the left hand column apoly to most
survey years. However, because of changes in the phrasing of the questions or
modification to the coding of the variables, commands have to be adapted in
certain years. These adjustments are shown in the column labelled "Excep-
tion."
```

- SEVERE. A unit is considered severely deficient if it has any of the following five problems:

Plumbing. Lacking not piped water or a flush toilet, or lacking both bathtub and shower, all for the exclusive use of the unit.

Heating. Having been uncomfortably cold last winter, for 24 hours or more, because the heating equipment broke down, and it broke down at least three times last winter, for at least six hours each time.

Upkeep. Having any five of the following six maintenance problems: leaks from outdoors, leads from indoors; holes in the floor; holes or open cracks in the walls or ceilings; more than a square foot of peeling paint or plaster; or rats in the last ninety days.

Hallways. Having all of the following four problems in public areas: no working light fixtures; loose or missing steps; loose or missing railings; and no elevator.

Electric. Having no electricity, or all of the following three electric problems: exposed wiring; a room with no working wall outlet; and three blown fuses or tripped circuit breakers in the last 90 days.

- mooerate. A unit is considered moderately deficient if it has any of the following five problems, but none of the severe problems:

Plumbing. Having the toilets all break down at once, at least three times in the last three months, for at least six hours each time.

Heating. Having unvented gas, oil or kerosene heaters as the main source of heat; these give off unsafe fumes.

Upkeep. Having any three of the six upkeep problems mentioned under SEVERE.

Hallways. Having any three of the four Hallways problems mentioned under SEVERE.

Kitchen. Lacking a sink, range, or refrigerator, all for the exclusive use of the unit.

Same

Having the heating equipment break down at least three times last winter, for at least six hours each time.


#### Abstract

Having any five of the following six maintenance problems: leaky roof; leaky basement; holes in the floors; holes or open eracks in the walls or ceilings; more than a square foot of peeling paint or plaster; mice or rats in the last ninety days. If the unit has no basement, any four of the remaining five problems would be enough to count the unit as severely deficient.

Having all of the three problems other than the elevator, which is not considered.


Same.

Having only one toilet which broke down at least three times in the last three months, for at least six hours each time.

Same.

Same.

Having any two of the three problems, other than the elevator probiem.

Same.

## Exceptions

## ZADEQ $=1$

```
Plumbing if PLUMB = 2 or PLUMB = 3 then ZADEQ = 3
```

Heating if NUMCOLD $\geq 3$ and NUMCOLD < 4 then ZADEQ $=3$
$\begin{array}{ll}\text { Electric } \begin{array}{l}\text { If } B U Y E=2 \text { or } P A Y E=3 \text { then } Z A D E Q ~\end{array}=3 \\ & \text { If NOWIRE }=2 \text { and PLUGS }=2 \text { and NUMBLOW } \geq 3 \text { and }\end{array}$
NUMBLOW <8 then ZADEQ $=3$

## Upkeep $\quad N=0$

If RLEAK $=1$ then $N=N+1$
If BLEAK $=1$ then $N=N+1$
If HOLES $=1$ then $N=N+1$
If CRACKS $=1$ then $N=N+1$
If PAINT $=1$ or PLASTER $=1$ then $N=N+1$
If RATS $=1$ then $N=N+1$
IF $N \geq 5$ then $Z A D E Q=3$
If BLEAK $=9$ and $N=4$ then $Z A D E Q=3$
Hallways $M=0$
If LTS $=2$ or LTSOK $=3$ then $M=M+1$
If BADSTEP $=1$ then $M=M+1$
If RAILOK $=2$ or RAILOK $=3$ then $M=M+1$
If $N=4$ then $Z A D E Q=3$
IF ZADEQ NE 3 THEN:
Plumbing if NUMTLT $=3$ or NUMTLT $=4$ then $Z A D E Q=2$
Heating if HEQUIP $=7$ then ZADEQ $=2$
Upkeep $\quad$ if $N \geq 3$ then $Z A D E Q=2$
Hallways if $M=2$ then $Z A D E Q=2$

If $M=3$ THEN ZADEQ $=2$
(Starting in 1984)
IF BUYE $=1$ THEN ZADEQ $=3$ (Starting in 1984)

```
IF LEAK = 1 then N = N + 1
IF ILEAK = 1 then N=N + 1
(starting in 1984)
IF BIGP = 1 THEN N=N+1 (|n
73N, 74N, 74S, and 75S, and
all years starting in 1984)!
Starting in 1984, this line
should be deleted.
IF LTS = 2 or LTSOK = 4 THEN
    M=M+1
IF GADSTEP = 2 THEN M = M + 1
IF RAILOK = 1 Or RAILOK = 3
THEN M = M + 1
IF CLIMB > 3 and CLIMB < 98
and ELEV NE 2 THEN M = M + 1
(Starting in 1984)
```

IF HEQUIP $=6$ THEN ZADEQ $=2$
(1n $73 N-76 N$ and $74 S-75 S)^{2}$
(Starting in 1984)

END

[^13]

[^14]


[^15]


$\begin{aligned} & \text { Notes: } \text { G Variable is computer generated, and is not present on the questionnaire. } \\ &++=\text { Variable is present on a supplemental page to the questionnaire. }\end{aligned}$
$C C=$ Variable is present on the control card for the unit.



[^16]Elevations
The south glazing admits sunlight to as many living spaces as possible, partucutarly those cnucal for daytime functions. Minimally, this glaxing will provide for a sun tempered residence, while the addition of iighrweigh concrete floor siabs (see wall section) will
provide a themal mass storage source to reradiate stored heat at night.

Conversely, the north elevation features fewer
and smaller windows which reduce this
elevation's heat losses. The lower bedroom
floor is set into the earth. allowing maximum
we of foundaion walls as interior surfaces.
and improving the thermat performance of the
wells through the earth's added insulative
properties.

Elevations


Souch Elevation


North Elevation

Steven Winter Associates, Inc., Building Value into Housing 1980 Awards, A compendium of Winning Submissions Under HUD's 1980 "Building Value into Housing Program", November, 1980.


#### Abstract

Data on neighbornood conditions include the presence of particular services, their dependability/adequacy, and the presence/extent of bother of particular detriments (e.g., ittter, crime pollution). Users should note that data on neighborhood conditions are based on subjective assessments of the respondent rather than on objective evaluations of the neignoorhood (there are a few exceptions where the enumerator's observations are available; these are indicated as appropriate). It should aiso be noted that the definition of "neighborhood" varies across years (for example, in 1973, respondents were asked to rate the conditions of their street while in later years they were asked to rate the conditions of the neighborhood). Furthermore, neighborhood is not defined to the respondent; it is whatever the respondent considers his/her neighborhood to be. Items related to previous neighborhood are presented in the past and future Homes section. Starting in 1984, interviewers are asked to complete, by observation, a few questions describing the immediate surroundings of the sample unit. The area is defined as 300 feet in any direction from the front of the building. These vartables are identified in the documentation by the words "within 300 feet" in the variable description.


Many of the questions were asked in a three-part format: Does the problem exist, is it disturbing to you, and does the problem make you want to move? In the 1973 National and 1974 SMSA tapes, the answers are preserved in three separate varlables (e.g., CRIME, CRIMED, CRIMEM), while in later tapes, the answers were combined (for example, CRIME).

The phrase "want to move" in these variables is not intended as a measure of modility but as a measure of dissatisfaction. Nevertheless, the variables are weakly correlated to mobility.

Besides these questions about the general neighborhood, the 1985 N survey has actual interviews with neighbors. For about 680 urban AHS units, chosen at random, the 10 elosest units were chosen and interviewed. These units are identified in the RURREC and NEIGH variables in the Geograpny section. A regular AHS interview was conducted, so you can analyze income, income mix, famlly composition, types of houses, etc. in each ciuster of neighbors. The samaple of neighbors will be interviewed again.in 1989 and 1993.



Notes: $\quad$ G $=$ Variable is computer generated, and is not present on the questionnaire.
++ = Variable is present on a supplemental page to the questionnaire.
$C C=$ Variable is present on the control card for the unit.



[^17]



| REF\# | NAME | SURVEYS | DESCRIPTION |  |
| :---: | :---: | :---: | :---: | :---: |
| 0382 | ZSERVM2 | 74N-77N | Recoded Wish To | Move Due To Inadequate Services |
|  |  |  | $1$ | Wish To Move |
|  |  |  | $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | Wish To Move Not Reported |
|  |  |  | 4 N | No Inadequate Services |
|  |  |  | 5 D | Don't know (Not On 74N) |
|  |  |  | 8 N | Not Answered |
|  |  |  | 9 | Not Applicable |

## Elevations

These elevations demonstrate the designer's concern with the cooling requirements of semi-arid Arizona. Overhangs protruding above large glazed areas are sized to provide shading and prevent excess solar heat gain. Landscaping buffers extermal surfaces from
solar exposure, reducing theriual toads.

Elevations


West Elevation


Souch Ele vation

```
Notes: G = Variable is computer generated, and is not present on the questionnaire.
    ++ = Variable is present on a supplemental page to the questionnaire.
    CC = Variable is present on the control card for the unit.
```


# Naturally Cooled Post \& Beam 

Project Sponsor/Designer: Lee Choir: \&
Mark Good
Newport Beach. California

Living Area: 1.000 sq. ft.

This house combines post and beam construction and manufactured roof and wall panels with passive solar techniques to produce a design for semi-arid climates.


[^18]
#### Abstract

Data on household composition are collected for all members of the househola and describe both individual members and aggregate household demographics. Basic demographic data such as age, sex, and race are available, as well as data on years of education. Concepts such as spouse present, race, Spanish origin, and marital status are not defined to the respondent. The variables reflect the answers as stated by the respondent. Some variables are available for the head or reference person only. (The concept of "head of household" was dropped in 1980, and replaced by the "reference person" who may be any of the people who own or rent the unit.) Summary household variables include total number of persons, number of adults, number of children, number of people not related to the head or reference person, and number of persons 65 years or older. The availability of these summary variables vary from year to year. Any variable can be recreated using the detailed information for each household member. Additional information on housenold members is contained in the Disabilities section, when they moved in is in the mobility section, and their incomes are in the Income section.


It should be noted that the variable ZCOMP presented at the end of this section and intended to provide a housenold elassification, is not recommended as some users have found that it is unreliable.

The following is a discussion of key concepts related to household composition as well as definitions for a number of variables documented in this section. The definitions are followed by a discussion of the interviewing and recording procedures to obtain housenold composition and demographic data items.

Household--A household consists of all the persons who oceupy a housing unit whether or not they are related. By definttion, the count of housenolds is the same as the count of occupied housing units.

[^19]A person is counted at the usual place of residence for that person. This
refers to the place where the person lives and sleeps most of the time. This Place is not necessarily the same as a legal residence, voting residence, or domicile. Unmarried students temporarily away in another locality to attend school are considered household members, unless they have left home permanently

Reference person--Family relationships are coded in relation to a reference person". The "reference person" is the first household member listed on the questionnaire or control card who is an owner or renter of the sample untt. If no housenold member occupying the sample unit owns or rents the unit, the refer ence person is the first housenold member 1 tsted who is 18 years old or older, or the first person listed if all housenold members are under 18 . In surveys from 1973 through 1979, the concept "head of household" was used. One person in each household was designated as the head, that is the person who was regarded as the head by the respondent. However, if a married woman living with her husband was reported as the head, her husband was considered the head for the purpose of simplifying the coding.

Relationship--Starting in 1984, the relationships provided in the AHS files are less detailed than in earlier years. Several variables have been added to the files. The variable PARENT provides the 1 ine number of the father or mother of a given household member, if living in the household. If both are present, the line number of the first person listed is entered. The second parent, if present, can be identified by using the variable SPOUSE, which inciudes the line number of the spouse. These two variables, together with the relationship codes, can be used to determine the composition of a household.

Own enildren--A enild is defined as an "own" enild if he or she is a single (never married) son, daughter, stepchild, or adopted chila of the reference person. Own children of subfamilies are excluded from the total count of own children, as are foster children.

Subfamily--A subfamily is a married couple with or without children, or one parent with one or more of their own single (never married) children. living in a household and related to, but not including the reference person or spouse The most common example of a subfamily is a young married couple snaring the home of the husband's or wife's parents.

Other relative--This category includes all persons related to the reference person by blood, marriage, or adoption except wife, husband, or child of reference person and members of subfamiites.

```
Nonrelative--A nonrelative of the reference person is any person in the house
hold who is not related to the reference person by blood, marriage, or adop-
tion. Roomers, boarders, lodgers, partners, resident employees, wards, and
foster children are included in this category.
```

Age--The age classification refers to the age reported as of each person's last
birtnday.


#### Abstract

Race--The concept of race used by the Census Bureau does not denote clear-cut scientific definitions of biological stock. The interviewer was to report the race of the reference person in three categories: White, Black (Negro), and other. The last category includes American Indian, Chinese, Eskimo, Japanese, Korean, and any other race except White and Black. The classification of race in the American Housing Survey up througn 1977 was made by the interviewer based on his own observation of the respondent (and a question about the other members of the household if there seemed any reason why they might be of a different race). In the 1970 and 1980 Census, race was essentially a self-classification by people according to the race with which they identified themselves. Starting with the 1978 AHS National and SMSA Surveys, new households joining the sample were asked to classify themselves by race, but other households interviewed before retained the interviewer observation.


Spanish origin--Spanish origin was determined on the basis of a question that asked for self-identification of a person's origin or descent.

Care should be exercised in the interpretation of differences in the estimated counts of Spanish-origin households between the American Housing Survey, the 1970 Census, 1980 Census, and other current surveys. Spanisn persons are identified according to various criterta: birtholace, birthplace of parents, language, surname, and origin or descent. In addition, research indicates that 1970 estimates of Spanish-origin housenolds may be significantly overstated in the South Region and North Central Region. In the 1980 Census the categories are essentially the same as the 1980 AHS , except the category "Central or South American" is not present. Starting in 1984, the data state whether a person is of Spanish origin but do not distinguish between the various origins.

Years of school completed by reference person--The data refer to the highest grade of regular school completed and not to the highest grade attended. For persons still attending school, the highest grade completed is one less than the one in which they are currently enrolled. Regular school refers to formal education obtained in graded public, private, or parochial schools, colleges. universities, or professional schools, whether day or night school, and whether attendance was full or part time. That is, "regular schooling" is formal education which may advance a person toward an elementary or high school diploma, or college, university, or professional school degree. Schooling or tutoring in other than regular schools is counted only if the credits obtained are regarded as transferable to a school in the regular school system. Reference persons whose highest grade completed was in a foreign school system or in an ungraded school were instructed to report the approximate equivalent grade (or years) in the regular United $S t a t e s$ school system. They were not reported as having completed a given grade if they dropped out or failed to pass the last grade attended. Education received in the following types of schools is not counted as "reguiar schooling": vocational schools, trade schools, and noncredit adult education classes.

Note that in the 1970 and 1980 Census, data for years of school completed were based on responses to two questions--the highest grade or year of regular school each household member attended, and whether or not that grade or year was completed. In the American Housing Survey, data for years of school completed were based on responses to a single question--the highest grade or year of regular school completed by the householder. Therefore, the American Housing Survey may overstate the education level of the reference person; that is, respondents may have reported the grade or year the person was currently enrolied in or had last been enrolled in whether or not the grade or year was completed.

Household characteristics--As described above, the American Housing Survey has information on each person tn each household: age, sex, marital status, relationsnip to a reference person, and race. These are stored in AGE-AGE15. SEXSEX15, MAR-MAR15, REL-REL 15 , and RACE-RACE 15.

```
Most of the variables documented in this section are recorded on the control
card of the AHS Survey, A sample of the control card is shown below. The
control card is completed by the interviewer, the first time that the oceupants
of a sample unit are interviewed. The interviewer lists all housenold memoers
on page 2 of the control card, and completes items 10-2G for each person that
does not have a Usual Residence Elsewhere (see Item 14 on page 2 of the control
card). During subsequent interviews in that same unit, the interviewer reviews
the information on the control card with the respondent and identifies household
members tinat have left or have moved in since the last tnterview
```

Line numbers (PLINE-PLIN45)--are assigned as name of housenold members are written down in the interview. The reference person is always entered first. Line numbers are consistent from survey to survey, until the household moves out. For example ff the household as a whole remains in piace, but the person on 1 ine 4 moves out, and a new baby is born, the baby will be assigned a new line number at the end of the 1 ist, and no person in the household will have 1ine number 4.






[^20]


[^21]| 0460 | SUBF |
| :--- | :--- |
| 0461 | SUBF2 |
| 0462 | SUBF3 |
| 0463 | SUBF4 |
| 0464 | SUBF5 |
| 0465 | SUBFG |
| 0466 | SUBF7 |
| 0467 | SUBF8 |
| 0468 | SUBF9 |
| 0469 | SUBF10 |
| 0470 | SUBF11 |
| 0471 | SUBF12 |
| 0472 | SUBF13 |
| 0473 | SUBF14 |
| 0474 | SUBFi5 |

$85 N-93 N$
$84 S-93 S$
Family Type (Person Number 1)
Family Type (Person Number 2)
Family Type (Person Number 3)
Family Type (Person Number 4)
Family Type (Person Number 5)
Family Type (Person Number 6)
Family Type (Person Number 7)
Family Type (Person Number 8)
Family Type (Person Number 9 )
Family Type (Person Number 10)
Family Type (Person Number 11)
Family Type (Person Number 12)
Family Type (Person Number 13)
Family Type (Person Number 14)
Family Type (Person Number 15)

| $84 S$ | 85 N |
| ---: | ---: |
| $G$ | $G$ |
| $G$ | $G$ |
| $G$ | $G$ |
| $G$ | $G$ |
| $G$ | $G$ |
| $G$ | $G$ |
| $G$ | $G$ |
| $G$ | $G$ |
| $G$ | $G$ |
| $G$ | $G$ |
| $G$ | $G$ |
| $G$ | $G$ |
| $G$ | $G$ |
| $G$ | $G$ |

                person's family
                2 Reference person with no relatives
                present
            3 Person is part of a subfamily
                related to reference person
            4 Person is part of a subfamily not
                related to reference person
            5 Person is a non-relative without
                own relataives present
    Note: Code 2 applies to the reference person ONLY.


85N-93N

O Person has no relative present in household
1 Person is a member of the reference person's family
2-7 Person is a member of Family
Number 2 through 7
9 Not Present, or Vacant
0490 AGE
$73 N$
$85 N-93 N$
$745-93 S$

$\frac{73 N}{4} \quad \frac{83 S}{8} \quad \frac{845}{C 2} \quad \frac{85 N}{C 2}$

Note: Starting in 1985S, top codes will be the 97 th percentile of each metropolitan area. Beginning in 1987N, the top code is the 97 th percentile for the entire national sample.


[^22]
 Standard Codes For All Variables Are:
cases selected from the 1970 Census, or from the 1980
Census for sample cases added to the sample after 1983.
See LONGIT in the General Section to determine whether the
data comes from the 1970 or 1980 Census.
73N-93N Spanish Origin Of Head/Reference Person $\quad \frac{9}{9} \quad \frac{83}{C 2}$
$\cdots \frac{745-835}{} \frac{845-935}{1}$

1 Hispantc or Spanish Americam
2 Not Hispanic or Spanish American
Vacant, URE, or Non-Interview
Of Reference Person
$\frac{79 N}{25}$
Mexican-American
Chicano
Mexican
Mexicano
Puerto Rican
Cuban
Central or South American
Other Spanism
Not Hispanic (i.e.. Anglo)
Not Answered
Vacant, URE, Non-Interview, Or
Reference Person is Head
0553 SEX

| 73N-93N | Sex Of Head/Reference Person |  |
| :---: | :---: | :---: | :---: |
| $74 S-93 S$ | $73 N-74 N$ | $75 N-93 N$ |

```
Notes: G = Variable is computer generated, and is not present on the questionnaire.
    ++ = Variable is present on a supplemental page to the questionnaire.
    CC = Variable is present on the control card for the unit.
```






[^23]REF/
NAME
SURVEYS DESCRIPTION
Page on questionnaire


#### Abstract

Data on income are available at various levels of detail: individual household member income, relative/non-relative income, family income, and housenold income, The term 'family' means the reference person and anyone else in the housenold related to the reference person. Data are available for total income, as well as individual income and assets components such as wages, social security, pensions, welfare, alimony, estates and interest income. This section also includes variables on subsidies received by the family (housing subsidies, energy subsidies) and on contributions towards rent made oy non-relatives living in the unit. Starting in 1984, a variable indicating whether a nousehold receives Food Stamps is available.


In all years. wages and salaries are reported separately for each family member (SAL1-SAL15). Similarly, sources of family income other than wages are available in all years. The level of detail in reporting tncome amounts from other sources and income of non-relatives varies from year to year (see documentation of variables in this section). Starting in 1984, family imcome other than wages and salaries is aggregated under one variable (VOTHER). Totai income of nonrelatives (wages, salaries and other incomes) is reported separately for each non-relative. Prior to 4984 , the variables SAL1-SAL6 represented the salaries and wages of family members only. Wages of non-reiatives were reported in YIWS. Starting in 1984, the variables SAL1-SAL15 contain the wages and salaries for family members, and total income for non-relatives. To determine whether a person is family or non-relative, use the variables REL, REL2-RELI5 (relationship to the reference person) in the Household Composition Section. It should be noted that the reference person is always family, even tf he or she has no relatives in the household.


```
Accounting Period--There may be significant differences in the income data
Detween the American Housing Survey and other surveys and Censuses. For exam-
ple, the time period for income data in the American Housing Survey refers to
the }12\mathrm{ montins prior to the interview while other income data generally refer to
the calendar year prior to the date of the interview. Additional differences in
the income data may de attributed to the various ways income questions are
asked. Because the AHS questions refer to the last 12 months, there may be some
inconsistencies in the way respondents provide income information within the
AHS. The interviews are being conducted in the fall of the survey year. Some
respondents mey provide information based on their last income tax return, while
others may give answers based on their current income. Income includes a full
year of income for all current members, even if they did not live in the house-
hold all year.
Income--Income in the American Housing Survey is based on the respondent's reply
to questions on income for the }12\mathrm{ months prior to the interview and is the sum
Of the amounts reported for wage and salary income, net self-employment income,
Social Security or railroad retirement income, public assistance or welfare payments, and all other money income. The figures represent the amount of income received before deductions for personal income taxes. Social Security, union dues, bond purchases, health insurance premiums, Medicare deductions, etc.
```

There have been numerous studies attempting to assess the accuracy of selfreported income in various surveys. These studies snow there are errors in both directions (over- and under-reporting), but that in general, income is underreported. See Chapter f for more details.

Income data are collected for all individuals occupying the housing unit, generally 14 years old and over. Specific ages covered vary from survey to survey and question to question. The chart below summarizes the ages covered for each year and variable(s):

| $73 N, 74 N, 74 S, 755$ | $14+$ | all ages | all ages |
| :--- | :--- | :--- | :--- |
| $75 N-79 N, 765,77 S$ | $14+$ | all ages | at |
| $785,79 S$ | $14+$ | all ages | all ages |
| 805 | $14+$ | all ages | $15+$ |
| $80 N, 84 N, 83 N, 815-83 S$ | $15+$ | all ages | $15+$ |
| $84 S+, 85 N+$ | $14+$ | $14+$ | $14+$ |

Wage or salary income- These are defined as the total money earnings received
for work performed as an employee. It inciudes wages, salaries, piece-rate
payments, commissions, tips, casn bonuses, and Armed forces pay. Net self-
employment income is defined as net money income (gross receipts minus operating
expenses) received from a business, professional practice, partnership, or farm
in which the person was self-employed.

Starting in 1984, there may be some double counting or inconsistent reporting between wages and income from business, although the interviewer instructions are clear on this point. Salary income includes salaries recetved by an official of a corporation even though the person may own stock in the corporation or be the soie employee. It excludes salaries which owners of incorporated businesses pay themselves. Respondents are first asked the salary questions and then they are asked if the family has a business. The income from the business is to be included in the total "other income" figure, If the respondent does not distinguish between salaries paid by the corporation or paid to himself/ herself and other income from business, such as profit, the total business income may be reported under wages or under other income, or in certain cases double counted, although interviewers are instructed to watch for double counting.

Social Security or Railroad Retirement income--This category includes cash receipts of Social Security pensions; survivors' benefits; disability insurance programs for retired persons, dependents of deceased insured workers, or disabled workers: and deductions for Medicare and nealth insurance premiums. Cash receipt of retirement, disability, and survivors' benefit payments made by the U.S. Government under the Railroad Retirement Act are also included. Separate payments received for hospital or other medical care are not included. This category does not include money received from the Supplemental Security Income Program (SSI), which is tncluded under other income below.

Income from all other sources--This includes money income received from sources such as periodic payments from estates and trust funds; dividends; interest; net rental income from property rentals; net receipts from roomers or boarders; net royalties; public assistance or welfare payments, which include cash recetved from public assistance programs, such as old age assistance, aid to families with dependent children, and aid to the blind or totally disabled; unemployment insurance benefits; money received for transportation and/or subsistence by persons participating in special governmental training programs, such as the Area Redevelopment Act and the Manpower Development and Training Act: workmen's compensation cash benefits; periodic payments by the Veterans Administration to disabled members of the Armed Forces or to survivors of deceased veterans; public or private pensions; periodic receipts from insurance policies or annuities; alimony or child support from persons who are not members of the household: net gambling gains; and nonservice scholarships and fellowships. Before 1984, the sources of income specified to the respondent were more detailed than they have been since 1984. For example, there previously were tiree categories to capture pensions: "Social Security or Railroad Retirement payments," "Government employee pensions" and "Private pensions or annuities." Since 1984, all pensions have been combined under the heading "Social Security or pensions." This category is meant to capture Social Security payments and Railroad Retirement income as defined above, as well as private pensions or retirement benefits, pensions paid by the Federal, State, County, or other government agencies to former employees (including members of the Armed forces) or their survivors, and annuities, such as money received as returns on investment, or from paid-up itfe insurance policies. IRA and KEOGH accounts. Starting in 1984, the word "annuities" is omitted. This may imply that annuities could be reported under other income or not reported at all if the respondent views an annuity as a witharawal from savings.

Money from the following sources are not included as income: value of income "in kind", such as free living quarters, housing subsidies. food stamps, or food produced and consumed by the housenold; money received from the sale of property (uniess the recipient was engaged in the business of selling such property); money borrowed; tax refund; withdrawal of bank deposits; accrued interest on "uncashed" savings bonds; exchange of money between relatives living in the same household; and giftis and lump-sum insurance payments, inheritances, and other types of lump-sum receipts.


#### Abstract

Publicly Owned or Subsidized Housing-- The data are not based on government or local records; the figures are, therefore, subject to the ability of a respondent to properly classify the unit as public or private and, if private, as subsidized or nonsubsidized housing. The publicly owned housing is not necessarily subsidized; for example, it includes houses owned by state colleges and by military bases as well as low income housing projects. Subsidized housing, furthermore, includes state and local programs as well as federal and need not be low income housing.


Starting in 1984, a series of detailed questions is asked of respondents to help determine whether the unit is in a Public Housing Project or any other subsidized untt, and whether the household receives some type of rental assistance such as Section 8.

[^24]



Note: In t984S, the question refers only to businesses See QFARM Delow.


Notes: $\begin{aligned} G & =V a r i a b l e \\ ++ & \text { Variable is present on a supplemental page to the questionnaire. }\end{aligned}$
$C C=$ Variable is present on the control card for the unit.



[^25]

| REFH | NAME |
| :--- | :--- |
|  |  |
| 0781 | YIWS2 |
| 0782 | YIWS3 |
| 0783 | YIWS4 |
| 0784 | YSS2 |
| 0785 | YSS3 |
| 0786 | YSS4 |
| 0787 | YDIV2 |
| 0788 | YDIV3 |
| 0789 | YDIV4 |
| 0790 | YINT2 |
| 0791 | YINT3 |
| 0792 | YINT4 |
| 0793 | YRENT2 |
| 0794 | YRENT3 |
| 0795 | YRENT4 |
| 0796 | YWELF2 |
| 0797 | YWELF3 |
| 0798 | YWELF4 |
| 0799 | YUNEMP2 |
| O800 | YUNEMP3 |
| O801 | YUNEMP4 |
| O802 | YWKCMP2 |
| 0803 | YWKCMP3 |
| 0804 | YWKCMP4 |
| 0805 | YGOVPN2 |
| 0806 | YGOVPN3 |
| 0807 | YGOVPN4 |
| 0808 | YVET2 |
| 0809 | YVET3 |
| 0810 | YVET4 |
| 0814 | YPRVPN2 |
| 0812 | YPRVPN3 |
| 0813 | YPRVPN4 |
| 0814 | YALIM2 |
| 0815 | YALIM3 |
| 0816 | YALIM4 |
| 0817 | YOUTPR2 |
| 0818 | YOUTPR3 |
| 0819 | YOUTPR4 |
| 0820 | YOTHER2 |
| 0821 | YOTHER3 |
| 0822 | YOTHER4 |
| 0 |  |

80 N


For All Variables, Standard Codes Are: 0-49999 \$0-49,999

50000 \$50,000 Or More
99999 No Non-rels 2-4, Vacant, URE, Non-interview
Note: Individual income amounts for non-relative 1 have
not been released. Individual income amounts for nonrelatives 2-4 will be released on a separate tape. It is estimated that only 300-400 cases per year have more than one adult non-relative. The individual income amounts for non-relative 1 may be derived by subtracting individual amounts for non-relatives 2-4 from the total, or by using the total when there is only one non-relative adult.
Publicly Owned Housing
73N-77N•78N-93N
74S-83S 84S-935

| 1 | Yes |
| :--- | :--- |
| 2 | No |
| 8 | Not Answered |

Non-Interview, URE, or OwnerOccupted
9 Vacant, URE, Non-Interview Or Owner-Occupied
Note: Includes all local, state, and federal owned housing, not just HUD public housing. Starting in 1984, the question specifies "owned by a public housing authority".

[^26]

## Paired Units for Handicapped and Able-Bodied Residents



Notes: $G=$ Variable is computer generated, and is not present on the questionnaire. $++=$ Variable is present on a supplemental page to the questionnaire. $C C=$ Varlable is present on the control card for the unit.

## Poured Adobe Construction




[^27]
#### Abstract

This section documents data collected on the types of fuels used to operate different types of equipment in the home (including supplemental heating equipment), and the costs of utilities. Data are also available on the costs of services sueh as garbage collection. Cost data on mortgages and rent, taxes. furnishings and insurance are presented in the Housing Value and costs section. Fuel and utility costs for previous residence are presented in the Mobility section data. Different variables were used for renters, owners Mobility section. Prior to 1984, the Census Bureau distinguished between several types of units in collecting utility cost data. Different variables in single family units, owners in condominium, etc. The information was asked every year for renters and owner-occupied one-unit structures on less than 10 acres having no commercial establishment or medical or dental office on the property, It was asked only in selected years for the other types of owner occupied units. Utility costs questions were not asked for renters in single family units on more than 10 acres. Starting in 1984 , the information is available for all units and the same variable name is used for all groups of respondents. We chose the name which had earlier been used for single family owners, since they are most numerous. See the table on the next page to select the variables appropriate for a spectfic analysis.


Heating and Cooking Fuei--"Gas from underground pipes" is gas run througn pipes from a central system to serve the neighbornood. "Bottled, or other liquid fue1" is stored in tanks which are refilled or exchanged when empty. "Kerosene and other liquid fuel" includes kerosene, gasoline, alcohol, and other combustible liquids. "Other fuel" includes any other fuel such as: oriquettes made of pitch and sawdust; corncobs; or purchased steam.

```
Utility Costs--The cost of utilities is not collected if the cost is included in
rent, site rent, condominium or other fee, or if the fuel is not used or
obtained free. The amount for each utility is the average for the past }1
months to take seasonal variations into account. Collecting information on
utility costs is always difficult. Unless a household subscribes to a "continu-
ous level billing" plan, utility costs fluctuate greatly from one month to the
Other. Heating bills are much nigher in cold winters and air conditioning
affects the electricity costs during the summer months. Some households receive
a combined bill for more than one fuel. Respondents are asked to state their
```

average monthly costs based on the last 12 months. If the respondent does not know the exact cost, the interviewer accepts an estimate, probing as necessary to obtain the estimate. Starting in 1984, an estimate for several utilities combined is accepted, if the respondent cannot provide amounts for each utifity. A separate variable allows the user to determine which utilities are included in the combined amount. If a respondent does not know the cost of fuel oil, coal. or wood, the interviewer helps the respondent by obtaining information on the number of gallons (tons or cords) used and the cost per unit. If the occupants have been living in the unit for less than twelve months, an estimate based on experience and.general knowledge of costs is recorded.

Fuel \& Utility Costs Variabies

| Variable Name |  |  | Owners |  | Renters |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Single Family Detached/Attached $>10$ Acres. No Drs. or Commercial Est. | Modile Homes On Less Than 10 Acres | Condominium/ Cooperative | Other* |  |
| HFUEL-FHOTHI | Yes | Yes | Yes | Yes | Yes |
| $\begin{aligned} & \text { BUYE-AMTW } \\ & 1984-1993 \\ & 1973-1983 \end{aligned}$ | $\begin{aligned} & \text { Yes } \\ & \text { Yes } \end{aligned}$ | Yes | Yes | Yes | Yes |
| AMTF | Yes | Yes | Yes | Yes | Yes |
| PAYE-OTHF |  |  |  |  | Yes |
| CBUYE-CAMTO |  |  | Yes |  |  |
| CONE-CONT |  |  | Yes |  |  |
| PGUYE-PAMTO |  |  |  | MultiFamily |  |
| NORESE-SPBILT |  |  |  | MultiFamily |  |
| ZUTIL-ZUTIL2 |  |  |  |  | Yes |
| BILLGE-BILLWT | Yes | Yes | Yes | Yes | Yes |
| VOLTS | Yes | Yes | Yes | Yes |  |
| NHBILL | Incomes $\$ 30,000$ | Income> $\$ 30,000$ | $\begin{aligned} & \text { I ncome> } \\ & \$ 30.000 \end{aligned}$ | I ncome> $\$ 30.000$ | Income> $\$ 30.000$ |
| EVEN, OVER | Yes | Yes | Yes | Yes | Yes |

[^28]

[^29]

|  |  | Type Of Fuel Used For Supplemental Heat |  |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
| 0864 | FAFURA | BOS-8iS | 1 Piped Gas Used For Air Furnace |

(Continued On Next Page)

[^30]
## DESCRIPTION

PAGE ON QUESTIONNAIRE

| REF\# | NAME |
| :--- | :--- |
|  |  |
| 0928 | FFRPLE |
| 0929 | FFRPLF |
| 0930 | FFRPLG |
| 0931 | FFRPLH |
| 0932 | FFRPLI |
| 0933 | FSTOVA |
| 0934 | FSTOVB |
| 0935 | FSTOVC |
| 0936 | FSTOVD |
| 0937 | FSTOVE |
| 0938 | FSTOVF |
| 0939 | FSTOVG |
| 0940 | FSTOVH |
| 0941 | FSTOVI |
| 0942 | FPORTA |
| 0943 | FPORTB |
| 0944 | FPORTC |
| 0945 | FPORTD |
| 0946 | FPORTE |
| 0947 | FPORTF |
| 0948 | FPORTG |
| 0949 | FPORTH |
| 0950 | FPORTI |
| 0951 | FHOTHA |
| 0952 | FHOTHB |
| 0953 | FHOTHC |
| 0954 | FHOTHD |
| 0955 | FHOTHE |
| 0956 | FHOTHF |
| 0957 | FHOTHG |
| 0958 | FHOTHH |
| 0959 | FHOTHI |


| 0960 | BUYE | $74 N-93 N$ |
| :--- | :--- | :--- |
| 0961 | BUYG | $75 S-93 S$ |
| 0962 | BUYD |  |
| 0963 | BUYW |  |
| 0964 | BUYT |  |

0965
0965 BUYF
$\begin{array}{ll}5 \text { Electricity Used For Firepiace } & 43 \\ 6 \text { Coke or coal Used For Fireplace } & 43\end{array}$
6 Coke or Coal Used For Fireplace 43
7 Wood Used For Fireplace
9 Other Fuel Used For Fireplace
Piped Gas Used for Stove
Bottled Gas Used For Stove
Fuel Oil Used for Stove
Kerosene Used For Stove
Electricity Used For Stove
Coke or coal Used for Stove
wood Used For Stove
Solar Heat Used For Stove
Other Fuel Used For Stove
Piped Gas Used For Portable Room Heaters
Bottled Gas Used For Portable Room Heaters
Fuel Dil Used For Portable Room Heaters
Kerosene Used For Portable Room Heaters
Electricity Used for Portable Room Heaters
Coke or Coal Used For Portable Room Heaters
Wood Used For Portable Room Heaters
Solar Heat Used For Portable Room Heaters
Other fuel Used For Portable Room Heaters
Piped Gas Used For Other Supp. Heat Source
Bottled Gas Used For Other Supp. Heat Source
Fuel 0il Used for Other Supp. Heat Source
Kerosene Used For Other Supp. Heat Source
Electricity Used For Other Supp. Heat Source
Coke or Coal Used For Other Supp. Heat Source
Wood Used For Other Supp. Heat Source
Solar Heat Used For Other Supo. Heat Source
Other Fuel Used for Other Supp. Heat Source 43 43 43 43 43 43 43 43 43 43
43
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43
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43
43
43

The Codes Unique to Each Variable Are Shown Above Standard Codes For All Variables are:

- Respondent did not cite this fuel

8 Not Answered
9 Not Applicable
Note: If a sertes of vartables (e.g. FAFURA-FAFURI) is not applicable, then all variables in the series are coded 9 . If a series of variables is not
answered, then the first eight variabies (e.g.
FAFURA-FAFURH) are coded 9 and the last variable
(e.g. FAFURI) is coded 8.



[^31]


[^32]UTILITIES (Continued)


| REF/ | NAME |
| :--- | :--- |
|  |  |
| 1033 | BILLGE |
| 1034 | BILLGO |
| 1035 | BILLGF |
| 1036 | BILLGT |
| 1037 | BILLGW |
| 1038 | BILLOE |
| 1039 | BILLOG |
| 1040 | BILLOF |
| 1041 | BILLOT |
| 1042 | BILLOW |
| 1043 | BILLFE |
| 1044 | BILLFG |
| 1045 | BILLFO |
| 1046 | BILLFT |
| 1047 | BILLFW |
| 1048 | BILLTE |
| 1049 | BILLTG |
| 1050 | BILLTO |
| 1051 | BILLTF |
| 1052 | BILLTW |
| 1053 | BILLWE |
| 1054 | BILLWG |
| 1055 | BILLWO |
| 1056 | BILLWF |
| 1057 | BILLWT |

1058 VOLTS 81N

| 1059 | NHBILL | $85 N$ |
| :--- | :--- | :--- |
| 1060 | EVEN | 87 N |
| 1061 | OVER |  |



Notes: $G=$ Variable is computer generated, and is not present on the questionnaire. ++ = Variable is present on a supplemental page to the questionnaire. $C C=$ Variable is present on the control card for the unit.


Hoer Mian


Thes design uthizes passve solar heating through the uese of tinck acobe wats and a greentouse. Firepleces and efficent ar circulation will aso lower heating and cooking requrements.

Butiresses not only serve as structura elements but contem channels to conduct water away from the acobe wals.


#### Abstract

Cost data include monthly mortgage and rent costs, taxes, condominium or mobile home park fees and insurance expenses. Starting in 4984 , new questions are asked about mortgage type, terms and interest rates. Utility costs for fuels, water and trash are documented in the Fuel and Utility cost section. Housing cost variables for previous residence are presented in the past and future Homes section. Indicators of whether a unit is in a public housing project or is subsidized, as well as information on housing costs paid by non-relatives living in the unit are documented in the Income Section. The cost of routine maintenance is included in the greakdown and Maintenance Section. These costs are included in the ownershlp housing costs summary variable (see below).


The AHS distinguishes between several types of units in collecting housing cost data for owner-occupied units. The intent is to identify units where special factoms affect the cost variables, e.g., units on more than 10 acres. prior to 1984, the nousing cost questions were asked of owners in single family units or mobile homes on less than 10 acres having no commercial establishment or medical/dental office on the property. In selected years, information was collected for condominium units and multi-family units. Different vartables were present in the data files to describe the same information for different types of units (e.g., PMT, CPMT, PPMT were used to record mortgage payments for single family units, condomtnium units and multi-family units, respectively). Starting in 1984, the information is collected for all ownermoccupied units. The questions distinguish between the costs associated with the sample unit itself and the costs associated with other portions of the property. The same variable name is used for all groups of respondents. Also. prior to t984, rent information was not availabie for renters in single family units on more than to acres. Starting in 1984, the questions are asked of all renters. See the table following this introduction to select the variables appropriate to your analysis requirements.

It should be noted that because of the complexity of the skip patterns involved, not all variables presented in the table could be checked systematically for each year. The discrepancies, if any, are small and relate mostly to units in cooperatives and mobile homes on more than 10 acres which account for a relatively smali number of cases. The table is sufficiently accurate to assist users in planning and conducting their analyses.

Ownership Monthly Housing Costs--Selected monthiy ownership housing cost is the monthly sum of payments for the mortgage(s), or installment loan(s) or contract(s), real estate taxes (including taxes on mobile nomes or trailer sites if the sites are owned), property insurance, utilities (electricity, gas, water, and sewage disposal), fuel (oil, coal, kerosene, wood, etc.), and garbage and trash collection. Starting in 1984, the variable includes fees (concominium, mobile home and homeowner associations).

Prior to 1984, ownership housing costs were not computed for housenolds with a mortgage or similar debt that failed to report the amount of their loan or contract payment and/or those households that did not report their real estate taxes. Starting in 1984, the variable is generated unless the respondent fails to report mortgage payment amounts.

Ownership Housing Costs as Percentage of Income--The yearly housing costs (housing costs multiplied by 12 ) are expressed as a percentage of the total income of the family or primary individual. This percentage is calculated for the same owner-occupied units for which "ownership monthly housing costs" were computed (for exclusions, see table at the end of this introduction). The percentage was computed separately for each unit and was rounded to the nearest tenth of a percent. The measure was not computed for units where occupants reported no income or a net loss or for households that did not report the amount or did not pay mortgage or similar debt and/or real estate taxes. Starting in 1984, this variable $1 s$ not available in the AHS data files. It can be replicated by using the above specifications.

Monthly Contract Rent--Monthly contract rent is the monthly rent agreed to, or contracted for, even if the furnishings, utilities, or services are inciuded. Prior to 1984, the data on rent excluded one-unit structures on 10 acres or more. Rent data for mobile nomes and trailers were not restricted by acreage. Starting in 1984, rent information is collected for all rental units.

Renter Monthly Housing Costs-Monthly computed rent, termed "gross rent," is the contract rent plus the estimated average monthly cost of utilities (electricity, gas. water) and fueis (oil, coal, kerosene, wood, etc.) if these ttems are paid for by the renter (or paid for by someone else, such as a relative, welfare agency, or friend) in addition to rent. Contract rent is the monthly rent


#### Abstract

agreed to, or contracted for, regardless of any furnishings, utilities, or ser- vices that may be included. Thus, gross rent is intended to eliminate differen- tials which result from varying practices in the inclusion of utilities and fuel as part of the rental payment. The estimated costs of water and fuels are reported on a yearly basis, but they are converted to monthly figures in the computation process. It should be noted that the definition of gross rent is not consistent if contract rent includes the cost of furnisnings and parking, since these costs are not added to contract rent (if paid separately) in com- puting gross rents. If the sample is large enough, users may consider esti- mating the cost of furniture and/or parking, and exiclude these costs from gross rents for units in which contract rent includes furntshings and/or parking. The adjustment cannot be made directly since the cost of furnisnings and/or parking is not available if included in contract rent. After 1983, the question on furniture was dropped.


Prior to 4984 , the data on gross rent excluded one-untt structures on io acres or more. Rent data for mobile nomes and trailers was not restricted by acreage. Starting in 1984, the information is available for all rental units. Until 1984, gross rent was reported separately from ownership housing costs. Starting in 1984, the same variable is used for both types of housing costs.

Value--The information is collected for all owner-occupied units, but is not collected for renter-occupied units.

For owner-occupied units, value represents the respondent's estimate of how much the property (house and lot) would sell for if it were for sale. for vacant untts, value represents the sale price asked for the property at the time of the interview, and may differ from the price at which the property is sold.

Prior to 1984, the value variable was available for selected owner-occupied units (see table). Starting in 1984, tt is available for all owner-ocupled units and represent the value of the sample unit and its yard (VALUE). The value of the overall property for multi-family units, structures with commercial/medical establishment and structures on more than io acres is recorded under the variable pVALUE.


#### Abstract

Purchase Price--This is the price which was paid at the time the property was acquired (house and lot), not the estimated value at the time of the interview. If only the house is owned, but not the land, the respondent was asked for a combined estimate of the value of the house and lot at the time of purchase. If the house was a single family unit at the time of purchase, but was spiit into two or more units since the purchase, the purchase price is the value of the complete structure at the time of the purchase. Purchase price includes the costs of furnishings if the property was acquired furnished. An estimate was accepted if the respondent did not know the exact purchase price. The amount reported excludes closing costs. Until 1984 , the information was available for units acquired within 12 months of the interview data. Starting in 1984 , the information is avaliable for all units.


Purchase price of mobile home--This item refers to owner-occupied mobile homes and trailers. The purchase price is the total cost of the mobile home or trailer at the time of purchase tncluding the down payment but excluding site costs or closing costs. The "no purchase $n / a$ " category refers to mobile homes and trailers that were not purchased by any occupant of the unit. e.g., the unit was acquired as a gift.


#### Abstract

Value-income ratio--The value-income ratio is computed by dividing the value of the housing unit by the total money income of the family or primary tndividual. The data are collected for owner-occupied untts for whtch "value" was collected. The ratio was computed separately for each unit and was rounded to one decimal place. In reporting value, respondents were asked to select an appropriate class interval. The midpoints of the value intervals were used for the computation of the value-income ratio, except that very small and very 1 arge ratios were recoded. For income, the dollar amounts were used. The ratio is not computed if occupants reported no income or a net loss. Starting in 1984, the variable is not available in the AHS data files. Users can replicate the variable by using the above specifications.


```
Year mobile nome acquired--This item pertains to owner-occupied mobile nomes and
traflers. "Year acquired" is the calendar year that the current owner took
possession of the modile home or trailer, not the year the mobile home or
```

trailer was manufactured. "Acquired" includes purchase as well as other forms
of taking possession such as inheritance, gift, trade, and foreclosure.

Mobile home acquired new--The data pertain to owner-occupied mobile homes and trailers. "Acquired new" means that no other person or family lived in the mobile home or used it for a business, etc., before the present owner acauired $i t$.

```
Mortgage--A mortgage or similar debt refers to all forms of debt where the
property is pledged as security fom payment of the debt. It includes such debt
instruments as deeds of trust, trust deeds, mortgage oonds, and vendor liens.
In the first three arrangements, usually.a third party, known as the trustee,
holds the title to the property until the debt is paid. In the vendor lien
arrangement, the title is kept by the buyer but the seller (vendor) reserves, in
the deed to the buyer, a lien on the property to secure payment of the balance
of the purchase price. Also included as a mortgage are contracts to purchase,
land contr\dot{acts, and lease-purchase agreements in which the title to the property}
remains wfth the seller until the agreed-upon payments have been made by the
buyer. Until t984, the questions referred to any mortgage on the property.
Starting in 1984, the respondent is asked how many mortgages there are on the
property. Detailed information is obtained for the first and the second mort-
gage. Summary information such as amount and montnly payment is available for
additional mortgages
```

Lower Cost Mortgages--These loans are generally 1 to 3 percent below the current mortgage interest rate at the time the loan was obtained. These loans are managed through state or local governments, and financed from the proceeds from revenue bonds e.g., loans for first time home buyers. These loans do not include federally funded $V . A$. programs.


#### Abstract

Wrap-around mortgage--A wrap-around mortgage is a second or juntor mortgage with a face value of both the amount it secures and the balance due under the first mortgage.

Current Interest Rate--For variable interest rates, the respondent is asked to report the interest in effect at the thme of the interview. If the last payment under the old schedule has been made, the rate for the next payment is recorded.


Monthly mortgage payment--The data includes all owner-oceupied untts. If a mortgage exists, data are coliected on the monthly doliar amount paid for the mortgage, principal and interest oniy. until 1984, the monthiy payment represents the sum of all mortgage payments made by the owner. Starting in 1984 , separate amounts are available for the first, the second mortgage and any other mortgages combined.

Real estate taxes last year--The data come only from owner-occupied units.
"Real estate taxes last year" refers to the yearly total amount of all real estate taxes payable on the entire property during the last biling period. It inciudes special assessments, school taxes, state and local real estate taxes. Not included are payments on delinquent taxes due from prior years. (Payments for special assessments, facilities, or services were not included prior to 1984.) Even when the real estate taxes are included with the mortgage, a separate amount for the taxes is obtained. Starting in 1984 , the total amount due minus any rebate is reported and the rabate amount, if any, is reported separately. Reoates include refunds or reduced rates or property taxes or lowered tax assessments because of the circumstances of the owner (e.g., senior citizens or disabled).

Insurance--This refers to policies which protect the unit and its contents against loss due to damage by fire, lightning, wind, hail, explosion, etc. Homeowners' policies are also included since this type of insurance has fire and hazard insurance together with other types of homeowner protection such as 1 iability. If the cost of the insurance was tncluded as part of the mortgage payments, a separate amount for the insurance was obtained. The amount of the insurance premium reported was the amount paid for an entire 12-month period even if made in two or more installments. Until 1983, the data are collected for owner-occupied, 1 -unit structures on less than 10 acres with no commercial establishment or medical or dental office on the property and for owner-occupied mobile homes and trailers on less than 10 acres. The data exclude owneroccupied cooperative and condominium units. Starting in 1984 , the information is collected for all units, including renter-occupied units, in which case, the question refers to household property insurance.

Furntture--The data refer to furnished apartments or houses in which the management supplied major pieces of furniture such as a bed, sofa, chest of drawers, and table and chairs for the use of the occupant. Refrigerator, cooking range or stove, lamps and rugs are not considered furniture. Housing units in which the occupants rent furniture from some source other than the management are not Classified as furnished. Starting in 9984 , information on whether a unit is rented furnished is not collected.

Fees-A condominium fee includes all operating and maintenance costs of the common property and related administrative costs such as utilities billed communally and management fees. The cooperative maintenance fee (also called carrying charges) is the share of the annual budget to be borne by the member living in the sample unit, including the occupant's share of the amount paid by the cooperative for real estate taxes, mortgage interest and operating costs. Modile home park fees are regular payments to the park management which could include utility charges, mail handling, and/or fees for the maintenance of common areas. A homeowner association fee may include payments for the upkeep of common property (e.g., street lights, parking areas, lawns), the use and maintenance of recreational facilities and the payment of security guards or other personnel. A fee which is optional is not included.

## Site Plan

This earth shelvered concept does not require an unusual site. as it is adipeable to any besically fian site with southern exposure and sceser.

Site Plan


Housing Value and Housing Costs (excluding utilities)


Housing value and Housing costs (excluding utilities)

| Variable Name |  | Owners |  |  | Renters |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Single Family Detached \& Attached on less than 10 acres, no doctors or commercial establishments | Mobile Homes on less than 10 acres | Condominium/ Cooperative | Other* |  |
| NEWMCO |  |  | condo only |  |  |
| HOWBUY | no mortgage | no mortgage |  |  |  |
| MHGET |  | no mortgage |  |  |  |

Mortgage Information

| NROWNR | Yes | Yes | Yes |  | Yes |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Yes } \\ & \text { Yes } \end{aligned}$ | $\begin{aligned} & \text { Yes } \\ & \text { Except in } 755 \end{aligned}$ | Yes |  | Yes |  |
| MLOAN |  | 755 only |  |  |  |  |
| $\begin{aligned} & \text { CMORT, } 83 N, 83 S \\ & 80 N, 81 N \end{aligned}$ |  |  | Yes Condo only |  | Yes |  |
| NUMMOR | Yes | Yes | Yes |  | Yes |  |
| MATBUY, 1984+ Earlier | $\begin{gathered} \text { Yes } \\ \text { no mortgage } \end{gathered}$ | Yes no mortgage | Yes |  | Yes |  |
| MATBU2 | Yes | Yes | Yes |  | Yes |  |
| MNUMOR |  | no mortgage |  |  |  |  |
| NEWMOR, 1984-1993 Earlier | $\begin{aligned} & \text { Yes } \\ & \text { RM** } \mathrm{W} / \mathrm{Mortgage} \end{aligned}$ | $\begin{gathered} \text { Yes } \\ \text { RM } \text { w/Mortgage } \end{gathered}$ | Yes <br> RM w/Mortgage | RM | Yes <br> w/Mortgage | . |
| NEWMR2 | Yes | Yes | Yes |  | Yes |  |
| $\begin{array}{ll} \text { AMMORT, } & 1985-1993 \\ & 1977-1983 \end{array}$ | Yes RM. non-assumed mortgage | Yes RM, non-assumed mortgage | Yes RM, non-assumed mortgage |  | Yes <br> n-assumed tgage |  |
| AMMOR2-INT 2 | Yes | Yes | Yes |  | Yes |  |
|  | $\begin{aligned} & \text { Yes } \\ & \text { Yes } \end{aligned}$ | $\begin{aligned} & \text { Yes } \\ & \text { Yes } \end{aligned}$ | $\begin{aligned} & \text { Yes } \\ & \text { Yes } \end{aligned}$ |  | Yes |  |
| MORTN2-LOON2 | Yes | Yes | Yes |  | Yes | Yes |
| PINCOP, 1984+ Earlier | Yes | Yes | Yes |  | $\begin{aligned} & \text { Yes } \\ & \text { Yes } \end{aligned}$ |  |
| MFARM-RESMR2 | Yes | Yes | Yes |  | Yes |  |
| Mortgage Payment | - |  |  |  |  |  |
| FPMT | Yes | Yes |  |  |  |  |
| CFPMT |  |  | Yes |  |  |  |
| NRPAYM | Yes | Yes | Yes |  | Yes |  |

[^33]

Housing Value and Housing Costs (excluding utilities)

| Variable Name | Owners |  |  |  | Renters |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Single Family Detached \& Atrached on less than 10 acres, no doctors or commercial establishments | Modile Homes on less than 10 acres | Condominium/ Cooperative | Other* |  |
| CAMTI |  |  | Yes |  |  |
| PAMTI-SPREI |  |  |  | Yes |  |
| INSTHF-INSOKE | Yes | Yes | Yes | Yes |  |
| REFINS, RETYP | Yes | Yes | Yes | Yes | Yes |
| INSRTH-INSRHZ |  |  |  |  | Yes |


| Land Rent Information |  |  |
| :--- | :--- | :--- |
| OWNLOT 1984+ | Yes | Yes |
| Earlier |  | Yes |

OWNLT MH OnTY

| OWNSIT |  |  |  |  | MH only |
| :---: | :---: | :---: | :---: | :---: | :---: |
| LANPMT Land | not owned |  |  |  |  |
| $\begin{array}{ll} \text { INCS, } & 84+ \\ 83 N, 83 S \\ & \text { Earlier } \end{array}$ | Yes | Yes <br> Yes <br> Yes |  | MH only** MH only | MH only <br> MH only |
| $\begin{aligned} \text { FLRENT-LRENT, } & 84+ \\ & 83 N, 83 S \\ & \text { Earlier } \end{aligned}$ | Yes | $\begin{aligned} & \text { Yes } \\ & \text { Yes } \\ & \text { Yes } \end{aligned}$ |  | MH only MH only | MH only MH only See FSRE \& SRENT |
| FSRENT, SRENT |  |  |  |  | MH only |
| Mobile Home, Condominium, Homeowner Association Fees |  |  |  |  |  |
| PARKF-HOTHFE |  | Yes |  | MH only | MH only |
| MPRT, MHTX |  | Not paying <br> R.E. taxes |  |  |  |
| IFFEE | Yes | Yes | Yes | Yes |  |
| CAMF, CONFEE, 84+ Earlier | Yes | $\begin{aligned} & \text { Yes } \\ & \text { Yes } \end{aligned}$ | $\begin{aligned} & \text { Yes } \\ & \text { Yes } \end{aligned}$ | Yes |  |
| CMNTN-COTHER |  |  | Yes |  |  |
| OTHPMT-AMTM2 | Yes | Yes | Yes | Yes |  |
| IFOTHF--MHOTFE |  | Yes |  | $\begin{gathered} \text { Yes } \\ \text { MH only } \end{gathered}$ | Yes |

```
* Other inciudes single family Units on less than 10 acres with doctors. offices or commercial establishments, dupiex, two unit mobile nomes, multifamily, single family or mobile home on more than 10 acres.
** MH = Mobile Homes
```

Notes: $G=$ Variable is computer generated, and is not present on the questionnaire. ++ = Variable is present on a supplemental page to the questionnaire. $C C=$ Variable is present on the control card for the unit.


REF\# NAME SURVEYS DESCRIPTION PAGE ON QUESTIONNAIRE


## Building Section

The upper entry level contains a "vaulted great room" designed for market appeal and solar gain considerations. An open stair provides access and light to a lower bedroom level and also series a mid-level compartmen. calized bath and laundry area. The plian
concept allows for expansion on the east/west axis to create larger or additional bedrooms.

Section


Notes: $G=$ Variable is computer generated, and is not present on the questionnaire.
$++=$ Variable is present on a supplemental page to the questionnaire.
$C C=$ Variable is present on the control card for the unit.



[^34]


[^35]| REF/ | name | SURVEYS | DESCRIPTION |  |
| :---: | :---: | :---: | :---: | :---: |
| 1077 | RPRICE | 83N | Purchase Price ${ }^{\text {Pr }}$ | Of Mobile Home (on < 10 acres) |
|  |  |  |  | Under $\$ 500$ $\$ 500-\$ 999$ |
|  |  |  |  | \$1000-\$1499 |
|  |  |  |  | \$1500-\$1999 |
|  |  |  |  | \$2000-\$2499 |
|  |  |  |  | \$2500-\$2999 |
|  |  |  |  | \$3000-\$3499 |
|  |  |  |  | \$3500-\$3999 |
|  |  |  |  | \$4000-\$4499 |
|  |  |  |  | \$4500-\$4999 |
|  |  |  |  | \$5000-\$5499 |
|  |  |  |  | \$5500-\$5999 |
|  |  |  |  | \$6000-\$6499 |
|  |  |  |  | \$6500-\$6999 |
|  |  |  |  | \$7000-\$7499 |
|  |  |  |  | \$7500-\$7999 |
|  |  |  |  | \$8000-\$8499 |
|  |  |  |  | \$8500-\$8999 |
|  |  |  |  | \$9000-\$9499 |
|  |  |  |  | \$9500-\$9999 |
|  |  |  |  | \$10000-\$10499 |
|  |  |  |  | \$10500-\$10999 |
|  |  |  |  | \$11000-\$11499 |
|  |  |  |  | \$11500-\$11999 |
|  |  |  |  | \$12000-\$12499 |
|  |  |  |  | \$12500-\$12999 |
|  |  |  |  | \$13000-\$13499 |
|  |  |  |  | \$13500-\$13999 |
|  |  |  |  | \$14000-\$14499 |
|  |  |  |  | \$14500-\$14999 |
|  |  |  |  | \$15000 Or More |
|  |  |  |  | Not Answered |
|  |  |  |  | Not Applicable |
| 1078 | PRICEM | 75s-83s | Purchase Price $1-99997$ | of Mobile Home (on <10 acres) Not Purchased \$1-\$99997 |
|  |  |  | 99998 | Not Answered |
|  |  |  | 99999 | Not Applicable |





[^36]


[^37]

HOUSING COSTS (Continued)


[^38]







This section includes information for recent movers in all surveys and questions on lifetime and planned mobility for selected years. The definition of recent movers changed after 1983 (see definition below) but the types of data available are generally the same: data on previous residence and reasons for move. It should be noted that this information is availabie only for nouseholds who moved into a sample unit from another place of residence. It does not include information for households who left a sample unit, since the AHS samples units, not households. Until 1984, the data indlcated whether a change in housenold composition had occurred as a result of the move to the new unit, by stating whether the reference person was also the reference person in the previous unit and by providing information to compare the number of individuals who 1 ived in the previous unit and the number of individuals itving in the sample unit. Starting in 1984, the AHS asks a series of detailed questions for each household member which determine whether all household members were already iving together before the move. If not, subgroups of the household who came from different previous residences are identified. Information on the location and selected charactertstics of each group's previous residence is available. These data can be used to study housenold formation. Data on reasons for moving are available in 1984 and later only if the respondent moved into the unit after 1979 (or moved in past year for 1973-1983 surveys). The questions on reason for moving in the 1984 and subsequent surveys are similar to the questions asked prior to 1984. The reasons for selecting a particular house/apartment are more specific and provide information on the characteristics of the unit which influenced the household choice. Data on mobility (restdence at age 16 and planned residence for the future) are only available in selected years. Starting in 1984, the mobility questions are asked only if the respondent moved after 1979.

Recent Mover--Until 1984, a household was considered a recent mover if the reference person moved into the sample unit within the last 12 months. Starting in 1984, data on recent movers are available if at least one nousenold member moved into the unit after 1979. Census publications continue to define a house hold as recent movers if the reference person moved to the unit in the iast 12 months. The availability of data for each person who moved allows the user of AHS data files to use a definition appropriate for a specific analysis.


#### Abstract

Date reference person/other household members moved into unit-The data are based on the information reported by the reference person and refer to the date of the most recent move. Thus, if the reference person moved back into a housing unit previously occupied, the date of the most recent move is to de reported: if the reference person moved from one apartment to another in the same building, the date the reference person moved into the present housing unit is to be reported. The intent is to estabiish the date the present occupancy by the reference person began. The date the reference person moves is not necessarily the same date other members of the household move, although in the great majority of cases, the entire housenold moves at the same time. Starting in 1984, a move date is available for each nousehold member.


The varible IMONTH in the Sample Status Section shows when each interview was conducted for the SMSA survey. However the date when the reference person moved into the unit cannot be compared to date of interview to determine clearly whether the household is the same as the one tnterviewed the year before because people do not always remember accurately when they moved, and the head may have moved before or after the rest of the nousehold. The variable HHLD (see Sample Status Section) should be used to determine if the household ts the same as the one interviewed the year before, although this variable has not yet been released for all survey years and some problems have been identified with the coding of the variable.

The AHS cannot be used to measure directly the number of moves that happen in any particular time period, because not all of these moves show up in the file. For example a unit with more than one family moving in and out during a year wili show up with only one mover in the survey. Simtlarly, a move into a Unit which is abandoned later in the year will not be counted in the survey. For these reasons, the AHS cannot be used to measure accurately the average time between moves for American families, since it omits multiple moves during a year, and it omits moves out of the housing stock, such as into nurstng homes or other instttutions.

```
The variable RMYEAR (until 1983) or otner variable ereated oy a user after 1983
accurately counts the number of current neads of housenold wno nave moved at
least once during a year, However it does not attempt to measure all moves by
those neads of housenold during the year. Starting in 1984, the availability of
a move date for all nousehold members enables users to identify moves by other
housenold members. It still, mowever, does not provide information to identify
multiple moves within a year by a specific person.
```

The longitudinal file merges data from at least two interviews, so it has at
least two chances to record a move. This gives tt better coverage of multiple
moves by the same person, and of movers who die or otherwise cease being heads
of mousehold. Naturally, However, even the longitudinal file is incomplete by
an unknown amount if one is trying to count all moves throughout the year. To
get that statistic one would nave to conduct the survey numerous times through
out the year or use statistical techniques such as the ones used to estimate
14fe expectancy

```
Notes: G = Variable is computer generated, and is not present on the questionnaire.
    ++ = Variable is present on a supplemental page to the questionnaire.
    CC i Variable is present on the control cara for the unit.
```

REF// NAME
1212 NLINE

1213 ALMV79
Line No. of Prev, Res. and Mobility Respondent
$\frac{80 N}{31}$
04-96 01 To 96
98 Not Answered
99 Not Applicaole

85N-93N All Members of Hhld Moved From Same Prev Res After 1979 845-93S Yes No
8 Not Answered
9 Non-Interview, Only One Hhld Member Moved In After 1979, Or No Hhld Member Moved In After 1979

| 1214 | MVG1 | $85 N-93 N$ |
| :--- | :--- | :--- |
| 1215 | MVG2 | $84 \mathrm{~S}-93 \mathrm{~S}$ |
| 1216 | MVG3 |  |
| 1217 | MVG4 |  |
| 1218 | MVG5 |  |
| 1219 | MVG6 |  |
| 1220 | MVG7 |  |
| 1221 | MVG8 |  |
| 1222 | MVG9 |  |
| 1223 | MVG10 |  |
| 1224 | MVG11 |  |
| 1225 | MVG12 |  |
| 1226 | MVG13 |  |
| 1227 | MVG14 |  |
| 1228 | MVG15 |  |

Previous Residence Group To Which Person 1 Belonged
Previous Residence Group To Which Person 2 Belonged
Previous Residence Group To Which Person 3 Belonged
Previous Residence Group To Which Person 4 Belonged
Previous Residence Group To Which Person 5 Belonged
Previous Residence Group To Which Person 6 Belonged
Previous Residence Group To Which Person 7 Belonged
Previous Residence Group To Which Person 8 Belonged
Previous Residence Group To Which Person 9 Belonged
Previous Residence Group To Which Person 10 Belonged
Previous Residence Group To Which Person 11 Belonged
Previous Residence Group To Which Person 12 Belonged
Previous Residence Group To Which Person 13 Belonged
Previous Residence Group To Which Person 14 Belonged
Previous Residence Group To Which Person 15 Belonged
Standard Codes For All Variables Are: Standard Codes For All Variables Are:

> Person Belongs to 1 st Prev Res Group Person Belongs to 2nd Prev Res Group Person Belongs to 3rd Prev Res Group Person Belongs to 4 th Prev Res Group Not Applicable

## 73N-93N 74S-93S

1239
1240
1241
1242
1243

MOVE2
MOVE 3
MOVE4
MOVE5
MOVES
MOVE7
MOVE8
MOVE9
MOXE 10
MOVE 11
MOVED

MOVE 12 MOVE 13 MOVE 14 MOVE 15


```
Notes: G = Variable is comouter generated, and is not present on the questionnaire.
    ++ = Variable is present on a supplemental page to the questionnaire.
    CC = Variable is present on the control card for the unit.
```

MOBILITY (Continued)

 $\longrightarrow-\frac{83 N}{}-\frac{845-935}{1}$ $1 \rightarrow \frac{84 S-93 S}{1}$

Same PMSA, Central City
Same PMSA, SuDurd
Same State, Diff PMSA, Central City
Diff State, Central City \& Suouro
Same SMSA, Central City
Same SMSA
Same SMSA, Not Central City
Different SMSA
Different SMSA, Central City
Different SMSA, Not Central City
Same State, Non-SMSA
Same State, Suburban
Different State, Suburban
Non-SMSA, Same County
Non-SMSA, Diff County, Same State
Non-SMSA, Different State
Same State, Non-Metro
Different State, Non-Metro
Outside U.S.
Not Applicable
Note: In Early Releases of The t978S Tape, XLOC Has Missing Values For All Cases. Starting in 1984, the Variable Refers to the Reference Person Only.

## XAINUS XBINUS XCINUS

 XDINUS1281 XINUS
$73 N$
$78 N-83 N$
745

1st Hhld Group's Previous Residence Outside U.S.
2nd Hhid Group's Previous Residence Outside U.S.
3rd Hhid Group's Previous Residence Outside U.S. 4th Hhid Group's Previous Residence Qutside U.S.

Standard Codes For All Variables Are:
1 Outside U.S.
9 Not Applicable
Prevtous Residence Outside The U.S. $\quad \frac{83 N}{23} \quad \frac{835}{21}$
745
79S-83S
1 Yes
9 Not Applicable
85N-93N
84S-93S
1
9
9

| $\frac{845}{12}$ | $\frac{85 N}{12}$ |
| ---: | ---: |
| 13 | 13 |
| 13 | 13 |
| 13 | 13 |



都


MOBILITY (Continued)


[^39]


MOBILITY (Continued)



[^40]1352 WHYMOVE $\begin{aligned} & 73 N-93 N \\ & 74 S-93 S\end{aligned}$
73N 74N-78N 79N-83N 85N-93N
74S 75S-795 80S-835 845-935


| 1353 | WMPRIV |
| :--- | :--- |
| 1354 | WMGOVT |
| 1355 | WMDISL |
| 1356 | WMUOES |
| 1357 | WMCLOS |
| 1358 | WMFEMP |
| 1359 | WMONHH |
| 1360 | WMLARG |
| 1361 | WMMARR |
| 1382 | WMFAML |
| 1363 | WMQUAL |
| 1364 | WMCHTN |
| 1365 | WMCHEP |
| 1366 | WMHOUS |
| 1367 | WMOTHR |

85N-93N Move Due To Private Co/Person's Actions
Move Due To Govt Forcing To Leave
Move Due To Disaster Loss (i.e. Fire, Flood)
Move Due To New vob or Job Transfer
Move Due To Wish To Be Closer To Work/School/Other
Move Due To Other Financial/Employment Reasons
Move Due To Establishment of Own Hhld
Move Due To Need For Larger House/Apartment
Move Due To Change In Marital Status
Move Due To Other Personal/Family Reasons
Move Due To Destre For Better Qualtty DU
Move Due To Change In Tenure
Move Due To Desire For Less Expensive Rent/Home
Move Due To Other Housing Related Reasons
Move Due To Other Reasons
Standard Codes For Ail Variables Are:
O Reason Was Not Factor In Move
1 Reason Was Factor In Move
8 Not Answered
9 Not Applicable

| $\frac{845}{10}$ | $\frac{85 N}{10}$ |
| ---: | ---: |
| 10 | 10 |
| 10 | 10 |
| 10 | 10 |
| 10 | 10 |
| 10 | 10 |
| 10 | 10 |
| 10 | 10 |
| 10 | 10 |
| 10 | 10 |
| 10 | 10 |
| 10 | 10 |
| 10 | 10 |
| 10 | 10 |
| 10 | 10 |



[^41]


```
Notes: G = Variable is computer generated, and is not present on the questionnaire.
    ++ = Variable is present on a supplemental page to the questionmaire.
    CC = Variable is present on the control card for the unit.
```




[^42]|  |  |  |
| :--- | :--- | :--- |
| 1471 | STERN1 | $85 N$ |
| 1472 | STBRN2 | 855 |
| 1473 | STBRN3 |  |
| 1474 | STBRN4 |  |

[^43]state In Which Second Mobility Respondent Born
State In Which Fourth Mobility Respondent Born


[^44]|  |  |  |
| :--- | :--- | :--- |
| 1496 | STAY51 | $85 N$ |
| 1497 | STAY52 | 85 |
| 1498 | STAY53 |  |
| 1499 | STAY54 |  |



| $\frac{855}{44}$ | $\frac{85 N}{44}$ |
| :--- | :--- |
| 45 | 45 |
| 45 | 45 |
| 45 | 45 |

very Likely
Likely
No Cnance at al
Don't know
Not Applicable

| 1500 | WHRN51 | $85 N$ |
| :--- | :--- | :--- |
| 1501 | WHRN52 | 85 S |
| 1502 | WHRN53 |  |
| 1503 | WHRN54 |  |


| 1st Mobility Resp Wld Prefer This Area In 5 | Yrs | $\frac{85 S}{45 N}$ | $\frac{85}{44}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2nd Mobility Resp Wld Prefer This Area In 5 Yrs | 45 | 45 |  |
| 3rd Mobility Resp Wld Prefer This Area In 5 Yrs | 45 | 45 |  |
| 4 th Mobility Resp Wld Prefer This Area In 5 Yrs | 45 | 45 |  |


#### Abstract

This section documents key variables used in sampling and interviewing in the survey. CONTROL contains the basic case identification number. WEIGHT is the adjusted weight assigned to each case in the sample and described in detail in Section 1.0 of Chapter 3. Other specialized weights and variadles needed for calculation of the variance are presented following the variable WEIGHT and are discussed in Cnapters 1 and 2. The remaining variables provide information on the status of the unit, on various aspects of the interview, on vacant units and non-interviews. These variables include the reasons for vacancy and noninterviews and some descrtptions for units which have been temporarily or definitely removed from the housing stock. Some units in special places are not considered part of the housing stock, as described in the General--Tenure section. A few concepts related to weights, vacancy, merger and conversions are discussed below. Finally, this section deals with the treatment of noninterviews, missing data in the AHS, and the use of allocation variables.


Zero Weighted Units-users should note that, in addition to non-interview units (see below for definition) which have a weight of zero, there are other cases whtch have data present on the tapes and have been assigned a weight of zero (see the variable wEIGHT in this section). These zero weighted units are:

```
Units in the neighborhood sample. Each cluster of neighborhoods should
    be weighted equally with other clusters, to calculate the percent of
    clusters havtrgg a particular trait.
Units accidentally interviewed which should not be in the sample. Use
    of data from these units would cause misrepresentation in the esti-
    mates.
```

Vacant and URE Units which are tents, boats, or are located in tran-
sient motels, which are not considered housing units.
(1983 and before) Vacant and URE mobile homes, which were not considered housing units then, but are now.

```
Vacancy Status--Vacant nousing units are classified as either "seasonal and
migratory" or "year-round." "Seasonal" units are intended for occupancy during
only certain seasons of the year. Included are units intended for recreational
use, sucn as beach cottages and hunting cabins, and vacant units held for
herders and loggers. "Migratory" units are vacant units held for oceupancy by
migratory labor employed in farm work during the crop season.
```

"Year-round" vacant housing units are available or intended for oecupancy at any
time of the year. A untt in a resort area which is usually oceupied on a year-
round basis is considered year-round. A untt used only occasionally throughout
the year is also considered year-round.
For "year-round" units, vacancy status is categorized in groups such as:
Vacant for sale--Vacant year-round units "for sale" also include vacant units in a cooperative or condominium project if the individual untts are offerea for sale.

```
Vacant for rent-Vacant year-round units "for rent" in 1983 and before also
included vacant untts offered either for rent or for sale.
```

Rented or sold, not occupied-If any money rent has been paid or agreed upon but the new renter has not moved in as of the date of the interview, or if the unit has recently been sold but the new owner has not yet moved in, the year-round vacant unit is classified as rented or sold, not occupied.

```
Held for occasional use--This category consists of vacant year-round units which
are held for weekend or other occasional use throughout the year. The intent
of this question was to identify homes reserved by their owners as second
nomes. Because of the difficulty of distinguishing between this category and
seasonal vacancies, it is possible that some "second momes" are classified as
"seasonal" and vice versa.
```

Other vacant-If a vacant year-round unit does not fall into any of the classifications specified in the distribution, it is classified as "other vacant." For example, this eategory includes units held for settlement of an estate, units held for occupancy by a caretaker or janitor, and units held for personal reasons of the owner.

```
Units Changed by Merger
```

A merger is the result of combining two or more housing units into fewer units through structural alteration or change in use. Structural alteration includes such changes as the removal of partitions or dismantiling of kitchen facilities. Change in use may result from a simple rearrangement of space without structural alteration, such as unlocking a door which formerly separated two housing units. A change in use also occurs, for example, when a family occupies both floors of a house which formerly contained a separate housing unit on each floor.

Conversion to More Units


#### Abstract

Conversions to more units take place when one or more apartments or houses are subdivided to build more or smaller apartments. All units resulting from the conversion become part of the sample if they meet the housing unit definttion and are not sample units in another Census Survey. (See Chapter 2 for a discussion of the changes in the 1985 sample design to insure that most units resulting from a conversion can be retained in the AHS sample.)


Types and Treatment of Missing Data

There are three sources of missing data in the Annual Housing Survey Data base: non-interviewed units, unanswered questions that did not apply to the unit, and unanswered questions that did apply to the unit.

Non-interviewed Units


#### Abstract

Units which have missing data because no interview was conducted are identified by the variable ISTATUS. Interviews do not take place for a variety of reasons. e.g., the unit could not be located by the interviewer, the househoid could not be reached or refused the interview, or the untt did not qualify as an eligible housing unit. In addition, units which were not part of the original cohort are assigned missing data in the longitudinal file for years prior to their first interview.


There are three types of interviews:

Type A: The unit is occupied by persons eligible for the interview. An interview was attempted but could not be obtained (e.g., no one nome. respondent refusal, sample untt cannot be reached because of impassable roads).

Type $B: \quad$ The untt is not eligibie for an interview at present but could become eligible for an interview in the future (e.g., unit currently is for nonrestdental use; unoccupied site for mobile home, unit under construction, unit severely damaged by fire). Note that vacant untts and units occupied entirely by persons with URE are not considered noninterviews. Type $B$ non-interviews will be revisited each survey year, and if they become housing units again, they will be interviewed.

Type $C$ : The unit is not eligible for the sample, because it no longer exists or because of sampling reasons (e.g., unit demolished, disaster loss. house or mobile home moved, unused permit--abandoned). Type $C$ noninterviews are not revisited in future years, and are dropped from the Census tape. They are nowever retained on Abt tapes as cases with ISTATUS=6 so that cumulative losses over time can be counted.


#### Abstract

Non-interviewed units are assigned a weight of zero. Eligible units which were not interviewed are compensated for by an increase in the weights of other nearby units. Thus, the totais are accurate, but there is an implictt assumption that the non-responding units and responding units would have answered similarly. The non-responding units are few, about 5 percent, so tine correction is smail. The specific units involved change slightly each year, causing the weights of almost all other units to change sijghtly as well.


The shifts in weignts especially affect longitudinal estimates. If a user is estimating 1974 housing units and what happened to them by 1979 , he or she should use 1974 weights (and the eategories of "what happened to them" must include "nonresponse in 1979" and "unit demolished or otherwise destroyed by 1979"). If a user is using 1979 units and where they came from, 1979 weights should be used (the categories of "where they came from" must include "non-

```
response in 1974" and "unit built or otherwise added since 1974"). If a user is
trying to count particular types of change, such as condominium conversion
(rental in 1974 to condominium ownership in 1979), he or she will always have an
underestimate since some units are not identifiable as conversions at the end of
each time period. Estimates may be adjusted based on the combined non-response
rate in the 2 years.
```

Data ftems for non-interviewed units and units not yet in the sample are considered "not applicable", and in the data files all ftelds have been filled with 9s. Users should note that in Abt files, the assignment of $9 s$ to all fields causes some variation in the value codes for "not applicable". This results when a variable's field length changed over the years. In this case, field length has been standardized to the largest field length, and then noninterviewed cases were filled with $9 s$. This results in the presence of not applicable codes which have different values in the same year--for example, "9" and "999".

To illustrate this fact, we shall discuss the treatment of the variable DISTJ, the one way distance from home to work of reference person, on the National file. This variable changed from a one column variable to a three column variable in 1978. On the AHS Data Project files the standardized format for DISTJ is therefore a 3 column field. From 1974 through 1976, the original Census tapes contained only interview records, and the code "g" was used for interviewed units to which the question was not apolicable such as vacant units or units where the head did not work. When the non-interview records for 74-76 were added by the AHS Data Project staff and the missing fields filled with g's, this resulted in a code "999" for non-intervtew records. Starting with 1977 , the non-interview records were contained in the original Census Tapes. A code "9" in 1977 was therefore present both for interviewed untts to which the question was not applicable and for non-interview records. Starting in 1978, DISTU was a 3-column fieid on the Census tapes and the code "999" was present both for interview records to which the question was not apolicable and for non-interview records. In addition, in the National Master file (longitudinal file), Abt inserted dummy variables for units not yet in the sample or aropped from the sample, and used code "999" for these records in all years.

```
Questions Which Are Not Applicable
```

Some questions are not applicable to every responcent or housing unit. for
instance, owner-occupants are not asked questions about rent, and questions
concerning condominium fees are asked only if the unit is a condominium. There
fore, most variables have a code (usually "9") defined as "not applicable" ("out
of universe" in Census documentation) to indicate that the question was inten-
tionally not asked because it did not apply to the unit.

Unanswered Questions

The third source of missing data is non-response or inconsistent response to particular questions asked during the interview. If two answers conflict (for example date moved in is before date built), then one of the questions is changed. It may be assigned a specific consistent value, or treated as if it were not answered. For some variables, the data base includes a code for "not answered" (usually "8", "98"). For other variables, however, the Census Bureau uses a "hot deck imputation" to assign, or allocate, responses to unanswered questions.
Data for unanswered survey questions are allocated by copying data from the last
case processed with similar characteristics. This procedure explicitly assumes
that non-responding and responding untts would have answered similarly. The
allocation preserves the distribution of responses within any variable, and
preserves the mean. However, tit sertously distorts any analysis of the relation
between two variabies. Therefore, the use of allocated data should be avotded
for most statistical analyses of the relation between two variables. Allocated
data shouldalso not be used for any longitudinal analyses, because stabiltty or
change measured with allocated data ts spurious.


#### Abstract

The Census Bureau documents the allocation of data for a particular unit by entering a code in a Census-generated "allocation variable." Allocation variables can be used to identify variables and units which contain allocated data, allowing users to assign missing values or drop particular variables if appropriate. = These allocation variables are part of the data base, but are not included in the regular codebook pages. They are documented only in the Ques-


 tionnaire Directory.Starting with the 1984 survey, these allocation varlables also show whenever Census made a correction to a variabie, based on fnconststent answers.

Allocation Procedures
The Census Bureau uses a technique known as "not decking" to allocate missing answers: it assigns a value to unanswered questions by copying the response of the last similar unit processed. The criteria used to define "similar" units are shown in the matrices on the next pages. In general, they include tenure, age, sex, race and general untt descriptors. Users may decide that the allocation criteria used by the Census Bureau do not meet their own analysis requirements and may wish to reallocate missing values according to different criteria. As described above, allocated answers can be identifed in the AHS files by examining the corresponding allocation variables.

[^45]Prior to the processing of an AHS file, a series of matrices are created. These matrices are used to allocate missing answers in the order that they apoear in the file. Units are processed in geographic order, so the last similar unit is normally located in approximately the same neighoorhood. The Census Bureau has occasionelly changed its allocation criteria. For simplicity, we present here the general matrices that were used until t983 and the revised matrices which are used starting in 1984. In practice, there are many more matrices, one for each variable subject to allocation and, in some cases, different matrices are used for different types of household members for a given variable.

Until 1983, there were three basic matrices. Matrix 1 was used to allocate missing values for NUNITS (number of units in the Building) and FLOORS (number of stories in the building). Matrix 2 was used to allocate all other Variables subject to allocation with the exception of the Income Variables which were allocated according to the criteria shown in Matrix 3 . A different Matrix 3 is used for income from different sources and for different types of household members. (See footnotes to Matrix 1.)

Starting in 1984, the criteria for allocations were refined, but the bastc allocation procedures remain unchanged. The revised allocation criteria are shown in matrices 7 through 10. For example, the number of rooms th. the unit (bedrooms, kitchens, bathrooms, etc.) and utility costs are now allocated on the basis of household size (see Matrix 5) and heating fuel (see Matrix 7) rather than race, sex and number of units in the building. The criteria for allocating income variables have also changed, as a result of changes in the information being collected starting in 1984 (see Matrices 9 and 10).

# As AHS records are processed, the value of each variable encountered on the record being read is entered in the appropriate cell of the appropriate matrix, as long as the answer is not missing. For example, if the record being read in 1983 pertains to a owner-occupied unit, with a non-black reference person, located in a 2 unit building (NUNITS=4), the value "4" is entered in the top cell of Matrix 1. (Owner, Non-Black Reference Person) The matrix is updated each time that a record contains a reported value (i.e., non-missing). When a missing value is encountered, the last value found in the appropriate cell of the appropriate matrix is used to allocate the missing answer. The process continues until all records in the file are processed. 

## Floor Plans

Design concepts include the use of the garage is $\mathbf{a}$ weather buffer, the orientation of all
living spaces solely to the south for solar gain pocential and minimum west, north and east exposure.

Foor Plans


Lower Leve! Plan


```
MATRIX 1: NUNITS and FLOORS:
\begin{tabular}{clc} 
Occupied or URE: & & All \\
Owner: & Non-Black Reference Person & \(X\) \\
& Black Reference Person & \(X\) \\
Renter: & Non-Black Reference Person & \(X\) \\
& Black Reference Person & \(X\) \\
Vacant & & \(x\)
\end{tabular}
```

MATRIX 2: All Other Variables Except Income

$$
\begin{array}{ccc}
\begin{array}{c}
\text { Mobile } \\
\text { Homes }
\end{array} & \begin{array}{c}
\text { One } \\
\text { Male Female }
\end{array} & \frac{\text { Unit }}{\text { Male Female }}
\end{array} \quad \begin{gathered}
\text { Units } \\
\hline \text { Male Female }
\end{gathered}
$$

Occupied or URE:

| Owner: | Non-Black Reference Person |
| :--- | :--- |
|  | Black Reference Person |
| Renter: | Non-Black Reference Person |
|  | Black Reference Person |
|  | For Sale |
|  | For Rent |
|  | Other |


| $x$ | $x$ | $x$ |  | $x$ |
| :--- | :--- | :--- | :--- | :--- |
| $x$ | $x$ | $x$ | $x$ |  |
| $x$ | $x$ | $x$ |  | $x$ |
| $x$ | $x$ | $x$ |  | $x$ |
|  |  |  | $x$ |  |
|  |  |  | $x$ |  |


| $x$ |  | $x$ |
| :---: | :---: | :---: |
| $x$ |  | $x$ |
| $x$ |  | $x$ |
| $x$ |  | $x$ |
|  | $x$ |  |
|  | $x$ |  |
|  | $x$ |  |

MATR|X 3: Income Variables

| Owner: $\quad$ | Value $<\$ 10,000$ |
| :--- | :--- |
|  | $\$ 10-24,999$ |
|  | $\$ 25-49,999$ |
|  | $\$ 50,000$ or more |
| Renter: | Contract Rent $<\$ 100$ |
|  | $\$ 100-149$ |
|  | $\$ 150-199$ |
|  | $\$ 200$ or more |


| Non-Black Reference Person |  |  |  |  |  |  | Black Reference Person |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age |  |  |  |  |  |  | Age |  |  |  |  |  |  |  |
| $<25$ | 25-34 |  | 35-64 |  | $65+$ |  | $\leq 25$ |  | 25-34 |  | 35-64 |  | $65+$ |  |
| $\bar{M} \quad \frac{F}{X}$ | M | F | $\bar{M}$ | $F$ | $\bar{M}$ | $\underline{F}$ | $\bar{M}$ | $\underline{F}$ | $\bar{M}$ | $\bar{F}$ | M | $\bar{F}$ | $\underline{M}$ | F |
| $\bar{X} \bar{x}$ | $\bar{X}$ | $\bar{x}$ | $\bar{x}$ | $\bar{x}$ | $\bar{x}$ | $\bar{x}$ | $\bar{X}$ | $\bar{x}$ | $\bar{X}$ | $\bar{x}$ | $X$ | $x$ | $\bar{x}$ | $\bar{x}$ |
| $x \quad x$ | $X$ | $x$ | $x$ | X | $x$ | X | $x$ | $x$ | X | $x$ | X | $x$ | $x$ | $x$ |
| $x \quad x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $X$ | $X$ | $x$ | $X$ | $x$ | $x$ | $x$ | $X$ | $x$ |
| $x \quad x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | X | $x$ | $x$ | $x$ | $x$ | $x$ |
| $x \quad x$ | X | X | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| $x \quad x$ | $x$ | X | $x$ | $x$ | $x$ | $x$ | $X$ | $x$ | X | $x$ | $x$ | $x$ | $x$ | $x$ |
| $x \quad x$ | X | $x$ | $x$ | $x$ | $x$ | $x$ | X | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| $\times \quad x$ | X | X | $x$ | X | $x$ | $x$ | X | $X$ | X | X | X | $x$ | X | $x$ |

Notes: For non-relatives, their own race, age, and sex are used instead of the Reference Person's.

- For wage \& salary, there are separate matrices for: reference person, spouse, child of reference person, head of any subfamily, spouse of any subfamily, child of any subfamily, other relatives, non-relatives.
- For farm and business income, there are four matrices: for farms and for businesses, respectively and for relatives and non-relatives.
- For all other income sources, there are three matrices for each variable: for 1 person families, 2-3 people, 4+ people, there is one matrix for each variable relating to nonrelatives.

MATRIX 4: Number of Units in the Building (NUNITS)

|  |  | Number of Stories in the 8uilding (FLOORS) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1-4 | 5-7 | 8-14 | 15-20 | $\underline{21+}$ | Missing or | or NA |
| Occupied or URE |  |  |  |  |  |  |  |  |
|  | Owner | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |  |
|  | Renter | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |  |
| Vacant |  | $x$ | $x$ | $x$ | $x$ | $x$ | X |  |

MATRIX 5: Number Bedrooms, Full Bathrooms, Kitchen, Living Rooms, Dining Rooms, Family Rooms, Business Rooms, and Other Rooms

|  | HOUSEHOLD SIZE (PER) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | $\frac{4}{x}$ | $\frac{5}{x}$ | 6 | $7 \pm$ |
| Occupied: Owner | $\bar{x}$ | $\bar{x}$ | $\bar{x}$ | $\bar{x}$ | $\bar{x}$ | $\bar{x}$ | $\bar{x}$ |
| Renter | $x$ | $x$ | $x$ | X | $x$ | X | X |
| Vacant for Rent | $x$ | $x$ | $x$ | X | $x$ | $x$ | $x$ |
| Vacant for Sale | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | X |
| URE and Other Vacant | x | $x$ | $x$ | X | $x$ | X | X |

MATRIX 6: Number of Stories (FLOORS)

$\frac{\text { Number of Units in the Building (NUNIT) }}{1}$| $2-4$ | $10-19$ | $20-49$ | $50+$ |
| :--- | :---: | :---: | :---: |

$$
\begin{array}{r}
\text { Occupied or URE: } \\
\text { Owner } \\
\text { Renter }
\end{array}
$$

| $x$ | $x$ |
| :--- | :--- |
| $x$ | $x$ |
| $x$ | $x$ |

$$
\begin{aligned}
& x \\
& x
\end{aligned}
$$

Vacant

MATRIX 7: Utility Costs (Electricity, Gas, Fuel Oil, Other, Garbage/Trash, Water and Sewage)
$\frac{\text { Heating Fuel (HFUEL) }}{\frac{\text { Electricity }}{\text { Male Female }} \frac{\text { Gas }}{\text { Male Female }} \frac{\text { Male Female }}{}}$

## Occupied:

Owner: Non-Black Reference Person Black Reference Person
Renter: Non-Black Reference Person Black Reference Person
URE: Owner
Renter
Vacant: For Rent
For Sale

| $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |

MATRIX 8: All Other variables except Income

$$
\frac{\text { Mobile Home }}{\text { Male Female }} \quad \frac{\text { One Unit }}{\text { Male Female }} \quad \frac{2+\text { Units }}{\text { Male Female }}
$$

Occupied:
Owner: Non-Black Reference Person Black Reference Person
Renter: Non-Black Reference Person
Black Reference Person
URE \& Vacant: Renter or For Rent
Owner or For Sale
Other Vacant

| $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |

MATRIX 9: Wage and Salary income of Family Memoers and Total Income of Non-Relatives

|  |  | Non-Black Family Members |  |  |  |  |  | Black Family Members |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Age |  | 25-64 |  | $65+$ |  | Age |  | 25-64 |  | $65+$ |  |
|  |  |  |  |  |  | $<25$ |  |  |  |  |
|  |  | M | F | M | F |  |  | M | F | M | F | M | F | M | $F$ |
| Owners: | Value < \$60,000 | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
|  | \$60,000 or more | $x$ | $x$ | $x$ | X | $x$ | $x$ | $X$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| Renters: | Contract Rent < \$300 | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $X$ | $x$ | $x$ | $x$ | $x$ | $x$ |
|  | \$300 + | X | X | $x$ | X | X | $x$ | X | X | $x$ | $x$ | $x$ | $x$ |

Note: Separate matrices are constructed for the reference person, spouse of reference person, child of reference person, head of any subfamily, spouse of any subfamily, child of any subfamily, other relatives, and non-relatives. Each person age, race and sex is used.

MATRIX 10: Other Sources of Income for Family Members


One Person Family

| Owners: | Value < \$60,000 | $x$ | $x$ | $x$ | $X$ | $X$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$60,000 or more | $x$ | X | $x$ | X | X | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| Renters: | Contract Rent < \$300 | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
|  | \$300 + | $x$ | X | $x$ | $X$ | X | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
| Two or More Persons |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Owners: | Value < \$60,000 | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
|  | \$60,000 or more | $x$ | $x$ | $x$ | $x$ | X | $x$ | $x$ | X | $x$ | $x$ | $x$ | X |
| Renters: | Contract Rent < \$300 | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |
|  | \$300 + | $x$ | X | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | X |

Note: All together there are 18 matrices to allocate family income from other sources (other than wage and salary): nine matrices to allocate whether any family member receives income from nine different sources: Business, Farm, Social Security, etc. and nine matrices to allocate the combined family income amount from these other sources depending on the type(s) of income sources reported.


[^46]


[^47]


[^48]

| REF\# | NAME | SURVEYS | DESCRIPTION |  | PAGE ON QUESTION | NAIRE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 845 | 85N |
| 1563 | HOWLST | $85 N-93 N$ | How Unit Was | Lost From Housing Stock | 5 | 5 |
|  |  | $845-935$ | $1$ | Demolisned |  |  |
| . |  |  |  |  |  |  |
|  |  |  | $9$ | Not a Type $C-30$ Non-Interview |  |  |
|  |  |  |  |  | 845 | 85 N |
| 1564 | HOWBAD | 85N-93N | Extent of Dem | nolition | 5 | 5 |
|  |  | 84S-93S | 1 | All of Unit |  |  |
|  |  |  | 2 | Part of Unit--Demolition Proceeding |  |  |
|  |  |  | 3 | Part of Unit--Demolition Discontinued |  |  |
|  |  |  | 4 | None of Unit Demolished |  |  |
|  |  |  | 9 | Not a Type C-30 Non-Interview or Not | mlished |  |

## Floor Plan

The plan demonstrates efficient space planning oriented to the Southwest's patio Lifestyic. Paxio extensions of each room increase the apparent square foorage of the thouse.

## Foor Plan



```
Notes: G = Variadle is computer generated, and is not present on the questionnaire.
    ++ = Variable is present on a supplemental page to the questionnaire.
    CC = Variable is present on the control card for the unit.
```


## Double-Walled Bi-Level


$\qquad$

Steven Winter Associates, Inc., Building Value into Housing 1980 Awards, A compendium of Winning Submissions Under HUD's 1980 "Building Value into Housing Program", November, 1980.

This section descrtbes the 1980 Census variables provided on the 1985 National File to assist longitudinal studies. These variables are provided for most units in the 1985 AHS National file. The 1980 Census variables are not available for unfts which were added to the housing stock since 1980 (New Construction, Conversions) or were not classified as housing units in 1980. Some cases may also be missing because the 1980 Questionnaire was not returned or a corresponding record could not be found.

For most 1985 N homes except neighbor units, all the vartables documented in this section will be available. For most neighbor units only variables identified with a note are available.

The order of the variables parallels the overall order of the Codebook: Geography variables, general characteristics of the unit, rooms, kitchen, plumbing, household composition, income, housing costs, mobility and commuting. The 1980 Census Questionnaire included questions which are not asked in the AHS survey: Employment information, more detalled questions on household characteristics, origtns, veteran status. These vartables have nevertheless been included, as they provide useful baseline information for households that have not moved between 1980 and 1985. Most of these specialized questions are provided for the head, and for a second adult, which is the spouse if present.

Census variables have been assigned variable names which are identical or similar to the variable name of the corresponding AHS variable. Each variable name ends with the suffix " 80 " to assist users in identifying the source of the various variabies. IT SHOULD BE NOTED THAT THE CODES USED FOR AHS AND CENSUS VARIABLES ARE RARELY IDENTICAL. For some variables, the phrasing of the question and the resulting coding conventions dffer significantly. The location of the 1 tem on the Census Questionnaire is provided in the documentation. Users may want to compare the questions from both sources.

Differences in concepts or definitions between AHS and Census are highlighted in the Introductions to the other sections of this Codebook.

The codes used by Census for Occupation. Industry, and Ancestry are numerous.
These codes are presented at the end of this section for easy reference

In order to meet the various analytical needs of Users, the 1980 Census distinguishes three subsamples for the purposes of coding geography variables. These subsamples are referred to under the appropriate variables and are oriefly described below:

A Sample: State is always identified. Metropolitan areas do not always follow the state boundaries, so some codes for metropolitan areas crossing state boundaries are suppressed.

B Sample: Metropolitan areas are always identified. State is suppressed for some cases in metropolitan areas crossing state lines.

C Sample: Urbanized areas are always ldentified. Metropolttan areas and state codes are sometimes suppressed when an urbanized area crosses the state or metropolitan boundaries.

Exhibit 1: Ancestry Codes



(Rimu is iander)

## 200-899) Pacitic

| Code | Ancestin |
| :---: | :---: |
| 800 | Australian : New So Wales, Morthern Terfitorv, Qumens land, Victoria) |
| 601 | Tasmanian |
| 803 | Fijim |
| 805 | Nuw Zealande? |
| 806 | Meori |
| 808 | Nam Cuinean |
| 809 | Pap:!89 |
| 810 | Amarican Samoan |
| 811 | Toxelau istarder |
| 112 | Tongan |
| 613 | Hewailan |
| 814 | Pre-Mawalion |
| 175 | Cummanian |
| 816 | Chmmerpo Islander |
| 817 | Manthail is lande? |
| 818 | Caroline istancep |
| 119 | Mintury is under |
| 820 | Wete lislinder |
| 821 | Sacan is lander |
| 822 | Northern Marianas islancer |
| 123 | US. Trust Terneories ai in Pacific |
| 824 | Truk islander |
| 825 | Yao islanter |
| 826 | Solomm istandep |
| 827 | Morroia istandef |
| 028 | Cook is lander |
| 820 | Chersemsa islander |
| 830 | Camporil is ander |
| 831 | Xemmatec istander |
| 832 | mamenim is ancier |
| 833 | Wew Caledonia lalande? |
| 834 | Nuw Hebrides is lander |
| 835 | Melanesia is is |
| 136 | micronesia is lander |
| 337 | Palymesia is lander |
| 838 | Pacitic Islander (Oceana) |
| 839 | Smman |
| 840 | Fromeh Polvesia (society Islander, Tahieian! |
| 341 | Fronch Smmo |
| 442 | Plauen |
| 643 | Ulithian (Famsian) |
| 844 | moleaim (ifalchese. Earmikes) |


| Cont | Anctitiv |
| :---: | :---: |
| 290 | tmerican indian-Engisn-Fiench |
| 921 | wrepican indian-Ëngilst-Cerman |
| 722 | trefican indian-Englisn-ifisn |
| 923 | wrepican indian-Cerman-irish |
| 924 | Dusch-french-lfigh |
| 925 | Duach-Cemman-1pish |
| 926 | Dutch-Irish-Scoteh (or Scortish) |
| 927 | Ensligh-french - Cemman |
| 928 | English-French-I irish |
| 929 | English-Cerman-irish |
| 930 | English-Cerman-5wedish |
| 931 | English-irish-Scoreh (or Seoresh) |
| 912 | English-Scoxch (ar Scextmh)-welsh |
| 933 | French-Ceman-I rish |
| 934 | German-irish-italian |
| 935 | Cemmen-trish-Scoten io seoreshl |
| 936 | Ceman-I ${ }^{\text {cish-Smedigh }}$ |


| Code | Ancestry |
| :---: | :---: |
| 901 | arerican |
| 912 | Unired States |
| 903 | Afro-american 'ibilalian, Black, Colored, Creole, rularto, Vegro, Vigri(ian, vonwhite) |
| 906 | White, Caucasian !anglo, angio-5axon, Apoalaction, Aryan, Hillbily, Swarno Yanker, WASP, White, |
| 908 | Greeniander |
| 909 | Canadian :Albertan, British Columbian, Labradorman, Manttotan, Brunswick, Oncarian. Prince Edward Istander, Siskatchewen, Yukoner) |
| 910 | Vmioundland |
| 911 | wove Seorian |
| 912 | Franch Canadian (Ountes) |
| 913 | Pe mindon |
| 915 | Vorth American |
| 916 | American Indian (American Indian Tribes) |
| 917 | 4 heut |
| 918 | Eshimo |


| 330-332 | French west lncies |
| :---: | :---: |
| 406-407 | morocean |
| 429-432 | Sveran |
| 450-45\% | Middie Eastern |
| 515-516 | Congotese |
| 520-521 | Equatorial Guinea |
| 522-523 | Ethiooian |
| 553-557 | vigerian |
| 570-574 | South aritican |
| 576-580 | Sudanese |
| 584-585 | Tanzanian |
| 541-592 | Upper volian |
| 600-602 | Alghan |
| 613-625, |  |
| 627-628 | Asian Indian |
| 633-635 | Ceylonese |
| 700-702 | Burmese |
| 703-704 | Carbodian |
| 706-712 | Chinese |
| 719.720 | laoanese |
| 725-727 | Laotian |
| 742-744 | Thai |
| 748.732 | Vietnamese |
| 800-809 | Austraiian |
| 805-806 | New Zealande? |
| 808-809 | New Cuinean |
| 901-902 | meriean |
| 909.911 | Canadan |


 elsamere clessufical)

Erecutive, artministrative, and manage ofal Decugations
Cegislatnes : 1111
Chief execurives and general ammistrazors, puolic amunistration :112
administrators and officials, quolic arministeat on (1132-1139)

financial managers (122)
Aersonnet ant labor relations managers (123)
Archasing managers (124)
Managers, market ing, adertising. and oublic relat ons (125)
Administrators, education and related fields (128)
Managers, medicine and health (131)
Managers, procenis and real meate (1353)
Postmasters and mail wotimendents (1344)
Funeral directors (ot 1359)
Managers and administrators, n.e.c., (121, 126, i27, $132-139$,
exc. 1344, 1353, ot 13591
Managemere Related Occuations
Account anes and uditors (1412)
undmerriters (1414)
Oref financial officers (1415. 1499)
Managenert analysts (142)
Personnel, training, and labor relations specialists (143)
Purchasing agents and buvers, farm products (1443)
Buvers, wolesale and refail trade except farm producss (1442)
Purchasing agems and berers, nate. (1449)
Business and pronotion agents (145)
Construction insoectors (1472)
Insoectors and campliance officers, exceot construct ion (1473)
Mansgement related occupetims, n.e.c. (149)

## Professional Soneialty Oceugnt ions

Engineers, Architects, and Survivors
Architects (161)
Engimeers
Aprononce (1622)
Werallurgical and meterials (9623)
Alning (1624)
Peraleum (1623)
Chamical (1626)
vuciear 1627
Civil (162A)
Agrieultural (1632)
Electrical and electronic (1633)
incustrial (1634)
mechanical (1635)
Protessional Specialty ©ceupations (cont mand)
marine and naval atchitects (1637)
Enginetrs, natce (1634)
survirors and rapping seleve hes (164)
mashometeal and Cormper selembes
Compuet vitems analysis ard seione ists (171)
fop rations and ovstems researchers and analysts (172)
Actuaries (1732)
Statisticiant (1733)
itathematical seient ists, naec. (1739)
Vatural Seient ists
Parsicists and astronamers (1842, 1843)
Chemists, except biochemises (1845)
temospheric and space cient isis (1846)
Ceowgists and peodesisis (1847)
Pmysical seiterists, n.ecc. (1849)
Agricultural and food xeiersists (1853)
atologieal and life seiere ists (1854)
Foresiry und conservation ccient ists (1852)
Medieal seientists (1853)
Health Olagnosing Ocecrant ions
Ansieiant (261)
Dent ists (262)
Vere rinariams (27)
Ootometrists (281)
Podistrists (283)
Health diaenosiong practit onert, n.ec. (289)
pteatit Assessmore and Trating Oceupations
Registered murses (29)
marmacists (301)
Dictitions (302)
The ragists
Inhalat on therapists (3031)
Decupational tharapists (3032)
envical therapists (3033)
spach therasists (3034)
Therapists, nate. (3039)
mysiciars' assistans (304)

Teschers, Posespeondery
Earth, environmertal, what marine seience teachens (2212)
Biotogical seimen exachen $\{2113$ )
Chamistry teachers (2214)
Anysics teschers (2215)
datural science ceachers, n.e.c. (2216)
Psychology teachers (2217)
Economics tenchers (2218)
Hiseory teschers (2222)
Political science teachers (2223)
Saciotopy reathers. (2224)
Social seience temehers, n.ecc. (2225)
entimetring tachers (2226)
wathematical science resethen : 2227)
Compuer seimen enachers (222n)
Medical science teactrers (2231)
Halth epecialtiet teachers (2232)
business. commerce, and marketine ieachers (2233)
agriculture and forestry temeners :22341
Art, drama, and music teacmen :2235;
Anysical education ieschers (2236)
Educaton teachers $; 2237$ !
English teachers \{2238)
Foreifn language teacheps :2242)
Law teachers (2243)
Social work teachers :2244
Theoligy teacteps '22:45,
Trad and industrial teachers (2246)
Home econamics teschers (2247)
Tesehers, postsecondery, n.e.e. (2249)
postsecondary teschers, wbiect not specified
Teschers, Exenpt Postseconden
Teacthers, prekindergarten and kindergarten (231)
Teachers, elemertary achool (232)
Teactiers, meondary school (233)
Tecchers, mecial education (235)
Teachers, nace. (236, 234)
Conneiors, aducatinal and vocational (24)
Llbrarians, Apchiviscs, and Curators
Librarians (251)
Archivists and curators (252)
Social Selert ists and Urban Plamers
Econamists (1912)
mychologists (1975
Sociologists (9996)
Social scientises, n.e.c. (1913, 1914. 1919)
Urtan planmers (192)
Social, Recreation, and Relifious morken
Social workers (2032)
Recreation morkers (2033)
Clercy (2042)
Religions wortart, noec. (2049)
Lempars and Juderes
Lemyers
Juders
Wrients, artists, emertainers, and athtetes
Aughors
Tectrical writers
Designers
Musicians and comporers
Actors and dirmetors
Panteps, seulptors, cpaft-artists, and art ist peimmakers
motoyraphe is
Dunce is
Artists, pertormers, and related worken, n.e.c.
Editors and mporters
mublic relat ons spectalists
announcers
Athletes
TECHNICAL, SALES, ANO AOMINISTRATIVE YPPDRT XCL'PATI-
Technicians and Related Support Sccuant ons
Health Technologists and Techniciare
Clinical labopatory technologisss and techniciars (362)
Dontal therenisss (363)

undioteric tectmicions (365)
Lleemed gractical mirset (366)
toalth meckoletists en techoicias, nace (340)

## Exhibit 2: Occupation Codes (continued)

iecmovelists and Technicians, Except Healith

| Engmeenne and helated Tectuobotists and Techniciane | 337 |
| :---: | :---: |
| Electrical and electionic (ectnicians (3711) | 338 |
| moustrial entineering rectrniciams (3712) | 339 |
| wechanical enginetring techmiciars (3713) | $3+3$ |
| Engineeting tectmiciams, n.ec. (3719) | 344 |
| Drating ocecoat ons (372) <br> zurvering and mapoing techniciart (373) |  |
|  | 345 |
| Science Teennicians | 346 |
| Biotogical eechniciams (382) | 347 |
| Chemical tectnicians (3831) <br> Science tecmicians, n.a.c. (3832, 3833, 384, 389) |  |
|  | 348 |
| Tectaicians; Except Health, Engineering, ard Science | 349 |
| Airolane pilots and navigators (823) | 353 |
| Air traffic cortrolters (392) |  |
| Brondcast equpmert ocerators (393) |  |
| Compueer prosranmers (3971, 3972) | 354 |
| Tool prosrammers, mumerical coritrod (3974) | 335 |
| Legal assistants (396) | 336 |
| Technicians, n.ecc. (399) | 357 |
| Sales Secupat ions |  |
| Supervisors and prapritors, setes oceupat inss, (40) | 359 |
|  | 363 |
| Saies Reoresematives, Finance and gusines; Services | 364 |
| Insurance sales occupt dost (4122) | 365 |
| Real estate sales oceventions (4123) | 366 |
| Securitis and finsocial semices sales occupations (6124) | 368 |
| Advertsind and related siles octupat ons (4153) | 169 |
| Sutes occumedas, other busimest services (4152) | 373 |
|  | 374 |
| Sales Represertativet. Commodition fxenot Retail |  |
| Sales enginetrs (421) |  |
| Sales represematives, mining, mamyfacturing. and wholesale (423, 424) | 375 |
|  | 376 |
| Sales Workers, Rerail and Personal Services | 377 |
| Sales workers, moror mancions and bots (4342, 4344) | 378 |
| Sales mopkers, mooarel (4346) |  |
| Sales workers, shoes (435) |  |
| Sales workers, furniture and home furnishings (4346) | 379 |
| Sales mokers, radin. N, hi-ti, and apliances (4343, 4352) | 383 |
| Sates morkers, hardware and building upalie (4353) | 384 |
| Seles mopkers, perts (4367) | 385 |
| Sates morkers, orhar commoditias (4345, 4347, 4354, 4356, 4359, | 386 |
| 4362, 4369) | 387 |
| Salet coumer eiorks (4363) | 389 |

Sales courter ciopks (4363)
Ceshiers (4364)
Seret and dop-10-door sales morkers (4366)
Nams vindors (4365)
Sales Related Occupet ions
Demonstrators, promsers and models, sales (443)
Auctioneers : 447)
Sales mpoort accugat ions, n+e.c. (444, 446, 449)
Administrative Sugeort Ocevestions, Inciudinas Cle rical
Supervisors, Admmistrative Suoport Occupations
supervisors, fentral office (4511, 4513, 4514, 4516, 4519, 4529)
fupervisors, compucer apuiontane aperacon (4512)
semervisors, financial records orocissing (4321)
Chiet osminmications operators (4523)
supervisors, distribution, scheduling, and djusting cherks (4322, 4524-4528)

Competer enviomert coprators
Computer aperacors (4612)
Prigheral equipmert cerators (4613)
Secrexaries, Senograghers and Trpists
Secrecaries (4622)
semograohe is (4623)
Trpists (4624)
Information Cleris
imerviewtirs (4642)
Horel elerts (4643)
Tramportstion ticher and nuanntion agens (4044)
Receprionists (4645)
informat ion ebifks, notec. (4649)
解cords Processing Occupat ions, Ereapt Phenelal Classified-ad elerks (4662)
Correspondenee charks (4663)
Opder cherks (4664)
Porsonnel ciarls. meepe ary roll and pinnterping (4692)
Literary sterks (4694)
File cierks (4696)
Records cinths. 46991

Enanciai Recoros Dencessing Ocenoetions
300kkecors, ccowting, and watmit ciarks;412:
Pavroll and timexeeding enerks (4713)
Gilling ciecks di:5)
Cost and race elecks 47:6)
Billing, wosting, and a ajating facene xemtors titis:
Duplicatint, wail and Othep Office wacnine Operators
Duolicatin machine coerators : 4722)
Wail preparingand aper handing machine coperators ;4723)
Office machine aperawors, n.ect. (4729)
Communications Equiomert Opefators
Telephone operators (4732)
Teletraphers (4733)
Communcations quigmert aperators, n.e.c. (4739)
Msil and wessage Distribucing Dcemations
Postal cifolks, exc. mail earrien (4742)
Mail cartiers, poseal service (4743)
Wail cherks, exc. goseal vervice (4744)
Wessengers (4745)
Material Recording, Scheduling. and Distribusing Clerks, n.e.c. Oispatchers (4751)
Production coordinators (4752)
Traffic, shoping, and receiving cherks (4753)
stock and invertory citerks (4754)
weter readers 4755 )
Werghers, measurers, and encekers (4756)
Samplets (4757)
Expediters : 4738 )
Waterial meording, scheduling, and distribucing chepks, n.e.c. ; 495
Adiusters and Investigators
Inswrance adjusters, examiners, and imestigators (4782)
Investigntors and diusters, aceot insurance ( 4783 )
Elicibility cherks, wecial welfare ( 4784 )
Bill and ucount coltectors (4786)
Miscellaneous Adrinistrative Support Oecupations
Cameral office elepts (463)
Sunt telliters (4791)
Proofreaders (4742)
Data-entir hevers (4793)
Statntecal ciorks (4794)
Teachers' aices (4795)
Administrative wpoort ocevontions, nate.c. (4787, 4799
SERVICE OCCIJPATIONS
Ppivate Households Occuat dis
baunderers and trone:s '5031
Cooks, private mousehold (504)
mousekeepers and butiers '505)
Child are morkers, private mousenald: S06,
Private mousehold 6 waners and servants: 502, 507, 509)
Protective Servics Oecugations
Supervisors, Protective Service Occupat ons
Sugenvisors, firetight ing and fire prevert ion occupat ons (\$111)
Sepervisors, pollee and tetectives (5112)
sapervithors, surds (5113)
FIrafighting and $f$ ire Prewtrion Oceupations
fire insoett on and fire orevert ion aceupat ons (5122)
Firefigheing occupations (3123)
Molice and Onectivet
police and detectives, public senice (5132)
Sherifts, bailiffs, and ather law enforcimarg afficers (3134)
Cormetimal metieut on officers (5133)
Cuerds
Crossine auspls (3142)
Cunds and police, exc. public sarvice (5444)
Prozective service ocempet oms, n.e.c. (5149)
Senvice Occwat ons, Except Pratective and Housemold
Food Preaaration and Service Occuoat ons
supervisors, food oreoaration and wrict occupetions :52T1)
Eartenders (5212)
waiters and mattresses (3213)
Couns, Encept short order ( 5214 )
Siont-order cooks (5215)
food coure er, fountain and related occumt one (\$216)
Kltetwen morken, food prearat ion (5217)
Werters' Amitresser' assistexs (5218)


Exhibit 2: Occupation Codes (continued)

| 445 | Hedin Sernce Ocelpationt Dental aswstants (5231) |
| :---: | :---: |
| 446 | Health sides, excepr nursing (5233) |
| 447 | Vursing alows, arderlies, and astendents ; 5236) |
|  | Cleaning and Buiding Service Dcewations, except tousehoid |
| +18 | soervisors, cleaning and buiding service morters (5241) |
| 449 | Vaids and housemen (5242, 5249) |
| +53 | (ancors and cleanery (52+4) |
| 454 | Elevaror speraters (5245) |
| 453 | Pegt contral accusations (5246) |
|  | Persunail Service Occuostions |
| 456 | Supervisors, dersonal service occuations (5251) |
| 457 | Barbers (5252) |
| 458 | Hairstessers and commatolotists (5253) |
| 459 | Attendents, amusernent and recreation facilitios (3254) |
| 463 | Cuides (5253) |
| 464 | Ushers (3256) |
| 465 | Public transportation astendmes (3237) |
| 466 | Baggage porters and bellhops (5262) |
| 467 | Weifare servier acdes (5263) |
| 468 | Child care morkers, excepe private housthold (5264) |
| 469 | Personal service acciperions, natce. (5258, 5269) |
|  | FARMINC, PORESTRY, AND FISHINC OCCUPATIONS |
|  | Farm operators and managers |
| 473 | Farmers, exeepe horticuitural (3512-5514) |
| 474 | Horticultural specialty tarmers (3515) |
| 475 | managers, farms, exceor torticultural (5322-5324) |
| 476 | Managers, horticulural ypocialty farms (5525) |
| 479 | Swoprvisors, farm morkers (\$611) |
| 4.9 | farin workers (3612-jol7) |
| 483 | Marine life cultivation morkers (5616) |
| 484 | Nursen morkers (5619) <br> Related Agricuturat Oecmapions |
| 445 | Supervisors, related agricultural ocelpations (5621) |
| 46 | Croundskeeoers and gardeners, encept farm (5622) |
| 487 | Animal carerakers, exceor farm (5624) |
| 448 | Graders and sorters, aspricultural procuct: (3625) |
| 469 | Insoectors, agricultural products ( 5627 ) |
| 494 | Supervisors, forsery and loasing morkers (571) |
| 495 | Forestery morkers, except logsing (372) |
| 4\% | Timoer cikting and longing occupations (573, 579) |
|  | Fishers, Mumers, and Trappers |
| 497 | Capains and ather officers, figines mapl: (pe 1241) |
| 49 | Fismers (383) |
| 499 | Hunteri and trapeers ( 584 ) |
|  | Precision pronuction, Graft, and repair xecupatiovs |
|  | Mechanics and kepairers |
| 503 | Subervisors, mechanics and repairers 1601 |
|  | Mecranies and Repairers, Excest Sceervisors <br> Vehicle and Mooile Equioment Mechanics and Repairers |
| 505 | Automabile methanics, excmpr acorentices (pt 6191) |
| 506 | Auromobile mechanic aoprentices (0r 6111) |
| 507 | Bus, tpuck, and stationary mgine mechanics (6112; |
| 508 | Aipcrate engine mechanics (6113) |
| 509 | Small mine recairers :6114) |
| 514 | Ausamobile book and related reasirels (6115) |
| 515 | Aiperaty mentanes, eve. matime '5116) |
| 316 | Heaw equiament mertanics (6117) |
| 517 | farm apuipment mactanics (6118) |
| 518 | Industrial machinery repairers (613) |
| 519 | machinery maintensne ocepations (614) |
| 523 | Electrical and Electronic Equioment Repairers Etectrenic mpairars, commenications and industrial equipment (6151, 6153, 6155) |
| 325 | Date processing equipent repeirers (6154) |
| 526 | mownhoid apoliance and comer mol momireps (6156) |
| 527 | Telephone line inscalters and repairers (6157) |
| 329 | Telephone installers and repairers (6198) |
| 533 | miscellanoous electrical and electronic equigment repsirers $(6152,6159)$ |
| 534 | Heating. aif conditioning, and refriteration machanics (616) misceliamores mechenics and Repairers |
| 535 | Camers, atten, and musical instrumant repaifors (6171. 6172) |
| 536 | Locksmiths and sate reparers (6173) |
| 538 | Office machine reosirers (6174) |
| 539 | mectenical controls and valve repairers (6175) |
| 543 | tlemetor instaliors and repeirers (6176) |
| 54.4 | Mllimerighas (6178) |
| 54. | Soecified mochenics and reopirers, nex.e. (6177, 6179) |
| 549 | Mot pecified mactunc: and reairers |

Mechanics and kepairers
Suservisors, mectanics and reosirers 1601
ecranics and Repairers, Excert Scoervisors
Automobile monie Equorment wechanics and Repaliers
Ausomobile mechanic aporentices (pt 6191)
Bus. Pisck, and stationary engine mechanics (6112:
Alperats angine mectanic: (6113)
Aucomobile bodr and related reosirels :6175)
(ircrath mechanies, exc. mime 5?16)
Farm quicmant rachanics (6197)
Industrial machinery repairers (613)
machinety maintenance ocepations (614)
Electrical and Electronic Equioment Repairers
( $6151,6153,6155$ )
aec procassing equipent rapairers (6154)
Mownhoid apoliance and power mol masirers (6156)
Telephome line inscallers and repairers (6137)
wiscellamous elactrical and electronic equoment repsirers
(6152, 6159 )
Hating, air conditioning, and refriteration mechanics (616)
Camers, maten, and musical instiumant repaifers (6171. 6172)
Lockgmiths and safe reparirers (6173)
(6174)
tienetor installers and repairers ( 6176 )
dilumintas (6178) mot queifled machenc: and repoirers

Consernction Tracies
Sugervisers, construstion occioations
sepervisors, brickinasons, stongmasons, and tife setters !6312) Supervicors, caromers and related morkers (6313)
Supervisors, lectricians and poner transmission instaliers 6114 sopervisors, painters, papernangers, and piascerers, osij,
Supervisors, plumbers, Doefitters, and steamfitters i63961
Supervisors, nutc. (6311, 6318 )
Construction Trades. Exceor Supervisors
Brickmasons and stonemasons, excepe acorencices (pr 6412, pt 641
Brickmasm and stonemason toprentices (ot 6412, 6413)
Tila setters, Mard and witt ( 6414 , Dt 6462)
Carpet inseallers ( $\alpha$ 6462)
Caroenters, exced soopentices ( 0 6422)
Carpmear apprentices (6422)
Dryall installers ( 6424 )
Electricians, exceot soarentices (pr 6432)
Electricion moprontices ( $x$ 5432)
Electrical pooer installers and repairers (6433)
Painters, construction and maintenance ( 6442 )
Pasermanmers (6443)
plasterers 6444 )
Plumbers, picefitters, and steamfieters, exceot adorentices ( D 645)
Plumber, pioftittep, and steamfiteer aporenelces pe 645)
Concrete and serpaszo finishers (6463)
Claziers (6464)
insulation norkers (6465)
Paving, surfacing, and tamping equioment sperators :5460́) Roofers ;6468)
Shenetmatal duct installeps (6472)
Steructural meral morkers (6473)
Drillers, earth (6474)
Construction trades, n.e.e. (6467, 6475, 6476, 6479)
Extpactive Ocecontions
Suparvisors, entractive oceupations (632)
Dritlers, oil well (652)
Explosives morkers (653)
wining machine coperators (654)
minint occoations, nouc. (656)
Precisicn Production Ocenbations
Supervisors, production occupations (57, 71)
Precision Meeal morking Occupations
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Tool and die maker aperentices (pt 6819)
Precision assemblers, meral (6812)
Machinists, excmex apprentices (or 6813)
Machinist apprantices (pt 6813)

Precision frinders, fitteps, and cool snarpeners .6816) Pattermmakers and model makers, metal ;6817) Lav*out morkers (6821)
Precion scones and merals anters (jevelers) (6822, 6866)
Engravers, metal (6823)
Shere metal workeps, ezerpe apprentices ( P 6824)
Shert mital worker apprantices (pt 6824)
Miscellaneors ppacision metal morkers (6829)
Precisien muodworting Oecupations
Patterroniers and madel makers, aood (6437)
Cabinut maters and trieh earponters (6332)
Fumiture and mad finishars (6835)
Misceileneous precision moodmorkers (6839)
Precision Teztile, Apoprel, and Fupnishings maching Wopters
Dresmenters (pr 6432, pe 9732)
Pailors (os 6852)
Unhol iterers (6453)
Shoe repairers (6854)
Acoarel and fabric petiermmakers (6856)
Wiscellanoous precision aposfet and faoric morkers :6859, or 9752;
Precision Workers, Assorted warerials
land nolders and shapers, encept jeselers (58AN
patternmakers, lay-our moriees, and eviters :6862)
Optical goods morkers (6864, x 7477, 又 7677 )
Oental lacoratury and meducal appiance tecmicians. 6845 ;
8combinders (6844)
Electrieal and electronic equigmant assombieps (6867)
Miscallamous pracision morkers, ne.e. (6869)
Precimon Food froduction Ocespations
Butehars and mat cuters (6a71)
Blaters (6472)
Food batelmakefs (6873, 6879)
Precision Insoectors. Testers, and Reiated morters
Inspectors, testers, and traders (6a81, 828)
Adjuters and calibracors (6882)
Pane and systeen Operators
water and stape treatment sient oceracops (691)
Power dent operstors ( 0 (693)



Mactime Ooprators, Assemblers, and insonctors
wactim Ooprator! and Penders, except precision
Metalmorting and Pastic Working Mactune Operators
Latm and turning machine set -co ocepators [7312)
bathe and surning machine aderators (7512)
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Millint and planing machine copators (7313, 7513)
Punching and samping press mactune ooefators (7314, 7317, 7514, 7317)
Rolling machime operators ( 7396,7516 )
Orilling and boring tractione coepators (7318, 7518)
Crinding, abreding, buffing, and polishing mechine operators (7322,-124, 522 :
Forsing machin aperators (7319, 7519)
Numerical comerol mectine operaters (7326)
Miscellaneous metal, plastic, stone, and glass workins machine coperators (7329, 7529)
Fabricatint machine deracors, nate. (7339, 7339)
metal and Plastic Processung Wachine Operators
molding and casting machine aperasors (7315, 7342, 7515, 7342)
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Heat preatine equignent operators (7344, 7544)
miscollemons metal and plastic processing machine operaters (7349, 7549 )
Woodmorkint Wachine Operators
mood idthe, rouking, and planing mechine aperacors (7431, 7432, 7631, 7632)
Stwing mechine aperators (7433, 7633)
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Printing machine ooerators (7443, 7643)
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Typeserters and composicors ( 6841,7642 )
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Testile, 4oparei, and Furnishings Wachine Joerators
minding and iwisting machine ooprators (7451, 7651)
Kniteing, looping, taping, and mavint machine ocerators (7452, 7652 )
Tertile cuting machine aperators (7654)
Textile maint mechime aperators (7655)
Shot meetime aperacors (7656)
Pressing meenine aperators (7657)
Laudering and dry clemine mactine operatops (6855, 7658)
Miscellmeon tentile machine operacors (7459, 7659)
Mentine Operators, Asmorted uaterials
Cemmating and gicime machine operators (7661)
Packaging and filling machine operators (7462, 7662)
Entruding and formina machine ooprators (7463, 7663)
Mizing and blendine machine opepators (7664)
Separating, filterime, and clarifyint machine coepacors (7476, 7666, 7676 )
Corposessing and corroectine mactine aperators (7467, 7667)
Painting and paine spraving mectine aperacois (7669)
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folding mection oeprator: ( 7474,7674 )
Fummer, kiln, and own operacors, enc. food (7675)
Crushing and grinding inacnune ocerazors ip 7477, pe 7677)
Slicing and cutting machine operators (7478, 7678)
motion picture proiectionists (pt 7479)
Phocos raptic process mechine operators (6863, 6868, 7671)
miscellanowe and not specifled mechine operators:
Miscellamous and not specified machine operato
machin operseors, not smeifled
Fabricators, Asmemblers, and Hand morking Occupations
Weldaps and ciaters (7332, 7532, 7714)
Solderert Mavers (7333. 7333, 7717)
Assamblers (772. 774)
Hand evating and trimmang ocewations (9753)
Hand moding, eastins, and formint occioations (7754, 9755)
Hand paintinge coating, and dererating accuations (7736)
Hant mbraving and printing ocecpations : $7: 57$ )
Mand grinding and polishing ocewations (7758)
Misctllantous hand morking occepations (7759)
Production Inspectors, Testers, Semplers, and Weighars
Production insonctors. eneckers, and examiners (782, 787)
Pioduction testers (is3)
Production smmolers and mingars (784)
Craders and sorters, exc. Afficultural (785)
Transportation and waterial moving Decupations
Mopor Vethicie Operators
Supervisors, motor vehicle ootrators (8111)
Truck drivers, heaw (8212, 8213)
Truck driwers, light (8214)
Driver-sales morkers (8218)
tub deivers (18275)
Fanicet drivers and chanforns (8214)
Parkinis lot attenderr: (874)
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Tirnsportation Ueeforions, Excedt Motnf Venicies
tail Transoortation Oeeupations
Railroad conductors and vardmasters (8113)

- xomotive soetating xecosetions : 8232 )

Railioad brake, signal, and suicen coerators 9:3]
Rail vehicle soefators, R.e.c. (3239)
Water Tramsoortation Ocscoations ship captains and rates, except fighing roats ion $8241,524=$ Sailors and deckitands (8243)
marine engineers ( 8244 )
Bridet, lock, and lighthouse tenders (8245)
Material Moving Equoment Doerators
Supervisors, material moving equioment ocerators (812)
Opersting engineters (8312)
Longstors equioment operators (8313)
Hoist and winch operators ( 8314 )
Crame and toner operators (8315)
Excavating and loading machine aperators (3316)
Grader, dozer, and scrape ooepatnrs is3ty?
Indentrial truck and tractor avioment operators (8318)
wiscilanous material moving avioment operators is319)
Mandiers, Equgment Clemers, Heiders, and Lacorers
Supervisors, hendlers, quomene clemers, and laborers, n.e.e. (85)
Hetpers, muchanics and reonifers (863)
Heloers, Construction and Extractiv Decuadions
Helpers, construction srades $(3647-8645,8648)$
Heloers. survevor (3645)
Helpers, extractive occwations :965)
Construction a00rers (371)
Production mipers (861, 862)
Fraighe, Stock, and waterial Handters
Garoage collecrors (8722)
Stevecores (8723)
Stock handers and bagers is7241
Wachine ieoders and oifbeapers :8725)
Fretern, scock, and material mandlers, nafac. (8726)
Garage and service seation reiated occupations :873)
Vehicle wishers and equpment cieaners (875)
Hend packers and packagers (8761)
baborers, except construction (8769)

| -1manare ciassified., |  |  |  |
| :---: | :---: | :---: | :---: |
| Code | induster | Code | incustin |
|  | acriculture, forejtry, wo fijmeries |  | WANUFAC TIRINC-COMINUEA Qurable goods-Consinued |
| 010 | Atricsitural production, croos (D9) |  |  |
| 011 | ${ }^{\text {a gricuitural production, liveseock : } 02 \text { ) }}$ | 280 | Other arimary metal industries i3331-333, 3339, part 334, 3351. |
| 020 | Agricultural ervices, except torticuitural (07, exceot 078) |  | $3356,3357,3362,3369.3301$ |
| 021 | mortcuitural menices :078) | 291 | Cuelery, nanctools, and aner mardsare (342) |
| 030 | Forestiry (08) | 282 | Fabriented structural metal products (344) |
| 031 | Fishing, tunting. and traporng (09) | 290 | Scren machine products ( 345 ) |
|  | MINING | 291 |  |
|  |  | 292 | Oronance (348) |
|  |  | 300 | Misceilaneous fabricated matal products (341, 343, 347, 349) |
| 041 | Coul mining (19, 12) | 301 | yachinerv, enemor elecrrical |
| 042 | Cruct sitroleum and natural ans extrection (13) | 310 | Engmes and turbines ; 351) |
| 050 | Nenmotallis minime and querring. except hal (14) | 311 | Farm machinery and equioment (352) |
| 000 | CONSTRUCTION (15, 16, 17) | 312 | Comstruction and maverial handing machines (353) |
|  |  | 321 | Meftice and accoching machines (357, excepr 3573) |
|  | mandeacturinc | 322 | Elactronic eompuing equipinemt (3573) |
|  | Nondurable reods | 331 | mastinary, encept electical, natc. (355, 356, 358, 359) |
|  | Food and kindred prodects | 332 | Not specified mechinery <br> Electitica! machinery, quiprment, and upolies |
| 100 | Meat products (201) | 340 | Housphold epliences (363) |
| 109 | Dairy products (202) | 341 | Radio, T.V., and communication muionmert (365, 366) |
| 102 110 | Camod and praserved fruits and veterables (203) | 342 | Efectrical mechinery. equiomert, and xoplies, neec. 361 , 362. |
| 110 111 | Crain mill products (204) Batery produes (205) | 350 | 364, 367, 369) |
| 112 | Sugar and exintactionery prodvers (206) |  | Transeortation eblioment |
| 120 | Sowerage industries (208) | 351 | Motor whicles and notor whicle sampment (371) |
| 121 | Miscellameves food preparations and kindred products (207, 209) | 352 | Aipcrate and gerss (372) |
| 122 | Not seciliad food industries | 360 | Shio and boet buidint and ropaiping (373) |
| 130 | Tobeceo manufactures (21) | 361 | Railford becomatives and equiornenk (374) |
|  | Taxtile mill produces | 362 | Guided missiles, sonce whicles, and parts (376) |
| 132 140 | Knitting mills (215) | 370 | Crcios and miscallancous rranspontion muiponert (375, 379) |
| 141 | Flowe coweringl, ameape hard surface (227) | 371 |  |
| 148150 | Yam, threed, and fatric milts (223, 121-224) | 372 | Oprical and halth services expoties (383, 384, 385) |
|  |  | 300 | motographie apopment and applies (386) |
|  | Apparel and ather finished teneile produets | 311 | Watehes, etbeks, and elockwork aperated civices (387) |
| 151 | Agearel and accesmorias, menpe knit (231-238) | 312 | Not mocitied profossional apuoment |
| 152 | miscollanacus habricated tentile products (239) | 390 |  |
|  | Paper and allied products | 391 | Miscailanous monufacturing induseries (39, exeape 394) |
| 160 | Aulo, paper, and pacerboard mills ( 261 -263, 266) | 392 | Nore specified mambacturine induseries |
| 161 | Miscetlaneous paper and pulp products (264) |  |  |
| 162 | Print ing. publishing, and allied induseries |  | TRANSDORTATION, COMMUNICATIONS, ND OTHER PURLIC UTILITIES |
| 179172 | vempaper oublishing and printing (27i) |  |  |
|  | prine ing. oublishing, and allied mdustries. encept nemospers $(272-279)$ | 400 | Trangeortation Railronds (40) |
|  | Chamicals and allied products | 401 | Bus survice and urben transit (41, exeere 412) |
| 100 | Plastics, whetreics, and resins (282) | 402 | Taricab service ( 412 ) |
| 111 | Orues (203) | 410 | Trucking service (421, 423) |
| 182 | Soces and cownutics (284) |  |  |
| 190 | Paines, varnishes, and rolated prochets (283) Agriculoural enmmicals (287) | 412 | W.5. Posial Service (43) (422) |
| 192 | incustrial and misceilanows dermicals (281, 286, 289) | 420 | Water etrmsoortat on (44) |
|  | Porroteum and coml products | 421 | Air transcortation (45) |
| 200 | Pexroloum retining (291) | 422 | Pipelines, axcepr natural gas (46) |
| 201 | Miscellmenous perrotern and coal oraducts (295, 299) Rubtipe and miscellanoces plastics prodvets | 432 | Services incidemal to efansportation (47) Communiearions |
| 210 | Tires and imer woes (301) | 440 | Rudio and reieviston broudeasting : 483) |
| 219 | Oiter nubber products, and piastics focemat and telting | 441 | Telephone (mire and radio) (481) |
|  | (302-304, 306) | 442 | Telagraph and miscefleneous commmication services (402, 489) |
| 212 | uiscellanmons olastics products (307) | 460 | Utidites and sunicary services <br> Electric light and prowir (491) |
| 220 | leather cannung and finisting (317) | 461 | Gas and stamm mooly yistems (492, 496) |
| 227 | foormear, exctex rubber and plastic (313, 314) | 462 | Electic and ens. and ather combinations (493) |
| 222 | Leather products, except hootwear (315-317, 319) | 470 | Water apoly irpigation (494, 497) Senitary ervices (495) |
|  | Ourable rocos | 472 | Norespecified cillites |
|  | Lumber and mad products, encopk furniture |  | Wholesale teade |
| 230 | Louging (241) |  | Ourable nooch |
| 131 | Sammills, planins mills, and millmork (242, 243) |  |  |
| 232 | mood buldings and moblie tomes (245) | 500 | Molor miniches and aruidmare (501) |
| 241 | Miscarlmans mood products (244, 249) | 507 | Furniture and home furnistinss (502) |
| 242 | Furniture end tiatures (25) <br> Stome, ciar, glass, and eanerete products | 502 510 | tumber and construation materials (303) sporting goods, tovs, and hober goods (504) |
| 150 | Clase and giass products (321-323) | 511 | mactis and minerals, excape preroieum (505) |
| 231 |  | 512 | Electrical poods (506) |
| 252 | Seructural cloy products (325) | 521 | Mardware, plumbing and hating woolies (507) |
| 261262 | Patery and related prockets (316) | 522 | Not mencified Nectrical and hardmare products |
|  | Miscenlimaons nammallic mineral and stone products (328, 329) | \$30 | Mechimery, criernext, and spoliss (506) |
| 270 | Meed indmetris <br>  | 531 332 |  |

Faper and stoep geoduces ; 511 )
Orues, enemicais, and aiied products (512, 516)
acos rel, labries, and nox ons (313)
Gpoctries and riated products (514)
farm products - raw materials (515)
Perroieum preduets :st?
Alcoholic beveraters (518)
farm noolies (5191)
miscelternous molesiele, mondurable peots (314, 5198, 5799 )
Net apecitime molesale trade
RETAIL RADE
Lumber and bilding macoriad rexailme (321, 323)
Mardware steres (525)
Ratail nurseries and gardan swores (326)
Yoale rovive aleps (527)
Owpartment stores (53i)
Variety stores (533)
Wiscellaneous general merchandise stores (539)
Crocery stores (541)
Dairy produess seores (545)
Retall bekerias ( 546 )
E500 stores, noe.c. (542, $543,544,549$ )
yocor whicte dealers (551, 552)
Auso and tome exply stores (553)
Casoline mince statoms (554)
Miscellansous vinicia calers ( $555,556,557,559$ )

Shoe scores (566)
furniture and home furnishings seres (571)
Household apilaneet, $\mathrm{T}, \mathrm{V}_{4}$ and rado sterts (372, 373 )
Eating and drinking places (58)
Orut stores (599)
biquap steres (592)
Sportint poods, bicyches, and tobty seorea (5941, 5945, 5946)
Geok and stationery stores (5942, 5943)
lemelry stores (5944)
Saming, medlevorth, and pice: pods stores (5949)
mail onder housas (3961)
Vendine machine aperators (3962)
Oirect milling astablishmares (5963)
Fund and ite dealers (598)
Retail florists (5992)
Miscallancous rexail stores (593, 5947 , 5948, 5993, 5994, 5999)
Nor soncitied meil rrad
Godern indusity
ENTERTAINMENT ANO RECREATION SERVCES

800
801
Theaters and motion pictures : 78, 92 :
Bowling allevs, billiara and 200 griors :793)
Aiscelianeous enteriammemt and recreation services (799, 794, 99
PROFESSIONAL AND RELATED SERVGES
Offices of ohvsicians (301, 303)
Offices of tentists (802)
Offices of chiropracsors ( 8041 )
Offices of apometrists (3042)
Offices of healih practifioners, necc. ( 0049 )
Hospitals (206)
Nursine and ersonal eare facilities (805)
Health ervices, me.c. (807, 808, 809)
Legal soruces (89)
Elementary and meondary exhools (821)

Business, trade, and wocational xhools (824)
Libraries (823)
Educational zervices, notc. (829)
106 training and vocational pehabilitation gervices (833)
Child dev are atrices (835)
Residertial infu facilities, mithour mursing (836:
Social sivices, nec. (832, 839)
muspus, art galleries, and zoos (54)
Religious orgmizatims (366)
membership orsanizatigns (861-865, 864)
Engmering, architectural. and wruming emices ; 891)

Noncommerical educational and scientific research (892)
Miscellamous protessional and ralated mivices (399)

## Puglic administration

Executive and begislative of fices : $911-913$ )
General povernment, nec. (979)
Justice, public onder, and safety (92)
Ablit finance, tazation, and moverary polley (93)
Administration of humen rasources prosrams (94)
Adrimistration of envifonmental grality and lousing propams (95)
Adininistration of economic prosram ( 96 )
National security and intermatimal affairs (97)
EXPERIENCED UNEMALOYED NOT CLASSIFIED BY INDUSTRY
Last jot Armed Farces?
Last worked 1974 or earliep ${ }^{2}$
${ }^{1}$ Code 999 represents grople tho tere viemoioved and whose ilst po mas as a mintier of it A rmed Forces.

2cade 992 represemt prapis tho wre unemployed mith previous work experience, ber who have not morted in the five reaps prececing the census. The consus asestomaires asked for information on the last intustry for gnopit tho morked since 1975.

Exhibit 4: Numerical List of Outlying Areas and Foreign Country Codes

| Code | Outlying Area/Foreign Country | Code | Foreign Country |
| :---: | :---: | :---: | :---: |
| 060 | American Samoa | 147 | Madagascar |
| 061 | Canton \& Endesbury Island | 148 | Malasi |
| 062 | Guam | 149 | Mauritius |
| 063 | Johnston Atoll | 150 | Mozambique |
| 064 | Midnay Islands | 151 | Reunion |
| 065 | Northern Marianas Islands | 152 | Ruanda |
| 066 | Trust Territory of the Pacific | 153 | Seychelles |
|  | Islands (n.e.c.) | 154 | Somalia |
| 067 | Kospae | 155 | Limbabue |
| 068 | Marshall Islands | 156 | Uganda |
| 069 | Palau | 157 | Tanzania |
| 070 | Ponape | 158 | Zambia |
| 071 | Truk | 160 | North Africa (n.e.c.) |
| 072 | Yap | 161 | Algeria |
| 073 | Miscellaneous Caribbean Islands | 162 | Egypt |
| 074 | Miscellaneous Pácific Islands | 163 | Libya |
| 075 | Virgin Islands | 164 | Morocco |
| 076 | St. Croix | 165 | Sudan |
| 077 | St. John | 166 | Tunisia |
| 078 | St. Thomas | 167 | Western Sahara |
| 079 | Wake Island | 170 | Central Africa (n.e.c.) |
| 080 | United States Outlying Areas (n.e.c.) | 171 | Angola |
| 081 | Puerto Rico | 172 | Cameroon |
| 110 | Africa (n.e.c.) | 173 | Central African Repulic |
| 120 | Western Africa (n.e.c.) | 174 | Chad |
| 121 | Benin | 175 | Congo |
| 122 | Cape Verde | 176 | Equatorial Cuinea |
| 123 | Cambia | 177 | Cabon |
| 124 | Chana | 178 | Sao Tome \& Principe |
| 125 | Guinea | 179 | Zaire |
| 126 | Guinea-Bissau | 180 | Southern Africa (n.e.c.) |
| 127 | Ivory Coast | 181 | Botsmana |
| 128 | Liberia | 182 | Lesotho |
| 129 | Mali | 183 | Namibia |
| 130 | Mauritania | 184 | South Africa |
| 131 | Niger | 185 | Suaziland |
| 132 | Nigeria | 200 | Antarctica (n.e.c.) |
| 133 | St. Helena | 201 | Bounet Islands |
| 134 | Senegal | 202 | British Antarctic Tepritory |
| 135 | Sierra Leone | 203 | Dronning Maud Land |
| 136 | Togo | 204 | French Southern Territory |
| 137 | Upper Volta | 205 | Heard \& McDonald Isiands |
| 140 | Eastern Africa (n.e.c.) | 300 | North America (n.e.c.) |
| 141 | British Indian Ocean Territory | 301 | Bermuda |
| 142. | Burundi | 302 | Canada |
| 143 | Comoros | 303 | Greenland |
| 144 | Djibouti | 304 | St. Pierre \& Miquelon |
| 145 | Ethiopia | 4001 | Latin America (n.e.c.) |
| 146 | Kenya | 410 | South America (n.e.c.) |
|  |  | 411 | Argentina |
|  |  | 412 | Bolivia |

IIf "South America' and 'Central America' are only shonn separately, then this code is tabulated with "South America".

Exhibit 4: Numerical List of Outlying Areas and Foreign Country Codes (continued)

| Code | Foreign Country | Code | Foreign Country |
| :---: | :---: | :---: | :---: |
| 413 | Brazil | 470 | French Caribbean (n.e.c.) |
| 414 | Chile | 471 | French St. Maarten |
| 495 | Colombia | 472 | Guadeloupe |
| 416 | Ecuador | 473 | Haiti |
| 417 | Falkland Islands | 474 | Mart inique |
| 418 | French Guiana | 475 | St. Barthelerry |
| 419 | Guyana | 476 | Cuba |
| 420 | Paraguay | 477 | Dominican Republic |
| 421 | Peru | 500 | East Asia (n.e.c.) |
| 422 | Surinam | 501 | China |
| 423 | Uruguay | 502 | Hong Kong |
| 424 | Venequela | 503 | Japan |
| 425 | Central America (n.e.c.) | 504 | Korea (n.e.c.) |
| 431 | Belize | 505 | North Korea |
| 432 | Costa Rica | 506 | South Korea |
| 433 | El Salvador | 507 | Macau |
| 434 | Guatemala | 508 | Mongolia |
| 435 | Honduras | 509 | Taiwan |
| 436 | Mexico | 600 | South Asia (n.e.c.) |
| 437 | Nicaragua | 610 | Southwest Asia (n.e.c.) |
| 438 | Panama | 611 | Afghanistan |
| 440 | Caribbean (n.e.c.) | 612 | Bangladesh |
| 441 | British West Indies (n.e.c.) | 613 | Bhutan |
| 442 | Anguilla | 614 | India |
| 443 | Ant igua - Barbuda | 615 | Iran |
| 444 | Bahamas | 616 | Maldives |
| 445 | Barbados | 617 | Nepal |
| 446 | British Virgin Islands (n.e.c.) | 618 | Pakistan |
| 447 | Anegada | 619 | Sri Lanka |
| 448 | Cooper | 620 | Southeast Asia (n.e.c.) |
| 449 | Jost Van Dyke | 621 | Brunei |
| 450 | Peter | 622 | Burma |
| 451 | Tortola | 623 | East Timor |
| 452 | Virgin Corda | 624 | Indonesia |
| 453 | Cayman Islands | 625 | Kampuchea |
| 454 | Dominica | 626 | Laos |
| 455 | Grenada | 627 | Malaysia |
| 456 | lamaica | 628 | Philippines |
| 457 | Mont seprat | 629 | Singapore |
| 458 | St. Kitts-Nevis | 630 | Thailand |
| 459 | St. Lucia | 631 | Vietnam |
| 460 | St. Vincent | 640 | Middle East (n.e.c.) |
| 461 | Trinidad \& Tobago | 641 | Bahrain |
| 462 | Tupks \& Caicos Islands | 642 | Cyprus |
| 463 | Dutch Caribbean (n.e.c.) | 643 644 | Caza Strip Irag |
| 465 | Bonaire | 645 | lspael |
| 466 | Curacao | 646 | jordan |
| 467 | Dutch St. Maarten | 647 | Kumait |
| 468 | Saba | 648 | Lebanon |
| 469 | St. Eustatins | 649 | Neutpal Zone |


| Code | Foreign Country | Code | Fopeign Country |
| :---: | :---: | :---: | :---: |
| 650 | Oman | 766 | Nornay |
| 651 | Qatar | 767 | Sueden |
| 652 | Saudi Arabia | 768 | Svalbard \& Jan Heyan Islands |
| 653 | Syria | 769 | United Kingdom (n.e.c.) |
| 654 | Turkey | 770 | Channel Islands |
| 655 | United Arab Emirates | 771 | England |
| 656 | Yemen | 772 | Isle of Man |
| 657 | Yemen, Democratic | 773 | Northern Ireland |
| 690 | Asia (n.e.c.) | 774 | Scotland |
| 700 | Europe -(n.e.c.) | 775 | Wales |
| 710 | Western Europe (n.e.c.) | 800 | Oceania (n.e.c.) |
| 711 | Austria | 810 | Australia |
| 712 | Belgium | 820 | Nen Zealand |
| 713 | France | 830 | Melanesia (n.e.c.) |
| 714 | Liechtenstein | 831 832 | Nen Caledonia |
| 715 | Luxembourg | 832 | Nen Hebrides |
| 716 | Monaco | 833 | Norfolk Islands |
| 717 | Netherlands | 834 | Papua Nex Cuinea |
| 718 | Suitzepland | 835 | Solomon Islands |
| 7192 | West Cermany | 840 | Polynesia (n.e.c.) |
| 720 | Southern Europe (n.e.c.) | 841 | Cook islands |
| 721 | Albania | 842 | fiji |
| 722 | Andorra | 843 | French Polynesia |
| 723 | Cibralter | 844 | Tonga |
| 724 | Greece | 845 | Wallis \& Futuna Islands |
| 725 | Italy | 846 | Western Samoa |
| 726 | Malta | 850 | Micronesia (n.e.c.) |
| 727 | Portugal | 851 | Christmas Island |
| 728 | Azores Islands | 852 | Cocos Islands |
| 729 | Madeira Islands | 853 | Kiribati |
| 730 | San Marino | 854 | Nauru |
| 731 | Soain | 855 | Niue |
| 732 | Vatican City | 856 | Pitcaipn Island |
| 733 | Yugoslavia | 857 | Tokelau |
| 740 | Eastern Europe (n.e.c.) | 858 | Tuvalu |
| 741 | Baltic States (n.e.c.) | 900 | Union of Soviet Socialist |
| 742 | Estonia |  | Republics (n.e.c.) |
| 743 | Latvia | 901 | Armenia |
| 744 | Lithuania | 902 | Azerbaijan |
| 745 | Bulgarla | 903 | Byelorussia |
| 746 | Czechoslovakia | 904 | Ceorgia (USSR) |
| $747^{2}$ | East Cepmany | 905 | Kazakhstan |
| 748 | Hungary | 906 | Kirghizia |
| 749 | Poland | 907 | Moldavia |
| 750 | Romania | 908 | Russian SFSR |
| 760 | Northern Europe (n.e.c.) | 909 | Tadzhik |
| 761 | Denmark | 910 | Turkmenistan |
| 762 | Faeroe Islands | 911 | Ukrainia |
| 763 | Finland | 912 | Uzbekistan |
| 764 | iceland | 9963 | Born Abroad, Country Not |
| 765 | Ireland | 9973 | Specified Born At Sea |



[^49]1573 MVAC8O 85N

| 1574 BOAR8O 85N |  |
| :--- | :--- | :--- |
| 1575 |  |
|  |  |

1576 NUN280 85N
1577 NUN8O 85N
1578 ACC80 85N
1579 TYPE8O 85N

Note: "Month" refers to any from the 16 th of one month to the 16 th of the next month, not the ist to the $31 s t$ of a month.

Unit Boarded Up In 1980
O. Occupied, Group Quarters Or Vacant Yes
2 No
9 New Untt Or Not Found In 1980 Census
Usual Residence Elsewhere (URE) In 1980
O No Or Group Quarters
9 Yes
9 New Unit Or Not Found In 1980 Census
Note: URE units are treated in the same manner as vacant Units in skip patterns.

Structural Type Classification In 1980
00 Group Quarters
1-9 1-9 Units In Building
1010 Or More Untts In Building
11 Mobile Home
No. Of Living Qrtrs In Strueture Incl. Vacant Qrtrs In 1980

Access To Unit In 1980
3
O Occupied, Group Quarters Or Vacant
Less Than 1 Month
1 Month Up To 2 Months
2 Months Up To 6 Months
6 Months Up To 12 Months
$t$ Year To 2 Years
2 Or More Years
New Unit Or Not
fers to any 4 we
Months This House Or Apartment Has Been Vacant In 1980
0 Occupied, Group Quarters Or Vacant
1 Less Than 1 Month
2
O. Occupied, Group Quarters Or Vacant
1 Yes
2 No
9 New Unit Or Not Found In 1980 Census
Usual Residence Elsewhere (URE) In 1980
0 No Or Group Quarters
1 Yes Unit Or Not found In 1980 Census
00
$1-9$
10
10
10 Oroup Quits More Unters
11
0 Group Quarters
1 Mobile Home--No Permanent Room

1. Detached or Mooile Home With Room Added
1. Attached
2
3 Or 4
5 TO 9
10 TO 19
20 TO 49
50 Or More
10 Boat, Tent, Van, Etc.
99 New Unit Or Not Found In 1980 Census
O Group Quarters
1 Direct
2 Through Anotier Unit
9 New Untt Or Not Found In 1980 Census
Type Of Group Quarters In 1980

0 Housing Unit
1 Home for The Aged
2 Rooming House
3 Other Group Quarters Or Non-Inmate Institutions
9 New Unit Or Not Found In 1980 Census
Note: The AHS does not collect information on housing characteristics of group quarters. The 1980 census does. (See discussion in Introduction to The Tenure, Butlding and Parking Section). Data items for group quarters are available on the 1985 National File for units which were in Group Quarters in 1980 and became housing units in 1985.

Passenger Elevator In Building In 1980


[^50]

Number Of Subfamilies In Household In 1980
O None, Vacant Unit Or Group Quarters
1-4 $1-4$ Subfamilies
9 New Unit Or Not Found In 1980 Census

| 1611 | $S 280$ |
| :--- | :--- |
| 1612 | $S 380$ |
| 1613 | $S 480$ |
| 1614 | 5580 |
| 1615 | $S 680$ |
| 1616 | 5780 |
| 1617 | 5880 |
| 1818 | $S 980$ |
| 1619 | $S 1080$ |
| 1620 | $S 1180$ |
| 1621 | $S 1280$ |
| 1622 | 51380 |
| 1623 | $S 1480$ |
| 1624 | $S 1580$ |

85N
1612 S380
1613 S480
$1614 \quad 5580$
1615
46175880
1818 S980
1619 S1080
1620
4622
1623
1624 S 1580
S1180
51280 51480

|  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Person 3 |  |  | 19 |
| amily | Number 10 |  | Person 4 |  |  | 1980 |
| bumaly | To |  | Person 5 |  | In | 19 |
| min | Number To |  | Person 6 |  | In | 19 |
| am | Number To |  |  | Belo |  | 19 |
| bbfamily | To |  |  | Bel |  | 1980 |
| ubfamily | To |  |  | Belon |  | 1980 |
| ubfamily | Number To |  |  | Belongs |  | n 198 |
| ubfamily | T0 |  | 11 |  |  | n 1980 |
| Subfamil | To | Whi | 12 |  |  |  |
|  | To |  | 13 |  |  |  |
|  | To |  | 14 |  |  |  |
|  |  |  |  |  |  |  |

Subfamily Numer To Which Person 2 Belongs in 1980 Subfamily Number To Which Person 4 Belongs in 1980 Subfamily Number To Which Person 5 Belongs In 1980 tamily Nunber To Which Person belongs Subfamily Number To Which Person 8 Belongs In 1980 Subfamily Number To Which Person 9 Belongs in 1980
 Subfamily Number To Which Person 11 Belongs In 1980 Subfamily Number To Which Person 12 Belongs In 1980 Subfamily Number To Which Person 14 Belongs In 1980

1-4 Subfamily Number
9 Vacant Unit, New Unit Or Not Found In 1980
Census

| 1625 | $S R 280$ |
| :--- | :--- |
| 1626 | $S R 380$ |
| 1627 | $S R 480$ |
| 1628 | $S R 580$ |
| 1629 | $S R 680$ |
| 1630 | $S R 780$ |
| 1631 | $S R 880$ |
| 1632 | SR980 |
| 1633 | $S R 1080$ |
| 1634 | $S R 1180$ |
| 1635 | $S R 1280$ |
| 1636 | $S R 1380$ |
| 1637 | $S R 1480$ |
| 1638 | $S R 1580$ |

85N
Relationship Of Person 2 To Subfamily Head In 1980
Relationship Of Person 3 To Subfamily Head In 1980
Relationship Of Person 4 To Subfamily Head In 1980
Relationship Of Person 5 To Subfamily Head In 1980
Relationship of Person 6 To Subfamily Head In 1980
Relationship Of Person 7 To Subfamily Head In 1980
Relationship of Person 8 To Subfamily Head In 1980
Relationship Of Person 9 To Subfamily Head In 1980
Relationship Of Person 10 To Subfamily Head In 1980
Relationship of Person 11 To Subfamily Head In 1980
Relationship Of Person 12 To Subfamily Head In 1980
Relationship Of Person 13 To Subfamily Head In 1980
Relationship Of Person 14 To Subfamily Head In 1980
Relationship of Person 15 To Subfamily Head In 1980
Group Quarters Or Not In Subfamily
Spouse, If Head And Spouse Are Present
Parent, If One Parent Only Is Present
Child
9 Vacant Unit. New Unit Or Not Found In 1980 Census


Age Of Person 2 In 1980
Age Of Person 4 In 1880

Age 0
Age Of Person 7 In 1980
Age Of Person 8 In 1980
Age of Person 9 In 1980
Age Of Pers
Age Of Person 12 In 1980
Age Of Person 13 in 1980
Age Of Person 14 In 1980

$$
\begin{array}{ll}
0 & \text { Less Than } 1 \text { Year } \\
1-89 & 1-89 \text { Years } \\
90 & 90 \text { Years Or More } \\
99 \text { Not Present, Vacant Unit. New Unit Or Not Found } \\
\text { In } 1980 \text { Census }
\end{array}
$$

[^51]| REF\% | NAME |
| :---: | :---: |
| 1654 | SEX80 |
| 1655 | 5×280 |
| 1656 | 5×380 |
| 1657 | 5×480 |
| 1858 | 5×580 |
| 1659 | SX680 |
| 1660 | 5×780 |
| 1661 | SX880 |
| 1662 | 5×980 |
| 1663 | 5×1080 |
| 1664 | SX1180 |
| 1865 | SX1280 |
| 1666 | SX1380 |
| 1667 | 5×1480 |
| 1888 | 5×1580 |

SURVEYS DESCRIPTION
PAGE ON QUESTIONNAIRE

| 1669 | MAR8O |
| :--- | :--- |
| 1670 | MR280 |
| 1671 | MR380 |
| 1672 | MR480 |
| 1673 | MR580 |
| 1674 | MR880 |
| 1675 | MR780 |
| 1676 | MR880 |
| 1677 | MR980 |
| 1678 | MR1080 |
| 1679 | MR1180 |
| 1680 | MR1280 |
| 1681 | MR1380 |
| 1682 | MR1480 |
| 1683 | MR1580 |

1684 RACE8O 85N
$85 N$
Sex Of Ref Person In 1980
Sex Of Person 2 In 1980
Sex Of Person 3 In 1980
Sex Of Person 4 In 1980
Sex Of Person 5 In 1980
Sex Of Person 6 In 1980
Sex Of Person 7 In 1980
Sex Of Person 8 In 1980
Sex Of Person 9 In 1980
Sex Of Person 10 In 1980
Sex Of Person 11 In 1980
Sex Of Person 12 In 1980
Sex of Person 13 In 1980
Sex Of Person 14 in 1980
Sex Of Person 15 In 1980

- Male

Female
9 Not Present, Vacant Unit. New Unit Or Not Found In 1980 Census

| Marital | Status of | Ref Person In 1980 |
| :---: | :---: | :---: |
| Marital | Status Of | Person 2 In 1980 |
| Marital | Status Of | Person 3 In 1980 |
| Marital | Status Of | Person 4 In 1980 |
| Marital | Status Of | Person 5 In 1980 |
| Marital | Status of | Person 6 In 1980 |
| Marital | Status of | Person 7 In 1980 |
| Marital | Status Of | Person 8 In 1980 |
| Marital | Status Of | Person 9 In 1980 |
| Marital | Status Of | Person 10 In 1980 |
| Marital | Status Of | Person 11 In 1980 |
| Marital | Status of | Person 12 In 1980 |
| Marital | Status Of | Person 13 In 1980 |
| Marital | Status Of | Person 14 In 1980 |
| Marital | Status of | Person 15 In 1980 |
|  | $\begin{aligned} & 0 \\ & 1 \end{aligned}$ | Married Widowed |
| - | 2 | Divorced |
|  | 3 | Separated |
|  | 4 | Never Married Or Age 0-15 |
|  | 9 | Not Present, Vacant Unit, |
|  |  | Or Not Found In 1980 Cen |

Race Of Ref Person In 1980

Note: The variate RACE8O is coded 12 (Spanish) if the respondent indicated "Spanish" in the space provided to record race. In a separate question, the respondent is asked to indicate Spanish origin (See SPAN80 below). This variable is more reliable to identify reference persons of spanish origin. On the few short forms, household code 11 only covers Guam and Samoa, code 12 is not present, and the respective households are coded 13 .

Spanish Origin of Ref Person In 1980
Mexican
Puerto Rican
Cuban
Other Spanish
Vacant unit, New Unit Or Not Found In 1980
Census
1686 NAME8O $85 N$

| 1691 | ENG80 |
| :--- | :--- | :--- |
| 1692 | ENG280 |



[^52]REFH NAME
1697 SCH8O

SURVEYS DESCRIPTION

## 85N

1698 PER8O 85N

1699 ZCOM8O 85N

1700 ZKID80 85N
1701 KIDS80 85N

ZINC8O
85N ZIN280

1704
1705
1706
1707
1708 1709

SAL8 SAL280 VSS80 VSS280 VWEL80 VWE280

Hhld Members Under 18 Enrolled In Schoois In 1980
O No children 5-16 enrolled in school
1 All Children in Public Schools except - 5-6 Year Olds Not Yet Enrolled

2 All Chilaren in Parochial Schools except 5-6 Year olds Not Yet Enrolled
3 All Children in Other Private Schools except 5-6 Year olds Not Yet Enrolled
4 All Children in Parochial or Other Private Schools except 5-6 Ly ear Olds Not Yet Enroiled
5 All Children in Putitc or Parochial Schools except $5-6$ Year $01 d s$ Not Yet Enrolled
6 All Cntldren in Public or Other Private Schools except 5-6 Year Olds Not Yet Enrolled
7 All Children in All Three Types of Schools except 5-6 Year $01 d$ Not Yet Enroiled
8 Some Children 7-16 Not Enrolled in School
9 No Hhld Members 5-16, Vacant Unit, New Unit Or Not Found In 1980 Census

Number Of Persons In Household In 1980

Recoded Household Type In 1980
O Vacant Unit Or Group Quarters
1 Reference Person And Spouse Present
2 Male Reference Person, No Spouse Present, Other Relative Present
3 Female Reference Person, No Spouse Present, Other Relative Present
4 No One Related To Reference Person
5 New Unit Or Not found In 1980 Census
Children Of Ref Person In Household In 1980
O Vacant Unit, Group Quarters Or No One Related To Reference Person
1 Children Under 6 Years Only
2 Children 6 To 17 Years Only
3 Both
4 No Chilaren
9 New Unit Or Not Found In 1980 Census
No. Of Children Conceived By Ref Person Or Spouse In 1980
O Male Reference Person And No Wife Present, Or Reference Person/Wife Under 15 Years
None
2-12 1-11 Cnildren
1312 Or More Children
99 Vacant Unit, New Unit Or Not Found In 1980 Census

Income Of Ref Person And Related Hhld Mbrs (1979)
Income Of All Hild Members Incl. Non-Relatives (1979)
$\begin{aligned}-9995 & \text { Loss Of } \$ 9990 \text { Or More } \\ -9985-74995 & \text { Income Or Loss In Dollars }\end{aligned}$ 75000 \$75,000 Or More
99999 New Unit Or Not Found In 1980 Census
Note: Income amounts are recoded using midpoint of $\$ 10$ interval.
Annual Salary, Wages, Tips, Commissions(1979)-Ref Person
Annuai Salary, Wages, Tips, Commissions(1979)-Spouse/2nd Adult
Social Security Or Railroad Retirement(1979)-Ref Person
Social Security Or Railroad Retirement(1979)-Spouse/2nd Adul
Welfare Or Public Assistance(Incl. SSI)-Ref Person
Welfare Or Public Assistance(Incl. SSI)-Spouse Or 2nd Adult

[^53]|  |  |  |
| :--- | :--- | :--- |
| 1710 | PBUS80 | 85 N |
| 1711 | PBU280 |  |
| 1712 | PFAR80 |  |
| 1713 | PFA280 |  |
| 1714 | VOIV80 |  |
| 1715 | VDI280 |  |
| 1716 | VOTH80 |  |
| 1717 | VOT280 |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
| 1718 | HFUE8O |  |
| 1719 | WFUE80 |  |
| 1720 | CFUE80 |  |

Earnings From Business Or Prof Prac(1979)-Ref. Person
Earnings From Business Or Prof Prac(1979)-Spouse/2nd Adult
Earnings From Farm(1979)--Ref. Person
Earnings From Farm(1979)--Spouse Or 2nd Adult
Int, Div, Royalties Or Net Rental Income(1979)--Ref. Pers
Int, Div, Royalties, Net Rental Income(1979)--Spouse/2nd Adul
Income From All Other Sources--Ref. Person
Income From All Other Sources--Spouse Or 2nd Adult
O None Or Under 16 Years Old
-9995 Loss Of $\$ 9990$ Or More
$-9985-74995$
75000
Income In Dollars
$\$ 75,000$ Or. More

Note: Income From All Other Sources includes Unemployment
Compensation, Veterans' payments, pensions or other than Social Security and Railroad Retirement, alimony or child support or any other income received regularly. It does not include Lump Sum Payments. (See Introduction to the Income Section for a discussion of Income Sources.)

Fuel Used Most For Heating In 1980
Fuel Used Most For Water Heating In 1980
Fuel Used Most For Cooking In 1980
0 Vacant Unit Or Group Quarters
Gas From Underground Pipes
Gas LP, Bottled Or Tank Electricity Fuel Oil. Kerosene Or Other Liquid Fuel Coal Or Coke wood
Other Fuel
No Fuel Used
New Unit, Or Not Found In 1980 Census
Average Monthly Cost Of Electricity In 1980
O Vacant Unit, Group Quarters Or No Payment 1-199 \$1-\$199

200 \$200 Or More

- 201 Included in Rent

202 Not Used or No Charge
999 New Unit Or Not Found In 1980 Census
Average Monthly Cost Of Gas In 1980
O Vacant Unit, Group Quarters Or No Payment
1-149 \$1-\$149
150 \$150.Or More
156 Included in Rent
157 Not Used or No Charge
999 New Unit Or Not Found In 1980 Census
Yearly Cost Of Oil, Coal, Kerosene, Wood, Etc. In 1980
O Vacant Unit, Group Quarters Or No Payment
1-1999 \$1-\$1999
2000 \$2000 Or More
2001 Included in Rent
2002 Not Used or No Charge
9999 New Unit Or Not Found In 1980 Census
Yearly Cost of Water And Sewage in 1980

- Vacant Unit

1-499 \$1-\$499
500 \$500 Or More
600 Not Included or No Charge
999 New Unit Or Not Found In 1980 Census
Monthly Ownership Costs In 1980
(See Table In Introduction To This Section)
1-1999 \$1-\$1999
2000 \$2000 Or More
9999 New Unit Or Not Found In 1980 Census





1776 WDIS80 85 N Work And Public Transportation Disability In 1980

Not Apolicable
Someone in Hhld has Transportation and work Disabilities, and is prevented from working
2 Someone in Hhld has Transportation and work Disabilities, but is not prevented from working
3 Someone in Hhld has Transportation Disability, but no Work Disability
4 No One in Hhld has Transportation Disability, but someone has a Work Disability and is prevented from working
5 No One in Hhld has Transportation Disability, but someone has a Work Disability thougn they are prevented from working
6 No One in Hhld has a Transportation or Work Disability

| 1777 | VET80 | 85N |
| :--- | :--- | :--- |
| 1778 | VET28O |  |

Most Recent Veteran Status Of Ref Person In 1980
Most Recent Veteran Status Of Spouse Or 2nd Adult In 1980
1778 VET280
0 Not a Veteran Or Under 16 Years Old Served In May 1975 Or Later Vietnam War (8/64-4/75)
Served Between $2 / 55$ And $7 / 64$
Korean Conflict (6/50-1/55)
World War II (9/40-7/47)
World War I (4/17-11/18)
7 Served At Any Other Time
Vacant Unit, New Unit Or Not Found In 1980 Census, Or 2nd Adult Not Present

```
Notes: G = Variable is computer generated, and is not present on the questionnaire.
    ++ = Variable is present on a supplemental page to the questionnaire.
    CC = Variable is present on the control card for the unit.
```

| 75 N | Number of Workers in Household |
| :--- | ---: |
| $80 \mathrm{~N}-81 \mathrm{~N}$ | 00 Zero Workers |
| 85 N | $1-15$ To 15 Workers |
| $75 \mathrm{~S}-77 \mathrm{~S}$ | 99 Dropped From Sampie Or Not Yet |
| 82 S | In Sample |

$\frac{81 N}{G} \frac{825}{G} \quad \frac{85 N}{G}$

$$
\frac{79 N}{38} \quad \frac{815}{37}
$$

74N-79N Reference Person/Head Employed Last Week

75S-81S
1 Yes
2 No
8 Not Answered
9
9

82S
Line Number of First Adult 16+

Line Number Of Adult 12 16+
For All Variables, Standard Codes Are:
1-97 Household Member's Line Number 99 Not Present, Vacant, URE, Or Non-Interview

| 1793 | IFU1 |
| :--- | :--- |
| 1794 | IFU2 |
| 1795 | IFU3 |
| 1796 | IFJ4 |
| 1797 | IFU5 |
| 1798 | IFU6 |
| 1799 | IFU7 |
| 1800 | IFU8 |
| 1801 | IFU9 |
| 1802 | IFU10 |
| 1803 | IFU11 |
| 1804 | IFU12 |


|  |  |
| :--- | ---: |
| Adult 1 Employed Last Week | 825 |
| Adult 2 Employed Last Week | 39 |
| Adult 3 Employed Last Week | 39 |
| Adult 4 Employed Last Week | 39 |
| Adult 5 Employed Last Week | 39 |
| Adult 6 Employed Last Week | 39 |
| Adult 7 Employed Last Week | 39 |
| Adult 8 Employed Last Week | 39 |
| Adult 9 Employed Last Week | 39 |
| Adult 10 Employed Last Week | 39 |
| Adult 11 Employed Last Week | 39 |
| Adult 12 Employed Last Week | 39 |
| For All |  |

For All Variables, Standard Codes Are:

| 1 | Yes |
| :--- | :--- |
| 2 | No |
| 8 | Not Answered |
| 9 | Not Present, URE, Vacant, or |
| Non-Interview |  |


| 1805 | WLINE1 | $75 N$ |
| :--- | :--- | :--- |
| 1806 | WLINE2 | $80 N-81 N$ |
| 1807 | WLINE3 | $85 N$ |
| 1808 | WLINE4 | $755-77 S$ |
| 1809 | WLINES | 825 |
| 1810 | WLINES | $845-85 S$ |
| 1811 | WLINE7 |  |
| 1812 | WLINE8 |  |

Line Number of Journey To Work-Worker 1
Line Number Of Journey To Work-Worker 2
Line Number Of Journey To Work-Worker 3
Line Number Of Journey To Work-Worker 4
Line Number Of Journey To Work-Worker 5
Line Number Of Journey To Work-Worker 6
Line Number Of Journey To Work-Worker 7
Line Number Of Journay To Work-Worker 8
For all Variables, Standara Codes are:
00 Zero workers
1-97 Household Member's Line Number 99 Not Applicable

| 81 N | $\frac{82 \mathrm{~S}}{40}$ | $\frac{845}{28}$ | $\frac{85 \mathrm{~N}}{28}$ |
| ---: | ---: | ---: | ---: |
| 42 | 42 | 29 | 29 |
| 44 | 44 | 29 | 29 |
| ++ | ++ | 29 | 29 |
| ++ | ++ | ++ | ++ |
| ++ | ++ | ++ | ++ |
| ++ | ++ | ++ | ++ |
| ++ | ++ | ++ | ++ |



[^54]|  |  |  |
| :--- | :--- | :--- |
| 1831 | VEHCL 1 | $75 N$ |
| 1832 | VEHCL2 | $80 N-81 N$ |
| 1833 | VEHCL3 | $85 N$ |
| 1834 | VEHCL4 | $75 S-77 S$ |
| 1835 | VEHCL5 | $82 S$ |
| 1836 | VEHCLG | $845-855$ |
| 1837 | VEHCL7 |  |
| 1838 | VEHCL8 |  |

Car Or Truck Oriven To Work-Worker 1
Car Or Truck Driven To Work-Worker 2
Car Or Truek Driven To Work-Worker 3
Car Or Truck Driven To Work-Worker 4
Car Or Truck Driven To Work-Worker 5
Car Or Truck Driven To Work-Worker 6
Car Or Truck Driven To Work-Worker 7
Car Or Truck Driven To Work-Worker 8

| $\frac{81 N}{40}$ | $\frac{825}{40}$ | $\frac{845}{28}$ | $\frac{85 N}{28}$ |
| ---: | ---: | ---: | ---: |
| 42 | 42 | 29 | 29 |
| 44 | 44 | 29 | 29 |
| ++ | ++ | 29 | 29 |
| ++ | ++ | ++ | ++ |
| ++ | ++ | ++ | ++ |
| ++ | ++ | ++ | ++ |
| ++ | ++ | ++ | ++ |

For 411 Variables; Standard Codes $4 r e: ~$
75 N 8 $\mathrm{N}-81 \mathrm{~N} 85 \mathrm{~N}$
$755 \quad 765-77 \mathrm{~S} 845-855$

|  |
| :---: |
| 0 |
|  |
| 1 |

Uses Other Means Of Trans
Drives Alone
Shares Driving With Others
Car
Truck
Van
Car or Carpool
Uses Other Means Of Transportation
Or Not Apolicable
Not Applicaole

Note: In 75 N and 75S-77S, missing data were imputed. but the allocation vartabies were not released.

1839 CARTOU | $74 N-75 N$ |
| :--- |
| $75 S-77 S$ |

Car Used In Mainly Non-car Trip To Work. Ref Person $\frac{75 \mathrm{~N}}{13} \frac{775}{39}$

| 1 | Yes |
| :--- | :--- |
| 2 | No |
| 8 | Not Answered |
| 9 | Not Applicabl |


| 1840 | CARTO1 | $75 N$ |
| :--- | :--- | :--- |
| 1841 | CARTO2 | $80 N-81 N$ |
| 1842 | CARTO3 | $755-77 S$ |
| 1843 | CARTO4 | 825 |
| 1844 | CARTO5 |  |
| 1845 | CARTO6 |  |
| 1846 | CARTO7 |  |
| 1847 | CARTO8 |  |


Car Used During Journey To Work-Worker 8

For All Variables, Standard Codes Are:
1 Yes
2 No
9 Not Applicable
Note: Excludes taxicabs in all years. In 80N-81N. the question asks specifically "Car Used In Addition To Public Transportation".
Note also that in 75N and 755-775, missing data
may have been imputed but, if so, the allocation
variable was not released.

| 1848 | ALONE 1 | $80 N-81 N$ |
| :--- | :--- | :--- |
| 1849 | ALONE2 | 825 |
| 1850 | ALONE3 |  |
| 1851 | ALONE |  |
| 1852 | ALONES |  |
| 1853 | ALONE6 |  |
| 1854 | ALONE7 |  |
| 1855 | ALONEB |  |


|  |  |  |  |  |  | 81 N | 825 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Main | Reason | For | Driving | Alone-worker | 1 | 40 | 40 |
| Main | Reason | For | Driving | Alone-worker | 2 | 42 | 42 |
| Main | Reason | For | Driving | Alone-worker | 3 | 44 | 44 |
| Main | Reason | For | Driving | Alone-worker | 4 | ++ | ++ |
| Main | Reason | For | Driving | Alone-worker | 5 | ++ | ++ |
| Main | Reason | For | Driving | Alone-Worker | 6 | ++ | ++ |
| Main | Reason | For | Driving | Alone-Worker | 7 | ++ | ++ |
| Main | Reason | For | Driving | Alone-Worker | 8 | ++ | ++ |


| 1856 | PASS 1 | $75 N$ |
| :--- | :--- | :--- |
| 1857 | PASS2 | $80 N-81 N$ |
| 1858 | PASS3 | $85 N$ |
| 1859 | PASS4 | $755-77 S$ |
| 1860 | PASS5 | $82 S$ |
| 1851 | PASS6 | $845-85 S$ |
| 1862 | PASS7 |  |
| 1863 | PASS8 |  |

No. Of People Usually Riding In Carpool-Worker 1
No. Of People Usually Riding In Carpool-Worker 2
No. Of People Usually Riding In Carpool-Worker 3
No. Of People Usually Riding In Carpool-Worker 4
No. Of People Usually Riding In Carpool-Worker 5
No. Of People Usually Riding In Carpool-Worker 6
No. Of People Usually Riding In Carpool-Worker 7
No. Of People Usually Riding In Carpool-Worker 8
For All Variabies, Standard Codes Are:
75N 80N-81N 85N
$\frac{75 S-775}{02-09} \begin{aligned} & 10\end{aligned} \frac{825}{02-97} \frac{845-855}{02-44}$
Number of Persons in Carpool
10 or More Persons in Carpool 15 or More Persons in Carpool
99
Note: 99
Includes Worker. Also, in 75 N and $75 \mathrm{~S}-775$
missing data may have been imputed, but, if so.
the allocation variable was not released
Note: Starting in 1985S, top codes will be the 97th percentile of each metropolitan area. Beginning in 1987 N , the top code is the 97 th percentile for the entire national sample.

| 1864 | PASSH 1 |
| :--- | :--- |
| 1865 | PASSH2 |
| 1866 | PASSH3 |
| 1867 | PASSH4 |
| 1868 | PASSH5 |
| 1869 | PASSH6 |
| 1870 | PASSH7 |
| 1871 | PASSH8 |


|  |  | $\frac{81 N}{825}$ | $\frac{825}{40}$ |
| :--- | :--- | :--- | :--- | :--- |
| Number of Household Members In Carpool-worker | 1 | 42 | 42 |
| Number of Household Members In Carpool-Worker 2 | 44 | 44 |  |
| Number of Household Members In Carpool-Worker | 3 | ++ | ++ |
| Number of Household Members In Carpool-Worker | 4 | ++ | ++ |
| Number of Household Members In Carpool-Worker | 5 | ++ | ++ |
| Number of Household Members In Carpool-Worker | 6 | ++ |  |
| Number of Household Members In Carpool-worker 7 | ++ | ++ |  |
| Number of Household Members In Carpool-worker 8 | ++ | ++ |  |

For All Variables, Standard Codes Are:
02-97 Number of Hhold Members in Carpool
98 Not Answered
99 Not Applicable
Note: Includes Worker Question Is Asked Of.

| 1872 | PUBTR1 | $80 N-81 N$ |
| :--- | :--- | :--- |
| 1873 | PUBTR2 | 82 S |


|  |  | $\frac{81 N}{40}$ | $\frac{82 S}{40}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Public Trans Used In Addition To Car-Worker | 1 | 42 | 42 |
| Public Trans Used In Addition To Car-Worker 2 | 44 | 44 |  |
| Public Trans Used In Addition To Car-Worker | 3 | ++ | ++ |
| Public Trans Used In Addition To Car-Worker | 4 | ++ | ++ |
| Public Trans Used In Addition To Car-Worker | 5 | ++ | ++ |
| Public Trans Used In Addition To Car-Worker | 6 | ++ |  |
| Public Trans Used In Addition To Car-Worker | 7 | ++ |  |
| Public Trans Used In Addition To Car-Worker 8 | ++ | ++ |  | Public Trans Used In Addition To Car-Worker 8


| $\frac{81 N}{40}$ | $\frac{825}{40}$ | $\frac{845}{28}$ | $\frac{85 N}{28}$ |
| :---: | :---: | :---: | :---: |
| 42 | 42 | 29 | 29 |
| 44 | 44 | 29 | 29 |
| ++ | ++ | 29 | 29 |
| ++ | ++ | ++ | ++ |
| ++ | ++ | ++ | ++ |
| ++ | ++ | ++ | ++ |
| ++ | ++ | ++ | ++ |


| 1873 | PUBTR2 | 82 S |
| :--- | :--- | :--- |
| 1874 | PUBTR3 |  |
| 1875 | PUBTR4 |  |
| 1876 | PUBTR5 |  |
| 1877 | PUBTR6 |  |
| 1878 | PUBTR7 |  |
| 1879 | PUBTR8 |  |

For All Variables, Standard Codes Are:
1 Yes
2 No
8 Not Answered
9 Not Applicable
1880 PLPUB 1 8ON-81N

1881 PLPUB2
1882 PLPU83
1883 PLPUB4
1884 PLPUB5
1885 PLPUB6
1886 PLPUB7
1887 PLPUB8


[^55]| 1888 | NOPUB1 | $80 N-81 N$ |
| :--- | :--- | :--- |
| 1889 | NOPUB2 | 825 |
| 1890 | NOPUB3 |  |
| 1891 | NOPUB4 |  |
| 1892 | NOPUB5 |  |
| 1893 | NOPUB6 |  |
| 1894 | NOPUB7 |  |
| 1895 | NOPUB8 |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
| 1896 | WMEAN1 | $80 N-81 N$ |
| 1897 | WMEAN2 | 825 |
| 1898 | WMEAN3 |  |
| 1899 | WMEAN4 |  |
| 1900 | WMEAN5 |  |
| 1901 | WMEAN6 |  |
| 1902 | WMEAN7 |  |
| 1903 | WMEAN8 |  |


| 1904 | SMEWK1 | $75 N$ |
| :--- | :--- | :--- |
| 1905 | SMEWK2 | $755-77 S$ |
| 1906 | SMEWK3 |  |
| 1907 | SMEWK4 |  |
| 1908 | SMEWK5 |  |
| 1909 | SMEWK6 |  |
| 1910 | SMEWK7 |  |
| 1911 | SMEWK8 |  |

Main Reason For Not Taking Pub Trans To Work-Worker 1
Main Reason For Not Taking Pub Trans To Work-Worker 2
Main Reason for Not Taking Pub Trans To Work-Worker 3
Main Reason For Not Taking Pub Trans To Work-Worker 4
Main Reason For Not Taking Pub Trans To Work-Worker 5
Main Reason For Not Taking Pub Trans To Work-Worker 6
Main Reason for Not Taking Pub Trans To Work-Worker 7
Main Reason For Not Taking Pub Trans To Work-Worker 8

| $\frac{81 N}{40}$ | $\frac{82 S}{40}$ |
| :---: | :---: |
| 42 | 42 |
| 44 | 44 |
| ++ | ++ |
| ++ | ++ |
| ++ | ++ |
| ++ | ++ |
| ++ | +- |

For All Variables, Standard Codes Are:
Rather Use Car, Truck Or Van
Available Transit Does Not Go To Work
Takes Too Long
Schedule Not Convenient
Public Transportation Not Available
Stop Too Far From Residence
Too Expensive
Need Car. Truck Or Van For Work
Physical And/Or Mental Impairment
Other Reason
Not Answered
99 Not Applicable
Main Reason For Taking Public Trans To Work-Worker 1
Main Reason For Taking Pubitc Trans To Work-Worker 2
Main Reason for Taking Public Trans To Work-Worker 3
Main Reason For Taking Public Trans To Work-Worker 4
Main Reason For Taking Public Trans To Work-Worker 5
Main Reason For Taking Public Trans To Work-worker 6
Main Reason For Taking Public Trans To Work-Worker 7
Main Reason For Taking Public Trans To Work-Worker 8

| $84 N$ | 825 |
| :---: | :---: |
| 41 | 41 |
| 43 | 43 |
| 45 | 45 |
| ++ | ++ |
| ++ | ++ |
| ++ | ++ |
| ++ | ++ |
| ++ | ++ |

    For All Variables, Standard Codes Are:
        No Driver's License
        No Car. Truck Or Van Available
        Cheaper Than Car, Truck Or Van
        No Parking Costs Or Problems
    No Driving Stratn
    Faster Than Car, Truck Or Van
    Other Reason
    Not Answered
    Not Applicable
    |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Usually Work At Same Location Each Day-Worker |  | $\frac{75 N}{38}$ | $\frac{77 S}{39}$ |
| Usually Work At Same Location Each Day-Worker 2 | 40 | 42 |  |
| Usually Work At Same Location Each Day-Worker 3 | 41 | 43 |  |
| Usually Work At Same Location Each Day-Worker | 4 | 42 | 44 |
| Usually Work At Same Location Each Day-Worker | 5 | 43 | ++ |
| Usually Work At Same Location Each Day-Worker | 6 | 44 | ++ |
| Usually Work At Same Location Each Day-Worker 7 | ++ | ++ |  |
| Usually Work At Same Location Each Day-Worker 8 | ++ | ++ |  |

        For All Variables, Standard Codes Are:
                        Yes
        No
    9 Not Applicable
    Note: Missing data may have been imputed, but, if so,
    the allocation variable was not released.
    Reports Same Place Each Day To Start Work, Ref Per $\frac{79 \mathrm{~N}}{38} \frac{815}{37}$


SURVEYS DESCRIPTION

[^56]|  |  |
| :--- | :--- |
| WMETR1 | $75 N$ |
| WMETR2 | $80 N-81 N$ |
| WMETR3 | $755-77 \mathrm{~S}$ |
| WMETR4 | 825 |
| WMETR5 |  |
| WMETR6 |  |
| WMETR7 |  |
| WMETR8 |  |


|  |  |  |  |  |  |  | 84 N | 825 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Recoded | Place | $0 f$ | Work | City/Suburban | Status-Worker | 1 | 41 | 41 |
| Recoded | Place | $0 f$ | Work | City/Suburban | Status-worker | 2 | 43 | 43 |
| Recoded | Place | $0 f$ | Work | City/Suburban | Status-Worker | 3 | 45 | 45 |
| Recoded | Place | $0 f$ | Work | City/Suburban | Status-worker. | 4 | ++ | + |
| Recoded | Place | Of | Work | City/Suburban | Status-Worker | 5 | ++ | ++ |
| Recoded | Place | Of | Work | City/Suburban | Status-worker | 6 | ++ | + |
| Recoded | Place | Of | Work | City/Suburban | Status-worker | 7 | ++ | ++ |
| Recoded | Place | Of | Work | City/Suburban | Status-Worker | 8 | ++ | ++ |

75N 75S-77S 80N-81N

| 1 | $\frac{825}{}$ |  |
| :---: | :---: | :---: |
| 2 | 1 |  |
| 2 | 2 |  |
|  | 3 | 2 |


| 3 | 3 |
| :--- | :--- |
| 4 | 3 |

4
3 Center City of Another SMSA Work Outside Central City of SMSA of Residence
4 Balance of Another SMSA Work in CBD of Another SMSA (including residents of non-metropolitan areas) Work Outside CBD, In Central City of Another SMSA (inci. non-metro res.) CBD Not Reported. Work In Central City of Another SMSA (incl. non-metro res) Work Outside Central City of Another SMSA (incl. non-metro residents)
5 Work Outside of Any SMSA
6 No Fixed Place of Work Work Outside SMSA of Residence
8 Place of Work Not Reported
9 Not Applicable

Note: Persons working outside of any SMSA are coded 3-6, as applicable.

| 1937 | WCNTY1 | $75 N$ |
| :--- | :--- | :--- |
| 1938 | WCNTY2 | $80 N-81 N$ |
| 1939 | WCNTY3 | $755-775$ |
| 1940 | WCNTY4 | 825 |
| 1941 | WCNTY5 |  |
| 1942 | WCNTY6 |  |
| 1943 | WCNTY7 |  |
| 1944 | WCNTY8 |  |


| Recoded Place Of Work, County-Worker $t$ | $\frac{81 N}{41}$ | $\frac{82 S}{41}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Recoded Place Of Work, County-Worker 2 | 43 | 43 |
| Recoded Place Of Work, County-Worker 3 | 45 | 45 |
| Recoded Place Of Work, County-Worker 4 | ++ | ++ |
| Recoded Place Of Work, County-Worker 5 | ++ | ++ |
| Recoded Place Of Work, County-Worker 6 | ++ | ++ |
| Recoded Place Of Work, County-Worker 7 | ++ | ++ |
| Recoded Place Of Work, County-Worker 8 | ++ | ++ | For All Variables, Standard Codes Are:

## 75N 75S-775 80N-81N


1946 SAMTWN
$76 \mathrm{~N}-79 \mathrm{~N}$ Live In Same Town As Work
$7 \mathrm{y}-78 \mathrm{~S}$

2 No
8 Not Answered
9 Not Applicable


WKPLC 9
WKPLC2 WKPLC3 WKPLCA WKPLCS WKPLC6 WKPLC7 WKPLC8

## 755-775

Workplace Place Code ( 25,000 or more)-Worker 1
Workplace Place Code $(25,000$ or more)-Worker 2
Workplace Place Code $(25,000$ or more)-worker 3
Workplace Place Code $(25,000$ or more)-worker 4
Workplace Place Code $(25,000$ or more)-worker 5
Workplace Place Code $(25,000$ or more)-worker 6
Workplace Place Code $(25,000$ or more)-Worker 7
Workplace Place Code ( 25,000 or more)-Worker 8
For All Variables. Standard Codes Are:
0000 Works At Home
OOO1-9995 Place Code (see Variable oLACE)
9996 No Fixed Place of Work
9997 Outside SMSA of Residence
9998 Place of Work Not Reported
9999 Not Applicable

| 1979 | WPLSZ 1 | $75 N$ |
| :--- | :--- | :--- |
| 1980 | WPLSZ2 | $755-775$ |
| 1981 | WPLSZ3 |  |

Workplace Place Size-Worker 1
Workplace Place Size-Worker 2
Workplace Place Size-Worker 3
Workplace Place Size-Worker 4
Workplace Place Size-Worker 5
Workplace place Size-worker 6
Workplace Place Size-worker 7
Workplace Place Size-worker 8
For All Variables. Standard Codes Are: 75N $\frac{75 S-775}{0}$
1 Less Than 2,500 or Not A Place $2 \quad 2,500$ to 4,999 $3 \quad 5,000$ to 9.999 $5 \quad 10,000$ to 24,999
2 50,000-99,999
650,000 or Over
100,000-249,000
250,000-499,999
500,000 And Over
No Fixed Place of Work
Outside SMSA of Residence
Place of Work Not Reported
Not Applicable

| 1987 | WTIME1 | 75 N |
| :--- | :--- | :--- |
| 1988 | WTIME2 | 81 N |
| 1989 | WTIME3 | 85 N |
| 1990 | WTIME4 | $75 \mathrm{~S}-77 \mathrm{~S}$ |
| 1991 | WTIMES | 82 S |
| 1992 | WTIMES | $84 \mathrm{~S}-855$ |
| 1993 | WTIME7 |  |
| 1994 | WTIME8 |  |

Time Usually Leave For Work-Worker 1
Time Usually Leave For Work-Worker 2
Time Usually Leave For Work-Worker 3
Time Usually Leave For Work-Worker 4
Time Usually Leave For Work-Worker 5
Time Usually Leave For Work-Worker 6
Time Usually Leave For Work-Worker 7
Time Usually Leave For Work-Worker 8
For All Variables, Standard Codes Are: 0100-1259 1:00 through 12:59

9998 Not Answered
9999 Not ADplicable
Note: In 75 N and $75 \mathrm{~S}-77 \mathrm{~S}$, missing data may have been imputed but, if so, the allocation vartable was not released.

| 1995 | AMPM1 | $75 N$ |
| :--- | :--- | :--- |
| 1996 | AMPM2 | $81 N$ |
| 1997 | AMPM3 | $85 N$ |
| 1998 | AMPM4 | $755-77 S$ |
| 1999 | AMPM5 | $82 S$ |
| 2000 | AMPMS | $845-85 S$ |
| 2004 | AMPM7 |  |
| 2002 | AMPM8 |  |

$\frac{775}{39}$
42
43
44
++
$++$
++

| $75 N$ | 775 |
| ---: | ---: |
| 38 | 39 |
| 40 | 42 |
| 41 | 43 |
| 42 | 44 |
| 43 | ++ |
| 44 | ++ |
| ++ | ++ |
| ++ | ++ |


| $\frac{81 N}{41}$ | $\frac{825}{41}$ | $\frac{845}{28}$ | $\frac{85 N}{28}$ |
| :---: | :---: | :---: | :---: |
| 43 | 43 | 29 | 29 |
| 45 | 45 | 29 | 29 |
| ++ | ++ | 29 | 29 |
| ++ | ++ | ++ | ++ |
| ++ | ++ | ++ | ++ |
| ++ | ++ | ++ | ++ |
| ++ | ++ | ++ | ++ |


| $\frac{81 N}{41}$ | $\frac{825}{41}$ | $\frac{845}{28}$ | $\frac{85 N}{28}$ |
| ---: | ---: | ---: | ---: |
| 43 | 43 | 29 | 29 |
| 45 | 45 | 29 | 29 |
| ++ | ++ | 29 | 29 |
| ++ | ++ | ++ | ++ |
| ++ | ++ | ++ | ++ |
| ++ | ++ | ++ | ++ |
| ++ | ++ | ++ | ++ |

Leave For Work AM Or PM-Worker 1
Leave For Work AM Or PM-Worker 2
Leave For Work AM Or PM-Worker 3
Leave For Work AM Or PM-Worker 4
Leave For Work AM Or PM-Worker 5
Leave For Work AM Or PM-Worker 6
Leave For Work AM Or PM-Worker 7
Leave For Work AM Or PM-Worker 8
For All Variables, Stancard Codes Are:
1
$A M$
2
8
8
Not Answered
9 Not ADOlicable

Note: In 75 N and $75 \mathrm{~S}-77 \mathrm{~S}$, missing data may have been imputed but, if so, the allocation variable was not released.


[^57]


[^58]


[^59]
## Superinsulated Arctic Bungalow

Project Sponsor: Superinsulated Homes. Inc Fairbanks, Alasia
Project Designer: Jane Galblum Special Consullant: Ed McGraih Floor area: Outside-1,000 sq. fi. Inside - 825 sq.ft.


```
The detailed data documented in this section were collected for the first time
in the 1985 National Survey. A simple question on second homes was asked
before, and is documented in the Tenure Chapter. Questions were asked from
respondents who reported to own or co-own a mesidential property besides the
sample unit (see the variable SECOND in the Tenure Section). A second nome is
reported in the AHS if it is owned (co-owned) or being bought by a housenold
member who owns or rents the sampie unit. A second home, for example, is not
reporited if it is owned by a lodger in the sample unit. A unit is considered as
a second nome if it meets the definition of a housing unit (see Introduction to
the Tenure, Building and Parking section).
```

Data on second homes include location, structure type, ownership arrangements, value and purpose (recreational or investment). Some questions are asked for as many as six second homes, others are asked for three homes only. If the house hold reports more than three homes, the interviewer is instructed to select three units according to the following eriteria: any nome which had previously been the usua; residence of the owner or co-owner, one home for each housenold member who owns a property, then any other. In cases with data for more than three second homes, the variables SNUMX through SNUMZ are used to 1 ink the variables available for six homes with the variables available for three homes only. For example, if the value of SNUMX is 2 , the vartable SBSTAT should be used to identify the location of the nome. If the value of SNUMY is 4, then the approprtate location variable is SOSTAT.

```
In 1987, the Second Home supplement was administered again. New respondents, i.e.
housenolds that moved into the sample units after the 1985 interview, were asked all
questions in the supplement. All other respondents were asked questions about
second homes acquired after 1985. For these households, the purpose of the
supplement is to update the data collected in 1985. Because the data collected in
1985 are not repeated on the 1987 tape, users interested in second homes must
use data from the }1985\mathrm{ and 1987 tapes to obtain a complete picture of all
second homes owned by sample nousenolds. By combining the data from both years,
users can determine whether second momes (and how many) have been sold since 1985.
It is not possible, nowever, to identify which ones have been sold.
```

| 2083 | SECADO | 87 N |
| :--- | :--- | ---: |
|  |  |  |
|  |  |  |
|  |  |  |
| 2084 | NADDUS | 85 N |
|  |  | 87 N |
|  |  |  |
|  |  |  |
| 2085 | SASTAT | $85 N$ |
| 2085 | SBSTAT | 87 N |
| 2087 | SCSTAT |  |
| 2088 | SDSTAT |  |
| 2089 | SESTAT |  |
| 2090 | SFSTAT |  |



| 2091 | SALIN1 | 85 N |
| :--- | :--- | :--- |
| 2092 | SALIN2 | 87 N |
| 2093 | SBLIN1 |  |
| 2094 | SBLIN2 |  |
| 2095 | SCLIN1 |  |
| 2096 | SCLIN2 |  |
| 2097 | SDLIN1 |  |
| 2098 | SDLIN2 |  |
| 2099 | SELIN1 |  |
| 2100 | SELIN2 |  |
| 2101 | SFLIN1 |  |
| 2102 | SFLIN2 |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
| 2103 | SALURE | $85 N$ |
| 2104 | SBURE | $87 N$ |
| 2105 | SCURE |  |
| 2106 | SDURE |  |
| 2107 | SEURE |  |
| 2108 | SFURE |  |


| 2109 | SAUNIT | $85 N$ |
| :--- | :--- | :--- |
| 2110 | SBUNIT | 87 N |
| 2111 | SCUNIT |  |
| 2112 | SDUNIT |  |
| 2113 | SEUNIT |  |
| 2114 | SFUNIT |  |

```
No. Of Units Owned/Co-owned in Same Bldg As 1st Addl Unit
No. of Units Owned/Co-owned in Same Bldg As 2nd Addl Unit
No. Of Units Owned/Co-owned in Same Bldg As 3rd Addi Unit
No. of Units Owned/Co-owned in Same gldg As 4th Addl Unit
No. of Units Ownad/Co-owned in Same Bldg As 5th Addi Unit
No. of Units OWned/Co-owned in Same Bldg as Eth Addl Unit
Standard Codes For All Varlables Are:
    0-997 O to 997 Addl Units
    998 Not Answered
    999 Not applicable
```



[^60]|  |  |  |
| :--- | :--- | :--- |
| 2133 | SXSHRD | $85 N$ |
| 2134 | SYSHRD | $87 N$ |
| 2135 | SZSHRD |  |
|  |  |  |
|  |  |  |
|  |  |  |
| 2136 | SXPCT | $85 N$ |
| 2137 | SYPCT | $87 N$ |
| 2138 | SZPCT |  |

Ownership Of First Addl Unit Is Shared Out of Hhld
Ownership Of Second Addl Unit Is Shared Out Of Hhld
Ownership Of Third Addl Unit Is Shared Out Of Hhld
Standard codes For All Variables Are:
1 Yes
$\left.\qquad \begin{array}{l}2 \\ \text { No } \\ 8\end{array}\right)$ Not Answered
9 Not Appeared
Ownership of Third Addl Unit is Shared Out Of Hhld

1 Yes

8 Not Answered
Share Of Ownership of First Addl Unit in Percent
Share Of Ownership of Second Addi Unit in Percent Share Of Ownership of Third Addl Unit in Percent

Share Of Ownership Df First Addl Unit in Weeks If Pet Not gi Share Of Ownership Of Second Addl Unit in Weeks If Pet Not g Share Of ownership of Third Addl Unit in Weeks If Pct Not gi

Standard Codes for All Variables Are:
1-52 1 to 52 Weeks
98 Not Answered
99 Not Applicable
Value of Share Of First Addl Unit on Market
Value Of Share Of Second Addl Unit on Market Value of Share of Third Addl Unit on Market

Standard Codes For All Variables Are:
1-999996 \$1-999,996
999998 Not Answered
999999 Not Applicable

| Mortgage Or Other Loan On First Addl Unit | $\frac{51}{1}$ |
| :--- | :--- |
| Mortgage Or Other Loan On Second Add Unit | 51 |
| Mortgage Or Other Loan On Third Addl Unit |  |

Standard Codes for All Variables are:
1 Yes
2 No
8 Not Answered
9 Not Applicable
Number Of Nights Spent At First Addi Unit Last Yr
Number Of Nights Spent At Second Addl Unit Last Yr Number Of Nights Spent At Third Addl Unit Last Yr

Standard Codes For All Variables Are:

- None

1-365 1 to 365
998 Not Answered
999 Not Applicable
Addl Res Unit Owned Because Was Prev Usual Res
Second Res Unit Owned Because Was Prev Usual Res
Third Addl Unit Owned Because Was Prev Usual Res
First Addl Unit Owned Because Used For Recreation Second Addl Unit Owned Because Used For Recreation Third Addl Unit Owned Because Used For Recreation First Addl Unit Owned For Investment Purposes Second Addl Unit Owned for Investment Purposes Third Addl Unit Owned For investment Purposes First Addl Unit Owned Because Not Able To Sell Second Addl Unit Owned Because Not Able To Sell Third Addl Unit Owned Because Not Able To Sell First Addl Unit Owned Because It Was Inherited Second Addl Unit Owned Because It Was Inherited Third Addl Unit Owned Because It Was Inherited First Addl Unit Owned For Some Other Reason Second Addl Unit Owned For Some Other Reason Third Addl Unit Owned For Some Other Reason

Standard Codes for Ali Variables Are:

[^61]Mobile nomes or.trailers are living quarters originally constructed to be towed on their own chassis. These include double wides, expandables, and single wides. Mobile homes placed on permanent foundations or with one or more permanent rooms attached are not counted as modile homes.


#### Abstract

All data for mobile homes and occupants of mobile homes which are (were) collected on a regular basis are included in the previous sections as appropriate, e.g., Ownership costs or rental costs are included in the Housing Costs Section, while mobile home descriptors are tnciuded in the Tenure, Building, and Parking Section. This section documents supplemental variables which were collected in the 1980 and 1983 National Surveys and documents respondent's perception of mobile nomes as a place to live and problems incurred during the transport and installation for mobile homes recently acquired. The section also includes a few descriptors for mobile homes which are not collected on an on-going basis.


The majority of the questions in this section are asked for all mobile homes in the sample, on less or more than 10 acres and apply to owners or renters as appropriate (see mobile homes on Table below).

Mobile Homes

| Vartable Name | On > 10 Acres | On > 10 Acres | Renters |
| :---: | :---: | :---: | :---: |
| RECHM-WIDTH | Yes | Yes | Yes |
| WHOSET-LIMWRN | Acquired New Only | No | No |
| MHINYR | Yes | Yes | No |
| MHDAMG-NOOTH | If Put On Site In Last 12 Months | If Put on Site In Last 12 Montns | No |
| MPO1-NP25 | Yes | Yes | Yes |
| RDMGOL-ROTHDL | If Put On Stte In Last 12 Months | If Put On Site In Last 12 Months | No |
| RPO10L-RP25DL | Yes | Yes | Yes |
| RDMGM-ROTHM | If Put On Site In Last 12 Months | If Put On Site In Last 12 Months | No |
| RPO1M-RP25M | yes | Yes | Yes |
| RDMGHM-ROTHHM | If Put On Site In Last 12 Months | If Put On Stte In Last 12 Months | No |
| RPO1HM-RO25HM | yes | Yes | Yes |
| RDMGHP - ROTHHP | If Put On Site In Last 12 Months | If Put On Site In Last 12 Months | No |
| RPO1SE-RO25SE | Yes | Yes | Yes |
| RDMGNR-ROTHNR | If Put On Site In Last 12 Montns | If Put On Site In Last 12 Months | No |
| RPO 1NR-RO25NR | Yes | Yes | Yes |
| MOOOR2 | Yes | Yes | Yes |
| MHRED | Yes | Yes | Yes |




[^62]


[^63]
(20)


O This Answer Not Given
1 Repaired By Dealer Or Someone Hired by Dealer
9 Not Answered or Not Applicable
Note: See ROMGNR-RP25NR if you need to distinguish between Not Answered and Not Applicable.

[^64]| REFW | NAME |
| :---: | :---: |
|  |  |
| 2290 | $R D M G M$ |
| 2291 | $R U T L M$ |
| 2292 | $R L V L M$ |
| 2293 | $R O T H M$ |
| 2294 | $R P O 1 M$ |
| 2295 | $R P O 2 M$ |
| 2296 | $R P O 3 M$ |
| 2297 | $R P O 4 M$ |
| 2298 | $R P O 5 M$ |
| 2299 | $R P O 6 M$ |
| 2300 | $R P O 7 M$ |
| 2301 | $R P O 8 M$ |
| 2302 | $R P O 9 M$ |
| 2303 | $R P 1 O M$ |
| 2304 | $R P 11 M$ |
| 2305 | $R P 12 M$ |
| 2306 | $R P 13 M$ |
| 2307 | $R P 14 M$ |
| 2308 | $R P 15 M$ |
| 2309 | $R P 16 M$ |
| 2310 | $R P 17 M$ |
| 2311 | $R P 18 M$ |
| 2312 | $R P 19 M$ |
| 2313 | $R P 20 M$ |
| 2314 | $R P 21 M$ |
| 2315 | $R P 22 M$ |
| 2316 | $R P 23 M$ |
| 2317 | $R P 24 M$ |
| 2318 | $R P 25 M$ |

SURVEYS DESCRIPTION
PAGE ON QUESTIONNAIRE

|  |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Fixed | Damage Caused By Transport Or Inst | 32 |
| Manufacturer Manufacturer | Fixed | Prodem With Utility Connections | 32 |
| Manufacturer | Fixed | Prodem With Leveling at Instal | 33 |
| Manufacturer | Fixed | Other Installation Problems | 33 |
| Manufacturer | Fixed | Other Electrical Problems | 35 |
| Manufacturer | Fixed | Leaking Pipes or Plumbing fixtures | 35 |
| Manufacturer | Fixed | Water Heater Problems | 35 |
| Manufacturer | Fixed | Sewer Or Septic Tank Problems | 35 |
| Manufacturer | Fixed | Otner Electricall Problems | 35 |
| Manufacturer | Fixed | Leaking Pipes Or Plumbing Fixtures | 35 |
| Manufarturer | Fixed | Water Heater Problems | 35 |
| Manufacturer | Fixed | Sewer Or Septic Tank Problems | 35 |
| Manufacturer | Fixed | Other Electrical Problems | 35 |
| Manufacturer Manufacturer | Fixed | Leaking Pipes Or Plumbing Fixture | 35 |
|  | Fixed | Water Heater Problems | 35 |
| Manufacturer | Fixed | Sewer Or Septic Tank Problems | 35 |
| Manufacturer | Fixed | Other Electrical Problems |  |
| Manufacturer | Fixed | Leaking Pipes Or Plumbing Fix |  |
| Manufacturer | Fixed | Water Heater Problems |  |
|  | Fixed | Sewer Or Septic Tank Probl |  |
| Manufacturer Manufacturer | Fixed | Other Electrical Problems | 35 |
| Manufacturer | Fixed | Leaking Pipes or Plumbing | 35 |
| Manufacturer f | Fixed | Water Heater Problems | 35 |
| Manufacturer | Fixed | Sewer Or Septic Tank Problems | 35 |
| Manufacturer | Fixed | Other Plumbing Problems | 35 |
| Manufacturer | Fixed | Htng Equip Brkawns, 6 + Consec Hrs. | 35 |
| Manufacturer | Fixed | Other Heating Problems | 35 |
| Manufacturer Manufacturer | Fixed | Air Conditioning Problems | 35 |
|  | Fixed fable | Probs With Interior Odors Or Fumes standard codes are: | 35 |
|  |  |  |  |
|  |  | ired By Manufacturer Or Som |  |
|  |  | red by Manufacturer |  |
|  |  | wered or Not Appl |  |

Note: See RDMGNR-RP2SNR if you need to distinguish between Not Answered and Not Applicable.

|  |  |
| :--- | :--- |
| 2319 | RDMGHM |
| 2320 | RUTLHM |
| 2321 | RLVLHM |
| 2322 | $R O T H H M$ |
| 2323 | $R P O 1 H M$ |
| 2324 | $R P O 2 H M$ |
| 2325 | $R P O 3 H M$ |
| 2326 | $R P O 4 H M$ |
| 2327 | $R P O 5 H M$ |
| 2328 | $R P O 6 H M$ |
| 2329 | $R P O 7 H M$ |
| 2330 | $R P O 8 H M$ |
| 2331 | $R P O 9 H M$ |
| 2332 | $R P 10 H M$ |
| 2333 | $R P 11 H M$ |
| 2334 | $R P 12 H M$ |
| 2335 | $R P 13 H M$ |
| 2336 | $R P 14 H M$ |
| 2337 | $R P 15 H M$ |
| 2338 | $R P 16 H M$ |
| 2339 | $R P 17 H M$ |
| 2340 | $R P 18 H M$ |
| 2341 | $R P 19 H M$ |
| 2342 | $R P 20 H M$ |
| 2343 | $R P 21 H M$ |
| 2344 | $R P 22 H M$ |
| 2345 | $R P 23 H M$ |
| 2346 | $R P 24 H M$ |
| 2347 | $R P 25 H M$ |


| HH | Member | Fixed | Damage Caused By Transport Or Inst | $\frac{83 N}{32}$ |
| :---: | :---: | :---: | :---: | :---: |
| HH | Member | Fixed | Problem With Utility Connections | 32 |
| HH | Member | Fixed | Problem With Leveling At Installation | 33 |
| HH | Member | Fixed | Other Installation Problems | 33 |
| HH | Member | Fixed | Uneven Settling | 35 |
| HH | Member | Fixed | Probs W/Joining of Double-Wide Sections | 35 |
| HH | Member | Fixed | Leaks In Roof | 35 |
| HH | Member | Fixed | Other Roof Problems | 35 |
| HH | Memoer | Fixed | Warped Siding Or Other Siding Probs | 35 |
| HH | Member | Fixed | Air Leaks In Walls | 35 |
| HH | Mamber | Fixed | Inoperative Doors Or Windows | 35 |
| HH | Member | Fixed | Other Outside Wall Problems | 35 |
| HH | Member | Fixed | Buckling Of Inside Walls | 35 |
| HH | Member | Fixed | Other Inside Wall Problems | 35 |
| HH | Member | Fixed | Buckiting Floors | 35 |
| HH | Member | Fixed | Holes In Floors | 35 |
| HH | Member | Fixed | Other Floor Problems | 35 |
| HH | Member | Fixed | Probs W/Elect Wiring | 35 |
| HH | Memoer | Fixed | Probs W/Elect Fixtures, Outlets. Etc. | 35 |
| HH | Member | Fixed | Lg Appliance Brkdwns (Orig Equip Only) | 35 |
| HH | Member | Fixed | Other Electrical Problems | 35 |
| HH | Member | Fixed | Leaking Pipes Or Plumbing Fixtures | 35 |
| HH | Member | Fixed | Water Heater Problems | 35 |
| HH | Member | Fixed | Sewer Or Septic Tank Problems | 35 |
| HH | Member | Fixed | Other Plumbing Problems | 35 |
| HH | Member | Fixed | Hting Equip Brkdwn, 6 Consec Hrs. | 35 |
| HH | Member | Fixed | Other Heating Problems | 35 |
| HH | Member | Fixed | Air Conditioning Problem | 35 |
| HH | Member | Fixed | Probs With Interior Odors Or Fumes | 35 |

For all variables, standard codes are:

- This Answer Not Given

3 Repaired By A Housenold Member
9 Not Answered or Not Applicable
Note: See RDMGNR-RP25NR if you need to distinguish between Not Answered and Not Applicable.


[^65]|  |  |
| :--- | :--- |
| 2377 | RDMGSE |
| 2378 | $R U T L S E$ |
| 2379 | $R L V L S E$ |
| 2380 | $R O T H S E$ |
| 2381 | $R P O 1 S E$ |
| 2382 | $R P O 2 S E$ |
| 2383 | $R P O 3 S E$ |
| 2384 | $R P O 4 S E$ |
| 2385 | $R P O 5 S E$ |
| 2386 | $R P O 6 S E$ |
| 2387 | $R P O 7 S E$ |
| 2388 | $R P O 8 S E$ |
| 2389 | $R P O 9 S E$ |
| 2390 | $R P 10 S E$ |
| 2391 | $R P 11 S E$ |
| 2392 | $R P 12 S E$ |
| 2393 | $R P 13 S E$ |
| 2394 | $R P 14 S E$ |
| 2395 | $R P 15 S E$ |
| 2396 | $R P 16 S E$ |
| 2397 | $R P 17 S E$ |
| 2398 | $R P 18 S E$ |
| 2399 | $R P 19 S E$ |
| 2400 | $R P 20 S E$ |
| 2401 | $R P 21 S E$ |
| 2402 | $R P 22 S E$ |
| 2403 | $R P 23 S E$ |
| 2404 | $R P 24 S E$ |
| 2405 | $R P 25 S E$ |


| 2406 | RDMGNR |
| :---: | :---: |
| 2407 | RUTLNR |
| 2408 | RLVLNR |
| 2409 | ROTHNR |
| 2410 | RPOINR |
| 2411 | RPO2NR |
| 2412 | RPO3NR |
| 2413 | RPO4NR |
| 2414 | RPO5NR |
| 2415 | RPOGNR |
| 2416 | RPO7NR |
| 2417 | RPO8NR |
| 2448 | RPO9NR |
| 2419 | RP 1ONR |
| 2420 | RP $\dagger$ 1NR |
| 2421 | RP12NR |
| 2422 | RP 13NR |
| 2423 | RP 14 NR |
| 2424 | RP 15NR |
| 2425 | RP 16NR |
| 2426 | RP97NR |
| 2427 | RP:8NR |
| 2428 | RP19NR |
| 2429 | RP20NR |
| 2430 | RP2 1 NR |
| 2431 | RP22NR |
| 2432 | RP23NR |
| 2433 | RP24NR |
| 2434 | RP25NR |



Note: See RDMGNR-RP25NR if you need to distinguish between Not Answered and Not Applicable.
Damage Caused By Transport Or Inst Not Repaired $\frac{83 \mathrm{~N}}{32}$
Problem With Utility Connections Not Repaired 32
Problem Wth Leveling Not Repaired 33
Other Installation Problems Not Repaired 33
Uneven Settling Not Fixed 35
Probs W/Joining of Double-Wide Sections Not Fixed 35
Leaks In Roof Not fixed 35
Other Roof Problems Not Fixed 35
Warped Siding Or Other Siding Problems Not Fixed 35
Air Leaks In Walls Not Fixed 35
Inoperative Doors Or Windows Not Fixed 35
Other Outstde Wall Problems Not Fixed 35
Buckling of Inside Walls Not Fixed 35
Other Inside Wall Problems Not Fixed 35
Buckling Floors Not Fixed 35
Holes In Fioors Not Fixed 35
Other Floor Problems Not Fixed 35
Problems With Electrical Wiring Not Fixed 35
Probs W/Elect Fixtures, Outlets, Etc. Not Fixed 35
Large Appliance Brkdwns (Orig Equip Only) Not Fixed 35
Other Electrical Problems Not Fixed 35
Leaking Pipes Or Piumbing Fixtures Not Fixed 35
Water Heater Problems Not Flxed . 35
Sewer Or Septic Tank Prodiems Not Fixed 35
Other Piumbing Problems Not Fixed. 35
Htng Equip Brkdwns, 6 Or More Consec Hrs, Not Fixed 35
Other Heating Problems Not Fixed 35
Air Conditioning Problem Not Fixed 35
Problems With Interior Odors Or Fumes Not Fixed 35
For all variables, standard codes are:
O This Answer Not Given
6 Proviem Not Repaired
8 Not Answered
9 Not Applicable
Cause Of Odors Or Fumes
1 Formaldehyde
2 Other
3 Don't know
8 Not Answered
9 Not Applicable

| REF\# | name | SURVEYS | DESCRIPTION |  |
| :---: | :---: | :---: | :---: | :---: |
| 2436 | MHRED | 80 N | Modile Home | Has Red Metal Manufacturer's Label |
|  |  | 83 N |  | 1 Yes |
|  |  |  |  | 2 No |
|  |  |  |  | 3 Don't know |
|  |  |  |  | 8 Not Answered |
|  |  |  |  | 9 Not Applicable |

## Elevations

The neaty detailed combination of horizonta! and vertical siding on the building's facade reflects common regionai material usages. Other treatments required to satisfy differing market conditions are possible.

## Cost Considerations

While the superinsulated construction techniques require more labor and material than conventional construction, the projected $60 \%$ fuel savings and reduced heating equipment costs, through the use of an oil-fired hor water heater with a minimal heating loop. combine

10 make the house competitive in price and highly cost effective in terms of operations and maintenance. Superinsulated concepts are aiso applicable to other far-north regions in addition to Alaska.


Souch Elevation


```
This section contains items related to disabilities and handicaps. Detailed
information is available on cond\tions affecting members of the nousenold,
availability of special features in the unit such as ramps, handrails, grab
bars, etc., and respondent's perception of which special features woula facili-
tate disabled and/or handicapped persons to get around in the unit.
Disability data are available for the 1978 National Survey and the 1979, 1980,
1981 and 1982 SMSA Surveys.
```




[^66]


[^67]

For All Variables, Standard Codes Are: 78N 79S-82S

| 29 | 0 | Not Appilcable Paralysis |
| :---: | :---: | :---: |
| 27 | 02 | Chronic Stiffness/Deformity Of Back/Spine |
| 28 | 03 | Other Back Or Spine Trouble |
| 19 | 04 | Arthritis Or Rheumatism |
| 26 | 05 | Chronic Stiffness Or Deformity Df Foot, Leg, Arm Or Hand |
| 24 | 06 | Missing Legs, Feet Or Toes |
| 25 | 07 | Missing Arms, Hands Or Fingers |
| 21 | 08 | Cerebral Palsy |
| 18 | 09 | Effects of Stroke |
| 23 | 10 | Blindness Or Serious Trouble Seeing |
| 22 | 11 | Deafness Or Serious Trouble Hearing |
| 16 | 12 | Effects of Heart Attack |
| 17 | 13 | Any Other Heart Trouble |
| 40 | 14 | HBP Or Hypertenston |
| 41 | 15 | Diabetes |
| 43 | 16 | Cancer Or Other Tumor, Growth Or Cyst |
| 11 | 17 | Astima |
| 13 12 |  | Bronchtits <br> Tuberculosis |
|  | 18 | Other Lung Problem (Includes Bronchitis and Emphysema In SMSA Surveys) |
| 44 |  | Emphysema |
| 15 |  | Other Lung Problems |
| 20 | 19 | Convulsions Or Epileptic Seizures |
| 42 | 21 | Parkinson's Disease |
| 44 | 22 | Hardening Of The Artertes |
| 45 | 23 | Senility |
| 60 | 24 | Infective and Parasitic Diseases |
| 61 | 25 | Neoplasms - New Growth of Tissue Serving No Function, e.g. Tumor. Does Not Include Cancer |
| 62 | 26 | Endocrine, Nutritional, and Metabolic ois |
| 63 | 27 | Diseases Of The Blood And Blood forming Organs |
| 64 | 28 | Mental Disorders |
| 65 | 29 | Diseases Of The Nervous System \& Sense Organs |
| 66 | 30 | Diseases Of The Circulatory System |

ll


For All Variables, Standard Codes Are:
1 Yes, Another Person
Yes, Special Equipment
Yes, Both
No
Not Answered
Not applicable

| 2582 | HELPP1 |
| :--- | :--- |
| 2583 | HELPP2 |
| 2584 | HELPP3 |
| 2585 | HELPP4 |
| 2586 | HELPP5 |
| 2587 | HELPPG |
| 2588 | HELPE |
| 2589 | HELPE2 |
| 2590 | HELPE3 |
| 2591 | HELPE4 |
| 2592 | HELPE5 |
| 2593 | HELPE6 |

795-825
Help Needed From Another Person By Person 1
Help Needed From Another Person By Person 2
Help Needed From Another Person By Person 3
Help Needed From Another Person By Person 4
Help Needed From Another Person By Person 5
Help Needed From Another Person By Person 6
Help Needed From Equipment By Person 1
Help Needed From Equipment By Person 2
Help Needed From Equipment By Person 3
Help Needed From Equipment By Person 4
Help Needed From Equipment By Person 5
Help Needed From Equipment By Person 6
For All Variables. Standard Codes Are:
Help Needed From Another Person By Person 3 37
Help Needed From Another Person By Person 4
Help Needed From Another Person By Person 5 37
Help Needed From Another Person By Person 6 37
Help Needed From Equipment By Person 1 36
Help Needed From Equipment By Person 236
Heip Needed From Equipment By Person 3
Help Needed From Equipment By Person 5 37
Help Needed From Equipment By Person 6
For All Vartables, Standard Codes Are:
Not Applicable
Yes
No
Not Answered
Not Applicable

| 2594 | ORAIL1 | 78 N |
| :--- | :--- | :--- |
| 2595 | ORAIL2 | $795-82 \mathrm{~S}$ |
| 2596 | ORAIL3 |  |
| 2597 | ORAIL4 |  |
| 2598 | ORAIL5 |  |
| 2599 | ORAIL6 |  |
| 2600 | IRAIL1 |  |
| 2601 | IRAIL2 |  |
| 2602 | IRAIL3 |  |
| 2603 | IRAIL4 |  |
| 2604 | IRAIL5 |  |
| 2605 | IRAIL6 |  |


| Handrails Would Help Person 1 Go Out More Easily | $\frac{78 N}{39}$ | $\frac{825}{36}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Handrails Would Help Person 2 Go Out More Easily | 39 | 36 |
| Handrails Would Help Person 3 Go Out More Easily | 39 | 37 |
| Handrails Would Help Person 4 Go Out More Easily | 39 | 37 |
| Handrails Would Help Person 5 Go Out More Easily | 39 | 37 |
| Handrails Would Help Person 6 Go Out More Eastly | 39 | 37 |
| Extra Handrails Help Person 1 Get Around Inside House | 39 | 36 |
| Extra Handrails Help Person 2 Get Around Inside House | 39 | 36 |
| Extra Handrails Help Person 3 Get Around Inside House | 39 | 37 |
| Extra Handrails Help Person 4 Get Around Inside House | 39 | 37 |
| Extra Handrails Help Person 5 Get Around Inside House | 39 | 37 |
| Extra Handrails Help Person 6 Get Around Inside House | 39 | 37 |

Extra Handrails Help Person 6 Get Around Inside House 3937
For All Variables, Standard Codes Are:
For All Vartables, Standard Codes Are:
$\frac{78 N}{00} \frac{795-825}{0}$ Handrails would Not Helo
Handrails Would Help
98 Not Answered
Not Applicable
9 Not Answered or Not Applicable

Note: See ONOT-INOG to distinguish between Not Answered and Not Applicable in 79S-82S

[^68]|  |  |  |
| :--- | :--- | :--- |
| 2606 | URAIL1 | $78 N$ |
| 2607 | URAIL2 | $79 S-82 S$ |
| 2608 | URAIL3 |  |
| 2609 | URAIL4 |  |
| 2610 | URAIL5 |  |
| 2611 | URAIL6 |  |


|  |  |  | $\frac{78 N}{40}$ | $\frac{825}{36}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Handrails Help Person 1 Go Up/Down Stairs More Easily | 40 | 36 |  |  |
| Handrails Help Person 2 Go Up/Down Stairs More Easily | 40 | 36 |  |  |
| Handrails Help Person 3 Go Up/Down Stairs More Easily | 40 | 37 |  |  |
| Handrails Help Person 4 Go Up/Down Stairs More Easily | 40 | 37 |  |  |
| Handrails Help Person 5 | Go Up/Down Stairs More Easily | 40 | 37 |  |
| Handrails Help Person 6 Go Up/Down Stairs More Easily | 40 | 37 |  |  |

For all Variables, Standard Codes Are:
$\frac{78 N}{0} \frac{795-82 S}{0}$
Extra Handrails Would Not Help
Extra Handrails would Help
Not Answerer
Not Answered or Not Applicable
Not Applicable
Note: See UNOT-UN06 to distinguish between Not Answered and Not Applicable in 795-82S.

| 2612 | ERAIL | $78 N$ |
| :--- | :--- | :--- |
| 2613 | ERAIL2 | $79 S-82 S$ |
| 2614 | ERAIL3 |  |
| 2615 | ERAIL4 |  |
| 2616 | ERAIL5 |  |
| 2617 | ERAIL6 |  |


|  |  |  |  | $78 N$ | 825 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 0 | $\frac{85}{36}$ |  |  |  |  |
| Extra Handrails Wandrails Wld Aid In Use Of Fac by Person 1 | 40 | 36 |  |  |  |
| Extra Handrails Wid Aid In Use Of Fac by Person 2 | 40 | 37 |  |  |  |
| Extra Handrails Wld Aid In Use Of Fac by Person 3 | 40 | 37 |  |  |  |
| Extra Handrails Wld Aid In Use Of Fac by Person 4 | 40 | 37 |  |  |  |
| Extra Handrails Wla Aid In Use Of Fac Dy Person 5 | 40 | 37 |  |  |  |

For All Variables, Standard Codes Are:
$\frac{78 N}{00} \frac{795-825}{00}$
Extra Handrails Would Not Help Extra Handrails Would Help Not Answered
99 Not Answered or Not Appltcable 99 Not Applicable
Note: See ENOI-ENOG to distinguish between Not Answered and Not Applicable in 79S-825.

| 2618 | ORAMP1 | $78 N$ |
| :--- | :--- | :--- |
| 2619 | ORAMP2 | $79 \mathrm{~S}-82 \mathrm{~S}$ |
| 2620 | ORAMP3 |  |
| 2621 | ORAMP4 |  |
| 2622 | ORAMP5 |  |
| 2623 | ORAMP6 |  |
| 2624 | IRAMP1 |  |
| 2625 | IRAMP2 |  |
| 2626 | IRAMP3 |  |
| 2627 | IRAMP4 |  |
| 2628 | IRAMP5 |  |
| 2629 | IRAMP6 |  |


|  |  | $78 N$ | 825 |
| :--- | :--- | :--- | :--- | :--- |
| Ramp Would Help Person 1 Go Out More Easily | 39 | 36 |  |
| Ramp Would Help Person 2 Go Out More Easily | 39 | 36 |  |
| Ramp Would Help Person 3 Go Out More Easily | 39 | 37 |  |
| Ramp Would Help Person 4 Go Out More Easily | 39 | 37 |  |
| Ramp Would Help Person 5 Go Out More Easily | 39 | 37 |  |
| Ramp Would Help Person 6 Go Out More Easily | 39 | 37 |  |
| Ramp Help Person 1 Get Around Inside House | 39 | 36 |  |
| Ramp Help Person 2 Get Around Instde House | 39 | 36 |  |
| Ramp Help Person 3 Get Around Inside House | 39 | 37 |  |
| Ramp Help Person 4 Get Around Inside House | 39 | 37 |  |
| Ramp Help Person 5 Get Around Inside House | 39 | 37 |  |
| Ramp Help Person 6 Get Around Inside House | 39 | 37 |  |

For All Variables, Standard Codes Are:
$78 N$
00
12

Ramps would Not Help
Ramps Would Help
Not Answered
Not Applicable
9 Not Answered or Not Applicable
Note: See ONO1-INOG to distinguish between Not Answered and Not applicable in 79S-825.

| 2630 | URAMP 1 | $78 N$ |
| :--- | :--- | :--- |
| 2631 | URAMP2 | $79 S-82 S$ |
| 2632 | URAMP3 |  |
| 2633 | URAMP4 |  |
| 2634 | URAMP5 |  |
| 2635 | URAMP6 |  |


|  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Ramp Help Person 1 Go Up Or Down Stairs More Easily | $\frac{78 N}{40}$ | $\frac{825}{36}$ |
| Ramp Help Person 2 Go Up Or Down Stairs More Easily | 40 | 36 |
| Ramp Help Person 3 Go Up Or Down Stairs More Easily | 40 | 37 |
| Ramp Help Person 4 Go Up Or Down Stairs More Easily | 40 | 37 |
| Ramp Help Person 5 Go Up Or Down Stairs More Easily | 40 | 37 |
| Ramp Help Person 6 Go Up Or Down Stairs More Easily | 40 | 37 |

## SURVEYS DESCRIPTION

PAGE ON QUESTIONNAIRE

| 2636 | OELEV1 |
| :--- | :--- |
| 2637 | OELEV2 |
| 2638 | OELEV3 |
| 2639 | OELEV4 |
| 2640 | OELEV5 |
| 2644 | $0 E L E V 6$ |
| 2642 | IELEV1 |
| 2643 | IELEV2 |
| 2644 | IELEV3 |
| 2645 | IELEV4 |
| 2646 | IELEV5 |
| 2647 | IELEV6 |



| 78 N | 825 |
| ---: | ---: |
| 39 | 36 |
| 39 | 36 |
| 39 | 37 |
| 39 | 37 |
| 39 | 37 |
| 39 | 37 |
| 39 | 36 |
| 39 | 36 |
| 39 | 37 |
| 39 | 37 |
| 39 | 37 |
| 39 | 37 |

Note: See ONO1-INO6 to distinguish between Not Answered and Not Applicable in 79s-82S.

| 2648 | UELEV1 | $78 N$ |
| :--- | :--- | :--- |
| 2649 | UELEV2 | $79 S-82 S$ |
| 2650 | UELEV3 |  |
| 2651 | UELEV4 |  |
| 2652 | UELEV5 |  |
| 2653 | UELEV6 |  |


|  |  |  |  |  |  |  |  |  |  |  | 78 N | 825 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Elevator | Heip | son | 1 | Go | Up | Or | Down | Stairs | More | Easily | 40 | 36 |
| Elevator | Help | Person | 2 | Go | Up | Or | Down | Stairs | More | Easily | 40 | 36 |
| Elevator | Help | Person | 3 | Go | Up | Or | Down | Stairs | More | Easily | 40 | 37 |
| Elevator | Help | Person | 4 | Go | Up | Or | Down | Stairs | More | Easily | 40 | 37 |
| Elevator | Help | Person | 5 | Go | Up | Or | Down | Stairs | More | Easily | 40 | 37 |
| Elevator | Help | Person | 6 | Go | Up | Or | Down | Stairs | More | Easily | 40 | 37 |

For All Variables, Standard Codes Are:
$\frac{78 N}{0} \frac{79 S-82 S}{0}$
$3 \quad 3 \quad$ Elevator Would Help
Not Answered
9 Not Answered or Not Appltcable Not Applicable
Note: See UNO1-UNOG to distinguish between Not Answered and Not Applicable in 795-82S.

| 2654 | OWIDE1 | $78 N$ |
| :--- | :--- | :--- |
| 2655 | OWIDE2 | $795-82 S$ |
| 2656 | OWIDE3 |  |
| 2657 | OWIDE4 |  |
| 2658 | OWIDE5 |  |
| 2659 | OWIDE6 |  |
| 2660 | IWIDE1 |  |
| 2661 | IWIDE2 |  |
| 2662 | IWIDE3 |  |
| 2663 | IWIDE4 |  |
| 2664 | IWIDE5 |  |
| 2665 | IWIDE6 |  |


|  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Extra Wide Doors Would Help Person 1 Go Out More Easily | $\frac{78 N}{39}$ | $\frac{825}{36}$ |
| Extra Wide Doors Would Help Person 2 Go Out More Easily | 39 | 36 |
| Extra Wide Doors Would Help Person 3 Go Out More Easily | 39 | 37 |
| Extra Wide Doors Would Help Person 4 Go Dut More Easily | 39 | 37 |
| Extra Wide Doors Would Help Person 5 Go Dut More Easily | 39 | 37 |
| Extra Wide Doors Would Help Person 6 Go Out More Easily | 39 | 37 |
| Wide Doors Help Person 1 Get Around Inside House | 39 | 36 |
| Wide Doors Help Person 2 Get Around Inside House | 39 | 36 |
| Wide Doors Help Person 3 Get Around Inside House | 39 | 37 |
| Wide Doors Help Person 4 Get Around Inside House | 39 | 37 |
| Wide Doors Help Person 5 Get Around Inside House | 39 | 37 |
| Wide Doors Help Person 6 Get Around Inside House | 39 | 37 |

For All Variables, Standard Codes Are:
$\frac{78 N}{00} \frac{795-82 S}{0}$
$1440 \quad$ Extra Wide Doors Would Not Help
98 Not Answered
99 Not Applicable
9 Not Answered or Not Applicable
Note: See ONO1-INO6 to distinguish between Not Answered and Not Applicable in 79S-825.

[^69]| 2666 | OHNDL 1 |
| :--- | :--- |
| 2667 | OHNDL2 |
| 2668 | OHNDL3 |
| 2669 | OHNDL4 |
| 2670 | OHNDL5 |
| 2679 | OHNDL6 |
| 2672 | IHNDL 1 |
| 2673 | IHNDL2 |
| 2674 | IHNDL3 |
| 2675 | IHNDL4 |
| 2676 | IHNDL5 |
| 2677 | IHNDL6 |


| 2678 | EHNDL 1 | $78 N$ |
| :--- | :--- | :--- |
| 2679 | EHNDL2 | $79 S-82 S$ |
| 2680 | EHNDL3 |  |
| 2681 | EHNDL4 |  |
| 2682 | EHNDL5 |  |
| 2683 | EHNDL6 |  |


|  |  |  |
| :--- | :--- | :--- |
| 2684 | ORAIS1 | 78N |
| 2685 | ORAIS2 | 79S-82S |
| 2686 | ORAIS3 | Ra |
| 2687 | ORAIS4 |  |
| 2688 | ORAIS5 | Ra |
| 2689 | ORAIS6 | Ra |
| 2690 | IRAIS1 | Ra |
| 2691 | IRAIS2 | Ra |
| 2692 | IRAIS3 | Ra |
| 2693 | IRAIS4 | Ra |
| 2694 | IRAIS5 | $R$ |
| 2695 | IRAIS6 |  |

99 Not ADPlicable
Note: See ENOI-ENOG to distingutsh between Not Answered
and Not Applicable in $79 S-82 S$.

|  |  |  |  |  |  |  |  |  |  | -78N | 82S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Raised | Lettering | Would | Help | Person | 1 | Go 0 |  | $t$ More | Easily | 39 | 36 |
| Raised | Lettering | would | Help | Person | 2 | Go | Out | $t$ More | Easily | 39 | 36 |
| Raised | Lettering | Would | Help | Person | 3 | Go | Out | $t$ More | Easily | 39 | 37 |
| Raised | Lettering | Would | Help | Person | 4 | Go O | Out | $t$ More | Easily | 39 | 37 |
| Raised | Lettering | Would | Help | Person | 5 | Go | Out | $t$ More | Easily | 39 | 37 |
| Raised | Lettering | would | Help | Person | 6 | Go |  | $t$ More | Easily | 39 | 37 |
| Raised | Lettering | Help | Persor | 1 Get |  | round |  | Inside | House | 39 | 36 |
| Raised | Lettering | Help | Persor | 2 Get |  | round |  | Inside | House | 39 | 36 |
| Raised | Lettering | Help | Persor | 3 Get | Ar | round |  | Inside | House | 39 | 37 |
| Raised | Lettertng | Help | Person | 4 Get | Ar | round |  | Inside | House | 39 | 37 |
| Raised | Lettering | Help | Person | 5 Get |  | round |  | Inside | House | 39 | 37 |
| Raised | Lettering | Help | Person | 6 Get |  | rouno |  | Inside | House | 39 | 37 |
| For | All Variab | les, S | tandar | d Codes |  | Are: |  |  |  |  |  |
| 78N 795-82S |  |  |  |  |  |  |  |  |  |  |  |
| 00 | 0 R | Raised Letering Would Not Help |  |  |  |  |  |  |  |  |  |
| 16 | 6 R | Raised Letterting would Help |  |  |  |  |  |  |  |  |  |
| 98 |  | Not Answered |  |  |  |  |  |  |  |  |  |
| 99 Not Answered or Not applicable |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |


| 2696 | ERAIS 1 | 78N |
| :---: | :---: | :---: |
| 2697 | ERAIS2 | 79S-82S |
| 2698 | ERAIS3 |  |
| 2699 | ERAIS4 |  |
| 2700 | ERAIS5 |  |
| 2701 | ERAIS6 |  | and Not Applicable in 795-825.



|  |  |
| :--- | :--- |
| 2702 | OPUSH1 |
| 2703 | OPUSH2 |
| 2704 | OPUSH3 |
| 2705 | OPUSHA |
| 2706 | OPUSH5 |
| 2707 | OPUSH6 |
| 2708 | IPUSH1 |
| 2709 | IPUSH2 |
| 2710 | IPUSH3 |
| 2711 | IPUSH4 |
| 2712 | IPUSH5 |
| 2713 | IPUSH6 |


|  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Push Bars Would Help Person 1 Go Out More Easily | $\frac{78 N}{39}$ | $\frac{82 S}{36}$ |
| Push Bars Would Help Person 2 Go Out More Easily | 39 | 36 |
| Push Bars would Help Person 3 Go Out More Easily | 39 | 37 |
| Push Bars would Help Person 4 Go Out More Easily | 39 | 37 |
| Push Bars would Help Person 5 Go Out More Easily | 39 | 37 |
| Push Bars Would Help Person 6 Go Out More Easily | 39 | 37 |
| Push Bars Help Person 1 Get Around Inside House | 39 | 36 |
| Pusn Bars Help Person 2 Get Around Inside House | 39 | 36 |
| Pusn Bars Help Person 3 Get Around Inside House | 39 | 37 |
| Push Bars Help Person 4 Get Around Inside House | 39 | 37 |
| Push Bars Help Person 5 Get Around Inside House | 39 | 37 |
| Push Bars Help Person 6 Get Around Inside House | 39 | 37 | For All Variables, Standard Codes Are:

$\frac{78 N}{00} \frac{79 S-82 S}{0}$

Push Bars would Not Help
Push Bars would Help
Not Answered
Not Applicable
9 Not Answered or Not Applicable
Note: See ONO1-INOG to distinguisn between Not Answered or Not Applicable in 79S-82S.

| 2714 | EPUSH1 | $78 N$ |
| :--- | :--- | :--- |
| 2715 | EPUSH2 | $79 S-82 S$ |
| 2716 | EPUSH3 |  |
| 2717 | EPUSH4 |  |
| 2718 | EPUSH5 |  |
| 2719 | EPUSH6 |  |


|  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Push Bars Wld Aid In Use Of Facilities by Person 1 | $\frac{78 N}{40}$ | $\frac{82 S}{36}$ |  |
| Pusn Bars Wld Aid In Use Of Facilities by Person 2 | 40 | 36 |  |
| Push Bars Wld Aid In Use Of Facilities by Person 3 | 40 | 37 |  |
| Push Bars Wld Aid In Use Of Facilities by Person 4 | 40 | 37 |  |
| Push Bars Wld Aid In Use Of Facilities by Person | 5 | 40 | 37 |
| Push Bars Wld Aid In Use Of Facilities by Person 6 | 40 | 37 |  |

For All Variadles, Standard Codes Are:

| $\frac{78 N}{00}$ | $\frac{79 S-82 S}{0}$ |  |
| :---: | :---: | :---: |
| 16 | 6 | Push Bars Would Not Help |
| 98 |  | Not Answered |

9 Not Answered or Not Applicable
Not apolicable
Note: See ENO1-ENOG to distinguish between Not Answered or Not Applicable in 79S-82S.

|  |  |  |
| :--- | :--- | :--- |
| 2720 | EPHON1 | $78 N$ |
| 2721 | EPHON2 | $79 S-825$ |
| 2722 | EPHON3 |  |
| 2723 | EPHON4 |  |
| 2724 | EPHON5 |  |
| 2725 | EPHON6 |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
| 2726 | EFLAS |  |
| 2727 | EFLAS2 | $79 S-82 S$ |
| 2728 | EFLAS3 |  |
| 2729 | EFLAS4 |  |
| 2730 | EFLAS5 |  |
| 2731 | EFLAS6 |  |


|  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Special Phone Wld Aid In Use Of Facilities by Person | $\frac{78 N}{40}$ | $\frac{82 S}{36}$ |  |
| Special Phone Wld Aid In Use Of Facilities by Person 2 | 40 | 36 |  |
| Special Phone Wld Aid In Use Of Factlities by Person | 3 | 40 | 37 |
| Special Phone Wld Aid In Use Of Facilities by Person 4 | 40 | 37 |  |
| Special Phone Wld Aid In Use Of Facilities by Person | 5 | 40 | 37 |
| Special Phone Wld Aid In Use Of Facilities by Person 6 | 40 | 37 |  | For All Variables, Standard Codes Are:

$\frac{78 N}{00} \frac{79 S-82 S}{0}$

O Special Telephone Would Not Help Special Teiepnone Woula Help Not Answered
9 Not Answered or Not Applicable Not Applicable
Note: See ENO1-ENO6 to distinguish between Not Answered and Not Applicable in 795-82S.

|  |  |  | $\frac{78 N}{40}$ | $\frac{825}{36}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Flashing Lights Wld Aid In Use Of Fac by Person | 4 | 40 | 36 |  |
| Flashing Lights Wld Aid In Use Of Fac by Person 2 | 40 | 37 |  |  |
| Flashing Lights Wld Aid In Use Of Fac by Person | 3 | 40 | 37 |  |
| Flashing Lights Wld Aid In Use Of Fac by Person 4 | 40 | 37 |  |  |
| Flashing Lignts Wld Aid In Use Of Fac by Person 5 | 40 | 37 |  |  |
| Flashing Lignts Wld Aid In Use Of Fac by Person 6 | 40 |  |  |  | For All Variables, Standard Codes Are:

$\frac{78 N}{00} \frac{795-82 S}{0}$ Flashing Lights would Not Help
8 Flashing Lights would Help
Not Answered
9 Not Answered or Not Applicable
Not Applicable
Note: See ENOt-ENOG to distinguisn between Not Answered and Not Applicable in 795-82S.

[^70]|  |  |
| :--- | :--- |
| 2732 | OOTHR 1 |
| 2733 | OOTHR2 |
| 2734 | OOTHR3 |
| 2735 | OOTHR4 |
| 2736 | OOTHR5 |
| 2737 | OOTHR6 |
| 2738 | IOTHR 1 |
| 2739 | IOTHR2 |
| 2740 | IOTHR3 |
| 2741 | IOTHR4 |
| 2742 | IOTHR5 |
| 2743 | IOTHR6 |


00
18
98
99
99

2744 UOTHR
2745 UOTHR2
2746 UOTHR3
2747 UOTHR4
2748 UOTHR5
2749 UOTHR6

| 2750 | EOTHR 1 |
| :--- | :--- |
| 2751 | EOTHR2 |
| 2752 | EOTHR3 |
| 2753 | EOTHR4 |
| 2754 | EOTHR5 |
| 2755 | EOTHRG |


| 2756 | ONO1 |
| :--- | :--- |
| 2757 | ONO2 |
| 2758 | ONO3 |
| 2759 | ONO4 |
| 2760 | ONO5 |
| 2761 | ONO6 |
| 2762 | INO1 |
| 2763 | INO2 |
| 2764 | INO3 |
| 2765 | INO4 |
| 2766 | INO5 |
| 2767 | INO6 |

## 78N <br> 79S-82S

Would Any features Help Person 1 Go Out More Easily Would any Features Help Person 2 Go Out More Easily would Any Features Help Person 3 Go Out More Easily Would Any Features Help Person 4 Go Dut More Easily Would Any Features Help Person 5 Go Out More Easily Would Any Features Help Person 6 Go Out More Easily No Features Help Person 1 Get Around Inside House No Features Help Person 2 Get around Inside House No Features Help Person 3 Get Around Inside House No Features Help Person 4 Get Around Inside House No Features Help Person 5 Get Around Inside House No Features Help Person 6 Get Around Inside House

| $78 N$ | $\mathbf{8 2 5}$ |
| ---: | ---: |
| 39 | 36 |
| 39 | 36 |
| 39 | 37 |
| 39 | 37 |
| 39 | 37 |
| 39 | 37 |
| 39 | 36 |
| 39 | 36 |
| 39 | 37 |
| 39 | 37 |
| 39 | 37 |
| 39 | 37 |


| 2768 | UNO1 | $78 N$ |
| :--- | :--- | :--- |
| 2769 | UNO2 | $79 S-82 S$ |
| 2770 | UNO3 |  |
| 2771 | UNO4 |  |
| 2772 | UNO5 |  |
| 2773 | UNO6 |  |



| REF" | NAME | SURVEYS | DESCRIPTION |  |  | Page on ques |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | 78 N | 825 |
| 2774 | ENO 1 | 78 N |  | Feature wid | Aid In Use Of Facilities by Person 1 | 40 | 36 |
| 2775 | ENO2 | 795-825 | No F | Feature Wla | Aid In Use Of Facilities by Person 2 | 40 | 36 |
| 2776 | ENO3 |  | No F | Feature Wid | Aid In Use Of Facilities by Person 3 | 40 | 37 |
| 2777 | ENO4 |  | No F | Feature wid | Aid In Use of Facilities by Person 4 | 40 | 37 |
| 2778 | ENO5 |  | No F | Feature wia | Aid In Use of facilities by person 5 | 40 | 37 |
| 2779 | EN06 |  | No Feature wid Aid In Use of Facilities by Person 6For All Variables, Standara Codes Are:$\frac{78 N}{00} \frac{795-825}{00}$ Some Feature Listed Above Would Helo |  |  | 40 | 37 |
|  |  |  |  |  |  | 4 | \% |
|  |  |  |  |  |  |  |  |
|  |  |  |  | $\begin{array}{ll} \hline 00 & 00 \\ & 10 \end{array}$ | Some Feature Listed Above Would Help Some Other Feature would Help |  |  |
|  |  |  |  | 2111 | *o feature would Help |  |  |
|  |  |  |  | 9898 | Not Answered |  |  |
|  |  |  |  | 9999 | Not Applicable |  |  |

[^71]
# Site Adaptive Two-Story 



```
Data on vehicles and appliances purchased and owned by the household are col-
lected in the "Purchase and Ownership" Supplement. These data are available for
the National Survey only in 1973 and 1974. Only the 1974 Survey is currently
documented in this codebook. The 1973 Survey will be documented at some time in
the future. Variables are essentially similar in 1973 and 1974. If you are
interested in more information, please call AHS User Services at (617) 497-
7182. In both years, these questions were only asked on one third of the
national cases. The cases were randomly selected, so the data are representa-
tive of the entire country, Information on cars and appliances in more recent
surveys can be found in the Tenure, Building and Parking section and in the
Kitchen, Plumbing, Cooling and Heating Equipment section, respectively.
```




[^72]

| REF\% | NAME | SURVEYS | DESCRIPTION |  | Page on | QUESTIONNATRE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | - ${ }^{\text {c }}$ | 74 N |  |
| 2858 | NWAIR 1 | $74 N$ | Room Air Conditioning Unit i Purenased New Or Used |  | 32 |  |
| 2859 | NWAIR2 |  | Room Air Conditior 4 | ioning Unit 2 Purchased New Or Used | 32 |  |
|  |  |  |  | New |  |  |
|  |  |  |  | Used |  |  |
|  |  |  |  | Not Answered |  |  |
|  |  |  |  | Not applicabie |  |  |
|  |  |  |  |  | 74 N |  |
| 2860 | CSTAR 1 | $74 N$ |  | $r$ Conditioner (Unit 1) | 32 |  |
| 2861 | CSTAR2 |  | cost Of Room Air cost Of Room Air | $r$ Conditioner (Unit 2) | 32 |  |
|  |  |  | $\begin{array}{r} 000 \\ 50-750 \\ 998 \\ 999 \end{array}$ | Cost Not Reported$\$ 50-\$ 750$ |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  | Not Applicable |  |  |
|  |  |  |  |  | 74 N |  |
| 2862 | TVEW | 74N | Number of Black | and White Television Sets In HouseNone | 32 |  |
|  |  |  |  |  |  |  |
|  |  |  |  | One |  |  |
|  |  |  |  | Three Or More |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  | Not Answered <br> Not Applicable |  |  |
|  |  |  |  |  | $74 N$ |  |
| 2863 | TVCOL | 74 N | Number of Color Television Sets In House |  | 32 |  |
|  |  |  | 1 | None |  |  |
|  |  |  | 2 | One |  |  |
|  |  |  | 3 T | Two |  |  |
|  |  |  | 4 T | Three Or More |  |  |
|  |  |  | 8 N | Not Answered |  |  |
|  |  |  | 9 | Not Applicaole |  |  |
|  |  |  |  |  | 74N |  |
| 2864 | BUYTV | 74N | Television Set | Purchased In Last 12 MonthsYes, 1 | 32 |  |
|  |  |  |  |  |  |  |
|  |  |  |  | Yes, 2 Or More |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  | Not Answered |  |  |
|  |  |  |  | Not Applicable |  |  |
|  |  |  |  |  | 74N |  |
| 2865 | BWTV1 | 74N | TV Purchased IsTV Purchased Is | S Black \& White Or Color (Set 1 of 2) | 32 |  |
| 2866 | BWTV2 |  |  | Black \& White Or Color (Set 2 of 2)Black \& White | 32 |  |
|  |  |  | TV Purchased Is |  |  |  |
|  |  |  |  | Color |  |  |
|  |  |  |  | Not Answered <br> Not Applicable |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  | Purchased New Or Used (Set 1 of 2) | $\frac{74 N}{32}$ |  |
| 2868 | NEWTV1NEWTV2 | $74 N$ | Television Set P |  | 32 |  |
|  |  |  | Television Set | Purchased New Or Used (Set 2 of 2) | 32 |  |
|  | NEWTV2 |  |  | New |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  | Not Answered |  |  |
|  |  |  |  | Not Applicable |  |  |
|  |  |  |  | sion Set (Set 1 of 2) | 74N |  |
| 2869 | TV+CST | $74 N$ | Cost Of Televisio |  | 32 |  |
| 2870 | TV2CST |  | Cost Of Televis | sion Set (Set 2 of 2)cost Not Reported | 32 |  |
|  |  |  |  |  |  |  |
|  |  |  |  | \$25-\$900 |  |  |
|  |  |  |  | Not Answered |  |  |
|  |  |  |  | Not Applicable |  |  |
|  |  |  |  |  | 74 N |  |
| 2871 | REFRIG | $74 N$ | Refrigerator, $\begin{array}{r}\text { Ow } \\ 1 \\ 2 \\ 8 \\ 9\end{array}$ | Owned Or Furntshed By Someone ElseYesNoNot AnsweredNot Applicable | 33 |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

[^73]

| REF\# | NAME | SURVEYS | DESCRIPTION |  | PAGE ON | QUESTIONNAIRE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2883 | FREEZ | 74N | Separate Freezer, Owned Or Furnished By Someone Else |  | $\frac{74 N}{33}$ |  |
|  |  |  | 1 | Yes |  |  |
|  |  |  | 2 | No |  |  |
|  |  |  | 8 N | Not Answered |  |  |
|  |  |  | 9 | Not ADPiicable |  |  |
|  |  |  |  |  | 74 N |  |
| 2884 | FRZOWN | 74 N | Separate Freezer Purchased New Or Used |  | 33 |  |
|  |  |  | $\begin{aligned} & 1 \\ & 2 \end{aligned}$ | Furnished <br> Owned, Not Purchased In Last 12 Months |  |  |
|  |  |  | $3$ | New, Purchased In Last 12 Months |  |  |
|  |  |  | 4 U | Used, Purchased In Last 12 Months |  |  |
|  |  |  | $\begin{aligned} & 8 \\ & 9 \end{aligned}$ | Not Answered <br> Not Applicable |  |  |
|  |  |  |  |  | 74N |  |
| 2885 | FRZCST | $74 N$ | $\begin{array}{r} \text { Cost Of Separatt } \\ 000 \\ 050-750 \\ 998 \\ 999 \end{array}$ | e Freezer | 33 |  |
|  |  |  |  |  |  |  |
|  |  |  |  | $\$ 50$ To \$750 <br> Not Answered | - |  |
|  |  |  |  | Not Answered <br> Not Applicable |  |  |
|  |  |  |  |  | 74N |  |
| 2886 | KIT | $74 N$ | Kitchen Range, 1 <br> 2 <br> 8 <br> 9 | Owned or Furnished By Someone Else Yes | 33 |  |
|  |  |  |  | No |  |  |
|  |  |  |  | Not Answered |  |  |
|  |  |  |  | Not Applicable | $74 N$ |  |
| 2887 | KITOWN | $74 N$ | Kitchen Range $\begin{array}{r}\text { Pu } \\ 1 \\ 2 \\ 3 \\ 4 \\ 4 \\ 8 \\ 9\end{array}$ | Urchased New Or Used | 33 |  |
|  |  |  |  | Furnished |  |  |
|  |  |  |  | Owned, Not Purchased In Last 12 Months |  |  |
|  |  |  |  | New, Purchased In Last 12 Months |  |  |
|  |  |  |  | Used. Purchased In Last 12 Months |  |  |
|  |  |  |  | Not Answered <br> Not Applicable |  | - |
|  |  |  |  | Not Applicabie | 74 N |  |
| 2888 | KITCST | 74N | Cost Of Kitchen | Range | 33 |  |
|  |  |  |  | Cost Not Reported |  |  |
|  |  |  |  | \$50 To \$750 |  |  |
|  |  |  |  | Not Answered |  |  |
|  |  |  |  | Not Applicable |  |  |

## Light Wells

Horeses more than two rooms deep frequently have light wells (1) provide both light and ventilation to the interior spaces. Priperly designed, light wells can serve as thermal chimneys. Jrawing air through the house. Painting them white will increase the amount of light reaching the bottom of the shaft Light wells are most commonly found in row houses.


James F. D. Lanier Housc. Indian (1860-4). The sairwell senve as an inverior lighrwell, providing light down throwgh the center of the howse. It is ii br a sonalt stryight is the cupole.

## Chapter 1

## ERRORS IN AHS DATA

As you may know a sample survey usually differs from the rest of the country in small random ways. These random differences are called sampling errors, and will be discussed in Section 2.0. However, first we will discuss nonsampling errors in the AHS, which are often larger.

To summarize both kinds of errors, you should probably assume that any percentage may be off by at least plus or minus 2 percentage points (more on some variables). If the percentage is calculated from less than 2,000 cases, the error may be even larger, and you should use Tables $1-4$ and $1-5$ to find it.

When the AHS shows an actual number of households, not a percent, it may be off by plus or minus 2 percent of the whole sample. For example, the 1.3 million U.S. homes without kitchens in 1983 may be off by 1.8 million ( 2 percent of the U.S. housing stock), and the 1,900 homes without kitchens in Washington, D.C. may be off by 5,600 (2 percent of the D.C. housing stock). These are very rough judgments, and other researchers may assert more or less overall error.

### 1.0 NONSAMPLING ERRORS

Nonsampling errors come from four sources.
Interviewer and Respondent Errors. These errors are due to misunderstandings, people not knowing the answers, or not wanting to give them. Re-interviews and comparisons with other data measure this type of error. Reinterviews show that from a few percent to over half the people change their answers when re-asked the same question a few weeks later. These measurements are discussed in Sections 1.1 and 1.2.

Omissions. Omissions from the sample design are hard to measure but are thought to equal about 6 percent of the country's homes in 1980. Omissions are discussed in Section 1.3. Occupants of the omitted homes tend to have lower income than average. Weights are adjusted to account for about two thirds of these omissions, but this is an imperfect solution. Section 1.3 describes the omissions.

Unanswered Questions. When people in the sample are not interviewed or omit some answers, the AHS assumes they are like people who do answer. This is probably wrong, and the error is unmeasured. About 5 percent of the sample each year is not interviewed (besides the 6 percent omitted from the sample, mentioned above). Chapter 2 discusses how the AHS adjusts weights for them. Further refusals, on individual questions, range up to about 15 percent on wages, and even 30 percent on business and farm income when those were separate question in 1974-83. The Sample Status section describes allocations for these answered questions, and the Directory reports the missing answers on every question in every survey.

Processing Errors. Processing errors can occur at places that use the data, and we have no way to measure these. Processing errors at Census include programming mistakes, and mistakes in tracking or keying the data. Programming mistakes are removed when they are found, and appear to be rare. Keying errors are measured regularly and average one in 10,000 numbers.

### 1.1 Discrepancies in People's Answers in the AHS.

People who do not understand questions, answer wrongly, or are recorded inaccurately by the interviewer, can lead to errors in the data. Therefore, Census conducts periodic studies to determine the extent of the problem. Recently, the answers to selected questions provided by a sample of 6,268 households to the 1987 National Survey were compared to the answers provided by the same respondents in 1985. Households with different answers in both years were asked during the 1987 interview to explain the discrepancies. Table 1.1A below presents the results of the study.

Besides that two year comparison of 1985 and 1987, Census conducts a short second interview within four weeks of the first, at two thousand or so units in each survey. By telephone, an experienced interviewer tries to talk to the same respondent who talked to the first interviewer. Different answers imply that someone made a mistake in at least one of the interviews. However, people who give the wrong answer both times cannot be measured. Table 1-1B shows the reason for discrepancies found in each reinterview for the 1985 and 1986 metro surveys. Table 1-1C shows the rate of discrepancies, though not the reasons, for a much longer list of variables, for many different years, so their importance for your work can be judged. For example, the first line shows different reporting of tenure between the original interview and the reinterview: One percent of all households changed tenure. In particular, one percent of the owners were re-classified as renters, and 2 percent of the renters were re-classified as owners. The two interviews asked about tenure within four weeks of each other, so an actual change in tenure would be rare. The differences may be simple misunderstandings. They may also be ambiguous cases (such as a property loaned by a relative, which should be called rental).

The reinterviews measure some of the error, but they do not catch people who answer both questions wrong. Also, it is unlikely that errors in different directions cancel. For example with a variable like kitchens, 99 percent of households have kitchens, so even a very small proportion who misunderstand the question, or give a wrong answer can greatly increase the number who appear to lack kitchens. For any rare items, like kitchens, even a small error can create substantial over-estimates, and the following errors are not always small.

Table 1.0
UNITS OMITTED FROM SAMPLE OR NOT ANSWERING 85 N AHS All These Are Adjusted for in Weight

[^74]|  | OCCUPIED |  |
| :---: | :---: | :---: |
| Blacks 8 |  |  |
| $\frac{\text { Total }}{8 \%}$ | $\frac{\text { Hispanics }}{16 \%}$ |  |
| $22 \%$ | $31 \%$ |  |
| $33 \%$ | $36 \%$ |  |


| VACANT |  |  |
| :---: | :---: | :---: |
| For Rent* | Year Round | Seasonal |
| -30\% | 36 | $30 \%$ |
| -138 | 138 | 41\% |
| NA | 24\% | 52\% |

* In this column, AHS has over-coverage, more units than the control total.

Source: Comparison of variables PWT and WT

```
            Table I.lA
Discrepancies Found Between 1985 and 1987 Out of 6268 Households Examined
```

TENURE

|  | Reason |
| :--- | ---: |
|  | 21 |
| Purchased since 1985 | 4 |
| SOLD, now renting | 1 |
| Began eharging rent since 1985 | 2 |
| Stopped charging rent since 1985 | 2 |
| 1985 answer wrong | 42 |
| 1987 answer wrong | 41 |
| Other | $\frac{38}{149}$ |

BASEMENT
Reason
$\begin{array}{ll}\text { Built under house } & 3 \\ \text { Old basement filled in } & 1\end{array}$
House is split-ievel, don't
know what to call it
Have a partial basement, don'†
know what to call it
Walkout basement, don' +
know what to call it ${ }^{+}$
Shallow basement, don't know
what to call it
2
1985 answer wrong 305
1987 answer wrong 349
Other
$\frac{60}{755}$

## BEDROOM

| ( | Reason |  |
| :---: | :---: | :---: |
| Another room converted | 144 |  |
| Addition added | 34 |  |
| Bedroom now used for something else | 219 |  |
| Part of house/apt. merged | 4 |  |
| Attic or basement finished | 19 |  |
| 1985 answer wrong | 127 |  |
| 1987 answer wrong | 164 |  |
| Other | $\frac{61}{772}$ |  |
| BATHROOM | 1st | 2nd |
|  | Reason | Reason |
| Half converted to full | 15 | 0 |
| Added in addition | 52 | 0 |
| Space converted | 7 | 0 |
| Some/all fixtures removed | 5 | 0 |
| Destroyed in merger | 0 | 0 |
| 1985 answer included half bathrooms | 6 | 1 |
| 1987 answer included half bathrooms | 6 | 0 |
| 1985 answer wrong | 253 | 4 |
| 1987 answer wrong | 152 | 1 |
| Other | 29 | 2 |
| Refused | 1 |  |
|  | 526 | 8 |

FUEL


RENT

$$
\frac{\text { Pd Monthly }}{1 \mathrm{st}} \text { 2nd Yearly }
$$

Major alterations/

| improvements |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Conversion or merger <br> changed size of unit <br> Disaster/partial demolition | 6 | 0 | 1 | 0 |
| changed size of unit | 0 | 0 | 0 | 0 |
| No longer rent controlled | 0 | 0 | 0 | 0 |
| Now rent controlled | 1 | 0 | 0 | 0 |
| No longer subsidized | 1 | 0 | 0 | 0 |
| Now subsidized | 1 | 0 | 0 | 0 |
| Owner raised/lowered rent | 6 | 0 | 0 | 0 |
| 1985 answer wrong | 76 | 0 | 5 | 0 |
| 1987 answer wrong | 10 | 5 | 4 | 1 |
| Other | 33 | 5 | 4 | 1 |
| Refused | $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{1}{18}$ | $\frac{0}{4}$ |


| VALUE | Ist <br> Reason | 2nd <br> Reason |
| :--- | ---: | ---: |
| Major alterations/improvements | 89 | 13 |
| Disaster/demolition | 0 | 1 |
| Sold/purchased land | 3 | 0 |
| Area more developed | 68 | 23 |
| Area had major disaster | 3 | 1 |
| Changes in the economy | 253 | 54 |
| Rezoning | 4 | 1 |
| 1985 answer wrong | 296 | 7 |
| 1987 answer wrong | 77 | 4 |
| Other | 190 | 25 |
| Refused | $\frac{8}{991}$ | $\frac{1}{130}$ |

Table 1-18
Discrepancies Found during Reinterviews for the 1985 and 1986 Metropolitan Survey (Holes/Cracks)

| 1985 |  | 1986 |  |
| :---: | :---: | :---: | :---: |
| Same | Different | Same | Different |
| Respondent | Respondent | Respondent | Respondent |

Occupied Units

| Number of interviews | 1,194 | 160 | 1,801 | 343 |
| :--- | :---: | :---: | :---: | :---: |
| Number of discrepancies | 74 | 14 | 65 | 10 |
| Percent | $6.2 \%$ | $8.8 \%$ | $3.6 \%$ | $2.9 \%$ |

## Reasons Stated by Respondent



## Reasons Stated by Respondent

Holes/Cracks fixed/approved since original
interview
Respondent not sure of situation 2
Original response correct 2
No reason given 2
Other reasons 4
Different respondent
3

Table 1-iC
Differences Found During Re-Interview, by Original Answer

|  | All Units | Owners | Renters | Vacant | Survey | Variable |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Different tenure <br> Different occupied/vacant status | $\begin{aligned} & 1 \% \\ & 3 \end{aligned}$ | $\frac{1 \%}{2}$ | ${ }_{4}^{2 \mathscr{}}$ | $\begin{aligned} & N A \\ & 4 \end{aligned}$ | $\begin{aligned} & 8 \mathrm{~N} \\ & 8 \mathrm{~N} \end{aligned}$ | TENURE ISTATUS |
| Different unit visited | . 4 |  |  |  | 81 N | NA |
| Different unit visited | . 2 |  |  |  | 78 N | NA |
| Different household composition | 1.0 |  |  |  | 81 N | NA |
| Different household composition | 1.5 |  |  |  | 78 N | NA |
| Different birthdate | 6 |  |  |  | 78N | zage |
| Different age | 5 |  |  |  | 78N | ZAGE |
| Different move date | 3 |  |  |  | 78N | MOVED |
|  | A11* | Yes | No | $\begin{aligned} & \text { Don't } \\ & \text { Know } \end{aligned}$ | Survey | Variable |
| Air conditioned | 6\% | 7\% | $6 \%$ |  | 80N | AIR |
| To reduce central air use: |  |  |  |  |  |  |
| Room unit | 1 | 50 | 1 |  | 80N | RaRUNT |
| Awnings | 4 | 50 | 3 |  | 80 N | RAAWNS |
| Dehumidifier | 9 | 50 | 5 |  | 80 N | RADHMD |
| Ceiling fan | 5 | 29 | 3 |  | 80 N | RACFAN |
| Attic fan | 6 | 24 | 5 |  | 80 N | RAATFN |
| Window fan | 4 | 44 | 3 |  | 80 N | RAWNFN |
| Portable fan | 15 | 25 | 12 |  | 80 N | RAPOFN |
| Nothing | 23 | 24 | 23 |  | 80 N | RANONE |
| Added wood/coal stove | 3 | 61 | 1 |  | 80 N | HAO2WS |
| Added fireplace | 1 | 67 | 1 |  | 80 N | HAOBFP |
| Added port. elec. htr . | 5 | 59 | 3 |  | 80N | HAO4EH |
| Added unvent. keo. htr. | 1 | 86 | . 3 |  | 80 N | HAOSUV |
| Added other heater | 1 | 69 | 1 |  | 80N | HA060T |
| Added no heater | 10 | 5 | 58 |  | 80 N | HAOTNO |
| Have fireplace/stove | 6 | 9 | 5 |  | 80 N | FRPL |
| Fire/stove works | 3 | 2 | 38 |  | 80N | FPLWK |
| All wood bought | 14 | 26 | 9 |  | 80 N | BUYFUL |
| Had job last week | 7 | 6 | 7 |  | 80 N | \|FJ| |
| Pub. trans. besides car | 1 | 55 | 1 |  | 80 N | PUBTR1 |
| Car besides pub. trans. | 7 | 43 | 2 |  | 80N | CARTOI |
| Same work place daily | 5 | 3 | 30 |  | 80 N | HJOB: |
| Garage or carport | 5 | 5 | 6 |  | 78 N | GARAGE |
| Piped water in building | 40 | 0 | 54 |  | 77N | WPIPED |
| Had to use extra heat sources | 8\% | 44\% | 5\% |  | 77N | HADDL |
| Had to use extra heat sources | 9 | 61 | 5 |  | 76N | HADDL |
| Heating breakdown | 6 | 54 | 4 |  | 77N | I FCOLD |
| Heating breakdown | 5 | 40 | 2 |  | 76 N | IFCOLD |
| Closed unheatable rooms | 5 | 47 | 3 |  | 77N | 1 FCLSD |
| closed unheatable rooms | 4 | 60 | 2 |  | 76N | 1 FCLSD |
| Interior open cracks/holes | 5 | 49 | 2 |  | 77N | CRACKS |
| Interior open cracks/holes | 5 | 51 | 3 |  | 76N | CRACKS |
| Holes in floors | 2 | 35 | 1 |  | 77 N | HOLES |
| Holes in floors | 2 | 58 | 1 |  | 76N | HOLES |
| Seen mice or rats | 9 | 40 | 4 |  | 76N | Rats |
| Basement | 5 | 5 | 4 |  | 76N | CELLAR |
| Basement leak | 15 | 27 | 10 | 38 | 76 N | BLEAK |
| Electric plug in every room | 3 | 2 | 49 |  | 76N | PLUGS |

[^75]Differences Found During Re-Interview, by Original Answer
All wiring concealed
Attic or roof insulation
Thru other bedroom to bath
Thru bedroom to other room
13+ shares bedrm w/2 others
Blown fuses
Garbage collection
Mobile home loans
Mortgage
Water stopped $6+$ hours
Roof leaked in last 3 months
Roof leaked in last 3 months
Main reason for move
Number of carpool
Number of rooms
Number of bedrooms**
Number of bedrooms**
Heating breakdowns
Heating breakdowns

Cars owned or used
Cars owned or used
Cars owned or used
Trucks owned or used
Trucks owned or used
Rooms without heating ducts
Rooms without heating ducts
Blown fuses


[^76]|  | AlI | Have <br> Cond. | Do Not | Don' $\dagger$ Know | All** with Cond. | No Bother | Lit+le Bother | Much Bother | Want Move | Survey | Variable |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Street noise | 19 | 32 | 14 |  | 5 | 5 | 3 | 11 | 10 | 77 N | STRN |
| Heavy traffic | 16 | 27 | 12 |  |  |  |  |  |  | 77 N | TRAF |
| Streets need repair | 15 | 44 | 8 |  |  |  |  |  |  | 77N | ROAD |
| Snow blocks road | 12 | 48 | 7 |  |  |  |  |  |  | 77 N | SNOW |
| Poor street lighting | 17 | 29 | 13 |  |  |  |  |  |  | 77N | STRL |
| Neighborhood crime | 12 | 41 | 6 |  |  |  |  |  |  | 77 N | CRIME |
| Littered streets/lots | 13 | 48 | 6 |  |  |  |  |  |  | 77 N | JUNK |
| Boarded/abandoned bldgs | 5 | 31 | 3 |  |  |  |  |  |  | 77 N | ABAN |
| Rundown occupied homes | 8 | 45 | 5 |  |  |  |  |  |  | 77N | DUMP |
| Non-residential act. | 18 | 39 | 14 |  |  |  |  |  |  | 77N | NONRES |
| Odors | 8 | 49 | 4 |  |  |  |  |  |  | 77N | ODOR |
| Plane noise | 13 | 29 | 10 |  |  |  |  |  |  | 77 N | AIRN |
| Unsatis. public trans. | 28 | 31 | 20 | 61 |  |  |  |  |  | 74N | TRN |
| Unsatisfactory schools | 14 | 42 | 7 | 50 |  |  |  |  |  | 77N | SCH |
| Neighborhood shopping | 13 | 43 | 8 | 100 |  |  |  |  |  | 77N | SHP |
| Police protection | 85 | 50 | 6 | 68 |  |  |  |  |  | 77N | FUZZ |
| Recreation facility | 24 | 43 | 14 | 65 |  |  |  |  |  | 77N | RECR |
| Hospitals/clinics | 18 | 48 | 11 | 61 |  |  |  |  |  | 77 N | HOSP |



[^77]|  | A11 | Car | Truck | Van | Survey | Variable |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Commute in | 6 | 3 | 14 | 48 | 80N | VEHCL 1 |


|  | All | Drive alone | Pool | Bus | Subway | RR | Taxi | Mcyc | Bike | Walks | Horse | Other | Survey | Variable |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Commute by | 10 | 5 | 18 | 23 | 19 | 44 | 0 | 27 | 18 | 21 | 26 | 100 | 80N | TRANT |


|  | All | Irreg hours | $\begin{aligned} & \text { Irreg } \\ & \text { place } \\ & \hline \end{aligned}$ | Need car | Know no one | Like privacy | $\begin{gathered} \text { No } \\ \text { detour } \end{gathered}$ | $\begin{gathered} \mathrm{No} \\ \text { waiting } \\ \hline \end{gathered}$ | Emer/ o'time | Mistrust other drivers | Other | Survey | Variables |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Why drive alone | 52 | 41 | 67 | 54 | 39 | 71 | 84 | 86 | 94 | 75 | 77 | 80N | ALONE 1 |


|  | All | Prefer car | Far fm. work | Slow | Bad Schedule | No pub trans | Far fm home | Cost | Need <br> car | Handi- cap | Other | Survey | Variables |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Why not pub trans | 43 | 65 | 80 | 82 | 76 | 22 | 89 | 67 | 53 | 0 | 77 | 80N | NOPUB1 |


|  | All | $\begin{gathered} \text { No } \\ \text { Iicense } \\ \hline \end{gathered}$ | No car | Cheap | Parking | Driving strain | Fast | Other | Survey | Variables |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Why use pub trans | 33 | 0 | 20 | 21 | 75 | 100 | $71^{\circ}$ | 50 | 80N | WMEANI |


|  | All | Diff. rooms | 1 Bathrm | 112w/0 T1t | 112W/ TIt | 2 | Over 2 | Survey | Variable |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of bathrms | 11 | 7 | 3 | 83 | 20 | 15 | 20 | 77N | BATHS |


|  | All | System | Well | Other | Survey | Variable |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Water source | 2 | 1 | 3 | 13 | 78N | WATER |
|  | All | System | Septic Privy | Other | Survey | Variable |
| Sewage disposal | 2 | 1 | 4 | 100 | 78N | SEWDIS |
|  | All* | Everywhere | Some | None | Survey | Variable |
| Storm windows Storm doors | $\begin{aligned} & 12 \% \\ & 15 \end{aligned}$ | $10 \%$ 11 | 37\% | $\begin{aligned} & 9 \% \\ & 9 \end{aligned}$ | $76 N$ $76 N$ | $\begin{aligned} & \text { STORM } \\ & \text { STORM } \end{aligned}$ |
|  | All | In 1 Bedrm | In 2 Bedrms | No | Survey | Variable |
| 3 people/bedroom | 3 | 21 | 67 | 1 | 76N | IF38ED |


| All | Year round | Migratory | Summer only | $\begin{array}{cc} \text { Winter } & 0 \\ \text { only } & \text { Se } \end{array}$ | Other Seasonal | Survey | Variaoles |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Different seasonality | 6 | 67 | 33 | NA | 0 | 80 N | VACANCY |
|  | Reg. sale | $\begin{array}{ll}\text { Sale } & \text { Sale } \\ \text { condo } & \text { coop }\end{array}$ | Not occ rented | $\begin{aligned} & \text { pied Occas. } \\ & \text { sold use } \end{aligned}$ | Other | Survey | Variables |
| Reason for vacancy 3139 | 6 | 33 NA | 67 | $50 \quad 35$ | 25 | 80 N | vacancy |
|  | Al1. | Here | Else | here S | Survey | Variables |  |
| Preferred area in 5 years | 20 | 16 |  | 27 | 80 N | WHRIN5 |  |
|  | All households with any condition on orig. or re-interview |  |  | $\begin{gathered} \text { Have } \\ \text { this } \\ \text { condition } \\ \hline \end{gathered}$ | Don't | Survey | Variable |
| Asthma |  | 8 |  | 65 | 3 | 78 N | ASTHMA |
| Tuberculosis |  | 0 |  | 50 | 0 | 78 N | TUBERC |
| Chronic bronchitis |  | 4 |  | 58 | 2 | 78 N | BRONCH |
| Emphysema |  | 2 |  | 47 | 1 | 78 N | EMPHY |
| Other lung problem |  | 3 |  | 74 | 1 | 78 N | LUNGO |
| Heart attack |  | 5 |  | 66 | 2 | 78 N | ATTACK |
| Other heart trouble |  | 10 |  | 69 | 4 | 78N | HEARTO |
| Stroke |  | 1 |  | 42 | 1 | 78 N | STROKE |
| Arthritis or rheumatism |  | 26 |  | 55 | 16 | 78 N | ARTH |
| Convulsions or epileptic seizures |  | 1 |  | 64 | 1 | 78 N | EPILEP |
| Cerebral palsy |  | 0 |  | 100 | 0 | 78 N | PALSY |
| Deat of serious trouble hearing |  | 6 |  | 68 | 3 | 78 N | DEAF |
| Blind or serious trouble seeing |  | 6 |  | 80 | 2 | 78N | 8LIND |
| Missing legs, feet or toes |  | 0 |  | 50 | 0 | 78N | LEGSM |
| Missing arms, hands or fingers |  | 1 |  | 67 | 0 | 78 N | ARMSM |
| Chronic limb stiffness or deformity |  | 4 |  | 76 | 2 | 78 N | LIMEST |
| Chronic back stiffness or deformity |  | 4 |  | 88 | 2 | 78 N | BACKST |
| Other trouble with back or spine |  | 11 |  | 85 | 4 | 78 N | BACKO |
| Paralysis |  | 7 |  | 71 | 0 | 78 N | PARAL |
| Other conditions |  | 17 |  | 76 | 9 | 78N | CONDOR |
|  | 1 problem 2 |  |  | problems 3 | $3+$ problems | Survey | Variable |
| Number of conditions <br> Number of difficulties | $\begin{aligned} & 73 \\ & 89 \end{aligned}$ | $\begin{aligned} & 60 \\ & 81 \end{aligned}$ |  | $\begin{array}{r} 79 \\ 100 \end{array}$ | 93 | $\begin{array}{r} 78 \mathrm{~N} \\ 78 \mathrm{~N} \end{array}$ | $\begin{aligned} & \text { NA } \\ & \text { NA } \end{aligned}$ |
|  | All households with any condition on orig. or re-interview |  |  | $\begin{gathered} \text { Have } \\ \text { this } \\ \text { difficulty } \\ \hline \end{gathered}$ | Don't | Survey | Variable |
| Hard to go in/out of house | 31 |  |  | 65 | 21 | 78N | INOUT |
| Hard to get around inside | 24 |  |  | . 92 | 18 | 78N | AROUND |
| Hard to go up/down stairs |  |  |  | 79 | 49 | 78 N | UPDOWN |
| Hard to use bathroom/kitchen/etc. | 14 |  |  | 100 | 11 | 78N | USEQUI |

### 1.2 Comparison with Other Data

In addition to re-interviews, which repeat the survey's own questions in order to find errors, we can compare some AHS items to more accurate data from other sources. Three comparisons are shown here, covering utility costs and income. We are not aware of comparisons of other subjects. The data below suggest that AHS utility costs are a little high, and incomes a little low. Therefore rent to income ratios are also too high in the AHS, on average. The details of these comparisons are discussed below.

Average Annual Costs


Source: Energy Information Administration, Consumption Expenditures, April 1981 through March 1982, Part 1: National Data, Washington, Government Printing Office, 1983 (and earlier editions), and HUD special tabulations.

AHS reports higher utility costs than the Residential Energy Consumption Survey (RECS, sponsored by the Department of Energy). AHS figures come from household interviews; RECS energy figures come from utility company records, so they are more accurate than AHS. A plausible reason for the higher AHS figures is that households are more concerned about and therefore overemphasize high cost months when they mentally average their bills for the AHS interviewer.

The discrepancy is fairly consistent over time, and data not presented here show it is also consistent for single family detached homes. Studies do show that 1980 Census data are even more over-stated, and vary greatly from area to area.

Independent estimates of income from GNP accounts, the Social Security Administration, the Veterans Administration, and so forth are shown in Table 1-2 AHS figures are lower than the independent estimates for total income and for every category other than self-employment income. The Current Population Survey (CPS) is done by the Census Bureau for the Labor Department. It is also low but comes closer to the independent estimates. When income is asked in CPS it is a major part of the questionnaire, while it is only a small part of the AHS questionnaire.

Table 1-2
Money Income of All U.S. Households Billions of Dollars

|  | Independent Estimate | CPS | AHS | AHS as \% of Ind. Est. |
| :---: | :---: | :---: | :---: | :---: |
| Total money income | \$2,403* | \$2,201 | \$2,073 | 86 |
| Wages or salaries | 1,632 | 1,161 | 1,505 | 92 |
| Interest | 221 | 99 | 67 | 30 |
| Soc. Sec., RR ret. | 155 | 142 | 139 | 90 |
| Nonfarm self-employment | 104 | 120 | 142 | 137 |
| Dividends | 60 | 27 | 38\%* | 63 |
| Estates \& trusts | NA | 7 |  |  |
| Fed \& mil retirement | 35 | 32 | 33 | 94 |
| State \& local gov't ret. | 21 | 13 |  |  |
| Private pensions \& anna. | 55 | 35 | 27 | 49 |
| Net rent \& royalties | 34 | 17 | 23** | 68 |
| Unemployment comp | 26 | 20 | 18 | 69 |
| AFDC | 14 | 11 |  |  |
| SSI | 9 | 8 | 17 | 189 |
| Other public assistance | NA | 2 |  |  |
| Workers' comp | 14 | 7 | 5 | 36 |
| Veterans' payments | 14 | 9 | 13** | 93 |
| Farm self-employment | 9 | 10 | 25 | 278 |
| Alimony \& child support | NA | 8 | 8 |  |
| Reg. contrib. from people | NA | 5 | 5 |  |
| Other money income | NA | 14 | 9 |  |
| 12 months ending | 12/83 | 12/83 | 10/83 |  |

[^78]In addition, Census Bureau staff have compared the 1973 CPS to individual tax returns from the same people, using social security numbers to match the data. Some people of course did not submit tax returns, usually because their income was too low. Figure $1-2$ shows people who appeared in both CPS and IRS records.

Figure 1-2
Distribution of Tax Filers, at Each Income, by Difference between IRS and CPS Wages


Source: Drawn from data in: Roger A. Herriot and Emmett F. Spiers, "Measuring the Impact on Income Statistics of. Reporting Differences between the Current Population Survey and Administrative Sources" in Social Security Administration, Studies from Interagency Data Linkages Report 11, SSA, 1980, Table 6.

The large area in the middle of the graph represents families where IRS data are within 5 percent of CPS. This area only covers about half the families. For other families, IRS information is progressively farther from CPS. The bands at the top are wider than those at the bottom, reflecting more families where the IRS is above the CPS than below. There is reason to believe that IRS data are more accurate than CPS, because taxpayers used their W-2 forms when submitting to IRS, and there are penalties for mistakes. Therefore, each income category in CPS (or AHS) data includes families whose incomes are really higher or lower than that category.

The study was done with 1972 income; current data would be expected to be similar. AHS is similar to CPS, so the findings probably apply to AHS also. The graph covers wages, salaries, tips, and overtime reported to CPS. Some people do not tell CPS (or AHS) what their wages were. Their wages are allocated on the tape, and would be farther from IRS than most of the cases shown here.

### 1.3 Omissions from the AHS Sample Design

The sample design is fully discussed in Chapter 3. This section just summarizes the main gaps, so if you are studying one of these areas, you can be aware of the AHS' weakness.

Some new construction units are missed. The sample of building permits is selected several months before the end of the survey, so the most recent spring and summer of building permits are missed in each national survey. Summer and fall are missed in each SMSA survey. The total is adjusted by weighting, but detailed characteristics for the most recent year may well be wrong. New constructions occuring just before the most recent Census may also be missed, since they can be accidentally screened out of the sample.

Other new housing is also hard to sample: conversions from nonresidential buildings, new locations for mobile homes, etc. Finally there are three types of illegal housing listed at the bottom of the table. Some people hide from Census interviewer if their situation is illegal, even though the survey is confidential.

Table 1-3
Types of Homes Covered Poorly by AHS

New homes built just before survey was over or just before Census was taken

Surveys with Problem National SMSA

Homes created in non-residential buildings after 3/70

All
All

Homes created in already-residential buildings after 3/70

Mobile home parks founded after 3/70
Mobile homes outside parks and installed after 3/70 or vacant then

73N-83N Al1

|  | All but 76S-81s |
| :---: | :---: |
| 73N-75N | All but |
| 77N-80N | 76s-78S |
| 73N-83N | All |
| A11 | All |
| A11 | All |
| All | All |
| All | All |
| All | All |
| All | All |

### 2.0 SAMPLING ERROR

The AHS does not cover every home in the United States. A large random sample was selected, and it should be representative, but there is always a chance that the people in the sample could be a little different from the average.

### 2.1 Error Tables

Tables $1-4$ and $1-5$ show by how much the AHS sample may differ from the rest of the country.

Table 1-4

| When the national AHS shows one of these numbers: | Then the odds are 95 out of 100 that the sampling error in the whole country is within plus or minus: |  |
| :---: | :---: | :---: |
| 0 | 5,000 | 4,000 |
| 25,000 | 16,000 | 13,000 |
| 100,000 | 31,000 | 27,000 |
| 250,000 | 49,000 | 42,000 |
| 500,000 | 70,000 | 60,000 |
| 1,000,000 | 98,000 | 85,000 |
| 5,000,000 | 215,000 | 185,000 |
| 10,000,000 | 295,000 | 254,000 |
| 25,000,000 | 423,000 | 364,000 |
| 50,000,000 | 477,000 | 410,000 |
|  | Use this column for numbers on: | Use this column for all other topics. |
|  | Hispanics |  |
|  | Mobile Homes |  |
|  | Built since 1970 |  |
|  | Incomplete kitchen or plumbing |  |
|  | Zero bedrooms or bathrooms |  |

Note: For mobile homes in the South Region, multiply these national errors on mobile homes by 1.3 . For mobile homes in the West, multiply by 1.8. For other regional numbers, use the figures in the table without ad justment.

For example, if the AHS shows 100,000 units of a certain type, then this table shows that the sampling error can be as large as 31,000 . Therefore, the true number of units of this type can be anywhere between 69,000 and 131,000 . It should be noted that the right hand column applies to most topics. Also, remember that errors caused by the sample are in addition to other errors such as the errors found by re-interviews, as discussed above.

Table 1-5 shows sampling errors when a percentage is calculated from the national AHS:

Table 1-5

| When the base of the percent is: | and AHS shows that a category is... |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2\% or $98 \%$ | 10\% or $90 \%$ | 25\% or $75 \%$ | 50\% |
|  | ...of the base, then the odds are 95 out of 100 that the sampling error is within plus or minus (in percentage points): |  |  |  |
| 5,000 | 53.6 | 53.6 | 53.6 | 49.9 |
| 10,000 | 31.1 | 31.1 | 36.8 | 42.5 |
| 25,000 | 13.7 | 16.1 | 23.3 | 26.9 |
| 50,000 | 7.1 | 11.4 | 16.5 | 19.0 |
| 100,000 | 3.8 | 8.1 | 11.6 | 13.4 |
| 250,000 | 2.4 | 5.1 | 7.4 | 8.5 |
| 500,000 | 1.7 | 3.6 | 5.2 | 6.0 |
| 1,000,000 | 1.2 | 2.6 | 3.7 | 4.3 |
| 2,500,000 | . 8 | 1.6 | 2.3 | 2.7 |
| 5,000,000 | . 5 | 1.1 | 1.6 | 1.9 |
| 7,500,000 | . 4 | . 9 | 1.3 | 1.6 |
| 10,000,000 | . 4 | . 8 | 1.2 | 1.3 |
| 25,000,000 | . 2 | . 5 | . 7 | . 9 |
| 50,000,000 | . 2 | . 4 | . 5 | . 6 |
| 75,000,000 | . 1 | . 3 | . 4 | . 5 |
| 90,000,000 | . 1 | . 3 | . 4 | . 4 |
|  |  |  |  |  |

Note: For the special topics listed in the last table, multiply these errors by 1.2. For mobile homes in the South Region, multiply by 1.5. For mobile homes in the West, multiply by 2.

For example, suppose the AHS shows $9,000,000$ black households, and 45.0 percent of them own their own homes. To measure the error in this percent, we go to ' $10,000,000$ ' and ' $50 \%$ ' in the table, and find an error of '1.3'. This means the true percent may be 45.0 plus or minus 1.3 , so black ownership is likely to be between 43.7 and 46.3 percent.

The tables above measure sampling errors in national AHS surveys. The sampling errors in metropolitan surveys are smaller, but vary widely from place to place. When you obtain a number from a metropolitan survey, find the square root of that number, multiply this square root by the factor in Table 1-6, and you will have the sampling error. (Error = (factor from Table 1-6) $x$ number from AHS ). For example the factor for Albany in 1980 is 16. If the Albany area had 40,000 homes of a particular type in 1980 , the square root is 200 , multiplied by 16 is 3,200 , so the chances are 95 out of 100 that the true number is between 36,800 and 43,200 .

When you obtain a percent (P) from a metropolitan survey, use the following formula:

```
Error = (factor from Table 1-6) x
```

Taole i-6
METROPOLITAN ERROR FACTORS


For example if the AHS shows 96,000 renters in the Albany area, and 14.1 percent of them rent single family homes, the error is:

or 1.8. The true percent is likely to be between 12.3 and 15.9.
This approach will also give more accuracy for national errors than Tables $1-4$ and $1-5$ above. Therefore, factors for various groups are provided in Table 1-7.

Table 1-7
National Error Factors for Selected Groups

Survey Year
National Tapes

| U.S.: Mobile Homes, NCPK*, Hispanics | 76 | 87 | 90 | 92 | 95 | 104 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| U.S.: Other | 87 | 86 | 75 | 76 | 82 | 89 |
| South: Mobile Homes |  |  |  | 126 | 138 | 131 |
| West: Mobile Homes |  |  | 166 | 182 | 173 |  |
| NE, MW: Mobile Homes, NE, MW, West: NCPK |  |  |  | 100 | 110 | 104 |
| Regions: Other | NA | NA | NA | NA | 85 | 92 |

* NCPK means New Construction, or incomplete Plumbing or Kitchens, except in 73-76, when it omits new construction. In 73 it also includes Blacks.

Note: Each metropolitan factor is about 1.96 times the square root of the average weight. National factors are larger than that, because of the clustered sample.

These tables of errors may meet the needs of most users. Sections 2.2 and 2.3 present two other methods for statisticians and economerricians, if they need more refined estimates of the standard error and confidence intervals.

### 2.2 Statistical Tests From Computer Programs

Many computer packages calculate statistical tests and confidence intervals for you. First, it is important to be sure your computer package uses the correct sample size in calculating statistics. Some packages, including BMDP, SAS and SPSS, wrongly treat the weighted count as a sample size; for example the package might assume there were 85 million households in the 1983

National AHS, rather than the actual count of 61,000 occupied homes. To tell if your package makes this mistake, you should divide all weights by the average weight. If this changes the standard errors, there is a mistake, and the ones after the division should be used.

Second, the packages usually assume simple random sampling. Due to the stratification and clustering of the AHS design, confidence intervals from statistical packages are too small. Fortunately there is also a simple adjustment for the sample design.

The "design effect" is a number which is different for different variables, and is shown in Table 1-8. Any time you obtain a standard error from the computer, multiply it by the square root of the design effect. Alternatively you can correct standard errors: Find the largest design effect that applied to your analysis, and divide all weights by this number (i.e., take the original weight, divided by the average weight, then divided again by the design effect). This computes an effective sample size that adjusts for the complex AHS design. This calculation will give good values although it will slightly over-estimate significance tests with regressions. The package will assume degrees of freedom equal to the effective sample size minus the number of variables, while the actual degrees of freedom are about 50 , based on how the design effect was calculated. (This discussion is indebted to Appendix 4 of Procedural Handbook: 1981-82 Mathematics and Citizenship/Social Studies Assessments, undated, from the National Assessment of Educational Progress, ETC, Princeton, NJ 08541-6710, (800) 223-0267 that cites several articles, including Kish and Frankel, "Inference from Complex Samples," J. of the Roy. Stat. Soc. Series B v.36, 1974, and other articles.)

The following rules may also help you:
The 95 percent confidence interval for the proportion $P$ is:

$$
P \pm\left[\left.\left.\right|_{-} ^{-} 1.96 \times\left.\left.\right|_{-} ^{-} \frac{P(1-P)}{\text { sample size }-1}\right|_{-} ^{1 / 2} \times\left.\quad(\text { design effect })^{1 / 2}\right|_{-} \right\rvert\,\right.
$$

The 95 percent confidence interval for the difference between two proportions $P$ and $R$ is:

$$
\left.P-R \pm\left[1.96 \times\left[\frac{P(1-P) \times \text { design effect for } P}{P \text { sample size }-1}+\frac{R(1-R) \times \text { design effect for } R}{R \text { sample size }-1}\right]_{-}^{-}\right]_{-}^{1 / 2}\right]_{-}^{-}
$$

The 95 percent confidence interval for a mean $M$ is:

$$
M \pm\left[\left.\right|_{-} ^{-} 1.96 \times \text { standard deviation } \times\left.\left.\left.\right|_{-} ^{-} \frac{\text { design effect }}{\text { sample size }}\right|_{-} ^{1 / 2^{-}}\right|_{-} ^{-}\right.
$$

The 95 percent confidence interval for the difference between two means $L$ and M is:
$L-M \pm \int_{-}^{-} 1.96 \times\left.\right|_{-} ^{-}$std. dev. ${ }^{2} \times \frac{L \text { design effect }}{\text { L sample size }}+M$ std. dev. ${ }^{2} \times\left.\left.\left.\frac{M \text { design effect }}{M \text { sample size }}\right|_{-} ^{1 / 2^{-}}\right|_{-}\right|_{-}$

For a Chi squared test of independence you should divide the usual chi squared statistic by the design effect.

Table 1-8
Design Effects for National and Regional Standard Errors

|  | US | NE | MW | $\underline{s}$ | $\underline{W}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| incomplete Kitchen, Plumbing or Bathroom | 2.61 | 2.18 | 2.61 | 2.18 | 2.61 |
| New Construction | 2.30 | 2.58 | 2.58 | 1.88 | 2.30 |
| Mobile Home, Individual Well | 2.70 | 3.26 | 3.26 | 5.18 | 8.29 |
| Other Topics, Depending Whether Cases Are: |  |  |  |  |  |
| 0 - 9\% Rural | 1.36 | 1.25 | 1.25 | 1.25 | 1.58 |
| 10-29\% Rural (Metro Areas) | 1.63 | 1.50 | 1.50 | 1.50 | 1.89 |
| $30-49 \%$ Rural (National Averages) | 1.90 | 1.75 | 1.75 | 1.75 | 2.21 |
| $50-69 \%$ Rural | 2.17 | 2.01 | 2.01 | 2.01 | 2.52 |
| 70 - 89\% Rural (Non-Metro Areas) | 2.45 | 2.26 | 2.26 | 2.26 | 2.87 |
| $90-100 \%$ Rural | 2.72 | 2.51 | 2.51 | 2.51 | 3.15 |

Note: Design effect is the ratio of estimated variance in the AHS to variance in a simple random sample of the same size.

### 2.3 Eormal Calculation of Variances

The confidence intervals in Sections 2.1 and 2.2 are approximately right, but actual variances depend a lot on individual questions. The Census Bureau uses detailed calculations to prepare the summary tables above, and you can use these calculations yourself if you wish. The following is a modification of what Census actually does on national AHS data.

This modification is necessary to reflect the information that is available in the AHS public use file. The calculation can be done weighting the cases with either WEIGHT or PWT. Use of WEIGHT will result in a very slight overestimate of variance, but the difference is negligible. Variance calculations for the MSA surveys are not presented here; the tables of variances shown in Appendix $B$ of each published MSA report can be used.

The variance for an estimate is equal to the sum of the variance for the estimate from self-representing (SR) PSUs plus the variance for the estimate from non-self-representing (NSR) PSUs. The SR component reflects the effect of the sampling of clusters within the SR PSUs. The NSR component reflects the effects of the sampling of PSUs within the NSR strata as well as the sampling of clusters within the NSR PSUs.

## Self-Representing PSUs

The technique for the $S R$ PSUs is to group these PSUs into 46 relatively homogeneous groupings, then divide the cases in each group in half at random, prepare the estimate in each half, square the difference of these two estimates, and add up these squared differences across all 46 groupings. The process is carried out ten times and the results are averaged to get the final estimate of variance in $S R$ PSUs. The repetitions and the averaging are not strictly required. In effect they reduce the variance of the estimate of variance. The $S R$ variance component of an estimate of characteristic $X$ is calculated using the following formula:

$$
\operatorname{Var}\left(X^{\prime}\right)_{S R}=\frac{\sum_{r=1}^{10} \sum_{s=1}^{46}\left(X_{\left.r s 1^{\prime} X_{r s 2}^{\prime}\right)^{2}}^{10}\right.}{10}
$$

where: $X^{\prime}$ is the estimate of characteristic $X$,
$r$ is a subscript identifying the half-sample replications used in this variance estimation. For AHS, these half-sample replications are formed by utilizing the panel numbers assigned to the AHS cases. Panel number can be found in the 4 th digit (counting from the left) of the control number,
$s$ is the subscript identifying the groupings of socio-economically similar SR PSUs used in this variance estimation. The general class of SR PSUs can be distinguished by a code 1.0000 in AWT. Then the cases in each socio-economically similar grouping are identified by unique codes in NCLUS (codes are scattered between 1001 and 2060),
$X^{\prime}$ is the estimate of characteristic $X$ based on the AHS sample cases in ${ }^{\text {Efhe }}$ first half-sample of the rth replication in the sth group of PSUs, and
$X_{r s 2}^{\prime}$ is the estimate of characteristic $X$ based on the AHS sample cases in refe second half of the rth replication in the sth group of PSUs.

For AHS, the half-samples within each of the replications are defined as follows:

Replication 1 2 3 4 5 6 7 8 9 10

Panel Numbers Included In First Half-Sample

| $1,2,3$ | $4,5,6$ |
| :--- | ---: |
| $1,2,4$ | $3,5,6$ |
| $1,2,5$ | $3,4,6$ |
| $1,2,6$ | $3,4,5$ |
| $2,3,4$ | $1,5,6$ |
| $2,3,5$ | $1,4,6$ |
| $2,3,6$ | $1,4,5$ |
| $1,3,4$ | $2,5,6$ |
| $1,3,5$ | $2,4,6$ |
| $1,3,6$ | $2,4,5$ |

## Non-Self-Representing PSUs

The NSR variance component of an estimate of characteristic $X$ is calculated using the following formula:

$$
\begin{aligned}
\operatorname{VAR}\left(X^{\prime}\right)_{N S R}= & \left.\sum_{s=101}^{210}\right|_{-} ^{-} A_{s 3} \frac{X_{s 1}+X_{s 2}^{\prime}}{2}-\left.\left.A_{s 1} X_{s 3}^{\prime}\right|_{-} ^{-}\right|^{2} \\
& +\frac{21}{4} \underset{s=101}{210}\left(A_{s 3}\right)^{2}\left[X_{s 1}^{\prime}-X_{s 2}^{\prime}\right]^{2}
\end{aligned}
$$

where: $X^{\prime}$ is the estimate of characteristic $X$,
$s$ is a subscript identifying the pairs of strata used in the sample selection. For AHS, s goes from 101 to 210 and it can be identified by the third through fifth digits (counting from the right) of RCLUS.
s1,s2,s3--These are subscripts identifying the individual PSUs within the sth pair of strata. These subscripts can be calculated by analyzing the second digit, counting from the right, of RCLUS, in combination with AWT. The cases with "l" in this digit are in PSU sl. Other cases with the same value of $s$ and the same value of AWT as PSU sl are in PSU s2. Remaining cases with the same value of $s$ but a different value of AWT are in PSU s3. Note that this calculation depends on there always being three PSUs in each pair of strata. In instances where the third PSU sampled from the pair of strata is identical to one of the other PSUs (possible, because it was chosen independently), some cases from the PSU that was selected twice are identified as being in the "third" PSU.
$X^{\prime}$ is the estimate of characteristic $X$ based on the AHS sample cases in $\bar{S} S U(0$ of the sth NSR Random Cluster.
$X^{\prime}$ is the estimate of characteristic $X$ based on the AHS sample cases in ${ }^{\text {PPSU }} 1$ of the sth NSR Random Cluster.
$X^{\prime}$, is the estimate of the characteristic $X$ based on the AHS sample cases in PSU 2 of the sth NSR Random Cluster.

A is the value of AWT associated with AHS sample cases in PSU 0 of the sth ${ }^{\circ}$ NSR Random Cluster.

As2 is the value of AWT associated with AHS sample cases in PSU 2 of the sth NSR Random Cluster.

## Special PSUs

Five cases on the 1981-83 files are outside the normal PSUs chosen for the AHS. These cases can be used for normal estimates, but must be ignored for variance calculations. They have codes of 9999 in NCLUS, 99999 in RCLUS and 999999 in AWT. All other cases derived from the business sample fall in normal AHS PSUs, so they will be included in the calculations described above.

## WEIGHTS

### 1.0 WEIGHTS

Weights to prepare national or MSA estimates are provided on the AHS tapes and are used in preparing the numbers presented in the Census publications and custom analyses prepared by the AHSDP Project. These weights and the various adjustments used to compute the weights are discussed in detail below for the 1973 National Sample and MSA samples from 1974 through 1983. Since the Census Bureau had not finalized its definitions and computations of weights for the 1985 National Survey and upcoming MSA surveys, it was not possible to include the documentation of the new weights in this version of the Codebook. A section will be added to this Chapter and made available to users as soon as the documentation becomes available.

The variable WEIGHT is not simply the inverse of the probability of selection for each unit, but includes several adjustments, designed to adjust for random variation in the original selection of the NSR PSUs, to account for refusals and other missed interviews, and to make AHS estimates conform to Survey of Construction (SOC) estimates, Housing Vacancy Survey (HVS) estimates, and Current Population Survey (CPS) estimates. CPS estimates themselves are adjusted to independent estimates of total population, based on census counts, National Center for Health Statistics data on births and deaths, and Census Bureau estimates of net migration. These adjustments change each year, so the variable WEIGHT also changes.

The variable "pure weight," (PWT) is more appropriate than WEIGHT for longitudinal analyses. It is the inverse of the probability of selection and incorporates none of the adjustments described below. It changes only because of formal sample reductions. For example, the $7 / 97$ reduction in 1977 increased the weight of remaining units by $97 / 90$ ths. Otherwise it is invariant over time.

### 1.1 Adjustments

### 1.1.A Non-Interview Ad justment

Type A non-interviews include refusals and other situations where data should have been but were not collected. The weights of these units are set to zero, and weights of responding units are correspondingly increased by the following ratio to represent the type A noninterviews:

Interviewed units + Type A non-interviews
Interviewed units
This approach assumes that non-responding units (about 5 percent of the total) would have responded like the others. This ratio is calculated by weighting each unit at the inverse of its probability of selection. It is done separately for each of the cells in Table 1-1, in each Census region. However, if there are less than 30 cases in a cell, or if the ratio in the cell would be 1.5 or more, the cell is combined with the cell having the closest
scale value, as shown in Table 1-1. Such combinations continue until both conditions are met.

Table 1-1

NON-INTERVIEW ADJUSTMENT CELLS AND SCALE VALUES, NORTHEAST REGION
(repeated for each region)

|  | MSA |  |  | Non-MSA |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Central City of MSA | Balance Urban | Balance Rural | Urban | Rural |
| Occupied |  |  |  |  |  |
| Permit Segments | 1 | 3 | 4 | 101 | 103 |
| Area Segments |  |  |  |  |  |
| Mobile Homes | 51 | 61 | 64 | . 151 | 161 |
| Non-Mobile Homes | 21 | 31 | 34 | 121 | 131 |
| Address \& Other Segments |  |  |  |  |  |
| Mobile Homes | 50 | 60 | 63 | 150 | 160 |
| Non-Mobile Homes | 20 | 30 | 33 | 120 | 130 |
| Vacant \& URE |  |  |  |  |  |
| Permit Segments | 301 | 303 | 304 | 501 | 503 |
| Area Segments | 321 | 341 | 351 | 521 | 541 |
| Address \& Other Segments | 320 | 340 | 350 | 520 | 540 |

### 1.1.B PSU Adjustment

This adjustment is used only in NSR PSUs. It takes into account the differences that existed at the time of the 1970 Census between the sampled NSR PSUs and all other NSR PSUs. This difference arises purely from the natural variability of samples, and is adjusted by multiplying the following fraction times the inverse of the probability of selection for each unit:

1970 Census counts of housing units in all NSR areas

| 305 |  |
| :--- | :--- |
| $\sum_{i=1}$ | $\frac{1970}{}$ Census count of housing units in ith NSR PSU in sample |
| Probability of selection of ith NSR PSU |  |

It is done separately in each cell listed in Table 1-2. In 1983, the factors were recalculated using 1980 Census counts.

It might be thought that this ratio could be multiplied by the pure weight to yield an adjusted weight that would be invariant over time and would be useful for longitudinal analysis. However, the appropriate ratio for a
case depends on its tenure, which is not invariant, so the adjusted weight would not be invariant and would not be useful for longitudinal analysis.
Table 1-2

PSU ADJUSTMENT CELLS


### 1.1.C New Construction Adjustment

This adjustment is used first for units where the value of BUILT is April 1 , 1970 or later. It should be noted that units derived from the sample of building permits are forced to have a date of April 1,1970 or later. If they have an earlier date, it is changed to match the date when the current reference person moved in, unless that date is also before April 1, 1970, in which case both are arbitrarily changed to January 1974. After these edits, the weights for all units built after April 1, 1970, whether from permit samples or area samples, are adjusted by the following ratio:

Survey of Construction estimates of units built 4/1/70 or later AHS estimate of units built $4 / 1 / 70$ or later

This ratio is calculated using the inverse of the probability of selection of each unit, adjusted by the non-interview adjustment and the PSU adjustment.

Note that the denominator includes units in the current AHS sample and also cases dropped from the sample, because of demolitions, mergers, etc., as long as they were built April 1,1970 or later. The SOC data used are total construction as of the end of the interviewing period. The ratio is calculated separately in each of the cells in Table $1-3$.

Table 1-3

## NEW CONSTRUCTION ADJUSTMENT CELLS

|  | Non-Mobile Homes |
| :--- | :--- |
| Date Built | l Unit |
| April 1970 - October 1973 |  |
| November 1973 - October 1974 |  |
| November 1974 - December 1975 |  |
| January 1976 - December 1976 |  |
| January 1977 - January 1978 |  |
| February 1978 - January 1979 |  |
| February 1979 - December 1979 |  |
| January 1980 - December 1980 |  |
| January 1981 - December 1981 |  |

The above adjustment makes AHS estimates of total cumulative construction match SOC estimates. The occupied new construction units in the AHS are then counted, using these new adjusted weights. The resulting estimate of occupied new construction is subtracted from the Current Population Survey (CPS) estimate of total occupied units, to produce an estimate of occupied old units. The following ratio is then calculated:

Estimate of occupied old units
AHS estimate of occupied units built before $4 / 1 / 70$
This ratio is calculated using weights as adjusted by all previous calculations. It is done for one cell consisting of all occupied units. In 1983 the denominator of the ratio was changed to occupied units built before $4 / 1 / 80$.

The result of this procedure is that if SOC misses some newly built units (which is possible in any survey), but CPS picks them up (which is possible because CPS totals are forced to match control totals based on vital statistics registrations and migrations), then AHS considers these extra households to be living in old construction, since new construction is matched to SOC, while total units are matched to CPS.

The adjustment process so far makes total occupied units match CPS counts, but does not necessarily make types of units match. That is done by the occupied units adjustment explained below.

### 1.1.D Vacant and URE Units Adjustment

This adjustment is used only for vacant and URE units. The effect is to match Housing Vacancy Survey (HVS) data on the percent distribution of types of vacancies while preserving AHS data on the total number of vacancies. The weights resulting from the previous steps are adjusted by the following ratio:

$$
\begin{aligned}
& \text { HVS estimate of vacant and URE units in a cell } \\
& \hline \text { HVS estimate of vacant and URE units in all cells } \\
& \hline \text { AHS estimate of vacant and URE units in the cell } \\
& \hline \text { AHS estimate of vacant and URE units in all cells }
\end{aligned}
$$

This ratio is calculated using weights adjusted by all the previous calculations. It is calculated separately in each of the cells in Table 1-4. However, if there are less than 50 cases in a cell, or if the ratio for the cell would be 2.0 or greater or 0.2 or less, the cell is combined with the cell having the closest scale value, as shown in the table. Such combinations continue until both conditions are met. The HVS data used are an average of the third and fourth quarters of the calendar year.

Table 1-4

VACANT AND URE UNITS ADJUSTMENT CELLS \& SCALE VALUES
$\begin{array}{lr}\text { Year-round Vacant + UREs } & \\ \text { For Rent } & 900 \\ \text { For Sale Only } & 901 \\ \text { Other } & 903\end{array}$
Seasonal and Migratory
Vacant + UREs
(This cell should not be collapsed with any other cell)

### 1.1.E Occupied Units Adjustment

This adjustment is used only for occupied units. The weights resulting from the previous steps are adjusted by the following ratio:

Estimate of Occupied Units Based on Current Population Survey Data AHS estimate of occupied units

This ratio is calculated using weights adjusted by all the previous calculations. It is calculated separately in each of the cells in Table l-5. However, cells can be combined as described for the Vacant and URE Units Adjustment, if the conditions mentioned there are not met. The CPS data used are estimated for October, being estimated by a regression on 35 months of CPS data, ending six months after the survey.

Table 1-5
OCCUPIED UNITS ADJUSTMENT CELLS \& SCALE VALUES

|  |  | Inside MSAs |  | Outside MSAs |
| :---: | :---: | :---: | :---: | :---: |
|  |  | In Central Cities | $\qquad$ |  |
| Owner-Occupied |  |  |  |  |
| White \& Other: | Male | 10 | 40 | 90 |
|  | Female | 20 | 50 | 100 |
| Black: | Male | 210 | 240 | 290 |
|  | Female | 220 | 250 | 300 |
| Renter-Occupied |  |  |  |  |
| White \& Other: | Male | 510 | 540 | 590 |
|  | Female | 520 | 550 | 600 |
| Black: | Male | 710 | 740 | 790 |
|  | Female | 720 | 750 | 800 |

### 1.2 Iteration

After all the above adjustments are done, the New Construction Adjustment, the Vacant and URE Units Adjustment, and the Occupied Units Adjustment are repeated, using the same numerators as before, but using denominators recalculated with weights adjusted by the results of the first iteration. The end result of this process is the weight factor, WEIGHT.

### 1.3 Journey to Work Supplement

The process above produces a household weight. The composition of households in the AHS sample differs very slightly from the CPS sample, due to normal sampling variability and perhaps procedural differences. Therefore, analysis of workers in the AHS Journey to Work Supplement might differ from analysis of workers in CPS. Another step of ratio estimation was therefore used to make AHS population characteristics match CPS population characteristics. The ratio was multiplied by the household weight to obtain a personal weight, which is stored for each worker as WWTl-8. For most purposes, and certainly for any research on households, these individual weights can be ignored, but they do produce estimates of employed workers more similar to CPS estimates.

### 1.41980 Census Adjustments

The weights of the national AHS are not directly benchmarked to the 1970 or 1980 Census. They are benchmarked to CPS and HVS which in turn were benchmarked to the 1970 Census until 1980, when they were adjusted to match the 1980 Census. The AHS national data from 1973-1980 are ultimately based on the 1970 Census, and from 1981 on are based on the 1980 Census. This introduces a discontinuity in time series. The discontinuity was extensively discussed in U.S. Bureau of the Census, Current Population Reports, Series $\mathrm{P}-60$, No. 127,

Money Income and Poverty Status of Families and Persons in the United States: 1980. The publication provides data comparing the old 1970 base and the 1980 base. In order for users of AHS tapes to test the effect of the discontinuity, the variable OLDWT is present on the 1981 National file. It is adjusted to the old series of CPS and HVS estimates, those based on the 1970 Census, and thus is comparable with WEIGHT in earlier years. Starting in the 1981 national core file, the variable WEIGHT is adjusted to the new CPS and HVS estimates, based on the 1980 Census. None of these considerations applies to PWT, which remains the inverse of the probability of selection and is most appropriate for longitudinal analysis.

### 1.5 Rural Weights

All of these adjustments are calculated in exactly the same way for rural and urban units, the only difference being that the initial probability of selection, as noted above, is twice as high for rural units, so their weights end up half as much as the weights of urban units.

On the public use tapes, as discussed in the section on geographic codes, rural units are normally identified as rural, and the interested researcher can verify that their weights are half as much as for urban units.

In the 125 MSAs identified on the public use tapes (in the variable "MSA"), rural-urban codes are suppressed to preserve confidentiality of families in the small rural portions of these MSAs. If the weights had been left alone, it would have been possible to identify rural units by their small weights. On the other hand, if the weights had been doubled, then any results in these MSAs would have been over-estimated. Therefore, half of the rural units in these 125 MSAs were deleted from the basic file, and the weights of the other half of the rural units were doubled. The interested researcher can verify that no low-weighted units appear in these MSAs.

The half of the rural units in these MSAs that were initially deleted were also included on the data tapes and can be identified with a special variable, RURREC (they have a code 2 in RURREC, all other cases have code 1). In order still to protect the confidentiality of families in rural areas of these 125 MSAs, the MSA code was suppressed. Therefore, the researcher can be sure that any cases with 2 in RURREC are rural, and are somewhere in the 125 MSAs, but will not know which MSA. Since this is half the original sample of rural cases in the 125 MSAs, their weights have been doubled to provide an estimate of these rural areas. The interested researcher can use these RURREC $=2$ cases for estimates of rural portions of the 125 MSAs, or can combine them with other rural cases, to obtain estimates for all rural areas in the country.

### 2.0 MSA SURVEYS

Weighting for the MSA surveys is similar to that described for the national surveys. There are five adjustments in WEIGHT: the non-interview adjustment, a special stratification adjustment, a new construction adjustment, a special Houston adjustment, and a Decennial Census adjustment.

The non-interview adjustment (see Section 1.1.A) is calculated separately for each cell listed in Table 1-6. However, if there are less than 30 cases

Table :-6
Noninterview Adjustment Cells and Scale Values by MSA

| $\begin{aligned} & \text { Income in } \\ & 1970 \end{aligned}$ | Central City 1 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Race of Head in 1970 |  |  |  |  |  |  |  |  |  |  |  |
|  | Nonblack |  |  |  |  |  | Black |  |  |  |  |  |
|  | Owner in 1970 |  |  | Renter in 1970 |  |  | Owner in 1970 |  |  | Renter in 1970 |  |  |
|  | Sami | ze | 1970 | Fam | Size | 1970 | Fami | Size | 1970 | Fam | Size | 1970 |
|  | 1 | 2 | $3+$ | 1 | 2 | $3+$ | 1 | 2 | $3+$ | 1 | 2 | $3+$ |
| Under \$3,000 | 1 | 4 | 8 | 61 | 64 | 68 | 201 | 204 | 208 | 261 | 264 | 268 |
| \$3,000-\$9,999 | 2 | 5 | 9 | 62 | 65 | 69 | 202 | 205 | 209 | 262 | 265 | 269 |
| \$10,000-\$14,999 | 18 | 23 | 29 | 78 | 83 | 89 | 218 | 223 | 229 | 278 | 283 | 289 |
| \$15,000 and over | 19. | 24 | 30 | 79 | 84 | 90 | 219 | 224 | 230 | 279 | 284 | 290 |

Units Occupied in 1970 in Address Segments


Units Occupied in 1970 in Address Segmentis
Central City 3

| $\begin{aligned} & \text { Income in } \\ & 1970 \end{aligned}$ | Central City 3 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Race of Head in 1970 |  |  |  |  |  |  |  |  |  |  |  |
|  | Nont lack |  |  |  |  |  | Black |  |  |  |  |  |
|  | Owner in 1970 |  |  | Renter in 1970 |  |  | Owner in 1970 |  |  | Renter in 1970 |  |  |
|  | Family Size in 1970 |  |  | Family Size in 1970 |  |  | Family Size in 1970 |  |  | Family Size in 1970 |  |  |
|  | 1 | 2 | $3+$ | 1 | 2 | $3+$ | 1 | 2 | $3+$ | 1 | 2 | 3+ |
| Under \$3,000 | 1501 | 1504 | 1508 | 1561 | 1564 | 1566 | 1701 | 1704 | 1708 | 1761 | 1764 | 1768 |
| \$3,000-\$9,999 | 1502 | 1505 | 1509 | 1562 | 1565 | 1569 | 1702 | 1705 | 1709 | 1762 | 1765 | 1769 |
| \$10,000-514,999 | 1518 | 1523 | 1529 | 1578 | 1583 | 1589 | 1718 | 1723 | 1729 | 1778 | 1783 | 1789 |
| \$15,000 and over | 1519 | 1524 | 1530 | 1579 | 1584 | 1590 | 1719 | 1724 | 1730 | 1779 | 1784 | 1790 |

Vacant Units and Units in Other Segments Not Included Above

|  | Central City 1 | Central City 2 | Balance of MSA |
| :---: | :---: | :---: | :---: |
| Units vacant in 1970 in address segments | 105 | 605 | 1605 |
| Units in special places in address segments | 53 | 553 | 1533 |
| New construction in permit segments and coverage improvement samples | 96 | 596 | 1596 |
| Mooite homes in area segments and coverage improvement samples | 98 | 598 | 1598 |
| Other units | 99 | 599 | 1599 |

in a cell, or if the ratio in the cell would be 1.5 or more, the cell is combined with the cell having the closest scale value, as shown in Table 1-6.

The stratification adjustment is calculated separately for each cell Listed in Table 1-7. It is calculated only for units taken from the 1970 Census long form questionnaires that are not group quarters and special places, i.e., for old housing units in permit-issuing areas. The weights resulting from the non-interview adjustment are adjusted by the following ratio:

1970 Census count of housing units in permit-issuing areas AHS estimate of 1970 housing units in permit-issuing areas

This ratio is calculated using the inverse of the probability of selection of each unit, adjusted by the non-interview adjustment. Note that the denominator includes units in the current AHS sample and also cases dropped from the sample, because of demolitions, mergers, etc. All units are classified by their 1970 characteristics, not the current characteristics. The ratio is calculated separately in each of the cells shown in Table l-7. If there are less than 20 cases in a cell or if the ratio in a cell would be 2.0 or greater, or 0.2 or less, the cell is combined with the cell having the closest scale value.

The effect of this adjustment procedure in MSAs is to reduce somewhat the variance due to variation in sampling rates for different strata in the address-listing areas. In principle there should be no difference in sampling rates for different strata. However, before the AHS sample selection in each MSA, units already selected for other Census Bureau surveys were deleted from the lists. Thus, some variation in effective sampling rates was introduced during the AHS sample selection process.

The new construction adjustment is calculated only in the 1979-83 surveys, and only for sample units resulting from building permits issued since the previous survey in the MSA. It is used in 35 of 60 MSAs. Where this adjustment was used, its effect is to match AHS estimates to estimates from the Survey of Construction (SOC) on the proportion of new construction done in central cities and suburbs, while preserving AHS estimates of total new construction. The weights resulting from the previous steps are adjusted by the following ratio:

SOC estimate of permits issued in the cell since five months from end of enumeration
$\overline{S O C}$ estimate of permits issued in the MSA since five months from end of enumeration
AHS estimate of permits issued in the cell since five months from end of enumeration
$\overline{A H S}$ estimate of permits issued in the MSA since five months from end of enumeration

Table 1-7
Stratification Adjustment Cells and Scale Values by MSA


Units Occupied in 1970 in Address Segments

| $\begin{aligned} & \text { Income in } \\ & \text { i970 } \end{aligned}$ | Central City 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Race of Head in 1970 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Nonblack |  |  |  |  |  |  |  | Black |  |  |  |  |  |  |  |
|  | Owner in 1970 |  |  |  | Renter in 1970 |  |  |  | Owner in 1970 |  |  |  | Renter in 1970 |  |  |  |
|  | Family Size in 1970 |  |  |  | Family Size in 1970 |  |  |  | Family Size in 1970 |  |  |  | Family Size in 1970 |  |  |  |
|  | 1 | 2 | 3-4 | $5+$ | 1 | 2 | 3-4 | 5+ | 1 | 2 | 3-4 | $5+$ | 1 | 2 | 3-4 | 5 |
| Under $\$ 3,000$ | 1001 | 1004 | 1009 | 1015 | 1030 | 1034 | 1039 | 1045 | 1401 | 1404 | 1409 | 1415 | 1430 | 1434 | 1439 | 1445 |
| \$3,000-\$9,999 | 1002 | 1005 | 1010 | 1016 | 1031 | 1035 | 1040 | 1046 | 1402 | 1405 | 1410 | 1416 | 1431 | 1435 | 1440 | 1446 |
| \$10,000-\$14,999 |  |  | 1070 |  |  |  | 1100 |  |  |  | 1470 |  |  |  | 1500 |  |
| \$15,000 and over | 1080 | 1081 | 1071 | 1076 | 1110 | 1111 | 1101 | 1106 | 1480 | 1481 | 1471 | 1476 | 1510 | 1511 | 1501 | 1506 |

Units Occupied in 1970 in Address Segments

| $\begin{aligned} & \text { Income in } \\ & 1970 \end{aligned}$ | Balance |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Race of Head in 1970 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Nonblack |  |  |  |  |  |  |  | Black |  |  |  |  |  |  |  |
|  | Onner in 1970 |  |  |  | Renter in 1970 |  |  |  | Owner in 1970 |  |  |  | Renter in 1970 |  |  |  |
|  | Family Size in 1970 |  |  |  | Family Size in 1970 |  |  |  | Family Size in 1970 |  |  |  | $\begin{array}{ll}\text { Family Size in } & 1970\end{array}$ |  |  |  |
|  | 1 | 2 | 3-4 | $5+$ | 1 | 2 | 3-4 | 5+ | 1 | 2 | 3-4 | $5+$ |  |  |  |  |
| Under \$3,000 | 3001 | 3004 | 3009 | 3015 | 3030 | 3034 | 3039 | 3045 | 3401 | 3404 | 3409 | 3415 | 3430 | 3434 | 3439 | 346 ${ }^{3}$ |
| \$3,000-59,999 | 3002 | 3005 | 3010 | 3016 | 3031 | 3035 | 3040 | 3046 | 3402 | 3405 | 3410 | 3416 | 3431 | 3435 | 3440 | 3446 |
| \$10,000-\$14,999 |  |  | 3070 |  |  |  | 3100 |  |  |  | 3470 |  |  |  | 3500 |  |
| \$15,000 and over | 3080 | 3081 | 3071 | 3076 | 3110 | 3111 | 3101 | 3106 | 3480 | 3481 | 3471 | 3476 | 3510 | 3511 | 3501 | 350 |

Vacant Units and Units in Other Segments Not Included Above

| Rent or value in 1970 | Central City 1 | Central City 2 | Balance of MSi |
| :---: | :---: | :---: | :---: |
| Rent under $\$ 80$ or value under $\$ 15,000$ | 199 | 1199 | 3119 |
| Rent of \$80-\$119 or value of \$15,000-\$24,999 | 201 | 1201 | 3201 |
| Rent of \$120 and over or value of \$25,000 and over | 202 | 1202 | 3202 |
| Remaining vacants | 205 | 1205 | 3205 |
|  | 1-32 |  |  |

This ratio is calculated weighting each AHS sample case by the inverse of its probability of selection. It is calculated separately in only two cells in each MSA: central city(ies) and balance of MSA.

The special Houston adjustment is calculated only in the 1979 survey, and only for housing units built since April 1,1970 in the Houston MSA, outside the central city. The effect is to obtain a better estimate of the great growth the Houston area experienced during the seventies in non-permit-issuing areas. The weights resulting from the previous steps are adjusted by the following ratio:

## AHS estimate + Census Bureau estimate of the undercount <br> AHS estimate

This ratio is calculated using the weights adjusted by the non-interview adjustment and the stratification adjustment. It is calculated separately in four cells:

1. Conventional housing units (non-mobile home or trailer) outside the central city, which were built between the 1970 census and the 1976 survey.
2. Mobile homes and trailers outside the central city with a model year between the 1970 census and 1976 survey.
3. Conventional housing units outside the central city built between the 1976 and 1979 surveys.
4. Mobile homes and trailers outside the central city with a model year between the 1976 and 1979 surveys.

A total housing unit ratio estimation was done for the 1974, 1975, 1977, and 1979-1983 surveys for some MSAs. For years other than 1979 and 1980, the independent estimates were based on census counts plus estimates of change. In 1979 and 1980 the independent estimates were based solely on 1970 and 1980 census counts:
in 1979: $\frac{\frac{1980 \text { Census count } \times 19+1970 \text { Census count }}{20}}{\text { AHS estimate }}$
in 1980: $\frac{1980 \text { Census count } \times 21-1970 \text { Census count }}{20}$
AHS estimate

This ratio is calculated using weights adjusted by all the previous steps. It is calculated separately for two cells in each MSA: central city(ies) and balance of MSA. At the time this is written, it has not been decided how 1981 and later MSA surveys will be adjusted to 1980 Census counts. The above extrapolation technique may be used, or some other Census Bureau estimate of the total number of housing units may be used.

The weight resulting from all these steps is stored in the variable WEIGHT. The reader will note that up through the 1978 survey, only two adjustments are used: the non-interview adjustment and the stratification adjustment. All the other adjustments began in 1979. For comparability, a special variable called "OLDWT" is available on the 1979 and later surveys, including only the non-interview adjustment and the stratification adjustment.

## Chapter 3

## SAMPLING DESIGN

The original samples for the National and Metropolitan Statistical Area (MSA) Surveys were drawn from the 1970 Census. The National sample was used from 1973 to 1983. In 1985, the National Survey was administered to a completely new sample drawn from the 1980 Census. This sample will be reinterviewed every two years until 1993. The procedures used to draw the three basic samples--the original National Sample, the new National sample, and the MSA samples--are similar, although differences are important enough to be documented. Sections 1.0 and 2.0 discuss in detail the selection of the original National Survey and the changes which occurred over the years. Section 3.0 presents the sample design for the new National Survey with emphasis on the differences between the two National samples. Section 4.0 describes the MSA samples.

### 1.0 THE 1973 NATIONAL SAMPLE

### 1.1 Selection of Sample Areas

The United States was divided into areas made up of counties and independent cities referred to as primary sampling units (PSUs). These PSUs were then grouped into 376 strata, 156 of which consisted of only 1 PSU each, which were therefore in the sample with certainty. These 156 strata were mostly the larger MSAs and were called self-representing (SR), since the sample from each area represented just that PSU. Each of the other 220 strata consisted of a group of PSUs and were referred to as non-self-representing (NSR), since the sample of housing units from the sample PSU in a stratum represented the other PSUs in the stratum as well as the sample PSU.

One PSU was selected from each NSR stratum with probability proportionate to the 1970 census population of the PSU. This resulted in 220 NSR sample PSUs. (This is called Sampling Plan A.) In addition, the NSR strata were grouped into 110 pairs and one stratum was picked at random from each pair. From this stratum, an additional PSU was selected independently of the other PSU selected from this stratum (this is called Sampling Plan B.) Since the two PSUs were independently selected, it was possible for the same PSU to be selected twice. This occurred in 25 instances, so there were only an additional 85 NSR sample PSUs, thus giving a grand total of 461 PSUs.

Sampling Plan A and Sampling Plan B are both representative of the NSR areas of the country. Therefore, if one added up the selected PSUs, weighting each by the inverse of its probability of selection, one would double-count the NSR areas. This result is avoided by weighting all data from Plan A by two-thirds, and data from Plan B by one-third, so their total adds up to a single count of the NSR areas.

### 1.2 Sampling Rates Within Sample PSUs

The national average sampling rate was determined by dividing the number of housing units in the country by the original desired sample size. This national average sampling rate was 1 in 1,366 . In each of the 461 PSUs, this rate was adjusted so that the overall probability of selection for each sample housing unit was the same. For example, if the probability of selecting an NSR PSU was 1 in 10 , then the within-PSU sampling rate would be 1 in 136.6 . In the 25 PSUs which were selected twice, under Sampling Plans A and B, the appropriate within-PSU sampling rate was calculated twice, once under each sampling plan, and the rates were added to obtain an overall within-PSU sampling rate.

In order to save interviewer travel costs, it was decided to sample units in clusters, so that instead of counting off 1,366 units and then taking one unit into the sample, every 2,732 units were counted off (this is the national average; as just noted, the sampling rate and hence the count-off rate varied in each PSU) and then 4 units were taken into the sample. In some areas, half the clusters of four units were surveyed, with the other clusters held in reserve. (This was the pattern followed in so-called "area segments" which are defined below.) In other areas, two of the four units in each cluster were surveyed, with the other half of each cluster held in reserve. (This was the pattern for all sample cases other than "area segments.")

Starting in 1974, all of the units in rural clusters were surveyed, (i.e., the reserve sample was activated in rural areas.) This resulted in a probability of selection in urban areas of 1 in 1,366 and in rural areas of 1 in 783. The purpose of the double-sampling in rural areas was to obtain more accurate data on rural housing, to compare with urban housing.

### 1.3 Use of Enumeration Districts

Each of the 461 PSUs was divided into enumeration districts (EDs) of type A, B or C. Each ED within a sample PSU could be classified into one of the following four ED geographic strata: (1) central city, (2) urbanized area outside of the central city, (3) urban place outside of urbanized areas, and (4) rural. For each ED the following number was calculated: the sum of the 1970 count of housing units, plus one-third of the 1970 count of persons in group quarters divided by four. This number was the ED measure of size which was used in the ED sample selection. Enumeration districts were stratified according to ED geographical code, place size code, and ED code. Within each $E D$ geographical category, the ED measures of size were cumulated. For each ED in the established ordering of EDs within an ED geographic stratum, there was an associated cumulative total. For the $i^{\text {th }} E D$ in the stratum ordering the cumulative total, denoted $T_{i}$, was

$$
\sum_{k=1}^{i} M_{k}
$$

where $M_{k}$ is the measure of size for the $k^{\text {th }} E D$.
A cumulative total of the measure of size was computed for each ED geographic stratum and divided by $s$, the expected sample size of EDs for the
stratum, to obtain a systematic probability proportional to size sampling interval, TE. A random start $R$ was designated and the following set of numbers was determined:

$$
R+T E, R+2 T E, \cdots, R+s T E .
$$

Under this selection procedure the $E D$ sample size, $s$, was the greatest integer such that the quantity $R+s T E$ did not exceed the cumulative total for the last ED in the ED geographic stratum. The $i^{\text {th }} E D$ was included in the ED sample if

$$
T_{i-1}<R+m T E \leq T_{i}
$$

for one of the values of $m$ in the set $\{0,1,2, \cdots, s\}$.
The selected EDs were then divided into address EDs and area EDs. An ED was classified as address if 90 percent or more of the 1970 census addresses recorded in the Census ED Address Register had a complete house number and Street name, and furthermore the ED was geographically located in a jurisdiction issuing permits for new construction. An ED could have been classified as an area ED either because it was not within a jurisdiction issuing permits for new construction and/or more than 10 percent of the addresses in the census address registers did not have a complete house number and Street name. The sample selection procedures for address EDs are discussed in Section 1.3.A while the procedures for selecting the sample in area EDs are discussed in Section 1.3.B.

### 1.3.A List or Address EDs

Enumeration districts within jurisdictions which issued building permits for new construction and which had a proportion of complete addresses of 90 percent or more were classified as list or address EDs. Addresses recorded in the 1970 Census ED Address Register were then used to form clusters having an expected four units. Adjacent address listings on the ED Address Register corresponded to housing units which were physically adjacent, so that the clusters formed would be compact clusters. Addresses having all their units in a single cluster were designated TA addresses while all other addresses were defined as NTA addresses.

After clusters in sample address EDs were formed using all addresses within the ED address register, sample clusters were determined. For TA addresses, where all units for an address fall in the same cluster, the interviewer listed and interviewed all units found at the TA address. For an NTA address, only a proportion of units at the address was part of the sample cluster. The AHS interviewer had to list all units found at the address using established listing procedures, and units located on listing lines which had AHS sample unit identifiers predesignated in the regional office. Suppose that the cluster formation had formed the following two clusters from units at 103 Maple Street where a two-unit structure is located and 106 Maple Street where a six-unit structure is located:

| 103 Maple | $\begin{aligned} & \text { Unit } 1 \\ & \text { Unit } 2 \\ & \hline \text { Unit } \\ & \text { Unit } 2 \end{aligned}$ | Cluster A |
| :---: | :---: | :---: |
|  | Unit 3 <br> Unit 4 | Cluster B |
| 106 Maple | Unit 5 <br> Unit 6 |  |

The address 103 Maple was a TA address while 106 Maple was a NTA address. If Cluster A was determined to be a sample cluster, then an interviewer would use the listing sheet for 106 Maple Street to transcribe all units found at that address. There would have been at least two listing lines having AHS sample designation codes, and the units falling on those listing lines would have been part of sample Cluster A.

Two of the housing units within a sample cluster were assigned to the primary sample while the remaining two units were assigned to the reserve sample.

Each mobile home park is treated as one "structure." The list is treated much as described for the list of building permits: each building or mobile home park is listed, with the number of units found at the 1970 Census; the count-off rate is applied, and clusters are selected. These clusters in effect determine a sampling rate within the building or park, e.g., 2 units may be selected out of a 20 -unit building ( 10 percent sampling within the building) or 1 unit out of a l-unit building ( 100 percent). In rural areas the entire cluster of 4 is included in the sample, while in urban areas two of the four units in each cluster are held in reserve. The interviewer who goes to the building or park makes a list of all units actually there, and samples them at the appropriate sampling rate. In later surveys, any additional units in the building or park are added at the bottom of the list, and the sampling rate continues to apply to them, systematically. In fact, a preprinted listing sheet, with certain lines earmarked for the AHS sample, is used to record and sample additional units.

### 1.3.B Area EDs

EDs where permits are not required for new construction and EDs where permits are required for new construction but less than 90 percent of the addresses within the ED are complete, use "area samples." These are primarily rural, but include some large cities, such as Houston. The boundaries of each such $E D$ were subdivided into small land areas having recognizable features such as county roads, rivers, railroad cracks, etc., as boundaries. These small land areas are called "area segments". Wherever possible, an area segment was formed so that it contained between 7 and 20 housing units which were enumerated in the 1970 Census. The housing unit count within each area segment within a sample ED was converted to a cluster count by dividing the housing unit count of the area segment by four and rounding the result. Within each area segment cluster identifiers were listed. From the total ED list of cluster identifiers, sample clusters were determined and every other cluster that was drawn into sample was designated for the reserve sample. Area segments containing sample clusters were the sample area segments. The
sample area segments that had to be listed by field enumerators as sample clusters at this stage were undefined for the AHS interviewers. A few months before interviewing started, interviewers went to the defined area and listed every unit there. When field enumerators listed sample area segments within permit-issuing area EDs, they determined for each housing unit within the area segment if the unit was built before or after April $1,1970$.

Housing units built after April 1,1970 were ineligible for the sampling of the primary and reserve noncompact clusters. These housing units built after April 1, 1970, would have a chance of being selected in the building permit frame. Sampling of new construction in this way in permit issuing area EDs led to a more dispersed and heterogeneous sample. If the area, according to the 1970 Census, was expected to have four units, then all units actually found were interviewed. If the area was expected to have more than four units, e.g., 20 , then the sampling rate was determined based on the number expected, e.g., 4 out of 20 , and was applied to all units found. For example, if 30 were found, $4 / 20$ of 30 , or 6 , would be interviewed. This sampling rate assured that all units, even those missed by the 1970 Census, had a predetermined probability of selection.

The only exception was when a very large number of units was found, as in a new subdivision or a large, new apartment building, in which case the area was subsampled and the new probability of selection was reported back, so that weights could be adjusted to make the subsample represent all of the original sample. The list is updated by interviewers before every survey, and the sampling rate is applied by Census Bureau regional office staff to the additional units also, so that new units are included in the survey at the same rate as old units.

### 1.4 Building Permit Sampling

Housing units built after April 1, 1970, were classified as new construction housing units in the AHS, and new construction housing units located in address EDs and permit-issuing area EDs would be represented in the building permit frame. The building permit sample selection procedures parallel the procedures for the address EDs.

Analogous to the sampling of enumeration districts within a sample PSU was the monthly sampling of building permit offices. For each permit office, the total number of housing units associated with permits issued in the period April 1,1970 to five months prior to the first AHS enumeration was obtained. This was the building permit office's measure of size for each month. Building permit offices within a sample PSU were then grouped into the following three geographic strata: (1) central city of MSA, (2) balance of an MSA, and (3) non MSA. After the stratification of building permit offices, permit offices were sampled monthly using systematic probability proportional to size sampling.

Building permits in sample permit offices had to be listed by field enumerators. From the permit office listing sheets, new construction units were assigned to map grid coordinates which grouped together new construction units located within a small land area within the jurisdiction of the permit office. Clusters of four new construction units were formed from units within each set of map coordinates. Clusters were then systematically sampled from the total permit office cluster universe.

Normally, a permit represents one unit, so this would be a cluster of 4 permits, but in multi-family construction it might be a cluster of the 12th15th units in a planned 20 -unit structure, under the same building permit. Originally, two units of each cluster were held in reserve, but since the reserve sample has been activated in rural areas, all units of every cluster are used for the sample in rural areas. In urban areas, two units from each cluster are kept in the sample with the other two still held in reserve. Then, each permit was followed up, and if the unit had not been built by April 1, 1970, but had been built by the time of the interview, it was included in the sample. Where the permit was for a multi-unit building, the count-off process as already discussed took this into account, and indicated what fraction of the units was to be sampled.

When interviewing began, all units in the building were listed and the appropriate fraction was sampled. The count-off process indicated what fraction of the units in the structure was to be sampled. For example, if the count-off process indicated 4 units were to be taken from a 20 -unit structure, then $4 / 20$ of the units actually found in the structure were sampled. (In a sense, each building permit was treated like an area segment as described earlier.) The permit sampling is repeated every year, so new units are continuously sampled. Since permits are usually not required for mobile homes, new mobile homes are not sampled by these building permits, but are covered by the area sampling, like all other kinds of units other than new construction.

The cut-off of building permits 5 months before the survey means that some units are missed each year, because they are built before the survey, with permits issued after the cut-off. It is estimated that the 1980 National AHS sample missed about 1.4 percent (i.e., about 251,000 units) of conventional housing units built after April 1, 1970 and before September 1980 because the permits for these units were issued less than 5 months in advance of the survey. These missed units would be even more serious as a percentage of 1980 construction. The new construction adjustment described in section 1.1.C of Chapter 3 below is designed to reduce the effect of this deficiency, although some bias probably still exists. Review of the adjustment indicates that there has been a consistent overcompensation for this deficiency in every year since 1975 by adjusting to counts of new construction for the end of the interview period, which has been December or January, instead of October. This overcompensation may inflate the new construction counts by 100,000 to 300,000 units. Researchers needing precise estimates of new construction should refer to the Census Bureau's monthly "Survey of Construction" (SOC). The AHS is designed to show the characteristics of people who live in new construction, which SOC does not show, but is not designed to replace basic statistics provided by SOC.

### 1.5 Coverage of Units in Different Types of EDs

In area EDs of Types $A$ and $B$, the area sampling methods successfully reach all kinds of housing, but they are very expensive because the job of listing all housing units within a geographic area is time-consuming for interviewers. Therefore, whenever possible, the Census Bureau uses address 1ists as described in Section 1.3.A above. Address EDs cover about 75 percent of housing in the country. (They only cover about 60 percent of the sample, because these EDs are largely urban, which are sampled half as much as rural EDs.) The weakness of these address lists is that they do not cover units missed by the 1970 Census, structures that were non-residential in 1970 but now have housing units in them, or mobile homes placed into a new park or onto an individual site after the 1970 Census.

Furthermore, the permit sampling, which is used in address as well as permit-issuing area EDs, can miss certain new construction units. Special efforts have been made to fill these gaps:

CEN-SUP--This was an evaluation study to estimate units missed by the 1970 Census, which identified a sample of such units. This sample was divided among the various current surveys of the Census Bureau, including the AHS, starting with the 1973 and 1974 surveys. The overall probability of selection for these units was quite variable but averaged about 1 in 1,900 . Unfortunately, this evaluation study did not cover mobile home parks.

New construction from old permits-A sample of new construction units whose permits were issued before January 1970 was selected as follows. Units whose permits were issued before January 1970, but which were completed after the census, were identified from the Survey of Construction (SOC), a survey of building permits conducted monthly by the Bureau of the Census. These units were then sampled so that the overall probability of selection was about 1 in 1,320. They were added to the AHS starting with the 1976 survey.

Mobile home parks--A sample of mobile homes placed in parks missed by the Census or established after the Census was selected as follows. A list of mobile home parks was obtained from commercial listings. This list was then supplemented by additional parks identified by a canvassing operation similar to that performed in EDs where area sampling methods are used. Unfortunately, however, this canvassing operation only represented about 92 percent of all address EDs. The parks were divided into clusters of four sites. These clusters were sampled so that the overall probability of selection of a unit was about 1 in 1,366 . These were added to the AHS sample starting in 1976. The canvassing operation was repeated in 1980 , and the resulting mobile homes were added to the AHS in 1981.

Residual problems--The efforts described above leave a residual of hard-to-find units. The following list summarizes the units covered by all these methods, and the other types of units where a special residual effort was needed in address EDs:

1. Units in structures or mobile home parks covered in the 1970 Census (address lists)
2. Group quarters covered in the 1970 Census and converted to housing units (address lists)
3. Units erroneously missed by the 1970 Census (CEN-SUP units)
4. Building permits issued from January 1970 on (building permit sample)
5. Building permits issued up through December 1969 (SOC sample)
6. Mobile homes outside parks and vacant at the time of the 1970 Census (residual effort)
7. Mobile homes in parks missed by the 1970 Census or established after the Census (mobile home park sample)
8. Mobile homes placed outside parks after the 1970 Census (residual effort) -
9. Units in structures that were totally non-residential at the time of the 1970 Census and were later converted to residential use (residual effort)
10. Houses moved onto a new site after 1970 Census (residual effort)

The residual effort was done in three stages. First, a subsample of the regular AHS sample units from the Census address list was selected. Second, succeeding structures that had been eligible to be selected from the Census address list were then listed until eight such additional structures (including mobile home parks) were found. Third, any structure between these nine was assessed. If it was of a type not covered by any of the other coverage improvement efforts, it was added to the sample and all or a subsample of units in it were interviewed, starting in 1976. The overall probability of selection for these units was highly variable, but averaged about 1 in 2,400 . This procedure was not considered very efficient for finding nonresidential conversions (which might be primarily in business districts), since the listing procedure started from a residential unit.

### 1.6 Business Sample

Non-residential conversions were surveyed again in 1980. Interviewers went to a sampling frame of businesses, originally prepared for a Department of Justice survey. Any structures which did not have housing units in them in the 1970 Census, but did by 1980, were considered non-residential conversions, and were added to the AHS sample in 1981.

### 2.0 FATE OE SAMPLE UNITS OVER TIME

The previous discussion describes how units join the AHS sample. They remain in it every year as long as possible. Even a unit which is converted to commercial purposes, or is boarded up and uninhabitable, is kept on the list as a Type $B$ non-interview (a "recoverable loss"). It is revisited each survey in case it has been fixed up for residential use again. It drops out
when it becomes a Type $C$ non-interview ("unrecoverable loss," i.e., when it is demolished, totally burned down, etc.). Some units have also been dropped because of sample reductions, as explained below.

### 2.1 Splits and Mergers

When two or more units are merged into one unit, the order of the units on the listing sheet determines whether the unit stays in the sample. If the first unit was in the AHS sample, the new unit stays in the sample with the same control number the old unit had. Otherwise, it drops from the sample. For example, if Apartment 701 is in the AHS and Apartment 702 is in the Current Population Survey (or not in any Census Bureau survey), and they are merged into Apartment 701, AHS keeps the new unit. If the new unit is called Apartment 702, however, AHS loses the unit. It becomes a Type C non-interview ("merged, not in current sample").

When a unit is split into two or more units, both units stay in the sample. One unit retains the old control number, while the other will have a new control number, which cannot be linked to the control number of the unit from which it split.

This sampling plan makes longitudinal study of splits and mergers difficult. It was modified when the new sample was drawn in 1985, by having AHS units as distant as possible from units in other Census Bureau samples, so that split and merged units can almost always be retained in the sample. (See Section 3.4 below.) The data base was also modified to identify which units split from and which merged with each other.

### 2.2 Sample Reductions

By 1977, the additions to the sample from new construction and other additions to the housing stock had increased the total sample size (interviews plus non-interviews) to about 81,000. The sample was reduced by 7/97 to approximately 75,000 in 1977. However, this reduction did not include any CEN-SUP units or units which were selected as part of the 1976 Coverage Improvement Program. Thus, the overall probability of selection for these latter units remained unchanged; the probability of selection for the rest of the units was changed to about 1 in 1,472 if they were urban and about 1 in 736 if they were rural.

In 1981, there was a similar cut-back of $5 / 90$, so the probability of selection for the basic sample of urban units was 1 in 1,559. At the same time, the rural sample was cut back further by dropping half of the rural sample outside the 125 biggest MSAs, and a quarter of the rural sample inside these 125 MSAs. Thus, outside the 125 MSAs, the probability of selection of rural units became equal to the probability for urban units; and inside the 125 MSAs, the probability was about 1 in 1,039. Again, CEN-SUP and Coverage Improvement Program units were omitted from the cut-backs. In 1983, however, the portion of the rural sample that had been cut back was reinstated.

### 3.0 THE 1985 NATIONAL SAMPLE

The AHS sample underwent a major redesign in the years following the release of data from the 1980 census. The 1985 National Sample not only reflects the use of 1980 Census data but differs from the previous 1983 AHS sample with respect to the following major elements:

- A decrease in the number of PSUs from 461 to 401,
- A decrease in the number of housing units eligible for interview from 71,800 to 48,000,
- A change in the within-ED sampling procedure intended to reduce the contribution to the variance of estimates made by this stage of sampling,
- Improvements in the sampling of building permits to include new construction,
- Improvements in the methods for maximizing the coverage of housing units not represented in the 1980 Census or building permit frames, and
- A new supplementary sample of neighbors of AHS sample housing units.


### 3.1 Selection of Sample Areas

In the redesigned National AHS, there are a total of 401 strata. Of the total number of strata, there are 177 self-representing strata containing only one PSU which was selected with certainty. Those PSUs not contained in selfrepresenting strata were grouped into 224 non-self representing strata. The task of grouping PSUs into strata was accomplished by employing a multivariate clustering algorithm. Tenure, race of householder, change in the housing inventory from 1970 to 1980, change in the population from 1970 to 1980, and value of housing were the AHS stratifiers which were the input variables to the clustering algorithm. One PSU was selected from each non-selfrepresenting stratum with probability proportionate to the 1985 projected number of housing units in the PSU. The redesigned National AHS therefore contains 401 PSUs in total. There was no formation of a smaller sampling plan nested within the sampling plan just described. (This smaller design was referred to as Sampling Plan B in Section 1.1 above.)

### 3.2 Sampling Rates Within Sample PSUs

The national average sampling rate for the 1985 National AHS was around 1 in 1,900. As was the case for the 1973 National AHS design, two samples of approximately equal size were generated. The first sample was the primary or basic sample while the second sample was referred to as the supplementary sample. That portion of the supplementary sample which fell in rural areas constituted the rural supplement. The rural supplement will be enumerated in 1987, 1991, and 1995.

In the address EDs of sample PSUs, systematic samples of housing units were selected from the 1980 Census Sample Housing Unit Record File. A housing unit record on this file contains all data recorded on the housing unit's 1980 Census questionnaire except the housing unit's address and telephone number. To select the two samples (i.e., the primary and supplementary samples), the within-PSU sampling rate was doubled and every other sample hit was assigned to the supplementary sample.

In areas EDs of each sample PSU, four 1980 Census housing units were drawn from the address listings in each sample area segment, and these were assigned to the primary sample. Four additional units were selected from the same area segment, and these were assigned to the supplementary sample. (Refer to Section 1.3.B for the definition of an area segment.) The withinPSU sampling interval was adjusted to account for the fact that four units were being selected from an area segment for the primary sample and four units were being selected from the same segment for the supplementary sample.

Building permits were also sampled to represent newly constructed housing units that were built after the 1980 Census. The within-PSU new construction sampling intervals were adjusted so that every other new construction sample hit was assigned to the supplementary sample.

### 3.3 Description of the Within-PSU Sampling Frames

### 3.3.A The List or Address Enumeration District Frame

Enumeration districts (EDs) having a proportion of addresses which were complete and accurate of 96 percent or more were classified as list or address EDs in both the old National AHS and the new National AHS. The list of addresses for an $E D$ is found in the census $E D$ address register, generated in the census enumeration. An address $E D$ must be geographically located within a jurisdiction which issues building permits for new construction.

In the 1973 National AHS design, clusters of housing units were selected from Census ED address registers. Prior to the formation of clusters, enumeration districts were sampled according to the procedures described in Section 1.3.

In the 1985 National AHS design, an unclustered systematic sample of housing units was selected in address EDs, using the 1980 Census Sample Housing Unit Record File. Enumeration districts no longer had to be sampled, as there was no need to key ED address registers or construct clusters of housing units. Since the 1980 Census Sample Housing Unit Record file was used as the address ED sampling frame, it was possible to use 1980 Census housing characteristics as AHS stratifiers so that the reliability of the survey estimates would be increased. Housing unit records on the 1980 Census Sample Housing Unit Record file located in a sample PSU were stratified according to the following characteristics:

1. Geographic Location (Central City, Urbanized Area outside of Central City, Urban outside of Urbanized Areas, Rural)
2. Tenure
3. Number of Rooms
4. Value of Unit (for Owner-Occupied Units)

Gross Rent (for Renter-Occupied Units)
To fully understand the differences between the address ED component of the old and new AHS National sample designs, it is necessary to discuss the major differences between the Census ED address registers and the Census Sample Housing Unit Record File. As mentioned earlier, a record on the Census Housing Unit Record File contains all data recorded on the housing unit's 1980 Census questionnaire except the housing unit's address and telephone number. The Census ED address register is a list of housing unit addresses within an ED recorded by Census enumerators who canvassed the ED. A listing line in the Census address register included the Street name and house number of the address where applicable, the block number of the address, the number of housing units at the address, and the Census serial numbers assigned to the housing units at each address.

Housing unit records that are adjacent to one another on the Census Sample Housing Unit Record File do not necessarily correspond to housing units that are physically adjacent, yet listing lines which are adjacent on the Census ED address register do correspond to housing units which are physically adjacent. It is apparent that the Census ED address registers are a much better resource than the Census Housing Unit Record File for constructing compact clusters of housing units.

Listing lines of the ED address registers, while corresponding to neighboring housing units, do not contain any demographic information about the housing units at the addresses, so that if stratification of housing units was to be undertaken, the stratifiers had to correspond to geographic characteristics such as those mentioned in Section 1.3.

The old National AHS address ED design can be compared to the new National AHS address ED design from the perspective of sampling variance. With respect to variance, the unclustered, stratified, systematic sample of the new design will produce survey estimates with lower variances than the clustered sample of the old design.

### 3.3.B The Area Enumeration District Frame

An enumeration district could be classified as an area ED either because it was not within a jurisdiction which issued building permits for new construction or it was within a jurisdiction which issued building permits for new construction, but more than 4 percent of the addresses within the ED were incomplete.

The methods of sampling area segments in the new AHS National design were similar to those used in the old National design, yet the selection methods within the sample area segment differed between the old and new designs. Since in the new design the sample area segment corresponded to an administrative block used in the 1980 Census canvassing operations, it was possible to identify addresses of housing units in the sample area segment that were
recorded in the $E D$ address register, as the administrative block number was present for all addresses in the ED address register.

The objective of the within-area segment sample selection was to first choose four housing units which had received the 1980 Census long-form questionnaires for the primary sample, and then choose four housing units which had received the 1980 Census long-form questionnaires for the rural supplement using the ED address register listings. It should be noted that the selection of housing units which were 1980 Census long-form questionnaire recipients within area EDs results in 1980 being the starting point for any longitudinal analysis involving long-form questionnaire variables such as household income, monthly utility costs, year built, etc. rather than the first AHS enumeration, using the new National AHS design, being the starting point for the longitudinal analysis. If there was an insufficient number of housing units which had received long-form questionnaires within the area segment from which to draw, then housing units which had received short-form questionnaires were selected for the primary and/or the rural supplemental sample so that there were four primary sample housing units and four rural supplement housing units. Since the sample units had been designated using census ED address registers, there were addresses available for the sample units. If the addresses were incomplete, the enumerator was given the address listings for all housing units in the administrative block. These were then given to AHS interviewers so that they could locate sample housing units within area segments. It should be stressed that the sampling procedures just described were applicable to both permit-issuing area EDs and non-permit issuing area EDs.

### 3.3.C The Building Permit Frame

The method of sampling building permits to represent new construction in the new AHS National sample design was similar to the building permit sampling methods used in the old design (see Section l.3.B) with three exceptions.

In the new AHS National design, clusters of four new construction units were formed using building permit information from sample building permit offices, and then they were sampled. When the sample clusters were identified, one new construction unit was subsampled from each cluster. This sampling method would result in AHS new construction estimates having smaller variances than new construction estimates derived from sample clusters of two or four new construction units as was done in the old design.

The National AHS new construction sampling was coordinated with the new construction sampling of other Census Bureau demographic surveys. The sampling of AHS new construction clusters was executed so as to maximize the overlap between the AHS sample permit offices and the sample permit offices of other demographic surveys.

Whereas in the old National AHS sample design, one-half of the new construction cluster was allocated to the primary sample and one-half to the rural supplement sample, in the new design, the new construction sampling rates for the selection of clusters were doubled so that every other sample cluster was assigned to the rural supplement sample.

The third exception was the starting permit issuance date for the new construction sampling. In the old design, the starting point for sampling new
construction was the permit issuance date of January 1970. In the new design, the starting date for permit sampling varied by region and size of structure. Table 3.2 shows the starting permit issuance for the region and size of structure categories. An explanation of the origin of these starting dates is provided in Section 3.5.C discussing coverage improvement sampling.

### 3.4 Exclusive Use of Small Multi-Unit Structures

In the redesigned AHS National sample, no other current Census Bureau demographic survey will have sample clusters in multi-unit structures having two to fifteen units, and containing AHS sample units. Sampling methods were devised for the address ED, area ED, and building permit sampling to achieve this condition. This sampling design feature will make it possible for AHS to overcome the difficulties, inherent in the old AHS National design, of maintaining a longitudinal record of splits and mergers of housing units because AHS and one or more of the current Census Bureau demographic surveys had sample units in a multi-unit structure. Although AHS does not have exclusive use of multi-unit structures of sixteen or more units, only a minor percentage of the total number of mergers and splits of housing units is found in these larger multi-unit structures.

### 3.5 Coverage Improvement Samples

There were housing units that did not appear on any of the sampling frames previously discussed, and unless steps were taken to construct sampling frames or use sampling frames not listed in Sections 3.3 to give representation to housing units missing from address ED, area $E D$, and building permit frames, the survey estimates could be potentially biased.

### 3.5.A Coverage Improvement in Address EDs <br> Use of 1980 Census Coverage Improvement Housing Unit Samples

As stated previously, the AHS address and area ED sampling frame was the 1980 Census Sample Housing Unit Record File, and obviously housing units not enumerated in the 1980 Census would not be represented by this frame. The Housing Unit Coverage Study (HUCS) was undertaken as part of the 1980 Census Coverage Evaluation program. In this study, the April 1980 CPS A-sample units were matched to Census records. Those units which could not be matched to the Census were considered Census misses. Census misses which were in 1980 -design sample PSUs became HUCS sample housing units. For the redesigned AHS National Survey, 300 HUCS sample housing units were selected from the HUCS nonmatches to give representation to housing units in address and area EDs missed in the 1980 Census.

## Use of Health Interview Survey Segment Listing Sheets

The previous section described how the Housing Unit Coverage Study was used to locate housing units that existed at the time of the 1980 Census enumeration but were missed by census enumerators. It was also necessary to devise a sampling plan that would pick up housing units that would not have been within the scope of the Housing Unit Coverage Study. The sampling plan had to pick up non-residential-to-residential conversions, mobile homes in parks established after the 1980 Census, mobile homes established at new addresses outside of mobile parks after the 1980 Census, and housing units moved to new sites after the 1980 Census.

The sampling plan designed for coverage improvement in address EDs utilized segment listing sheets compiled by Health Interview Survey enumerators. The sample clusters of housing units in the Health Interview Survey were selected from an all-area segment sample design; that is, no sample clusters were constructed and selected from 1980 census generated lists of housing units. The HIS area segments located within address EDs corresponded to Census official blocks or block partitions. As the Census official block or block partition was an area segment, HIS field enumerators canvassed the block and listed all housing units in the block in late 1984. A "year built" question was asked of each housing unit that was listed by the HIS field enumerator, since residential structures built after April 1980 would have been sampled in the HIS building permit frame.

Sample clusters were not designated in all HIS sample area segments. A subsample of HIS sample area segments, where the listing operation was done but no designation of sample clusters occurred, was selected by AHS. Two noncompact clusters, each cluster composed of four housing units, were selected from the subsampled HIS sample area segments. An attempt was made to match the addresses of housing units in the sample clusters shown on the HIS listing sheets to census ED address register listings for those housing units built prior to April 1, 1980. Housing units which were nonmatches were then screened in the field by AHS enumerators to see if they were housing units which met AHS eligibility requirements. If they did, then they were added to the AHS address ED coverage improvement sample.

### 3.5.B Coverage Improvement in Area EDs

In AHS sample area segments, sample clusters of housing units had been designated from the area segment listing sheets completed by field enumerators. (Refer to Section l.3.B for a description of the designation of clusters in area segments.) In nonpermit-issuing area EDs, one sample cluster was designated, and in permit-issuing EDs two sample clusters were designated from the area segment listing sheets whenever possible. Coverage Improvement Screener forms were administered to housing units in each sample cluster. In permit-issuing area EDs, new construction housing units were sampled from the building permit universe, so that housing units in sample clusters built after April 1, 1980 were deleted from further screening. Addresses of listed units within sample clusters built prior to April 1, 1980 were matched to the appropriate ED Address Register, and nonmatches were added to the AHS coverage improvement sample. In nonpermit-issuing EDs, listed units in sample clusters which were new construction units as well as sample cluster units which could not be matched to listings in census ED Address Registers were added to the

AHS sample. The AHS sampling plan in area EDs had been designed so that AHS would have exclusive use of their sample area segments; that is, no other survey would have sample clusters in the area segment. AHS would then have a chance to select any unit that was added to the sample area segment between the initial listing and subsequent updates of the area segment.

### 3.5.C New Construction Permit Lag

In the old AHS National design, the building permit universe was composed of permits issued from January 1, 1970 up through five months before the AHS National Survey began. As the average time from permit issuance to building completion was five months, structures associated with permits issued in January would have been completed after the 1970 Census, so that duplication between the building permit frame and the Census housing unit address list frame would have been prevented. Unfortunately, there were a considerable number of structures whose building permits had been issued prior to January 1,1970 and which were not completed until after the Census. These housing units were not represented in either the building permit universe or on the 1970 Census Housing Unit file and they are referred to as permit lag units (see Section 1.4). In the new National AHS sample design, the optimal month defining the building permit universe start point was derived using the following approach. Given any month prior to the 1980 Census Day, a number of housing units associated with building permits issued in this month and all months up to March 31 st would be completed by Census Day. There would also be a number of housing units associated with building permits issued before the given month and all months prior which would not be completed until after April l, 1980. It is evident that housing units in the first group have two chances of being selected, one in the building permit universe and the other in the Census Housing Unit Record file, while the housing units in the second group have no chance of being selected. The dates shown in Table 3-1 are the point at which the two group sizes are equal, so that each permit lag housing unit is represented by a census duplicate which has a chance of being selected in the building permit sampling as well as the census list sampling.

TABLE 3-1
PERMIT ISSUANCE DATES DEFINING PERMIT ELIGIBILITY FOR NEW CONSTRUCTION SAMPLING

| Size <br> of <br> Structure | Monthly Reporters |  |  |  | Annual Reporters |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | NE | NC | South | West | All |
| $1-2$ Regions |  |  |  |  |  |
| $3-4$ units | $7 / 79$ | $8 / 79$ | $9 / 79$ | $7 / 79$ | 180 |
| $5+$ units | $6 / 79$ | $6 / 79$ | $7 / 79$ | $7 / 79$ | 179 |

### 3.6 Neighbors' Sample

As part of the 1985 National AHS design, a sample of neighbors was generated, where a group of neighbors was considered a compact cluster of housing units. The Department of Housing and Urban Development is interested in determining the degree of homogeneity among adjacent housing units and persons residing within these housing units with respect to demographic characteristics such as tenure, type of structure, age, gross rent, race, and value of unit. Also of interest was the change or transition in groups of neighbors with respect to these characteristics.

Housing units selected in the address ED, area ED, and the building permit frames were subsampled, and the subsampled housing units were designated neighbor group kernels. Field enumerators were given the address of the neighbor group kernel and told to locate the ten housing units closest to the neighbor group kernel and list their addresses. A total of 680 sample groups of neighbors were formed with 566 located in address EDs, 63 located in sample area segments, and 51 located in new construction developments. The neighbor group sample will be interviewed in 1985, 1989, and 1993. If there were fewer than ten units near the kernel, or if some could not be interviewed, the cluster has fewer than ten neighbors.

### 4.0 METROPOLITAN STATISTICAL AREA (MSA) SAMPLE SELECTION

The purpose of the AHS-Metropolitan Statistical Area sample is to provide estimates of housing characteristics for individual MSAs. The MSAs selected for the AHS are interviewed on a rotating basis. A list of 60 MSAs was nonrandomly selected to represent the largest and fastest growing MSAs. This sample was originally intended to be the basis of a three-panel, 60 MSA survey, with groups of the 60 MSAs being interviewed each year, providing a representative sample of the nation. The largest MSAs were initially interviewed with large samples. From 1978 on, however, budget cutbacks forced the sample sizes to be reduced (see below for more details).

Within the selected MSAs, MSA samples were drawn in the same way as described for the national sample with the following exceptions:

Each MSA was divided into permit-issuing areas and non-permit-issuing areas, which were then sampled separately.

EDs of Type $B$, where permits are required for new construction and addresses compiled for the 1970 Census were incomplete or inadequate, do not use area samples in the MSA surveys as they do in the national sample. They use address listings, just like Type C EDs. They were rare enough in the selected MSAs that the risk of not being able to find the unit based on its inadequate address was considered acceptable. To help find the unit, the enumerator was given a list of the five units on either side of the sample unit, and the name of the 1970 occupant.

Central cities were sampled separately from the rest of each MSA. The sampling rate, nevertheless, was about the same in central cities as in the suburbs of each MSA, except for 12 MSAs where especially large samples were drawn. These 12 can be identified in Table 4 of the Geography Section. In these 12 , equal sample sizes were taken from the central city and suburban portions of the MSA, so the sampling rates were different.

In address-1isting areas, sampling was based on the 20 percent of units which answered "long form" questionnaires in the 1970 Census.

Occupied and vacant housing units were sampled separately from special places and group quarters.

Occupied housing units were stratified by race (non-Black/Black); tenure (owner/renter); number of persons related to head, including head (1, 2, 3, 4, $5+$ ); and income of head and relatives ( $\$ 0-3 \mathrm{~K}, 3-6 \mathrm{~K}, 6-10 \mathrm{~K}, 10-15 \mathrm{~K}, 15+\mathrm{K}$ ) -- a total of 100 strata.

Vacant units were stratified into four categories: inexpensive (under $\$ 80$ rent or $\$ 15,000$ value), medium, expensive ( $\$ 120+$ rent or $\$ 25,000+$ value), and other (i.e., units not for sale or rent, such as seasonally vacant units).

Special places and group quarters were stratified by census tract and census ED within Central City and within the suburban portions of the MSAs.

Clusters of two were used for the sample from long-form questionnaires. This means two adjacent questionnaires were chosen from the stratified list of questionnaires. The units were not necessarily geographically close. Clusters of four were used for area segments, building permits, special places, and group quarters.

Building permits are sampled up to 5 months before the end of interviewing, not the beginning.

In address-1isting areas, new units in sample structures are not listed and are not sampled. Such units were therefore included in the Coverage Improvement Program.

Coverage improvement for new construction (after April 1, 1970) from old permits (before January 1, 1970) was conducted substantially differently from the national sample. A sample of permit offices was taken and a sample of 1969 permits in them, wherever data could be obtained. One-to-two unit structures were then sampled at one-fourth the normal AHS rate for the MSA. Larger structures were subdivided into clusters of two and sampled at one-half the normal rate. In MSAs where necessary data could not be obtained, permits identified by the Survey of Construction were sampled at one-third the normal rate.

### 5.0 CHANGES IN THE MSA SAMPLE

Unlike the National Survey, the AHS-MSA Survey was not totally redesigned, yet important changes occurred. MSAs that remained in the sample were redefined to conform with the 1983 Census boundaries; new MSAs were added while MSAs were dropped. For Houston, a totally new sample was drawn from the 1980 Census. In some MSAs, certain areas containing existing sample were targeted for sample supplementation. These areas containing existing housing units selected from the 1970 Census Housing Unit Record files are referred to as salted zones, and sample supplementation was necessary in these areas to prevent confidentiality problems with the release of survey micro-data.

Starting in 1984, there are 44 MSAs in the Survey which have been divided into four groups. Each group will be interviewed on a four-year cycle. (See Table 2 in the Introduction to the Codebook.)

### 5.1 Sampling Frame Used for Selection of New Samples

In addition to new MSAs, new samples of housing units were selected for counties or MCDs appended to an MSA whose geographical definition had been updated, and for salted zones of an MSA where 1970 Census-based sample housing units existed. For counties or MCDs (Minor Civil Divisions) added to the MSA due to the change in the MSA definition and for new MSAs, permit-issuing enumeration districts were separated from nonpermit-issuing enumeration districts as the sample selection procedures for permit-issuing EDs differed from the sample selection procedures for nonpermit-issuing EDs. New samples were selected in the permit-issuing portions of salted zones. All new sample housing units located in permit-issuing enumeration districts were selected from the 1980 Census Complete Count Housing Unit Record file. Note that in the 1970 Census-based design, housing units were selected from the 1970 Census Sample Housing Unit Record file which included a sample of about twenty percent of the housing units enumerated in the 1970 Census and given a "longform" questionnaire. For a MSA having salted zones and new counties or MCDs, due to the change in the MSA definition, the salted zones had to be sampled separately from the added counties or MCDs as the sampling rate used in salted zones differed from the one used in added counties or MCDs.

### 5.2 Stratification for New Sample Selection in Permit Issuing EDs

Housing unit records on the 1980 Census Complete Count Housing Unit Record file, for housing units located in permit-issuing EDs of salted zones or appended counties and MCDs, were stratified according to the following variables:

1. Central City of MSA/Balance of MSA
2. Tenure
3. Contract Rent
4. Value
5. Number of Rooms

Renter-related strata were oversampled from the 1980 Complete Count Housing Unit Record file. It should be noted that this stratification plan differed considerably from the stratification plan used in the 1970 Census-based design.

When housing units were initially selected from the 1970 Census materials for the MSA Survey, central cities were sampled separately from the rest of each MSA (see Section 4.0 above). Samples of housing were selected from salted zones andor new counties or MCDs within an existing MSA in such a way so that the final weights of sample housing units located in the central city were equal to the final weights of sample housing units in the balance of the MSA.

For the 1980 Census-based survey component, a distinction was made between institutionalized group quarters and non-institutionalized group quarters. Group quarters were classified as institutional if there were one
or more persons under care of custody such as nursing homes, halfway houses, and orphanages. Examples of non-institutional group quarters are rooming and boarding houses, hotels and motels, and college dormitories. Sampling procedures used for the non-institutionalized group quarters remained the same as those instituted by the 1970 Census-based sampling, but for institutionalized group quarters, each institution was given a measure of size one and they were selected using equal probability systematic sampling.

### 5.3 Cluster Sizes Used in New Sample Selection

Whereas the 1970 Census-based sampling procedure in permit-issuing EDs resulted in the selection of clusters of two adjacent long-form questionnaires from the stratified list of census sample housing units, the 1980 Census-based sample in permit-issuing areas was unclustered. New sample units selected in permit-issuing EDs were split into two equal-sized replicates. The replicates were formed by assigning every other sample hit to the second replicate.

Clusters of two new construction units formed using building permit information were selected in the new construction sampling in the 1980 Censusbased survey component, while new construction clusters of size four were used in the 1970 Census-based survey component. In the salted zones, new MSAs, and added counties and MCDs, clusters of four newly constructed units were initially formed from permits within a sample building permit office. These clusters were then sampled. The procedures for the formation and the sampling of the clusters of size four did not differ from the procedures used in the new construction sampling of the 1970 s, but following the sample selection of clusters of size four, two housing units were randomly selected from the clusters of size four.

### 5.4 Reduction of MSA Survey Samples

In the original design, each MSA sample is divided into 12 equal-sized and equally representative parts. Each month a different one is interviewed. A few interviews may extend into the following month, and new construction may be interviewed even later in the year, but these units are still considered to "belong" to the panel in which they were originally assigned, and are identified in IMONTH as belonging to that panel, regardless of when they are interviewed. An overall sample cut-back was undertaken in 1977, by omitting the March panel. In 1981 five more panels were omitted for large-sample MSAs, so that in three MSAs (Boston, Detroit and Washington) only the June-August and October panels were interviewed. In 1982, the sample was reduced in the remaining nine panels for 7 of 12 MSAs to achieve a sample size of 4,250 units in all MSAs. In 1983 and later surveys, all MSAs were cut back, particularly among owned units, to have a smaller sample size, with at least half the sample being renters whenever possible. No interviewing is done in January through March from 1983 on; any cases retained from those panels have been assigned new panel numbers. The purpose of oversampling renters was to increase the reliability of HUD estimates of rent level in each market.

The housing units selected from the 1980 Census Complete Count Housing Unit Record file for salted zones, new counties or MCDs within existing MSAs, and new MSAs were not part of the 1984 and 1985 Survey sample reductions.

In the 1985 Survey reduction, clusters consisting of owner-occupied housing units, clusters consisting of renter housing units, and clusters consisting of both renter and owner-occupied housing units were all reduced, although the reduction rates were lowest for clusters consisting of renter housing units. Subsamples of housing unit clusters that had been deleted in the previous enumeration sample reduction were reinstated for the 1985 AHS-MSA Survey. Prior to the subsampling, clusters were stratified by MSA sector (central city versus balance). Wherever possible, reinstated housing units were from panels 04-09 (April-December). Following the reduction and reinstatement procedures, all housing units remaining in panels 01-03 (January-March) were reassigned to panels 04-12.
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ANNUAL HOUSING SURVEY QUESTIONNAIRE<br>\section*{1985 National Sample}

Questionnaries for the National and Metropolitan Samples are virtually identical from 1984 to 1993. Earlier questionnaires, however, are very different. Copies of the questionnaires can be ordered using the order form at the end of this Codebook.

NOTE: The sample shows questions for occupied units. It does not show sections for non-interviews, or unoccupied units and does not include supplemental questions which vary from survey to survey. Copies of complete questionnaires are printed in the AHS Publication or may be obtained from abt Associates. A copy of selected pages of the control card is included in the Household Composition section.


NOTE: In the original Questionnaire, Page 2 is blank

| REGULAR OCCUPIED |  |
| :---: | :---: |
| MARK OR ASK - <br> 20. Are your living quarters in a (Read all answer categories.) | TYPE <br> 1120 Mobile home <br> 2 One-untt building, detached from eny other building <br> $3 \square$ One-unit building, ettached to one or more buildinga - Skip to item 22a Building with two or more apartmenta? Skip to item 21b |
| 21a. Are there any occupied or vacant apartments besides your own in the (building/mobits home)? <br> b. How many apartments are in the (bullding/mobile home)? | 1130 $\square$ Yes - Fill Table $\times$ on Control Card, OTHLQ <br> then go to item $21 b$ <br> $2 \square$ No - Skip to item 23 and mark box 1 or 4  |
| 22a. Does your (houso/apartment) share an astic or basement with the (house/apartment) next door? <br> b. How many (houses/apartments) Including your own share the attic or besement? |  |
| C. Does your (house/apartment) share a furnace of boller with the (house/apartment) next door? | $\left.\begin{array}{ll}11170 & \square \text { Yes } \\ & \begin{array}{l}\square \text { No..... } \\ 3 \\ \\ \end{array}\end{array}\right\}$ Don't know $\}$ SKIP to item 220 |
| d. How many (houses/apartmants) Including your own share the furnace or boller? | $\qquad$ Number - If one, reask item 22c and correct entry. If more than one, skip to item 23 and mark box 3. |
| 6. Are there any occupled or vacant apartmenta besides your own in the building? | $\begin{array}{ll} 1190 & 1 \square \text { Yes }- \text { Fill Table } X \text { on Control Card, } \\ \text { then go to item } 22 f \\ & 2 \square \text { No }- \text { Skip to item } 23 \text { and mark box } 2 \end{array}$ |
| f. How many apartmonts inciuding your own are in the building? | 1200 $\qquad$ Number - If one, reask item $\angle \angle E$ and correct entry. If more than one, go to item 23 and mark box 3. |
| 23. Check Item <br> Final structure type classification based on entries in items 20-22. |  |
| 24. Is the house buitt - <br> (Read answer categories until a "Yes" reply is received.) | CELIAR $\qquad$ |
| 25a. Is the (house/apartment) part of a condominium or cooperative? |  |
| b. To the Census Bureau, a cooperative is property which is owned by a corporation. Each shareholder is entitied to occupy an individual unit. Is this what you mean when you say this is a cooperative? | Yes No - Reask item 25a and correct entry |

## REGULAR OCCUPIED - Continued


28. Check Item (See item 26a.)One or more full bathrooms - Skip to item 30aNo full bathrooms - Ask item 29a




| REGULAR OCCUPIED - Continued |  |
| :---: | :---: |
| 40a. Does your (house/apartment) have a washing machine (-..- / in the apartment)? <br> b. Is it more then 5 yoars old? | 1710 <br> WASH <br> 2 No - Skip to item 41 a $\square$ Yes <br> 2 $\square$ No |
| 41a. Does your (house/apartment) have a clothes dryer (-..- / in the apartment)? <br> b. la k more than 5 years old? <br> C. What kind of fuel does the dryer use? | 1730 $\square$ Yes <br> DRY <br> ${ }_{2}$ 〇 No - Skip to item 42a <br> 1740 Yes No $\square$ DFUEL Gas <br> $3 \square$ $\square$ Other - Specify $\qquad$ |
| 42a. Does your (house/apartment) have central air conditioning? <br> b. What kind of fuol does it use? <br> c. Do you use any room air conditionera? <br> d. How many? |  |
| 43a. What fuol ia used MOST for heating the (house/apartment)? <br> b. Besides (Fuel marked in item 43a), what other fual is used for heating the (house/apartment)? <br> (Mark all that apply.) |  |
| Notes |  |


| 44. | Does the (house/apartment) have a usable fireplace? | 1830, EYes | FPLink |
| :---: | :---: | :---: | :---: |

PLEASE LOOK AT THIS CARD.
45. What type of heating equipment is used MOST to heat the (houselapartment)?

## HEQUIF

1840
A central warm-air furnace (with air vents or
ducts to the individual rooms)
2 - Steam or hot-water system (radiators or other system using steam or not water)
3 三 Electric heat pump
4 - Other built-in electric units (permanently installed in wall, ceiling, or baseboards)Floor, wall, or other built-in, hot air heater without ductsRoom heaters - (ls it /Are they) -
$6 \square$ Kerosene, gas, of oil heaters, VENTED to the outsida through a chimney, flue, or pipes?UNVENTED ges, oil, or ikerosene heaters?Portable electric heatera?Stove(s)Fireplace(s) WITH inserts finstalled equipment designed to circulate more heat into the room)
11ireplace(s) with NO inserts

12 Other - Specify
13 None - Skip to item 48a, page 9

46a. What other kinds of heating equipment does the (house/apartment) have or use?
(Mark all that apply.)
b. Anything else?
$\square$ Yes - Mark appropriate box(es), then
go to item 47a $\square$ No
$1850, \square$ A central warm-air furnace (with air vents or ducts to the individual rooms) SAFURSteam or hot-water system (radiators or other system using steam or hot water) SS'LcAMElectric heat pump SHPMPOther built-in electric units (permanently SELECT installed in wall, ceiling, or baseboards)Floor, wall, or other built-in, hot-air heater SPLF without ductsRoom heaters - (is it /Are they) -
$6 \square$ Kerosene, gas, or oil heaters, SFLOT VENTED to the outside through a chimney, flue, or pipes?

SFIIN
 UNVENTED gas, oil, or kerosene heaters? Portable electric heaters?
$\qquad$
 Stove(s) SSTOVE Fireplace(s) WITH inserts (installed equipment SFRPL: designed to circulate more heat into the roomt
$11 \square$ Fireplace(s) with NO inserts

SFRPL
$12 \square$Other - Specity $\qquad$

Notes


## REGULAR OCCUPIED - Continued



| 52a. What are the reasons you moved from your last residence? <br> (Mark all that apoly.) |  |  |
| :---: | :---: | :---: |

b. MARK if only one box checked in item 52a OR ASK if two or more boxes checked -

2070
Number from item 52a $\quad$ All reasons of equal importance $\quad$ WHMOVE
53. Check Item (Mark first box that applies.)
Box 1 marked in item 52a - Ask item 54a
Box 2 marked in item 52a - Skip to item 54b
Boxes 1 and 2 blank in item 52a - Skip to item 54c
548. Did you leave -

WMOWNR
(1) Because the owner, or members of the owner's family were going to move into that residence?
(2) Because that unit was going to become a condominium or cooperative?
3) Because that residence was closed for repairs?

2100
 $\left.\begin{array}{l}\text { Yes } \\ \text { No }\end{array}\right\}$

Skip to item 55a, page 11
b. Did you leave -
(1) Because the government wanted to use the land or building for some other purpose?
(2) Because that residence was condemned by the government as unfit for occupency?

## 2120

Yes - Skip to item 55a, page 11$2 \square \mathrm{~N}$
2090, $\square$ Yes - Skip to item 55a, page 11 WMCNDO
2090
 Yes - Skip to item 55a, page 11 No
${ }_{1}-\mathrm{Ye}$





## REGULAR OCCUPIED - Continued

62. INTRODUCTION: The next questions are about your current residence.
63. Check Item (See Control Card item 8b.)

Current residence is -
三Owned - Skip to item 73a, page 16
ERented - Go to item 64a

- No cash rent - Skip to item 64c


Notes


## REGULAR OCCUPIED - Continued

71. Check Item (See item 23, page 3.)

$$
\text { I Two-or-more-unit building or two-or-more-unit mobile home - Skip to item 109a, page } 24
$$

All others - Ask item 72a

74. Check Item (See item 73a.)

$$
\square \text { At least one "Yes"' marked in item 73a - Ask item } 75
$$

$\square$ All "No' in item 73a - Skip to item 76
75. Did the household get a low interest loan or grant from a government program to help pay for making any of these repairs or

## 2830

 1 ПYes2 二NO

SLBFIX


| REGULAR OCCUPIED - Continued |  |
| :---: | :---: |
| 83. Check Item <br> a. (See item 25a, page 3.) Condominium or cooperative - Skip to item Not a condominium or cooperative - Go to it <br> b. (See item 23, pege 3.) One-unit building - Ask item 84a One-unit mobile home - Skip to item 88e, Two-or-more-unit building or two-or-more-un |  |
| 84a. How large is the (lot/ske)? <br> IInclude all connecting land that is owned or that is rented with the home. ) <br> (If over 1 acre, drop any fractions, don't round up. If under one acre, convert to approximate square feet.) | 2980 $\qquad$ Squaro foet <br> OR <br> 2990 $\qquad$ Feet by <br> 3000 $\qquad$ feet <br> 3010 $\qquad$ Whole acres Don't know - Ask item 84b |
| b. MARK OR ASK Is it more than 10 acres? | 3020 , $\square$ Yes - Skip to item 86a ${ }^{\text {a }}$ |
| C. Is there a commercial establishment on the property? | $3030{ }^{\square} \square^{1}$ Yes - Skip to item 85a SHOPS |
| d. Is there medical or dental office on the property? | 1040  <br>  $\square$ Yes -Skip to item 85b <br> $2 \square \mathrm{No}$  |
| 2. How much do you think the house and lot would sell for on todey's market? | 3100 \$ ${ }^{\text {a }}$ |
| 85a. Is there a medical or dental office on the proparty? | $\square$ $\square$ Yes <br> 2 $\square$ No |
| b. How much do you think the house, (business/medical office) and lot would sell for on today's market? | \$ $\qquad$ 00 <br> PVALUE |
| c. What is the value of the residential portion of this property? | 3100 \$ $\qquad$ $\square$ Skip to item 89a, page 19 |
| 86a. Is there a commerciel establishment on the property? | 3030 l $\begin{aligned} & 1 \square \text { Yes } \\ & \\ & 2 \square\end{aligned}$ |
| b. İs theróa medical or dental ôffice on the property? | 3040$1 \square$ Yes $\quad$ DOCS <br> $2 \square$ No |
| c. How much do you think the house nad (Acreage from item 84a/all the land) would sell for on todey's market? | 3080 \$ PVALUE |
| d. How much do you think the house and ks (lotyard) would sell for on today's market? | 3100 \$_00 Skip to item 89a, page 19 |
| -. Is there a commercial esta the property? |  |
| f. İsthere a medical or dentat office on the property? | 3040 $\square$ Yes <br> 2 No |
| g. How much do you think the entire building and property would sell for on today's market? | 3080 \$ PVALUE |
| h. How much of that would apply to the apartment only? | 3100 $\$ \ldots .00$ Skip to item 89a, oage ${ }^{\text {VALHE }}$ |
| 87a. Is there a commercial establishment on the property? | 3030 CONDOS1 Yes  <br> 2 No   |
| b. Is there a medical or dental office on the property? | 3040 $\begin{aligned} & 1 \\ & 2 \mathrm{Yes} \\ & \mathrm{NO}\end{aligned}$ |
| c. How much do you think the apartment would sell for on today's market? | 3100 \$ . |




| REGULAR OCCUPIED - Continued |  |  |
| :---: | :---: | :---: |
| 96n. Is the mortgage an FHA mortgage, a VA mortgage, a Farmer's Home Administration mortgage, or some other mortgage? | FIRST (MORTGAGE/LOAN) | SECOND (MORTGAGE/LOAN) |
|  |  |  |
| 0. Did you borrow the money from a bank or other organization, OR did you borpow it from an individual? | 3440 $1 \square$Bank or other organiza- <br> tion -Skip to item $96 a$ <br> BANK $2 \square$ Individual | $\square$ Bank or other organization - Skip to item 96q <br> BANK2 2 $\square$ Individual |
| p. Was that the former owner of the home? |   <br> SELJ 2450 <br> $\square$ Yos  | $\begin{array}{ll} 3450 \\ \text { SEIL2 } & \square \mathrm{Yes} \\ \text { No } \end{array}$ |
| q. Are the peyments on this loen the same during the whole length of the mortgage? | 3480 $\square$ Yes - Skip to item 96s <br> VARY $2 \square$ No | $\begin{aligned} & 3460, \square \text { Yes - Skip to item } 96 \mathrm{~s} \\ & \text { VARY2 } 2 \square \text { No } \end{aligned}$ |
| P. How do they change? <br> (Mark all that apply.) | $\left.\begin{array}{cc}1 . \square & \text { Change in taxes or } \\ \text { insurance, or due to } \\ \text { decline in principal }\end{array}\right\}$ |  |
| 5. Check Item (See item 95, page 20.1 | こ One mortgage - Skip to item 98a, page 22 <br> $\square$ Two or more mortgages - Go back to item 96a | Only two mortgages Skip to item 98a, page 22 Three or more mortgages - Ask item $97 a$ |
| 97a. For the (third mortgage/other mortgages), how much did you borrow? <br> b. What is your current monthly payment for the (third mortgage/other mortgages)? | $\sim 6112$ <br> 3490 <br> s $\square$ <br> 00 <br> \$ $\qquad$ $\square$ <br> 00 | AMMRT 3 <br> PMT3 |
| Notes |  |  |

## REGULAR OCCUPIED - Continued



| REGULAR OCCUPIED - Continued |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 1118. How many automobiles are kept at home for use by members of your household? (Exclude vans or trucks.) |  |  | Number <br> e $\qquad$ Number <br> e |  |
| 112. Check Item <br> 2. (See Control Card items 13, 14, and 18.) <br> $\square$ No nonrelative household members age 14 + in household - Skip to item 114, page 26 <br> - Nonrelative household members age $14+$ in household - Go to item $112 b$ <br> b. (See Control Card items 13, 17, and 18.) <br> - All nonrelatives age 14 + are co-ownersico-renters (in Control Card item 17) - Skip to item 114, <br> - All others - Go to item $112 c$ <br> C. (See Control Card items 13, 17, and 18.) <br> $\square$ Remaining nonrelatives age 14 + are spouse or child(ren) of co-owner or co-renter - Skip to item 114, page 26 <br> [ All others - Ask item 113a-d for each nonrelative age $14+$ who is not a co-owner or co-renter |  |  |  |  |
|  | -620+ | $\sim 6217$ | $\sim 622 \%$ |  |
| 113. Enter line number <br> a. Does . . . pay a regular fixed rent as a lodger to someone in this household? |  |  | 3880 : Line number <br> NRLIN3 | 3880 Line number <br> NRLIN4 |
|  |  |  | 1 Y Yes <br> 2 - <br> No - Skip to next nonrelative; if no other nonrelative. skip to item 114. page 26. | $\begin{aligned} 1 \text { Yes } \\ 2 \text { No-Skip to next } \\ \text { nonreiative: If no } \\ \text { other nonrelative. } \\ \text { skip to item } 114 \text {, } \\ \text { page } 26 . \end{aligned}$ |
| b. How often is . . .'s rent due? | 3900 FRENTI | 3900 FRENT | 3900 FRENT3 | 3900 FRENT4 |
|  | $\qquad$ Times/year <br> 12 $\square$ Monthly | ${ }_{12} \square$ Monthly ${ }^{\text {Times/year }}$ | ${ }_{12 \square} \square$ Monthly Times/year | 12■ Monthly ${ }^{\text {Timesiyear }}$ |
| C. How much is the rent? | 3910 RENT1 | 3910 RENT2 | 3910 RENT3 | 3910 RENT4 |
| d. Does that include food? | 3920 FOOD1 $1 \square$ Yes $2 \square$ No | 3920 FOOD2 $1 \square$ Yes $2 \square$ No | $\begin{aligned} & \frac{3920 \text { FOOD3 }}{1 \square \mathrm{Yes}} \\ & 2 \square \mathrm{No} \end{aligned}$ | 3920 FOOD4 $1 \square_{Y e s}$ 2 No |

Notes



Notes



## REGULAR OCCUPIED - Continued


f. Describe characteristics of the sample unit that would help to determine total number of square feet, such as ranch, cape cod, split level, etc.

Dimensions Do not include a garage
Include a garage for -
One car
Two cars
Three or more cars
g. INSTRUCTION - GO TOITEM 122, PAGE 31.
h. Check Item (See item 23, page 3.)
$\qquad$ One-unit building - detached \} Ask item $121 i$
=All others - Go to item 122, page 31
i. Because housing size is so important, I would like to measure the length and width of this house from the outside. May I do that after I finizh the interview?

4650
1 二Yes
2 二No

MEASUR


Notes

INTERVIEWER OBSERVATION


Notes

\begin{tabular}{|c|c|}
\hline \multicolumn{2}{|l|}{INTERVIEWER OBSERVATION - Continued} \\
\hline \multicolumn{2}{|l|}{The items on this page concerns the area within 300 feet of the building in which sample unit is located.} \\
\hline \begin{tabular}{l}
214a. Which of these are within 300 feet of building containing the sample unit? \\
ESFD \\
ELOW \\
(Exclude this building.) \\
EMID \\
(Mark all that apply.)
\end{tabular} \&  \\
\hline \begin{tabular}{l}
b. What is the predominant age of residential buildings within 300 feet? \\
EAGE \\
(Exclude this building.)
\end{tabular} \& 4920 , \(\square\)
Older than sample unit

About the same

Newer than sample unit

Very mixed
$\square$ No other residential buildings <br>

\hline | C. Are any buildings vandalized, or interior exposed to the eiements? |
| :--- |
| eaban |
| (Exclude this building.) | \& 49301 Yes, only one vandalized or exposed

Yes, more than one
None vandalized or exposed
No other buildings within 300 feet - Skip to item 2140 <br>

\hline | d. Are there bars on windows of buildings in area? |
| :--- |
| (Exclude this building.) | \& | 4940 , Yes, only one building with bars Yes, more than one |
| :--- |
| 3 No bars on windows | <br>

\hline -. What is the condition of streets? \& \begin{tabular}{l}
Major repairs needed

Minor repairs needed <br>
3
No repairs needed
No streets within 300 feet
\end{tabular} <br>

\hline | f. Is there trash, litter, or junk in streets, roeds, empty lots, or on any properties? |
| :--- |
| EJUNK |
| (Include this building.) | \& | 4960 , Major accumulation Minor accumulation |
| :--- |
| 3 None | <br>

\hline \multicolumn{2}{|l|}{INTERVIEW COMPLETED} <br>
\hline \& <br>
\hline
\end{tabular}

| 215. Check Item - Regular Occupied (See item 121i, page 30); URE Occupied (See item 174i, page 43)"Yes" marked - Go to item 216 - If callback required, mark item 10, page 1"No" marked or blank - Fill observation items on pages 53 and 54 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| UNIT MEASUREMENT |  |  |  |  |
| 216. Obtain the measurements (length and width) of each story of the unit. Draw sketch (showing dimensions) in area below. Include basements and finished attics. Exclude unfinished attics, carports, attached garages, and porches that are not protected from the elements. |  |  |  |  |
| a. SKETCH | $\begin{aligned} & \text { OFFICE } \\ & \text { USEE } \\ & \text { ONLY } \end{aligned}$ | 4970 | UNITSF | Square feet |

b. ENTER DIMENSIONS HERE.

| 1 | Rectangles or squares |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | First <br> (a) |  | Second (b) |  | Third (c) |  | Fourth <br> (d) |  |
| 1 | Length | Width | Length | Width | Length | Width | Length | Width |
| Basement |  |  |  |  |  |  |  |  |
| , |  |  |  |  |  |  |  |  |
| 1st floor of unit |  |  |  |  |  |  |  |  |
| 2nd floor of unit |  |  |  |  |  |  |  |  |
| 3rd floor of unit |  |  |  |  |  |  |  |  |
| 4th floor of unit |  |  |  |  |  |  |  |  |

C. Describe characteristics of the sample unit that would help to determine total number of square feet such as ranch, cape cod, split level, etc.

Dimensions -
$\square$ Do not include a garage
$\square$ include a garage for $\nabla$
$\square$ One car
Two cars
$\square$ Three or more cars
d. FILL OBSERVATION ITEMS ON PAGES 53 AND 54

Name $\qquad$
Title $\qquad$
Organizarion $\qquad$
Department $\qquad$
Mailing
Address
City/Town $\qquad$

| ITEM | QUANTITY | PRICE | COST |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { AHS Catalog/Price List } \\ & \text { (30 Pages) } \end{aligned}$ |  | \$ 3.00 |  |
| AHS Codebook <br> (describes all data) <br> (410 pages) |  | \$45.00 |  |
| Questionnaire Directory <br> (350 pages) |  | \$40.00 |  |
| AHS Codebook \& Questionnaire Directory |  | \$80.00 |  |
| National Survey Questionnaire (Be sure to indicate years) | Year (s) | $\begin{aligned} & \text { one year } \\ & \text { @ } \$ 10.00 \end{aligned}$ |  |
| Metropolitan Survey Questionnaire | Metro Area | one Metro Area e $\$ 10.00$ |  |

Subtotal $\qquad$
In MA, add 5\% Sales Tax $\qquad$
TOTAL $\qquad$
HETHOD OP PAYIDAT: (DO NOT SEND CASH!)

| Check Enclosed | Card $\ddagger$ |
| :--- | :--- |
| VISA | Expiration |

Master Card Signature $\qquad$

If we have any questions about your order, please indicate how we may contact you during daytime business hours:
$\frac{( }{\text { AREA CODE }}$ TELEPHONE NO.

## EXTENSION

Please detach form and fold to show $A B T$ address (remember to cut off rough edge, tape or staple, and add postage), or place in an envelope and mail to:

AHS DATA PROJECT
Abt Associates Inc.
55 Wheeler Street
Cambridge, MA 02138-9990

We would like your reactions to chis Codebook, so we can improve it.

## First reactions:

## Further Comments after you have used this Codebook:

Please detach form and fold to show $A B T$ address, or place in an envelope and mail to:

```
                                    AHS DATA PROJECT
ABT ASSOCIATES INC.
55 Wheeler Street
Cambridge, Massachusetts 02138-9990
```

```
(Note: Please remember to cut off rough edge, tape or staple, and add
postage.)
```

ALPhABETICAL INDEX OF VAR!ABLES

| 0330 | aban | 1109 | amrtzz | 0252 bleak |
| :---: | :---: | :---: | :---: | :---: |
| 0339 | aband | 0219 | amtain | 2456 BLIND |
| 0350 | Abanm | 0972 | AMTE | 2472 BLOOO |
| 1765 | ABL280 | 1721 | AMTE80 | 1128 BLOON |
| 1764 | Able80 | 0977 | AMTF | 1129 BLOON2 |
| 1578 | ACC8O | 0973 | AMTG | 1574 BOAR8O |
| 0049 | Access | 1722 | AMTG80 | 0228 BOARD |
| 1566 | ACRE80 | 1174 | AMTI | 1550 BOARDU |
| 0100 | ADD | 1207 | AMTM | 2446 BRONCH |
| 0846 | AfUEL | 1208 | AMTM2 | 1570 BUIL80 |
| 1640 | AG280 | 0975 | amto | 0044 BUILT |
| 1641 | AG380 | 1723 | AMtoso | 0125 BURNER |
| 1642 | AG480 | 1022 | AMTRSE | 2800 BUSV1 |
| 1643 | AG580 | 1023 | AMTRSG | 2801 BUSV2 |
| 1644 | AG680 | 1177 | AMTRSI | 2802 busv3 |
| 1645 | AG780 | 1025 | AMTRSO | 2803 gUSV4 |
| 1646 | AG880 | 1024 | AMTRST | 2857 buyair |
| 1647 | AG980 | 1026 | MMTRSW | 0960 BUYE |
| 1648 | AG1080 | 1165 | AMTRSX | 0966 BUYE2 |
| 1649 | AG1180 | 0974 | AMTT | 0965 BUYF |
| 1650 | AG1280 | 1731 | AMTT80 | 0969 BUYF2 |
| 1651 | AG1380 | 0976 | AMTU | 0860 BUYFUL |
| 1652 | AG1480 | 1724 | AMTU80 | 0961 BUYG |
| 1653 | AG1580 | 1162 | AMTX | 0967 BUYG2 |
| 0490 | AGE | 2480 | ANOMLY | 1167 BUYI |
| 0491 | AGE2 | 0136 | APPBAD | 0962 BuYo |
| 0492 | AGE3 | 0135 | APPOK | 0968 BUYO2 |
| 0493 | AGE4 | 1122 | ARM | 0964 BUYT |
| 0494 | AGE5 | 1123 | ARM2 | 0970 BUYT2 |
| 0495 | AGE6 | 2458 | ARMSM | 2864 BUYTV |
| 0496 | AGE7 | 2439 | AROUND | 2796 BUYV1 |
| 0497 | AgE8 | 2467 | ARTERY | 2797 8UYV2 |
| 0498 | AGE9 | 2452 | ARTH | 2798 BUYV3 |
| 0499 | AGE10 | 1555 | ARTSTR | 2799 BUYV4 |
| 0500 | AGE19 | 2444 | ASthma | 0963 BUY4 |
| 0501 | AGE12 | 2449 | Attack | 0971 BUYH2 |
| 0502 | AGE13 | 1526 | AWT | 1154 BUYX |
| 0503 | AGE14 | 2461 | backo | 1081 BUYYR |
| 0504 | age15 | 2460 | backst | 2865 BUTV1 |
| 1639 | AGE80 | 0262 | BADDRY | 2866 BUTV2 |
| 0151 | AIR | 0318 | BADPER | 0591 C6 |
| 1593 | Alr80 | 0317 | BADPRP | 0593 C 18 |
| 0324 | AIRN | 0270 | BADSEW | 0592 C617 |
| 0343 | AIRND | 0316 | BADSRV | 1197 CAMF |
| 0354 | AIRNM | 0243 | BADSTEP | 0997 CAMTE |
| 0152 | AlRSYS | 0266 | BADTLT | 0998 CAMTG |
| 1781 | ALIN1 | 1114 | BANK | 1175 CAMTI |
| 1782 | Alinz | 1115 | bank2 | 1001 CAMTO |
| 1783 | Alin3 | 1587 | bathbo | 0999 CAMTT |
| 1784 | ALIN4 | 0077 | baths | 1000 CAMTH |
| 1785 | ALINS | 1552 | 88LDG | 1163 CAMTX |
| 1786 | ALIN6 | 0076 | BDRMSC | 2466 CANCER |
| 1787 | ALIN7 | 1586 | BEDR80 | 0038 CANRNT |
| 1788 | Alin8 | 0075 | BEDRMS | 0058 CARS |
| 1789 | ALIN9 | 0257 | BIGP | 1583 CARS80 |
| 1790 | alinio | 1043 | BILLfE | 1840 CARTO1 |
| 1791 | ALIN11 | 1044 | billfg | 1841 cartoz |
| 179 |  | 1045 | BILLFO | 1842 CART03 |
| 1213 | ALMV79 | 1046 | BILLft | 1843 CARTO4 |
| 1848 | ALONE 1 | 1047 | BILLFW | 1844 CARTO5 |
| 1849 | ALONE2 | 1033 | BILLGE | 1845 CARTO6 |
| 1850 | ALONE3 | 1035 | BILLGF | 1846 CARTO7 |
| 1851 | ALONE 4 | 1034 | BILLGO | 1847 CARTO8 |
| 1852 | 2 ALONE5 | 1036 | BILLGT | 1839 CARTOJ |
| 1853 | ALONE6 | 1037 | BILLGU | 0992 CBUYE |
| 1854 | ALONE7 | 1038 | BILLOE | 0993 CBUYG |
| 1855 | ALONE8 | 1040 | BILLOF | 1168 CBUY1 |
| 0102 | ALT | 1039 | BILLOG | 0995 CBUYO |
| 1101 | AMMORT | 1041 | BILLOT | 0996 CBUYT |
| 1102 | AMmRT2 | 1042 | BILLO | 0994 CBUYU |
| 1103 | AMMRT3 | 1048 | BILLTE | 1155 CBUYX |
| 1995 | AMPM1 | 1051 | BILLTF | 0055 CELLAR |
| 1996 | AMPM2 | 1049 | BILLTG | 1143 CFPMT |
| 1997 | AMPM3 | 1050 | BILLTO | 1720 CFUE80 |
| 1998 | AMPM4 | 1052 | BILLTH | 0843 CFUEL |
| 1999 | AMPM5 | 1053 | BILLWE | 1286 CHHEAD |
| 2000 | AMPM6 | 1056 | BILLWF | - 1290 CHUSAF |
| 2001 | AMPM7 | 1054 | BILLUG | 1287 CINLIM |
| 2002 | AMPM8 | 1055 | BILLWO | 2475 CIRCLE |
| 1108 | AMRTZ | 1057 | BILLWT | 1738 CIT280 |


| 1737 | citz80 | 0254 CRACKS | 0132 DISH5 | 1751 EMP280 |
| :---: | :---: | :---: | :---: | :---: |
| 0833 | CLASST | 1202 CREC | 2880 DISHER | 2447 EMPH |
| 0053 | CLImb | 0327 CRIME | 0287 DISP | 1750 EMPL80 |
| 2504 | CLineq | 0337 CRIMED | 0130 DISP5 | 1691 ENG80 |
| 2505 | CLINE2 | 0348 CRIMEM | 0122 DISPL | 1692 ENG280 |
| 2506 | CLINE3 | 0009 CROP5 | 2020 DISTJ | 2774 ENO1 |
| 2507 | CLINE4 | 0010 CROP25 | 2021 DISTJ1 | 2775 ENO2 |
| 2508 | CLINE5 | 1567 CROPBO | 2022 DISTJ2 | 2776 ENO3 |
| 2509 | CLINE6 | 0008 CROPSL | 2023 DISTJ3 | 2777 ENO4 |
| 1199 | CMNTN | 1203 CSECUR | 2024 DISTJ4 | 2778 ENOS |
| 1094 | CMORT | 0109 CSTADD | 2025 DISTJ5 | 2779 ENO6 |
| 1537 | CHS | 2860 CSTAR1 | 2026 DISTJ6 | 0240 ENOB |
| 0017 | CMSA | 2861 CSTAR2 | 2027 DISTJ7 | 0303 ENOCL |
| 2540 | CONA1 | 0111 CSTETH | 2028 DISTJ8 | 0238 ENOF |
| 2541 | CONA2 | 0113 CSTFIX | 0383 DLINE1 | 0232 ENOR |
| 2542 | CONA3 | 0110 CSTKIT | 0057 DOCS | 0761 EOTHER |
| 2543 | CONA 4 | 0205 CSTMEQ | 2808 DRIVE1 | 2750 EOTHR1 |
| 2544 | CONA5 | 0227 cstmat | 2809 DRIVE2 | 2751 EOTHR2 |
| 2545 | CONA6 | 1554 CSTRG | 2810 DRIVE3 | 2752 EOTHR3 |
| 2546 | CONB1 | 0108 CSTROF | 2811 DRIVE4 | 2753 EOTHR4 |
| 2547 | CONB2 | 0210 cSTSOW | 2804 DRVYR1 | 2754 EOTHR5 |
| 2548 | CONB3 | 0112 CSTSID | 2805 DRVYR2 | 2755 EOTHR6 |
| 2549 | COWB4 | 1201 cswim | 2806 DRVYR3 | 0760 EOUTPR |
| 2550 | CONB5 | 1152 CTXPMT | 2807 DRVYR4 | 2720 EPHOW1 |
| 2551 | CONB6 | 2848 CYLHV1 | 0128 DRY | 2721 EPHON2 |
| 2552 | CONC1 | 2849 CYLNV2 | 0134 DRY5 | 2722 EPHON3 |
| 2553 | CONC2 | 2850 CYLHV3 | 2879 DRYCST | 2723 EPHON4 |
| 2554 | CONC3 | 2851 CYLNV4 | 2877 DRYER | 2724 EPHON5 |
| 2555 | CONC4 | 2196 damag | 2878 DRYOUN | 2725 EPHON6 |
| 2556 | CONCS | 2197 damag2 | 2882 DSHCST | 2453 EPILEP |
| 2557 | concs | 2198 DAMAG3 | 2881 DSHOWM | 0298 EPRKG |
| 2558 | COND 1 | 1519 DATE | 0323 DUMP | 0758 EPRVPN |
| 2559 | COND2 | 2075 dCLAFF | 0340 DUMPD | 2714 EPUSH 1 |
| 2560 | COND 3 | 2076 DCLAVL | 0351 DUMPM | 2715 EPUSH2 |
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| 1569 | COND80 | 2079 DCLOTH | 0304 EAGE | 2719 EPUSH6 |
| 2483 | CONDNO | 2071 DCLPEO | 0759 EALIM | 2612 ERAIL1 |
| 0034 | CONDO | 2072 DCLSCH | 0236 EBAR | 2613 ERAILT |
| 2482 | CONDOR | 2073 DCLSHP | 0306 EBARCL | 2614 ERAIL3 |
| 1002 | CONE | 2078 DCLTMP | 0235 EBROKE | 2615 ERAIL4 |
| 2564 | CONE1 | 2455 deaf | 0835 ECASST | 2616 ERAIL5 |
| 2565 | CONE2 | 0004 Degree | 0301 ECL | 2617 ERAIL6 |
| 2566 | CONE3 | 0082 DENS | 0297 ECOM | 2696 ERAIS1 |
| 2567 | CONE 4 | 1558 dfire | 0237 ECRLMB | 2697 ERAIS2 |
| 2568 | CONE5 | 0847 DFUEL | 0750 EDIV | 2698 ERAIS3 |
| 2569 | CONEG | 2464 DIABET | 0834 EEASST | 2699 ERAIS4 |
| 2570 | CONF1 | 2471 DIET | 2726 EFLAS1 | 2700 ERAIS5 |
| 2571 | CONF2 | 2516 DIFA1 | 2727 EfLAS2 | 2701 ERAIS6 |
| 2572 | CONF3 | 2517 DIFA2 | 2728 EfLAS3 | 0752 ERENT |
| 2573 | COMF4 | 2518 DIFA3 | 2729 EfLAS4 | 0308 EROAD |
| 2574 | comf 5 | 2519 DIFA4 | 2730 EfLAS5 | 0229 ESAGR |
| 2575 | CONF6 | 2520 DIFA5 | 2731 Eflas6 | 0292 ESFD |
| 1198 | COMFEE | 2521 DIFA6 | 0239 Ec000 | 0234 ESLOPW |
| 0200 | CONFUR | 2522 DIFB1 | 0756 EGOVPN | 0749 ESS |
| 1003 | CONG | 2523 DIFB2 | 0300 EGREEN | 0302 ETRANS |
| 1005 | cono | 2524 DifB3 | 0295 EHIGM | 0754 EUMEMP |
| 1006 | CONT | 2525 DIFB4 | 2678 EHMDL 1 | 1060 EVEN |
| 1516 | COWTRLX | 2526 DIFB5 | 2679 EHNDL2 | 0757 EVET |
| 1515 | CONTROL | 2527 DIFB6 | 2680 EHNDL3 | 0299 EMATER |
| 1004 | CONW | 2528 DIFC1 | 2681 EHNDL4 | 0753 EUELF |
| 0123 | COOK | 2529 DIFC2 | 2682 EHMDL5 | 0755 EUKCMP |
| 0131 | COOK5 | 2530 DIFC3 | 2683 EHKDL6 | 1551 EXPOSE |
| 0983 | COSTE | 2531 DIFC4 | 0231 EHOLER | 0290 EXTERM |
| 0988 | Costi | 2532 DIFC5 | 0751 EINT | 0861 FAFURA |
| 0984 | cosig | 2533 DIFC6 | 0309 EJUNK | 0862 FAFURS |
| 0986 | costo | 2534 DIFD1 | 0052 ELEV | 0863 FAFURC |
| 0066 | COSTP | 2535 DIFD2 | 1580 ELEV80 | 0864 FAFURD |
| 0985 | COSTT | 2536 DIFD3 | 2510 ELINE 1 | 0865 FAFURE |
| 2828 | COSTV1 | 2537 DIFD4 | 2519 Eline2 | 0866 FAFURF |
| 2829 | Costv2 | 2538 DIFD5 | 2512 ELINE3 | 0867 FAfURG |
| 2830 | cosiv3 | 2539 DIFD6 | 2513 ELINE4 | 0868 FAFURH |
| 2831 | COSTV4 | 2442 DIFFNO | 2514 ELINE5 | 0869 fafur! |
| 0987 | COSTH | 2477 DIGEST | 2515 ELINE6 | 0475 faM |
| 1204 | COTHER | 0260 DILAPM | 0293 ELOW | 0476 fam2 |
| 2476 | COUGH | 0081 DINING | 0294 EMID | 0477 fam3 |
| 0018 | COUNTY | 2437 DISABL | 0230 EmISSR | 0478 FAM4 |
| 1200 | CPARK | 1559 DISAS | 02.3 EMISSW | 0479 faM5 |
| 1148 | CPMT | 0126 DISH | 0296 EMOBIL | 0480 FAM6 |


| 0482 | FAM8 | 1192 | FLRENT | 1694 GRA280 |
| :---: | :---: | :---: | :---: | :---: |
| 0483 | FAM9 | 1210 | FMHOT F | 0569 GRAD2 |
| 0484 | FAM10 | 0741 | F0001 | 0570 GRAD3 |
| 0485 | FAM11 | 0742 | F0002 | 0571 GRAD4 |
| 0486 | FAM12 | 0743 | F0003 | 0572 GRAD5 |
| 0487 | FAM13 | 0744 | F0004 | 0573 GRAD6 |
| 0488 | FAM14 | 0745 | F0005 | 0574 GRAD7 |
| 0489 | FAM15 | 0746 | F0006 | 0575 GRAD8 |
| - 1688 | FAN280 | 0747 | F0007 | 0576 GRAD9 |
| 1687 | FANC80 | 0748 | F0008 | 0577 GRAD10 |
| 0064 | FARP | 0897 | FPLFA | 0578 GRAD11 |
| 0888 | FELCTA | 0898 | FPLFB | 0579 GRAD12 |
| 0889 | FELCTB | 0899 | FPLFC | 0580 GRAD 13 |
| 0890 | FELCTC | 0900 | FPLFD | 0581 GRAD14 |
| 0891 | FELCTD | 0901 | FPLFE | 0582 GRAD15 |
| 0892 | FELCTE | 0902 | FPLFF | 1693 GRAD80 |
| 0893 | FELCTF | 0903 | FPLFG | 0568 GRADE1 |
| 0894 | FELCTG | 0904 | FPLFH | 0583 GRADER |
| 0895 | FELCTH | 0905 | FPLFI | 0191 HA01SL |
| 0896 | FELCTI | 0859 | FPLFUL | 0192 HAO2US |
| 0906 | FFLIMA | 0178 | FPLWK | 0193 HA03FP |
| 0907 | FFLINB | 1142 | FPMT | 0194 HAO4EH |
| 0908 | FFLINC | 0942 | FPORTA | 0195 HAOSUN |
| 0909 | FFLIND | 0943 | FPORTB | 0196 HAO60T |
| 0910 | FFLINE | 0944 | FPORTC | 0197 HAOTNO |
| 0911 | FFLINF | 0945 | FPORTD | 0163 HADOL |
| 0912 | FFLING | 0946 | FPORTE | 0078 HALFB |
| 0913 | FFLINH | 0947 | FPORTF | 2493 MBATH |
| 0914 | FFLINI | 0948 | FPORTG | 2450 HEARTO |
| 0915 | FFLOTA | 0949 | FPORTH | 0836 HEASST |
| 0946 | FFLOTB | 0950 | FPORTI | 1912 HEDJOB |
| 0917 | FFLOTC | 2883 | FREEZ | 2486 HELEV |
| 0918 | FFLOTD | 0276 | FREEZE | 2576 HELP1 |
| 0919 | FFLOTE | 1066 | FRENT | 2577 HELP2 |
| 0920 | FFLOTF | 0725 | FRENT1 | 2578 HELP3 |
| 0924 | FFLOTG | 0726 | FRENT2 | 2579 HELP4 |
| 0922 | FFLOTH | 0727 | FRENT3 | 2580 HELP5 |
| 0923 | FFLOTI | 0728 | FRENT4 | 2581 HELP6 |
| 0924 | FFRPLA | 0729 | FRENT5 | 2588 HELPE1 |
| 0925 | FFRPLB | 0730 | FRENT6 | 2589 HELPE2 |
| 0926 | FFRPLC | 0731 | FRENT7 | 2590 HELPE3 |
| 0927 | FFRPLD | 0732 | FRENT8 | 2591 HELPE4 |
| 0928 | FFRPLE | 0177 | FRPL | 2592 HELPES |
| 0929 | FFRPLF | 0031 | FRSIT | 2593 HELPE6 |
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| 0934 | FFRPLH | 0030 | FRSTOC | 2583 HELPP2 |
| 0932 | FFRPLI | 2885 | FRZCST | 2584 HELPP3 |
| 1695 | FGR80 | 2884 | FRZOWN | 2585 HELPP4 |
| 1696 | FGR280 | 1194 | FSRENT | 2586 HELPP5 |
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| 0952 | FHOTHB | 0880 | FSTEM8 | 1594 HE08O |
| 0953 | FHOTHC | 0881 | FSTEMC | 0162 HEQUIP |
| 0954 | FHOTHD | 0882 | FSTEMD | 1478 HER 161 |
| 0955 | FHOTHE | 0883 | FSTEME | 1479 HER 162 |
| 0956 | fhothf | 0884 | FSTEMF | 1480 HER163 |
| 0957 | FHOTHG | 0885 | FSTEMG | 1481 HER164 |
| 0958 | FHOTHH | 0886 | FSTEMH | 0639 HERE1 |
| 0959 | FHOTHI | 0887 | FSTEMI | 0640 HERE2 |
| 0870 | FHPMPA | 0933 | FSTOVA | 0641 HERE3 |
| 0871 | FHPMPB | 0934 | FSTOVB | 0642 HERE4 |
| 0872 | FHPMPC | 0935 | FSTOVC | 0643 HERE5 |
| 0873 | FHPMPD | 0936 | FSTOVD | 0644 HERE6 |
| 0874 | FHPMPE | 0937 | FSTOVE | 0645 HERE7 |
| 0875 | FHPMPF | 0938 | FSTOVF | 0646 HERE8 |
| 0876 | FHPMPG | 0939 | FSTOVG | 0647 HERE9 |
| 0877 | FHPMPH | 0940 | FSTOVH | 0648 HERE10 |
| 0878 | FHPMPI | 0941 | FSTOVI | 0649 HERE19 |
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| 0106 | FIX | 0199 | furman | 0652 HERE14 |
| 1120 | FIXED | 0355 | FUZZ | 0653 HERE15 |
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| 2499 | FLINE2 | 0061 | GARGC | 2495 HFLAS |
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| 2501 | FLINE4 | 0848 | GASPIP | 0840 HFUEL |
| 2502 | FLINE5 | 1124 | GPM | 0841 HFUELC |
| 2503 | FLINE6 | 1125 | GPM2 | 0595 HHCOMP |
| 0054 | FLOORS | 1126 | CDMW | 1518 HHLD |
| 1581 | fLOR80 | 1127 | GPMW2 | 2488 HHNDL |


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| 1247 | HOVM4 | 0095 | NEWADD |
| 1248 | MOVM5 | 0218 | NEWAIN |
| 1249 | MOVM6 | 0097 | NEWBTH |
| 1250 | MOMM7 | 0213 | NEWC |
| 1251 | MOVM8 | 0223 | NEWICST |
| 1252 | MOVM9 | 0216 | NEWIN |
| 1253 | MOVM10 | 0220 | NEWINH |
| 1254 | MOVM11 | 0096 | NEWKIT |
| 1255 | MOVM12 | 1086 | NELM |
| 1256 | MOVM13 | 1088 | NEMMCO |
| 1257 | MOVA14 | 0204 | nelmato |
| 1258 | movm 15 | 1099 | NELAMOR |
| 2211 | MP01 | 1087 | NELMOT |
| 2212 | MP02 | 1100 | MELMR2 |
| 2213 | MP03 | 0093 | NEWROF |
| 2214 | MP04 | 0212 | NEWSO |
| 2215 | MP05 | 0209 | NEUSDH |
| 2216 | MP06 | 0214 | NELSHUT |
| 2217 | MP07 | 0098 | NEWSID |
| 2218 | MPO8 | 0211 | NEWSW |
| 2219 | MP09 | 0374 | NEWTRN |
| 2220 | MP10 | 2867 | NEWTV1 |
| 2221 | MP11 | 2868 | NELTVZ |
| 2222 | MP12 | 2792 | NEWV1 |
| 2223 | MP13 | 2793 | NEWV2 |
| 2224 | MP14 | 2794 | NEWN3 |
| 2225 | MP15 | 2795 | NEWV4 |
| 2226 | MP16 | 0217 | NEWNIN |
| 2227 | MP17 | 0222 | NEWHTH |
| 2228 | MP18 | 0184 | NFLIN |
| 2229 | MP19 | 0185 | NFLOT |
| 2230 | MP20 | 0186 | NFRPL |
| 2231 | MP21 | 1059 | NHBILL |
| 2232 | MP22 | 0189 | NHOTH |
| 2233 | MP23 | 0180 | NHPMP |
| 2234 | MP24 | 0251 | HLEAK |
| 2235 | MP25 | 1212 | NLINE |
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| 1160 | MPRT | 2789 | NMCYL2 |
| 1670 | MR280 | 2790 | NMCYL3 |
| 1671 | MR380 | 2791 | HMCYL4 |
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| 1675 | MR780 | 0612 | NMK104 |
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| 1677 | MR980 | 2205 | NOELEC |
| 1678 | MR1080 | 1549 | NOINT |
| 1679 | MR1180 | 0313 | NOISE |
| 1680 | MR1280 | 2194 | NOLEVL |
| 1681 | MR1380 | 2206 | NONGAS |
| 1682 | MR1480 | 0654 | NONREL |
| 1683 | MR1580 | 0331 | NOWRES |
| 1072 | MSALE | 0341 | NONRESD |
| 2479 | MUSCLE | 0352 | NOWRESM |
| 1573 | MVAC80 | 2210 | MOOTH |
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| 1215 | MVG2 | 1888 | MOPUB 1 |
| 1216 | MVG3 | 1889 | NOPU82 |
| 1217 | MVG4 | 1890 | NOPUB3 |
| 1218 | MVG5 | 1891 | NOPUB4 |
| 1219 | MVG6 | 1892 | NOPUB5 |
| 1220 | MVG7 | 1893 | NOPUB6 |
| 1221 | MVG8 | 1894 | NOPUB7 |
| 1222 | MVG9 | 1895 | NOPUB8 |
| 1223 | MVG10 | 1017 | HORESE |
| 1224 | MVGi9. | 1018 | NORESG |
| 1225 | MVG12 | 1170 | NORESI |
| 1226 | MVG13 | 1020 | NORESO |
| 1227 | MVG14 | 1021 | NOREST |
| 1228 | MVG15 | 1019 | NORESW |
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| 0179 | NAFUR | 2209 | NOSEW |
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| 2252 | NP17 | 2734 | OOTHR3 |
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| 0632 | NRLIN2 | 2597 | ORAIL4 |
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| 0037 | NUMCND | 0991 | Othf |
| 0278 | NUMCOLD | 0099 | othfix |
| 2856 | NUMCYL | 0048 | othlo |
| 0263 | MUMORY | 0585 | отнм |
| 2180 | NUMMOB | 0319 | отнкно |
| 1095 | NUMMOR | 1205 | OTHPMT |
| 0284 | MUMND | 0085 | OTHRMS |
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| 2666 | OHNDL 1 | 1189 | OWNSIT |
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| 2669 | OHNDL4 | 2454 | PaLSY |


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| 1016 | PaMto | 1490 | PLC164 | 0692 QUNEMP |
| 1014 | PAMTT | 1509 | PlCIN5 | 0689 QVET |
| 1015 | PAMTU | 1505 | PLCN59 | 0683 QWELF |
| 1164 | PAMTX | 1506 | PLCN52 | 0687 OWKCMP |
| 0399 | Par | 1507 | PLCN53 | 0158 RAATFN |
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| 1859 | PASS4 | 1885 | PLPUB6 | 0160 RAPOFN |
| 1860 | PASS5 | 1886 | PLPUB7 | 0154 RARUNT |
| 1861 | PASS6 | 1887 | PLPUB8 | 0289 RATMIC |
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| 0990 | PAYF | 2815 | PRCBP4 | 2170 RECMH |
| 0979 | Payg | 1080 | PRICE | 0368 RECR |
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| 1008 | PPUYG | 1873 | PUBTR2 | 0430 REL |
| 1169 | PPUYI | 1874 | PUBTR3 | 0431 REL2 |
| 1010 | psuro | 1875 | PUBTR4 | 0432 REL3 |
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| 2006 | TIMEJ3 | 2630 | URAMP1 | 1939 | WCNTY3 | 1954 | WKST8 | 1901 | WMEAN6 | 1466 | WT230T | 1430 | XNRATE |
| 2007 | TIMEJ4 | 2631 | URAMP2 | 1940 | WCNTY4 | 1963 | WKST21 | 1902 | WMEAN7 | 1987 | WTIME 9 | 1305 | XNUNITS |
| 2008 | TIMEJ5 | 2632 | URAMP3 | 1941 | WCNTY5 | 1964 | WKSTZ2 | 1903 | WHEAN8 | 1988 | WTIME2 | 1334 | XOTHF |
| 2009 | TIMEJ6 | 2633 | URAMP4 | 1942 | WCNTYG | 1965 | WKST23 | 1774 | HMET80 | 1989 | WTIME3 | 1323 | XPAYE |
| 2010 | TIMEJ7 | 2634 | URAMP5 | 1943 | WCNTY7 | 1966 | WKSTZ4 | 1929 | WMETR1 | 1990 | WTIME 4 | 1331 | XPAYF |
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| 0026 | TIMSHR | 0005 | URBAN | 2068 | WCOMF | 1968 | WKSTZ6 | 1931 | WMETR3 | 1992 | WTIME6 | 1325 | XPAYO |
| 0139 | toilet | 1575 | URE80 | 1776 | WDis80 | 1969 | WKST27 | 1932 | WMETR4 | 1993 | WTIME7 | 1336 | XPAYP |
| 0032 | TOTHOM | 2478 | UROL | 2061 | WDIST | 1970 | WKSTZ8 | 1933 | WMETR5 | 1994 | WTIME8 | 1329 | XPAYT |
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| 1826 | TRAN5 | 0705 | VDIR | 2063 | WHOUSE | 1416 | WM01IR | 1353 | LMPRIV | 1301 | XaUnIT | 0815 | YALIM3 |
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| 2869 | TV1CST | 1058 | VOLTS | 1922 | WINUS2 | 1380 | W H 13 NM | 1983 | WPLS25 | 1340 | $x \operatorname{costt}$ | 0783 | YIWS4 |
| 2870 | TV2CST | 1717 | VOT280 | 1923 | WInUS3 | 1381 | WH14FI | 1984 | WPLSZ6 | 1344 | XCOSTU | 0774 | YOTHER |
| 2862 | TVBW | 1716 | VOTH80 | 1924 | WINUS4 | 1382 | M15FD | 1985 | WPLS27 | 1308 | XCPER | 0820 | YOTHER2 |
| 2863 | TVCOL | 0704 | VOTHER | 1925 | WINUS5 | 1383 | Wh16EH | 1986 | WPLSZ8 | 1273 | XCREL | 0821 | YOTHER3 |
| 1729 | TXIN80 | 0716 | VOUTPR | 1926 | WINUS6 | 1384 | WH17FR | 0837 | WRHTAS | 1293 | XCTEN | 0822 | YOTHER4 |
| 1151 | TXPMT2 | 0714 | VPRVPN | 1927 | WINUS7 | 1385 | Wh180C | 1735 | WRK180 | 1303 | XCUNIT | 0773 | YOUTPR |
| 0050 | TYPE | 0709 | VRENT | 1928 | WINUS8 | 1386 | UM19RC | 2188 | WRNTE | 1284 | XCZOW | 0817 | YOUTPR2 |
| 1579 | TYPE80 | 0702 | VSS | 1955 | WKCBD 1 | 1387 | H20CM | 2064 | USCH | 1298 | XDCOND | 0818 | YOUTPR3 |
| 2648 | UELEV1 | 1706 | VSS80 | 1956 | WKCBO2 | 1388 | WH21uc | 2876 | USHCST | 1319 | XDCOST | 0819 | YOUTPR 4 |
| 2649 | UELEV2 | 1707 | VSS280 | 1957 | WKCBO 3 | 1389 | H22NC | 2875 | WSHOM | 1269 | XDHEAD | 0771 | YPRVPM |
| 2650 | UELEV3 | 0670 | vtotal | 1958 | WKC304 | 1390 | W238N | 2065 | USHP | 1280 | XDIMUS | 0811 | YPRVPN2 |
| 2651 | UELEV4 | 0710 | VUNEMP | 1959 | WKC8D5 | 1391 | WM2481 | 0845 | USOLAR | 1351 | XDISTJ | 0812 | YPRVPN3 |
| 2652 | UELEVS | 0706 | WN | 1960 | WKCBD6 | 1392 | W250R | 1444 | WTO1JT | 1309 | XDPER | 0813 | YPRVPN4 |
| 2653 | UELEV6 | 0713 | VVET | 1961 | WKCBD 7 | 1393 | WM268H | 1445 | WT02LW | 1274 | XDREL | 1083 | YRBUY |
| 0069 | UNITSF | 1709 | VWE280 | 1962 | WKCBD8 | 1394 | W W 27RR | 1446 | WTO3NJ | 1294 | XOTEN | 1082 | YRBUYM |
| 2768 | UNO1 | 1708 | WEL80 | 0617 | WKDGO1 | 1395 | W2834C | 1447 | WTO4AF | 1304 | XDUNIT | 2820 | YRBUYV1 |
| 2769 | UNO2 | 0703 | WWELF | 0618 | WKDGO2 | 1396 | WM29LE | 1448 | WTO5RT | 1285 | XDZON | 2821 | YRBUYV2 |
| 2770 | UNO3 | 0711 | VWKCMP | 0619 | W/DG03 | 1397 | WH3OCC | 1449 | WTOGCT | 1335 | XFARP | 2822 | YRBUYV3 |
| 2771 | UNO4 | 2067 | HAFORD | 0620 | WKDGO4 | 1398 | WH31DP | 1450 | WT07AS | 1270 | XHEAD | 2823 | YRBUYV4 |
| 2772 | UN05 | 0127 | WASH | 1974 | WKPLC1 | 1399 | WM32PA | 1451 | WT080E | 1349 | XHJOB | 0765 | YRENT |
| 2773 | UNO6 | 0133 | WASH5 | 1972 | WKPLC2 | 1400 | UM33SC | 1452 | WT09LH | 1442 | XHRATE | 0793 | YRENT2 |
| 2744 | UOTHR1 | 2874 | HASHER | 1973 | WKPLC3 | 1401 | WM34ND | 1453 | WTIOCR | 1330 | XIFF. | 0794 | YRENT3 |
| 2745 | UOTHR2 | 1591 | WAT80 | 1974 | WKPLC4 | 1402 | WM350T | 1454 | WT11FR | 1345 | XIFJ | 0795 | YRENT4 |
| 2746 | Vothr3 | 0140 | WATER | 1975 | WKPLC5 | 1365 | WMCHEP | 1455 | WT12LC | 1332 | XIFP | 1104 | YRMOR |
| 2747 | UOTHR4 | 0141 | WATERC | 1976 | WKPLC6 | 1364 | HMCHTM | 1456 | WT13RC | 1333 | XINCP | 1105 | YRMOR2 |
| 2748 | VOTHR5 | 2172 | WBLOC | 1977 | WKPLC7 | 1357 | WMCLOS | 1457 | WT14CM | 1281 | XINUS | 0025 | YRRND |
| 2749 | UOTHRG | 2177 | WBNVST | 1978 | WKPLC8 | 1404 | WMCNDO | 1458 | WT15WC | 1467 | XLINE1 | 0676 | YSLF |
| 2440 | UPDOWN | 2178 | UBOTHR | 1947 | UKST1 | 1355 | WMDISL | 1459 | WT16NC | 1468 | XLINE2 | 0775 | YSLF2 |
| 2606 | URAIL1 | 2173 | UBQUAL | 1948 | WKST2 | 1775 | WME280 | 1460 | WT17BN | 1469 | XLINE3 | 0776 | YSLF3 |
| 2607 | URAIL2 | 2175 | WBSAFE | 1949 | WKST3 | 1896 | WMEAN1 | 1469 | WT188I | 1470 | XLINE4 | 0777 | YSLF4 |
| 2608 | URAIL3 | 2174 | USSI2E | 1950 | WKST4 | 1897 | WMEAN2 | 1462 | WT194C | 1276 | XLOC | 0762 | YSS |
| 2609 | URAIL4 | 2176 | UBXPEN | 1951 | UKST5 | 1898 | LMEAN3 | 1463 | WT20LE | 1288 | XLOT | 0784 | YSS2 |
| 2610 | URAIL5 | 1937 | WCNTY1 | 1952 | WKST6 | 1899 | WMEAN4 | 1464 | WT21CC | 1289 | XLOTR | 0785 | YSS3 |

ALPhabetical index of variables
2037 YTRNJ1 1337 2XPARK
2038 YTRNJZ 1322 2XRENT
2039 YTRNJ3 1300 2XTEN
2040 YTRNJ4
2041 YTRNJ5
2042 YTRNJ6
2043 YTRNJT
2044 YTRNJ8
0767 YUNEMP
0799 YUNEMP?
0800 YUNEMP3
0801 YUNEMP4
0770 YVET
0808 YVET2
0809 YVET3
0810 YVET4
2045 YVHCL 1
2046 YVHCL2
2047 YVHCL3
2048 YVHCL4
2049 YVHCL5
2050 WHCL6
2051 YVHCL7
2052 YVHCL8
0766 YWELF
0796 YWELF2
0797 YHELF3
0798 YKELF4
0768 YukCMP
0802 YWXCMP2
0803 YWXCMP3
0804 YWKCMP4
0224 ZADEO
0589 ZADULT
0505 2AGE
0045 ZBUILT
0594 2CHILD
1699 2COM80
06002 COMP
0087 2CROND
0226 ZDEFM
2012 ZDIST1
2013 2DIST2
2014 2DIST3
2015 zDIST4
2016 ZDIST5
2017 2DIST6
2018 2DIST7 2019 2015T8 1703 2IN280
0621 ZINC
0623 ZINC2
1702 2INC8O
0622 ZINCA
0624 2INCB
1700 2KID80
1743 ZLA280
1742 ZLAB80
0002 ZMETRO
0380 ZMOVE
0020 ZONE
0067 2PARK
0068 2PARK2
1079 ZPRICE
1076 ZPRICEM
1732 ZREN8O
1064 2RENT
1065 2R!
0381 2SERVM
0382 2SERMM2
1725 2SHM8O
1062 2SMHC
1063 2SMHCP
0040 2SPEC
0379 2STRM
0041 2TRV
1031 ZUTIL
1032 ZUTIL2
1069 2VI
1315 2XCROWO

The questionnaire at the back of any AHS publication and the codebook show many other questions. Most variables have a code for not applicable (e.g. for vacant units or non-interviews) which is the digit 9 , repeated for as many columns as the variable has (e.g. 9, 99, 9999). Exceptions are listed.

Variable Num-
ber and Name

|  |  | Geography |
| :---: | :---: | :---: |
| 1 | REGION | 1 Northeast, 2 Midwest (North Central), 3 South, 4 West |
| 3 | MEIRO | 1 Central City, 2 Urbanized Suburb, 3 Other Urban Suburb, 4 Rural Suburb, 5 Urbanized Nonmetro, 6 Other Urban Nonmetro, 7 Rural Nonmetro |
| 12 | NEIGH | 1-680 any cases with same number are in same cluster of neighbors, 9999 NA |
| 15 | SMSA | 80-9320 Standard MSA codes, 9999 Nonmetro or suppressed MSA, Page 11 of Code Book |
|  |  | General |
| 22 | ISTATUS | 1 Occupied, 2 Reside elsewhere, 3 Vacant, 4 Non-Interview |
| 28 | TENURE | 1 Own, 2 Rent, 3 No Cash Rent |
| 44 | BUILT |  |
| 47 | NUNITS | 1-101+ Units |
| 50 | TYPE | 1 House/Apt, 2 Mobile Home no permanent room added, 3 Mobile Home permanent room added 4 Residential Hotel, 5 Transient Hotel, 6 Rooming House, 7 Boat/RV, 8 RR Car, 9 Other Unit; Non-Hsg units: 10 Boarding House, 11 Dorm, 12 Mobile Home Site, 13 Hotel, 14 Other |
| 69 | UNITSF | 0 Don't Know, 1-5001+ sq ft |
| 73 | ROOMS | 1-21+ Rooms |
| 75 | BEDRMS | 0-10+ Bedrooms |
| 77 | BATHS | 0-10+ Bathrooms |
|  |  | Equipment |
| 117 | KITCHEN | 1 Complete, 2 No Complete Kitchen: sink, refrigerator, burner(s) |
| 137 | PLUMB | 1 Yes complete, 2 Items missing, 3 All three items missing -- hot water, toilet, tub or shower |
| 162 | HEQUIP | 1 Heating ducts, 2 Radiators, 3 Heat pump, 4 Other permanent electric, 5 Wall furnace, 6 vented heater, 7 Unvented kerosene heater, 8 Portable electric heater, 9 Stove, 10 Fireplace with insert, 11 Fireplace without insert, 12 Other, 13 No Heater |
| 204 | NEWMEQ | 1 New equipment,major replacement, 2 No, 3 This household replaced, 4 Replaced by other |
| 205 | CSTMEQ | 0-9996+ (\$0-\$9,996 or more) for equipment/major replacement |
|  |  | Unit Quallity |
| 224 | ZADEQ | 1 Adequate, 2 Moderately Inadequate, 3 Severely Inadequate |
| 225 | HOWH | 1-10 Worst to Best Scale, 98 Not answered |
| 227 | CSTMNT | 0 Nothing spent, 1-9997 (\$1-\$9,997) spent on maintenance in past year |
|  |  | Neighborhood |
| 291 | HOWN | 1-10 Worst to Best Scale, 0 No neighborhood, 98 Not Answered |
| 304 | EAGE | 1 Other Buildings within 300ft are older, 2 Same age, 3 Newer, 4 Ages Mixed, 5 No buildings |
| 305 | EABAN | 1 One abandoned/boarded, 2 More than one, 3 No /none |
| 308 | EROAD | 1 Major repairs needed, 2 Minor repairs, 3 No repairs needed |
| 312 | NUCRIM | 0 Crime not bothersome, 1 Crime bothersome |
| 357 | SHP | 1 Shopping facilities adequate, 2 Inadeqate, 3 Don't Know |
| 359 | SHPCLS | 1 Yes, grocery or drug store within 1 mile, 2 No |
| 374 | NEWTRN | 1 Yes, public transportation available, 2 No |
| 376 | TRN | 1 Adequate public transportation, 2 Inadequate, 3 Don't Use |


|  |  | Household Composition |
| :---: | :---: | :---: |
| 431 | REL2 | 3 Husband of Reference person, 4 Wife, 5 Child, 6 Parent, 7 Sibling, 8 Other relative, 9 Non-relative with own relative present, 10 Non-relative without relative present |
| 490 | AGE | 0-91+ Years old |
| 506 | MAR | 1 Married, 2 Widowed, 3 Divorced, 4 Separated, 5 Never married |
| 521 | RACE | 1 White, 2 Black, 3 Indian, 4 Asian, 5 Other |
| 537 | SPAN | 1 Hispanic or Spanish American, 2 Not Hispanic or Spanish |
| 553 | SEX | 1 Male, 2 Female |
| 588 | PER | 1-98 Persons in household |
| 589 | ZADULT | 0-11+ Adults in household (18 or older) |
|  |  | Income |
| 621 | ZINC | -10000 to 999996 Reference person \& relatives' income, usually top code is \$100001 |
| 623 | ZINC2 | -10000 to 999996 Household income, usually top code is \$100001 |
| 655 | SAL1 | 0-100001+ Salary of Reference person |
| 681 | QSS | 1 Yes Social Security Income or Pension, 2 No |
| 683 | QWELF | 1 Yes Welfare or Social Security Income, 2 No |
| 696 | INV20K | 1 Yes savings/investments over \$20,000, 2 No, 8 Not answered |
| 701 | QFS1 | 1 Yes received food stamps, 2 No |
| 704 | VOTHER | -1000 to 100001+ Total non-salary income of Reference person and relatives |
|  |  | Housing Assistance |
| 823 | PROJ | 1 Yes publicly owned housing, 2 No |
| 824 | SUB | 1 Yes Federal Government pays some cost of unit, 2 No |
| 825 | SUBLOC | 1 Yes State or local government pays some cost of unit, 2 No |
| 826 | SUBINC | 1 Yes household income reported so rent can be set, 2 No |
| 827 | SUBMOR | 1 Yes low cost mortgage obtained through government program |
|  |  | Utilities |
| 960 | BUYE | 1 Electricity not used, 2 Included in rent or fees, 3 Free |
| 972 | AMTE | 1-261+ Average Monthly Cost of Electricity |
|  |  | Housing Cost |
| 1062 | ZSMHC | 1-99996 Monthly housing costs, 99998 mortgage payment not reported |
| 1067 | RENT | 1-751+ Monthly contract rent |
| 1068 | VALUE | 1-250001+ (\$1-\$250,001 or more) value of property |
| 1095 | NUMMOR | 1-6 Mortgages, 8 Not Answered, 9 No Mortgage or renter etc. |
| 1110 | INT | 0000-9997 (0.00\% to 99.97\%) interest rate on primary mortgage |
| 1145 | PMT | 1-2001+ (\$1-\$2,001 or more) primary mortgage payment, 99998 not answered |
| 1146 | PMT2 | 1-2001+(\$1-\$2,001 or more) second mortgage payment, 99998 not answered |
| 1162 | AMTX | 0 None, 1-20 Yearly property tax by $\$ 50$ intervals to $\$ 1,000,21-36$ by $\$ 100$ s to $\$ 2,500+$ |
|  |  | Mobility |
| 1229 | MOVED | 100 Reference person born in unit, 1-85 year moved in |
| 1261 | RMYEAR | 1 Yes reference person moved here last 12 months, 9 No or Not applicable |
| 1291 | XATEN | 1 Owned/buying previous unit, 2 Rented, 3 No cash rent |
| 1316 | XACOST | 1 Increased housing cost, 2 Same cost, 3 Decreased cost, 4 Don't Know |
| 1446 | XHRATE | 1 Better than old house, 2 Worse, 3 About the same |
|  |  | Sample Status \& Allocation |
| 1515 | CONTROL | Consistent control number for matching the same homes $85 \mathrm{~N}-93 \mathrm{~N}, 12$ digits |
| 1522 | WEIGHT | Adjusts for sample design, and for non-response, 8 digits including 2 implicit decimal places |
| 1546 | VACANCY | 1 Vacant for rent, 2 For rent or sale, 3 For sale, 4 Rented, not yet occupied, 5 Sold, not yet occupied, 6 Held for occasional use, 7 Other year round units, 8 for summer use, 9 for winter use, 10 Other season, 11 Migrants, 99 Occupied or Non-interview |



Site Plan for Attached Truss Frame Units
Modifications of this truss frame design can be built on both flat and sloping sites, and in a variety of unit clustering arrangements. Variations in siding materials, site plans and unit orientations allow truss frames to be used in large housing developments in an aesthetically pleasing manner.

The site plan provided here exemplifies the flexability of truss frame applications to residential construction. Each unit is provided two parking spaces and total density is approximately 7.5 units per acre.
m .
DATE DUE


HIGHSMITH LO-45230

Publications
Technical Assistance and Data Files
How to Use This Codebook
Special Considerations
Geography
General
Tenure
Building Age and Size
Cars and Parking
Unit
Rooms
Renovations
Equipment
Kitchen
Plumbing
Cooling
Heating
Insulation
Unit Quality
Interior and Exterior Condition
Breakdowns of Equipment
Neighborhood
Household Composition
Income
Total and Detailed Sources of Income Lodgers' Rents
Other Non-Relative Income
Subsidies
Utilities
Fuels Used
Costs
Housing Cost
Overall Monthly Cost
Value, Purchase Process
Mortgage and Taxes
Insurance, Land Rent and Fees
Mobility
Past Homes
Future Homes
Sample Status and Allocation
1980 Census Variables
Occasional Supplements
Commuting
Second Homes
Mobile Homes
Disabilities
Cars and Major Appliances


[^0]:    ** The number of megabytes per file is orovided to help users decide whether the file can be used on a P.C.

[^1]:    - See individual variables, such as income from business (3\%), income from interest (32\%), income from dividends (47\%), etc.
    *Less than $1 \%$.

[^2]:    
    $++=$ Variable is present on a supplemental page to the questionnaire.
    $C C=$ Variable is present on the control card for the unit.

[^3]:    Notes: $G=\operatorname{Variable}$ is computer generated, and is not present on the questionnaire. ++ = Variable is present on a supplemental page to the questionnaire. $C C=$ Variable is present on the control card for the unit.

[^4]:    wmormerty included in the Paterson area
    m=Starting in 1987, the Paterson-Clifton-Passaic area is included under the Newark-Northern New Jersey area.

[^5]:    Notes: $G=$ Variable is computer generated, and is not present on the questionnaire. $++=$ Variable is present on a supplemental page to the questionnaire.

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[^12]:    Common stairways--Data for common stairways are collected for housing units in structures of two or more units with common stairways. The data reflect the physical condition of the stairway, i.e., whether there are loose, broken or missing steps or stair railings. Common stairways are stairways which are usually used oy the oceupants or guests to get to the door of the unit. They may be inside or outside of the building. Starting in 1984, the condition of stairways is reported for all units.

[^13]:    1. Starting in 1984, data on water leakages from inside and outside the unit are used rather than roof and basement leaks. In some years, PAINT and PLASTER were combined in one question. More people identify peeling paint and plaster when the questions are asked separately. These changes introduce a discrepancy in the time series.
    2. In these earlier years the coding of HEQUIP was different. The change of phrasing is so slight that it probably does not introduce any discrepancy in the time series.
[^14]:    Notes: $G=\operatorname{Variable}$ is computer generated, and is not present on the questionnaire.
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[^17]:    Notes: $G$ = Variable is computer generated, and is not present on the questionnaire $++=$ Variable is present on a supplemental page to the questionnaire.
    

[^18]:    Steven Winter Associates, Inc., Building Value into Housing 1980 Awards, A compendium of Winning Submissions Under HUD's 1980 "Building Value into Housing Program", November, 1980.

[^19]:    Number of persons--All persons occupying the housing unit are counted. These persons include not only occupants pelated to the reference person but also any lodgers, roomers, Doarders, partners, wards, foster children, and resident employees who share the living quarters of the reference person.

[^20]:    Notes: $G$ a Variable is computer generated, and is not present on the questionnaire.
    $++=$ Variable is present on a supplemental page to the questionnaire.
    $C C=V a r i a b l e$ is present on the control card for the unit.

[^21]:    Notes: $G=V a r i a d e i s$ computer generated, and is not present on the questionnaire. $++=$ Variable is present on a supolemental page to the questionnaire. $C C=$ Variable is present on the control card for the unit.

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[^27]:    The monolituc wells contain pre-instatied reinforcing. ducts and conctues. In desert ot mates. all neceetery space cooling on be achivied by ueing external shading cevens over the viges (poise) extenoing from the root structura, neluctive rool odoration, use of a plo to ceppure preveing windi operate skyignts and wincowe and reivenct on the therme stabily of the then adobe welt.

[^28]:    *Other inciudes single family units on less than 10 acres with doctors or commercial establishments, duplex, two unit modile homes, multifamily, single family or moblle home on more than 10 acres.

[^29]:    Notes: $G=V a r i a b l e$ is computer generated, and is not present on the questionnaire ++ = Variable is present on a supplemental page to the questionnaire. $C C=$ Variable is present on the control card for the unit.

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[^31]:    Notes: G x Variable is computer generated, and is not present on the questionnaire. ++ $=$ Variable is present on a supplemental page to the questionnaire. $C C=$ Variable is present on the control card for the unit.

[^32]:    Notes: $G=$ Variable is computer generated, and is not present on the questionnaire. ++ = Variable is present on a supplemental page to the questionnaire.
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[^33]:    * Other includes Single Family Units on less than 10 acres with doctors, offices or commercial establishments, duplex, two unit mobile homes, multifamily, single family or mobile nome on more than 10 acres.
    ** Recent Movers (RM) refer to housenolds that bought their home in the last 12 months.

[^34]:    Notes: $G=$ Variable is computer generated, and is not present on the questionnaire.
    $++\quad=$ Variable is present on a supplemental page to the questionnaire.
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[^35]:    Notes: $G=$ Variable is computer generated, and is not present on the questionnaire. $++=$ Variable is present on a supplemental page to the questionnaire.
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[^37]:    Notes: $G=$ Variable is computer generated, and is not present on the questionnaire. $+^{+}=$Variable is present on a supplemental page to the questionnaire. $C C=$ Variable is present on the control card for the unit.

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[^42]:    Notes: $G=$ Variable is computer generated, and is not present on the questionnaire.
    ++ = Variable is present on a supplemental page to the questionnaire.
    

[^43]:    79N-80N State In which Reference Person Was Born

[^44]:    Notes: $G$ = Variable is computer generated, and is not present on the questionnaire ++ a Variatle is present on a supplemental page to the questionnaire.
    $C C=V a r i a b l e$ is present on the control card for the unit.

[^45]:    * Note however that there are a few variables which are subject to allocation, but for which an allocation variable is not present for all years. It is not always clear whether the variable was not subject to allocation in these years or whether the Census Bureau did not release these allocation variables for these years. If it was not subject to allocation, codes "8" (not answered) will De present in the data files.

[^46]:     ++ = Variable is present on a supplemental page to the questionnaire. $C C=$ Variable is present on the control card for the unit.

[^47]:    
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[^53]:    None Or Under 16 Years Old
    5-49995 Income In Dollars $50000 \$ 50,000$ Or More

[^54]:    Notes: $G=$ Variable is computer generated, and is not present on the questionnaire. $++=$ Variable is present on a supplemental page to the questionnaire.
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[^57]:    Notes: $G$ = Variable is computer generated, and is not present on the questionnaire ++ = Variabie is present on a supplemental page to the questionnaire. $C C=$ Variadie is present on the control card for the unit

[^58]:    Notes: $G=$ Variable is computer generated, and is not present on the questionnaire. $+{ }^{+}=$Variadle is present on a supplemental page to the questionnaire
    

[^59]:    Notes: $G=$ Variable is computer generated, and is not present on the questionnaire. ++ a Variable is present on a supplemental page to the questionnaire. $C C=$ Variable is present on the control cara for the unit.

[^60]:    Notes: $G=$ Variable is computer generated, and is not present on the questionnaire.
    ++ $=$ Variable is present on a supplemental page to the questionnaire.
    $C C=$ Variable is present on the control card for the unit.

[^61]:    0 No
    yes
    8 Not Answered
    9 Not Applicable

[^62]:    Notes: $G=$ Variable is computer generated, and is not present on the questionnaire.
    ++ $=$ Variable is present on a supplemental page to the questionnaire.
    $C C=$ variable is present on the control card for the unit.

[^63]:    Notes: $G=\operatorname{Variable} i s$ computer generated, and is not present on the questionnaire. $++=$ Variable is present on a supplemental page to the questionnaire. $C C=$ Variable is present on the control card for the unit.

[^64]:    Notes: $G=$ Variable is computer generated, and is not present on the questionnaire. ++ = Variable is present on a supplemental page to the questionnaire $C C=$ Variable is present on the control card for the unit.

[^65]:    Notes: $G=$ Variable is computer generated, and is not present on the questionnaire. ++ = Variable is present on a supplemental page to the questionnaire $C C=$ Variable is present on the control card for the unit.

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[^67]:    
    ++ = Variable is present on a supplemental page to the questionnaire.
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[^68]:    Notes: $G=\operatorname{Variable} i s$ computer generated, and is not present on the questionnaire. ++ $=$ Variable is present on a supolemental page to the questionnaire. $C C=$ Variable is present on the control card for the unit.

[^69]:    Notes: $G=$ Variable is computer generated, and is not present on the questionnaire ++ = Variable is present on a supplemental page to the questionnaire.
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[^70]:    Notes: $G=$ Variable is computer generated, and is not present on the questionnaire. $++=$ Vartaole is present on a supplemental page to the questionnaire. $C C=$ Variable is present on the control card for the unit.

[^71]:    Notes: $G=$ Variable is computer generated, and is not present on the questionnaire. ++ = Variable is present on a supplemental page to the questionnaire.
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[^72]:    Notes: $G=$ Variable is computer generated, and is not present on the questionnaire. ++ a Variable is present on a supplemental page to the questionnaire
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[^73]:    Notes: $G=$ Variable is computer generated, and is not present on the questionnaire.
    ++ = Variable is present on a supplementai page to the questionnaire.
    $C C=$ Variable is present on the control card for the unit.

[^74]:    All Units
    New Construction (81.85)
    New Mobile Homes (81.85)

[^75]:    * "Al|" means applicable households. For example, piped water was only asked at occupied homes, not vacant.

[^76]:    *"Al|" means applicable households. For example, piped water was only asked at occupied homes, not vacant.

    * Not clear what efficiencies are.

[^77]:    "All" means applicable households. For example, piped water was only asked at occupied homes, not vacant.
    ** Different by two or more points.
    *"All" means applicable households. For example, piped water was only asked at occupied homes, not vacant.

[^78]:    *Excludes 5 categories, shown as NA. There are other differences such as the exclusion of children's income (0-14) from CPS and AHS, military households from CPS, and group quarters from AHS.
    $\#$ AHS comes closer to independent estimate than CPS does. This is considered desirable, but even the independent estimates contain unknown amounts of errors.
    Source: Census Series P-60, No. 151, p. 170 and HUD special tabulation. (Since the AHS public use tape does not distinguish among amounts of $\$ 50,000$ or more, they have each been treated as $\$ 60,000$.)

