

# 1990 Census of Population and Housing Equal Employment Opportunity File: Puerto Rico Technical Documentation

D1-D90-EEOF-14-TECHP

**Note:** This technical documentation was issued at same time as the corresponding data file and does not necessarily reflect changes to the data file that may have been made later. We offer it as a service to our customers who have purchased the file, but we do not in general offer technical support for past data files. Note that although the documentation may refer to data on tape, the U.S. Census Bureau no longer releases data on magnetic tape; customers purchasing files previously released on tape will receive the file in ASCII on CD-ROM. For information about this and other technical documentation, please contact the Customer Services Center at 301-763-INFO (4636).

Additionally, Census Bureau organization, telephone numbers, and staff cited in this technical documentation are not current. For updated information, see our Telephone Contacts site at <http://www.census.gov/contacts/www/contacts.html> or Staff Search at <http://www.census.gov/cgi-bin/main/email.cgi>.

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1990 Census of  
Population and Housing

CENSUS '90



**Equal  
Employment  
Opportunity  
(EEO) File**  
*Puerto Rico*

**TECHNICAL  
DOCUMENTATION  
TECHNICAL  
DOCUMENTATION  
TECHNICAL  
DOCUMENTATION**



# ACKNOWLEDGMENTS

The Decennial Planning Division, **Susan M. Miskura**, Chief, coordinated and directed all census operations. **Patricia A. Berman**, Assistant Division Chief for Content and Data Products, and **Lourdes N. Flaim**, Chief, Puerto Rico and Outlying Areas Branch, developed, directed, and coordinated the 1990 Census of Puerto Rico. Other assistant division chiefs were **Robert R. Bak**, **Rachel F. Brown**, **James L. Dinwiddie**, **Alan A. Stephenson**, and **Edwin B. Wagner, Jr.** The following other branch chiefs made significant contributions: **Cheryl R. Landman**, **Adolfo L. Paez**, **A. Edward Pike**, and **William A. Starr**. Other important contributors were **Julia Buckley-Ess**, **Ada Costa-Cash**, **Idabelle B. Hovland**, **Ivonne Pabón-Marrero**, **Abraham A. Picano**, and **Gloria J. Porter**.

The Puerto Rico Planning Board, under the direction of Engineer **Patricia G. Custodio**, Chairperson, assisted by **Lillian Torres-Aguirre**, Census Coordinator, organized the Puerto Rico Interagency Committee for the 1990 Census of Population and Housing, coordinated its review of the proposed questionnaire content and data products specifications, and provided assistance with other census activities.

The Decennial Operations Division, **Arnold A. Jackson**, Chief, was responsible for processing and tabulating census data. Assistant division chiefs were: **Donald R. Dalzell**, **Kenneth A. Riccini**, **Billy E. Stark**, and **James E. Steed**. Processing offices were managed by **Alfred Cruz, Jr.**, **Earle B. Knapp, Jr.**, **Judith N. Petty**, **Mark M. Taylor**, **Russell L. Valentine, Jr.**, **Carol A. Van Horn**, and **C. Kemble Worley**. The following branch chiefs made significant contributions: **Jonathan G. Ankers**, **Sharron S. Baucum**, **Catharine W. Burt**, **Vickie L. Cotton**, **Robert J. Hemmig**, **George H. McLaughlin**, **Carol M. Miller**, **Lorraine D. Neece**, **Peggy S. Payne**, **William L. Peil**, **Cotty A. Smith**, **Dennis W. Stoudt**, and **Richard R. Warren**. Other important contributors were **Eleanor I. Banks**, **Miriam R. Barton**, **Danny L. Burdhead**, **J. Kenneth Butler, Jr.**, **Albert A. Cselar**, **Donald H. Danbury**, **Judith A. Dawson**, **Donald R. Dwyer**, **Beverly B. Fransen**, **Katherine H. Gilbert**, **Lynn A. Hollabaugh**, **Charles J. Kahn**, **Ellen B. Katzoff**, **Randy M. Kleer**, **Norman W. Larsen**, **Peter J. Long**, **Sue Love**, **Patricia O. Madson**, **Mark J. Matsko**, **John R. Murphy**, **Dan E. Philipp**, **Evelyn Proctor**, **Eugene M. Rashlich**, **Maria E. Reed**, **Willie T. Robertson**, **Barbara A. Rosen**, **Sharon A. Schoch**, **Imelda B. Severdia**, **Emmett F. Spiers**, **Johanne M. Stovall**, **Annette P. Taylor**, and **Jess D. Thompson**.

The Housing and Household Economic Statistics Division, **Daniel H. Weinberg**, Chief, developed the questionnaire content, designed the data tabulations, and reviewed the data for the economic and housing characteristics. **Gordon W. Green, Jr.**, Assistant Division Chief for Economic Characteristics, and **Leonard J. Norry**, Assistant Division Chief for Housing Characteristics, directed the development of this work. The following branch chiefs made significant contributions: **William A. Downs**, **Peter J. Fronczek**, **Patricia A. Johnson**, **Enrique J. Lamas**, **Charles T. Nelson**, and **Thomas S. Scopp**. Other important contributors were **Eleanor F. Baugher**, **Jeanne C. Benetti**, **Robert L. Bennefield**, **Robert W. Bonnette**, **William S. Chapin**, **Higinio Feliciano**, **Timothy S. Grall**, **Cynthia J. Harpine**, **Selwyn Jones**, **Mary C. Kirk**, **Richard G. Kreinsen**, **Gordon H. Lester**, **Mark S. Liktman**, **Willfred T. Masumura**, **John M. McNeil**, **Diane C. Murphy**, **George F. Patterson**, **Thomas J. Palumbo**, **Kirby G. Posey**, **John Priebe**, **Anne D. Smoler**, and **Carmina F. Young**.

The Population Division, **Paula J. Schneider**, Chief, developed the questionnaire content, designed the data tabulations, and reviewed the data for the demographic and social characteristics of the population. **Philip N. Fulton**, Assistant Division Chief for Census Programs, directed the development of this work. Other assistant division chiefs were **Nampee R. McKenney** and **Arthur J. Norton**. The following branch and staff chiefs made significant contributions: **Jorge H. del Pinal**, **Campbell J. Gibson**, **Roderick J. Harrison**, **Donald J. Hernandez**, **Jane H. Ingold**, **Martin T. O'Connell**, **Marie Pees**, **J. Gregory Robinson**, **Phillip A. Salopek**, **Paul M. Siegel**, **Robert C. Speaker**, **Gregory K. Spencer**, and **Cynthia M. Taeuber**. Other important contributors were **Celia G. Boertlein**, **Rosalind R. Bruno**, **Janice A. Costanzo**, **Rosemarie C. Cowan**, **Arthur R. Cresce**, **Larry G. Curran**, **Carmen DeNavas**, **Robert O. Grymes**, **Kristin A. Hansen**, **Mary C. Hawkins**, **Rodger V. Johnson**, **Michael J. Levin**, **Edna L. Paisano**, **Sherry B. Pollock**, **Stanley J. Rolark**, **A. Dianne Schmidley**, **Denise I. Smith**, and **Nancy L. Sweet**.

The Data User Services Division, **Marshall L. Turner, Jr.**, Chief, directed the development of data product dissemination and information to increase awareness, understanding, and use of census data.

**Marie G. Argana**, Assistant Chief for Data User Services, directed preparation of electronic data products and their dissemination. **Alfonso E. Mirabal**, Assistant Chief for Group Information and Advisory Services, directed activities related to the National Services Program, State Data Centers, and preparation of training materials. The following branch chiefs made significant contributions: **Deborah D. Barrett**, **Frederick G. Bohme**, **Larry W. Carbaugh**, **James P. Curry**, **Samuel H. Johnson**, **John C. Kavalunas**, and **Forrest B. Williams**. Other important contributors were **Molly Abramowitz**, **Barbara J. Aldrich**, **Delores A. Baldwin**, **Ramala Basu**, **Geneva A. Burns**, **Carmen D. Campbell**, **James R. Clark**, **Virginia L. Collins**, **George H. Dailey, Jr.**, **Barbara L. Hatchl**, **Paul T. Mantka**, **John D. McCall**, **Jo Ann Norris**, **David M. Pemberton**, **Sarahbeth Rodriguez**, **Charles J. Wade**, **Joyce J. Ware**, and **Gary M. Young**.

The Geography Division, **Robert W. Marx**, Chief, directed and coordinated the census mapping and geographic activities. **Jack R. George**, Assistant Division Chief for Geoprocessing, directed the planning and development of the TIGER System and related software. **Robert A. Lallacchia**, Assistant Division Chief for Planning, directed the planning and implementation of processes for defining 1990 census geographic areas. **Silla G. Tomasi**, Assistant Division Chief for Operations, managed the planning and implementation of 1990 census mapping applications using the TIGER System. The following branch chiefs made significant contributions: **Frederick R. Broome**, **Linda M. Franz**, **David E. Galdi**, **Dan N. Harding**, **Donald I. Hirschfeld**, **Peter Rosenson**, **Joel Sobel**, and **Brian Swanhart**. Other important contributors were **Gerard Boudriault**, **Desmond J. Carron**, **Anthony W. Costanzo**, **Paul W. Daisey**, **Beverly A. Davis**, **Carl S. Hantman**, **Christine J. Kinnear**, **Terence D. McDowell**, **Wendell McManus**, **Linda M. Pike**, **Rose J. A. Quarato**, **Lourdes Ramirez**, **Janemary G. Rosenson**, **Daniel L. Sweeney**, **Timothy F. Trainor**, and **Phyllis S. Willette**.

The Statistical Support Division, **John H. Thompson**, Chief, directed the application of mathematical statistical techniques in the design and conduct of the census. **John S. Linebarger**, Assistant Division Chief for Quality Assurance, directed the development and implementation of operational and software quality assurance. **Henry F. Woltman**, Assistant Division Chief for Census Design, directed the development and implementation of sample design, disclosure avoidance, weighting, and variance estimation procedures. **Howard Hogan**, Assistant Chief for Coverage Measurement, and **David V. Bateman**, Chief, Coverage Studies and Evaluation Staff, were contributing assistant division chiefs. The following branch chiefs made significant contributions: **Florence H. Abramson**, **Nicholas S. Alberti**, **Gregg J. Diffendal**, **Deborah H. Griffin**, **Richard A. Griffin**, **Michael L. Mersch**, and **Jimmie B. Scott**. Other important contributors were **Maribel Aponte**, **James E. Hartman**, **Alfredo Navarro**, **Michael D. Sinclair**, **Kathryn F. Thomas**, **Amy L. Tillman**, **Maria E. Urrutia**, and **O. Annetta Walker**.

The Administrative and Publications Services Division, **Walter C. Odom**, Chief, provided direction for the census administrative services, publications, printing, and graphics functions. **Michael G. Garland** was a contributing assistant division chief. The following branch and staff chiefs made significant contributions: **Bernard E. Baymiller**, **Albert W. Cosner**, **Gary L. Lauffer**, **Gerald A. Mann**, **Clement B. Nettles**, **Russell Price**, and **Barbara J. Stanard**. Other important contributors were **Barbara M. Abbott**, **Robert J. Brown**, **David M. Coontz**, and **John T. Overby**.

The Data Preparation Division, **Joseph S. Harris**, Chief, provided management of a multi-operational facility including kit preparation, procurement, warehousing and supply, and census processing activities. **Plummer Alston, Jr.**, and **Patricia M. Clark** were assistant division chiefs.

The Field Division, **Stanley D. Matchett**, Chief, directed the census data collection and associated field operations. **Richard L. Bitzer**, **Richard F. Blass**, **Karl K. Kindel**, and **John W. Marshall** were assistant division chiefs. **Sheila H. Grimm** was the director of the New York Regional Office with responsibility for the Census of Puerto Rico.

The Personnel Division, **David P. Warner**, Chief, provided management direction and guidance to the staffing, planning pay systems, and employee relations programs for the census. **Colleen A. Woodard** was the assistant chief.



1990 Census of  
Population and Housing

**Equal  
Employment  
Opportunity  
(EEO) File  
*Puerto Rico***

**TECHNICAL  
DOCUMENTATION**

Issued February 1993



**U.S. Department of Commerce**  
Ronald H. Brown, Secretary  
John Rollwagen, Deputy Secretary  
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Harry A. Scarr, Acting Director





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**Jeffrey Mayer, Acting Under Secretary**



**BUREAU OF THE CENSUS**  
**Harry A. Scarr, Acting Director**

**Charles D. Jones**, Associate Director for  
Decennial Census  
**William P. Butz**, Associate Director for  
Demographic Programs  
**Bryant Benton**, Associate Director for Field  
Operations  
**Bryant Benton**, Acting Associate Director for  
Management Services  
**Peter A. Bounpane**, Assistant Director for  
Decennial Census

### **SPECIAL ACKNOWLEDGMENTS**

This report was prepared by persons in the Labor Force Statistics Branch of the Housing and Household Economic Statistics Division. **John A. Priebe** and **Mary C. Kirk** planned and coordinated the report, under the general supervision of **Thomas S. Scopp**, Chief, Labor Force Statistics Branch, under the direction of **Charles T. Nelson**, Assistant Division Chief (Socioeconomic Statistics Program).

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The files should be cited as follows:

Census of Population and Housing, 1990: Equal Employment Opportunity (EEO) File Puerto Rico [machine-readable data files] / prepared by the Bureau of the Census. —Washington: The Bureau [producer and distributor], 1993.

The technical documentation should be cited as follows:

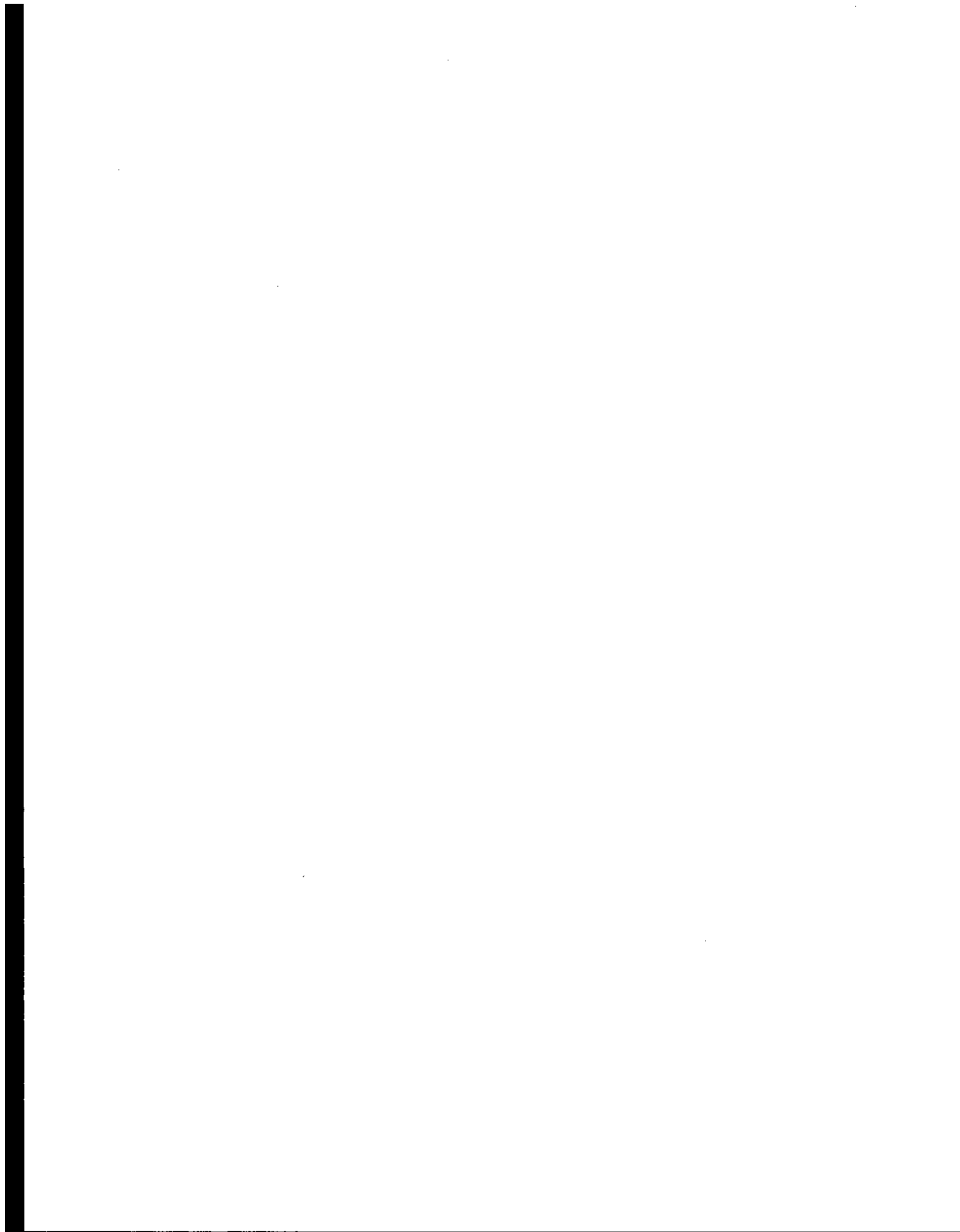
Census of Population and Housing, 1990: Equal Employment Opportunity (EEO) File Puerto Rico Technical Documentation / prepared by the Bureau of the Census. —Washington: The Bureau, 1993.

For additional information concerning the files, contact Data User Services Division, Customer Services Branch, Bureau of the Census, Washington, DC 20233. Telephone: 301-763-4100.

For additional information concerning the technical documentation, contact Data User Services Division, Data Access and Use Staff, Bureau of the Census, Washington, DC 20233. Telephone: 301-763-2074.

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## ABSTRACT

*The user should note that there are limitations to many of these data. Please refer to the technical documentation provided with the 1990 Census of Population and Housing, Equal Employment Opportunity (EEO) File (Puerto Rico) for a further explanation on the limitations of the data.*

### CONTENTS

Citation	11
Comparability to 1980 Census Data	12
Expected Use of 1990 EEO Census Data	12
File Availability	13
Geographic Coverage	12
Related Products	12
Related Electronic Media Products	13
Related Reference Materials	12
Subject Matter Description	11
Technical Description	13
Type of File	11
Universe Description	11

### CITATION

1990 Census of Population and Housing, Equal Employment Opportunity (EEO) File (Puerto Rico) [machine-readable data files] / prepared by the Bureau of the Census. —Washington: The Bureau [producer and distributor], 1993.

### TYPE OF FILE

Summary statistics.

### UNIVERSE DESCRIPTION

All persons in the civilian labor force in Puerto Rico.

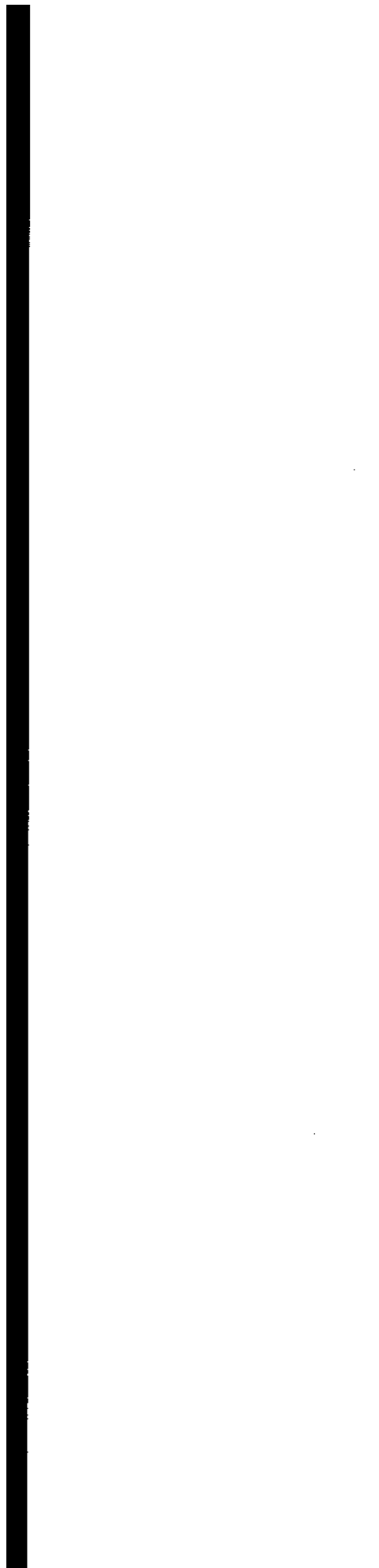
### SUBJECT MATTER DESCRIPTION

The 1990 Census Equal Employment Opportunity (EEO) File (Puerto Rico) is based on civilian labor force data from the 1990 decennial census of Puerto Rico. The file contains two sample-based tables of tabulations. Table P1 is a cross-tabulation of a detailed census occupation distribution by sex. Table P2 shows educational attainment for selected age groupings by age and by sex.

The format of the 1990 EEO File is somewhat different from the 1980 version. Each record contains all occupation and educational attainment categories by sex. Shown below is an example of how the data are sorted for each geographic unit, that is, for Puerto Rico, each municipio, each metropolitan area, and each place of 50,000 or more persons. The file contains data for two tables for each geographic entity.

- P1. Detailed Occupation by Sex  
Universe: Civilian Labor Force  
Legislators (001-003):  
Male  
Female  
Chief executives and general administrators, public administration (004):  
(Repeat SEX)  
(For each occupation repeat Sex)
- P2. Educational Attainment by Age by Sex  
Universe: Civilian Labor Force  
Not high school graduate:  
16 to 19 years:  
Male:  
Female:  
20 to 24 years:  
(Repeat Sex)  
25 to 29 years:  
(Repeat Sex)  
30 to 34 years:  
(Repeat Sex)  
35 to 39 years:  
(Repeat Sex)  
40 to 69 years:  
(Repeat Sex)  
70 years and over:  
(Repeat Sex)  
High school graduate:  
(Repeat Age by Sex)  
Some college or associate degree:  
(Repeat Age by Sex)  
Bachelor's degree:  
(Repeat Age by Sex)  
Graduate or professional degree:  
(Repeat Age by Sex)

Both tables in this file present data for the entire civilian labor force. In table 1, occupation data will be available only for the "recent-experienced" civilian labor force (defined as persons employed in 1990 or unemployed having civilian work experience between 1985-1990). All remaining persons in the civilian labor force are in the residual line "unemployed with no civilian work experience since 1985." This line includes all persons who reported themselves as unemployed in 1990 and one of the following: (1) their last job since 1985 was in the U.S. Armed Forces and they had a uniquely



military occupation; or (2) they last worked in 1984 or earlier; or (3) they reported that they had never worked.

#### **GEOGRAPHIC COVERAGE**

Data are provided for Puerto Rico; all municipios; all Metropolitan Statistical Areas (MSA's), Consolidated Metropolitan Statistical Areas (CMSA's), and Primary Metropolitan Statistical Areas (PMSA's); and all places with a population of 50,000 or more.

#### **COMPARABILITY TO 1980 CENSUS DATA**

This file is the 1990 counterpart to the 1980 Census/EEO Special File. Generally, the classification system used for the 1990 occupation data is the same as the one used in 1980, but there are some differences, as follows:

##### **New 1990 categories:**

- 017 Managers, food serving and lodging establishments
- 021 Managers, service organizations, not elsewhere classified (n.e.c.)
- 466 Family child care providers
- 467 Early childhood teacher's assistants

##### **Deleted 1980 categories (consolidated with others):**

- 349 Telegraphers (now part of 353, Communications equipment operators, n.e.c.)
- 369 Samplers (now part of 368-372, Weighers, measurers, checkers, and samplers)
- 437 Short-order cooks (now part of 436, Cooks)
- 673 Apparel and fabric patternmakers (now part of 674, Miscellaneous precision apparel and fabric workers)
- 794 Hand grinding and polishing occupations (now part of 795, Miscellaneous hand working occupations)
- 805 Truck drivers, light (now part of 804, Truck drivers)

Most of the 1990 census occupation codes are the same, but some have changed. See Appendix I, 1980-1990 Occupation Comparability List, for detailed changes.

#### **EXPECTED USE OF 1990 CENSUS EEO DATA**

This file will be useful during the next decade to both the government and the private sector as the primary source of occupational and educational attainment data for personnel recruitment and affirmative action program planning.

Occupation and education data frequently are important in preparing studies dealing with demographic and economic issues. The 1990 file will be valuable for such studies and especially for affirmative action plan-

ning during the 1990's. Census figures on the number of workers by occupation generally have been accepted as proxies for the number of workers who are "skilled." The first tabulation addresses this need for work-experience data by furnishing counts of people in specific occupations.

Many entry-level jobs, apprenticeship programs, training programs, and other work situations do not require a skill based on work experience (as measured by occupation) but instead require a certain level of educational attainment. The tabulation for education level by age of persons in the civilian labor force meets this need for data on new entrants.

#### **RELATED PRINTED REPORTS**

CP-S-1-1, *Detailed Occupation and Other Characteristics From the EEO File for the United States: 1990*. This publication repeats the tables available on the tape at the national level only. This report is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 003-024-08613-1. Price: \$6.00.

CPH-R-3, *1990 Census of Population and Housing: Alphabetical Index of Industries and Occupations: 1990*. This document lists all the industry and occupation titles, arranged in alphabetical order. The Index is used primarily for coding operations. This report is available from: Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 003-024-08080-0. Price: \$19.

CPH-R-4, *1990 Census of Population and Housing: Classified Index of Industries and Occupations: 1990*. This document is a companion to the Alphabetical Index. Industry and occupation titles are arranged by classification code. It presents for each category in the industrial and occupational classification systems, the individual titles that constitute the category. This report is available from: Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 003-024-08081-8. Price: \$14.

#### **RELATED REFERENCE MATERIALS**

*Introduction to 1990 Census Products for Puerto Rico*. This booklet, available in English and Spanish, lists the subject items included in the 1990 Census of Population and Housing for Puerto Rico, presents census geography for Puerto Rico, and describes reports and machine-readable products that are available from the 1990 census. This publication is available without charge from Customer Services, Data User Services Division, Bureau of the Census, Washington, DC 20233. Telephone: 301-763-4100. FAX: 301-763-4794.

*1990 Census of Population and Housing Tabulation and Publication Program for Puerto Rico*. This booklet provides descriptions of the data products for Puerto



Rico available from the 1990 census. Available without charge from Customer Services (see above).

*Census '90 Basics.* This booklet provides a general overview of the census activity and detailed information on census content, geographic areas, and products. Available without charge from Customer Services (see above).

1990 CPH-R-1A, *1990 Census of Population and Housing Guide, Part A.* Text. This provides detailed information about all aspects of the census. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 003-024-08574-7. Price: \$11. Part B, Glossary, will be available in early 1993. Part C, Index, provides an index of Summary Tape Files 1-4 and will be available in the spring of 1993.

#### RELATED ELECTRONIC MEDIA PRODUCTS

The EEO File for Puerto Rico also will be available on CD-ROM and will contain data for all geographic entities on the computer tape. It will be in dBASE format, and organized in a fashion similar to the tape file. The disc will include the technical documentation and a simple retrieval/display program that retrieves geographic entities and displays data tables in a format similar to the microfiche described below.

The EEO File on microfiche will follow a similar geographic hierarchy to the 1980 microfiche product, that is, the Puerto Rico summary followed by municipio, place with 50,000 or more persons, and MA summaries. The microfiche will be produced in 42x, column format. Each of the 208 frames will be a negative image whereas the eye-readable header area will be a positive image. There will be 68 frames of data with three geographic areas presented on each microfiche. The last frame (frame 208) will have an index. A text will be in several frames preceding the 208th position. The size of the microfiche file is estimated to be 1,500 microfiche. The eye-readable title will contain the product title and the name of all 3 geographic entities contained on the

microfiche. The optimum character size for the eye-readable title will be 3 lines of 112 characters.

#### TECHNICAL DESCRIPTION

The EEO Files have a record size of 10,474 characters divided into 2 segments of 5,237 characters each. The first 300 characters of each segment contain geographic information.

#### FILE AVAILABILITY

The data for each entity are identified on the tapes by both a geographic code and alphabetic name. This will allow users to identify the data easily when printed and eliminate the need for a separate geographic code index. The Puerto Rico EEO File is available as one file. For pricing information, contact Customer Services. The minimum charge is \$175.

Options include 6250 or 1600 bpi, ASCII or EBCDIC, labeled or unlabeled. The files also are available on tape cartridges (IBM 3480 compatible) for the same price. A machine-readable data dictionary is included on the tape without charge.

Each order includes a copy of the technical documentation; additional copies are \$15 per copy. When ordering, please use the order form at the end of this chapter. For further information, contact Customer Services, Data User Services Division, Bureau of the Census, Washington, DC 20233. Phone: 301-763-4100. FAX: 301-763-4794.

For additional information about the content of the EEO Files, such as occupational classifications, coding, data collection, etc., contact: Thomas S. Scopp, Labor Force Statistics Branch, Housing and Household Economic Statistics Division, Bureau of the Census, Washington, DC 20233. Phone: 301-763-8574. FAX: 301-763-8412.









# HOW TO USE THIS FILE

## CONTENTS

Introduction.....	2-1
Using the File.....	2-2

## INTRODUCTION

This chapter serves as a guide for data users to both the tape and the technical documentation. Novice users trying to understand how to use the documentation and the file should read this chapter first.

### Documentation Chapters

The Abstract chapter in this documentation provides a quick overview of the file, including the formal title, geographic coverage, subject coverage, comparability to 1980 data, and file availability. Also shown are citations for related reference materials and printed reports. Their titles and geography are included in this section, along with purchasing information.

The Subject Locator is an aid to finding which tables provide the information needed. The List of Tables (Matrices) and the Table (Matrix) Outlines provide two types of presentations for the tables available in the file. The List of Tables (Matrices) has the table titles and universes.

The Table (Matrix) Outlines show a detailed presentation of the tables. When reviewing the tables, remember that a colon (:) following an entry indicates the entry is a heading, not a data cell. For this EEO file, the main occupation headings are shown in the Table (Matrix) Outlines and in appendix H. The Table (Matrix) Section of the data dictionary describes only the data cell items. In the Table (Matrix) Outlines and the Table (Matrix) Section, many occupation codes are presented as ranges; for example, legislators (001-003). In appendix H, the Occupation Code List includes single census occupation codes and comparable Standard Occupational Classification (SOC) code equivalents. Single census occupation codes in appendix H are equivalent to corresponding census code ranges in the Table (Matrix) Outlines and Table (Matrix) Section.

### User Notes

Information about file or documentation changes sometimes becomes available after the documentation has been printed. User notes inform the user community about these changes. These are issued in a numbered series. If there are technical documentation

changes, revised pages usually accompany them. The revised pages should be inserted in their proper location, but the user note cover sheet should be filed in the User Notes chapter. Technical notes, which contain file errata, also are issued by the Census Bureau. We suggest filing these following appendix J.

### Data Dictionary

The data dictionary describes the file and provides character locations for each variable and each table. It has two elements, the identification section and the table (matrix) section.

In the identification section, the components include the field name; the data dictionary reference name, a short mnemonic for use with software packages; field size; starting position; and data type (alphabetic, numeric, or alphanumeric).

The identification section of the data dictionary is identical for the EEO file and all summary tape files. It provides a list of the geographic codes or refers the user to the appropriate source. Review the footnotes carefully; they provide explanations for various terms. These footnotes are listed at the end of the identification section of the data dictionary.

The table (matrix) section provides information on the table (matrix) number; table (matrix) description; number of implied decimals in each cell (if not 0); starting position within the record, within the segment, and for all cells within the first-level variable; and cell coordinates.

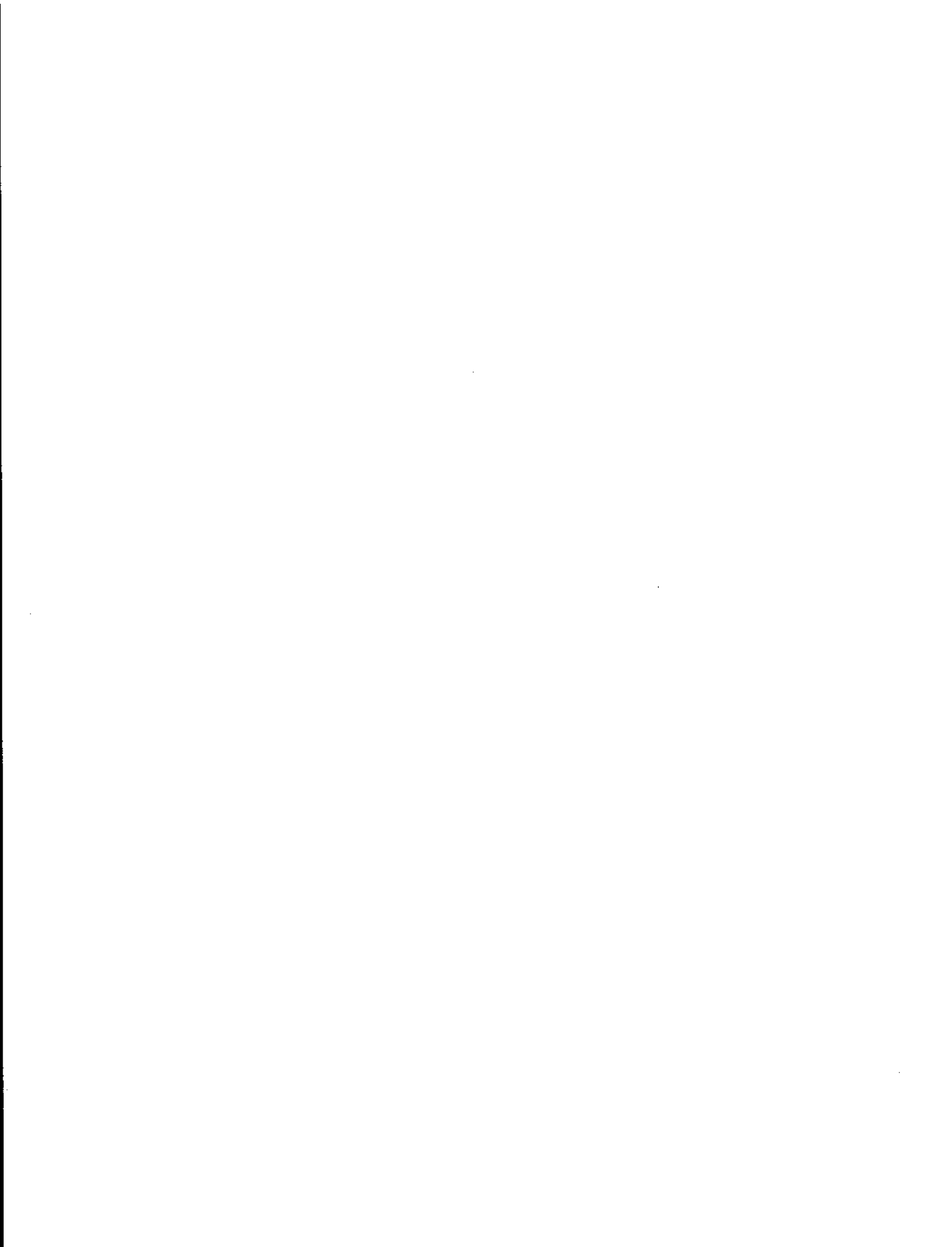
There also is a machine-readable data dictionary file on the data tape. This dictionary is designed to be converted for use with various software packages.

### Appendixes

Detailed information on geographic areas is in appendix A followed by subject-matter definitions in appendix B. Appendix C provides detailed statistical information about the data while appendix D outlines the data collection and processing procedures. A facsimile of the 1990 census long-form questionnaire for Puerto Rico is in appendix E.

Appendix F furnishes detailed information on all the 1990 census data products for Puerto Rico as well as suggested sources of information and assistance. The record layout for the machine-readable data dictionary file that accompanies each tape order is in appendix G.

Appendix H contains the industry and occupation code lists used in processing the data. Each respective list also contains the Standard Industrial Classification



(SIC) codes and the 1980 Standard Occupational Classification (SOC) code equivalents. Occupation and industry codes are listed on the left of each code description; SIC codes, and SOC codes are in parentheses at the end of each code description.

Appendix I compares the 1980 and 1990 occupation codes and notes changes.

Appendix J provides a list of the FIPS Puerto Rico and municipio codes, place codes (50,000 or more persons), and metropolitan area codes.

## Count Corrections

The Census Bureau issues population count corrections on an occasional basis. Count corrections for geography at the place level and above are available from Customer Services, Data User Services Division, Bureau of the Census, Washington, DC 20233. Count corrections for geography at the census tract/BNA level or below are available from Population Division, Bureau of the Census, Washington, DC 20233. When requesting these corrections, please include the desired census tract/BNA, block group, or block numbers.

## USING THE FILE

### Internal File Labels

**System Labels**—Tape orders which specify labeled tapes will have a standard American National Standards Institute (ANSI) label. The system label consists of 17 characters, but only the first 12 are active. The remaining five characters will be 'X' filled. The 1990 EEO File for Puerto Rico has a Data Set Name (DSN) of SP300XPR.Fnnxxxx; nn is a two-digit number with leading zeroes identifying the tape volume sequence. (The "X", "F", and "x" in the DSN remain constant.)

**User Labels**—Each user tape will have six user header labels and six user trailer labels. These labels combine information from the system label and the identification portion of the first and last record. These labels enable the user to quickly identify the beginning and ending records on each tape.

**User Header Labels**—The user header labels are designated UHL1 through UHL6. UHL1 and UHL2 repeat information from the system label in HDR1 and HDR2. UHL3 and UHL4 contain information from the identification portion of the first record on the tape. UHL5 through UHL6 contain a statement regarding the data.

**User Trailer Labels**—The user trailer labels are designated UTL1 through UTL6. UTL1 and UTL2 contain information from the system trailer label. UTL3 and subsequent user trailer labels contain identification information from the last record on the tape. The unused portion of UTL6 is blank filled.

## Specific File Information

*Specific file information for Puerto Rico, such as record counts, is not provided in the technical documentation. However, each tape order is accompanied by a tape creation sheet. This sheet provides the file name, file label (HDR1), the third user header label (UHL3), record size, block size, and record count. The third user header label for each reel identifies the geography for the first record on the reel. For example, the UHL3 at the beginning of each reel of a three-reel file for a State<sup>1</sup> provides the geography for the first record. If the geography needed is on reel three, only reel three needs to be processed.*

The tape creation sheet received with the tape should be filed in the technical documentation notebook or with other tape information maintained by the user.

## Record Segmentation

Logical records are divided into segments, each containing identification information and parts of specific tables. A logical record is one geographic entity such as Puerto Rico, a municipio, a place of 50,000 or more persons, or an MA. Every logical record has a sequence number that is repeated in each segment. This is the logical record number (LOGRECNU). There is a unique LOGRECNU for every separate geographical entity on a specific tape. For example, the first LOGRECNU will be "1" for the State (Puerto Rico); the second LOGRECNU will be "2" for municipio, etc. The LOGRECNU appears in position 19 of each segment.

Following this, beginning in position 25 is the logical record part number (LOGRECPN). The LOGRECPN indicates the segment number for a block of data within a record. See Chart 1, Segmentation of EEO Records, for a list of segments for the EEO Puerto Rico File. The total number of parts, or segments, in a record (PARTREC) are shown in position 29. For this file the PARTREC will indicate "2."

It is important to check the LOGRECPN to be assured the correct segment or segments of a logical record have been accessed. For example, if data for public transportation attendants is required, segment 2 of a logical record needs to be read. To assure that the correct data is available, the PARTREC should indicate "2."

Each EEO Puerto Rico logical record has a record size of 10,474 characters. The record is divided into 2 record segments of 5,237 characters with each segment having 300 characters of identification information followed by tables (matrices). The geographic information layout for each segment is identical to the identification information described for starting positions 1-300 of the data dictionary. The segmentation scheme is illustrated as follows.

<sup>1</sup>Puerto Rico



Chart 1. Segmentation of EEO Puerto Rico Records

Segment 1	
Geographic Identification	P1. Legislators through Unhired 5,237 characters including 5 characters filler
Segment 2	
Geographic Identification	P1. Public transportation attendants through P2. Graduate professional degree 5,237 characters including 23 characters filler

## Record Identification

Each record on the EEO File is identified uniquely by a combination of geography (for example, Puerto Rico, and municipio), summary level, and geographic component codes. For example, if you have the Puerto Rico EEO file and want to look at the summary record for Ponce Municipio, three identification fields must be checked: the summary level code for municipio records (050), the total record for geographic components (00), and the municipio code for Ponce Municipio. If all three fields are not checked, multiple records will be found. See the Summary Level Sequence Chart and Geographic Area Component Codes section below for information on identifying summary level and geographic component codes.

## Summary Level Sequence Chart and Geographic Area Component Codes

The Summary Level Sequence Chart chapter and the geographic area component codes provide important information for using the 1990 Puerto Rico EEO File.

The Summary Level Sequence Chart chapter identifies the geographic levels for which data are provided. It is easy to determine this if you remember that the last geographic area type listed in the sequence identifies the geography of the summary level; the prior codes simply define the hierarchy. For example, in summary level 168, the hierarchy listed is State<sup>1</sup>—Place [50,000 or more persons]. The record actually contains data for a place within Puerto Rico.

When reading the Summary Level Sequence Chart chapter, it is important to recognize that dashes (—) separate the individual hierarchies while slashes (/) separate different types of geography within the same hierarchy.

After identifying the summary level code, turn to chart 2 at the end of this chapter to determine the geographic area codes and area characteristics provided on the tape for this summary level. Remember that an asterisk

(\*) indicates a code in that field. The code may be one of the standard codes described below.

The Summary Level Sequence Chart chapter also provides geographic component code information. This code identifies the various geographic components for which the record is repeated within the summary level. These component codes are provided in the data dictionary beginning in position 14. For example, the Summary Level Sequence Chart for EEO indicates that the summary level for State records (040) has geographic component code 00. By turning to the geographic component variable in the data dictionary, you can determine that the tables for summary level 040 (State) are available for total geography (State) (geographic component=00).

In short, always check the geographic codes, the summary level (beginning in position 11 of the data dictionary), and the geographic component code (beginning in position 14 of the data dictionary) for complete identification of an EEO record.

## Special Area Codes

Special area codes appear in the geographic area codes portion of the data dictionary (positions 142-171). The codes represented may vary across decennial products. In all the Puerto Rico EEO Files, special area code (9) is used. The nine codes for special area code (9) are described below.

### Special area code (9)—Land/water area

- |   |  |
|---|--|
| 1 | Significant land, significant (0.0005 or more square kilometers) water |
| 2 | Significant land, minimal (less than 0.0005 square kilometer) water    |
| 3 | Significant land, zero (0) water                                       |
| 4 | Minimal land, significant water  |
| 5 | Minimal land, minimal water  |
| 6 | Minimal land, zero water   |
| 7 | Zero land, significant water   |
| 8 | Zero land, minimal water   |
| 9 | Zero land, zero water  |

## Class of Worker Codes

Class of worker codes are used with some of the EEO detailed occupations. The codes and definitions are as follows:

- |   |  |
|---|--|
| 0 | NA (Including Person Under 16 Years/Unemployed Who Never Worked/NILF, Last Worked Before 1985) |
| 1 | Employee of a Private For-Profit Company   |

<sup>1</sup>Puerto Rico



- 2 Employee of a Private Not-for-Profit Company
- 3 Employee of a Municipio Government
- 4 Employee of the Commonwealth Government
- 5 Employee of Federal Government
- 6 Self-employed in Own Not Incorporated Business
- 7 Self-employed in Own Incorporated Business
- 8 Unpaid Family Worker
- 9 Unemployed, Last Worked Before 1985

- ! Not available—The code would be shown except it had not been determined when the files were prepared (for example, metropolitan area code on a municipio summary level (050) on STF 1A).
- 9 Not in—This indicates a "remainder of" an area, such as a place code in the portion of a municipio subdivision not in a place, or the summary level is not part of any area to which the code field applies.
- Blank Not applicable—This indicates that the code is not applicable to the summary level.

### Standard Codes

In the identification section of all decennial tape products, there are standard codes, undefined in the data dictionary, that have identical meaning regardless of the field. The codes are the same size as the field; that is, a three-character field will have three symbols. These standard codes are listed below.

Where these codes are specifically defined in the data dictionary, the defined code should be used. For example, in the division code description on the data dictionary (position 89), the code for the Pacific Division is indicated as "9." This "9" should be interpreted as the division code, not as "not in," the standard code for "9."





Chart 2. **EEO (Puerto Rico) File Identification by Summary Level<sup>1</sup>**

Field name	Summary level			Summary level	
	040	050	168	320	321
<b>Record Codes</b>					
File Identification	*	*	*	*	*
State/US-Abbreviation (Puerto Rico only)	*	*	*	*	*
Summary Level	*	*	*	*	*
Geographic Component	*	*	*	*	*
Characteristic Iteration	*	*	*	*	*
Logical Record Number	*	*	*	*	*
Logical Record Part Number	*	*	*	*	*
Total Number of Parts In Record	*	*	*	*	*
<b>Geographic Area Codes</b>					
Alaska Native Regional Corporation					
American Indian And Alaska Native Area (Census)					
American Indian And Alaska Native Area (FIPS)					
American Indian And Alaska Native Area Class Code					
American Indian Reservation Trust Land Indicator					
Block					
Block Group					
Census Tract/Block Numbering Area					
Congressional District					
Consolidated City (Census)			*		
Consolidated City (FIPS)			*		
Consolidated City Class Code			*		
Consolidated City Size Code			*		
Consolidated Metropolitan Statistical Area		*		*	*
Municipio (County)		*			
County Size Code		*			
County Subdivision (Barrio-pueblo or Barrio) (Census)					
County Subdivision (FIPS)					
County Subdivision Class Code					
County Subdivision Size Code					
Division	*	*	*	*	*
Extended City Indicator			*		
Internal Use Code					
Metropolitan Statistical Area/Consolidated Metropolitan Area		*		*	*

<sup>1</sup>See the Summary Level Sequence Chart chapter for identification of the summary level record numbers.

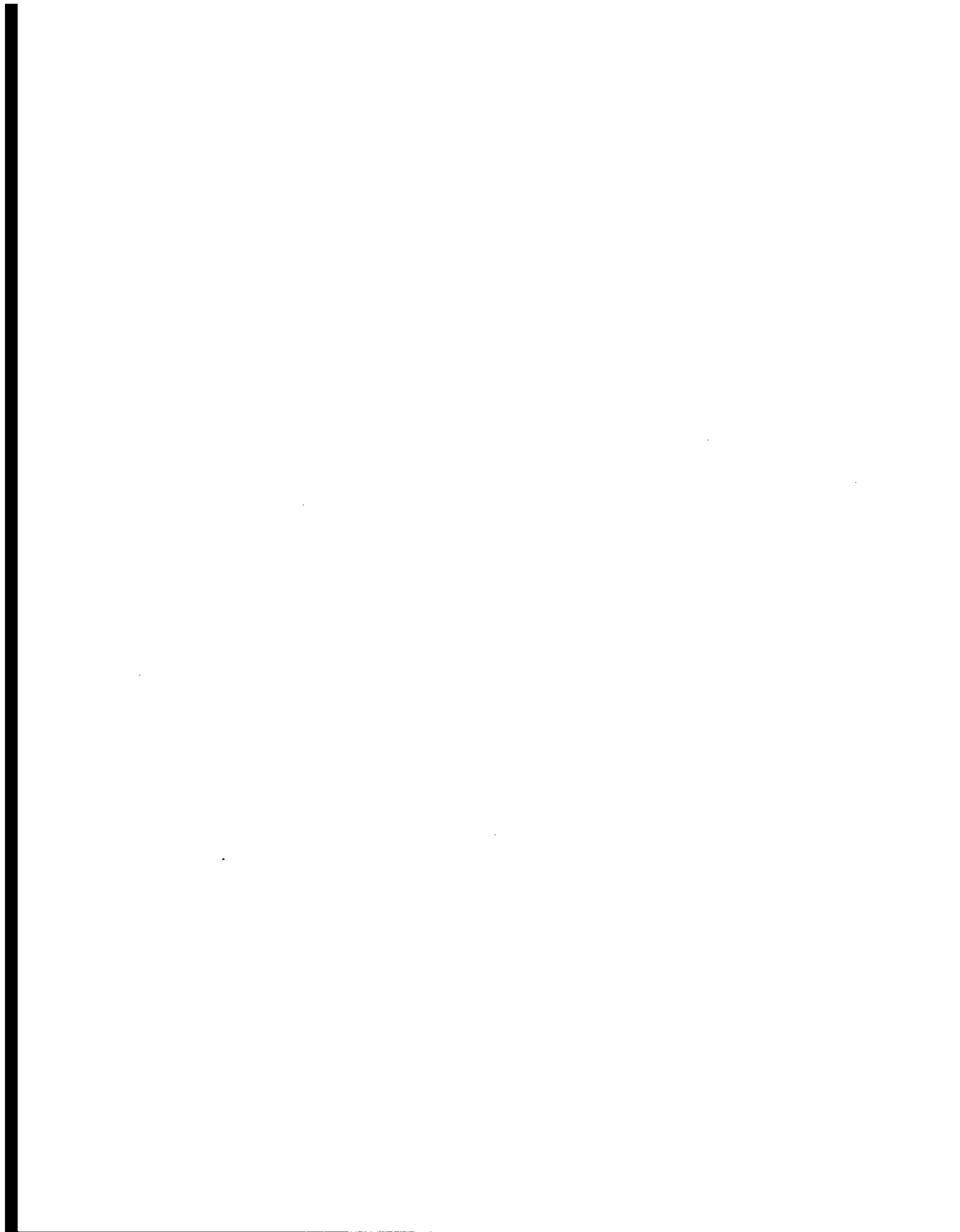
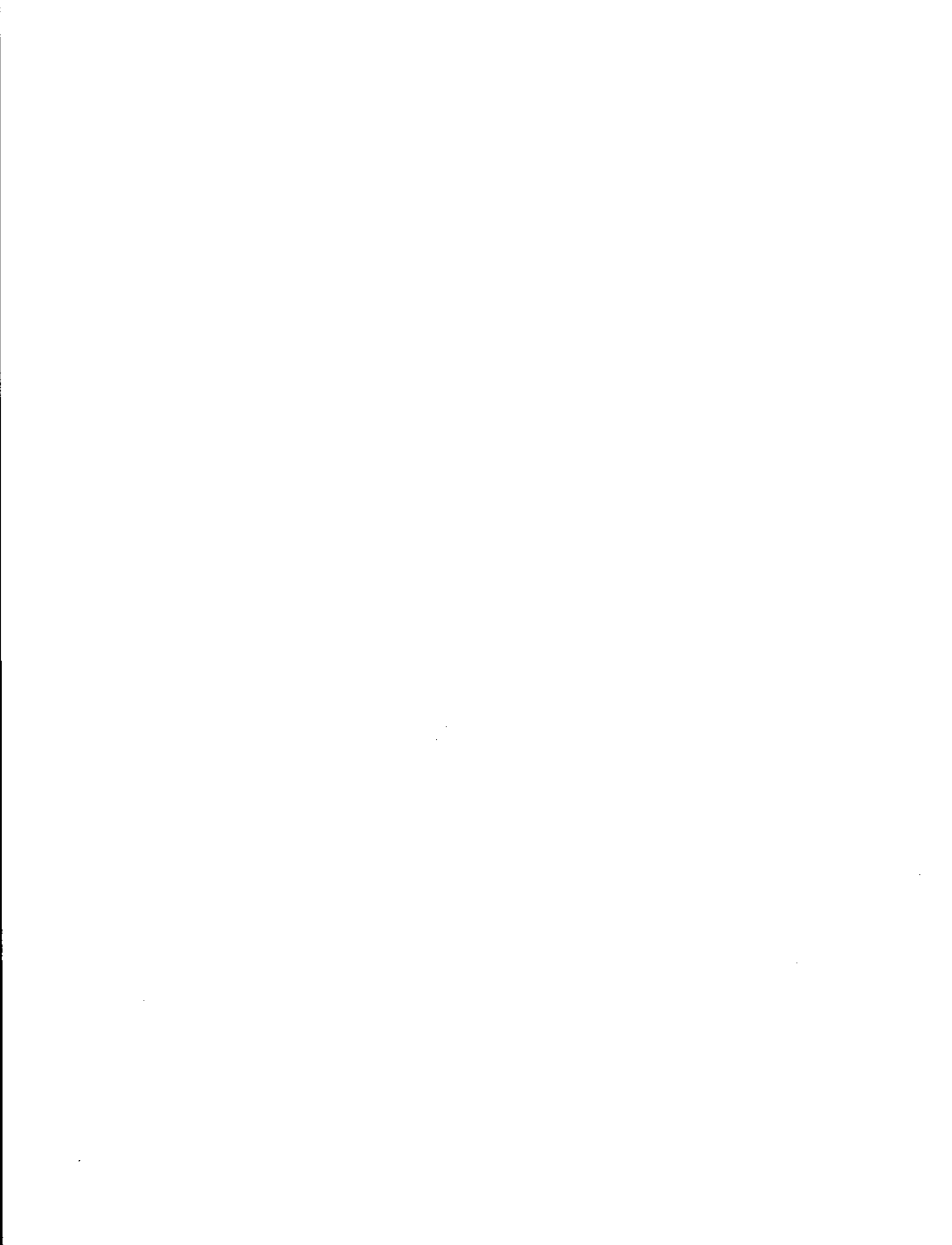


Chart 2. EEO (Puerto Rico) File Identification by Summary Level<sup>1</sup>—Con.

Field name	Summary level			Summary level	
	040	050	168	320	321
<b>Geographic Area Codes—Con.</b>					
MSA/CMSA Size Code		*		*	*
Place (Census)			*		
Place (FIPS)			*		
Place Class Code			*		
Place Description Code			*		
Place Size Code			*		
Primary Metropolitan Statistical Area		*			*
Region	*	*	*	*	*
State (Census) <sup>2</sup>	*	*	*	*	*
State (FIPS)	*	*	*	*	*
Urban/Rural					
Urbanized Area					
Urbanized Area Size Code					
Special Area Code (1)					
Special Area Code (2)					
Special Area Code (3)					
Special Area Code (4)					
Special Area Code (5)					
Special Area Code (6)					
Special Area Code (7)					
Special Area Code (8)					
Special Area Code (9)	*	*	*	*	*
Special Area Code (10)					
<b>Area Characteristics</b>					
Area (Land)	*	*	*	*	*
Area (Water)	*	*	*	*	*
Area Name/PSAD Term/Part Indicator	*	*	*	*	*
Functional Status Code	*	*	*	*	*
Geographic Change User Note Indicator	*	*	*	*	*
Housing Unit Count (100 percent)	*	*	*	*	*
Internal Point (Latitude)	*	*	*	*	*
Internal Point (Longitude)	*	*	*	*	*
Part Flag				*	*
Political/Statistical Area Description Code	*	*	*	*	*
Population Count (100 percent)	*	*	*	*	*
Special Flag	*	*	*	*	*

<sup>1</sup>See the Summary Level Sequence Chart chapter for identification of the summary level record numbers.

<sup>2</sup>Puerto Rico



# SUBJECT LOCATOR

## CONTENTS

Index .....	3-1
Introduction .....	3-1

## INTRODUCTION

This index is designed to quickly identify the EEO tables needed for Puerto Rico. Each table variable is listed alphabetically. Both the type of entry being tabulated (universe), which is shown in italics, and the relevant table numbers appear under the variable heading. If the entry variable is cross tabulated by another variable, the variable of cross tabulation is indicated beneath the universe and is preceded by the word "by." The index entries for each variable are arranged alphabetically by universe, then by variable of cross tabulation, if any. For example, if you are looking for a table tabulating detailed occupation by sex for the civilian labor force, check the index under either of the two variables. Checking under detailed occupation, you find an entry with a universe of civilian labor force. Checking the P1 entry, you can see that detailed occupation is cross tabulated by sex.

## INDEX

### Age

*Civilian labor force*  
by Educational Attainment by Sex ----- P2

### Detailed Occupation

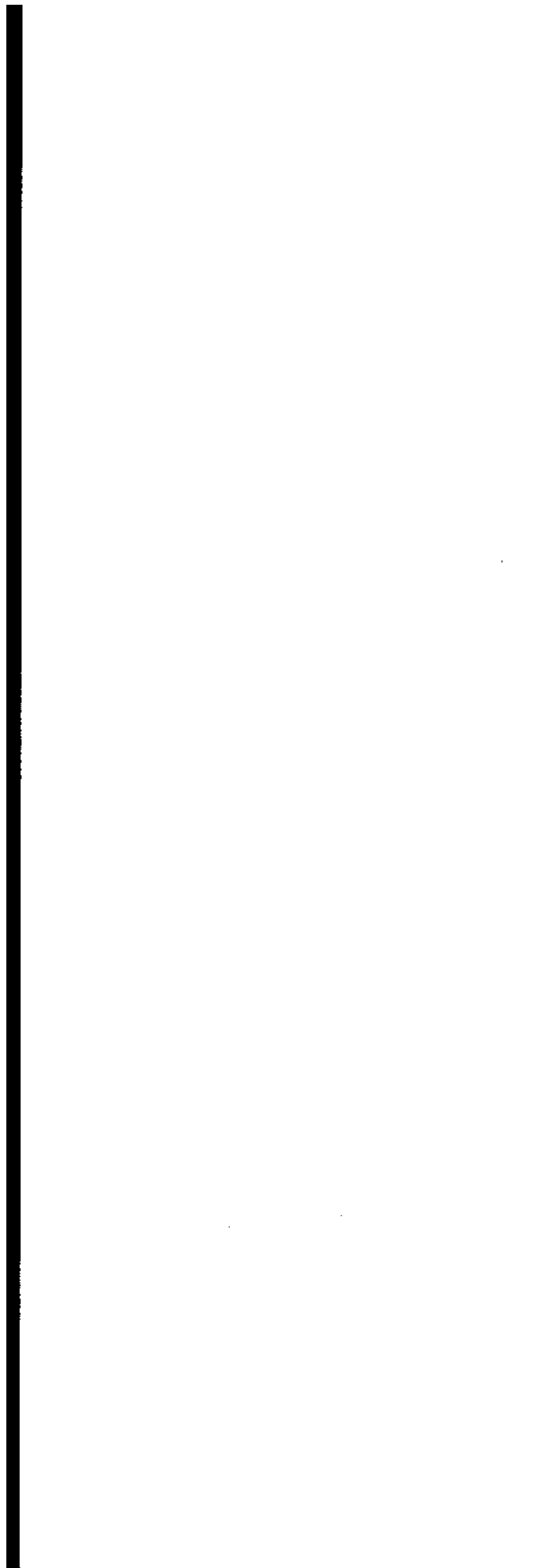
*Civilian labor force*  
by Sex ----- P1

### Educational Attainment

*Civilian labor force*  
by Age by Sex ----- P2

### Sex

*Civilian labor force*  
by Educational Attainment by Age ----- P2  
by Detailed Occupation ----- P1









## LIST OF TABLES (MATRICES)

Table (matrix)	Title	Total number of data cells
P1.	DETAILED OCCUPATION(512) BY SEX(2) ..... <i>Universe: Civilian labor force</i>	1024
P2.	EDUCATIONAL ATTAINMENT(5) BY AGE(7) BY SEX(2) ..... <i>Universe: Civilian labor force</i>	70

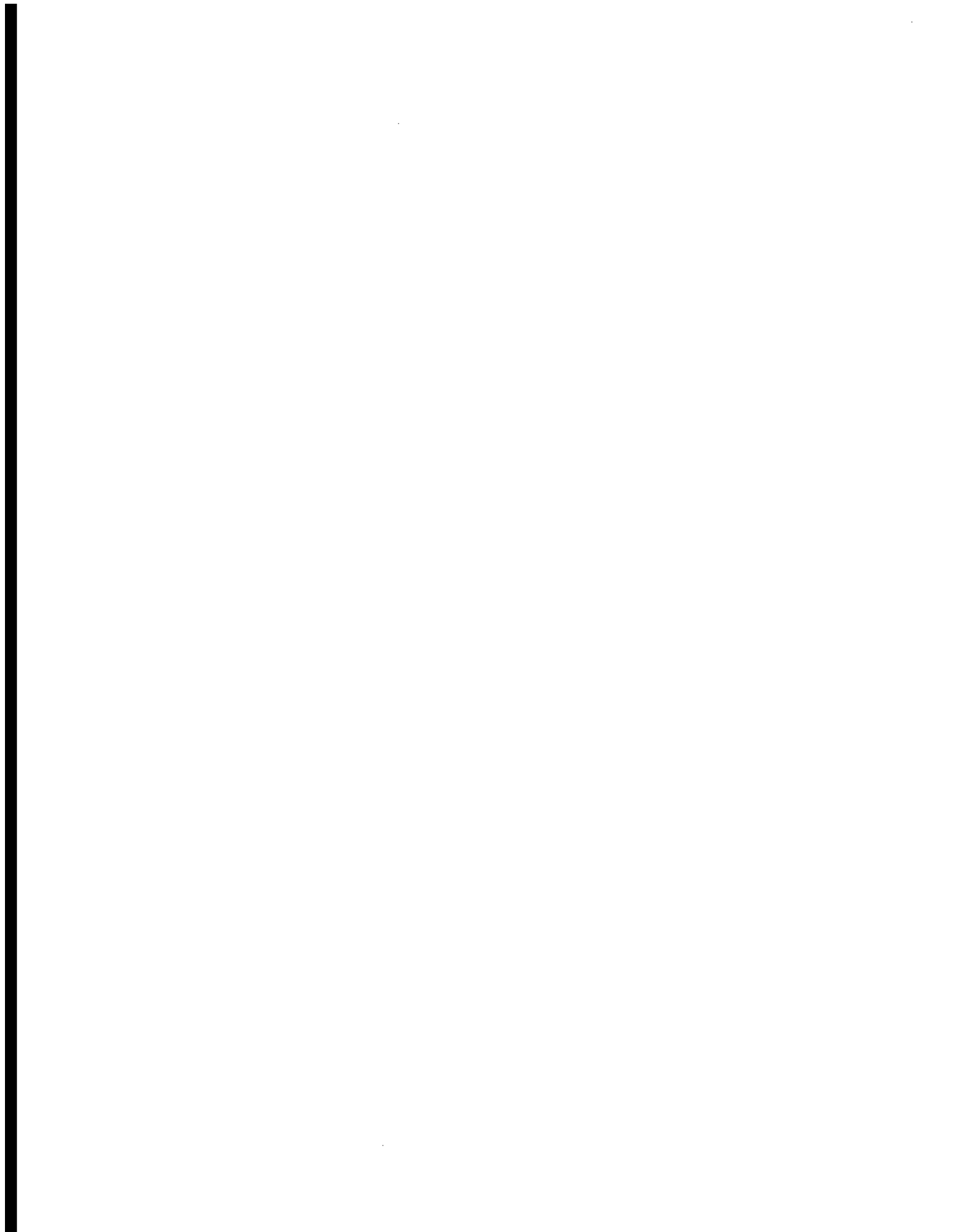






# TABLE (MATRIX) OUTLINES

Table (matrix)	Title	Total number of data cells
P1.	<p>DETAILED OCCUPATION(512) BY SEX(2).....</p> <p><i>Universe: Civilian labor force</i></p> <p>MANAGERIAL AND PROFESSIONAL SPECIALTY OCCUPATIONS (001-202):</p> <p>Executive, Administrative, and Managerial Occupations (001-042):</p> <p>Legislators (001-003):</p> <p>Male</p> <p>Female</p> <p>Chief executives and general administrators, public administration (004):</p> <p>(Repeat SEX)</p> <p>Administrators and officials, public administration (005):</p> <p>(Repeat SEX)</p> <p>Administrators, protective services (006):</p> <p>(Repeat SEX)</p> <p>Financial managers (007):</p> <p>(Repeat SEX)</p> <p>Personnel and labor relations managers (008):</p> <p>(Repeat SEX)</p> <p>Purchasing managers (009-012):</p> <p>(Repeat SEX)</p> <p>Managers, marketing, advertising, and public relations (013):</p> <p>(Repeat SEX)</p> <p>Administrators, education and related fields (014):</p> <p>(Repeat SEX)</p> <p>Managers, medicine and health (015):</p> <p>(Repeat SEX)</p> <p>Postmasters and mail superintendents (016):</p> <p>(Repeat SEX)</p> <p>Managers, food serving and lodging establishments (017):</p> <p>(Repeat SEX)</p> <p>Managers, properties and real estate (018):</p> <p>(Repeat SEX)</p> <p>Funeral directors (019-020):</p> <p>(Repeat SEX)</p> <p>Managers, service organizations, n.e.c. (021):</p> <p>(Repeat SEX)</p> <p>Managers and administrators, n.e.c. (022):</p> <p>Managers and administrators, n.e.c., salaried (022) (Class of worker codes 1-5, 7, 9):</p> <p>(Repeat SEX)</p> <p>Managers and administrators, n.e.c., self-employed (022) (Class of worker codes 6, 8):</p> <p>(Repeat SEX)</p> <p>Management Related Occupations (023-042):</p> <p>Accountants and auditors (023):</p> <p>(Repeat SEX)</p> <p>Underwriters (024):</p> <p>(Repeat SEX)</p> <p>Other financial officers (025):</p> <p>(Repeat SEX)</p> <p>Management analysts (026):</p> <p>(Repeat SEX)</p> <p>Personnel, training, and labor relations specialists (027):</p> <p>(Repeat SEX)</p> <p>Purchasing agents and buyers, farm products (028):</p> <p>(Repeat SEX)</p> <p>Buyers, wholesale and retail trade, except farm products (029-032):</p> <p>(Repeat SEX)</p>	1024



P1.	DETAILED OCCUPATION(512) BY SEX(2)—Con.
	Purchasing agents and buyers, n.e.c. (033):
	(Repeat SEX)
	Business and promotion agents (034):
	(Repeat SEX)
	Construction inspectors (035):
	(Repeat SEX)
	Inspectors and compliance officers, except construction (036):
	(Repeat SEX)
	Management related occupations, n.e.c. (037-042):
	(Repeat SEX)
	Professional Specialty Occupations (043-202):
	Engineers, Architects, and Surveyors (043-063):
	Architects (043):
	(Repeat SEX)
	Engineers (044-062):
	Aerospace (044):
	(Repeat SEX)
	Metallurgical and materials (045):
	(Repeat SEX)
	Mining (046):
	(Repeat SEX)
	Petroleum (047):
	(Repeat SEX)
	Chemical (048):
	(Repeat SEX)
	Nuclear (049-052):
	(Repeat SEX)
	Civil (053):
	(Repeat SEX)
	Agricultural (054):
	(Repeat SEX)
	Electrical and electronic (055):
	(Repeat SEX)
	Industrial (056):
	(Repeat SEX)
	Mechanical (057):
	(Repeat SEX)
	Marine and naval architects (058):
	(Repeat SEX)
	Engineers, n.e.c. (059-062):
	(Repeat SEX)
	Surveyors and mapping scientists (063):
	(Repeat SEX)
	Mathematical and Computer Scientists (064-068):
	Computer systems analysts and scientists (064):
	(Repeat SEX)
	Operations and systems researchers and analysts (065):
	(Repeat SEX)
	Actuaries (066):
	(Repeat SEX)
	Statisticians (067):
	(Repeat SEX)
	Mathematical scientists, n.e.c. (068):
	(Repeat SEX)
	Natural Scientists (069-083):
	Physicists and astronomers (069-072):
	(Repeat SEX)
	Chemists, except biochemists (073):
	(Repeat SEX)
	Atmospheric and space scientists (074):
	(Repeat SEX)





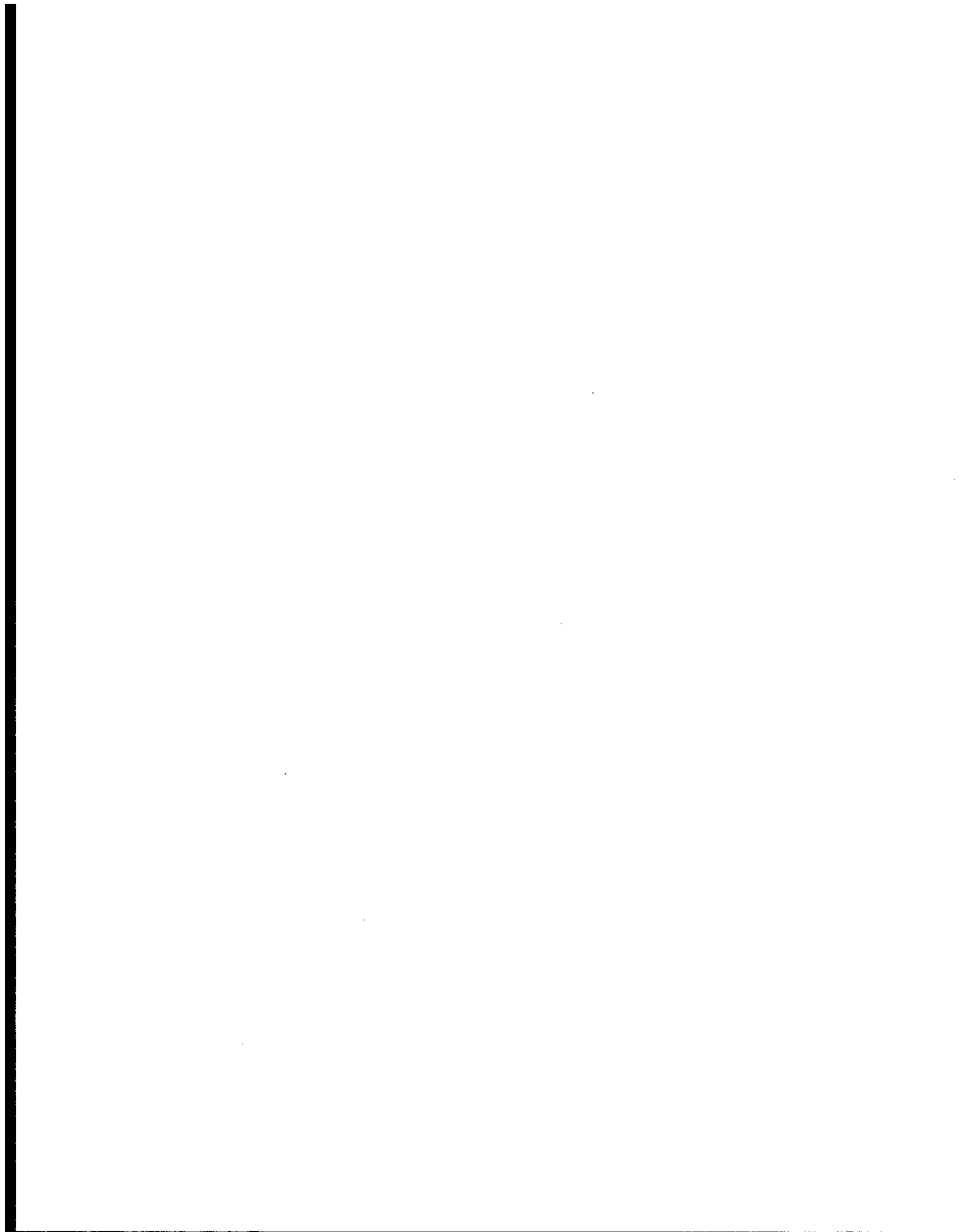
Table (matrix)	Title	Total number of data cells
P1.	<p>DETAILED OCCUPATION(512) BY SEX(2)—Con.</p> <p>Geologists and geodesists (075): (Repeat SEX)</p> <p>Physical scientists, n.e.c. (076): (Repeat SEX)</p> <p>Agricultural and food scientists (077): (Repeat SEX)</p> <p>Biological and life scientists (078): (Repeat SEX)</p> <p>Forestry and conservation scientists (079-082): (Repeat SEX)</p> <p>Medical scientists (083): (Repeat SEX)</p> <p>Health Diagnosing Occupations (084-094):</p> <p>Physicians (084): (Repeat SEX)</p> <p>Dentists (085): (Repeat SEX)</p> <p>Veterinarians (086): (Repeat SEX)</p> <p>Optometrists (087): (Repeat SEX)</p> <p>Podiatrists (088): (Repeat SEX)</p> <p>Health diagnosing practitioners, n.e.c. (089-094): (Repeat SEX)</p> <p>Health Assessment and Treating Occupations (095-112):</p> <p>Registered nurses (095): (Repeat SEX)</p> <p>Pharmacists (096): (Repeat SEX)</p> <p>Dietitians (097): (Repeat SEX)</p> <p>Therapists (098-105):</p> <p>Respiratory therapists (098): (Repeat SEX)</p> <p>Occupational therapists (099-102): (Repeat SEX)</p> <p>Physical therapists (103): (Repeat SEX)</p> <p>Speech therapists (104): (Repeat SEX)</p> <p>Therapists, n.e.c. (105): (Repeat SEX)</p> <p>Physicians' assistants (106-112): (Repeat SEX)</p> <p>Teachers, Postsecondary (113-154):</p> <p>Earth, environmental, and marine science teachers (113): (Repeat SEX)</p> <p>Biological science teachers (114): (Repeat SEX)</p> <p>Chemistry teachers (115): (Repeat SEX)</p> <p>Physics teachers (116): (Repeat SEX)</p> <p>Natural science teachers, n.e.c. (117): (Repeat SEX)</p> <p>Psychology teachers (118): (Repeat SEX)</p> <p>Economics teachers (119-122): (Repeat SEX)</p> <p>History teachers (123): (Repeat SEX)</p>	



P1.	DETAILED OCCUPATION(512) BY SEX(2)—Con.
	Political science teachers (124): (Repeat SEX)
	Sociology teachers (125): (Repeat SEX)
	Social science teachers, n.e.c. (126): (Repeat SEX)
	Engineering teachers (127): (Repeat SEX)
	Mathematical science teachers (128): (Repeat SEX)
	Computer science teachers (129-132): (Repeat SEX)
	Medical science teachers (133): (Repeat SEX)
	Health specialties teachers (134): (Repeat SEX)
	Business, commerce, and marketing teachers (135): (Repeat SEX)
	Agriculture and forestry teachers (136): (Repeat SEX)
	Art, drama, and music teachers (137): (Repeat SEX)
	Physical education teachers (138): (Repeat SEX)
	Education teachers (139-142): (Repeat SEX)
	English teachers (143): (Repeat SEX)
	Foreign language teachers (144): (Repeat SEX)
	Law teachers (145): (Repeat SEX)
	Social work teachers (146): (Repeat SEX)
	Theology teachers (147): (Repeat SEX)
	Trade and industrial teachers (148): (Repeat SEX)
	Home economics teachers (149-152): (Repeat SEX)
	Teachers, postsecondary, n.e.c. (153): (Repeat SEX)
	Postsecondary teachers, subject not specified (154): (Repeat SEX)
	Teachers, Except Postsecondary (155-162):
	Teachers, prekindergarten and kindergarten (155): (Repeat SEX)
	Teachers, elementary school (156): (Repeat SEX)
	Teachers, secondary school (157): (Repeat SEX)
	Teachers, special education (158): (Repeat SEX)
	Teachers, n.e.c. (159-162): (Repeat SEX)
	Counselors, educational and vocational (163): (Repeat SEX)
	Librarians, Archivists, and Curators (164-165):
	Librarians (164): (Repeat SEX)
	Archivists and curators (165): (Repeat SEX)



P1.	DETAILED OCCUPATION(512) BY SEX(2)—Con.	
	Social Scientists and Urban Planners (166-173):	
	Economists (166):	
	(Repeat SEX)	
	Psychologists (167):	
	(Repeat SEX)	
	Sociologists (168):	
	(Repeat SEX)	
	Social scientists, n.e.c. (169-172):	
	(Repeat SEX)	
	Urban planners (173):	
	(Repeat SEX)	
	Social, Recreation, and Religious Workers (174-177):	
	Social workers (174):	
	(Repeat SEX)	
	Recreation workers (175):	
	(Repeat SEX)	
	Clergy (176):	
	(Repeat SEX)	
	Religious workers, n.e.c. (177):	
	(Repeat SEX)	
	Lawyers and Judges (178-182):	
	Lawyers (178):	
	(Repeat SEX)	
	Judges (179-182):	
	(Repeat SEX)	
	Writers, Artists, Entertainers, and Athletes (183-202):	
	Authors (183):	
	(Repeat SEX)	
	Technical writers (184):	
	(Repeat SEX)	
	Designers (185):	
	(Repeat SEX)	
	Musicians and composers (186):	
	(Repeat SEX)	
	Actors and directors (187):	
	(Repeat SEX)	
	Painters, sculptors, craft-artists, and artist printmakers (188):	
	(Repeat SEX)	
	Photographers (189-192):	
	(Repeat SEX)	
	Dancers (193):	
	(Repeat SEX)	
	Artists, performers, and related workers, n.e.c. (194):	
	(Repeat SEX)	
	Editors and reporters (195-196):	
	(Repeat SEX)	
	Public relations specialists (197):	
	(Repeat SEX)	
	Announcers (198):	
	(Repeat SEX)	
	Athletes (199-202):	
	(Repeat SEX)	
	TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS (203-402):	
	Technicians and Related Support Occupations (203-242):	
	Health Technologists and Technicians (203-212):	
	Clinical laboratory technologists and technicians (203):	
	(Repeat SEX)	
	Dental hygienists (204):	
	(Repeat SEX)	
	Health record technologists and technicians (205):	
	(Repeat SEX)	



P1.	DETAILED OCCUPATION(512) BY SEX(2)—Con.	
	Radiologic technicians (206):	
	(Repeat SEX)	
	Licensed practical nurses (207):	
	(Repeat SEX)	
	Health technologists and technicians, n.e.c. (208-212):	
	(Repeat SEX)	
	Technologists and Technicians, Except Health (213-242):	
	Engineering and Related Technologists and Technicians (213-222):	
	Electrical and electronic technicians (213):	
	(Repeat SEX)	
	Industrial engineering technicians (214):	
	(Repeat SEX)	
	Mechanical engineering technicians (215):	
	(Repeat SEX)	
	Engineering technicians, n.e.c. (216):	
	(Repeat SEX)	
	Drafting occupations (217):	
	(Repeat SEX)	
	Surveying and mapping technicians (218-222):	
	(Repeat SEX)	
	Science Technicians (223-225):	
	Biological technicians (223):	
	(Repeat SEX)	
	Chemical technicians (224):	
	(Repeat SEX)	
	Science technicians, n.e.c. (225):	
	(Repeat SEX)	
	Technicians, Except Health, Engineering, and Science (226-242):	
	Airplane pilots and navigators (226):	
	(Repeat SEX)	
	Air traffic controllers (227):	
	(Repeat SEX)	
	Broadcast equipment operators (228):	
	(Repeat SEX)	
	Computer programmers (229-232):	
	(Repeat SEX)	
	Tool programmers, numerical control (233):	
	(Repeat SEX)	
	Legal assistants (234):	
	(Repeat SEX)	
	Technicians, n.e.c. (235-242):	
	(Repeat SEX)	
	Sales Occupations (243-302):	
	Supervisors and proprietors, sales occupations, salaried (243-252) (Class of worker	
	codes 1-5, 7, 9): <sup>1</sup>	
	(Repeat SEX)	
	Supervisors and proprietors, sales occupations, self employed (243-252) (Class of worker	
	codes 6, 8): <sup>1</sup>	
	(Repeat SEX)	
	Sales Representatives, Finance and Business Services (253-257):	
	Insurance sales occupations (253):	
	(Repeat SEX)	
	Real estate sales occupations (254):	
	(Repeat SEX)	
	Securities and financial services sales occupations (255):	
	(Repeat SEX)	
	Advertising and related sales occupations (256):	
	(Repeat SEX)	
	Sales occupations, other business services (257):	
	(Repeat SEX)	

<sup>1</sup>See How to Use This File chapter for class of worker code definitions.



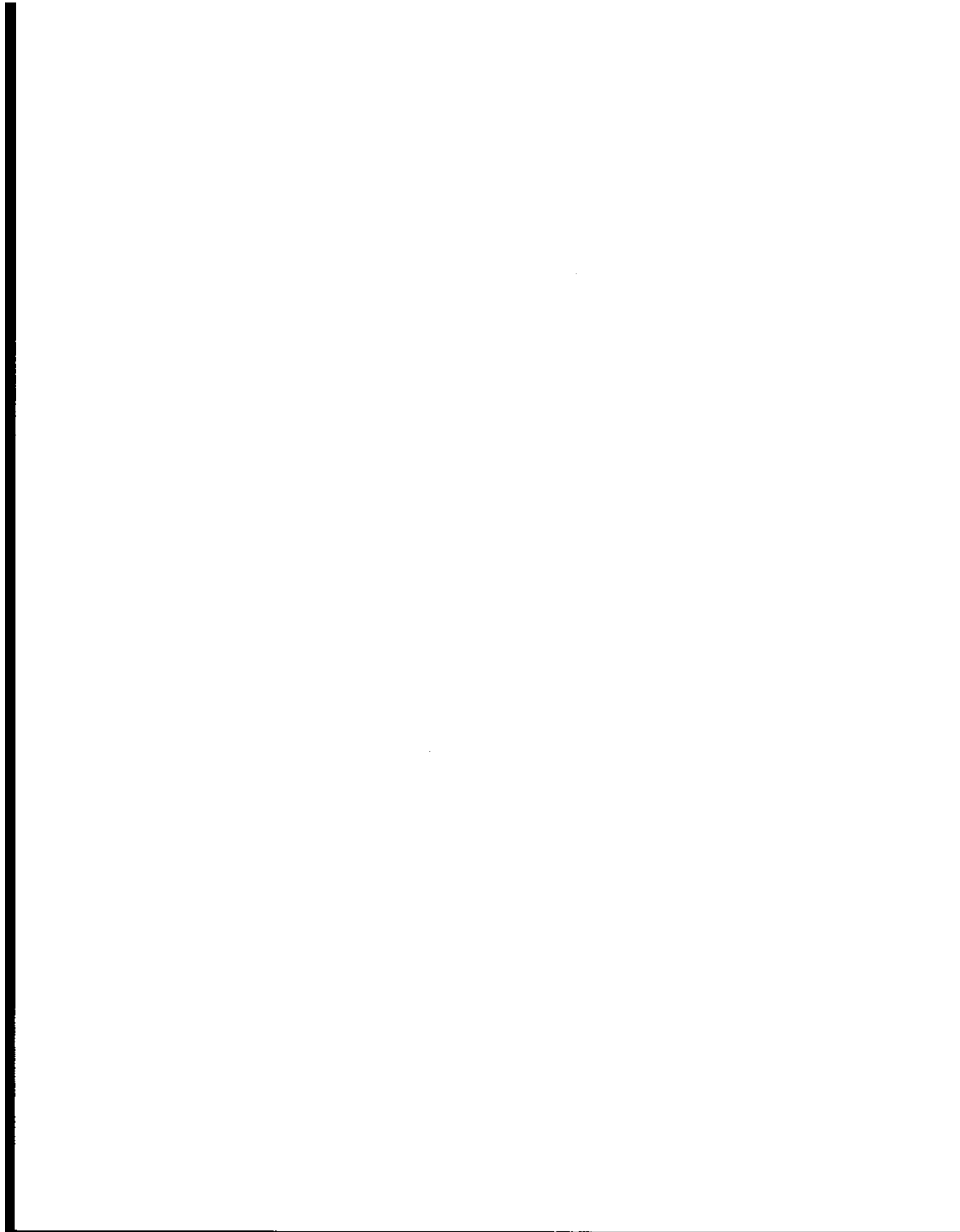


Table (matrix)	Title	Total number of data cells
P1.	<p><b>DETAILED OCCUPATION(512) BY SEX(2)—Con.</b></p> <p><b>Sales Representatives, Commodities, Except Retail (258-262):</b></p> <p>Sales engineers (258): (Repeat SEX)</p> <p>Sales representatives, mining, manufacturing, and wholesale (259-262): (Repeat SEX)</p> <p><b>Sales Workers, Retail and Personnel Services (263-282):</b></p> <p>Sales workers, motor vehicles and boats (263): (Repeat SEX)</p> <p>Sales workers, apparel (264): (Repeat SEX)</p> <p>Sales workers, shoes (265): (Repeat SEX)</p> <p>Sales workers, furniture and home furnishings (266): (Repeat SEX)</p> <p>Sales workers, radio, TV, hi-fi, and appliances (267): (Repeat SEX)</p> <p>Sales workers, hardware and building supplies (268): (Repeat SEX)</p> <p>Sales workers, parts (269-273): (Repeat SEX)</p> <p>Sales workers, other commodities (274): (Repeat SEX)</p> <p>Sales counter clerks (275): (Repeat SEX)</p> <p>Cashiers (276): (Repeat SEX)</p> <p>Street and door-to-door sales workers (277): (Repeat SEX)</p> <p>News vendors (278-282): (Repeat SEX)</p> <p><b>Sales Relation Occupations (283-302):</b></p> <p>Demonstrators, promoters and models, sales (283): (Repeat SEX)</p> <p>Auctioneers (284): (Repeat SEX)</p> <p>Sales support occupations, n.e.c. (285-302): (Repeat SEX)</p> <p><b>Administrative Support Occupations, Including Clerical (303-402):</b></p> <p>Supervisors, Administrative Support Occupations (303-307):</p> <p>Supervisors, general office (303): (Repeat SEX)</p> <p>Supervisors, computer equipment operators (304): (Repeat SEX)</p> <p>Supervisors, financial records processing (305): (Repeat SEX)</p> <p>Chief communications operators (306): (Repeat SEX)</p> <p>Supervisors, distribution, scheduling, and adjusting clerks (307): (Repeat SEX)</p> <p>Computer Equipment Operators (308-312):</p> <p>Computer operators (308): (Repeat SEX)</p> <p>Peripheral equipment operators (309-312): (Repeat SEX)</p> <p><b>Secretaries, Stenographers, and Typists (313-315):</b></p> <p>Secretaries (313): (Repeat SEX)</p> <p>Stenographers (314): (Repeat SEX)</p> <p>Typists (315): (Repeat SEX)</p>	



Table (matrix)	Title	Total number of data cells
P1.	<p>DETAILED OCCUPATION(512) BY SEX(2)—Con.</p> <p>Information Clerks (316-324):</p> <p>Interviewers (316): (Repeat SEX)</p> <p>Hotel clerks (317): (Repeat SEX)</p> <p>Transportation ticket and reservation agents (318): (Repeat SEX)</p> <p>Receptionists (319-322): (Repeat SEX)</p> <p>Information clerks, n.e.c. (323-324): (Repeat SEX)</p> <p>Records Processing Occupations, Except Financial (325-336):</p> <p>Classified-ad clerks (325): (Repeat SEX)</p> <p>Correspondence clerks (326): (Repeat SEX)</p> <p>Order clerks (327): (Repeat SEX)</p> <p>Personnel clerks, except payroll and timekeeping (328): (Repeat SEX)</p> <p>Library clerks (329-334): (Repeat SEX)</p> <p>File clerks (335): (Repeat SEX)</p> <p>Records clerks (336): (Repeat SEX)</p> <p>Financial Records Processing Occupations (337-344):</p> <p>Bookkeepers, accounting, and auditing clerks (337): (Repeat SEX)</p> <p>Payroll and timekeeping clerks (338): (Repeat SEX)</p> <p>Billing clerks (339-342): (Repeat SEX)</p> <p>Cost and rate clerks (343): (Repeat SEX)</p> <p>Billing, posting, and calculating machine operators (344): (Repeat SEX)</p> <p>Duplicating, Mail and Other Office Machine Operators (345-347):</p> <p>Duplicating machine operators (345): (Repeat SEX)</p> <p>Mail preparing and paper handling machine operators (346): (Repeat SEX)</p> <p>Office machine operators, n.e.c. (347): (Repeat SEX)</p> <p>Communications Equipment Operators (348-353):</p> <p>Telephone operators (348-352): (Repeat SEX)</p> <p>Communications equipment operators, n.e.c. (353): (Repeat SEX)</p> <p>Mail and Message Distributing Occupations (354-358):</p> <p>Postal clerks, except mail carriers (354): (Repeat SEX)</p> <p>Mail carriers, postal service (355): (Repeat SEX)</p> <p>Mail clerks, except postal service (356): (Repeat SEX)</p> <p>Messengers (357-358): (Repeat SEX)</p>	



Table (matrix)	Title	Total number of data cells
P1.	<p>DETAILED OCCUPATION(512) BY SEX(2)—Con.</p> <p>Material Recording, Scheduling, and Distributing Clerks (359-374):</p> <p>Dispatchers (359-362): (Repeat SEX)</p> <p>Production coordinators (363): (Repeat SEX)</p> <p>Traffic, shipping, and receiving clerks (364): (Repeat SEX)</p> <p>Stock and inventory clerks (365): (Repeat SEX)</p> <p>Meter readers (366-367): (Repeat SEX)</p> <p>Weighers, measurers, checkers, and samplers (368-372): (Repeat SEX)</p> <p>Expeditors (373): (Repeat SEX)</p> <p>Material recording, scheduling, and distributing clerks, n.e.c. (374): (Repeat SEX)</p> <p>Adjusters and Investigators (375-378):</p> <p>Insurance adjusters, examiners, and investigators (375): (Repeat SEX)</p> <p>Investigators and adjusters, except insurance (376): (Repeat SEX)</p> <p>Eligibility clerks, social welfare (377): (Repeat SEX)</p> <p>Bill and account collectors (378): (Repeat SEX)</p> <p>Miscellaneous Administrative Support Occupations (379-402):</p> <p>General office clerks (379-382): (Repeat SEX)</p> <p>Bank tellers (383): (Repeat SEX)</p> <p>Proofreaders (384): (Repeat SEX)</p> <p>Data-entry keyers (385): (Repeat SEX)</p> <p>Statistical clerks (386): (Repeat SEX)</p> <p>Teachers' aides (387-388): (Repeat SEX)</p> <p>Administrative support occupations, n.e.c. (389-402): (Repeat SEX)</p> <p>SERVICE OCCUPATIONS (403-472):</p> <p>Private Household Occupations (403-412):</p> <p>Launderers and ironers (403): (Repeat SEX)</p> <p>Cooks, private household (404): (Repeat SEX)</p> <p>Housekeepers and butlers (405): (Repeat SEX)</p> <p>Child care workers, private household (406): (Repeat SEX)</p> <p>Private household cleaners and servants (407-412): (Repeat SEX)</p> <p>Protective Service Occupations (413-432):</p> <p>Supervisors, Protective Service Occupations (413-415):</p> <p>Supervisors, firefighting and fire prevention occupations (413): (Repeat SEX)</p> <p>Supervisors, police and detectives (414): (Repeat SEX)</p> <p>Supervisors, guards (415): (Repeat SEX)</p>	



Table (matrix)	Title	Total number of data cells
P1.	<p>DETAILED OCCUPATION(512) BY SEX(2)—Con.</p> <p>Firefighting and Fire Prevention Occupations (416-417):</p> <p>Fire inspection and fire prevention occupations (416):</p> <p>(Repeat SEX)</p> <p>Firefighting occupations (417):</p> <p>(Repeat SEX)</p> <p>Police and Detectives (418-424):</p> <p>Police and detectives, public service (418-422):</p> <p>(Repeat SEX)</p> <p>Sheriffs, bailiffs, and other law enforcement officers (423):</p> <p>(Repeat SEX)</p> <p>Correctional institution officers (424):</p> <p>(Repeat SEX)</p> <p>Guards (425-432):</p> <p>Crossing guards (425):</p> <p>(Repeat SEX)</p> <p>Guards and police, except public service (426):</p> <p>(Repeat SEX)</p> <p>Protective service occupations, n.e.c. (427-432):</p> <p>(Repeat SEX)</p> <p>Service Occupations, Except Protective and Household (433-472):</p> <p>Food Preparation and Service Occupations (433-444):</p> <p>Supervisors, food preparation and service occupations (433):</p> <p>(Repeat SEX)</p> <p>Bartenders (434):</p> <p>(Repeat SEX)</p> <p>Waiters and waitresses (435):</p> <p>(Repeat SEX)</p> <p>Cooks (436-437):</p> <p>(Repeat SEX)</p> <p>Food counter, fountain and related occupations (438):</p> <p>(Repeat SEX)</p> <p>Kitchen workers, food preparation (439-442):</p> <p>(Repeat SEX)</p> <p>Waiters'/waitresses' assistants (443):</p> <p>(Repeat SEX)</p> <p>Miscellaneous food preparation occupations (444):</p> <p>(Repeat SEX)</p> <p>Health Service Occupations (445-447):</p> <p>Dental assistants (445):</p> <p>(Repeat SEX)</p> <p>Health aides, except nursing (446):</p> <p>(Repeat SEX)</p> <p>Nursing aides, orderlies, and attendants (447):</p> <p>(Repeat SEX)</p> <p>Cleaning and Building Service Occupations, Except Household (448-455):</p> <p>Supervisors, cleaning and building service workers (448):</p> <p>(Repeat SEX)</p> <p>Maids and housemen (449-452):</p> <p>(Repeat SEX)</p> <p>Janitors and cleaners (453):</p> <p>(Repeat SEX)</p> <p>Elevator operators (454):</p> <p>(Repeat SEX)</p> <p>Pest control occupations (455):</p> <p>(Repeat SEX)</p> <p>Personal Service Occupations (456-472):</p> <p>Supervisors, personal service occupations (456):</p> <p>(Repeat SEX)</p> <p>Barbers (457):</p> <p>(Repeat SEX)</p> <p>Hairdressers and cosmetologists (458):</p> <p>(Repeat SEX)</p>	



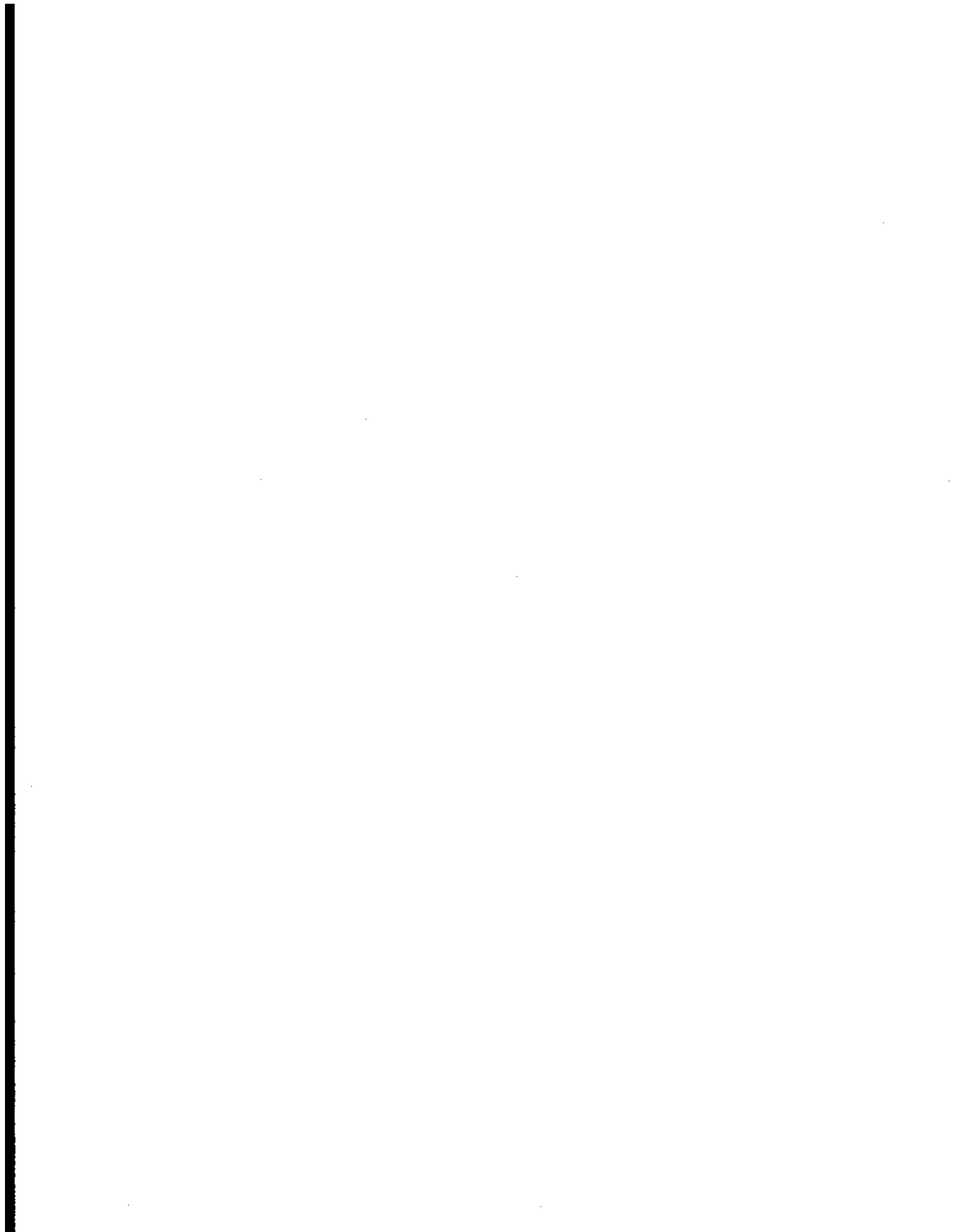


Table (matrix)	Title	Total number of data cells
P1.	<p>DETAILED OCCUPATION(512) BY SEX(2)—Con.</p> <p>Attendants, amusement and recreation facilities (459-460): (Repeat SEX)</p> <p>Guides (461): (Repeat SEX)</p> <p>Ushers (462): (Repeat SEX)</p> <p>Public transportation attendants (463): (Repeat SEX)</p> <p>Baggage porters and bellhops (464): (Repeat SEX)</p> <p>Welfare service aides (465): (Repeat SEX)</p> <p>Family child care providers (466): (Repeat SEX)</p> <p>Early childhood teacher's assistants (467): (Repeat SEX)</p> <p>Child care workers, n.e.c. (468): (Repeat SEX)</p> <p>Personal service occupations, n.e.c. (469-472): (Repeat SEX)</p> <p>FARMING, FORESTRY, AND FISHING OCCUPATIONS (473-502):</p> <p>Farm Operators and Managers (473-476):</p> <p>Farmers, except horticultural (473): (Repeat SEX)</p> <p>Horticultural specialty farmers (474): (Repeat SEX)</p> <p>Managers, farms, except horticultural (475): (Repeat SEX)</p> <p>Managers, horticultural specialty farms (476): (Repeat SEX)</p> <p>Other Agricultural and Related Occupations (477-493):</p> <p>Farm Occupations, Except Managerial (477-484):</p> <p>Supervisors, farm workers (477-478): (Repeat SEX)</p> <p>Farm workers (479-482): (Repeat SEX)</p> <p>Marine life cultivation workers (483): (Repeat SEX)</p> <p>Nursery workers (484): (Repeat SEX)</p> <p>Related Agricultural Occupations (485-493):</p> <p>Supervisors, related agricultural occupations (485): (Repeat SEX)</p> <p>Groundskeepers and gardeners, except farm (486): (Repeat SEX)</p> <p>Animal caretakers, except farm (487): (Repeat SEX)</p> <p>Graders and sorters, agricultural products (488): (Repeat SEX)</p> <p>Inspectors, agricultural products (489-493): (Repeat SEX)</p> <p>Forestry and Logging Occupations (494-496):</p> <p>Supervisors, forestry and logging workers (494): (Repeat SEX)</p> <p>Forestry workers, except logging (495): (Repeat SEX)</p> <p>Timber cutting and logging occupations (496): (Repeat SEX)</p> <p>Fishers, Hunters, and Trappers (497-502):</p> <p>Captains and other officers, fishing vessels (497): (Repeat SEX)</p>	

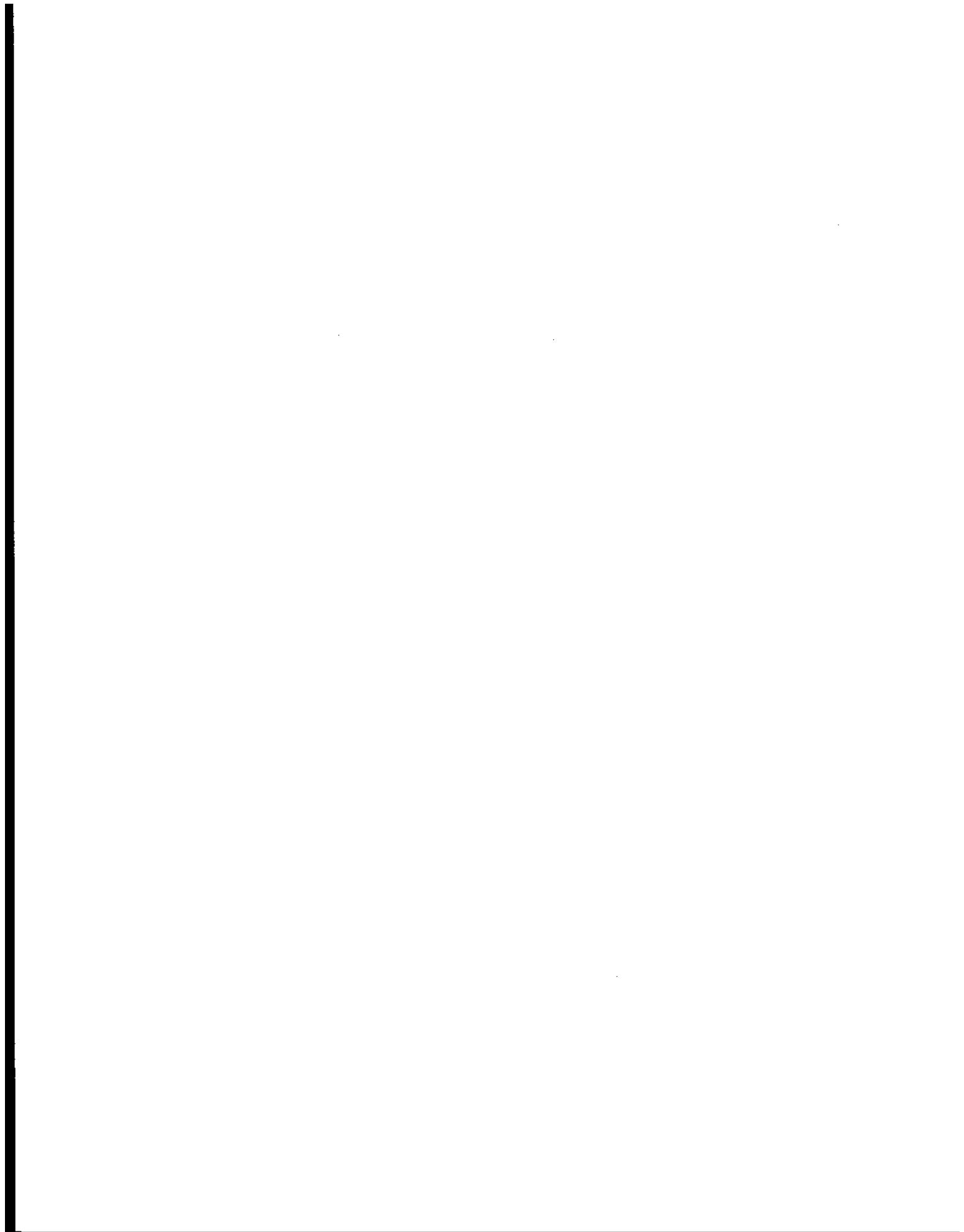


Table (matrix)	Title	Total number of data cells
P1.	<p>DETAILED OCCUPATION(512) BY SEX(2)—Con.</p> <p>Fishers (498): (Repeat SEX)</p> <p>Hunters and trappers (499-502): (Repeat SEX)</p> <p>PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS (503-702):</p> <p>Mechanics and Repairers (503-552):</p> <p>Supervisors, mechanics and repairers (503-504): (Repeat SEX)</p> <p>Mechanics and Repairers, Except Supervisors (505-552):</p> <p>Vehicle and Mobile Equipment Mechanics and Repairers (505-517):</p> <p>Automobile mechanics, except apprentices (505): (Repeat SEX)</p> <p>Automobile mechanic apprentices (506): (Repeat SEX)</p> <p>Bus, truck, and stationary engine mechanics (507): (Repeat SEX)</p> <p>Aircraft engine mechanics (508): (Repeat SEX)</p> <p>Small engine repairers (509-513): (Repeat SEX)</p> <p>Automobile body and related repairers (514): (Repeat SEX)</p> <p>Aircraft mechanics, except engine (515): (Repeat SEX)</p> <p>Heavy equipment mechanics (516): (Repeat SEX)</p> <p>Farm equipment mechanics (517): (Repeat SEX)</p> <p>Industrial machinery repairers (518): (Repeat SEX)</p> <p>Machinery maintenance occupations (519-522): (Repeat SEX)</p> <p>Electrical and Electronic Equipment Operators (523-533):</p> <p>Electronic repairers, communications and industrial equipment (523-524): (Repeat SEX)</p> <p>Data processing equipment repairers (525): (Repeat SEX)</p> <p>Household appliance and power tool repairers (526): (Repeat SEX)</p> <p>Telephone line installers and repairers (527-528): (Repeat SEX)</p> <p>Telephone installers and repairers (529-532): (Repeat SEX)</p> <p>Miscellaneous electrical and electronic equipment repairers (533): (Repeat SEX)</p> <p>Heating, air conditioning, and refrigeration mechanics (534): (Repeat SEX)</p> <p>Miscellaneous Mechanics and Repairers (535-552):</p> <p>Camera, watch, and musical instrument repairers (535): (Repeat SEX)</p> <p>Locksmiths and safe repairers (536-537): (Repeat SEX)</p> <p>Office machine repairers (538): (Repeat SEX)</p> <p>Mechanical controls and valve repairers (539-542): (Repeat SEX)</p> <p>Elevator installers and repairers (543): (Repeat SEX)</p> <p>Millwrights (544-546): (Repeat SEX)</p> <p>Specified mechanics and repairers, n.e.c. (547-548): (Repeat SEX)</p>	



Table (matrix)	Title	Total number of data cells
P1.	<p>DETAILED OCCUPATION(512) BY SEX(2)—Con.</p> <p>Not specified mechanics and repairers (549-552): (Repeat SEX)</p> <p>Construction Trades (553-612):</p> <p>Supervisors, Construction Occupations (553-562):</p> <p>Supervisors, brickmasons, stonemasons, and tile setters (553): (Repeat SEX)</p> <p>Supervisors, carpenters and related workers (554): (Repeat SEX)</p> <p>Supervisors, electricians and power transmission installers (555): (Repeat SEX)</p> <p>Supervisors, painters, paperhangers, and plasterers (556): (Repeat SEX)</p> <p>Supervisors, plumbers, pipefitters, and steamfitters (557): (Repeat SEX)</p> <p>Supervisors, construction, n.e.c. (558-562): (Repeat SEX)</p> <p>Construction Trades, Except Supervisors (563-612):</p> <p>Brickmasons and stonemasons, except apprentices (563): (Repeat SEX)</p> <p>Brickmason and stonemason apprentices (564): (Repeat SEX)</p> <p>Tile setters, hard and soft (565): (Repeat SEX)</p> <p>Carpet installers (566): (Repeat SEX)</p> <p>Carpenters, except apprentices (567-568): (Repeat SEX)</p> <p>Carpenter apprentices (569-572): (Repeat SEX)</p> <p>Drywall installers (573-574): (Repeat SEX)</p> <p>Electricians, except apprentices (575): (Repeat SEX)</p> <p>Electrician apprentices (576): (Repeat SEX)</p> <p>Electrical power installers and repairers (577-578): (Repeat SEX)</p> <p>Painters, construction and maintenance (579-582): (Repeat SEX)</p> <p>Paperhangers (583): (Repeat SEX)</p> <p>Plasterers (584): (Repeat SEX)</p> <p>Plumbers, pipefitters, and steamfitters, except apprentices (585-586): (Repeat SEX)</p> <p>Plumber, pipefitter, and steamfitter apprentices (587): (Repeat SEX)</p> <p>Concrete and terrazzo finishers (588): (Repeat SEX)</p> <p>Glaziers (589-592): (Repeat SEX)</p> <p>Insulation workers (593): (Repeat SEX)</p> <p>Paving, surfacing, and tamping equipment operators (594): (Repeat SEX)</p> <p>Roofers (595): (Repeat SEX)</p> <p>Sheetmetal duct installers (596): (Repeat SEX)</p> <p>Structural metal workers (597): (Repeat SEX)</p>	



Table (matrix)	Title	Total number of data cells
P1.	<p>DETAILED OCCUPATION(512) BY SEX(2)—Con.</p> <p>Drillers, earth (598): (Repeat SEX)</p> <p>Construction trades, n.e.c. (599-612): (Repeat SEX)</p> <p>Extractive Occupations (613-627):</p> <p>Supervisors, extractive occupations (613): (Repeat SEX)</p> <p>Drillers, oil well (614): (Repeat SEX)</p> <p>Explosives workers (615): (Repeat SEX)</p> <p>Mining machine operators (616): (Repeat SEX)</p> <p>Mining occupations, n.e.c. (617-627): (Repeat SEX)</p> <p>Precision Production Occupations (628-702):</p> <p>Supervisors, production occupations (628-633): (Repeat SEX)</p> <p>Precision Metal Working Occupations (634-655):</p> <p>Tool and die makers, except apprentices (634): (Repeat SEX)</p> <p>Tool and die maker apprentices (635): (Repeat SEX)</p> <p>Precision assemblers, metal (636): (Repeat SEX)</p> <p>Machinists, except apprentices (637-638): (Repeat SEX)</p> <p>Machinist apprentices (639-642): (Repeat SEX)</p> <p>Boilermakers (643): (Repeat SEX)</p> <p>Precision grinders, filers, and tool sharpeners (644): (Repeat SEX)</p> <p>Patternmakers and model makers, metal (645): (Repeat SEX)</p> <p>Lay-out workers (646): (Repeat SEX)</p> <p>Precious stones and metals workers (Jewelers) (647-648): (Repeat SEX)</p> <p>Engravers, metal (649-652): (Repeat SEX)</p> <p>Sheet metal workers, except apprentices (653): (Repeat SEX)</p> <p>Sheet metal worker apprentices (654): (Repeat SEX)</p> <p>Miscellaneous precision metal workers (655): (Repeat SEX)</p> <p>Precision Woodworking Occupations (656-665):</p> <p>Patternmakers and model makers, wood (656): (Repeat SEX)</p> <p>Cabinet makers and bench carpenters (657): (Repeat SEX)</p> <p>Furniture and wood finishers (658): (Repeat SEX)</p> <p>Miscellaneous precision woodworkers (659-665): (Repeat SEX)</p> <p>Precision Textile, Apparel, and Furnishing Machine Workers (666-674):</p> <p>Dressmakers (666): (Repeat SEX)</p> <p>Tailors (667): (Repeat SEX)</p>	

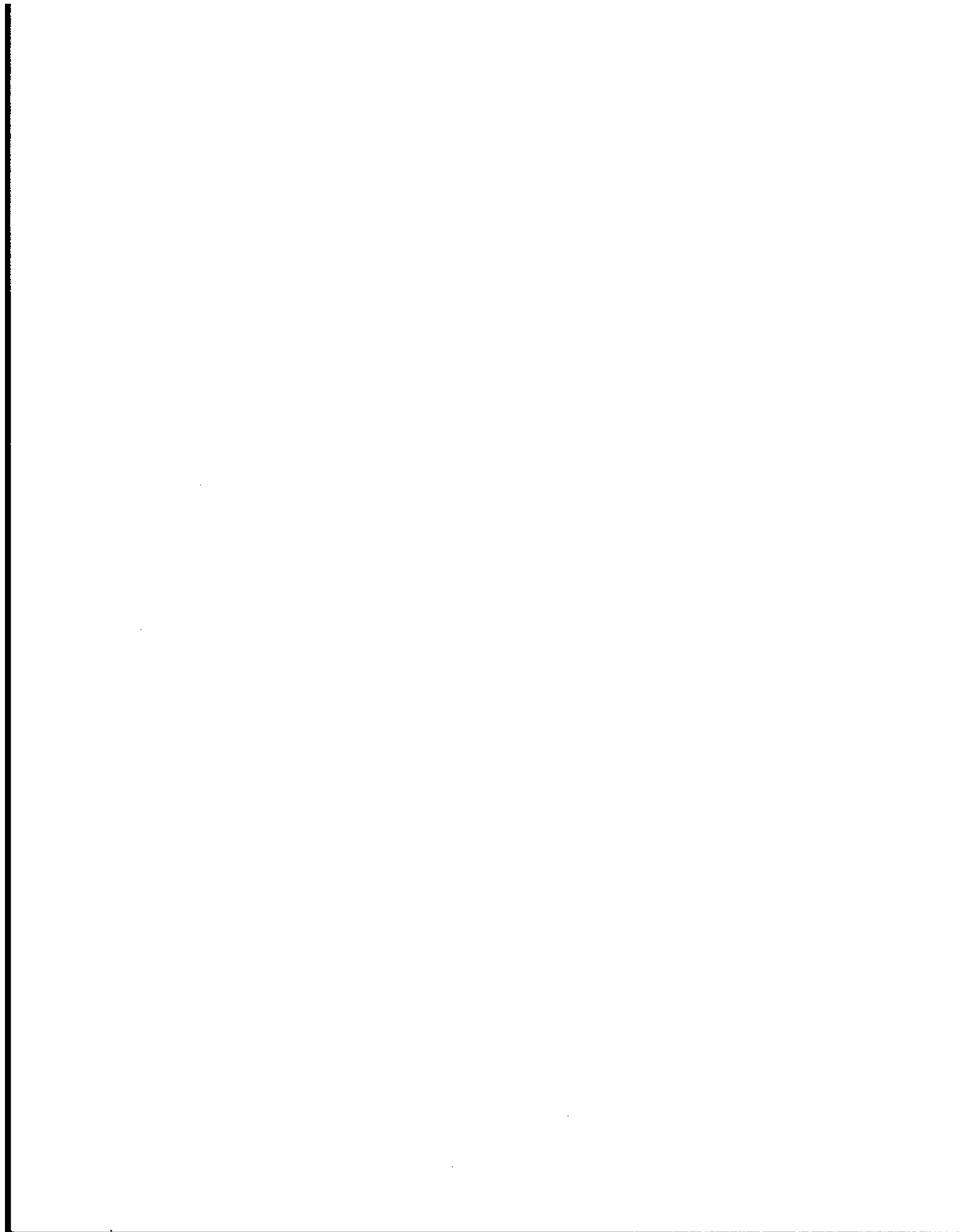




Table (matrix)	Title	Total number of data cells
P1.	<p><b>DETAILED OCCUPATION(512) BY SEX(2)—Con.</b></p> <p>Upholsterers (668): (Repeat SEX)</p> <p>Shoe repairers (669-673): (Repeat SEX)</p> <p>Miscellaneous precision apparel and fabric workers (674): (Repeat SEX)</p> <p>Precision Workers, Assorted Materials (675-685):</p> <p>Hand molders and shapers, except jewelers (675): (Repeat SEX)</p> <p>Patternmakers, lay-out workers, and cutters (676): (Repeat SEX)</p> <p>Optical goods workers (677): (Repeat SEX)</p> <p>Dental laboratory and medical appliance technicians (678): (Repeat SEX)</p> <p>Bookbinders (679-682): (Repeat SEX)</p> <p>Electrical and electronic equipment assemblers (683): (Repeat SEX)</p> <p>Miscellaneous precision workers, n.e.c. (684-685): (Repeat SEX)</p> <p>Precision Food Production Occupations (686-688):</p> <p>Butchers and meat cutters (686): (Repeat SEX)</p> <p>Bakers (687): (Repeat SEX)</p> <p>Food batchmakers (688): (Repeat SEX)</p> <p>Precision Inspectors, Testers, and Related Workers (689-693):</p> <p>Inspectors, testers, and graders (689-692): (Repeat SEX)</p> <p>Adjusters and calibrators (693): (Repeat SEX)</p> <p>Plant and System Operators (694-702):</p> <p>Water and sewage treatment plant operators (694): (Repeat SEX)</p> <p>Power plant operators (695): (Repeat SEX)</p> <p>Stationary engineers (696-698): (Repeat SEX)</p> <p>Miscellaneous plant and system operators (699-702): (Repeat SEX)</p> <p><b>OPERATORS, FABRICATORS, AND LABORERS (703-902):</b></p> <p><b>Machine Operators, Assemblers, and Inspectors (703-802):</b></p> <p><b>Machine Operators and Tenders, Except Precision (703-782):</b></p> <p><b>Metal Working and Plastic Working Machine Operators (703-716):</b></p> <p>Lathe and turning machine set-up operators (703): (Repeat SEX)</p> <p>Lathe and turning machine operators (704): (Repeat SEX)</p> <p>Milling and planing machine operators (705): (Repeat SEX)</p> <p>Punching and stamping press machine operators (706): (Repeat SEX)</p> <p>Rolling machine operators (707): (Repeat SEX)</p> <p>Drilling and boring machine operators (708): (Repeat SEX)</p> <p>Grinding, abrading, buffing, and polishing machine operators (709-712): (Repeat SEX)</p> <p>Forging machine operators (713): (Repeat SEX)</p>	



Table (matrix)	Title	Total number of data cells
P1.	<p><b>DETAILED OCCUPATION(512) BY SEX(2)—Con.</b></p> <p>Numerical control machine operators (714): (Repeat SEX)</p> <p>Miscellaneous metal, plastic, stone, and glass working machine operators (715-716): (Repeat SEX)</p> <p>Fabricating machine operators, n.e.c. (717-718): (Repeat SEX)</p> <p>Metal and Plastic Processing Machine Operators (719-725):</p> <p>Molding and casting machine operators (719-722): (Repeat SEX)</p> <p>Metal plating machine operators (723): (Repeat SEX)</p> <p>Heat treating equipment operators (724): (Repeat SEX)</p> <p>Miscellaneous metal and plastic processing machine operators (725): (Repeat SEX)</p> <p>Woodworking Machine Operators (726-733):</p> <p>Wood lathe, routing, and planing machine operators (726): (Repeat SEX)</p> <p>Sawing machine operators (727): (Repeat SEX)</p> <p>Shaping and joining machine operators (728): (Repeat SEX)</p> <p>Nailing and tacking machine operators (729-732): (Repeat SEX)</p> <p>Miscellaneous woodworking machine operators (733): (Repeat SEX)</p> <p>Printing Machine Operators (734-737)</p> <p>Printing press operators (734): (Repeat SEX)</p> <p>Photoengravers and lithographers (735): (Repeat SEX)</p> <p>Typesetters and compositors (736): (Repeat SEX)</p> <p>Miscellaneous printing machine operators (737): (Repeat SEX)</p> <p>Textile, Apparel, and Furnishings Machine Operators (738-752):</p> <p>Winding and twisting machine operators (738): (Repeat SEX)</p> <p>Knitting, looping, taping, and weaving machine operators (739-742): (Repeat SEX)</p> <p>Textile cutting machine operators (743): (Repeat SEX)</p> <p>Textile sewing machine operators (744): (Repeat SEX)</p> <p>Shoe machine operators (745-746): (Repeat SEX)</p> <p>Pressing machine operators (747): (Repeat SEX)</p> <p>Laundering and dry cleaning machine operators (748): (Repeat SEX)</p> <p>Miscellaneous textile machine operators (749-752): (Repeat SEX)</p> <p>Machine Operators, Assorted Materials (753-782):</p> <p>Cementing and gluing machine operators (753): (Repeat SEX)</p> <p>Packaging and filling machine operators (754): (Repeat SEX)</p> <p>Extruding and forming machine operators (755): (Repeat SEX)</p> <p>Mixing and blending machine operators (756): (Repeat SEX)</p>	

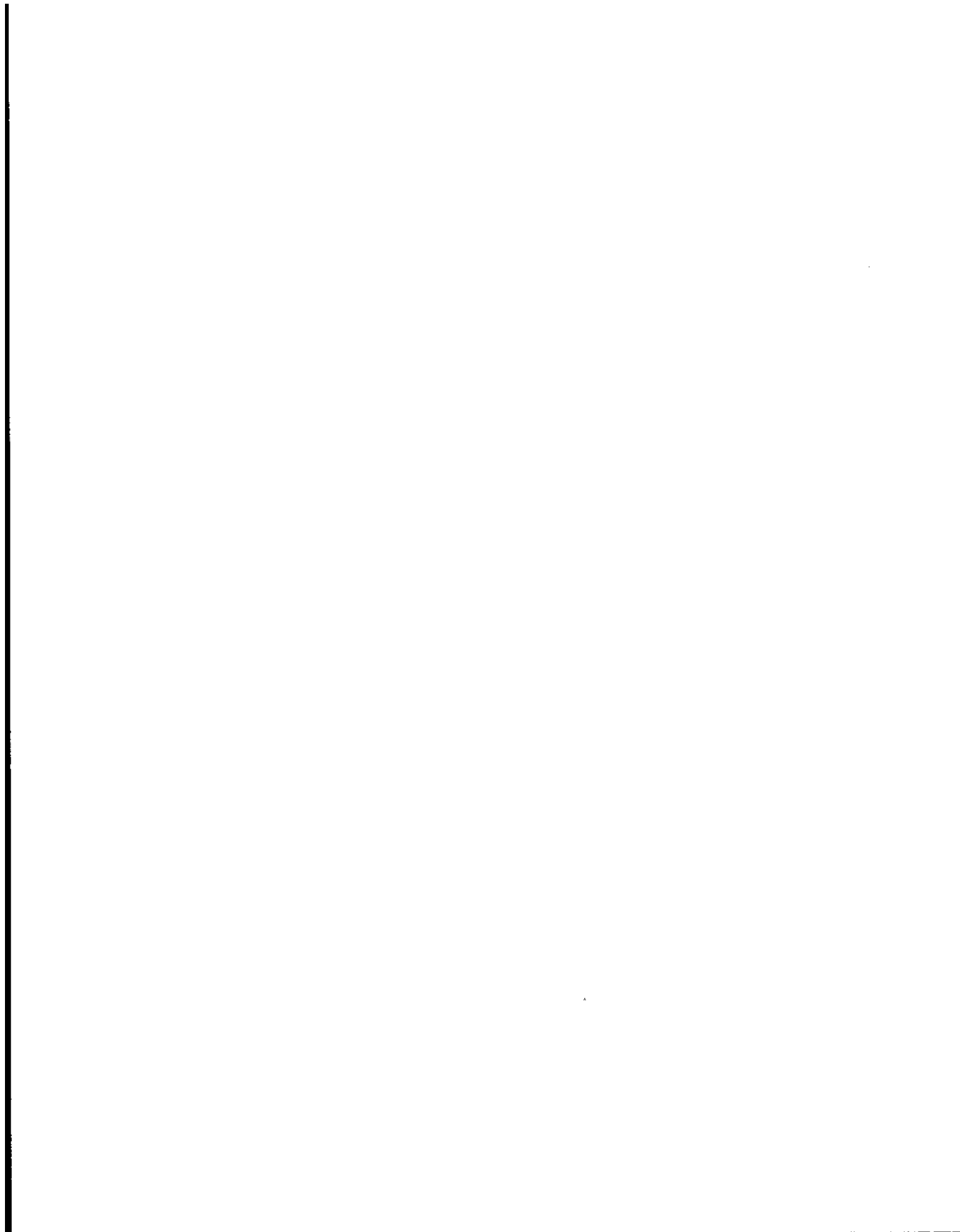


P1.	DETAILED OCCUPATION(512) BY SEX(2)—Con.
	Separating, filtering, and clarifying machine operators (757): (Repeat SEX)
	Compressing and compacting machine operators (758): (Repeat SEX)
	Painting and paint spraying machine operators (759-762): (Repeat SEX)
	Roasting and baking machine operators, food (763): (Repeat SEX)
	Washing, cleaning, and pickling machine operators (764): (Repeat SEX)
	Folding machine operators (765): (Repeat SEX)
	Furnace, kiln, and oven operators, except food (766-767): (Repeat SEX)
	Crushing and grinding machine operators (768): (Repeat SEX)
	Slicing and cutting machine operators (769-772): (Repeat SEX)
	Motion picture projectionists (773): (Repeat SEX)
	Photographic process machine operators (774-776): (Repeat SEX)
	Miscellaneous machine operators, n.e.c. (777-778):
	Manufacturing, nondurable goods (777-778) (Industry codes 100-229): (Repeat SEX)
	Manufacturing, durable goods (777-778) (Industry codes 230-399): (Repeat SEX)
	Nonmanufacturing industries (777-778) (Industry codes 010-099, 400-999): (Repeat SEX)
	Machine operators, not specified (779-782):
	Manufacturing, nondurable goods (779-782) (Industry codes 100-229): (Repeat SEX)
	Manufacturing, durable goods (779-782) (Industry codes 230-399): (Repeat SEX)
	Nonmanufacturing industries (779-782) (Industry codes 010-099, 400-999): (Repeat SEX)
	Fabricators, Assemblers, and Hand Working Occupations (783-795):
	Welders and cutters (783): (Repeat SEX)
	Solderers and brazers (784): (Repeat SEX)
	Assemblers (785): (Repeat SEX)
	Hand cutting and trimming occupations (786): (Repeat SEX)
	Hand molding, casting, and forming occupations (787-788): (Repeat SEX)
	Hand painting, coating, and decorating occupations (789-792): (Repeat SEX)
	Hand engraving and printing occupations (793-794): (Repeat SEX)
	Miscellaneous hand working occupations (795): (Repeat SEX)
	Production Inspectors, Testers, Samplers, and Weighers (796-802):
	Production inspectors, checkers, and examiners (796): (Repeat SEX)
	Production testers (797): (Repeat SEX)
	Production samplers and weighers (798): (Repeat SEX)
	Graders and sorters, except agricultural (799-802): (Repeat SEX)



Table (matrix)	Title	Total number of data cells
P1.	<p>DETAILED OCCUPATION(512) BY SEX(2)—Con.</p> <p>Transportation and Material Moving Occupations (803-863):</p> <p>Motor Vehicle Operators (803-822):</p> <p>Supervisors, motor vehicle operators (803): (Repeat SEX)</p> <p>Truck drivers (804-805): (Repeat SEX)</p> <p>Driver-sales workers (806-807): (Repeat SEX)</p> <p>Bus drivers (808): (Repeat SEX)</p> <p>Taxicab drivers and chauffeurs (809-812): (Repeat SEX)</p> <p>Parking lot attendants (813): (Repeat SEX)</p> <p>Motor transportation occupations, n.e.c. (814-822): (Repeat SEX)</p> <p>Transportation Occupations, Except Motor Vehicles (823-842):</p> <p>Rail Transportation Occupations (823-827):</p> <p>Railroad conductors and yardmasters (823): (Repeat SEX)</p> <p>Locomotive operating occupations (824): (Repeat SEX)</p> <p>Railroad brake, signal, and switch operators (825): (Repeat SEX)</p> <p>Rail vehicle operators, n.e.c. (826-827): (Repeat SEX)</p> <p>Water Transportation Occupations (828-842):</p> <p>Ship captains and mates, except fishing boats (828): (Repeat SEX)</p> <p>Sailors and deckhands (829-832): (Repeat SEX)</p> <p>Marine engineers (833): (Repeat SEX)</p> <p>Bridge, lock, and lighthouse tenders (834-842): (Repeat SEX)</p> <p>Material Moving Equipment Operators (843-863):</p> <p>Supervisors, material moving equipment operators (843): (Repeat SEX)</p> <p>Operating engineers (844): (Repeat SEX)</p> <p>Longshore equipment operators (845-847): (Repeat SEX)</p> <p>Holst and winch operators (848): (Repeat SEX)</p> <p>Crane and tower operators (849-852): (Repeat SEX)</p> <p>Excavating and loading machine operators (853-854): (Repeat SEX)</p> <p>Grader, dozer, and scraper operators (855): (Repeat SEX)</p> <p>Industrial truck and tractor equipment operators (856-858): (Repeat SEX)</p> <p>Miscellaneous material moving equipment operators (859-863): (Repeat SEX)</p> <p>Handlers, Equipment Cleaners, Helpers, and Laborers (864-902):</p> <p>Supervisors, handlers, equipment cleaners, and laborers, n.e.c. (864): (Repeat SEX)</p> <p>Helpers, mechanics, and repairers (865): (Repeat SEX)</p> <p>Helpers, Construction and Extractive Occupations (866-868):</p> <p>Helpers, construction trades (866): (Repeat SEX)</p>	





## P1. DETAILED OCCUPATION(512) BY SEX(2)—Con.

Helpers, surveyor (867):

(Repeat SEX)

Helpers, extractive occupations (868):

(Repeat SEX)

Construction laborers (869-873):

(Repeat SEX)

Production helpers (874):

(Repeat SEX)

Freight, Stock, and Material Handlers (875-884):

Garbage collectors (875):

(Repeat SEX)

Stevedores (876):

(Repeat SEX)

Stock handlers and baggers (877):

(Repeat SEX)

Machine feeders and offbearers (878-882):

(Repeat SEX)

Freight, stock, and material handlers, n.e.c. (883-884):

(Repeat SEX)

Garage and service station related occupations (885-886):

(Repeat SEX)

Vehicle washers and equipment cleaners (887):

(Repeat SEX)

Hand packers and packagers (888):

(Repeat SEX)

Laborers, except construction (899-902):

Manufacturing, nondurable goods (889-902) (Industry codes 100-229):

(Repeat SEX)

Manufacturing, durable goods (889-902) (Industry codes 230-399):

(Repeat SEX)

Transportation, communications, and other public utilities (889-902) (Industry codes 400-499):

(Repeat SEX)

Wholesale and retail trade (889-902) (Industry codes 500-699):

(Repeat SEX)

All other industries (889-902) (Industry codes 010-099, 700-999):

(Repeat SEX)

## EXPERIENCED UNEMPLOYED NOT CLASSIFIED BY OCCUPATION (000, 903-999):

Unemployed, no recent civilian work experience (000, 903-999):

(Repeat SEX)

## P2. EDUCATIONAL ATTAINMENT(5) BY AGE(7) BY SEX(2) ..... 70

Universe: Civilian labor force

Not high school graduate:

16 to 19 years:

Male

Female

20 to 24 years:

(Repeat SEX)

25 to 29 years:

(Repeat SEX)

30 to 34 years:

(Repeat SEX)

35 to 39 years:

(Repeat SEX)

40 to 69 years:

(Repeat SEX)

70 years and over:

(Repeat SEX)

High school graduate (Includes equivalency):

(Repeat AGE By SEX)

Some college or associate degree:

(Repeat AGE By SEX)



Table (matrix)	Title	Total number of data cells
P2.	EDUCATIONAL ATTAINMENT(5) BY AGE(7) BY SEX(2)—Con. Bachelor's degree: (Repeat AGE By SEX) Graduate or professional degree: (Repeat AGE By SEX)	



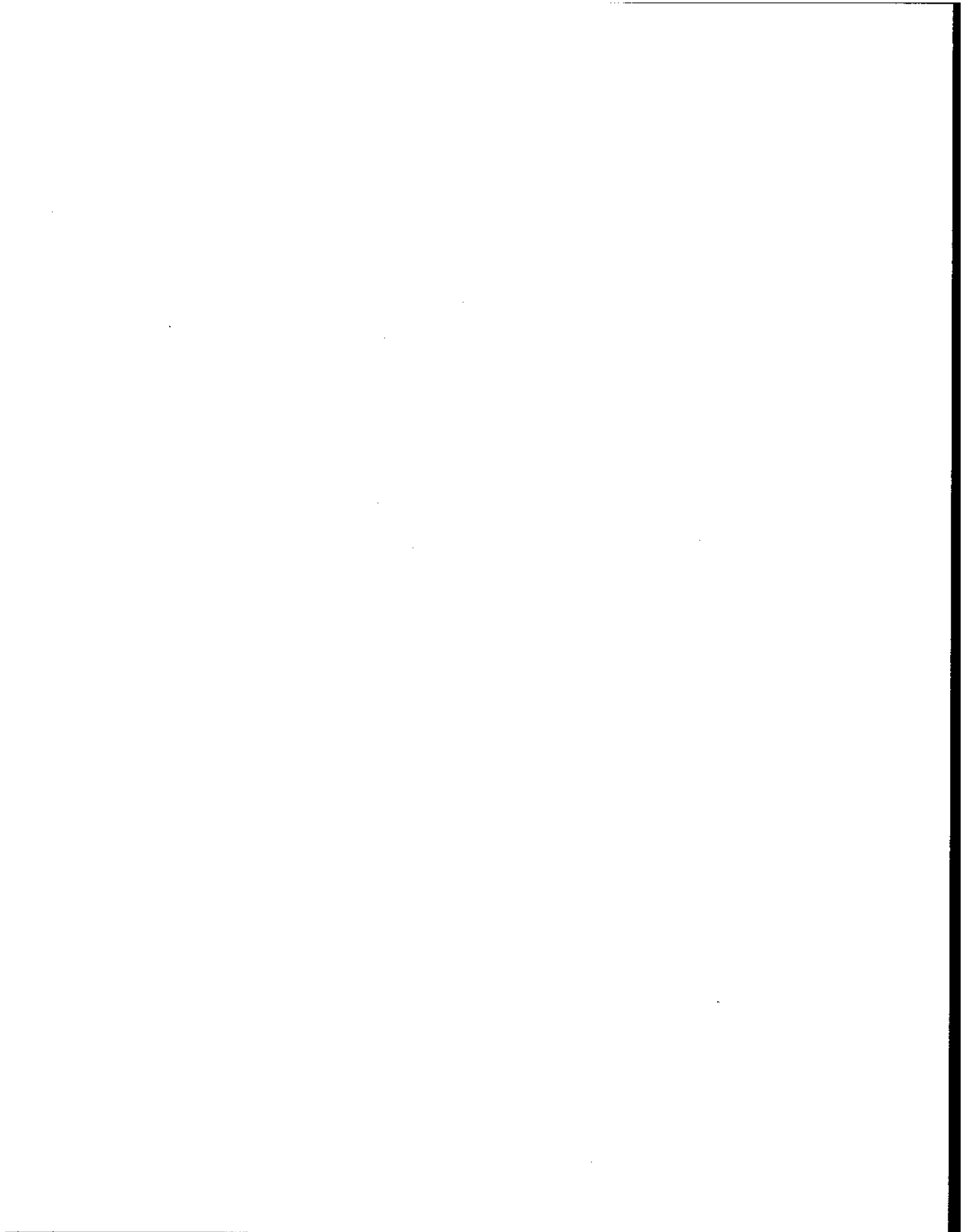
# SUMMARY LEVEL SEQUENCE CHART

Summary level area	Summary level code	Geographic component code
State <sup>1</sup>	040	00
State—County <sup>2</sup>	050	00
State—Place [50,000 or more persons]	168	00
State—Metropolitan Statistical Area/Consolidated Metropolitan Statistical Area/Remainder	320	00
State—Consolidated Metropolitan Statistical Area—Primary Metropolitan Statistical Area	321	00

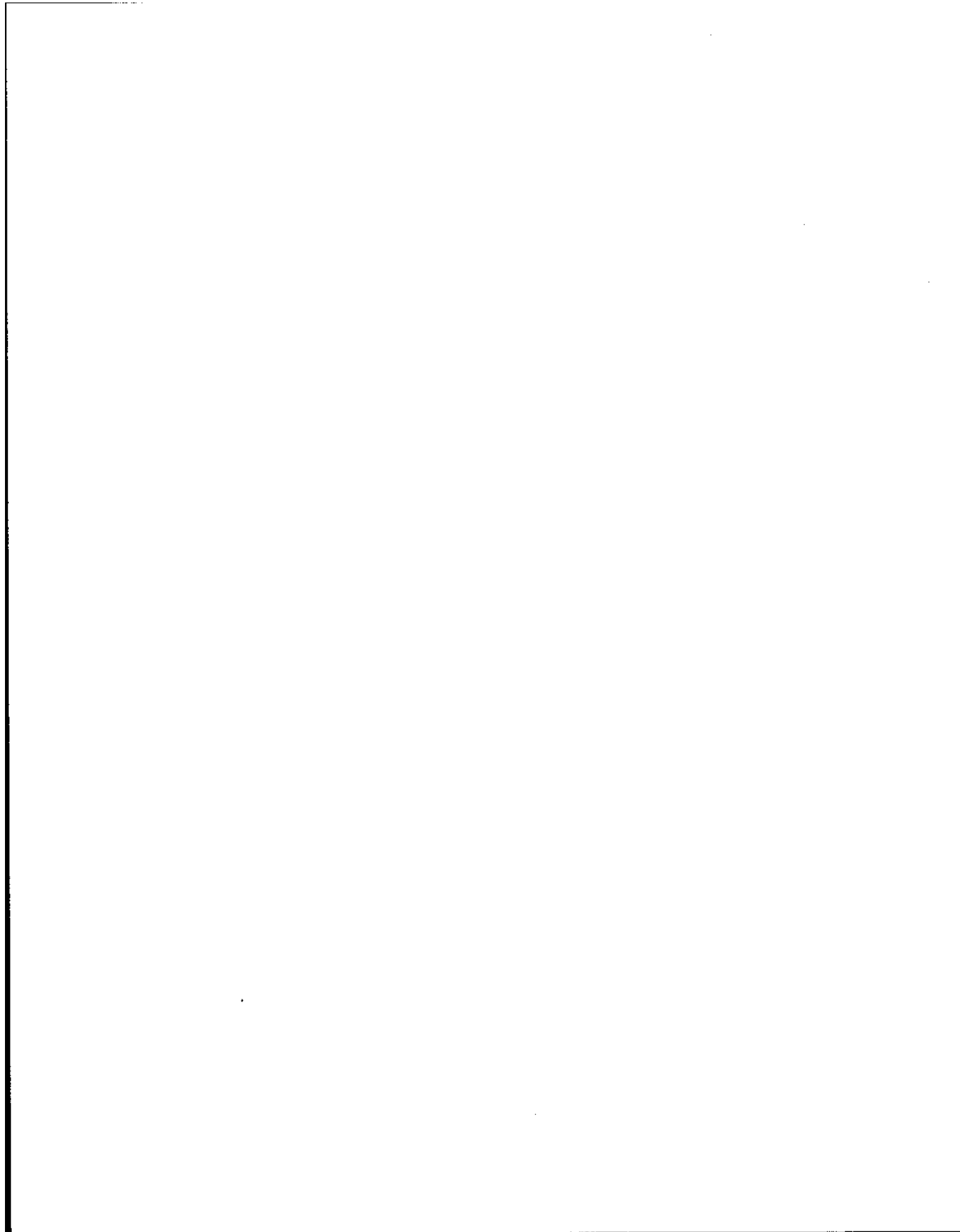
<sup>1</sup>Puerto Rico

<sup>2</sup>Municipio in Puerto Rico





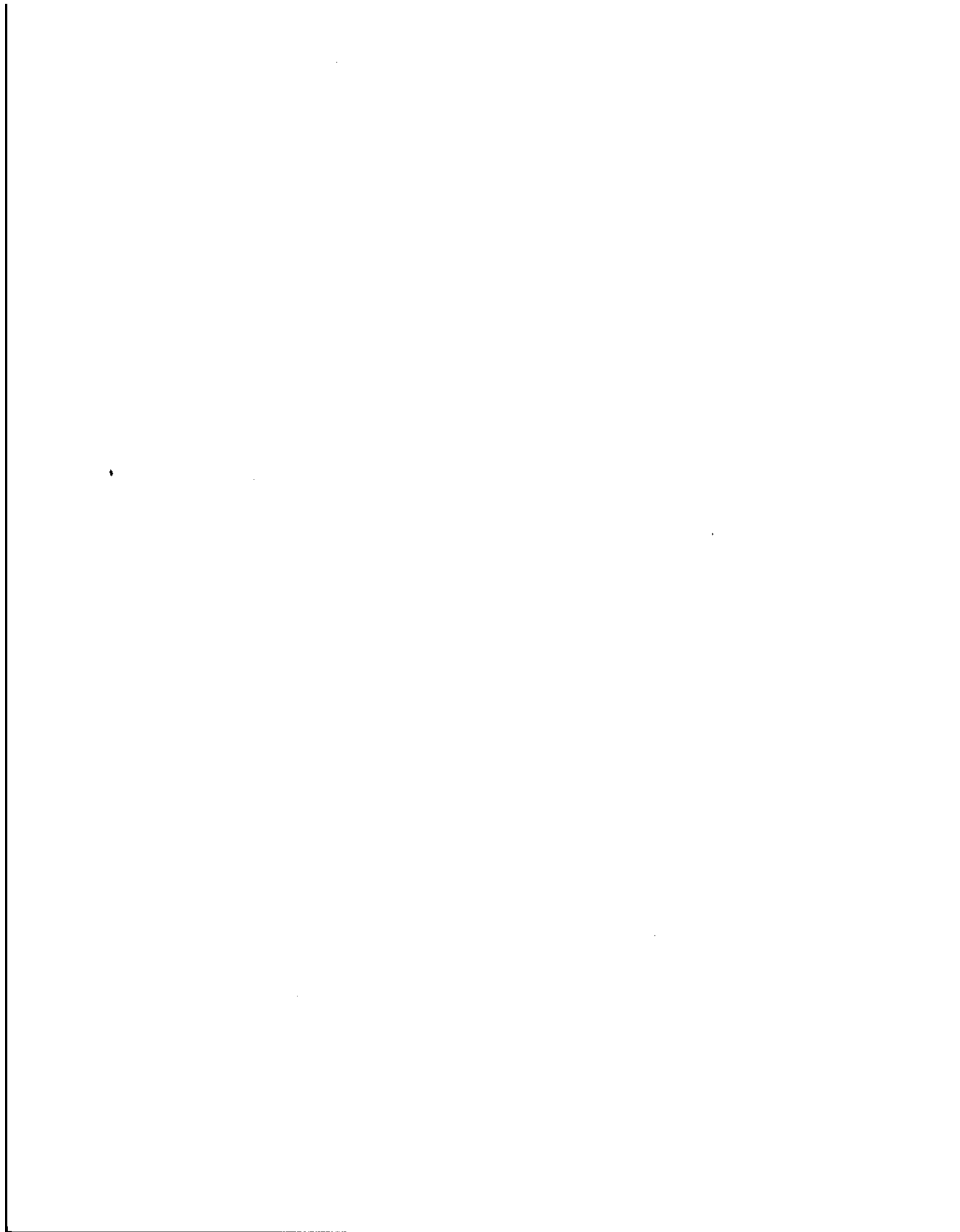




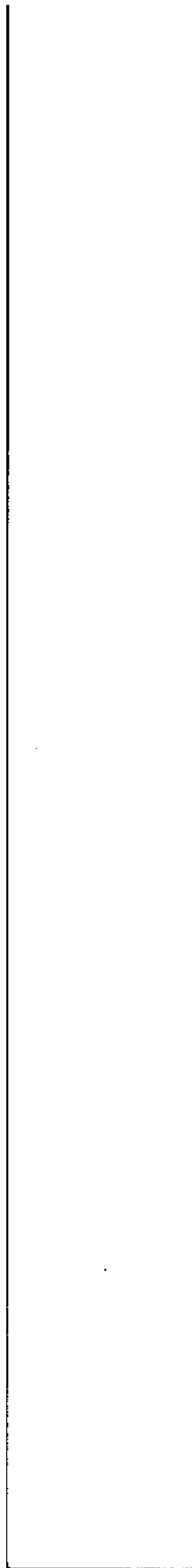
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Washington, DC 20233

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Name of File:     **Census of Population and Housing, 1990: Equal Employment Opportunity (EEO) File  
Puerto Rico**

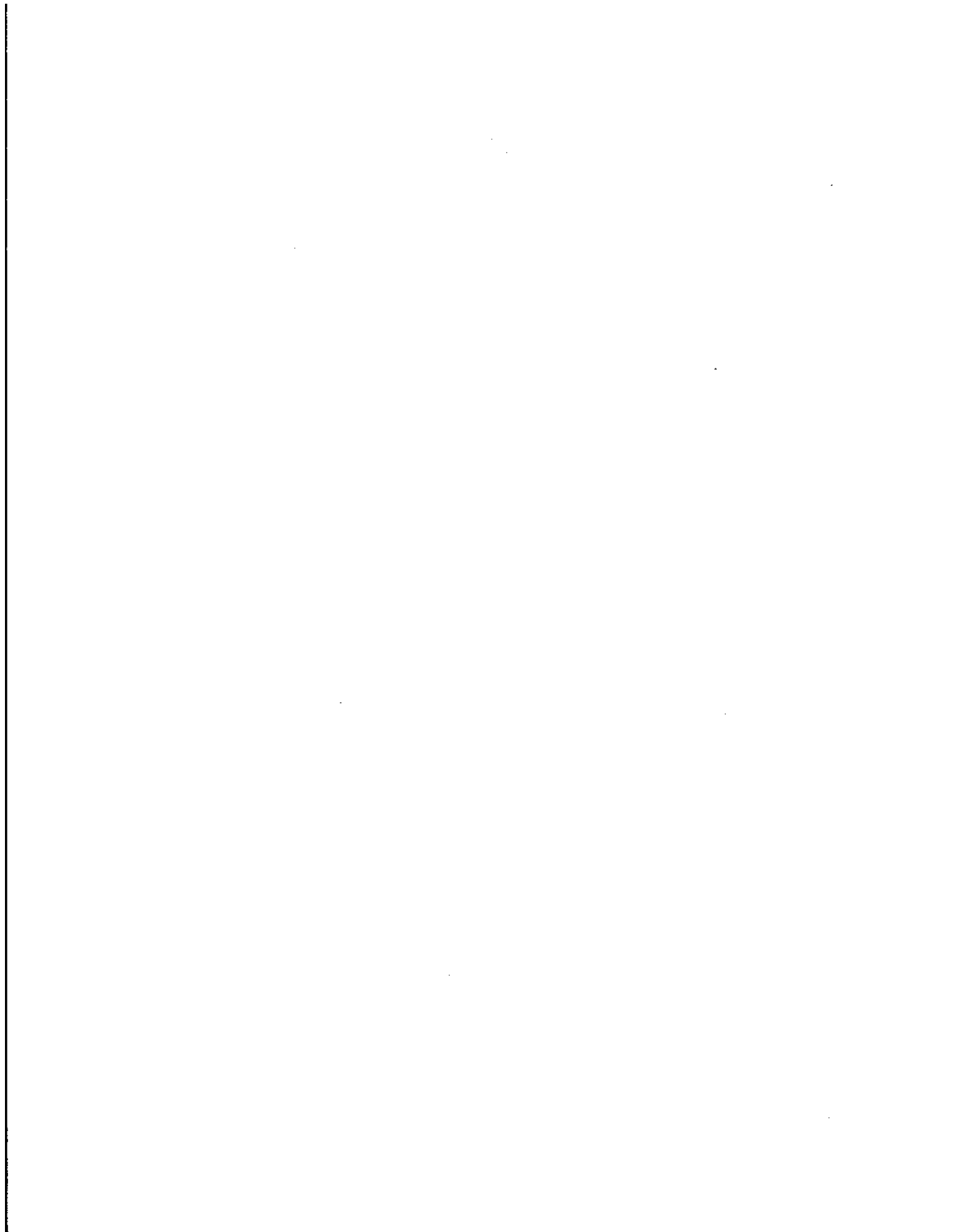
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# DATA DICTIONARY

## CONTENTS

Identification Section .....	1
Table (Matrix) Section .....	13

## IDENTIFICATION SECTION

Field name	Data dictionary reference name	Field size	Starting position	Data type
------------	--------------------------------	------------	-------------------	-----------

### Record Codes

File Identification <sup>1</sup> .....	FILEID	8	1	A/N
State/US Abbreviation .....	STUSAB	2	9	A

AK	Alaska	ID	Idaho	NC	North Carolina	SC	South Carolina
AL	Alabama	IL	Illinois	ND	North Dakota	SD	South Dakota
AR	Arkansas	IN	Indiana	NE	Nebraska	TN	Tennessee
AZ	Arizona	KS	Kansas	NH	New Hampshire	TX	Texas
CA	California	KY	Kentucky	NJ	New Jersey	US	United States
CO	Colorado	LA	Louisiana	NM	New Mexico	UT	Utah
CT	Connecticut	MA	Massachusetts	NV	Nevada	VA	Virginia
DC	District of Columbia	MD	Maryland	NY	New York	VI	Virgin Islands of the United States
DE	Delaware	ME	Maine	OH	Ohio	VT	Vermont
FL	Florida	MI	Michigan	OK	Oklahoma	WA	Washington
GA	Georgia	MN	Minnesota	OR	Oregon	WI	Wisconsin
HI	Hawaii	MO	Missouri	PA	Pennsylvania	WV	West Virginia
IA	Iowa	MS	Mississippi	PR	Puerto Rico	WY	Wyoming
		MT	Montana	RI	Rhode Island		

Summary Level <sup>2</sup> .....	SUMLEV	3	11	N
Geographic Component <sup>3</sup> .....	GEOCOMP	2	14	N

00	Not a geographic component
01	Urban
02	Urban in urbanized area
03	Urban in urbanized area in urbanized area central place
04	Urban in urbanized area not in urbanized area central place
05	Urban not in urbanized area
06	Urban not in urbanized area place [10,000 or more persons]
07	Urban not in urbanized area place [2,500 to 9,999 persons]
08	Rural
09	Rural place [1,000 to 2,499 population, not in an extended city]
10	Rural place [0 to 999 population, not in an extended city]
11	Rural not in place [or rural part of extended city]
12	Rural farm
13	Urban portion of extended city
14	Rural portion of extended city
20	In metropolitan statistical area/consolidated metropolitan statistical area
21	In metropolitan statistical area/consolidated metropolitan statistical area urban
22	In metropolitan statistical area/consolidated metropolitan statistical area rural

NOTE: See footnotes at the end of this section.



# IDENTIFICATION SECTION—Con.

Field name	Data dictionary reference name	Field size	Starting position	Data type
<div> 23 In metropolitan statistical area/consolidated metropolitan statistical area in metropolitan statistical area/primary metropolitan statistical area central city  24 In metropolitan statistical area/consolidated metropolitan statistical area not in metropolitan statistical area/primary metropolitan statistical area central city  25 In metropolitan statistical area/consolidated metropolitan statistical area not in metropolitan statistical area/primary metropolitan statistical area central city urban  26 In metropolitan statistical area/consolidated metropolitan statistical area not in metropolitan statistical area/primary metropolitan statistical area central city urban in urbanized area  27 In metropolitan statistical area/consolidated metropolitan statistical area not in metropolitan statistical area/primary metropolitan statistical area central city urban not in urbanized area  28 In metropolitan statistical area/consolidated metropolitan statistical area not in metropolitan statistical area/primary metropolitan statistical area central city rural  30 Not in metropolitan statistical area/consolidated metropolitan statistical area  31 Not in metropolitan statistical area/consolidated metropolitan statistical area urban  32 Not in metropolitan statistical area/consolidated metropolitan statistical area urban in urbanized area  33 Not in metropolitan statistical area/consolidated metropolitan statistical area urban not in urbanized area  34 Not in metropolitan statistical area/consolidated metropolitan statistical area urban not in urbanized area place [10,000 or more population]  35 Not in metropolitan statistical area/consolidated metropolitan statistical area urban not in urbanized area place [2,500 - 9,999 population]  36 Not in metropolitan statistical area/consolidated metropolitan statistical area rural  40 American Indian reservation and trust land [American Indian reservations (AIR codes 0001-4989) including any trust lands]  42 Tribal Jurisdiction Statistical Area [Oklahoma only]  43 Tribal Designated Statistical Area  44 Alaska Native village statistical area [Alaska only] </div>				
Characteristic Iteration <sup>4</sup>	CHARITER	3	16	N
000 Not a characteristic iteration				
Logical Record Number <sup>5</sup>	LOGRECNU	6	19	N
Logical Record Part Number <sup>6</sup>	LOGRECPN	4	25	N
Total Number of Parts in Record <sup>7</sup>	PARTREC	4	29	N
<b>Geographic Area Codes</b>				
Alaska Native Regional Corporation <sup>8</sup>	ANRC	2	33	A/N
<div> 07 Ahlta  14 Aleut  21 Arctic Slope  28 Bering Straits  35 Bristol Bay  42 Calista  49 Chugach  56 Cook Inlet  63 Doyon  70 Koniag  77 NANA  84 Sealaska </div>				
American Indian/Alaska Native Area (Census) <sup>9</sup>	AIANACE	4	35	A/N
American Indian/Alaska Native Area (FIPS) <sup>10</sup>	AIANAFP	5	39	A/N
American Indian/Alaska Native Area Class Code	AIANACC	2	44	A/N
<div> D1 Federally recognized American Indian reservation that does not serve as a minor civil division (MCD) equivalent  D2 Federally recognized American Indian reservation that also serves as an MCD equivalent  D3 American Indian tribal government that holds property in trust—"trust land"—for a tribe or individual member(s) of the tribe, and the trust land(s) is not associated with a specific American Indian reservation or the associated American Indian reservation is not located in this State  D4 State-recognized American Indian reservation that does not serve as an MCD equivalent  D5 State-recognized American Indian reservation that also serves as an MCD equivalent </div>				

NOTE: See footnotes at the end of this section.

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# IDENTIFICATION SECTION—Con.

Field name	Data dictionary reference name	Field size	Starting position	Data type
<div> D6 Tribal designated statistical area (TDSA); tribal jurisdiction statistical area (TJSA) (TJSAs occur only in Oklahoma)  E1 Alaska Native village statistical area (ANVSA) that does not coincide with or approximate an incorporated place or a census designated place (CDP)  E2 ANVSA that coincides with or approximates a CDP  E5 ANVSA that coincides with or approximates an incorporated place </div>				
American Indian Reservation Trust Land Indicator Code.....	ARTLI	1	46	A/N
<div> 1 American Indian reservation; including Tribal Jurisdiction Statistical Area (TJSA) and Tribal Designated Statistical Area (TDSA)  2 Off-reservation trust land  9 Not an American Indian area </div>				
Block <sup>a</sup> .....	BLCK	4	47	A/N
Block Group <sup>a</sup> .....	BLCKGR	1	51	A/N
Census Tract/Block Numbering Area <sup>a</sup> .....	TRACTBNA	6	52	A/N
Congressional District (101st Congress) <sup>a</sup> .....	CONGDIS	2	58	A/N
<div> 01-45 The actual congressional district number  00 Applies to States whose representative is elected "at large"; i.e., the State has only one representative in the United States House of Representatives  98 Applies to areas that have a nonvoting delegate in the United States House of Representatives  99 Applies to areas that have no representation in the United States House of Representatives </div>				
Consolidated City (Census) <sup>a</sup> .....	CONCITCE	1	60	A/N
<div> B Butte-Silver Bow, Montana      I Indianapolis, Indiana      M Milford, Connecticut  C Columbus, Georgia      J Jacksonville, Florida      N Nashville-Davidson, Tennessee </div>				
Consolidated City (FIPS) <sup>a,10</sup> .....	CONCITFP	5	61	A/N
Consolidated City Class Code <sup>10</sup> .....	CONCITCC	2	66	A/N
<div>C3 Consolidated city</div>				
Consolidated City Population Size Code .....	CONCITSC	2	68	A/N
<div> 00 Not in universe      06 250-299      12 2,500-4,999      18 100,000-249,999  01 0 -      07 300-499      13 5,000-9,999      19 250,000-499,999  02 1-24      08 500-999      14 10,000-19,999      20 500,000-999,999  03 25-99      09 1,000-1,499      15 20,000-24,999      21 1,000,000-2,499,999  04 100-199      10 1,500-1,999      16 25,000-49,999      22 2,500,000-4,999,999  05 200-249      11 2,000-2,499      17 50,000-99,999      23 5,000,000 or more </div>				
Consolidated Metropolitan Statistical Area <sup>a</sup> .....	CMSA	2	70	A/N
County <sup>a</sup> .....	CNTY	3	72	A/N

NOTE: See footnotes at the end of this section.

DATA DICTIONARY



# IDENTIFICATION SECTION—Con.

Field name	Data dictionary reference name	Field size	Starting position	Data type
County Population Size Code.....	CNTYSC	2	75	A/N

00 Not in universe	06 250-299	12 2,500-4,999	18 100,000-249,999
01 0	07 300-499	13 5,000-9,999	19 250,000-499,999
02 1-24	08 500-999	14 10,000-19,999	20 500,000-999,999
03 25-99	09 1,000-1,499	15 20,000-24,999	21 1,000,000-2,499,999
04 100-199	10 1,500-1,999	16 25,000-49,999	22 2,500,000-4,999,999
05 200-249	11 2,000-2,499	17 50,000-99,999	23 5,000,000 or more

County Subdivision (Census) <sup>9</sup> ..... COUSUBCE 3 77 A/N

County Subdivision (FIPS) <sup>10</sup> ..... COUSUBFP 5 80 A/N

County Subdivision Class Code ..... COUSUBCC 2 85 A/N

- C2 Incorporated place that also serves as a minor civil division (MCD) equivalent because, although the place is coextensive with an MCD, the Census Bureau, in agreement with State officials, does not recognize that MCD for presenting census data because the MCD cannot provide governmental services (Ohio only)
- C5 Incorporated place that also serves as an MCD equivalent because it is not part of an MCD or a county subdivision classified as Z5
- C7 Incorporated place that also serves as a county equivalent and an MCD equivalent; generally referred to as an "independent city"
- D2 Federally recognized American Indian reservation that also serves as an MCD equivalent
- D5 State-recognized American Indian reservation that also serves as an MCD equivalent
- T1 Governmentally active minor civil division (MCD) that is not coextensive with an incorporated place
- T5 Governmentally active MCD that is coextensive with an incorporated place
- Z1 MCD that is governmentally inactive or cannot provide general-purpose governmental services
- Z3 Unorganized territory identified by the Census Bureau as an MCD equivalent for presenting census data
- Z5 Census county division (CCD); census subarea (CSA) (Alaska only); census subdistrict (Virgin Islands only)
- Z7 Incorporated place that the Census Bureau treats as a minor civil division (MCD) equivalent because it is not in any MCD or is coextensive with a legally established but nonfunctioning MCD that the Census Bureau does not recognize for data presentation, AND is located in a State or county whose MCDs cannot provide governmental services (Iowa and Nebraska only)

County Subdivision Population Size Code ..... COUSUBSC 2 87 A/N

00 Not in universe	06 250-299	12 2,500-4,999	18 100,000-249,999
01 0	07 300-499	13 5,000-9,999	19 250,000-499,999
02 1-24	08 500-999	14 10,000-19,999	20 500,000-999,999
03 25-99	09 1,000-1,499	15 20,000-24,999	21 1,000,000-2,499,999
04 100-199	10 1,500-1,999	16 25,000-49,999	22 2,500,000-4,999,999
05 200-249	11 2,000-2,499	17 50,000-99,999	23 5,000,000 or more

Division <sup>9</sup> ..... DIVIS 1 89 A/N

0 Not in a division	4 West North Central	7 West South Central
1 New England	5 South Atlantic	8 Mountain
2 Middle Atlantic	6 East South Central	9 Pacific
3 East North Central		

Extended City Indicator <sup>9</sup> ..... EXTCITIN 1 90 A/N

1 Extended city	9 Not an extended city
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Internal Use Code <sup>11</sup> ..... INTUC 15 91 A/N

NOTE: See footnotes at the end of this section.





# IDENTIFICATION SECTION—Con.

Field name	Data dictionary reference name	Field size	Starting position	Data type
Metropolitan Statistical Area/Consolidated Metropolitan Statistical Area <sup>9</sup> .....	MSACMSA	4	106	A/N
MSA/CMSA Population Size Code .....	MSACMSAS	2	110	A/N

00 Not in universe	06 250-299	12 2,500-4,999	18 100,000-249,999
01 0	07 300-499	13 5,000-9,999	19 250,000-499,999
02 1-24	08 500-999	14 10,000-19,999	20 500,000-999,999
03 25-99	09 1,000-1,499	15 20,000-24,999	21 1,000,000-2,499,999
04 100-199	10 1,500-1,999	16 25,000-49,999	22 2,500,000-4,999,999
05 200-249	11 2,000-2,499	17 50,000-99,999	23 5,000,000 or more

Place (Census) <sup>9</sup> .....	PLACECE	4	112	A/N
Place (FIPS) <sup>10</sup> .....	PLACEFP	5	116	A/N
Place Class Code .....	PLACECC	2	121	A/N

- C1 Incorporated place that is governmentally active, is not related to an Alaska Native village statistical area (ANVSA), and does not serve as a minor civil division (MCD) equivalent
- C2 Incorporated place that also serves as a minor civil division (MCD) equivalent because, although the place is coextensive with an MCD, the Census Bureau, in agreement with State officials, does not recognize that MCD for presenting census data because the MCD cannot provide governmental services (Iowa and Ohio only)
- C5 Incorporated place that also serves as an MCD equivalent because it is not part of an MCD
- C6 Incorporated place that coincides with or approximates an ANVSA
- C7 Incorporated place that also serves as a county equivalent; generally referred to as an "independent city"
- C8 The portion ("remainder") of a consolidated city that excludes the incorporated place(s) within that jurisdiction
- C9 Incorporated place whose government is operationally inactive and is not included in any other C subclass
- M2 Military or Coast Guard installation (or part of an installation) that serves as a census designated place (CDP)
- U1 CDP with a name that is commonly recognized for the populated area
- U2 CDP with a name that is not commonly recognized for the populated area (e.g., a combination of the names of two or three commonly recognized communities, or a name that identifies the location of the CDP in relation to an adjacent incorporated place)
- U9 CDP that coincides with or approximates an ANVSA.

Note: In Ohio, a multi-county place that has a different MCD relationship in each county is assigned only a single class code of C1, C2, or C5.

Place Description Code .....	PLACEDC	1	123	A/N
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- 1 Incorporated central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA), but not a central place of an urbanized area (UA)
- 2 Incorporated central place of an urbanized area (UA), but not a central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA)
- 3 Incorporated central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA) and a central place of an urbanized area (UA)
- 4 Consolidated city or an incorporated place that is not a central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA) and not a central place of an urbanized area (UA)
- 5 Incorporated place, which is the central place of an urbanized area (UA), but only part of which is the central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA)
- 6 Incorporated place, which is not a central place of an urbanized area (UA), but part of which is the central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA)
- A Census designated place (CDP) that is a central place of an urbanized area (UA), but not a central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA)
- B Census designated place (CDP) that is a central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA), but not a central place of an urbanized area (UA)
- C Census designated place (CDP) that is a central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA) and a central place of an urbanized area (UA)

NOTE: See footnotes at the end of this section.

DATA DICTIONARY



# IDENTIFICATION SECTION—Con.

Field name	Data dictionary reference name	Field size	Starting position	Data type
<p>D Census designated place (CDP) that is in a 1980 or special census urbanized area (UA) and is not a central city or a central place; these CDP's must have a 1990 population of at least 300 in Hawaii and the Virgin Islands of the United States, 1,000 in Puerto Rico, and 2,500 elsewhere</p> <p>E Census designated place (CDP) not classified elsewhere; these CDP's must meet the following minimum population requirements:</p> <ul style="list-style-type: none"> <li>— 300 in Hawaii and the Virgin Islands of the United States</li> <li>— 25 in Alaska</li> <li>— 1,000 in all other States and Puerto Rico</li> </ul> <p>F Zona urbana that is a central place of an urbanized area (UA) in Puerto Rico, but not a central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA)</p> <p>G Zona urbana that is a central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA) in Puerto Rico, but not a central place of an urbanized area (UA)</p> <p>H Zona urbana that is a central city of a metropolitan statistical area/primary metropolitan statistical area (MSA/PMSA) and a central place of an urbanized area (UA)</p> <p>I Zona urbana in Puerto Rico that is not a central city or a central place</p> <p>L Census designated place (CDP) entirely within an American Indian reservation and entirely outside of a 1980 or special census urbanized area (UA); these CDP's must have a 1990 population of at least 25 in Alaska and 250 elsewhere</p>				

Place Population Size Code .....PLACESC 2 124 A/N

00 Not in universe	06 250-299	12 2,500-4,999	18 100,000-249,999
01 0	07 300-499	13 5,000-9,999	19 250,000-499,999
02 1-24	08 500-999	14 10,000-19,999	20 500,000-999,999
03 25-99	09 1,000-1,499	15 20,000-24,999	21 1,000,000-2,499,999
04 100-199	10 1,500-1,999	16 25,000-49,999	22 2,500,000-4,999,999
05 200-249	11 2,000-2,499	17 50,000-99,999	23 5,000,000 or more

Primary Metropolitan Statistical Area <sup>a</sup> .....PMSA 4 126 A/N

Region <sup>a</sup> .....REG 1 130 A/N

1 Northeast	2 Midwest	3 South	4 West
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State (Census) <sup>a</sup> .....STATECE 2 131 A/N

06 Puerto Rico	33 Illinois	54 Virginia	81 Montana
07 Virgin Islands of the United States	34 Michigan	55 West Virginia	82 Idaho
11 Maine	35 Wisconsin	56 North Carolina	83 Wyoming
12 New Hampshire	41 Minnesota	57 South Carolina	84 Colorado
13 Vermont	42 Iowa	58 Georgia	85 New Mexico
14 Massachusetts	43 Missouri	59 Florida	86 Arizona
15 Rhode Island	44 North Dakota	61 Kentucky	87 Utah
16 Connecticut	45 South Dakota	62 Tennessee	88 Nevada
21 New York	46 Nebraska	63 Alabama	91 Washington
22 New Jersey	47 Kansas	64 Mississippi	92 Oregon
23 Pennsylvania	51 Delaware	71 Arkansas	93 California
31 Ohio	52 Maryland	72 Louisiana	94 Alaska
32 Indiana	53 District of Columbia	73 Oklahoma	95 Hawaii
		74 Texas	

NOTE: See footnotes at the end of this section.

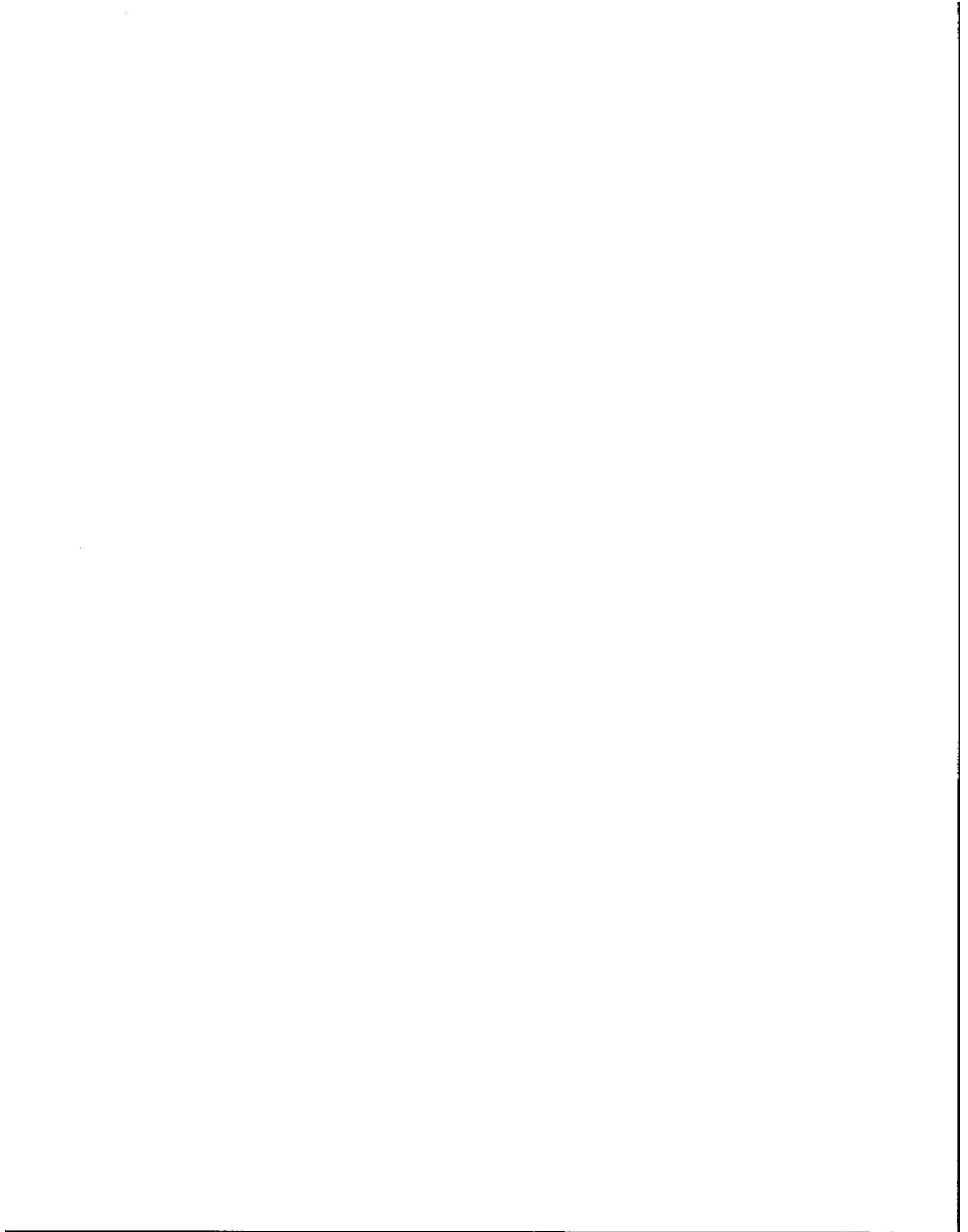


# IDENTIFICATION SECTION—Con.

Field name	Data dictionary reference name	Field size	Starting position	Data type																																																								
State (FIPS) <sup>a</sup> .....	STATEFP	2	133	A/N																																																								
<table><tr><td>01 Alabama</td><td>17 Illinois</td><td>31 Nebraska</td><td>46 South Dakota</td></tr><tr><td>02 Alaska</td><td>18 Indiana</td><td>32 Nevada</td><td>47 Tennessee</td></tr><tr><td>04 Arizona</td><td>19 Iowa</td><td>33 New Hampshire</td><td>48 Texas</td></tr><tr><td>05 Arkansas</td><td>20 Kansas</td><td>34 New Jersey</td><td>49 Utah</td></tr><tr><td>06 California</td><td>21 Kentucky</td><td>35 New Mexico</td><td>50 Vermont</td></tr><tr><td>08 Colorado</td><td>22 Louisiana</td><td>36 New York</td><td>51 Virginia</td></tr><tr><td>09 Connecticut</td><td>23 Maine</td><td>37 North Carolina</td><td>53 Washington</td></tr><tr><td>10 Delaware</td><td>24 Maryland</td><td>38 North Dakota</td><td>54 West Virginia</td></tr><tr><td>11 District of Columbia</td><td>25 Massachusetts</td><td>39 Ohio</td><td>55 Wisconsin</td></tr><tr><td>12 Florida</td><td>26 Michigan</td><td>40 Oklahoma</td><td>56 Wyoming</td></tr><tr><td>13 Georgia</td><td>27 Minnesota</td><td>41 Oregon</td><td>72 Puerto Rico</td></tr><tr><td>15 Hawaii</td><td>28 Mississippi</td><td>42 Pennsylvania</td><td>78 Virgin Islands of the United States</td></tr><tr><td>16 Idaho</td><td>29 Missouri</td><td>44 Rhode Island</td><td></td></tr><tr><td></td><td>30 Montana</td><td>45 South Carolina</td><td></td></tr></table>					01 Alabama	17 Illinois	31 Nebraska	46 South Dakota	02 Alaska	18 Indiana	32 Nevada	47 Tennessee	04 Arizona	19 Iowa	33 New Hampshire	48 Texas	05 Arkansas	20 Kansas	34 New Jersey	49 Utah	06 California	21 Kentucky	35 New Mexico	50 Vermont	08 Colorado	22 Louisiana	36 New York	51 Virginia	09 Connecticut	23 Maine	37 North Carolina	53 Washington	10 Delaware	24 Maryland	38 North Dakota	54 West Virginia	11 District of Columbia	25 Massachusetts	39 Ohio	55 Wisconsin	12 Florida	26 Michigan	40 Oklahoma	56 Wyoming	13 Georgia	27 Minnesota	41 Oregon	72 Puerto Rico	15 Hawaii	28 Mississippi	42 Pennsylvania	78 Virgin Islands of the United States	16 Idaho	29 Missouri	44 Rhode Island			30 Montana	45 South Carolina	
01 Alabama	17 Illinois	31 Nebraska	46 South Dakota																																																									
02 Alaska	18 Indiana	32 Nevada	47 Tennessee																																																									
04 Arizona	19 Iowa	33 New Hampshire	48 Texas																																																									
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06 California	21 Kentucky	35 New Mexico	50 Vermont																																																									
08 Colorado	22 Louisiana	36 New York	51 Virginia																																																									
09 Connecticut	23 Maine	37 North Carolina	53 Washington																																																									
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11 District of Columbia	25 Massachusetts	39 Ohio	55 Wisconsin																																																									
12 Florida	26 Michigan	40 Oklahoma	56 Wyoming																																																									
13 Georgia	27 Minnesota	41 Oregon	72 Puerto Rico																																																									
15 Hawaii	28 Mississippi	42 Pennsylvania	78 Virgin Islands of the United States																																																									
16 Idaho	29 Missouri	44 Rhode Island																																																										
	30 Montana	45 South Carolina																																																										
Urban/Rural <sup>a</sup> .....	URBANRUR	1	135	A/N																																																								
<table><tr><td>1 Urban</td><td>2 Rural</td></tr></table>					1 Urban	2 Rural																																																						
1 Urban	2 Rural																																																											
Urbanized Area <sup>a</sup> .....	URBAREA	4	136	A/N																																																								
Urbanized Area Population Size Code .....	UASC	2	140	A/N																																																								
<table><tr><td>00 Not in universe</td><td>06 250-299</td><td>12 2,500-4,999</td><td>18 100,000-249,999</td></tr><tr><td>01 0</td><td>07 300-499</td><td>13 5,000-9,999</td><td>19 250,000-499,999</td></tr><tr><td>02 1-24</td><td>08 500-999</td><td>14 10,000-19,999</td><td>20 500,000-999,999</td></tr><tr><td>03 25-99</td><td>09 1,000-1,499</td><td>15 20,000-24,999</td><td>21 1,000,000-2,499,999</td></tr><tr><td>04 100-199</td><td>10 1,500-1,999</td><td>16 25,000-49,999</td><td>22 2,500,000-4,999,999</td></tr><tr><td>05 200-249</td><td>11 2,000-2,499</td><td>17 50,000-99,999</td><td>23 5,000,000 or more</td></tr></table>					00 Not in universe	06 250-299	12 2,500-4,999	18 100,000-249,999	01 0	07 300-499	13 5,000-9,999	19 250,000-499,999	02 1-24	08 500-999	14 10,000-19,999	20 500,000-999,999	03 25-99	09 1,000-1,499	15 20,000-24,999	21 1,000,000-2,499,999	04 100-199	10 1,500-1,999	16 25,000-49,999	22 2,500,000-4,999,999	05 200-249	11 2,000-2,499	17 50,000-99,999	23 5,000,000 or more																																
00 Not in universe	06 250-299	12 2,500-4,999	18 100,000-249,999																																																									
01 0	07 300-499	13 5,000-9,999	19 250,000-499,999																																																									
02 1-24	08 500-999	14 10,000-19,999	20 500,000-999,999																																																									
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04 100-199	10 1,500-1,999	16 25,000-49,999	22 2,500,000-4,999,999																																																									
05 200-249	11 2,000-2,499	17 50,000-99,999	23 5,000,000 or more																																																									
Special Area Code (1) .....	SAC1	5	142	A/N																																																								
Special Area Code (2) .....	SAC2	5	147	A/N																																																								
Special Area Code (3) .....	SAC3	4	152	A/N																																																								
Special Area Code (4) .....	SAC4	4	156	A/N																																																								
Special Area Code (5) .....	SAC5	3	160	A/N																																																								
Special Area Code (6) .....	SAC6	3	163	A/N																																																								
Special Area Code (7) .....	SAC7	2	166	A/N																																																								
Special Area Code (8) .....	SAC8	2	168	A/N																																																								
Special Area Code (9) .....	SAC9	1	170	A/N																																																								
Special Area Code (10) .....	SAC10	1	171	A/N																																																								
<b>Area Characteristics</b>																																																												
Area (land) <sup>12</sup> .....	AREALAND	10	172	A/N																																																								
Area (water) <sup>13</sup> .....	AREAWAT	10	182	A/N																																																								
Area Name/PSAD Term/ Part Indicator <sup>14</sup> .....	ANPSADPI	66	192	A/N																																																								

NOTE: See footnotes at the end of this section.

DATA DICTIONARY



# IDENTIFICATION SECTION—Con.

Field name	Data dictionary reference name	Field size	Starting position	Data type
Functional Status Code.....	FUNCSTAT	1	258	A/N

- A Active governmental unit, except American Indian reservations and Alaska Native village statistical areas. — An active governmental unit has the legal capacity to have officers, to raise revenue, and to conduct governmental activities under State laws, and currently is doing so.
- B Functioning governmental unit providing no substantive governmental services. — These areas may be coextensive with and administered by officials of another governmental unit (such as towns in Connecticut that are coextensive with cities), or the number of officials and/or the functions they perform are so minimal and/or vestigial that the Census Bureau does not recognize them as governmental units for census purposes (such as townships in Iowa).
- F False entity. — In order to maintain complete coverage of every State at the county level and of every county at the county subdivision level, we create false entities at these levels for any place that is independent of a county or independent of a minor civil division (MCD). This code also is used for place records that represent the remainder of a consolidated city or the remainder of a county subdivision.
- I Inactive governmental unit. — An inactive governmental unit has the legal capacity to be active, but currently has no legal officers, raises no revenues, and conducts no activities.
- N Nonfunctioning governmental unit. — A nonfunctioning governmental unit has legally established boundaries, but has no legal capacity to conduct governmental activity.
- R An American Indian reservation, an American Indian tribe whose name is associated with trust lands, or an Alaska Native village statistical area.
- S Statistical entity, except Alaska Native village statistical areas and tribal jurisdiction statistical areas. — A statistical entity has no governmental status and is defined by or in cooperation with the Census Bureau or other Federal agency. This category includes census regions, census divisions, census county divisions (CCDs), census designated places (CDPs), metropolitan areas (MSA/CMSA/PMSAs), urbanized areas (UAs), unorganized territories (UTs), tribal designated statistical areas (TDSAs), census areas and census subareas in Alaska, and comunidades and zonas urbanas in Puerto Rico.
- T Tribal jurisdiction statistical area. — A tribal jurisdiction statistical area (TJSA) is not a legally defined governmental unit, but is recognized as a statistical area for the 1990 census. These areas exist only in the State of Oklahoma and were not recognized separately in 1980.

Geographic Change User Note Indicator.....	GCUNI	1	259	A/N
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- 0 No geographic change note for the area within the summary level
- 1 See User Notes for a geographic change note

Housing Unit Count (100 percent) <sup>15</sup> .....	HU100	9	260	A/N
Internal Point (latitude) <sup>16</sup> .....	INTPTLAT	9	269	A/N
Internal Point (longitude) <sup>17</sup> .....	INTPTLNG	10	278	A/N
Part Flag.....	PARTFLAG	1	288	A/N

- 0 Not a part
- 1 Part

Political/Statistical Area Description Code .....	PSADC	2	289	A/N
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- 01 State or State equivalent no status is appended to the name of the entity in census publications and related data products.
- 04 Borough county equivalent in Alaska; "Borough" is appended to the name of the entity in census publications and related data products.
- 05 Census area county equivalent in Alaska; "Census Area" is appended to the name of the entity in census publications and related data products.
- 06 County "County" is appended to the name of the entity in census publications and related data products.
- 08 Independent city county equivalent in Maryland, Missouri, and Virginia; "city" is appended to the name of the entity in census publications and related data products.
- 09 Independent city county equivalent in Nevada; no status is appended to the name of the entity in census publications and related data products.

NOTE: See footnotes at the end of this section.



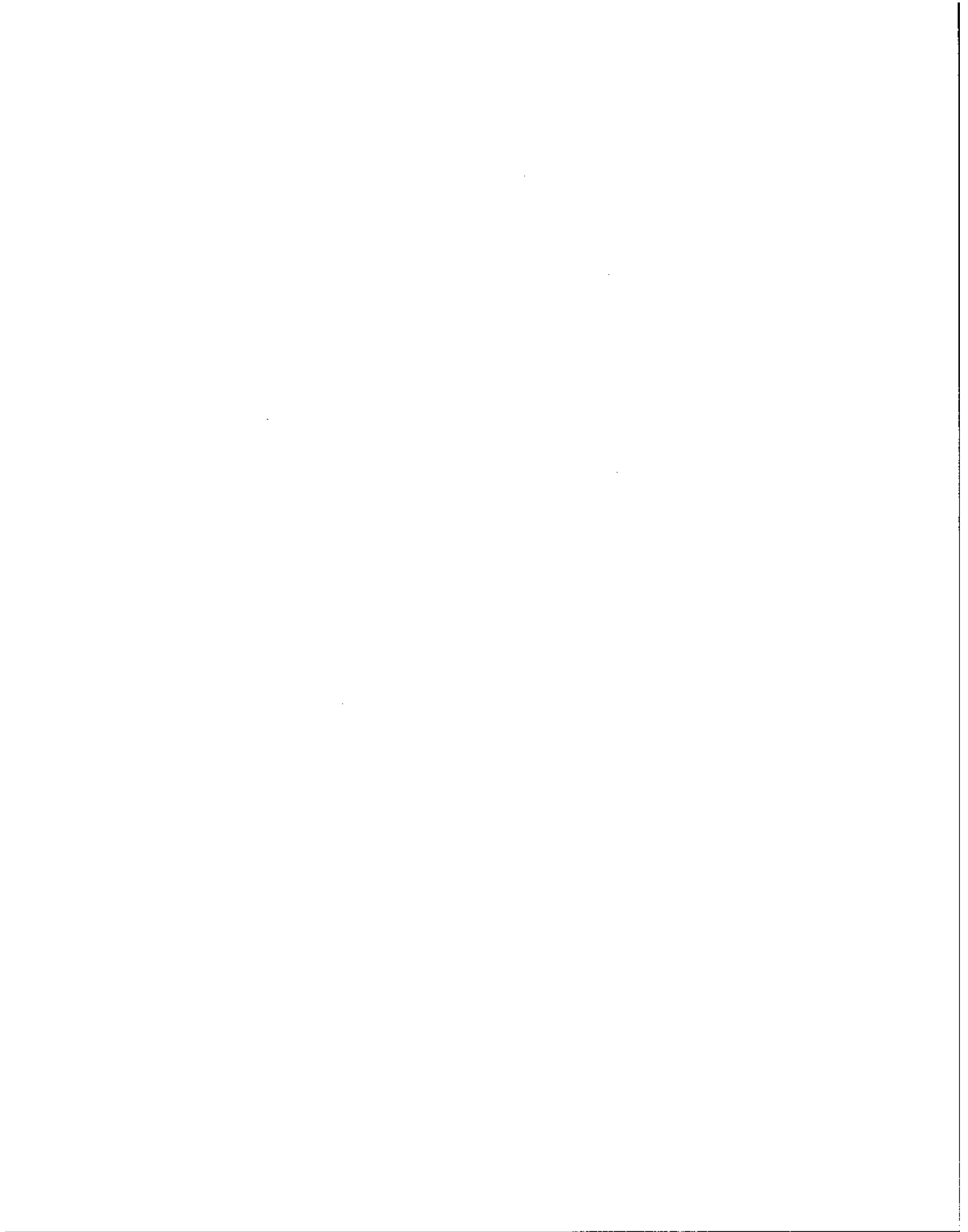


# IDENTIFICATION SECTION—Con.

Field name	Data dictionary reference name	Field size	Starting position	Data type
10	Island county equivalent in Virgin Islands of the United States; "Island" is appended to the name of the entity in census publications and related data products.			
13	Municipio county equivalent in Puerto Rico; "Municipio" is appended to the name of the entity in census publications and related data products.			
14	(none) county equivalent; used at county level for the District of Columbia and Yellowstone National Park (Montana). No status is appended to the name of the entity in census publications and related data products.			
15	Parish county equivalent in Louisiana; "Parish" is appended to the name of the entity in census publications and related data products.			
19	American Indian reservation minor civil division (MCD) in Maine and New York; "Reservation" is appended to the name of the entity in census publications and related data products.			
20	Barrio minor civil division (MCD) in Puerto Rico; "barrio" is appended to the name of the entity in census publications and related data products.			
21	Borough minor civil division (MCD) in New York; MCD equivalent in New Jersey and Pennsylvania; "borough" is appended to the name of the entity in census publications and related data products.			
22	Census county division (CCD) minor civil division (MCD) equivalent in 21 States; "division" is appended to the name of the entity in census publications and related data products.			
23	Census subarea minor civil division (MCD) equivalent in Alaska; "census subarea" is appended to the name of the entity in census publications and related data products.			
24	Census subdistrict minor civil division (MCD) equivalent in the Virgin Islands of the United States; "subdistrict" is appended to the name of the entity in census publications and related data products.			
25	City minor civil division (MCD) equivalent in 20 States; "city" is appended to the name of the entity in census publications and related data products.			
27	District (magisterial, road) minor civil division (MCD) in Pennsylvania, Virginia, and West Virginia; "district" is appended to the name of the entity in census publications and related data products.			
28	District (assessment, election, magisterial, supervisors', or parish governing authority) minor civil division (MCD) in Louisiana, Maryland, Mississippi, and West Virginia; no status is appended to the name of the entity in census publications and related data products.			
29	Election precinct minor civil division (MCD) in Illinois and Nebraska; "precinct" is appended to the name of the entity in census publications and related data products.			
30	Election precinct minor civil division (MCD) in Illinois and Nebraska; no status is appended to the name of the entity in census publications and related data products.			
31	Gore minor civil division (MCD) in Maine and Vermont; "gore" is appended to the name of the entity in census publications and related data products.			
32	Grant minor civil division (MCD) in New Hampshire and Vermont; "grant" is appended to the name of the entity in census publications and related data products.			
33	Independent city minor civil division (MCD) equivalent in Maryland, Missouri, and Virginia; "city" is appended to the name of the entity in census publications and related data products.			
34	Independent city minor civil division (MCD) equivalent in Nevada; no status is appended to the name of the entity in census publications and related data products.			
36	Location minor civil division (MCD) in New Hampshire; "location" is appended to the name of the entity in census publications and related data products.			
38	(none) minor civil division (MCD) equivalent for District of Columbia and Arlington County, Virginia; no status is appended to the name of the entity in census publications and related data products.			
39	Plantation minor civil division (MCD) in Maine; "plantation" is appended to the name of the entity in census publications and related data products.			
40	Plantation minor civil division (MCD) in Maine; no status is appended to the name of the entity in census publications and related data products.			
41	Barrio-pueblo minor civil division (MCD) in Puerto Rico; "barrio-pueblo" is appended to the name of the entity in census publications and related data products.			
42	Purchase minor civil division (MCD) in New Hampshire; "purchase" is appended to the name of the entity in census publications and related data products.			
43	Town minor civil division (MCD) in 8 States; MCD equivalent in New Jersey, Pennsylvania, and South Dakota; "town" is appended to the name of the entity in census publications and related data products.			
44	Township minor civil division (MCD) in 16 States; "township" is appended to the name of the entity in census publications and related data products.			
45	Township minor civil division (MCD) in Kansas, Nebraska, and North Carolina; no status is appended to the name of the entity in census publications and related data products.			

NOTE: See footnotes at the end of this section.

DATA DICTIONARY



# IDENTIFICATION SECTION—Con.

Field name	Data dictionary reference name	Field size	Starting position	Data type
46	Unorganized territory minor civil division (MCD) in 9 States; "unorg." is appended to the name of the entity in census publications and related data products.			
47	Village minor civil division (MCD) equivalent in New Jersey, Ohio, South Dakota, and Wisconsin; "village" is appended to the name of the entity in census publications and related data products.			
51	Subbarrio sub-minor civil division (sub-MCD) in Puerto Rico; "subbarrio" is appended to the name of the entity in census publications and related data products.			
55	Comunidad place (census designated place) in Puerto Rico; "comunidad" is appended to the name of the entity in census publications and related data products.			
56	Borough place in Connecticut, New Jersey, and Pennsylvania; "borough" is appended to the name of the entity in census publications and related data products.			
57	Census designated place place; "CDP" is appended to the name of the entity in census publications and related data products.			
58	City place; "city" is appended to the name of the entity in census publications and related data products.			
59	City place; used for some cities that have a unique description, no description, or a description included with their name, as follows: Anaconda-Deer Lodge County (Montana): Incorporated municipality; Butte-Silver Bow (remainder) (Montana): (none); Carson City, Nevada: (none); Columbus city (remainder) (Georgia): (none); Indianapolis city (remainder) (Indiana): (none); Jacksonville city (remainder) (Florida): (none); Lexington-Fayette (Kentucky): Urban County Government; Lynchburg-Moore County (Tennessee): (none); Milford city (remainder) (Connecticut): (none); Nashville-Davidson (remainder) (Tennessee): "Metropolitan Government of Nashville and Davidson County"; No status is appended to the name of the entity in census publications and related data products.			
60	Town place; place in 30 States and the Virgin Islands of the United States; "town" is appended to the name of the entity in census publications and related data products.			
61	Village place; place in 19 States; "village" is appended to the name of the entity in census publications and related data products.			
62	Zona urbana place (census designated place) in Puerto Rico; "zona urbana" is appended to the name of the entity in census publications and related data products.			
65	Consolidated city in Connecticut, Florida, Georgia, and Indiana "city" is appended to the name of the entity in census publications and related data products.			
66	Consolidated city used for some consolidated cities that have unique descriptions or no descriptions, as follows: Butte-Silver Bow (Montana): (none); Nashville-Davidson (Tennessee): "Metropolitan Government of Nashville and Davidson County"; No status is appended to the name of the entity in census publications and related data products.			
68	Census region no status is appended to the name of the entity in census publications and related data products.			
69	Census division no status is appended to the name of the entity in census publications and related data products.			
71	Consolidated metropolitan statistical area (CMSA) "CMSA" is appended to the name of the entity in census publications and related data products.			
72	Metropolitan statistical area (MSA) "MSA" is appended to the name of the entity in census publications and related data products.			
73	Primary metropolitan statistical area (PMSA) "PMSA" is appended to the name of the entity in census publications and related data products.			
75	Urbanized area (UA) no status is appended to the name of the entity in census publications and related data products.			
77	Alaska Native Regional Corporation no status is appended to the name of the entity in census publications and related data products.			
79	Alaska Native village statistical area no status is appended to the name of the entity in census publications and related data products.			
80	Tribal designated statistical area American Indian reservation equivalent for non-land-based tribes outside of Oklahoma; "TDSA" is appended to the name of the entity in census publications and related data products.			
81	Colony American Indian reservation; "Colony" is appended to the name of the entity in census publications and related data products.			
82	Community American Indian reservation; "Community" is appended to the name of the entity in census publications and related data products.			

NOTE: See footnotes at the end of this section.

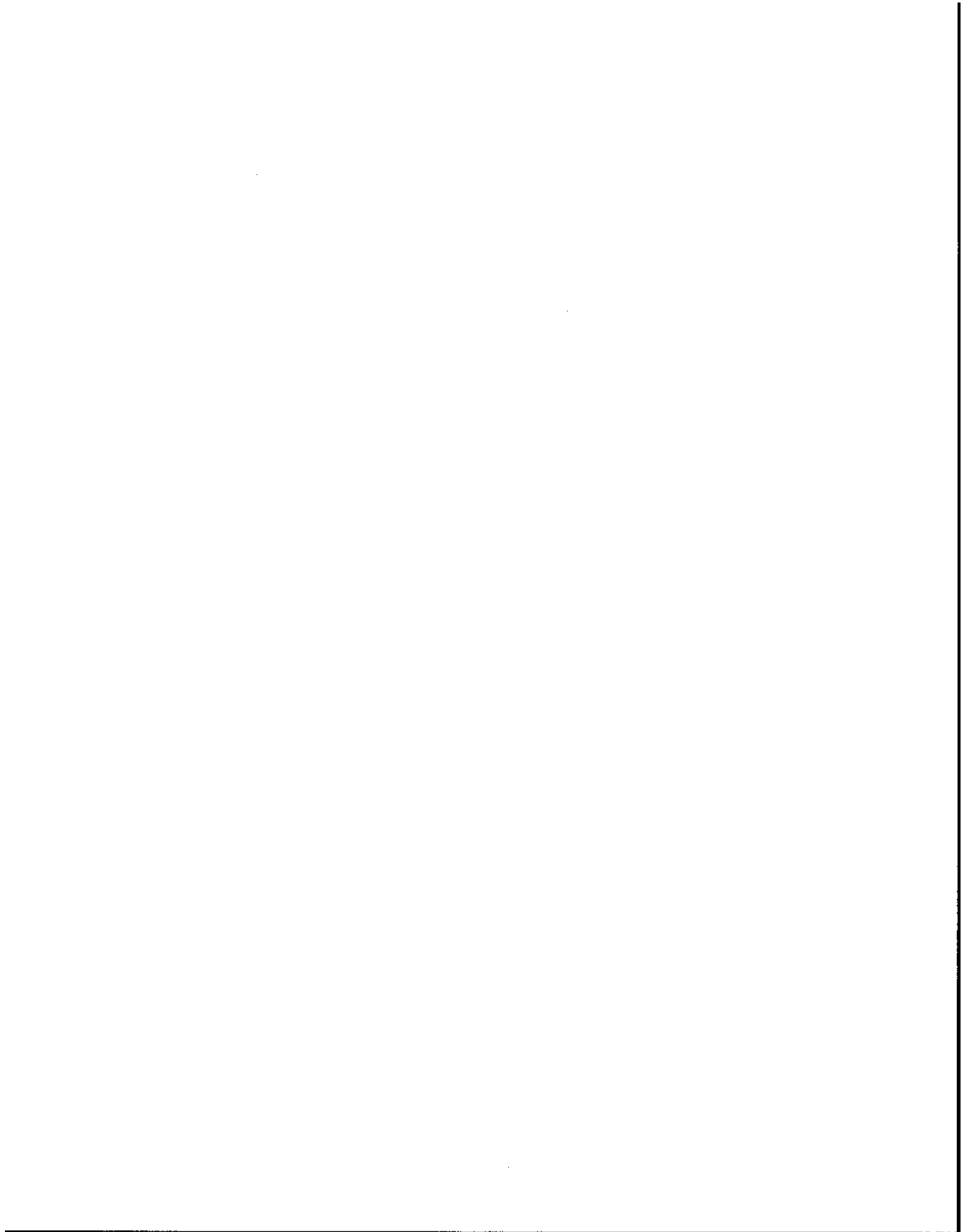


## IDENTIFICATION SECTION—Con.

Field name	Data dictionary reference name	Field size	Starting position	Data type
<div style="border: 1px solid black; padding: 5px;"> <p>83 Joint area American Indian reservation equivalent; "joint area" is appended to the name of the entity in census publications and related data products.</p> <p>84 Pueblo American Indian reservation; "Pueblo" is appended to the name of the entity in census publications and related data products.</p> <p>85 Rancheria American Indian reservation; "Rancheria" is appended to the name of the entity in census publications and related data products.</p> <p>86 Reservation American Indian reservation; "Reservation" is appended to the name of the entity in census publications and related data products.</p> <p>87 Reserve American Indian reservation; "Reserve" is appended to the name of the entity in census publications and related data products.</p> <p>88 Tribal jurisdiction statistical area American Indian reservation equivalent representing historic tribal areas in Oklahoma; "TJSA" is appended to the name of the entity in census publications and related data products.</p> <p>89 Trust lands American Indian reservation equivalent; no status is appended to the name of the entity in census publications and related data products.</p> <p>90 (none) American Indian reservation; no status is appended to the name of the entity in census publications and related data products.</p> </div>				
Population Count (100 percent) <sup>18</sup> .....	POP100	9	291	A/N
Special Flag.....	SPFLAG	1	300	A/N

### Footnotes

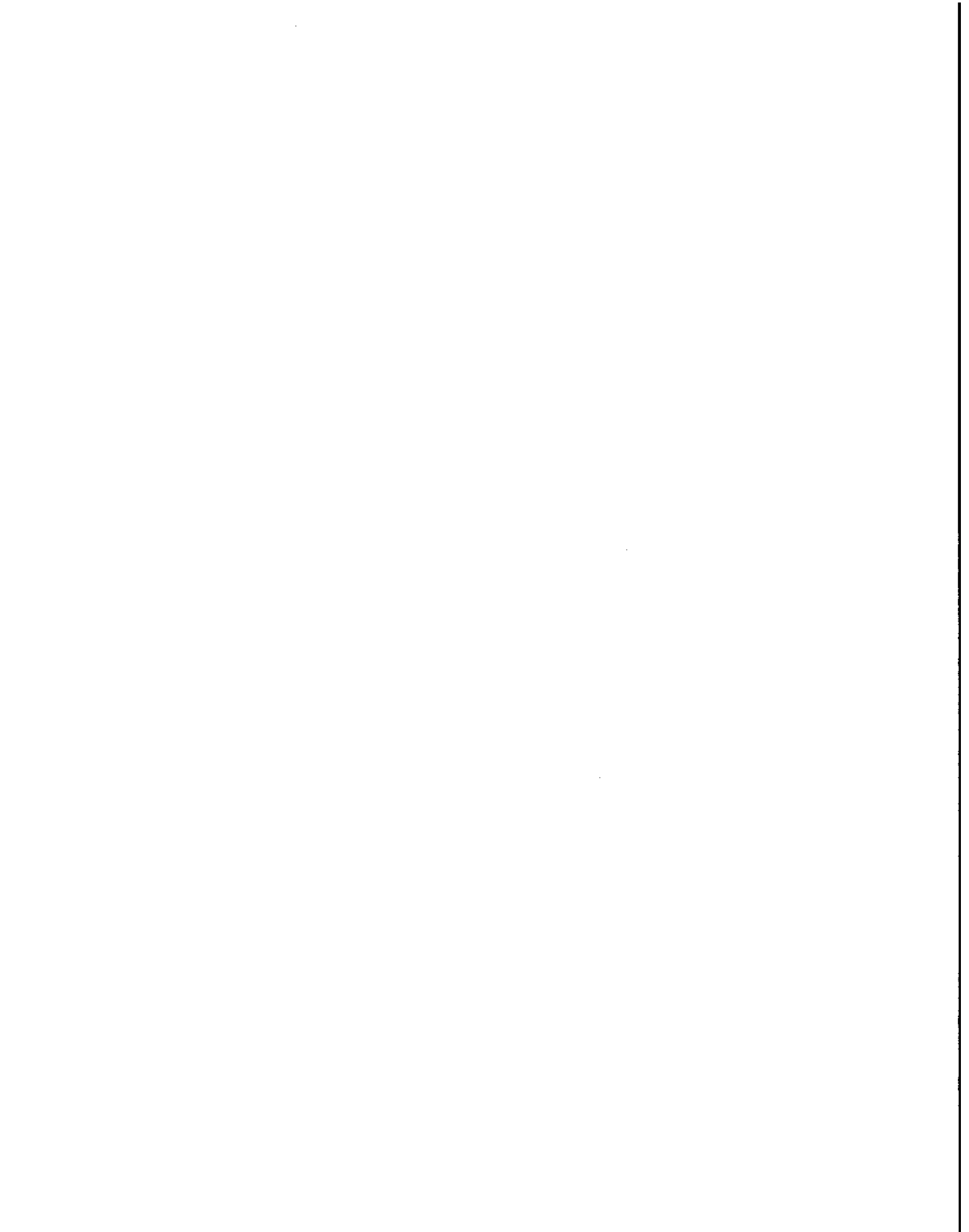
1. A unique identifier for each file series. Dress rehearsal files have a "D" in the character following the last character in the file identification code for the equivalent 1990 decennial census file; for example, PL94171D is the identifier for the dress rehearsal file for the P.L. 94-171 data. File identification code for the P.L. 94-171 file is PL94171. File identification codes for summary tape files are STFnn where nn = file number; for example, STF1A is the identification for Summary Tape File 1A. File identification codes for subject summary tape files are SSTFnn where nn = the number of the subject report. File identification codes for special project files are identified by SPmmm where mmm = a three digit special project number. See How to Use This File for further information.
2. Identifies the geographic level for which the data matrices on the summary tape file have been summarized. The summary level sequence chart describes the hierarchical arrangement of the specified geographic areas with other geographic areas, if any. The summary level must be used in combination with the geographic area codes to identify a specific geographic area (for example, summary level 050 and a specific county code must be used together to locate the data for a particular county). See How to Use This File for further information.
3. Indicates an iteration (repetition), for the specified summary level, of the data matrices on the summary tape file for the geographic components listed in the Geographic Component field. See How To Use This File for further information.
4. Indicates an iteration (repetition), for the specified summary level, of the data matrices on the summary tape file for a population or housing characteristic. Only matrices containing a "B" in the prefix have characteristic iterations. See How to Use This File for further information.
5. The logical record is the complete record [identification and set of tables (matrices)] for a geographic entity defined by the summary level, but exclusive of the characteristic iteration. A logical record may have one or more parts (or segments). Each logical record has an assigned sequential integer number within the file. See How to Use This File for further information.
6. Within the logical record, each part is identified uniquely in terms of its sequence. See How to Use This File for further information.
7. This field identifies how many parts (or segments) comprise the entire logical record. See How to Use This File for further information.
8. See Appendix A, Area Classifications, for definition of this field if it is applicable to this file.



## IDENTIFICATION SECTION—Con.

9. See the publication, *Geographic Identification Code Scheme*, for codes in this field and related terminology if it is applicable to this file. See Appendix A, *Area Classifications*, for definition of this field if it is applicable to this file.
10. See the publication, *Geographic Identification Code Scheme*, for FIPS 55 codes in this field and related terminology if it is applicable to this file. See Appendix A, *Area Classifications*, for definition of this field if it is applicable to this file.
11. Codes in unspecified arrangement for Census Bureau use.
12. Land area measurement in thousandths (.001) of a square kilometer. The accuracy of the area measurement is limited by the inaccuracy inherent in 1) the mapping of the various boundary features in the TIGER File and 2) rounding affecting the last digit in all operations that compute and/or sum the area measurements. Land area includes intermittent water and glaciers, which appear on census maps and in the TIGER File as hydrographic features. An area of .0005 square kilometer is rounded to .001; an area smaller than .0005 is rounded to .000. The decimal point is implied on the file. Square miles can be derived by dividing square kilometers by 2.59. See Appendix A, *Area Classifications*, for definition of this field if it is applicable to this file.
13. Water area measurement in thousandths (.001) of a square kilometer. Water area is excluded from census blocks by definition, so the water area for a block always will be zero. The accuracy of the area measurement is limited by the inaccuracy inherent in 1) the mapping of the various boundary features in the TIGER File and 2) rounding affecting the last digit in all operations that compute and/or sum the area measurements. Water area excludes intermittent water and glaciers, which are treated as land even though they appear on census maps and in the TIGER File as hydrographic features. An area of .0005 square kilometer is rounded to .001; an area smaller than .0005 is rounded to .000. The decimal point is implied on the file. Square miles can be derived by dividing square kilometers by 2.59. See Appendix A, *Area Classifications*, for definition of this field if it is applicable to this file.
14. Name of the lowest-level entity represented by the summary level. In addition to the name of the entity, the name field contains the political/statistical area description (PSAD) when appropriate, and sometimes contains the State abbreviation.  
  
For legal entities, the name is the one reported to the Bureau of the Census in the Boundary and Annexation Survey and by other appropriate sources; for statistical entities, the name is determined by the Office of Management and Budget for metropolitan areas and, for other areas, the name is determined by the Bureau of the Census, usually in cooperation with local officials.  
  
When the summary level represents only part of the area specified in the name, the name usually will have "(pt.)" appended to the name/code terminology to designate that this entry for the entity represents only a part of the total entity.
15. The total number of housing units enumerated in the specified summary level as determined in the 100-percent processing.
16. Latitude in degrees, to six decimal places, of a point within the geographic area represented by the summary level. The decimal point is implied on the file. The character immediately preceding the first digit of the latitude of an internal point identifies the direction (hemisphere): a plus sign (+) indicates the Northern Hemisphere; a minus sign (-) indicates the Southern Hemisphere. See Appendix A, *Area Classifications*, for definition of this field if it is applicable to this file.
17. Longitude in degrees, to six decimal places, of a point with the geographic area represented by the summary level. The decimal point is implied on the file. The character immediately preceding the first digit of the longitude of an internal point identifies the direction (hemisphere): a plus sign (+) indicates the Eastern Hemisphere; a minus sign (-) indicates the Western Hemisphere. A point on the 180th meridian is assigned to the Western Hemisphere (-180000000). See Appendix A, *Area Classifications*, for definition of this field if it is applicable to this file.
18. The total number of persons enumerated in the specified summary level as determined in the 100-percent processing.





# TABLE (MATRIX) SECTION

Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P1.	DETAILED OCCUPATION(512) BY SEX(2) {1024}			
	Universe: Civilian labor force			
	Legislators (001-003):			
	Male.....	301 .....	301.....	1,1
	Female.....	310 .....	310.....	1,2
	Chief executives and general administrators, public administration (004):			
	(Repeat SEX).....	319 .....	319.....	2,1
	Administrators and officials, public administration (005):			
	(Repeat SEX).....	337 .....	337.....	3,1
	Administrators, protective services (006):			
	(Repeat SEX).....	355 .....	355.....	4,1
	Financial managers (007):			
	(Repeat SEX).....	373 .....	373.....	5,1
	Personnel and labor relations managers (008):			
	(Repeat SEX).....	391 .....	391.....	6,1
	Purchasing managers (009-012):			
	(Repeat SEX).....	409 .....	409.....	7,1
	Managers, marketing, advertising, and public relations (013):			
	(Repeat SEX).....	427 .....	427.....	8,1
	Administrators, education and related fields (014):			
	(Repeat SEX).....	445 .....	445.....	9,1
	Managers, medicine and health (015):			
	(Repeat SEX).....	463 .....	463.....	10,1
	Postmasters and mail superintendents (016):			
	(Repeat SEX).....	481 .....	481.....	11,1
	Managers, food serving and lodging establishments (017):			
	(Repeat SEX).....	499 .....	499.....	12,1
	Managers, properties and real estate (018):			
	(Repeat SEX).....	517 .....	517.....	13,1
	Funeral directors (019-020):			
	(Repeat SEX).....	535 .....	535.....	14,1
	Managers, service organizations, n.e.c. (021):			
	(Repeat SEX).....	553 .....	553.....	15,1
	Managers and administrators, n.e.c., salaried (022) (Class of worker codes 1-5, 7, 9): <sup>1</sup>			
	(Repeat SEX).....	571 .....	571.....	16,1
	Managers and administrators, n.e.c., self-employed (022) (Class of worker codes 6, 8): <sup>1</sup>			
	(Repeat SEX).....	589 .....	589.....	17,1
	Accountants and auditors (023):			
	(Repeat SEX).....	607 .....	607.....	18,1
	Underwriters (024):			
	(Repeat SEX).....	625 .....	625.....	19,1
	Other financial officers (025):			
	(Repeat SEX).....	643 .....	643.....	20,1
	Management analysts (026):			
	(Repeat SEX).....	661 .....	661.....	21,1
	Personnel, training, and labor relations specialists (027):			
	(Repeat SEX).....	679 .....	679.....	22,1
	Purchasing agents and buyers, farm products (028):			
	(Repeat SEX).....	697 .....	697.....	23,1
	Buyers, wholesale and retail trade, except farm products (029-032):			
	(Repeat SEX).....	715 .....	715.....	24,1
	Purchasing agents and buyers, n.e.c. (033):			
	(Repeat SEX).....	733 .....	733.....	25,1
	Business and promotion agents (034):			
	(Repeat SEX).....	751 .....	751.....	26,1

<sup>1</sup> See How to Use This File for class of worker code definitions.



TABLE (MATRIX) SECTION—Con.

Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P1.	DETAILED OCCUPATION(512) BY SEX(2) [1024]—Con.			
	Construction Inspectors (035):			
	(Repeat SEX) .....	769 .....	769 .....	27,1
	Inspectors and compliance officers, except construction (036):			
	(Repeat SEX) .....	787 .....	787 .....	28,1
	Management related occupations, n.e.c. (037-042):			
	(Repeat SEX) .....	805 .....	805 .....	29,1
	Architects (043):			
	(Repeat SEX) .....	823 .....	823 .....	30,1
	Aerospace (044):			
	(Repeat SEX) .....	841 .....	841 .....	31,1
	Metallurgical and materials (045):			
	(Repeat SEX) .....	859 .....	859 .....	32,1
	Mining (046):			
	(Repeat SEX) .....	877 .....	877 .....	33,1
	Petroleum (047):			
	(Repeat SEX) .....	895 .....	895 .....	34,1
	Chemical (048):			
	(Repeat SEX) .....	913 .....	913 .....	35,1
	Nuclear (049-052):			
	(Repeat SEX) .....	931 .....	931 .....	36,1
	Civil (053):			
	(Repeat SEX) .....	949 .....	949 .....	37,1
	Agricultural (054):			
	(Repeat SEX) .....	967 .....	967 .....	38,1
	Electrical and electronic (055):			
	(Repeat SEX) .....	985 .....	985 .....	39,1
	Industrial (056):			
	(Repeat SEX) .....	1003 .....	1003 .....	40,1
	Mechanical (057):			
	(Repeat SEX) .....	1021 .....	1021 .....	41,1
	Marine and naval architects (058):			
	(Repeat SEX) .....	1039 .....	1039 .....	42,1
	Engineers, n.e.c. (059-062):			
	(Repeat SEX) .....	1057 .....	1057 .....	43,1
	Surveyors and mapping scientists (063):			
	(Repeat SEX) .....	1075 .....	1075 .....	44,1
	Computer systems analysts and scientists (064):			
	(Repeat SEX) .....	1093 .....	1093 .....	45,1
	Operations and systems researchers and analysts (065):			
	(Repeat SEX) .....	1111 .....	1111 .....	46,1
	Actuaries (066):			
	(Repeat SEX) .....	1129 .....	1129 .....	47,1
	Statisticians (067):			
	(Repeat SEX) .....	1147 .....	1147 .....	48,1
	Mathematical scientists, n.e.c. (068):			
	(Repeat SEX) .....	1165 .....	1165 .....	49,1
	Physicists and astronomers (069-072):			
	(Repeat SEX) .....	1183 .....	1183 .....	50,1
	Chemists, except biochemists (073):			
	(Repeat SEX) .....	1201 .....	1201 .....	51,1
	Atmospheric and space scientists (074):			
	(Repeat SEX) .....	1219 .....	1219 .....	52,1
	Geologists and geodesists (075):			
	(Repeat SEX) .....	1237 .....	1237 .....	53,1
	Physical scientists, n.e.c. (076):			
	(Repeat SEX) .....	1255 .....	1255 .....	54,1
	Agricultural and food scientists (077):			
	(Repeat SEX) .....	1273 .....	1273 .....	55,1



TABLE (MATRIX) SECTION—Con.

Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P1.	DETAILED OCCUPATION(512) BY SEX(2) [1024]—Con.			
	Biological and life scientists (078):			
	(Repeat SEX).....	1291 .....	1291 .....	56,1
	Forestry and conservation scientists (079-082):			
	(Repeat SEX).....	1309 .....	1309 .....	57,1
	Medical scientists (083):			
	(Repeat SEX).....	1327 .....	1327 .....	58,1
	Physicians (084):			
	(Repeat SEX).....	1345 .....	1345 .....	59,1
	Dentists (085):			
	(Repeat SEX).....	1363 .....	1363 .....	60,1
	Veterinarians (086):			
	(Repeat SEX).....	1381 .....	1381 .....	61,1
	Optometrists (087):			
	(Repeat SEX).....	1399 .....	1399 .....	62,1
	Podiatrists (088):			
	(Repeat SEX).....	1417 .....	1417 .....	63,1
	Health diagnosing practitioners, n.e.c. (089-094):			
	(Repeat SEX).....	1435 .....	1435 .....	64,1
	Registered nurses (095):			
	(Repeat SEX).....	1453 .....	1453 .....	65,1
	Pharmacists (096):			
	(Repeat SEX).....	1471 .....	1471 .....	66,1
	Dietitians (097):			
	(Repeat SEX).....	1489 .....	1489 .....	67,1
	Respiratory therapists (098):			
	(Repeat SEX).....	1507 .....	1507 .....	68,1
	Occupational therapists (099-102):			
	(Repeat SEX).....	1525 .....	1525 .....	69,1
	Physical therapists (103):			
	(Repeat SEX).....	1543 .....	1543 .....	70,1
	Speech therapists (104):			
	(Repeat SEX).....	1561 .....	1561 .....	71,1
	Therapists, n.e.c. (105):			
	(Repeat SEX).....	1579 .....	1579 .....	72,1
	Physicians' assistants (106-112):			
	(Repeat SEX).....	1597 .....	1597 .....	73,1
	Earth, environmental, and marine science teachers (113):			
	(Repeat SEX).....	1615 .....	1615 .....	74,1
	Biological science teachers (114):			
	(Repeat SEX).....	1633 .....	1633 .....	75,1
	Chemistry teachers (115):			
	(Repeat SEX).....	1651 .....	1651 .....	76,1
	Physics teachers (116):			
	(Repeat SEX).....	1669 .....	1669 .....	77,1
	Natural science teachers, n.e.c. (117):			
	(Repeat SEX).....	1687 .....	1687 .....	78,1
	Psychology teachers (118):			
	(Repeat SEX).....	1705 .....	1705 .....	79,1
	Economics teachers (119-122):			
	(Repeat SEX).....	1723 .....	1723 .....	80,1
	History teachers (123):			
	(Repeat SEX).....	1741 .....	1741 .....	81,1
	Political science teachers (124):			
	(Repeat SEX).....	1759 .....	1759 .....	82,1
	Sociology teachers (125):			
	(Repeat SEX).....	1777 .....	1777 .....	83,1
	Social science teachers, n.e.c. (126):			
	(Repeat SEX).....	1795 .....	1795 .....	84,1



**TABLE (MATRIX) SECTION—Con.**

Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P1.	DETAILED OCCUPATION(512) BY SEX(2) [1024]—Con.			
	Engineering teachers (127):			
	(Repeat SEX) .....	1813 .....	1813 .....	85,1
	Mathematical science teachers (128):			
	(Repeat SEX) .....	1831 .....	1831 .....	86,1
	Computer science teachers (129-132):			
	(Repeat SEX) .....	1849 .....	1849 .....	87,1
	Medical science teachers (133):			
	(Repeat SEX) .....	1867 .....	1867 .....	88,1
	Health specialties teachers (134):			
	(Repeat SEX) .....	1885 .....	1885 .....	89,1
	Business, commerce, and marketing teachers (135):			
	(Repeat SEX) .....	1903 .....	1903 .....	90,1
	Agriculture and forestry teachers (136):			
	(Repeat SEX) .....	1921 .....	1921 .....	91,1
	Art, drama, and music teachers (137):			
	(Repeat SEX) .....	1939 .....	1939 .....	92,1
	Physical education teachers (138):			
	(Repeat SEX) .....	1957 .....	1957 .....	93,1
	Education teachers (139-142):			
	(Repeat SEX) .....	1975 .....	1975 .....	94,1
	English teachers (143):			
	(Repeat SEX) .....	1993 .....	1993 .....	95,1
	Foreign language teachers (144):			
	(Repeat SEX) .....	2011 .....	2011 .....	96,1
	Law teachers (145):			
	(Repeat SEX) .....	2029 .....	2029 .....	97,1
	Social work teachers (146):			
	(Repeat SEX) .....	2047 .....	2047 .....	98,1
	Theology teachers (147):			
	(Repeat SEX) .....	2065 .....	2065 .....	99,1
	Trade and industrial teachers (148):			
	(Repeat SEX) .....	2083 .....	2083 .....	100,1
	Home economics teachers (149-152):			
	(Repeat SEX) .....	2101 .....	2101 .....	101,1
	Teachers, postsecondary, n.e.c. (153):			
	(Repeat SEX) .....	2119 .....	2119 .....	102,1
	Postsecondary teachers, subject not specified (154):			
	(Repeat SEX) .....	2137 .....	2137 .....	103,1
	Teachers, prekindergarten and kindergarten (155):			
	(Repeat SEX) .....	2155 .....	2155 .....	104,1
	Teachers, elementary school (156):			
	(Repeat SEX) .....	2173 .....	2173 .....	105,1
	Teachers, secondary school (157):			
	(Repeat SEX) .....	2191 .....	2191 .....	106,1
	Teachers, special education (158):			
	(Repeat SEX) .....	2209 .....	2209 .....	107,1
	Teachers, n.e.c. (159-162):			
	(Repeat SEX) .....	2227 .....	2227 .....	108,1
	Counselors, educational and vocational (163):			
	(Repeat SEX) .....	2245 .....	2245 .....	109,1
	Librarians (164):			
	(Repeat SEX) .....	2263 .....	2263 .....	110,1
	Archivists and curators (165):			
	(Repeat SEX) .....	2281 .....	2281 .....	111,1
	Economists (166):			
	(Repeat SEX) .....	2299 .....	2299 .....	112,1
	Psychologists (167):			
	(Repeat SEX) .....	2317 .....	2317 .....	113,1





TABLE (MATRIX) SECTION—Con.

Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P1.	DETAILED OCCUPATION(512) BY SEX(2) [1024]—Con.			
	Sociologists (168):			
	(Repeat SEX).....	2335 .....	2335.....	114,1
	Social scientists, n.e.c. (169-172):			
	(Repeat SEX).....	2353 .....	2353.....	115,1
	Urban planners (173):			
	(Repeat SEX).....	2371 .....	2371.....	116,1
	Social workers (174):			
	(Repeat SEX).....	2389 .....	2389.....	117,1
	Recreation workers (175):			
	(Repeat SEX).....	2407 .....	2407.....	118,1
	Clergy (176):			
	(Repeat SEX).....	2425 .....	2425.....	119,1
	Religious workers, n.e.c. (177):			
	(Repeat SEX).....	2443 .....	2443.....	120,1
	Lawyers (178):			
	(Repeat SEX).....	2461 .....	2461.....	121,1
	Judges (179-182):			
	(Repeat SEX).....	2479 .....	2479.....	122,1
	Authors (183):			
	(Repeat SEX).....	2497 .....	2497.....	123,1
	Technical writers (184):			
	(Repeat SEX).....	2515 .....	2515.....	124,1
	Designers (185):			
	(Repeat SEX).....	2533 .....	2533.....	125,1
	Musicians and composers (186):			
	(Repeat SEX).....	2551 .....	2551.....	126,1
	Actors and directors (187):			
	(Repeat SEX).....	2569 .....	2569.....	127,1
	Painters, sculptors, craft-artists, and artist printmakers (188):			
	(Repeat SEX).....	2587 .....	2587.....	128,1
	Photographers (189-192):			
	(Repeat SEX).....	2605 .....	2605.....	129,1
	Dancers (193):			
	(Repeat SEX).....	2623 .....	2623.....	130,1
	Artists, performers, and related workers, n.e.c. (194):			
	(Repeat SEX).....	2641 .....	2641.....	131,1
	Editors and reporters (195-196):			
	(Repeat SEX).....	2659 .....	2659.....	132,1
	Public relations specialists (197):			
	(Repeat SEX).....	2677 .....	2677.....	133,1
	Announcers (198):			
	(Repeat SEX).....	2695 .....	2695.....	134,1
	Athletes (199-202):			
	(Repeat SEX).....	2713 .....	2713.....	135,1
	Clinical laboratory technologists and technicians (203):			
	(Repeat SEX).....	2731 .....	2731.....	136,1
	Dental hygienists (204):			
	(Repeat SEX).....	2749 .....	2749.....	137,1
	Health record technologists and technicians (205):			
	(Repeat SEX).....	2767 .....	2767.....	138,1
	Radiologic technicians (206):			
	(Repeat SEX).....	2785 .....	2785.....	139,1
	Licensed practical nurses (207):			
	(Repeat SEX).....	2803 .....	2803.....	140,1
	Health technologists and technicians, n.e.c. (208-212):			
	(Repeat SEX).....	2821 .....	2821.....	141,1
	Electrical and electronic technicians (213):			
	(Repeat SEX).....	2839 .....	2839.....	142,1

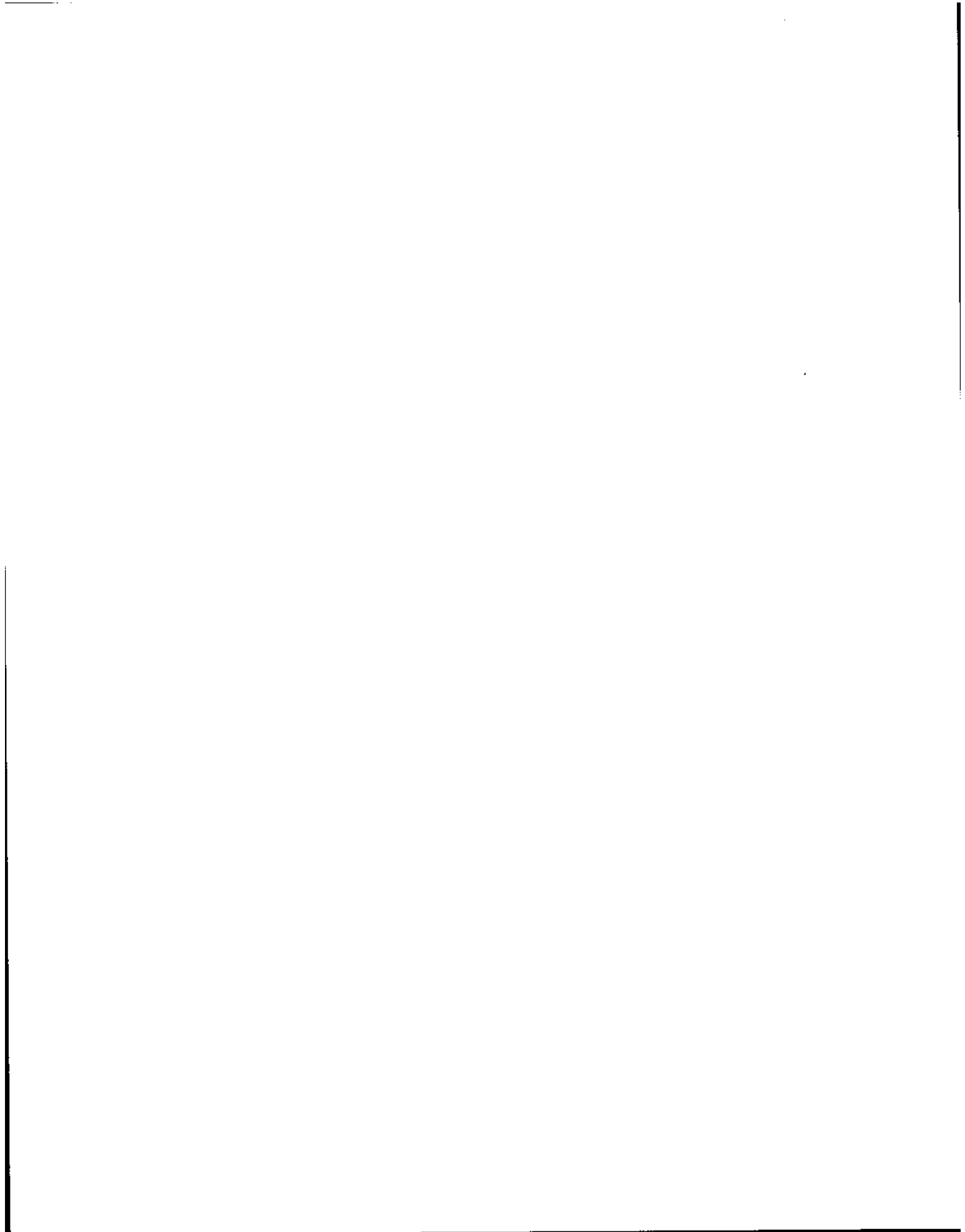


TABLE (MATRIX) SECTION—Con.

Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P1.	DETAILED OCCUPATION(512) BY SEX(2) [1024]—Con.			
	Industrial engineering technicians (214):			
	(Repeat SEX) .....	2857 .....	2857 .....	143,1
	Mechanical engineering technicians (215):			
	(Repeat SEX) .....	2875 .....	2875 .....	144,1
	Engineering technicians, n.e.c. (216):			
	(Repeat SEX) .....	2893 .....	2893 .....	145,1
	Drafting occupations (217):			
	(Repeat SEX) .....	2911 .....	2911 .....	146,1
	Surveying and mapping technicians (218-222):			
	(Repeat SEX) .....	2929 .....	2929 .....	147,1
	Biological technicians (223):			
	(Repeat SEX) .....	2947 .....	2947 .....	148,1
	Chemical technicians (224):			
	(Repeat SEX) .....	2965 .....	2965 .....	149,1
	Science technicians, n.e.c. (225):			
	(Repeat SEX) .....	2983 .....	2983 .....	150,1
	Airplane pilots and navigators (226):			
	(Repeat SEX) .....	3001 .....	3001 .....	151,1
	Air traffic controllers (227):			
	(Repeat SEX) .....	3019 .....	3019 .....	152,1
	Broadcast equipment operators (228):			
	(Repeat SEX) .....	3037 .....	3037 .....	153,1
	Computer programmers (229-232):			
	(Repeat SEX) .....	3055 .....	3055 .....	154,1
	Tool programmers, numerical control (233):			
	(Repeat SEX) .....	3073 .....	3073 .....	155,1
	Legal assistants (234):			
	(Repeat SEX) .....	3091 .....	3091 .....	156,1
	Technicians, n.e.c. (235-242):			
	(Repeat SEX) .....	3109 .....	3109 .....	157,1
	Supervisors and proprietors, sales occupations, salaried (243-252)			
	(Class of worker codes 1-5, 7, 9):			
	(Repeat SEX) .....	3127 .....	3127 .....	158,1
	Supervisors and proprietors, sales occupations, self employed			
	(243-252) (Class of worker codes 6, 8):			
	(Repeat SEX) .....	3145 .....	3145 .....	159,1
	Insurance sales occupations (253):			
	(Repeat SEX) .....	3163 .....	3163 .....	160,1
	Real estate sales occupations (254):			
	(Repeat SEX) .....	3181 .....	3181 .....	161,1
	Securities and financial services sales occupations (255):			
	(Repeat SEX) .....	3199 .....	3199 .....	162,1
	Advertising and related sales occupations (256):			
	(Repeat SEX) .....	3217 .....	3217 .....	163,1
	Sales occupations, other business services (257):			
	(Repeat SEX) .....	3235 .....	3235 .....	164,1
	Sales engineers (258):			
	(Repeat SEX) .....	3253 .....	3253 .....	165,1
	Sales representatives, mining, manufacturing, and wholesale			
	(259-262):			
	(Repeat SEX) .....	3271 .....	3271 .....	166,1
	Sales workers, motor vehicles and boats (263):			
	(Repeat SEX) .....	3289 .....	3289 .....	167,1
	Sales workers, apparel (264):			
	(Repeat SEX) .....	3307 .....	3307 .....	168,1
	Sales workers, shoes (265):			
	(Repeat SEX) .....	3325 .....	3325 .....	169,1
	Sales workers, furniture and home furnishings (266):			
	(Repeat SEX) .....	3343 .....	3343 .....	170,1



**TABLE (MATRIX) SECTION—Con.**

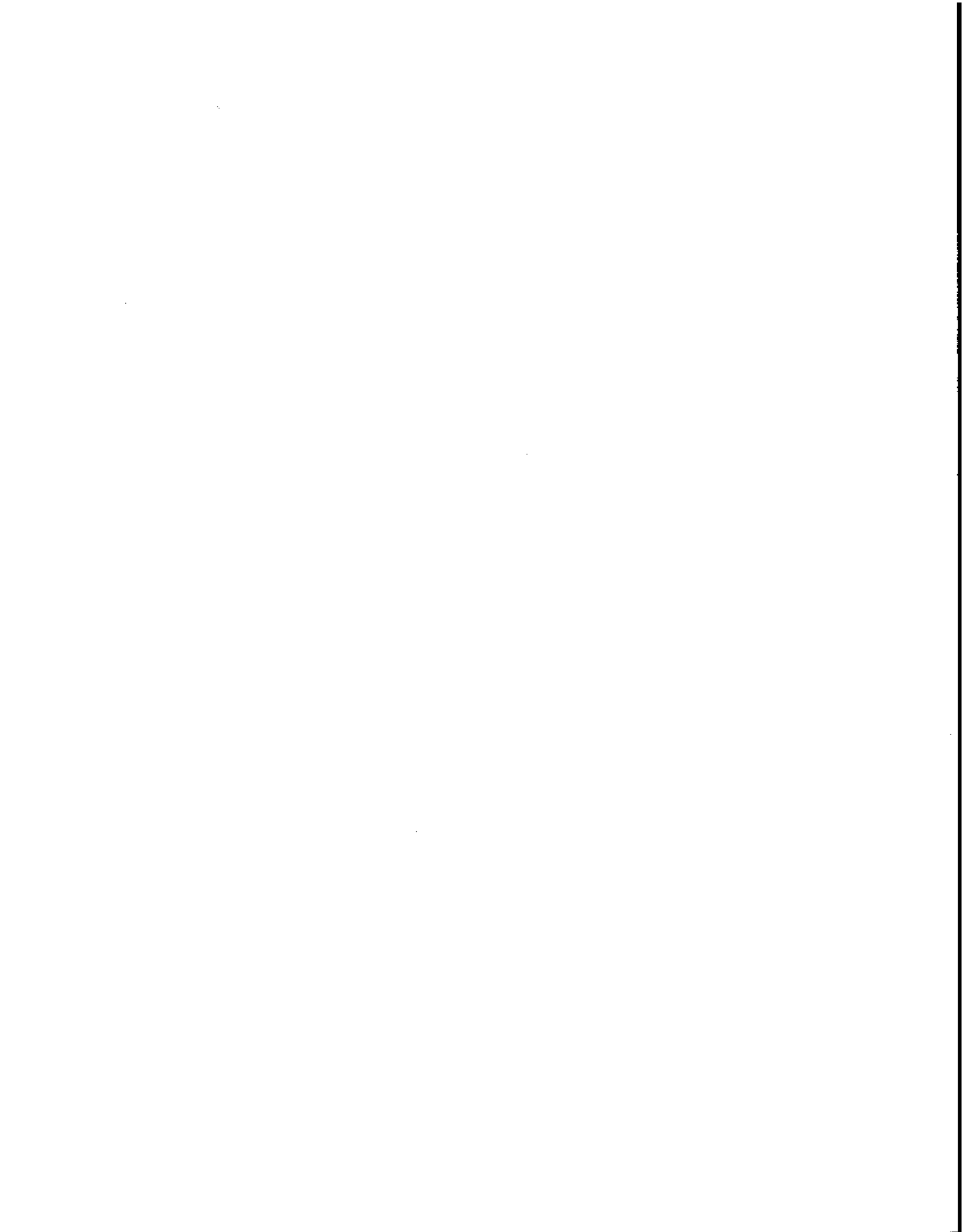
Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P1.	DETAILED OCCUPATION(512) BY SEX(2) [1024]—Con.			
	Sales workers, radio, TV, hi-fi, and appliances (267):			
	(Repeat SEX).....	3361 .....	3361 .....	171,1
	Sales workers, hardware and building supplies (268):			
	(Repeat SEX).....	3379 .....	3379 .....	172,1
	Sales workers, parts (269-273):			
	(Repeat SEX).....	3397 .....	3397 .....	173,1
	Sales workers, other commodities (274):			
	(Repeat SEX).....	3415 .....	3415 .....	174,1
	Sales counter clerks (275):			
	(Repeat SEX).....	3433 .....	3433 .....	175,1
	Cashiers (276):			
	(Repeat SEX).....	3451 .....	3451 .....	176,1
	Street and door-to-door sales workers (277):			
	(Repeat SEX).....	3469 .....	3469 .....	177,1
	News vendors (278-282):			
	(Repeat SEX).....	3487 .....	3487 .....	178,1
	Demonstrators, promoters and models, sales (283):			
	(Repeat SEX).....	3505 .....	3505 .....	179,1
	Auctioneers (284):			
	(Repeat SEX).....	3523 .....	3523 .....	180,1
	Sales support occupations, n.e.c. (285-302):			
	(Repeat SEX).....	3541 .....	3541 .....	181,1
	Supervisors, general office (303):			
	(Repeat SEX).....	3559 .....	3559 .....	182,1
	Supervisors, computer equipment operators (304):			
	(Repeat SEX).....	3577 .....	3577 .....	183,1
	Supervisors, financial records processing (305):			
	(Repeat SEX).....	3595 .....	3595 .....	184,1
	Chief communications operators (306):			
	(Repeat SEX).....	3613 .....	3613 .....	185,1
	Supervisors, distribution, scheduling, and adjusting clerks (307):			
	(Repeat SEX).....	3631 .....	3631 .....	186,1
	Computer operators (308):			
	(Repeat SEX).....	3649 .....	3649 .....	187,1
	Peripheral equipment operators (309-312):			
	(Repeat SEX).....	3667 .....	3667 .....	188,1
	Secretaries (313):			
	(Repeat SEX).....	3685 .....	3685 .....	189,1
	Stenographers (314):			
	(Repeat SEX).....	3703 .....	3703 .....	190,1
	Typists (315):			
	(Repeat SEX).....	3721 .....	3721 .....	191,1
	Interviewers (316):			
	(Repeat SEX).....	3739 .....	3739 .....	192,1
	Hotel clerks (317):			
	(Repeat SEX).....	3757 .....	3757 .....	193,1
	Transportation ticket and reservation agents (318):			
	(Repeat SEX).....	3775 .....	3775 .....	194,1
	Receptionists (319-322):			
	(Repeat SEX).....	3793 .....	3793 .....	195,1
	Information clerks, n.e.c. (323-324):			
	(Repeat SEX).....	3811 .....	3811 .....	196,1
	Classified-ad clerks (325):			
	(Repeat SEX).....	3829 .....	3829 .....	197,1
	Correspondence clerks (326):			
	(Repeat SEX).....	3847 .....	3847 .....	198,1
	Order clerks (327):			
	(Repeat SEX).....	3865 .....	3865 .....	199,1



TABLE (MATRIX) SECTION—Con.

Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P1.	DETAILED OCCUPATION(512) BY SEX(2) [1024]—Con.			
	Personnel clerks, except payroll and timekeeping (328):			
	(Repeat SEX) .....	3883 .....	3883 .....	200,1
	Library clerks (329-334):			
	(Repeat SEX) .....	3901 .....	3901 .....	201,1
	File clerks (335):			
	(Repeat SEX) .....	3919 .....	3919 .....	202,1
	Records clerks (336):			
	(Repeat SEX) .....	3937 .....	3937 .....	203,1
	Bookkeepers, accounting, and auditing clerks (337):			
	(Repeat SEX) .....	3955 .....	3955 .....	204,1
	Payroll and timekeeping clerks (338):			
	(Repeat SEX) .....	3973 .....	3973 .....	205,1
	Billing clerks (339-342):			
	(Repeat SEX) .....	3991 .....	3991 .....	206,1
	Cost and rate clerks (343):			
	(Repeat SEX) .....	4009 .....	4009 .....	207,1
	Billing, posting, and calculating machine operators (344):			
	(Repeat SEX) .....	4027 .....	4027 .....	208,1
	Duplicating machine operators (345):			
	(Repeat SEX) .....	4045 .....	4045 .....	209,1
	Mail preparing and paper handling machine operators (346):			
	(Repeat SEX) .....	4063 .....	4063 .....	210,1
	Office machine operators, n.e.c. (347):			
	(Repeat SEX) .....	4081 .....	4081 .....	211,1
	Telephone operators (348-352):			
	(Repeat SEX) .....	4099 .....	4099 .....	212,1
	Communications equipment operators, n.e.c. (353):			
	(Repeat SEX) .....	4117 .....	4117 .....	213,1
	Postal clerks, except mail carriers (354):			
	(Repeat SEX) .....	4135 .....	4135 .....	214,1
	Mail carriers, postal service (355):			
	(Repeat SEX) .....	4153 .....	4153 .....	215,1
	Mail clerks, except postal service (356):			
	(Repeat SEX) .....	4171 .....	4171 .....	216,1
	Messengers (357-358):			
	(Repeat SEX) .....	4189 .....	4189 .....	217,1
	Dispatchers (359-362):			
	(Repeat SEX) .....	4207 .....	4207 .....	218,1
	Production coordinators (363):			
	(Repeat SEX) .....	4225 .....	4225 .....	219,1
	Traffic, shipping, and receiving clerks (364):			
	(Repeat SEX) .....	4243 .....	4243 .....	220,1
	Stock and inventory clerks (365):			
	(Repeat SEX) .....	4261 .....	4261 .....	221,1
	Meter readers (366-367):			
	(Repeat SEX) .....	4279 .....	4279 .....	222,1
	Welghers, measurers, checkers, and samplers (368-372):			
	(Repeat SEX) .....	4297 .....	4297 .....	223,1
	Expeditors (373):			
	(Repeat SEX) .....	4315 .....	4315 .....	224,1
	Material recording, scheduling, and distributing clerks, n.e.c. (374):			
	(Repeat SEX) .....	4333 .....	4333 .....	225,1
	Insurance adjusters, examiners, and investigators (375):			
	(Repeat SEX) .....	4351 .....	4351 .....	226,1
	Investigators and adjusters, except insurance (376):			
	(Repeat SEX) .....	4369 .....	4369 .....	227,1
	Eligibility clerks, social welfare (377):			
	(Repeat SEX) .....	4387 .....	4387 .....	228,1





**TABLE (MATRIX) SECTION—Con.**

Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P1.	DETAILED OCCUPATION(512) BY SEX(2) [1024]—Con.			
	Bill and account collectors (378):			
	(Repeat SEX).....	4405 .....	4405 .....	229,1
	General office clerks (379-382):			
	(Repeat SEX).....	4423 .....	4423 .....	230,1
	Bank tellers (383):			
	(Repeat SEX).....	4441 .....	4441 .....	231,1
	Proofreaders (384):			
	(Repeat SEX).....	4459 .....	4459 .....	232,1
	Data-entry keyers (385):			
	(Repeat SEX).....	4477 .....	4477 .....	233,1
	Statistical clerks (386):			
	(Repeat SEX).....	4495 .....	4495 .....	234,1
	Teachers' aides (387-388):			
	(Repeat SEX).....	4513 .....	4513 .....	235,1
	Administrative support occupations, n.e.c. (389-402):			
	(Repeat SEX).....	4531 .....	4531 .....	236,1
	Launderers and ironers (403):			
	(Repeat SEX).....	4549 .....	4549 .....	237,1
	Cooks, private household (404):			
	(Repeat SEX).....	4567 .....	4567 .....	238,1
	Housekeepers and butlers (405):			
	(Repeat SEX).....	4585 .....	4585 .....	239,1
	Child care workers, private household (406):			
	(Repeat SEX).....	4603 .....	4603 .....	240,1
	Private household cleaners and servants (407-412):			
	(Repeat SEX).....	4621 .....	4621 .....	241,1
	Supervisors, firefighting and fire prevention occupations (413):			
	(Repeat SEX).....	4639 .....	4639 .....	242,1
	Supervisors, police and detectives (414):			
	(Repeat SEX).....	4657 .....	4657 .....	243,1
	Supervisors, guards (415):			
	(Repeat SEX).....	4675 .....	4675 .....	244,1
	Fire inspection and fire prevention occupations (416):			
	(Repeat SEX).....	4693 .....	4693 .....	245,1
	Firefighting occupations (417):			
	(Repeat SEX).....	4711 .....	4711 .....	246,1
	Police and detectives, public service (418-422):			
	(Repeat SEX).....	4729 .....	4729 .....	247,1
	Sheriffs, bailiffs, and other law enforcement officers (423):			
	(Repeat SEX).....	4747 .....	4747 .....	248,1
	Correctional institution officers (424):			
	(Repeat SEX).....	4765 .....	4765 .....	249,1
	Crossing guards (425):			
	(Repeat SEX).....	4783 .....	4783 .....	250,1
	Guards and police, except public service (426):			
	(Repeat SEX).....	4801 .....	4801 .....	251,1
	Protective service occupations, n.e.c. (427-432):			
	(Repeat SEX).....	4819 .....	4819 .....	252,1
	Supervisors, food preparation and service occupations (433):			
	(Repeat SEX).....	4837 .....	4837 .....	253,1
	Bartenders (434):			
	(Repeat SEX).....	4855 .....	4855 .....	254,1
	Walters and waitresses (435):			
	(Repeat SEX).....	4873 .....	4873 .....	255,1
	Cooks (436-437):			
	(Repeat SEX).....	4891 .....	4891 .....	256,1
	Food counter, fountain and related occupations (438):			
	(Repeat SEX).....	4909 .....	4909 .....	257,1



TABLE (MATRIX) SECTION—Con.

Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P1.	DETAILED OCCUPATION(512) BY SEX(2) [1024]—Con.			
	Kitchen workers, food preparation (439-442):			
	(Repeat SEX) .....	4927 .....	4927 .....	258,1
	Waiters'/waitresses' assistants (443):			
	(Repeat SEX) .....	4945 .....	4945 .....	259,1
	Miscellaneous food preparation occupations (444):			
	(Repeat SEX) .....	4963 .....	4963 .....	260,1
	Dental assistants (445):			
	(Repeat SEX) .....	4981 .....	4981 .....	261,1
	Health aides, except nursing (446):			
	(Repeat SEX) .....	4999 .....	4999 .....	262,1
	Nursing aides, orderlies, and attendants (447):			
	(Repeat SEX) .....	5017 .....	5017 .....	263,1
	Supervisors, cleaning and building service workers (448):			
	(Repeat SEX) .....	5035 .....	5035 .....	264,1
	Maids and housemen (449-452):			
	(Repeat SEX) .....	5053 .....	5053 .....	265,1
	Janitors and cleaners (453):			
	(Repeat SEX) .....	5071 .....	5071 .....	266,1
	Elevator operators (454):			
	(Repeat SEX) .....	5089 .....	5089 .....	267,1
	Pest control occupations (455):			
	(Repeat SEX) .....	5107 .....	5107 .....	268,1
	Supervisors, personal service occupations (456):			
	(Repeat SEX) .....	5125 .....	5125 .....	269,1
	Barbers (457):			
	(Repeat SEX) .....	5143 .....	5143 .....	270,1
	Hairdressers and cosmetologists (458):			
	(Repeat SEX) .....	5161 .....	5161 .....	271,1
	Attendants, amusement and recreation facilities (459-460):			
	(Repeat SEX) .....	5179 .....	5179 .....	272,1
	Guides (461):			
	(Repeat SEX) .....	5197 .....	5197 .....	273,1
	Ushers (462):			
	(Repeat SEX) .....	5215 .....	5215 .....	274,1
	Filler .....	5233 .....	5233 .....	
	End of Segment			
	Public transportation attendants (463):			
	(Repeat SEX) .....	5538 .....	301 .....	275,1
	Baggage porters and bellhops (464):			
	(Repeat SEX) .....	5556 .....	319 .....	276,1
	Welfare service aides (465):			
	(Repeat SEX) .....	5574 .....	337 .....	277,1
	Family child care providers (466):			
	(Repeat SEX) .....	5592 .....	355 .....	278,1
	Early childhood teacher's assistants (467):			
	(Repeat SEX) .....	5610 .....	373 .....	279,1
	Child care workers, n.e.c. (468):			
	(Repeat SEX) .....	5628 .....	391 .....	280,1
	Personal service occupations, n.e.c. (469-472):			
	(Repeat SEX) .....	5646 .....	409 .....	281,1
	Farmers, except horticultural (473):			
	(Repeat SEX) .....	5664 .....	427 .....	282,1
	Horticultural specialty farmers (474):			
	(Repeat SEX) .....	5682 .....	445 .....	283,1
	Managers, farms, except horticultural (475):			
	(Repeat SEX) .....	5700 .....	463 .....	284,1



TABLE (MATRIX) SECTION—Con.

Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P1.	DETAILED OCCUPATION(512) BY SEX(2) [1024]—Con.			
	Managers, horticultural specialty farms (476):			
	(Repeat SEX).....	5718 .....	481 .....	285,1
	Supervisors, farm workers (477-478):			
	(Repeat SEX).....	5736 .....	499 .....	286,1
	Farm workers (479-482):			
	(Repeat SEX).....	5754 .....	517 .....	287,1
	Marine life cultivation workers (483):			
	(Repeat SEX).....	5772 .....	535 .....	288,1
	Nursery workers (484):			
	(Repeat SEX).....	5790 .....	553 .....	289,1
	Supervisors, related agricultural occupations (485):			
	(Repeat SEX).....	5808 .....	571 .....	290,1
	Groundskeepers and gardeners, except farm (486):			
	(Repeat SEX).....	5826 .....	589 .....	291,1
	Animal caretakers, except farm (487):			
	(Repeat SEX).....	5844 .....	607 .....	292,1
	Graders and sorters, agricultural products (488):			
	(Repeat SEX).....	5862 .....	625 .....	293,1
	Inspectors, agricultural products (489-493):			
	(Repeat SEX).....	5880 .....	643 .....	294,1
	Supervisors, forestry and logging workers (494):			
	(Repeat SEX).....	5898 .....	661 .....	295,1
	Forestry workers, except logging (495):			
	(Repeat SEX).....	5916 .....	679 .....	296,1
	Timber cutting and logging occupations (496):			
	(Repeat SEX).....	5934 .....	697 .....	297,1
	Captains and other officers, fishing vessels (497):			
	(Repeat SEX).....	5952 .....	715 .....	298,1
	Fishers (498):			
	(Repeat SEX).....	5970 .....	733 .....	299,1
	Hunters and trappers (499-502):			
	(Repeat SEX).....	5988 .....	751 .....	300,1
	Supervisors, mechanics and repairers (503-504):			
	(Repeat SEX).....	6006 .....	769 .....	301,1
	Automobile mechanics, except apprentices (505):			
	(Repeat SEX).....	6024 .....	787 .....	302,1
	Automobile mechanic apprentices (506):			
	(Repeat SEX).....	6042 .....	805 .....	303,1
	Bus, truck, and stationary engine mechanics (507):			
	(Repeat SEX).....	6060 .....	823 .....	304,1
	Aircraft engine mechanics (508):			
	(Repeat SEX).....	6078 .....	841 .....	305,1
	Small engine repairers (509-513):			
	(Repeat SEX).....	6096 .....	859 .....	306,1
	Automobile body and related repairers (514):			
	(Repeat SEX).....	6114 .....	877 .....	307,1
	Aircraft mechanics, except engine (515):			
	(Repeat SEX).....	6132 .....	895 .....	308,1
	Heavy equipment mechanics (516):			
	(Repeat SEX).....	6150 .....	913 .....	309,1
	Farm equipment mechanics (517):			
	(Repeat SEX).....	6168 .....	931 .....	310,1
	Industrial machinery repairers (518):			
	(Repeat SEX).....	6186 .....	949 .....	311,1
	Machinery maintenance occupations (519-522):			
	(Repeat SEX).....	6204 .....	967 .....	312,1
	Electronic repairers, communications and industrial equipment (523-524):			
	(Repeat SEX).....	6222 .....	985 .....	313,1

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TABLE (MATRIX) SECTION—Con.

Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P1.	DETAILED OCCUPATION(512) BY SEX(2) [1024]—Con.			
	Data processing equipment repairers (525):			
	(Repeat SEX) .....	6240.....	1003 .....	314,1
	Household appliance and power tool repairers (526):			
	(Repeat SEX) .....	6258.....	1021 .....	315,1
	Telephone line installers and repairers (527-528):			
	(Repeat SEX) .....	6276.....	1039 .....	316,1
	Telephone installers and repairers (529-532):			
	(Repeat SEX) .....	6294.....	1057 .....	317,1
	Miscellaneous electrical and electronic equipment repairers (533):			
	(Repeat SEX) .....	6312.....	1075 .....	318,1
	Heating, air conditioning, and refrigeration mechanics (534):			
	(Repeat SEX) .....	6330.....	1093 .....	319,1
	Camera, watch, and musical instrument repairers (535):			
	(Repeat SEX) .....	6348.....	1111 .....	320,1
	Locksmiths and safe repairers (536-537):			
	(Repeat SEX) .....	6366.....	1129 .....	321,1
	Office machine repairers (538):			
	(Repeat SEX) .....	6384.....	1147 .....	322,1
	Mechanical controls and valve repairers (539-542):			
	(Repeat SEX) .....	6402.....	1165 .....	323,1
	Elevator installers and repairers (543):			
	(Repeat SEX) .....	6420.....	1183 .....	324,1
	Millwrights (544-546):			
	(Repeat SEX) .....	6438.....	1201 .....	325,1
	Specified mechanics and repairers, n.e.c. (547-548):			
	(Repeat SEX) .....	6456.....	1219 .....	326,1
	Not specified mechanics and repairers (549-552):			
	(Repeat SEX) .....	6474.....	1237 .....	327,1
	Supervisors, brickmasons, stonemasons, and tile setters (553):			
	(Repeat SEX) .....	6492.....	1255 .....	328,1
	Supervisors, carpenters and related workers (554):			
	(Repeat SEX) .....	6510.....	1273 .....	329,1
	Supervisors, electricians and power transmission installers (555):			
	(Repeat SEX) .....	6528.....	1291 .....	330,1
	Supervisors, painters, paperhangers, and plasterers (556):			
	(Repeat SEX) .....	6546.....	1309 .....	331,1
	Supervisors, plumbers, pipefitters, and steamfitters (557):			
	(Repeat SEX) .....	6564.....	1327 .....	332,1
	Supervisors, construction, n.e.c. (558-562):			
	(Repeat SEX) .....	6582.....	1345 .....	333,1
	Brickmasons and stonemasons, except apprentices (563):			
	(Repeat SEX) .....	6600.....	1363 .....	334,1
	Brickmason and stonemason apprentices (564):			
	(Repeat SEX) .....	6618.....	1381 .....	335,1
	Tile setters, hard and soft (565):			
	(Repeat SEX) .....	6636.....	1399 .....	336,1
	Carpet installers (566):			
	(Repeat SEX) .....	6654.....	1417 .....	337,1
	Carpenters, except apprentices (567-568):			
	(Repeat SEX) .....	6672.....	1435 .....	338,1
	Carpenter apprentices (569-572):			
	(Repeat SEX) .....	6690.....	1453 .....	339,1
	Drywall installers (573-574):			
	(Repeat SEX) .....	6708.....	1471 .....	340,1
	Electricians, except apprentices (575):			
	(Repeat SEX) .....	6726.....	1489 .....	341,1
	Electrician apprentices (576):			
	(Repeat SEX) .....	6744.....	1507 .....	342,1





TABLE (MATRIX) SECTION—Con.

Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P1.	DETAILED OCCUPATION(512) BY SEX(2) [1024]—Con.			
	Electrical power installers and repairers (577-578):			
	(Repeat SEX).....	6762 .....	1525 .....	343,1
	Painters, construction and maintenance (579-582):			
	(Repeat SEX).....	6780 .....	1543 .....	344,1
	Paperhangers (583):			
	(Repeat SEX).....	6798 .....	1561 .....	345,1
	Plasterers (584):			
	(Repeat SEX).....	6816 .....	1579 .....	346,1
	Plumbers, pipefitters, and steamfitters, except apprentices (585-586):			
	(Repeat SEX).....	6834 .....	1597 .....	347,1
	Plumber, pipefitter, and steamfitter apprentices (587):			
	(Repeat SEX).....	6852 .....	1615 .....	348,1
	Concrete and terrazzo finishers (588):			
	(Repeat SEX).....	6870 .....	1633 .....	349,1
	Glaziers (589-592):			
	(Repeat SEX).....	6888 .....	1651 .....	350,1
	Insulation workers (593):			
	(Repeat SEX).....	6906 .....	1669 .....	351,1
	Paving, surfacing, and tamping equipment operators (594):			
	(Repeat SEX).....	6924 .....	1687 .....	352,1
	Roofers (595):			
	(Repeat SEX).....	6942 .....	1705 .....	353,1
	Sheetmetal duct installers (596):			
	(Repeat SEX).....	6960 .....	1723 .....	354,1
	Structural metal workers (597):			
	(Repeat SEX).....	6978 .....	1741 .....	355,1
	Drillers, earth (598):			
	(Repeat SEX).....	6996 .....	1759 .....	356,1
	Construction trades, n.e.c. (599-612):			
	(Repeat SEX).....	7014 .....	1777 .....	357,1
	Supervisors, extractive occupations (613):			
	(Repeat SEX).....	7032 .....	1795 .....	358,1
	Drillers, oil well (614):			
	(Repeat SEX).....	7050 .....	1813 .....	359,1
	Explosives workers (615):			
	(Repeat SEX).....	7068 .....	1831 .....	360,1
	Mining machine operators (616):			
	(Repeat SEX).....	7086 .....	1849 .....	361,1
	Mining occupations, n.e.c. (617-627):			
	(Repeat SEX).....	7104 .....	1867 .....	362,1
	Supervisors, production occupations (628-633):			
	(Repeat SEX).....	7122 .....	1885 .....	363,1
	Tool and die makers, except apprentices (634):			
	(Repeat SEX).....	7140 .....	1903 .....	364,1
	Tool and die maker apprentices (635):			
	(Repeat SEX).....	7158 .....	1921 .....	365,1
	Precision assemblers, metal (636):			
	(Repeat SEX).....	7176 .....	1939 .....	366,1
	Machinists, except apprentices (637-638):			
	(Repeat SEX).....	7194 .....	1957 .....	367,1
	Machinist apprentices (639-642):			
	(Repeat SEX).....	7212 .....	1975 .....	368,1
	Boilermakers (643):			
	(Repeat SEX).....	7230 .....	1993 .....	369,1
	Precision grinders, filers, and tool sharpeners (644):			
	(Repeat SEX).....	7248 .....	2011 .....	370,1
	Patternmakers and model makers, metal (645):			
	(Repeat SEX).....	7266 .....	2029 .....	371,1

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TABLE (MATRIX) SECTION—Con.

Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P1.	DETAILED OCCUPATION(512) BY SEX(2) [1024]—Con.			
	Lay-out workers (646):			
	(Repeat SEX) .....	7284.....	2047 .....	372,1
	Precious stones and metals workers (Jewelers) (647-648):			
	(Repeat SEX) .....	7302.....	2065 .....	373,1
	Engravers, metal (649-652):			
	(Repeat SEX) .....	7320.....	2083 .....	374,1
	Sheet metal workers, except apprentices (653):			
	(Repeat SEX) .....	7338.....	2101 .....	375,1
	Sheet metal worker apprentices (654):			
	(Repeat SEX) .....	7356.....	2119 .....	376,1
	Miscellaneous precision metal workers (655):			
	(Repeat SEX) .....	7374.....	2137 .....	377,1
	Patternmakers and model makers, wood (656):			
	(Repeat SEX) .....	7392.....	2155 .....	378,1
	Cabinet makers and bench carpenters (657):			
	(Repeat SEX) .....	7410.....	2173 .....	379,1
	Furniture and wood finishers (658):			
	(Repeat SEX) .....	7428.....	2191 .....	380,1
	Miscellaneous precision woodworkers (659-665):			
	(Repeat SEX) .....	7446.....	2209 .....	381,1
	Dressmakers (666):			
	(Repeat SEX) .....	7464.....	2227 .....	382,1
	Tailors (667):			
	(Repeat SEX) .....	7482.....	2245 .....	383,1
	Upholsterers (668):			
	(Repeat SEX) .....	7500.....	2263 .....	384,1
	Shoe repairers (669-673):			
	(Repeat SEX) .....	7518.....	2281 .....	385,1
	Miscellaneous precision apparel and fabric workers (674):			
	(Repeat SEX) .....	7536.....	2299 .....	386,1
	Hand molders and shapers, except jewelers (675):			
	(Repeat SEX) .....	7554.....	2317 .....	387,1
	Patternmakers, lay-out workers, and cutters (676):			
	(Repeat SEX) .....	7572.....	2335 .....	388,1
	Optical goods workers (677):			
	(Repeat SEX) .....	7590.....	2353 .....	389,1
	Dental laboratory and medical appliance technicians (678):			
	(Repeat SEX) .....	7608.....	2371 .....	390,1
	Bookbinders (679-682):			
	(Repeat SEX) .....	7626.....	2389 .....	391,1
	Electrical and electronic equipment assemblers (683):			
	(Repeat SEX) .....	7644.....	2407 .....	392,1
	Miscellaneous precision workers, n.e.c. (684-685):			
	(Repeat SEX) .....	7662.....	2425 .....	393,1
	Butchers and meat cutters (686):			
	(Repeat SEX) .....	7680.....	2443 .....	394,1
	Bakers (687):			
	(Repeat SEX) .....	7698.....	2461 .....	395,1
	Food batchmakers (688):			
	(Repeat SEX) .....	7716.....	2479 .....	396,1
	Inspectors, testers, and graders (689-692):			
	(Repeat SEX) .....	7734.....	2497 .....	397,1
	Adjusters and calibrators (693):			
	(Repeat SEX) .....	7752.....	2515 .....	398,1
	Water and sewage treatment plant operators (694):			
	(Repeat SEX) .....	7770.....	2533 .....	399,1
	Power plant operators (695):			
	(Repeat SEX) .....	7788.....	2551 .....	400,1



**TABLE (MATRIX) SECTION—Con.**

Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P1.	DETAILED OCCUPATION(512) BY SEX(2) [1024]—Con.			
	Stationary engineers (696-698):			
	(Repeat SEX).....	7806 .....	2569 .....	401,1
	Miscellaneous plant and system operators (699-702):			
	(Repeat SEX).....	7824 .....	2587 .....	402,1
	Lathe and turning machine set-up operators (703):			
	(Repeat SEX).....	7842 .....	2605 .....	403,1
	Lathe and turning machine operators (704):			
	(Repeat SEX).....	7860 .....	2623 .....	404,1
	Milling and planing machine operators (705):			
	(Repeat SEX).....	7878 .....	2641 .....	405,1
	Punching and stamping press machine operators (706):			
	(Repeat SEX).....	7896 .....	2659 .....	406,1
	Rolling machine operators (707):			
	(Repeat SEX).....	7914 .....	2677 .....	407,1
	Drilling and boring machine operators (708):			
	(Repeat SEX).....	7932 .....	2695 .....	408,1
	Grinding, abrading, buffing, and polishing machine operators (709-712):			
	(Repeat SEX).....	7950 .....	2713 .....	409,1
	Forging machine operators (713):			
	(Repeat SEX).....	7968 .....	2731 .....	410,1
	Numerical control machine operators (714):			
	(Repeat SEX).....	7986 .....	2749 .....	411,1
	Miscellaneous metal, plastic, stone, and glass working machine operators (715-716):			
	(Repeat SEX).....	8004 .....	2767 .....	412,1
	Fabricating machine operators, n.e.c. (717-718):			
	(Repeat SEX).....	8022 .....	2785 .....	413,1
	Molding and casting machine operators (719-722):			
	(Repeat SEX).....	8040 .....	2803 .....	414,1
	Metal plating machine operators (723):			
	(Repeat SEX).....	8058 .....	2821 .....	415,1
	Heat treating equipment operators (724):			
	(Repeat SEX).....	8076 .....	2839 .....	416,1
	Miscellaneous metal and plastic processing machine operators (725):			
	(Repeat SEX).....	8094 .....	2857 .....	417,1
	Wood lathe, routing, and planing machine operators (726):			
	(Repeat SEX).....	8112 .....	2875 .....	418,1
	Sawing machine operators (727):			
	(Repeat SEX).....	8130 .....	2893 .....	419,1
	Shaping and joining machine operators (728):			
	(Repeat SEX).....	8148 .....	2911 .....	420,1
	Nailing and tacking machine operators (729-732):			
	(Repeat SEX).....	8166 .....	2929 .....	421,1
	Miscellaneous woodworking machine operators (733):			
	(Repeat SEX).....	8184 .....	2947 .....	422,1
	Printing press operators (734):			
	(Repeat SEX).....	8202 .....	2965 .....	423,1
	Photoengravers and lithographers (735):			
	(Repeat SEX).....	8220 .....	2983 .....	424,1
	Typesetters and compositors (736):			
	(Repeat SEX).....	8238 .....	3001 .....	425,1
	Miscellaneous printing machine operators (737):			
	(Repeat SEX).....	8256 .....	3019 .....	426,1
	Winding and twisting machine operators (738):			
	(Repeat SEX).....	8274 .....	3037 .....	427,1
	Knitting, looping, taping, and weaving machine operators (739-742):			
	(Repeat SEX).....	8292 .....	3055 .....	428,1



TABLE (MATRIX) SECTION—Con.

Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P1.	DETAILED OCCUPATION(512) BY SEX(2) [1024]—Con.			
	Textile cutting machine operators (743):			
	(Repeat SEX) .....	8310 .....	3073 .....	429,1
	Textile sewing machine operators (744):			
	(Repeat SEX) .....	8328 .....	3091 .....	430,1
	Shoe machine operators (745-746):			
	(Repeat SEX) .....	8346 .....	3109 .....	431,1
	Pressing machine operators (747):			
	(Repeat SEX) .....	8364 .....	3127 .....	432,1
	Laundering and dry cleaning machine operators (748):			
	(Repeat SEX) .....	8382 .....	3145 .....	433,1
	Miscellaneous textile machine operators (749-752):			
	(Repeat SEX) .....	8400 .....	3163 .....	434,1
	Cementing and gluing machine operators (753):			
	(Repeat SEX) .....	8418 .....	3181 .....	435,1
	Packaging and filling machine operators (754):			
	(Repeat SEX) .....	8436 .....	3199 .....	436,1
	Extruding and forming machine operators (755):			
	(Repeat SEX) .....	8454 .....	3217 .....	437,1
	Mixing and blending machine operators (756):			
	(Repeat SEX) .....	8472 .....	3235 .....	438,1
	Separating, filtering, and clarifying machine operators (757):			
	(Repeat SEX) .....	8490 .....	3253 .....	439,1
	Compressing and compacting machine operators (758):			
	(Repeat SEX) .....	8508 .....	3271 .....	440,1
	Painting and paint spraying machine operators (759-762):			
	(Repeat SEX) .....	8526 .....	3289 .....	441,1
	Roasting and baking machine operators, food (763):			
	(Repeat SEX) .....	8544 .....	3307 .....	442,1
	Washing, cleaning, and pickling machine operators (764):			
	(Repeat SEX) .....	8562 .....	3325 .....	443,1
	Folding machine operators (765):			
	(Repeat SEX) .....	8580 .....	3343 .....	444,1
	Furnace, kiln, and oven operators, except food (766-767):			
	(Repeat SEX) .....	8598 .....	3361 .....	445,1
	Crushing and grinding machine operators (768):			
	(Repeat SEX) .....	8616 .....	3379 .....	446,1
	Slicing and cutting machine operators (769-772):			
	(Repeat SEX) .....	8634 .....	3397 .....	447,1
	Motion picture projectionists (773):			
	(Repeat SEX) .....	8652 .....	3415 .....	448,1
	Photographic process machine operators (774-776):			
	(Repeat SEX) .....	8670 .....	3433 .....	449,1
	Manufacturing, nondurable goods (777-778) (Industry codes 100-229): <sup>2</sup>			
	(Repeat SEX) .....	8688 .....	3451 .....	450,1
	Manufacturing, durable goods (777-778) (Industry codes 230-399): <sup>2</sup>			
	(Repeat SEX) .....	8706 .....	3469 .....	451,1
	Nonmanufacturing industries (777-778) (Industry codes 010-099, 400-999): <sup>2</sup>			
	(Repeat SEX) .....	8724 .....	3487 .....	452,1
	Manufacturing, nondurable goods (779-782) (Industry codes 100-229): <sup>3</sup>			
	(Repeat SEX) .....	8742 .....	3505 .....	453,1
	Manufacturing, durable goods (779-782) (Industry codes 230-399): <sup>3</sup>			
	(Repeat SEX) .....	8760 .....	3523 .....	454,1
	Nonmanufacturing industries (779-782) (Industry codes 010-099, 400-999): <sup>3</sup>			
	(Repeat SEX) .....	8778 .....	3541 .....	455,1

<sup>2</sup>Industry tally of occupation "miscellaneous machine operators, n.e.c."<sup>3</sup>Industry tally of occupation "machine operators, not specified."



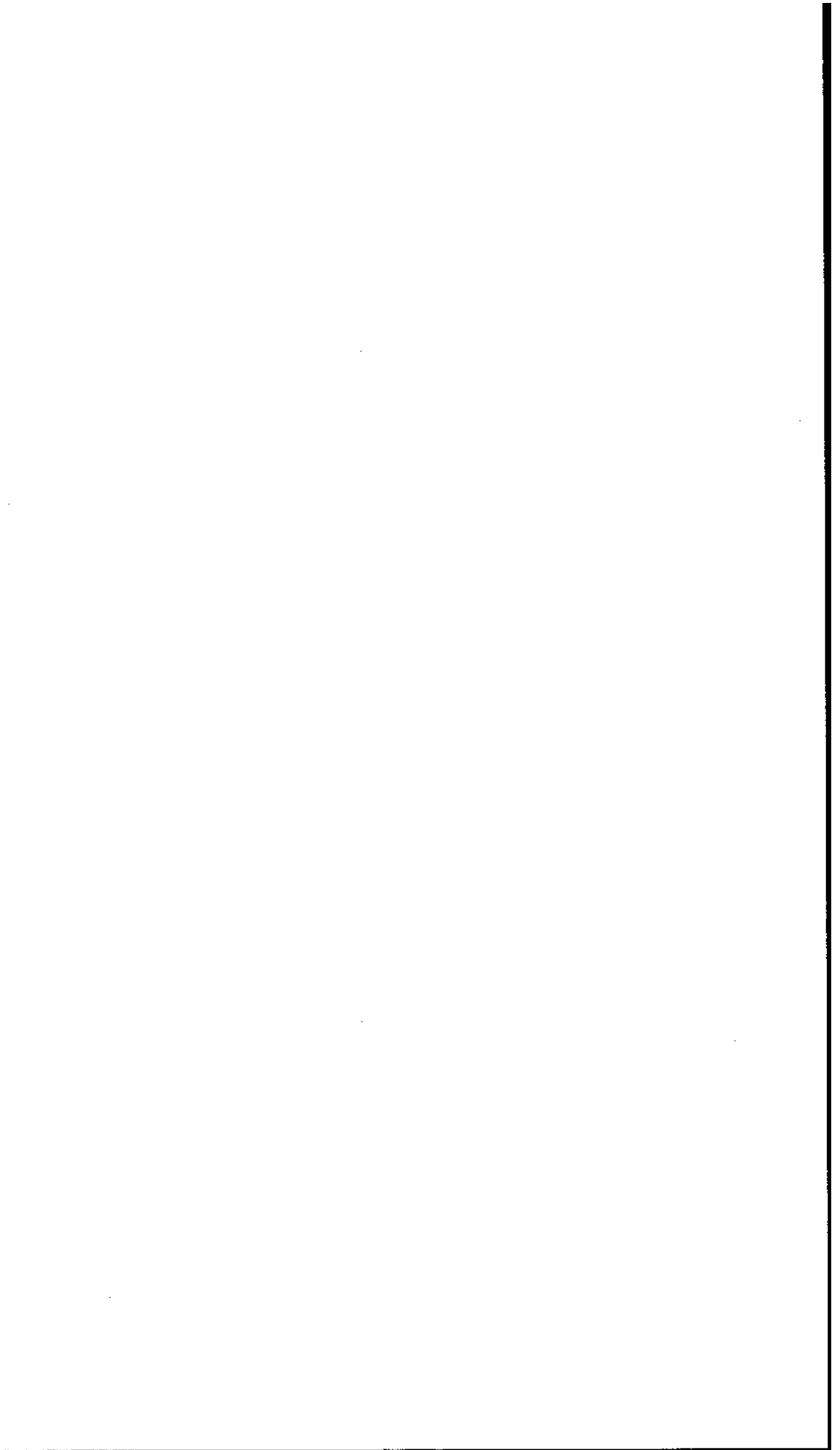


TABLE (MATRIX) SECTION—Con.

Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P1.	DETAILED OCCUPATION(512) BY SEX(2) [1024]—Con.			
	Welders and cutters (783):			
	(Repeat SEX).....	8796.....	3559.....	456,1
	Solderers and brazers (784):			
	(Repeat SEX).....	8814.....	3577.....	457,1
	Assemblers (785):			
	(Repeat SEX).....	8832.....	3595.....	458,1
	Hand cutting and trimming occupations (786):			
	(Repeat SEX).....	8850.....	3613.....	459,1
	Hand molding, casting, and forming occupations (787-788):			
	(Repeat SEX).....	8868.....	3631.....	460,1
	Hand painting, coating, and decorating occupations (789-792):			
	(Repeat SEX).....	8886.....	3649.....	461,1
	Hand engraving and printing occupations (793-794):			
	(Repeat SEX).....	8904.....	3667.....	462,1
	Miscellaneous hand working occupations (795):			
	(Repeat SEX).....	8922.....	3685.....	463,1
	Production inspectors, checkers, and examiners (796):			
	(Repeat SEX).....	8940.....	3703.....	464,1
	Production testers (797):			
	(Repeat SEX).....	8958.....	3721.....	465,1
	Production samplers and weighers (798):			
	(Repeat SEX).....	8976.....	3739.....	466,1
	Graders and sorters, except agricultural (799-802):			
	(Repeat SEX).....	8994.....	3757.....	467,1
	Supervisors, motor vehicle operators (803):			
	(Repeat SEX).....	9012.....	3775.....	468,1
	Truck drivers (804-805):			
	(Repeat SEX).....	9030.....	3793.....	469,1
	Driver-sales workers (806-807):			
	(Repeat SEX).....	9048.....	3811.....	470,1
	Bus drivers (808):			
	(Repeat SEX).....	9066.....	3829.....	471,1
	Taxicab drivers and chauffeurs (809-812):			
	(Repeat SEX).....	9084.....	3847.....	472,1
	Parking lot attendants (813):			
	(Repeat SEX).....	9102.....	3865.....	473,1
	Motor transportation occupations, n.e.c. (814-822):			
	(Repeat SEX).....	9120.....	3883.....	474,1
	Railroad conductors and yardmasters (823):			
	(Repeat SEX).....	9138.....	3901.....	475,1
	Locomotive operating occupations (824):			
	(Repeat SEX).....	9156.....	3919.....	476,1
	Railroad brake, signal, and switch operators (825):			
	(Repeat SEX).....	9174.....	3937.....	477,1
	Rail vehicle operators, n.e.c. (826-827):			
	(Repeat SEX).....	9192.....	3955.....	478,1
	Ship captains and mates, except fishing boats (828):			
	(Repeat SEX).....	9210.....	3973.....	479,1
	Sailors and deckhands (829-832):			
	(Repeat SEX).....	9228.....	3991.....	480,1
	Marine engineers (833):			
	(Repeat SEX).....	9246.....	4009.....	481,1
	Bridge, lock, and lighthouse tenders (834-842):			
	(Repeat SEX).....	9264.....	4027.....	482,1
	Supervisors, material moving equipment operators (843):			
	(Repeat SEX).....	9282.....	4045.....	483,1
	Operating engineers (844):			
	(Repeat SEX).....	9300.....	4063.....	484,1

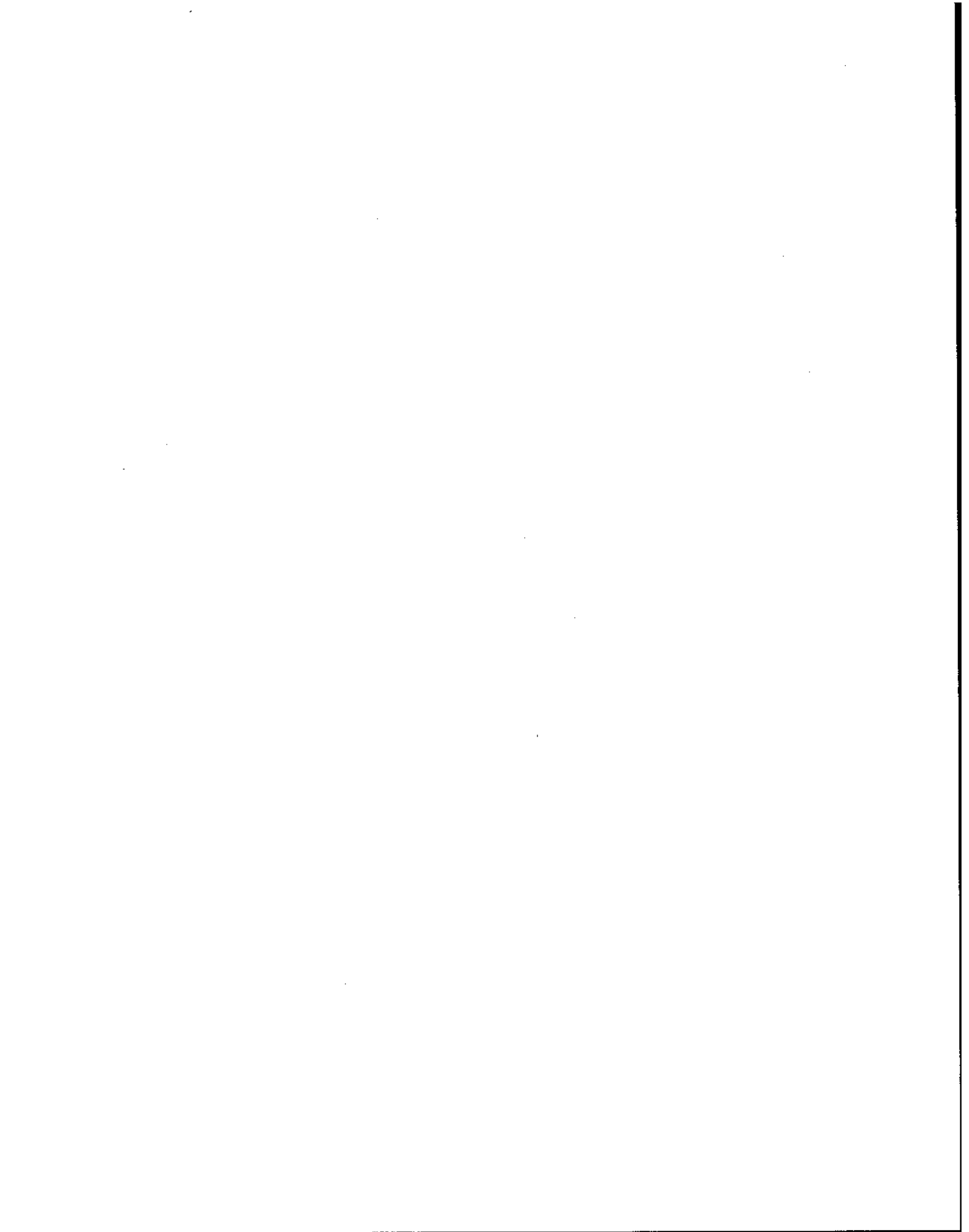


TABLE (MATRIX) SECTION—Con.

Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P1.	DETAILED OCCUPATION(512) BY SEX(2) [1024]—Con.			
	Longshore equipment operators (845-847):			
	(Repeat SEX) .....	9318.....	4081 .....	485,1
	Hoist and winch operators (848):			
	(Repeat SEX) .....	9336.....	4099 .....	486,1
	Crane and tower operators (849-852):			
	(Repeat SEX) .....	9354.....	4117 .....	487,1
	Excavating and loading machine operators (853-854):			
	(Repeat SEX) .....	9372.....	4135 .....	488,1
	Grader, dozer, and scraper operators (855):			
	(Repeat SEX) .....	9390.....	4153 .....	489,1
	Industrial truck and tractor equipment operators (856-858):			
	(Repeat SEX) .....	9408.....	4171 .....	490,1
	Miscellaneous material moving equipment operators (859-863):			
	(Repeat SEX) .....	9426.....	4189 .....	491,1
	Supervisors, handlers, equipment cleaners, and laborers, n.e.c. (864):			
	(Repeat SEX) .....	9444.....	4207 .....	492,1
	Helpers, mechanics, and repairers (865):			
	(Repeat SEX) .....	9462.....	4225 .....	493,1
	Helpers, construction trades (866):			
	(Repeat SEX) .....	9480.....	4243 .....	494,1
	Helpers, surveyor (867):			
	(Repeat SEX) .....	9498.....	4261 .....	495,1
	Helpers, extractive occupations (868):			
	(Repeat SEX) .....	9516.....	4279 .....	496,1
	Construction laborers (869-873):			
	(Repeat SEX) .....	9534.....	4297 .....	497,1
	Production helpers (874):			
	(Repeat SEX) .....	9552.....	4315 .....	498,1
	Garbage collectors (875):			
	(Repeat SEX) .....	9570.....	4333 .....	499,1
	Stevedores (876):			
	(Repeat SEX) .....	9588.....	4351 .....	500,1
	Stock handlers and baggers (877):			
	(Repeat SEX) .....	9606.....	4369 .....	501,1
	Machine feeders and offbearers (878-882):			
	(Repeat SEX) .....	9624.....	4387 .....	502,1
	Freight, stock, and material handlers, n.e.c. (883-884):			
	(Repeat SEX) .....	9642.....	4405 .....	503,1
	Garage and service station related occupations (885-886):			
	(Repeat SEX) .....	9660.....	4423 .....	504,1
	Vehicle washers and equipment cleaners (887):			
	(Repeat SEX) .....	9678.....	4441 .....	505,1
	Hand packers and packagers (888):			
	(Repeat SEX) .....	9696.....	4459 .....	506,1
	Manufacturing, nondurable goods (889-902) (Industry codes 100-229): <sup>4</sup>			
	(Repeat SEX) .....	9714.....	4477 .....	507,1
	Manufacturing, durable goods (889-902) (Industry codes 230-399): <sup>4</sup>			
	(Repeat SEX) .....	9732.....	4495 .....	508,1
	Transportation, communications, and other public utilities (889-902) (Industry codes 400-499): <sup>4</sup>			
	(Repeat SEX) .....	9750.....	4513 .....	509,1
	Wholesale and retail trade (889-902) (Industry codes 500-699): <sup>4</sup>			
	(Repeat SEX) .....	9768.....	4531 .....	510,1
	All other industries (889-902) (Industry codes 010-099, 700-999): <sup>4</sup>			
	(Repeat SEX) .....	9786.....	4549 .....	511,1
	Unemployed, no recent civilian work experience (000, 903-999):			
	(Repeat SEX) .....	9804.....	4567 .....	512,1

<sup>4</sup>Industry tally of occupation "laborers, except construction."

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TABLE (MATRIX) SECTION—Con.

Table (matrix) number	Table (matrix)	Starting position	Starting position within segment	Table (matrix) coordi- nates
P2.	EDUCATIONAL ATTAINMENT(5) BY AGE(7) BY SEX(2) [70]			
	<i>Universe: Civilian labor force</i>			
	Not high school graduate:			
	16 to 19 years:			
	Male .....	9822 .....	4585 .....	1,1,1
	Female .....	9831 .....	4594 .....	1,1,2
	20 to 24 years:			
	(Repeat SEX) .....	9840 .....	4603 .....	1,2,1
	25 to 29 years:			
	(Repeat SEX) .....	9858 .....	4621 .....	1,3,1
	30 to 34 years:			
	(Repeat SEX) .....	9876 .....	4639 .....	1,4,1
	35 to 39 years:			
	(Repeat SEX) .....	9894 .....	4657 .....	1,5,1
	40 to 69 years:			
	(Repeat SEX) .....	9912 .....	4675 .....	1,6,1
	70 years and over:			
	(Repeat SEX) .....	9930 .....	4693 .....	1,7,1
	High school graduate (includes equivalency):			
	(Repeat AGE By SEX) .....	9948 .....	4711 .....	2,1,1
	Some college or associate degree:			
	(Repeat AGE By SEX) .....	10074 .....	4837 .....	3,1,1
	Bachelor's degree:			
	(Repeat AGE By SEX) .....	10200 .....	4963 .....	4,1,1
	Graduate or professional degree:			
	(Repeat AGE By SEX) .....	10326 .....	5089 .....	5,1,1
	Filler .....	10452 .....	5215 .....	
	End of Record			









# APPENDIX A. Area Classifications

## CONTENTS

Boundary Changes .....	A-1
Census Code (See Geographic Code)	
Census Designated Place (CDP) (See Place)	
Census Geographic Code (See Geographic Code)	
Census Region and Census Division .....	A-1
Central City (See Metropolitan Area)	
Comunidad (See Place)	
Consolidated Metropolitan Statistical Area (CMSA) (See Metropolitan Area)	
Federal Information Processing Standards (FIPS) Code (See Geographic Code)	
Geographic Code .....	A-1
Geographic Presentation .....	A-2
Hierarchical Presentation (See Geographic Presentation)	
Inventory Presentation (See Geographic Presentation)	
Metropolitan Area (MA) .....	A-2
Metropolitan Statistical Area (MSA) (See Metropolitan Area)	
Municipio .....	A-3
Municipio Subdivision .....	A-3
Place .....	A-3
Primary Metropolitan Statistical Area (PMSA) (See Metropolitan Area)	
Puerto Rico (See State)	
State .....	A-3
Subbarrio (See Municipio Subdivision)	
TIGER .....	A-4
United States .....	A-4
Zona Urbana (See Place)	

These definitions are for many geographic entities and concepts that the Census Bureau will include in its standard 1990 census data products for Puerto Rico. Not all entities and concepts are shown in any one 1990 census data product. For a description of geographic areas included in each data product, see appendix F.

## BOUNDARY CHANGES

The boundaries of some places changed from those reported for the 1980 census. The historical counts shown for places are not updated for such changes, and thus reflect the population and housing units in the area as delineated at each census. Boundary changes are not reported for statistical areas.

## CENSUS REGION AND CENSUS DIVISION

For statistical purposes, the United States is divided into four census regions, which are further subdivided into nine divisions. Puerto Rico is not assigned to any region or division.

## AREA CLASSIFICATIONS

## GEOGRAPHIC CODE

Geographic codes are shown primarily on machine-readable data products, such as computer tape and compact disc-read only memory (CD-ROM), but also appear on other products such as microfiche; they also are shown on some census maps. Codes are identified as "census codes" only if there also is a Federal Information Processing Standards (FIPS) code for the same geographic entity. A code that is not identified as either "census" or "FIPS" usually is a census code for which there is no FIPS equivalent or for which the Census Bureau does not use the FIPS code. The exceptions, which use only the FIPS code in census products, are municipio, congressional district, and metropolitan area (that is, metropolitan statistical area, consolidated metropolitan statistical area, and primary metropolitan statistical area).

## Census Code

Census codes are assigned for a variety of geographic entities, including Puerto Rico, municipio subdivision, place, urbanized area, and voting district. The structure, format, and meaning of census codes appear in the 1990 census *Geographic Identification Code Scheme* and in the data dictionary portion of the technical documentation for summary tape files, CD-ROM's, and microfiche.

## Federal Information Processing Standards (FIPS) Code

Federal Information Processing Standards (FIPS) codes are assigned for a variety of geographic entities, including congressional district, county (including statistically equivalent entities such as municipio), barrio-pueblo and barrio, metropolitan area, place, and State (including statistically equivalent entities such as Puerto Rico). The structure, format, and meaning of FIPS codes used in the census are shown in the 1990 census *Geographic Identification Code Scheme* and in the data dictionary portion of the technical documentation for summary tape files, CD-ROM's, and microfiche.

The objective of the FIPS codes is to improve the use of data resources of the Federal Government and avoid unnecessary duplication and incompatibilities in the collection, processing, and dissemination of data. More information about the FIPS and FIPS code documentation is available from the National Technical Information Service, Springfield, VA 22161.

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## United States Postal Service (USPS) Code

The United States Postal Service (USPS) code for Puerto Rico is used in all 1990 census data products. The code is a two-character alphabetic abbreviation: PR. The code is the same as the FIPS two-character alphabetic abbreviation.

## GEOGRAPHIC PRESENTATION

### Hierarchical Presentation

A hierarchical geographic presentation shows the geographic entities in a superior/subordinate structure in census products. This structure is derived from the legal, administrative, or areal relationships of the entities. The hierarchical structure is depicted in report tables by means of indentation, and is explained for machine-readable media in the discussion of file structure in the geographic coverage portion of the abstract in the technical documentation. An example of hierarchical presentation for Puerto Rico is the "standard census geographic hierarchy": block, within block group, within census tract or block numbering area, within place, within municipio subdivision, within municipio, within Puerto Rico. Graphically, this is shown as:

- Puerto Rico
  - Municipio
    - Municipio subdivision
      - Place (or part)
        - Census tract/block numbering area (or part)
          - Block group (or part)
            - Block

### Inventory Presentation

An inventory presentation of geographic entities is one in which all entities of the same type are shown in alphabetical or code sequence, without reference to their hierarchical relationships. Generally, an inventory presentation shows totals for entities that may be split in a hierarchical presentation, such as place, census tract/block numbering area, or block group. An example of a series of inventory presentations is: Puerto Rico, followed by all the municipios, followed by all the places in Puerto Rico. Graphically, this is shown as:

- Puerto Rico
  - Municipio "A"
  - Municipio "B"
  - Municipio "C"
  - Place "X"
  - Place "Y"
  - Place "Z"

## METROPOLITAN AREA (MA)

The general concept of a metropolitan area (MA) is one of a large population nucleus, together with adjacent communities that have a high degree of economic

and social integration with that nucleus. Some MA's are defined around two or more nuclei.

The MA classification is a statistical standard, developed for use by Federal agencies in the production, analysis, and publication of data on MA's. The MA's are designated and defined by the Federal Office of Management and Budget, following a set of official published standards. These standards were developed by the interagency Federal Executive Committee on Metropolitan Areas, with the aim of producing definitions that are as consistent as possible for all MA's throughout the United States and Puerto Rico.

An MA in Puerto Rico must contain either a place with a minimum population of 50,000 or a Census Bureau-defined urbanized area and a total MA population of at least 100,000. An MA comprises one or more municipios that have close economic and social relationships. An outlying municipio must have a specified level of commuting to the central municipio(s) and also must meet certain standards regarding metropolitan character, such as population density, urban population, and population growth, to be included in an MA.

The territory, population, and housing units in MA's are referred to as "metropolitan." The metropolitan category is subdivided into "inside central city" and "outside central city." The territory, population, and housing units located outside MA's are referred to as "nonmetropolitan." The metropolitan and nonmetropolitan classification cuts across the other hierarchies; for example, there is generally both urban and rural territory within both metropolitan and nonmetropolitan areas.

To meet the needs of various users, the standards provide for a flexible structure of metropolitan definitions that classify an MA either as a metropolitan statistical area (MSA), or as a consolidated metropolitan statistical area (CMSA) that is divided into primary metropolitan statistical areas (PMSA's). Documentation of the MA standards and how they are applied is available from the Secretary, Federal Executive Committee on Metropolitan Areas, Population Division, U.S. Bureau of the Census, Washington, DC 20233.

### Central City

In each MSA and CMSA in Puerto Rico, the largest place and, in some cases, additional places are designated as "central cities" under the official standards. The largest central city and, in some cases, up to two additional central cities may be included in the title of the MA; there also may be central cities that are not included in an MA title.

### Consolidated and Primary Metropolitan Statistical Area (CMSA and PMSA)

If an area that qualifies as an MA has more than one million persons, primary metropolitan statistical areas (PMSA's) may be defined within it. In Puerto Rico,



PMSA's consist of a large urbanized municipio or cluster of municipios that demonstrates very strong internal economic and social links, in addition to close ties to other portions of the larger area. When PMSA's are established, the larger area of which they are component parts is designated a consolidated metropolitan statistical area (CMSA).

### **Metropolitan Statistical Area (MSA)**

Metropolitan statistical areas (MSA's) are relatively freestanding MA's and are not closely associated with other MA's.

### **Metropolitan Area Title and Code**

The title of an MSA contains the name of its largest central city and up to two additional place names, provided that the additional places meet specified levels of population, employment, and commuting.

The title of a PMSA may contain up to three place names, as determined above, or up to three municipio names, sequenced in order of population. A CMSA title also may include up to three names, the first of which generally is the most populous central city in the area. The second name may be the first place or municipio name in the most populous remaining PMSA; the third name may be the first place or municipio name in the next most populous PMSA. A regional designation may be substituted for the second and/or third names in a CMSA title if such a designation is supported by local opinion and is deemed to be unambiguous and suitable by the Office of Management and Budget.

The titles for all MA's in Puerto Rico also contain the name of the Commonwealth. Each MA is assigned a four-digit FIPS code in alphabetical order of all MA's. If the fourth digit of the code is a "2," it identifies a CMSA. Additionally, there is a separate set of two-digit codes for CMSA's, also assigned alphabetically.

### **MUNICIPIO**

The primary political divisions of Puerto Rico are termed "municipios." The Census Bureau, for statistical purposes, treats a municipio as the equivalent of a county in the United States. Each municipio is assigned a unique three-digit FIPS code in alphabetical order within Puerto Rico.

### **MUNICIPIO SUBDIVISION**

The Census Bureau recognizes barrios-pueblos and barrios as the primary legal subdivisions (minor civil divisions, or MCD's) of municipios. The barrios-pueblos

### **AREA CLASSIFICATIONS**

replace the "pueblos" reported in previous decennial censuses. In agreement with the Puerto Rico government, the Census Bureau no longer includes ciudades in its data tabulations.

Each municipio subdivision is assigned a three-digit census code in alphabetical order within municipio and a five-digit FIPS code in alphabetical order within Puerto Rico.

### **Subbarrio**

Subbarrios in 23 municipios are legal subdivisions of the barrios-pueblos and some barrios. The Census Bureau presents the same types of 1990 census data for these "sub-MCD's" as it does for the barrios-pueblos and barrios. Each subbarrio is assigned a two-digit census code in alphabetical order within municipio and a five-digit FIPS code in alphabetical order within Puerto Rico.

### **PLACE**

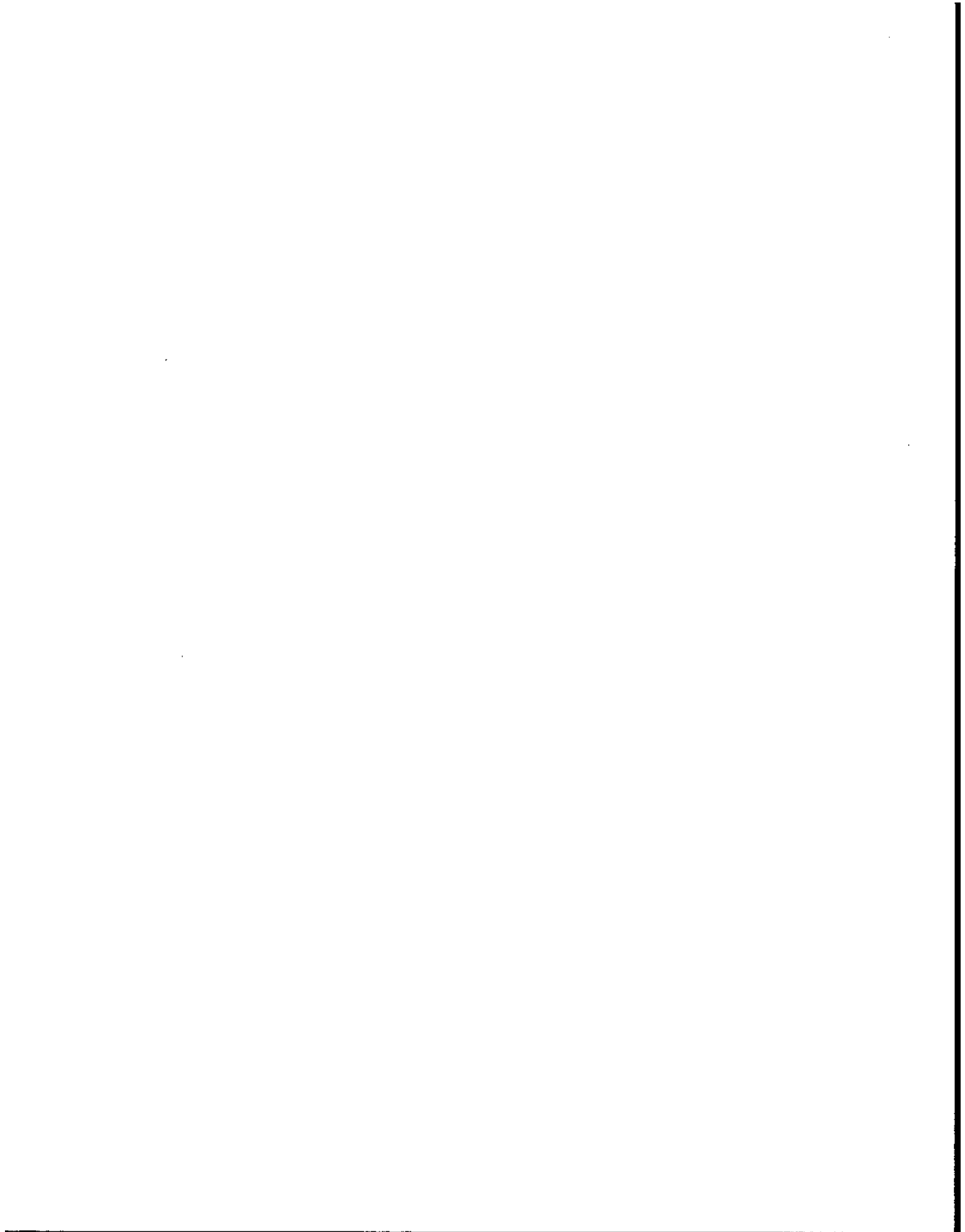
For the reporting of decennial census data, places in Puerto Rico consist of zonas urbanas and comunidades. Each place is assigned a four-digit census code and a five-digit FIPS code that are unique within Puerto Rico. Both the census and FIPS codes are assigned based on alphabetical order within Puerto Rico.

Because Puerto Rico does not have incorporated places—legally defined governmental units that perform services, raise taxes, and have elected officials specifically for closely settled communities—the Census Bureau recognizes only places delineated for statistical purposes. These census designated places (CDP's) are delineated by the Puerto Rico Planning Board, following Census Bureau guidelines, for the decennial census as the statistical counterparts of incorporated places in the States. Their boundaries, which usually coincide with visible features, have no legal status. CDP boundaries may change with changes in the settlement pattern; a CDP with the same name as in previous censuses does not necessarily have the same boundaries.

The Census Bureau provides data for two types of CDP's in Puerto Rico: (1) zonas urbanas, representing the governmental center of each municipio; there is no minimum population requirement for a zona urbana, and (2) comunidades (called "aldeas" in previous censuses), representing other settlements with a 1990 census population of at least 1,000. Comunidades qualified on the basis of the population counts prepared for the 1990 Postcensus Local Review Program. Because these counts were subject to change, a few may have final population counts lower than 1,000.

### **STATE**

States are the primary governmental divisions of the United States. The District of Columbia is treated as a statistical equivalent of a State for census purposes. The Census Bureau treats the outlying areas as the



equivalents of States for presenting the 1990 census data. The outlying areas include American Samoa, Guam, the Commonwealth of the Northern Mariana Islands (Northern Mariana Islands), the Republic of Palau (Palau), Puerto Rico, and the Virgin Islands of the United States (Virgin Islands).

Each State and equivalent entity is assigned a two-digit numeric Federal Information Processing Standards (FIPS) code in alphabetical order by State name, followed by the outlying area names. Each State and equivalent entity also is assigned a two-digit census code. The first digit of the code is the code for the respective division except for Puerto Rico, the Virgin Islands, and the outlying areas of the Pacific, which are assigned "0" as the first digit because they are not part of any division. Each State and equivalent area also is assigned the two-letter FIPS/ United States Postal Service (USPS) code.

### **TIGER**

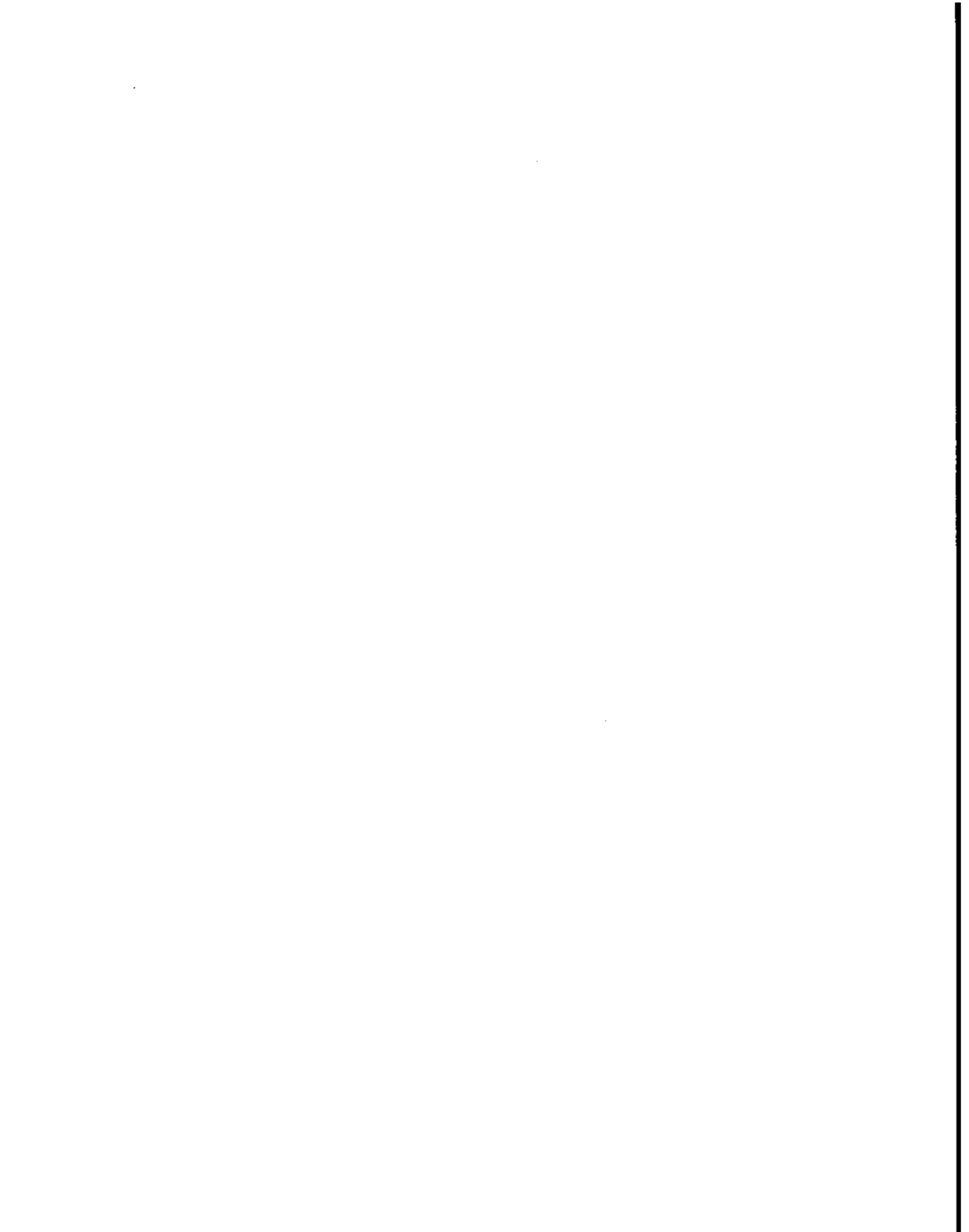
TIGER is an acronym for the new digital (computer-readable) geographic data base that automates the mapping and related geographic activities required to

support the Census Bureau's census and survey programs. The Census Bureau developed the Topologically Integrated Geographic Encoding and Referencing (TIGER) System to automate the geographic support processes needed to meet the major geographic needs of the 1990 census: producing the cartographic products to support data collection and map publication, providing the geographic structure for tabulation and publication of the collected data, assigning residential and employer addresses to their geographic location and relating those locations to the Census Bureau's geographic units, and so forth. The content of the TIGER data base is made available to the public through a variety of "TIGER Extract" files that may be obtained from the Data User Services Division, U.S. Bureau of the Census, Washington, DC 20233.

### **UNITED STATES**

The United States comprises the 50 States and the District of Columbia. In addition, the Census Bureau treats the outlying areas (see "State") as statistical equivalents of States for the 1990 census.





# APPENDIX B. Definitions of Subject Characteristics

## CONTENTS

<b>SUBJECT CHARACTERISTICS</b> .....	B-1
<i>Actual Hours Worked Last Week (See Employment Status)</i>	
<i>Age</i> .....	B-1
<i>Civilian Labor Force (See Employment Status)</i>	
<i>Class of Worker (See Industry, Occupation, and Class of Worker)</i>	
<i>Educational Attainment</i> .....	B-1
<i>Employment Status</i> .....	B-2
<i>Industry, Occupation, and Class of Worker</i> .....	B-4
<i>Occupation (See Industry, Occupation, and Class of Worker)</i>	
<i>Reference Week</i> .....	B-6
<i>Sex</i> .....	B-7
<i>Worker (See Employment Status; see Industry, Occupation, and Class of Worker)</i>	

## SUBJECT CHARACTERISTICS

### AGE

The data on age were derived from answers to questionnaire item 4, which was asked of all persons. The age classification is based on the age of the person in completed years as of April 1, 1990. The age response in question 4a was normally used to represent a person's age. However, when the age response was unacceptable or unavailable, a person's age was derived from an acceptable year of birth response in question 4b.

Data on age are used to determine the applicability of other questions for a person and to classify other characteristics in census tabulations. Age data are needed to interpret most social and economic characteristics used to plan and examine many programs and policies. Therefore, age is tabulated by single years of age and by many different groupings, such as 5-year age groups.

Some tabulations are shown by the age of the householder. These data were derived from the age responses for each householder. (For more information on householder, see the discussion under "Household Type and Relationship.")

**Median Age**—This measure divides the age distribution into two equal parts: one-half of the cases falling below the median value and one-half above the value. Generally, median age is computed on the basis of more detailed age intervals than are shown in some census publications; thus, a median based on a less detailed distribution may differ slightly from a corresponding

median for the same population based on a more detailed distribution. (For more information on medians, see the discussion under "Derived Measures.")

**Limitation of the Data**—Counts in 1970 and 1980 for persons 100 years old and over were substantially overstated. Improvements were made in the questionnaire design, in the allocation procedures, and to the respondent instruction guide to attempt to minimize this problem in 1990.

Review of detailed 1990 information indicated that respondents tended to provide their age as of the date of completion of the questionnaire, not their age as of April 1, 1990. In addition, there may have been a tendency for respondents to round their age up if they were close to having a birthday. It is likely that approximately 10 percent of persons in most age groups are actually 1 year younger. For most single years of age, the misstatements are largely offsetting. The problem is most pronounced at age 0 because persons lost to age 1 may not have been fully offset by the inclusion of babies born after April 1, 1990 and because there may have been more rounding up to age 1 to avoid reporting age as 0 years. (Age in completed months was not collected for infants under age 1.)

The reporting of age 1 year older than age on April 1, 1990 is likely to have been greater in areas where the census data were collected later in 1990. The magnitude of this problem was much less in the three previous censuses where age was typically derived from respondent data on year of birth and quarter of birth. (For more information on the design of the age question, see the section below that discusses "Comparability.")

**Comparability**—Age data have been collected in Puerto Rico in every census. For the first time since 1960, the 1990 data are not available by quarter year of age. This change was made so that coded information could be obtained for both age and year of birth. In each census since 1950, the age of a person was assigned when it was not reported. Since 1960, assignment of unknown age has been performed by a general procedure described as "imputation." The specific procedures for imputing age have been different in each census. (For more information on imputation, see Appendix C, Accuracy of the Data.)

### EDUCATIONAL ATTAINMENT

Data on educational attainment were derived from answers to questionnaire item 10, which was asked of a sample of persons. Data are tabulated as attainment for



persons 15 years old and over. Persons are classified according to the highest grade of school completed or the highest degree received. The question included instructions to report the previous grade attended or the highest degree received for persons currently enrolled in school. The question included response categories which allowed persons to report completing the 12th grade without receiving a high school diploma, and which instructed respondents to report as "high school graduate(s)"—persons who received either a high school diploma or the equivalent, for example, passed the Test of General Educational Development (G.E.D.), and did not attend college. (On the Military Census Report questionnaire, the lowest response category was "Less than 9th grade.")

Enumerators were instructed that schooling completed in foreign or ungraded school systems should be reported as the equivalent level of schooling in the regular American system; that vocational certificates or diplomas from vocational, trade, or business schools or colleges were not to be reported unless they were college level degrees; and that honorary degrees were not to be reported. The instructions gave "medicine, dentistry, chiropractic, optometry, osteopathic medicine, pharmacy, podiatry, veterinary medicine, law, and theology" as examples of professional school degrees, and specifically excluded "barber school, cosmetology, or other training for a specific trade" from the professional school category. The order in which they were listed suggested that doctorate degrees were "higher" than professional school degrees, which were "higher" than master's degrees.

Persons who did not report educational attainment were assigned the attainment of a person of the same age and sex who resided in the same or a nearby area.

*High School Graduate or Higher*—Includes persons whose highest degree was a high school diploma or its equivalent, persons who attended college or professional school, and persons who received a college, university, or professional degree. Persons who reported completing the 12th grade but not receiving a diploma are not included.

*Not Enrolled, Not High School Graduate*—Includes persons of compulsory school attendance age or above who were not enrolled in school and were not high school graduates; these persons may be taken to be "high school dropouts." There is no restriction on when they "dropped out" of school, and they may have never attended high school.

In prior censuses, "Median school years completed" was used as a summary measure of educational attainment. In 1990, the median can only be calculated for groups of which less than half the members have attended college. "Percent high school graduate or higher" and "Percent bachelor's degree or higher" are

summary measures which offer quite readily interpretable measures of differences between population subgroups. To make comparisons over time, "Percent high school graduate or higher" can be calculated and "Percent bachelor's degree or higher" can be approximated with data from previous censuses.

**Comparability**—In censuses prior to 1950, the only educational attainment question asked about basic literacy. The same literacy question was asked in 1990. Questions on educational attainment, in terms of years of school completed, were included from 1950 to 1980. In these censuses, a two-part question asking highest grade of school attended and whether that grade was finished was used to construct highest grade or year of school completed. For persons who have not attended college, the response categories in the 1990 educational attainment question should produce data which are comparable to data on highest grade completed from earlier censuses.

The response categories for persons who have attended college were modified from earlier censuses because there was some ambiguity in interpreting responses in terms of the number of years of college completed. For instance, it was not clear whether "completed the fourth year of college," "completed the senior year of college," and "college graduate" were synonymous. Research conducted shortly before the census suggests that these terms were more distinct in 1990 than in earlier decades, and this change may have threatened the ability to estimate the number of "college graduates" from the number of persons reported as having completed the fourth or a higher year of college. It was even more difficult to make inferences about post-baccalaureate degrees and "Associate" degrees from highest year of college completed. Thus, comparisons of post-secondary educational attainment in this and earlier censuses should be made with great caution.

In the 1960 and subsequent censuses, persons for whom educational attainment was not reported were assigned the same attainment level as a similar person whose residence was in the same or a nearby area. In the 1950 census, persons for whom educational attainment was not reported were not allocated.

## EMPLOYMENT STATUS

The data on employment status were derived from answers to questionnaire items 22, 26, and 27, which were asked of a sample of persons. The series of questions on employment status was asked of all persons 15 years old and over and was designed to identify, in this sequence: (1) persons who worked at any time during the reference week; (2) persons who did not work during the reference week but who had jobs or businesses from which they were temporarily absent (excluding layoff); (3) persons on layoff; and (4) persons



who did not work during the reference week, but who were looking for work during the last four weeks and were available for work during the reference week. (For more information, see the discussion under "Reference Week.")

The employment status data shown in this and other 1990 census tabulations relate to persons 16 years old and over. Some tabulations showing employment status, however, include persons 15 years old. By definition, these persons are classified as "Not in Labor Force." In the 1940, 1950, and 1960 censuses, employment status data were presented for persons 14 years old and over. The change in the universe was made in 1970 to agree with the official measurement of the labor force as revised in January 1967 by the U.S. Department of Labor. The 1970 census was the last to show employment data for persons 14 and 15 years old.

**Employed**—All civilians 16 years old and over who were either (1) "at work"—those who did any work at all during the reference week as paid employees, worked in their own business or profession, worked on their own farm, or worked 15 hours or more as unpaid workers on a family farm or in a family business; or (2) were "with a job but not at work"—those who did not work during the reference week but had jobs or businesses from which they were temporarily absent due to illness, bad weather, industrial dispute, vacation, or other personal reasons. Excluded from the employed are persons whose only activity consisted of work around the house or unpaid volunteer work for religious, charitable, and similar organizations; also excluded are persons on active duty in the U.S. Armed Forces.

**Unemployed**—All civilians 16 years old and over are classified as unemployed if they (1) were neither "at work" nor "with a job but not at work" during the reference week, and (2) were looking for work during the last 4 weeks, and (3) were available to accept a job. Also included as unemployed are civilians who did not work at all during the reference week and were waiting to be called back to a job from which they had been laid off. Examples of job seeking activities are:

- Registering at a public or private employment office
- Meeting with prospective employers
- Investigating possibilities for starting a professional practice or opening a business
- Placing or answering advertisements
- Writing letters of application
- Being on a union or professional register

**Civilian Labor Force**—Consists of persons classified as employed or unemployed in accordance with the criteria described above.

**Experienced Unemployed**—These are unemployed persons who have worked at any time in the past.

**Experienced Civilian Labor Force**—Consists of the employed and the experienced unemployed.

**Labor Force**—All persons classified in the civilian labor force plus members of the U.S. Armed Forces (persons on active duty with the U.S. Army, Air Force, Navy, Marine Corps, or Coast Guard).

**Not in Labor Force**—All persons 16 years old and over who are not classified as members of the labor force. This category consists mainly of students, housewives, retired workers, seasonal workers enumerated in an *off* season who were not looking for work, institutionalized persons, and persons doing only incidental unpaid family work (less than 15 hours during the reference week).

**Worker**—This term appears in connection with several subjects: journey-to-work items, class of worker, weeks worked in 1989, and number of workers in family in 1989. Its meaning varies and, therefore, should be determined in each case by referring to the definition of the subject in which it appears.

**Actual Hours Worked Last Week**—All persons who reported working during the reference week were asked to report in questionnaire item 22b the number of hours that they worked. The statistics on hours worked pertain to the number of hours actually worked at all jobs, and do not necessarily reflect the number of hours typically or usually worked or the scheduled number of hours. The concept of "actual hours" differs from that of "usual hours" described below. The number of persons who worked only a small number of hours is probably understated since such persons sometimes consider themselves as not working. Respondents were asked to include overtime or extra hours worked, but to exclude lunch hours, sick leave, and vacation leave.

**Limitation of the Data**—The census may understate the number of employed persons because persons who have irregular, casual, or unstructured jobs sometimes report themselves as not working. The number of employed persons "at work" is probably overstated in the census (and conversely, the number of employed "with a job, but not at work" is understated) since some persons on vacation or sick leave erroneously reported themselves as working. This problem has no effect on the total number of employed persons. The reference week for the employment data is not the same for all persons. Since persons can change their employment status from one week to another, the lack of a uniform reference week may mean that the employment data do not reflect the reality of the employment situation of any given week. (For more information, see the discussion under "Reference Week.")



**Comparability**—The questionnaire items and employment status concepts for the 1990 census are essentially the same as those used in the 1980 and 1970 censuses. However, these concepts differ in many respects from those associated with the 1950 and 1960 censuses.

Since employment data from the census are obtained from respondents in households, they differ from statistics based on reports from individual business establishments, farm enterprises, and certain government programs. Persons employed at more than one job are counted only once in the census and are classified according to the job at which they worked the greatest number of hours during the reference week. In statistics based on reports from business and farm establishments, persons who work for more than one establishment may be counted more than once. Moreover, some tabulations may exclude private household workers, unpaid family workers, and self-employed persons, but may include workers less than 16 years of age.

An additional difference in the data arises from the fact that persons who had a job but were not at work are included with the employed in the census statistics, whereas many of these persons are likely to be excluded from employment figures based on establishment payroll reports. Furthermore, the employment status data in census tabulations include persons on the basis of place of residence regardless of where they work, whereas establishment data report persons at their place of work regardless of where they live. This latter consideration is particularly significant when comparing data for workers who commute between areas.

Census data on actual hours worked during the reference week may differ from data from other sources. The census measures hours actually worked, whereas some surveys measure hours paid for by employers. Comparability of census actual hours worked data may also be affected by the nature of the reference week (see "Reference Week").

For several reasons, the unemployment figures of the Census Bureau may not be comparable with published figures on unemployment compensation claims. For example, figures on unemployment compensation claims exclude persons who have exhausted their benefit rights, new workers who have not earned rights to unemployment insurance, and persons losing jobs not covered by unemployment insurance systems (including some workers in agriculture, domestic services, and religious organizations, and self-employed and unpaid family workers). In addition, the qualifications for drawing unemployment compensation differ from the definition of unemployment used by the Census Bureau. Persons working only a few hours during the week and persons with a job but not at work are sometimes eligible for unemployment compensation but are classified as "Employed" in the census. Differences in the

geographical distribution of unemployment data arise because the place where claims are filed may not necessarily be the same as the place of residence of the unemployed worker.

## **INDUSTRY, OCCUPATION, AND CLASS OF WORKER**

The data on industry, occupation, and class of worker were derived from answers to questionnaire items 29, 30, and 31 respectively. These questions were asked of a sample of persons. Information on industry relates to the kind of business conducted by a person's employing organization; occupation describes the kind of work the person does on the job.

For employed persons, the data refer to the person's job during the reference week. For those who worked at two or more jobs, the data refer to the job at which the person worked the greatest number of hours. For unemployed persons, the data refer to their last job. The industry and occupation statistics are derived from the detailed classification systems developed for the 1990 census as described below. The *Classified Index of Industries and Occupations* provided additional information on the industry and occupation classification systems.

Respondents provided the data for the tabulations by writing on the questionnaires descriptions of their industry and occupation. These descriptions were coded by clerical staff in the Census Bureau's Jacksonville, FL processing office. The clerical staff converted the written questionnaire descriptions to codes by comparing these descriptions to entries in the *Alphabetical Index of Industries and Occupations*. For the industry code, these coders also referred to an Employer Name List (formerly called Company Name List). This list, prepared from the Standard Statistical Establishment List developed by the Census Bureau for the economic censuses and surveys, contained the names of business establishments and their Standard Industrial Classification (SIC) codes converted to population census equivalents. This list facilitated coding and maintained industrial classification comparability.

### **Industry**

The industry classification system developed for the 1990 census consists of 236 categories for employed persons, classified into 13 major industry groups. Since 1940, the industrial classification has been based on the Standard Industrial Classification Manual (SIC). The 1990 census classification was developed from the 1987 SIC published by the Office of Management and Budget, Executive Office of the President.

The SIC was designed primarily to classify establishments by the type of industrial activity in which they were engaged. However, census data, which were





collected from households, differ in detail and nature from those obtained from establishment surveys. Therefore, the census classification systems, while defined in SIC terms, cannot reflect the full detail in all categories. There are several levels of industrial classification found in census products. For example, the 1990 CP-2, *Social and Economic Characteristics* report includes 41 unique industrial categories, while the 1990 Summary Tape File 4 (STF 4) presents 72 categories.

### Occupation

The occupational classification system developed for the 1990 census consists of 501 specific occupational categories for employed persons arranged into 6 summary and 13 major occupational groups. This classification was developed to be consistent with the Standard Occupational Classification (SOC) Manual: 1980, published by the Office of Federal Statistical Policy and Standards, U.S. Department of Commerce. Tabulations with occupation as the primary characteristic present several levels of occupational detail. The most detailed tabulations are shown in special 1990 tape files on occupation. This product contains all 501 occupational categories.

Some occupation groups are related closely to certain industries. Operators of transportation equipment, farm operators and workers, and private household workers account for major portions of their respective industries of transportation, agriculture, and private households. However, the industry categories include persons in other occupations. For example, persons employed in agriculture include truck drivers and bookkeepers; persons employed in the transportation industry include mechanics, freight handlers, and payroll clerks; and persons employed in the private household industry include occupations such as chauffeur, gardener, and secretary.

### Class of Worker

The data on class of worker were derived from answers to questionnaire item 31. The information on class of worker refers to the same job as a respondent's industry and occupation and categorizes persons according to the type of ownership of the employing organization. The class of worker categories are defined as follows:

**Private Wage and Salary Workers**—Includes persons who worked for wages, salary, commission, tips, pay-in-kind, or piece rates for a private for profit employer or a private not-for-profit, tax-exempt or charitable organization. Self-employed persons whose business was incorporated are included with private wage and salary workers because they are paid employees of their own companies. Some tabulations present data separately for these subcategories: "For profit," "Not for profit," and "Own business incorporated."

Employees of foreign governments, the United Nations, or other formal international organizations were classified as "Private-not-for-profit."

**Government Workers**—Includes persons who were employees of any municipal, commonwealth, or Federal governmental unit, regardless of the activity of the particular agency. For some tabulations, the data were presented separately for the three levels of government.

**Self-Employed Workers**—Includes persons who worked for profit or fees in their own unincorporated business, profession, or trade, or who operated a farm.

**Unpaid Family Workers**—Includes persons who worked 15 hours or more without pay in a business or on a farm operated by a relative.

**Salaried/Self-Employed**—In tabulations that categorize persons as either salaried or self-employed, the salaried category includes private and government wage and salary workers; self-employed includes self-employed persons and unpaid family workers.

The industry category, "Public administration," is limited to regular government functions such as legislative, judicial, administrative, and regulatory activities of governments. Other government organizations such as schools, hospitals, liquor stores, and bus lines are classified by industry according to the activity in which they are engaged. On the other hand, the class of worker government categories include all government workers.

Occasionally respondents supplied industry, occupation, or class of worker descriptions which were not sufficiently specific for precise classification or did not report on these items at all. Some of these cases were corrected through the field editing process and during the coding and tabulation operations. In the coding operation, certain types of incomplete entries were corrected using the *Alphabetical Index of Industries and Occupations*. For example, it was possible in certain situations to assign an industry code based on the occupation reported.

Following the coding operations, there was a computer edit and an allocation process. The edit first determined whether a respondent was in the universe which required an industry and occupation code. The codes for the three items (industry, occupation, and class of worker) were checked to ensure they were valid and were edited for their relation to each other. Invalid and inconsistent codes were either blanked or changed to a consistent code.

If one or more of the three codes were blank after the edit, a code was assigned from a "similar" person based on other items such as age, sex, education, farm or nonfarm residence, and weeks worked. If all the labor



force and income data also were blank, all these economic items were assigned from one other person who provided all the necessary data.

**Comparability**—Comparability of industry and occupation data was affected by a number of factors, primarily the systems used to classify the questionnaire responses. For both the industry and occupation classification systems, the basic structures were generally the same from 1940 to 1970, but changes in the individual categories limited comparability of the data from one census to another. These changes were needed to recognize the "birth" of new industries and occupations, the "death" of others, and the growth and decline in existing industries and occupations, as well as, the desire of analysts and other users for more detail in the presentation of the data. Probably the greatest cause of incomparability is the movement of a segment of a category to a different category in the next census. Changes in the nature of jobs and respondent terminology, and refinement of category composition made these movements necessary.

In the 1990 census, the industry classification had minor revisions to reflect recent changes to the SIC. The 1990 occupational classification system is essentially the same as that for the 1980 census. However, the conversion of the census classification to the SOC in 1980 meant that the 1990 classification system was less comparable to the classifications used prior to the 1980 census.

Other factors that affected data comparability included the universe to which the data referred (in 1970, the age cutoff for labor force was changed from 14 years to 16 years); how the industry and occupation questions were worded on the questionnaire (for example, important changes were made in 1970); improvements in the coding procedures (the Employer Name List technique was introduced in 1960); and how the "not reported" cases are handled. Prior to 1970, they were placed in the residual categories, "Industry not reported" and "Occupation not reported." In 1970, an allocation process was introduced that assigned these cases to major groups. In 1990, as in 1980, the "Not reported" cases were assigned to individual categories. Therefore, the 1980 and 1990 data for individual categories included some numbers of persons who were tabulated in a "Not reported" category in previous censuses.

The following publications contain information on the various factors affecting comparability and are particularly useful for understanding differences in the occupation and industry information from earlier censuses: U.S. Bureau of the Census, *Changes Between the 1950 and 1960 Occupation and Industry Classifications With Detailed Adjustments of 1950 Data to the 1960 Classifications*, Technical Paper No. 18, 1968; U.S. Bureau of the Census, *1970 Occupation and Industry Classification Systems in Terms of their 1960 Occupation and Industry Elements*, Technical Paper No. 26, 1972; and U.S.

Bureau of the Census, *The Relationship Between the 1970 and 1980 Industry and Occupation Classification Systems*, Technical Paper No. 59, 1988. For citations for earlier census years, see the 1980 Census of Population report, PC80-1-D, *Detailed Population Characteristics*.

The 1990 census introduced an additional class of worker category for "private not-for-profit" employers. This category is a subset of the 1980 category "employee of private employer" so there is no comparable data before 1990. Also in 1990, employees of foreign governments, the United Nations, etc., are classified as "private not-for-profit," rather than Federal Government as in 1970 and 1980. While in theory, there was a change in comparability, in practice, the small number of U.S. residents working for foreign governments made this change negligible.

Comparability between the statistics on industry and occupation from the 1990 census and statistics from other sources is affected by many of the factors described in the section on "Employment Status." These factors are primarily geographic differences between residence and place of work, different dates of reference, and differences in counts because of dual job holding. Industry data from population censuses cover all industries and all kinds of workers, whereas, data from establishments often excluded private household workers, government workers, and the self-employed. Also, the replies from household respondents may have differed in detail and nature from those obtained from establishments.

Occupation data from the census and data from government licensing agencies, professional associations, trade unions, etc., may not be as comparable as expected. Organizational listings often include persons not in the labor force or persons devoting all or most of their time to another occupation; or the same person may be included in two or more different listings. In addition, relatively few organizations, except for those requiring licensing, attained complete coverage of membership in a particular occupational field.

## REFERENCE WEEK

The data on labor force status and journey to work were related to the reference week; that is, the calendar week preceding the date on which the respondents completed their questionnaires or were interviewed by enumerators. This week is not the same for all respondents since the enumeration was not completed in one week. The occurrence of holidays during the enumeration period could affect the data on actual hours worked during the reference week, but probably had no effect on overall measurement of employment status (see the discussion below on "Comparability").

**Comparability**—The reference weeks for the 1990 and 1980 censuses differ in that Passover and Good Friday occurred in the first week of April 1980, but in the



# APPENDIX C. Accuracy of the Data

## CONTENTS

Confidentiality of the Data .....	C-1
Editing of Unacceptable Data .....	C-7
Errors in the Data .....	C-1
Estimation Procedure .....	C-5
Sample Design .....	C-1

## INTRODUCTION

The data contained in this data product are based on the 1990 census sample. The data are estimates of the actual figures that would have been obtained from a complete count. Estimates derived from a sample are expected to be different from the 100-percent figures because they are subject to sampling and nonsampling errors. Sampling error in data arises from the selection of persons and housing units to be included in the sample. Nonsampling error affects both sample and 100-percent data, and is introduced as a result of errors that may occur during the collection and processing phases of the census. Provided below is a detailed discussion of both types of errors and a description of the estimation procedures.

## SAMPLE DESIGN

Every person and housing unit in Puerto Rico was asked certain basic demographic and housing questions (for example, age, marital status, housing value, or rent). A sample of these persons and housing units was asked more detailed questions about such items as income, occupation, and housing costs in addition to the basic demographic and housing information. The primary sampling unit for the 1990 census was the housing unit, including all occupants. For persons living in group quarters, the sampling unit was the person. Persons in group quarters were sampled at a 1-in-6 rate.

All of Puerto Rico was enumerated by the list/enumerate method. Each enumerator was given a blank address register with designated sample lines. Beginning about Census Day, the enumerator systematically canvassed an assigned area and listed all housing units in the address register in the order they were encountered. Completed 100-percent questionnaires were collected or filled out through a personal interview by enumerators. All sample questionnaires or long forms were administered by personal visits. All housing units in Puerto Rico were sampled at a 1-in-6 sampling rate.

## ACCURACY OF THE DATA

## CONFIDENTIALITY OF THE DATA

To maintain the confidentiality required by law (Title 13, United States Code), the Bureau of the Census applies a confidentiality edit to the 1990 census data to assure that published data do not disclose information about specific individuals, households, or housing units. As a result, a small amount of uncertainty is introduced into the estimates of census characteristics. The sample itself provides adequate protection for most areas for which sample data are published since the resulting data are estimates of the actual counts; however, small areas require more protection. The edit is controlled so that the basic structure of the data is preserved.

The confidentiality edit is implemented by selecting a small subset of individual households from the internal sample data files and blanking a subset of the data items on these household records. Responses to those data items were then imputed using the same imputation procedures that were used for nonresponse. A larger subset of households is selected for the confidentiality edit for small areas to provide greater protection for these areas. The editing process was implemented in such a way that the quality and usefulness of the data were preserved.

## ERRORS IN THE DATA

Since statistics in this data product are based on a sample, they may differ somewhat from 100-percent figures that would have been obtained if all housing units, persons within those housing units, and persons living in group quarters had been enumerated using the same questionnaires, instructions, enumerators, etc. The sample estimate also would differ from other samples of housing units, persons within those housing units, and persons living in group quarters. The deviation of a sample estimate from the average of all possible samples is called the sampling error. The standard error of a sample estimate is a measure of the variation among the estimates from all the possible samples and thus is a measure of the precision with which an estimate from a particular sample approximates the average result of all possible samples. The sample estimate and its estimated standard error permit the construction of interval estimates with prescribed confidence that the interval includes the average result of all possible samples. Described below is the method of calculating standard errors and confidence intervals for the data in this product.



In addition to the variability which arises from the sampling procedures, both sample data and 100-percent data are subject to nonsampling error. Nonsampling error may be introduced during any of the various complex operations used to collect and process census data. For example, operations such as editing, reviewing, or handling questionnaires may introduce error into the data. A detailed discussion of the sources of nonsampling error is given in the section on "Control of Nonsampling Error" in this appendix.

Nonsampling error may affect the data in two ways. Errors that are introduced randomly will increase the variability of the data and should therefore be reflected in the standard error. Errors that tend to be consistent in one direction will make both sample and 100-percent data biased in that direction. For example, if respondents consistently tend to underreport their income, then the resulting counts of households or families by income category will tend to be understated for the higher income categories and overstated for the lower income categories. Such biases are not reflected in the standard error.

### Calculation of Standard Errors

**Totals and Percentages**—Tables A through C contain the information necessary to calculate the standard errors of sample estimates in this data product. To calculate the standard error, it is necessary to know the basic standard error for the characteristic (given in table A or B) that would result under a simple random sample design (of persons, households, or housing units) and estimation technique; the design factor for the particular characteristic estimated (given in table C); and the number of persons or housing units in the tabulation area and the percent of these in the sample. For machine-readable products, the percent-in-sample is included in a data matrix on the file for each tabulation area. In printed reports, the percent-in-sample is provided in data tables at the end of the statistical tables that compose the report. The design factors reflect the effects of the actual sample design and complex ratio estimation procedure used for the 1990 census. Tape purchasers will receive table C, the table of design factors, as a supplement to the technical documentation. Table C is included in this appendix for printed reports.

The steps given below should be used to calculate the standard error of an estimate of a total or a percentage contained in this product. A percentage is defined here as a ratio of a numerator to a denominator where the numerator is a subset of the denominator.

1. Obtain the standard error from table A or B (or use the formula given below the table) for the estimated total or percentage, respectively.
2. Find the geographic area to which the estimate applies in the appropriate percent-in-sample table or appropriate matrix, and obtain the person or

housing unit "percent-in-sample" figure for this area. Use the person "percent-in-sample" figure for person and family characteristics. Use the housing unit "percent-in-sample" figure for housing unit characteristics.

3. Use table C to obtain the design factor for the characteristic (for example, employment status, school enrollment) and the range that contains the percent-in-sample with which you are working. Multiply the basic standard error by this factor.

The unadjusted standard errors of zero estimates or of very small estimated totals or percentages will approach zero. This is also the case for very large percentages or estimated totals that are close to the size of the tabulation areas to which they correspond. Nevertheless, these estimated totals and percentages still are subject to sampling and nonsampling variability, and an estimated standard error of zero (or a very small standard error) is not appropriate. For estimated percentages that are less than 2 or greater than 98, use the basic standard errors in table B that appear in the "2 or 98" row. For an estimated total that is less than 50 or within 50 of the total size of the tabulation area, use a basic standard error of 16.

An illustration of the use of the tables is given in the section entitled "Use of Tables to Compute Standard Errors."

**Sums and Differences**—The standard errors estimated from these tables are not directly applicable to sums of and differences between two sample estimates. To estimate the standard error of a sum or difference, the tables are to be used somewhat differently in the following three situations:

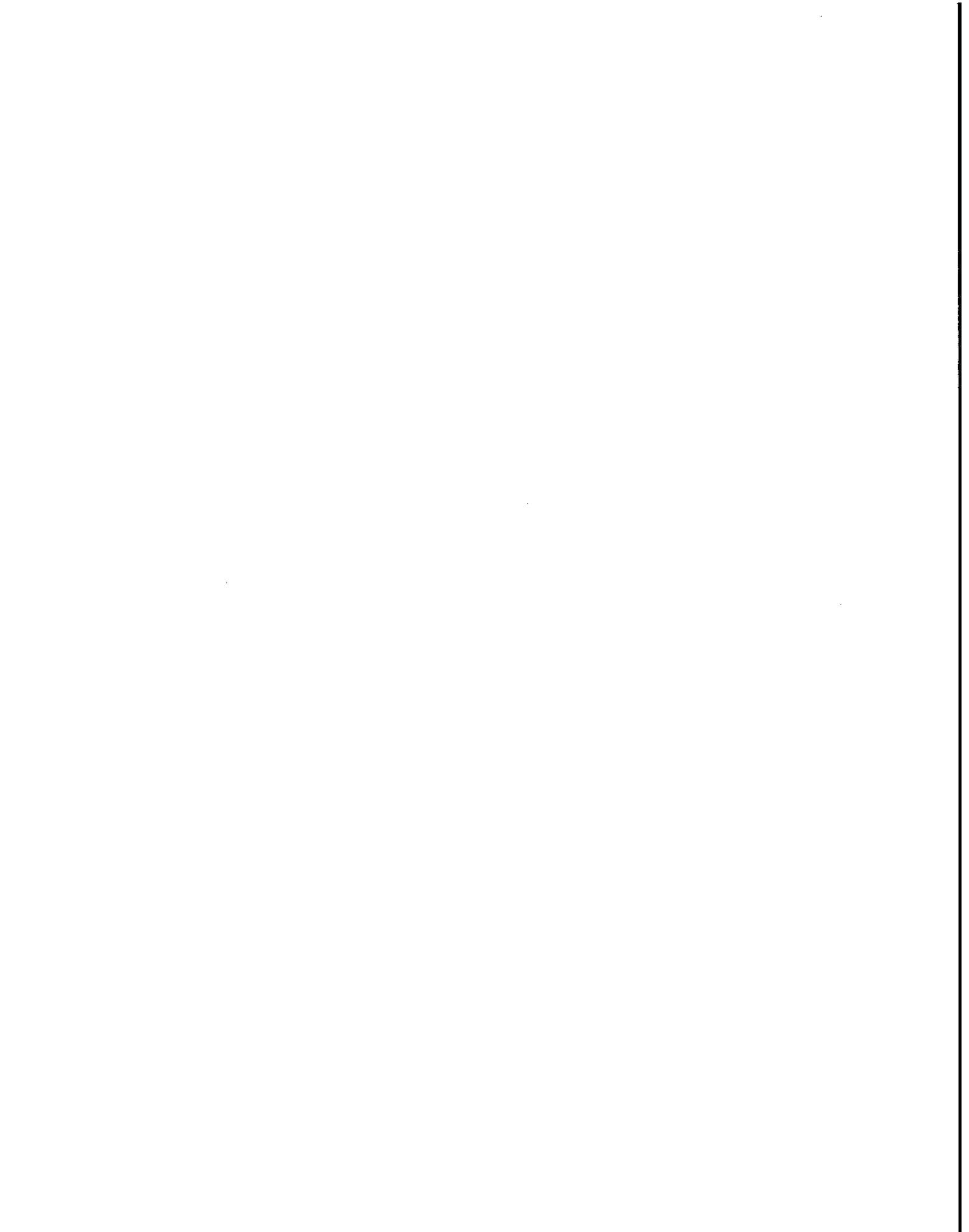
1. For the sum of or difference between a sample estimate and a 100-percent value, use the standard error of the sample estimate. The complete count value is not subject to sampling error.
2. For the sum of or difference between two sample estimates, the appropriate standard error is approximately the square root of the sum of the two individual standard errors squared; that is, for standard errors:

$SE_{\hat{X}}$  and  $SE_{\hat{Y}}$  of estimates  $\hat{X}$  and  $\hat{Y}$ :

$$SE_{(\hat{X} + \hat{Y})} = SE_{(\hat{X} - \hat{Y})} = \sqrt{(SE_{\hat{X}})^2 + (SE_{\hat{Y}})^2}$$

This method, however, will underestimate (overestimate) the standard error if the two items in a sum are highly positively (negatively) correlated or if the two items in a difference are highly negatively (positively) correlated. This method may also be used for the difference between (or





sum of sample estimates from two censuses or from a census sample and another survey. The standard error for estimates not based on the 1990 census sample must be obtained from an appropriate source outside of this appendix.

3. For the differences between two estimates, one of which is a subclass of the other, use the tables directly where the calculated difference is the estimate of interest.

**Ratios**—Frequently, the statistic of interest is the ratio of two variables, where the numerator is not a subset of the denominator. For example, the ratio of teachers to students in public elementary schools. The standard error of the ratio between two sample estimates is estimated as follows:

1. If the ratio is a proportion, then follow the procedure outlined for "Totals and Percentages."
2. If the ratio is not a proportion, then approximate the standard error using the formula below.

$$SE_{(\hat{X}/\hat{Y})} = \frac{\hat{X}}{\hat{Y}} \sqrt{\frac{(SE_{\hat{X}})^2}{\hat{X}^2} + \frac{(SE_{\hat{Y}})^2}{\hat{Y}^2}}$$

**Medians**—For the standard error of the median of a characteristic, it is necessary to examine the distribution from which the median is derived, as the size of the base and the distribution itself affect the standard error. An approximate method is given here. As the first step, compute one-half of the number on which the median is based (refer to this result as  $N/2$ ). Treat  $N/2$  as if it were an ordinary estimate and obtain its standard error as instructed above. Compute the desired confidence interval about  $N/2$ . Starting with the lowest value of the characteristic, cumulate the frequencies in each category of the characteristic until the sum equals or first exceeds the lower limit of the confidence interval about  $N/2$ . By linear interpolation, obtain a value of the characteristic corresponding to this sum. This is the lower limit of the confidence interval of the median. In a similar manner, continue cumulating frequencies until the sum equals or exceeds the count in excess of the upper limit of the interval about  $N/2$ . Interpolate as before to obtain the upper limit of the confidence interval for the estimated median.

When interpolation is required in the upper open-ended interval of a distribution to obtain a confidence bound, use 1.5 times the lower limit of the open-ended confidence interval as the upper limit of the open-ended interval.

## Confidence Intervals

A sample estimate and its estimated standard error may be used to construct confidence intervals about the estimate. These intervals are ranges that will contain

the average value of the estimated characteristic that results over all possible samples, with a known probability. For example, if all possible samples that could result under the 1990 census sample design were independently selected and surveyed under the same conditions, and if the estimate and its estimated standard error were calculated for each of these samples, then:

1. Approximately 68 percent of the intervals from one estimated standard error below the estimate to one estimated standard error above the estimate would contain the average result from all possible samples;
2. Approximately 90 percent of the intervals from 1.645 times the estimated standard error below the estimate to 1.645 times the estimated standard error above the estimate would contain the average result from all possible samples.
3. Approximately 95 percent of the intervals from two estimated standard errors below the estimate to two estimated standard errors above the estimate would contain the average result from all possible samples.

The intervals are referred to as 68 percent, 90 percent, and 95 percent confidence intervals, respectively.

The average value of the estimated characteristic that could be derived from all possible samples is or is not contained in any particular computed interval. Thus, we cannot make the statement that the average value has a certain probability of falling between the limits of the calculated confidence interval. Rather, one can say with a specified probability of confidence that the calculated confidence interval includes the average estimate from all possible samples (approximately the 100-percent value).

Confidence intervals also may be constructed for the ratio, sum of, or difference between two sample figures. This is done by first computing the ratio, sum, or difference, then obtaining the standard error of the ratio, sum, or difference (using the formulas given earlier), and finally forming a confidence interval for this estimated ratio, sum, or difference as above. One can then say with specified confidence that this interval includes the ratio, sum, or difference that would have been obtained by averaging the results from all possible samples.

The estimated standard errors given in this appendix do not include all portions of the variability due to nonsampling error that may be present in the data. The standard errors reflect the effect of simple response variance, but not the effect of correlated errors introduced by enumerators, coders, or other field or processing personnel. Thus, the standard errors calculated represent a lower bound of the total error. As a result,

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confidence intervals formed using these estimated standard errors may not meet the stated levels of confidence (i.e., 68, 90, or 95 percent). Thus, some care must be exercised in the interpretation of the data in this data product based on the estimated standard errors.

A standard sampling theory text should be helpful if the user needs more information about confidence intervals and nonsampling errors.

## Use of Tables to Compute Standard Errors

The following is a hypothetical example of how to compute a standard error of a total and a percentage. Suppose a particular data table shows that for Municipio A 9,948 persons out of all 15,888 persons age 16 years and over were in the civilian labor force. The percent-in-sample table lists Municipio A with a percent-in-sample of 16.0 percent (Persons column). The column in table C which includes 16.0 percent-in-sample shows the design factor to be 1.1 for "Employment status."

The basic standard error for the estimated total 9,948 may be obtained from table A or from the formula given below table A. In order to avoid interpolation, the use of the formula will be demonstrated here. Suppose that the total population of Municipio A was 21,220. The formula for the basic standard error, SE, is

$$SE(9,948) = \sqrt{5(9,948) (1 - 9,948/21,220)}$$

$$= 163 \text{ persons.}$$

The standard error of the estimated 9,948 persons 16 years and over who were in the civilian labor force is found by multiplying the basic standard error 163 by the design factor, 1.1 from table C. This yields an estimated standard error of 179 for the total number of persons 16 years and over in Municipio A who were in the civilian labor force.

The estimated percent of persons 16 years and over who were in the civilian labor force in Municipio A is 62.6. From table B, the unadjusted standard error is found to be approximately 0.85 percentage points. The standard error for the estimated 62.6 percent of persons 16 years and over who were in the civilian labor force is  $0.85 \times 1.1 = 0.94$  percentage points.

A note of caution concerning numerical values is necessary. Standard errors of percentages derived in this manner are approximate. Calculations can be expressed to several decimal places, but to do so would indicate more precision in the data than is justifiable. Final results should contain no more than two decimal places when the estimated standard error is one percentage point (i.e., 1.00) or more.

In the previous example, the standard error of the 9,948 persons 16 years and over in Municipio A who were in the civilian labor force was found to be 179.

Thus, a 90 percent confidence interval for this estimated total is found to be:

$$[9,948 - 1.645(179)] \text{ to } [9,948 + 1.645(179)]$$

or

$$9,654 \text{ to } 10,242$$

One can say, with about 90 percent confidence, that this interval includes the value that would have been obtained by averaging the results from all possible samples.

The following is an illustration of the calculation of standard errors and confidence intervals when a difference between two sample estimates is obtained. For example, suppose the number of persons in Municipio B age 16 years and over who were in the civilian labor force was 9,314 and the total number of persons 16 years and over was 16,666. Further suppose the population of Municipio B was 25,225. Thus, the estimated percentage of persons 16 years and over who were in the civilian labor force is 55.9 percent. The unadjusted standard error determined using the formula provided at the bottom of table B is 0.86 percentage points. We find that Municipio B had a percent-in-sample of 15.7. The range which includes 15.7 percent-in-sample in table C shows the design factor to be 1.1 for "Employment Status." Thus, the approximate standard error of the percentage (55.9 percent) is  $0.86 \times 1.1 = 0.95$  percentage points.

Now suppose that one wished to obtain the standard error of the difference between Municipio A and Municipio B of the percentages of persons who were 16 years and over and who were in the civilian labor force. The difference in the percentages of interest for the two municipalities is:

$$62.6 - 55.9 = 6.7 \text{ percent.}$$

Using the results of the previous example:

$$SE(6.7) = \sqrt{(SE(62.6))^2 + (SE(55.9))^2} = \sqrt{(0.94)^2 + (0.95)^2}$$

$$= 1.34 \text{ percentage points}$$

The 90 percent confidence interval for the difference is formed as before:

$$[6.70 - 1.645(1.34)] \text{ to } [6.70 + 1.645(1.34)]$$

or

$$4.50 \text{ to } 8.90$$

One can say with 90 percent confidence that the interval includes the difference that would have been obtained by averaging the results from all possible samples.

For reasonably large samples, ratio estimates are normally distributed, particularly for the census population. Therefore, if we can calculate the standard error of



a ratio estimate then we can form a confidence interval around the ratio. Suppose that one wished to obtain the standard error of the ratio of the estimate of persons who were 16 years and over and who were in the civilian labor force in Municipio A to the estimate of persons who were 16 years and over and who were in the civilian labor force in Municipio B. The ratio of the two estimates of interest is:

$$\begin{aligned} 9948/9314 &= 1.07 \\ SE(1.07) &= \left( \frac{9948}{9314} \right) \sqrt{\frac{179^2}{(9948)^2} + \frac{188^2}{(9314)^2}} \\ &= .029 \end{aligned}$$

Using the results above, the 90 percent confidence interval for this ratio would be:

$$\begin{aligned} [1.07 - 1.645(.029)] \text{ to } [1.07 + 1.645(.029)] \\ \text{or} \\ 1.02 \text{ to } 1.12 \end{aligned}$$

### ESTIMATION PROCEDURE

The estimates which appear in this publication were obtained from an iterative ratio estimation procedure (iterative proportional fitting) resulting in the assignment of a weight to each sample person or housing unit record. For any given tabulation area, a characteristic total was estimated by summing the weights assigned to the persons or housing units possessing the characteristic in the tabulation area. Estimates of family or household characteristics were based on the weight assigned to the family member designated as householder. Each sample person or housing unit record was assigned exactly one weight to be used to produce estimates of all characteristics. For example, if the weight given to a sample person or housing unit had the value 6, all characteristics of that person or housing unit would be tabulated with the weight of 6. The estimation procedure, however, did assign weights varying from person to person or housing unit to housing unit. The estimation procedure used to assign the weights was performed in geographically defined "weighting areas." Weighting areas generally were formed of contiguous geographic units which agreed closely with census tabulation areas within municipios. Weighting areas were required to have a minimum sample of 400 persons. Weighting areas never crossed municipio boundaries. In small municipios with a sample count below 400 persons, the minimum required sample condition was relaxed to permit the entire municipio to become a weighting area.

Within a weighting area, the ratio estimation procedure for persons was performed in three stages. For persons, the first stage applied 17 household-type groups.

### ACCURACY OF THE DATA

The second stage used the dichotomy householders/nonhouseholders. The third stage applied 18 aggregate age-sex categories. The stages were as follows:

### PERSONS

#### STAGE I: TYPE OF HOUSEHOLD

Group	Persons in Housing Units With a Family With Own Children Under 18
1	2 persons in housing unit
2	3 persons in housing unit
3	4 persons in housing unit
4	5 to 7 persons in housing unit
5	8 or more persons in housing unit
	Persons in Housing Units With a Family Without Own Children Under 18
6-10	2 through 8 or more persons in housing unit
	Persons in All Other Housing Units
11	1 person in housing unit
12-16	2 through 8 or more persons in housing unit
	Persons in Group Quarters
17	Persons in Group Quarters

#### STAGE II: HOUSEHOLDER/NONHOUSEHOLDER

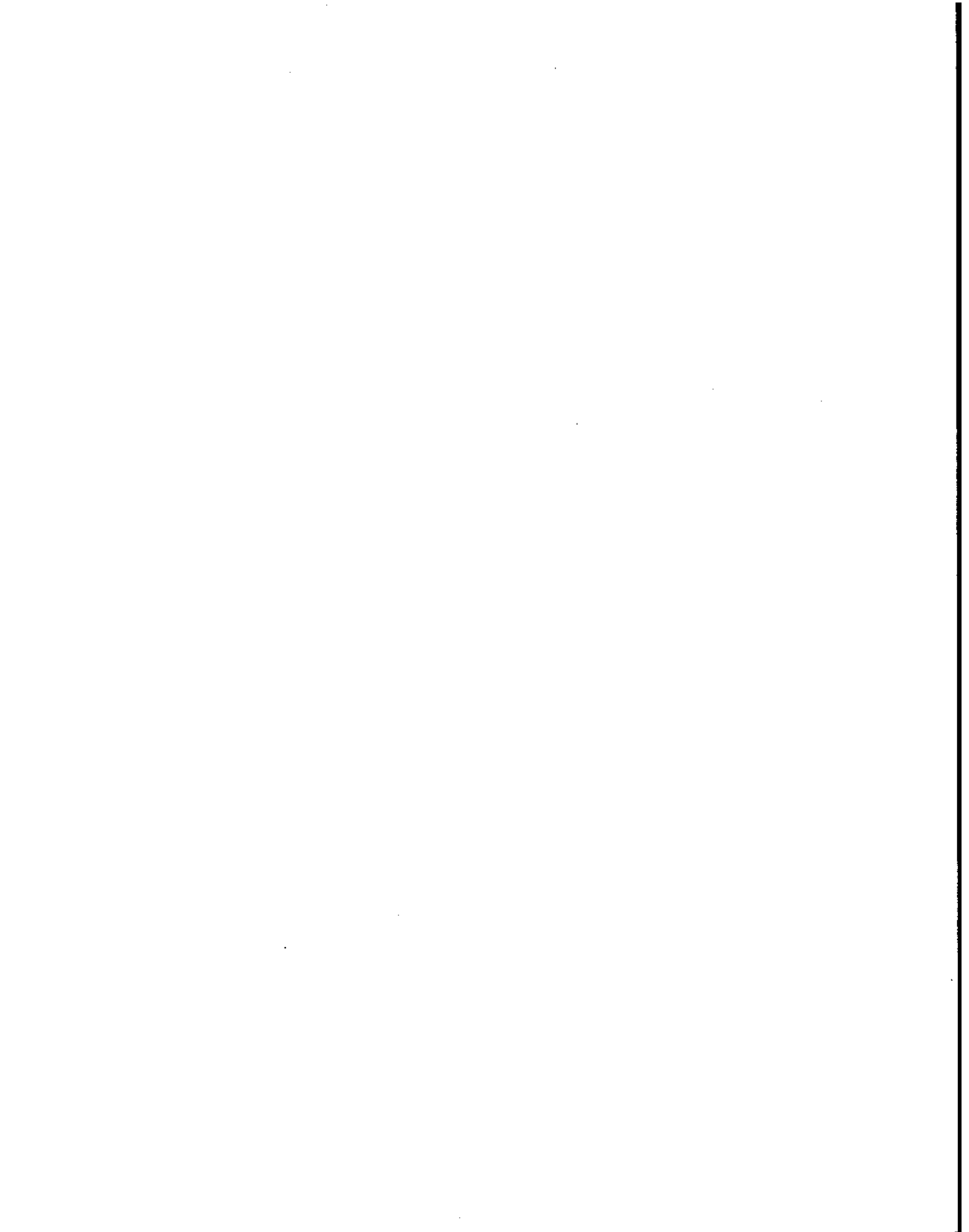
1	Householder
2	Nonhouseholder

#### STAGE III: AGE/SEX

Group	Male
1	0 to 4 years
2	5 to 14 years
3	15 to 19 years
4	20 to 24 years
5	25 to 34 years
6	35 to 54 years
7	55 to 64 years
8	65 to 74 years
9	75 years and over
	Female
10-18	Same age categories as groups 1 through 9.

Within a weighting area, the first step in the estimation procedure was to assign an initial weight to each sample person record. This weight was approximately equal to the inverse of the probability of selecting a person for the census sample.

The next step in the estimation procedure, prior to iterative proportional fitting, was to combine categories in each of the three estimation stages, when needed to increase the reliability of the ratio estimation procedure.



For each stage, any group that did not meet certain criteria for the unweighted sample count or for the ratio of the 100-percent to the initially weighted sample count, was combined, or collapsed, with another group in the same stage according to a specified collapsing pattern.

As the final step, the initial weights underwent three stages of ratio adjustment applying the grouping procedures described above. At the first stage, the ratio of the complete census count to the sum of the initial weights for each sample person was computed for each stage I group. The initial weight assigned to each person in a group was then multiplied by the stage I group ratio to produce an adjusted weight.

In stage II, the stage I adjusted weights were again adjusted by the ratio of the complete census count to the sum of the stage I weights for sample persons in each stage II group. Finally, at stage III, the stage II weights were adjusted by the ratio of the complete census count to the sum of the stage II weights for sample persons in each stage III group. The three stages of ratio adjustment were performed two times (two iterations) in the order given above. The weights obtained from the second iteration for stage III were assigned to the sample person records. However, to avoid complications in rounding for tabulated data, only whole number weights were assigned. For example, if the final weight of the persons in a particular group was 7.25 then 1/4 of the sample persons in this group were randomly assigned a weight of 8, while the remaining 3/4 received a weight of 7.

The ratio estimation procedure for housing units was essentially the same as that for persons, except that vacant units were treated differently. The occupied housing unit ratio estimation procedure was done in three stages, and the vacant housing unit ratio estimation procedure was done in a single stage. The first stage for occupied housing units applied 16 household type categories. The second stage applied three units-in-structure categories; i.e. single units, multi-unit less than 10 and multi-unit 10 or more. The third stage could potentially use 20 tenure-value/rent groups. The stages for ratio estimation for housing units were as follows:

## OCCUPIED HOUSING UNITS

### STAGE I: TYPE OF HOUSEHOLD

Group	Housing Units With a Family With Own Children Under 18
1	2 persons in housing unit
2	3 persons in housing unit
3	4 persons in housing unit
4	5 to 7 persons in housing unit
5	8 or more persons in housing unit

## OCCUPIED HOUSING UNITS—Con.

### STAGE I: TYPE OF HOUSEHOLD—Con.

	Housing Units With a Family Without Own Children Under 18
6-10	2 through 8 or more persons in housing unit
11	All Other Housing Units
12-16	1 person in housing unit
	2 through 8 or more persons in housing unit

### STAGE II: UNITS IN STRUCTURE

1	Single unit structure
2	Multi-unit structure consisting of fewer than 10 individual units
3	Multi-unit structure consisting of 10 or more individual units

### STAGE III: TENURE/VALUE OR RENT

Group	Owner Value
1	Less than \$20,000
2	\$20,000 to \$39,999
3	\$40,000 to \$59,999
4	\$60,000 to \$79,999
5	\$80,000 to \$99,999
6	\$100,000 to \$149,999
7	\$150,000 to \$249,999
8	\$250,000 to \$299,999
9	\$300,000 or more
10	Other <sup>1</sup>
	Renter Rent
101	Less than \$100
102	\$100 to \$199
103	\$200 to \$299
104	\$300 to \$399
105	\$400 to \$499
106	\$500 to \$599
107	\$600 to \$749
108	\$750 to \$999
109	\$1,000 or more
110	No cash rent

### Vacant Housing Units

1	Vacant for rent
2	Vacant for sale
3	Other vacant

<sup>1</sup>Value of units in this category results from other factors besides housing value alone, for example, inclusion of more than 3 cuerdas of land, or presence of a commercial establishment on the premises.



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The estimates produced by this procedure realize some of the gains in sampling efficiency that would have resulted if the population had been stratified into the ratio estimation groups before sampling, and if the sampling rate had been applied independently to each group. The net effect is a reduction in both the standard error and the possible bias of most estimated characteristics to levels below what would have resulted from simply using the initial, unadjusted weight. A by-product of this estimation procedure is that the estimates from the sample will, for the most part, be consistent with the complete count figures for the population and housing unit groups used in the estimation procedure.

### Control of Nonsampling Error

As mentioned earlier, both sample and 100-percent data are subject to nonsampling error. This component of error could introduce serious bias into the data, and the total error could increase dramatically over that which would result purely from sampling. While it is impossible to completely eliminate nonsampling error from an operation as large and complex as the decennial census, the Bureau of the Census attempted to control the sources of such error during the collection and processing operations. Described below are the primary sources of nonsampling error and the programs instituted for control of this error. The success of these programs, however, was contingent upon how well the instructions actually were carried out during the census. As part of the 1990 census evaluation program, both the effects of these programs and the amount of error remaining after their application will be evaluated.

**Undercoverage**—It is possible for some households or persons to be missed entirely by the census. The undercoverage of persons and housing units can introduce biases into the data.

Coverage improvement programs were implemented during census enumeration and processing to minimize undercoverage of the population and housing units. These programs were developed based on experience from the 1980 census and results from the 1990 census testing cycle.

Addresses were listed concurrent with enumeration. A recheck of units initially classified as vacant or nonexistent improved further the coverage of persons and housing units. All local officials were given the opportunity to participate in a post-census local review, and census enumerators conducted an additional canvass. In addition, efforts were made to improve the coverage of unique population groups. Computer and clerical edits also contributed to improved coverage.

As a test of the feasibility of using an administrative records list to improve coverage, the Census Bureau obtained a list of residential customers from the Puerto Rico electric company, clerically matched addresses

(for large multi-unit structures) on the list to the census address listing books and followed up on units identified on the electric company list but not in the census.

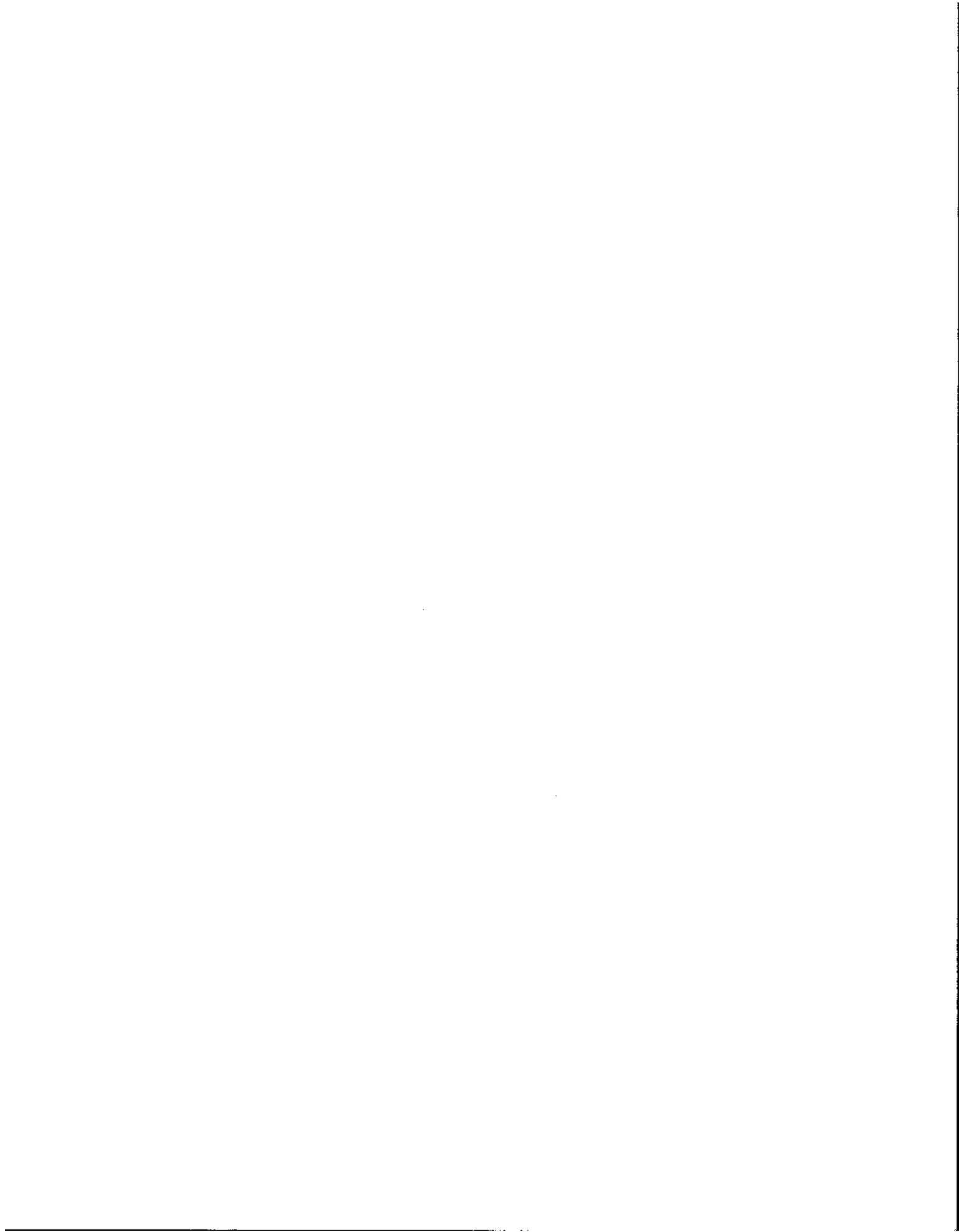
More extensive discussion of the programs implemented to improve coverage will be published by the Census Bureau when the evaluation of the coverage improvement program is completed.

**Respondent and Enumerator Error**—The person answering the questionnaire or responding to the questions posed by an enumerator could serve as a source of error, although the questions were phrased as clearly as possible and detailed instructions for completing the questionnaire were provided to each household. In addition, respondents' answers were edited for completeness and consistency, and problems were followed up as necessary.

The enumerator may misinterpret or otherwise incorrectly record information given by a respondent; may fail to collect some of the information for a person or household; or may collect data for households that were not designated as part of the sample. To control these problems, the work of enumerators was monitored carefully. Field staff were prepared for their tasks by using standardized training packages that included hands-on experience in using census materials. A sample of the households interviewed by enumerators for nonresponse were reinterviewed to control for the possibility of data for fabricated persons being submitted by enumerators. Also, the estimation procedure was designed to control for biases that would result from the collection of data from households not designated for the sample.

**Processing Error**—The many phases involved in processing the census data represent potential sources for the introduction of nonsampling error. The processing of the census questionnaires includes the field editing, followup, and transmittal of completed questionnaires; the manual coding of write-in responses; and the electronic data processing. The various field, coding and computer operations undergo a number of quality control checks to insure their accurate application.

**Nonresponse**—Nonresponse to particular questions on the census questionnaire allows for the introduction of bias into the data, since the characteristics of the nonrespondents have not been observed and may differ from those reported by respondents. As a result, any imputation procedure using respondent data may not completely reflect this difference either at the elemental level (individual person or housing unit) or on the average. Some protection against the introduction of large biases is afforded by minimizing nonresponse. In the census, nonresponse was reduced substantially during the field operations by the various edit and followup operations aimed at obtaining a response for every question. Characteristics for the nonresponses



remaining after this operation were imputed by the computer by using reported data for a person or housing unit with similar characteristics.

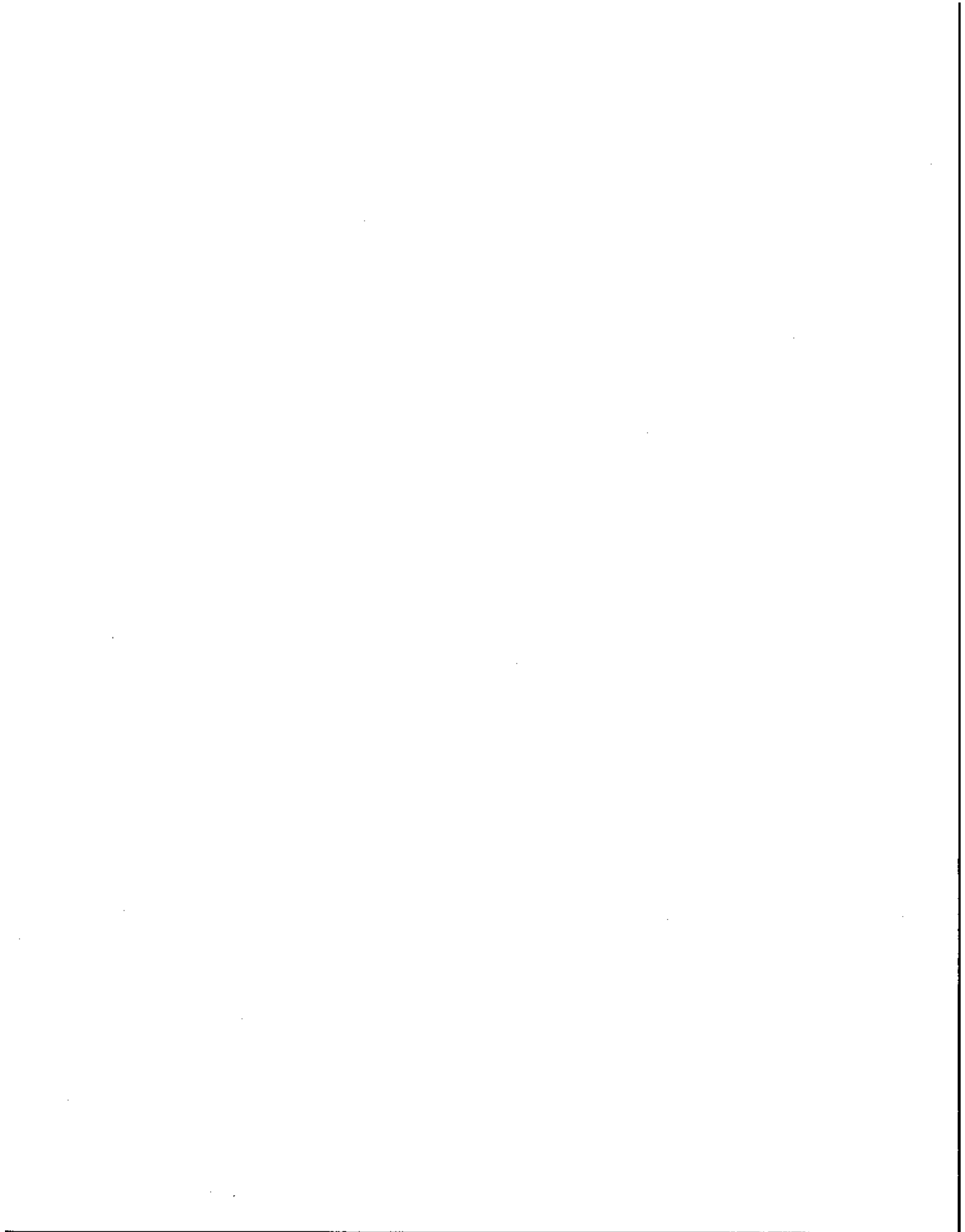
### **EDITING OF UNACCEPTABLE DATA**

The objective of the processing operation is to produce a set of data that describes the population as accurately and clearly as possible. To meet this objective, questionnaires were edited during field data collection operations for consistency, completeness, and acceptability. Questionnaires also were reviewed by census clerks for omissions, certain specific inconsistencies, and population coverage. For example, write-in entries such as "Don't know" or "NA" were considered unacceptable. The initial edit was performed by clerks. As a result of this operation, a telephone or personal visit followup was made to obtain missing information. Potential coverage errors were included in the followup, as well as a sample of questionnaires with omissions and/or inconsistencies.

Subsequent to field operations, remaining incomplete or inconsistent information on the questionnaires was assigned using imputation procedures during the final automated edit of the collected data. Imputations, or computer assignments of acceptable codes in place of unacceptable entries or blanks, are needed most often

when an entry for a given item is lacking or when the information reported for a person or housing unit on that item is inconsistent with other information for that same person or housing unit. As in previous censuses, the general procedure for changing unacceptable entries was to assign an entry for a person or housing unit that was consistent with entries for persons or housing units with similar characteristics. The assignment of acceptable codes in place of blanks or unacceptable entries enhances the usefulness of the data.

Another way in which corrections were made during the computer editing process was through substitution; that is, the assignment of a full set of characteristics for a person or housing unit. When there was an indication that a housing unit was occupied but the questionnaire contained no information for the people within the household or the occupants were not listed on the questionnaire, a previously accepted household was selected as a substitute, and the full set of characteristics for the substitute was duplicated. The assignment of the full set of housing characteristics occurred when there was no housing information available. If the housing unit was determined to be occupied, the housing characteristics were assigned from a previously processed occupied unit. If the housing unit was vacant, the housing characteristics were assigned from a previously processed vacant unit.



**Table A. Unadjusted Standard Error for Estimated Totals**

[Based on a 1-in-6 simple random sample]

Estimated Total <sup>1</sup>	Size of publication area <sup>2</sup>													
	500	1,000	2,500	5,000	10,000	25,000	50,000	100,000	250,000	500,000	1,000,000	5,000,000	10,000,000	25,000,000
50	16	16	16	16	16	16	16	16	16	16	16	16	16	16
100	20	21	22	22	22	22	22	22	22	22	22	22	22	22
250	25	30	35	35	35	35	35	35	35	35	35	35	35	35
500	-	35	45	45	50	50	50	50	50	50	50	50	50	50
1,000	-	-	55	65	65	70	70	70	70	70	70	70	70	70
2,500	-	-	-	80	95	110	110	110	110	110	110	110	110	110
5,000	-	-	-	-	110	140	150	150	150	150	150	150	150	150
10,000	-	-	-	-	-	170	200	210	220	220	220	220	220	220
15,000	-	-	-	-	-	170	230	250	270	270	270	270	270	270
25,000	-	-	-	-	-	-	250	310	340	350	350	350	350	350
50,000	-	-	-	-	-	-	-	310	510	570	580	610	610	610
100,000	-	-	-	-	-	-	-	-	550	630	670	700	700	710
250,000	-	-	-	-	-	-	-	-	-	790	970	1,090	1,100	1,100
500,000	-	-	-	-	-	-	-	-	-	-	1,120	1,500	1,540	1,570
1,000,000	-	-	-	-	-	-	-	-	-	-	-	2,000	2,120	2,160
5,000,000	-	-	-	-	-	-	-	-	-	-	-	-	3,540	4,470
10,000,000	-	-	-	-	-	-	-	-	-	-	-	-	-	5,480

<sup>1</sup>For estimated totals larger than 10,000,000, the standard error is somewhat larger than the table values. The formula given below should be used to calculate the standard error.

$$SE(\hat{Y}) = \sqrt{5\hat{Y}(1 - \frac{\hat{Y}}{N})}$$

N = Size of area

$\hat{Y}$  = Estimate of characteristic total

<sup>2</sup>The total count of persons in the area if the estimated total is a person characteristic, or the total count of housing units in the area if the estimated total is a housing unit characteristic.

**Table B. Unadjusted Standard Error in Percentage Points for Estimated Percentage**

[Based on a 1-in-6 simple random sample]

Estimated Percentage	Base of percentage <sup>1</sup>												
	500	750	1,000	1,500	2,500	5,000	7,500	10,000	25,000	50,000	100,000	250,000	500,000
2 or 98	1.4	1.1	1.0	0.8	0.6	0.4	0.4	0.3	0.2	0.1			
5 or 95	2.2	1.8	1.5	1.3	1.0	0.7	0.6	0.5	0.3	0.2	0.1	0.1	0.1
10 or 90	3.0	2.4	2.1	1.7	1.3	0.9	0.8	0.7	0.4	0.3	0.2	0.1	0.1
15 or 85	3.6	2.9	2.5	2.1	1.6	1.1	0.9	0.8	0.5	0.4	0.3	0.2	0.1
20 or 80	4.0	3.3	2.8	2.3	1.8	1.3	1.0	0.9	0.6	0.4	0.3	0.2	0.1
25 or 75	4.3	3.5	3.1	2.5	1.9	1.4	1.1	1.0	0.6	0.4	0.3	0.2	0.1
30 or 70	4.6	3.7	3.2	2.6	2.0	1.4	1.2	1.0	0.6	0.4	0.3	0.2	0.1
35 or 65	4.8	3.9	3.4	2.8	2.1	1.5	1.2	1.1	0.7	0.5	0.3	0.2	0.1
50	5.0	4.1	3.5	2.9	2.2	1.6	1.3	1.1	0.7	0.5	0.4	0.2	0.2

<sup>1</sup>For a percentage and/or base of percentage not shown in the table, the formula given below may be used to calculate the standard error. This table should only be used for proportions, that is, where the numerator is a subset of the denominator.

$$SE(\hat{p}) = \sqrt{\frac{5}{B} \hat{p}(100 - \hat{p})}$$

B = Base of estimated percentage

$\hat{p}$  = Estimated percentage

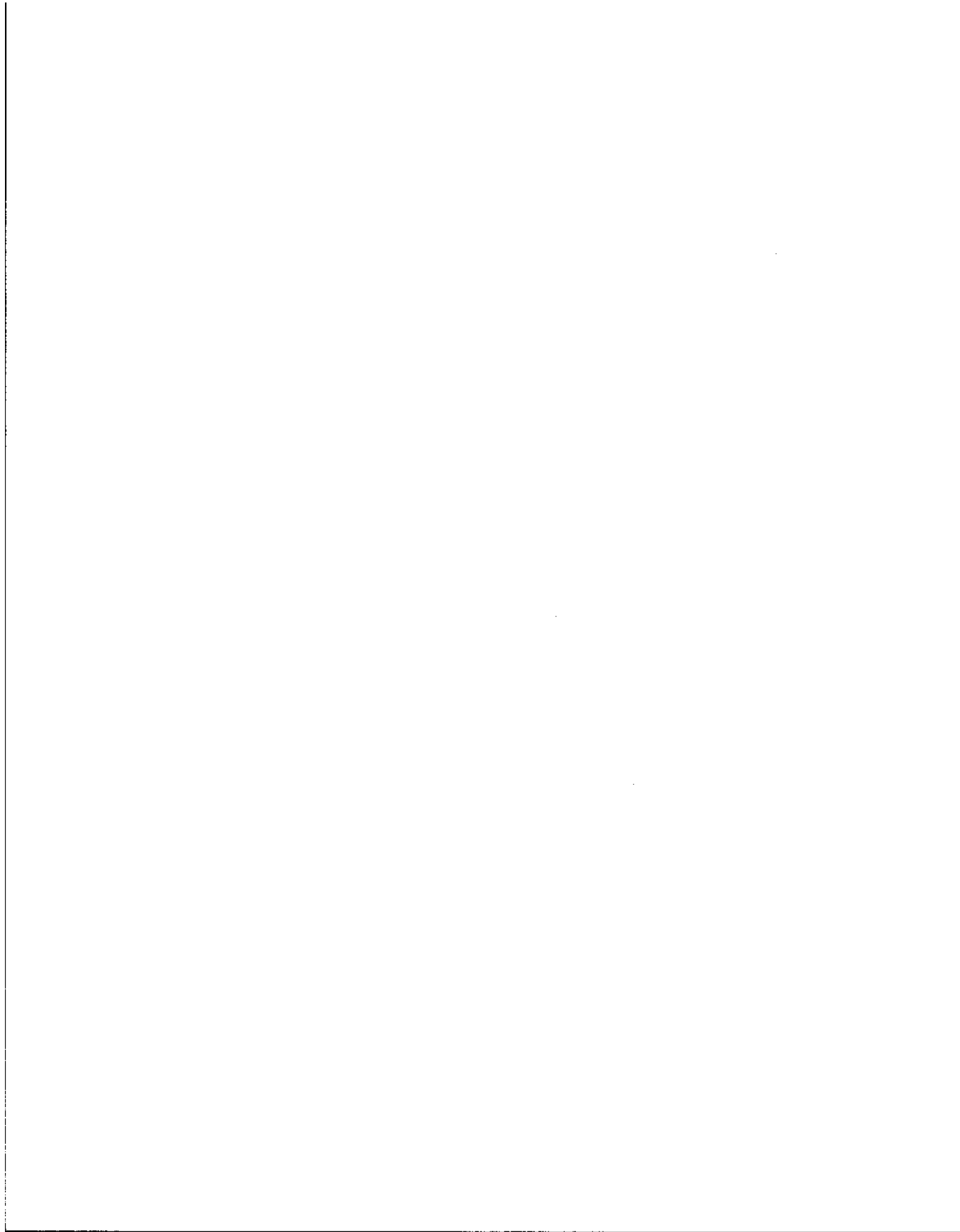


**Table C. Standard Error Design Factors—Puerto Rico**

[Percent of persons or housing units in sample]

Characteristic	Less than 15 percent	15 percent or more
<b>POPULATION</b>		
Age.....	1.2	1.1
Sex.....	1.8	1.5
Marital status.....	1.2	1.0
Household type and relationship.....	1.4	1.2
Children ever born.....	3.1	2.9
Work disability and mobility limitation status.....	1.2	1.1
Place of birth.....	2.5	2.3
Citizenship.....	2.1	1.8
Residence in 1985.....	2.5	2.2
Year of entry.....	3.2	2.7
Ability to speak Spanish and/ or English.....	1.5	1.3
Educational attainment.....	1.3	1.1
School enrollment.....	1.9	1.8
Ability to read and write.....	1.5	1.3
Vocational training.....	1.6	1.4
Length of last stay in the United States.....	3.2	2.7
School attendance.....	3.3	2.7
Type of residence (urban/ rural).....	2.8	2.2
Household type.....	1.2	1.1
Family type.....	1.4	1.3
Subfamily type and presence of children.....	1.2	1.1
Group quarters.....	1.1	0.9
Employment status.....	1.2	1.1
Industry.....	1.2	1.1
Occupation.....	1.2	1.1
Class of worker.....	1.3	1.1
Hours per week and weeks worked in 1989.....	1.2	1.1
Number of workers in family.....	1.3	1.1
Place of work.....	1.3	1.1
Means of transportation to work.....	1.3	1.1
Travel time to work.....	1.3	1.1
Time leaving home to go to work.....	1.3	1.1
Private vehicle occupancy.....	1.3	1.1
Type of income in 1989.....	1.4	1.2
Household income in 1989.....	1.2	1.1
Family income in 1989.....	1.2	1.1
Poverty status in 1989 (persons).....	1.3	1.2
Poverty status in 1989 (families).....	1.2	1.1
Armed Forces and veteran status.....	1.7	1.4





**Table C. Standard Error Design Factors—Aguedilla**  
 [Percent of persons or housing units in sample]

Characteristic	Less than 15 percent	15 percent or more
<b>POPULATION</b>		
Age.....		
Sex.....	1.2	1.1
Marital status.....	1.7	1.5
Household type and relationship.....	1.2	1.0
Children ever born.....	1.4	1.2
Work disability and mobility limitation status.....	3.0	2.8
Place of birth.....	1.2	1.1
Citizenship.....	2.5	2.3
Residence in 1985.....	2.1	1.8
Year of entry.....	2.4	2.2
Ability to speak Spanish and/ or English.....	3.2	2.7
Educational attainment.....	1.5	1.3
School enrollment.....	1.3	1.1
Ability to read and write.....	1.9	1.8
Vocational training.....	1.5	1.3
Length of last stay in the United States.....	1.6	1.4
School attendance.....	3.3	2.7
Type of residence (urban/ rural).....	3.3	2.7
Household type.....	2.7	2.2
Family type.....	1.2	1.1
Subfamily type and presence of children.....	1.4	1.3
Group quarters.....	1.2	1.1
Employment status.....	1.1	0.9
Industry.....	1.2	1.1
Occupation.....	1.2	1.1
Class of worker.....	1.2	1.1
Hours per week and weeks worked in 1989.....	1.3	1.2
Number of workers in family.....	1.2	1.1
Place of work.....	1.3	1.1
Means of transportation to work.....	1.3	1.2
Travel time to work.....	1.3	1.1
Time leaving home to go to work.....	1.3	1.1
Private vehicle occupancy.....	1.3	1.1
Type of income in 1989.....	1.3	1.2
Household income in 1989.....	1.4	1.2
Family income in 1989.....	1.2	1.1
Poverty status in 1989 (persons).....	1.2	1.1
Poverty status in 1989 (families).....	1.3	1.2
Armed Forces and veteran status.....	1.2	1.1
	1.7	1.4



Table C. Standard Error Design Factors—Arecibo

[Percent of persons or housing units in sample]

Characteristic	Less than 15 percent	15 percent or more
<b>POPULATION</b>		
Age.....		
Sex.....	1.2	1.1
Marital status.....	1.7	1.5
Household type and relationship.....	1.2	1.0
Children ever born.....	1.4	1.2
Work disability and mobility limitation status.....	3.0	2.8
Place of birth.....	1.2	1.1
Citizenship.....	2.5	2.3
Residence in 1985.....	2.1	1.8
Year of entry.....	2.4	2.2
Ability to speak Spanish and/ or English.....	3.2	2.7
Educational attainment.....	1.5	1.3
School enrollment.....	1.3	1.1
Ability to read and write.....	1.9	1.6
Vocational training.....	1.5	1.3
Length of last stay in the United States.....	1.6	1.4
School attendance.....	3.3	2.7
Type of residence (urban/ rural).....	3.3	2.7
Household type.....	2.7	2.2
Family type.....	1.2	1.1
Subfamily type and presence of children.....	1.4	1.3
Group quarters.....	1.2	1.1
Employment status.....	1.1	0.9
Industry.....	1.2	1.1
Occupation.....	1.2	1.1
Class of worker.....	1.2	1.1
Hours per week and weeks worked in 1989.....	1.3	1.2
Number of workers in family.....	1.2	1.1
Place of work.....	1.3	1.1
Means of transportation to work.....	1.3	1.2
Travel time to work.....	1.3	1.1
Time leaving home to go to work.....	1.3	1.1
Private vehicle occupancy.....	1.3	1.1
Type of income in 1989.....	1.3	1.2
Household income in 1989.....	1.4	1.2
Family income in 1989.....	1.2	1.1
Poverty status in 1989 (persons).....	1.2	1.1
Poverty status in 1989 (families).....	1.3	1.2
Armed Forces and veteran status.....	1.2	1.1
	1.7	1.4



**Table C. Standard Error Design Factors—Mayaguez**

[Percent of persons or housing units in sample]

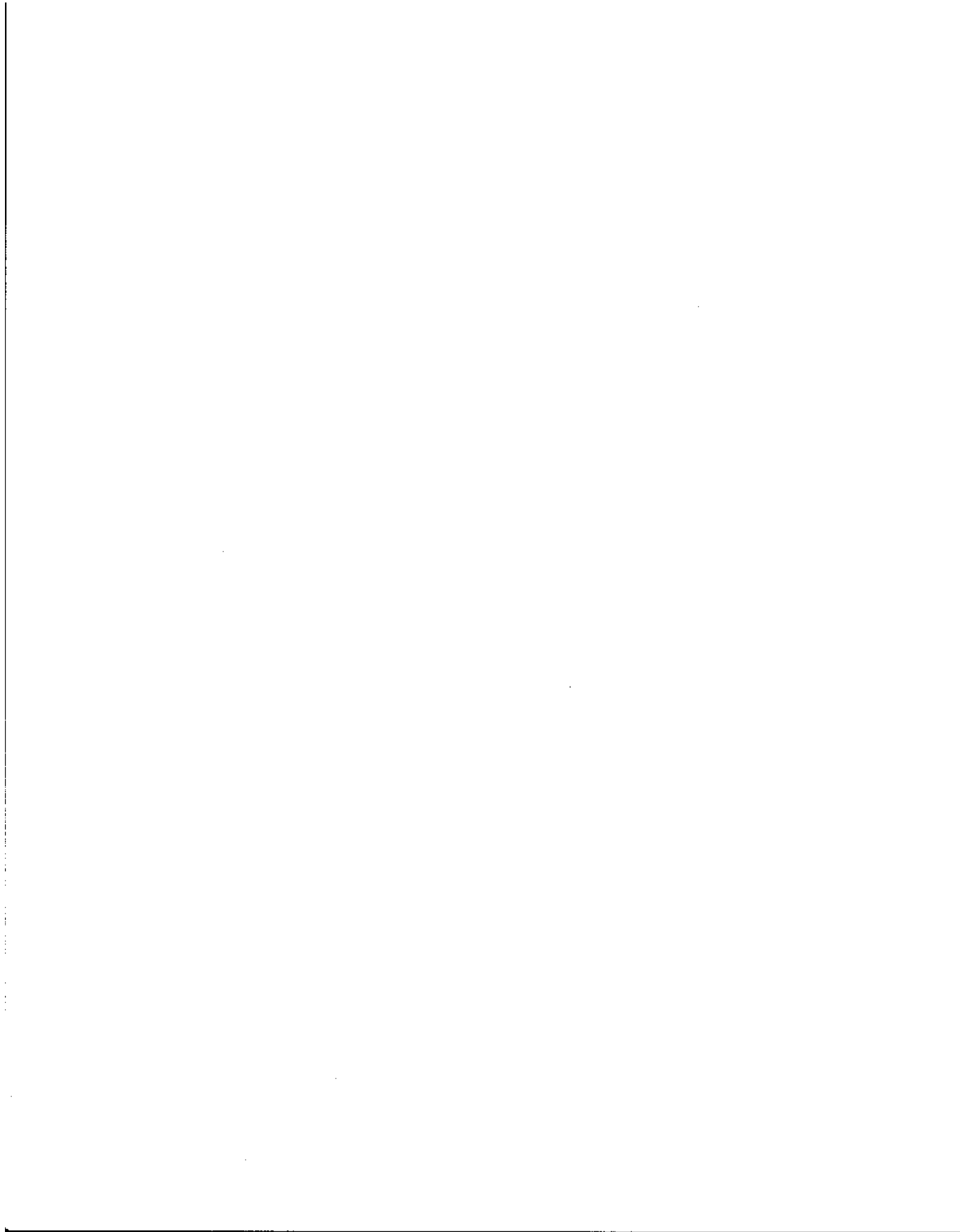
Characteristic	Less than 15 percent	15 percent or more
<b>POPULATION</b>		
Age.....		
Sex.....	1.2	1.1
Marital status.....	1.7	1.5
Household type and relationship.....	1.2	1.0
Children ever born.....	1.4	1.2
Work disability and mobility limitation status.....	3.0	2.8
Place of birth.....	1.2	1.1
Citizenship.....	2.5	2.3
Residence in 1985.....	2.1	1.8
Year of entry.....	2.4	2.2
	3.2	2.7
Ability to speak Spanish and/ or English.....		
Educational attainment.....	1.5	1.3
School enrollment.....	1.3	1.1
Ability to read and write.....	1.9	1.6
Vocational training.....	1.5	1.3
Length of last stay in the United States.....	1.6	1.4
School attendance.....	3.3	2.7
Type of residence (urban/ rural).....	3.3	2.7
Household type.....	2.7	2.2
Family type.....	1.2	1.1
	1.4	1.3
Subfamily type and presence of children.....		
Group quarters.....	1.2	1.1
Employment status.....	1.1	0.9
Industry.....	1.2	1.1
Occupation.....	1.2	1.1
Class of worker.....	1.2	1.1
Hours per week and weeks worked in 1989.....	1.3	1.2
Number of workers in family.....	1.2	1.1
Place of work.....	1.3	1.1
Means of transportation to work.....	1.3	1.2
	1.3	1.1
Travel time to work.....		
Time leaving home to go to work.....	1.3	1.1
Private vehicle occupancy.....	1.3	1.1
Type of income in 1989.....	1.3	1.2
Household income in 1989.....	1.4	1.2
Family income in 1989.....	1.2	1.1
Poverty status in 1989 (persons).....	1.2	1.1
Poverty status in 1989 (families).....	1.3	1.2
Armed Forces and veteran status.....	1.2	1.1
	1.7	1.4



**Table C. Standard Error Design Factors—Ponce**  
 [Percent of persons or housing units in sample]

Characteristic	Less than 15 percent	15 percent or more
<b>POPULATION</b>		
Age .....		
Sex .....	1.2	1.1
Marital status .....	1.7	1.5
Household type and relationship .....	1.2	1.0
Children ever born .....	1.4	1.2
Work disability and mobility limitation status .....	3.0	2.8
Place of birth .....	1.2	1.1
Citizenship .....	2.5	2.3
Residence in 1985 .....	2.1	1.8
Year of entry .....	2.4	2.2
	3.2	2.7
Ability to speak Spanish and/ or English .....		
Educational attainment .....	1.5	1.3
School enrollment .....	1.3	1.1
Ability to read and write .....	1.9	1.6
Vocational training .....	1.5	1.3
Length of last stay in the United States .....	1.6	1.4
School attendance .....	3.3	2.7
Type of residence (urban/ rural) .....	3.3	2.7
Household type .....	2.7	2.2
Family type .....	1.2	1.1
	1.4	1.3
Subfamily type and presence of children .....		
Group quarters .....	1.2	1.1
Employment status .....	1.1	0.9
Industry .....	1.2	1.1
Occupation .....	1.2	1.1
Class of worker .....	1.2	1.1
Hours per week and weeks worked in 1989 .....	1.3	1.2
Number of workers in family .....	1.2	1.1
Place of work .....	1.3	1.1
Means of transportation to work .....	1.3	1.2
	1.3	1.1
Travel time to work .....		
Time leaving home to go to work .....	1.3	1.1
Private vehicle occupancy .....	1.3	1.1
Type of income in 1989 .....	1.3	1.2
Household income in 1989 .....	1.4	1.2
Family income in 1989 .....	1.2	1.1
Poverty status in 1989 (persons) .....	1.2	1.1
Poverty status in 1989 (families) .....	1.3	1.2
Armed Forces and veteran status .....	1.2	1.1
	1.7	1.4





**Table C. Standard Error Design Factors—Caguan**

[Percent of persons or housing units in sample]

Characteristic	Less than 15 percent	15 percent or more
<b>POPULATION</b>		
Age .....	1.2	1.1
Sex .....	1.7	1.5
Marital status .....	1.2	1.0
Household type and relationship .....	1.4	1.2
Children ever born .....	3.0	2.8
Work disability and mobility limitation status .....	1.2	1.1
Place of birth .....	2.5	2.3
Citizenship .....	2.1	1.8
Residence in 1985 .....	2.4	2.2
Year of entry .....	3.2	2.7
Ability to speak Spanish and/ or English .....	1.5	1.3
Educational attainment .....	1.3	1.1
School enrollment .....	1.9	1.8
Ability to read and write .....	1.5	1.3
Vocational training .....	1.6	1.4
Length of last stay in the United States .....	3.3	2.7
School attendance .....	3.3	2.7
Type of residence (urban/ rural) .....	2.7	2.2
Household type .....	1.2	1.1
Family type .....	1.4	1.3
Subfamily type and presence of children .....	1.2	1.1
Group quarters .....	1.1	0.9
Employment status .....	1.2	1.1
Industry .....	1.2	1.1
Occupation .....	1.2	1.1
Class of worker .....	1.3	1.2
Hours per week and weeks worked in 1989 .....	1.2	1.1
Number of workers in family .....	1.3	1.1
Place of work .....	1.3	1.2
Means of transportation to work .....	1.3	1.1
Travel time to work .....	1.3	1.1
Time leaving home to go to work .....	1.3	1.1
Private vehicle occupancy .....	1.3	1.2
Type of income in 1989 .....	1.4	1.2
Household income in 1989 .....	1.2	1.1
Family income in 1989 .....	1.2	1.1
Poverty status in 1989 (persons) .....	1.3	1.2
Poverty status in 1989 (families) .....	1.2	1.1
Armed Forces and veteran status .....	1.7	1.4



**Table C. Standard Error Design Factors—San Juan**  
 [Percent of persons or housing units in sample]

Characteristic	Less than 15 percent	15 percent or more
<b>POPULATION</b>		
Age .....		
Sex .....	1.2	1.1
Marital status .....	1.7	1.5
Household type and relationship .....	1.2	1.0
Children ever born .....	1.4	1.2
Work disability and mobility limitation status .....	3.0	2.8
Place of birth .....	1.2	1.1
Citizenship .....	2.5	2.3
Residence in 1985 .....	2.1	1.8
Year of entry .....	2.4	2.2
Ability to speak Spanish and/ or English .....	3.2	2.7
Educational attainment .....	1.5	1.3
School enrollment .....	1.3	1.1
Ability to read and write .....	1.9	1.6
Vocational training .....	1.5	1.3
Length of last stay in the United States .....	1.6	1.4
School attendance .....	3.3	2.7
Type of residence (urban/rural) .....	3.3	2.7
Household type .....	2.7	2.2
Family type .....	1.2	1.1
Subfamily type and presence of children .....	1.4	1.3
Group quarters .....	1.2	1.1
Employment status .....	1.1	0.9
Industry .....	1.2	1.1
Occupation .....	1.2	1.1
Class of worker .....	1.2	1.1
Hours per week and weeks worked in 1989 .....	1.3	1.2
Number of workers in family .....	1.2	1.1
Place of work .....	1.3	1.1
Means of transportation to work .....	1.3	1.2
Travel time to work .....	1.3	1.1
Time leaving home to go to work .....	1.3	1.1
Private vehicle occupancy .....	1.3	1.1
Type of income in 1989 .....	1.3	1.2
Household income in 1989 .....	1.4	1.2
Family income in 1989 .....	1.2	1.1
Poverty status in 1989 (persons) .....	1.2	1.1
Poverty status in 1989 (families) .....	1.3	1.2
Armed Forces and veteran status .....	1.2	1.1
	1.7	1.4



# APPENDIX D.

## Collection and Processing Procedures

### CONTENTS

Data Collection Procedures .....	D-2
Enumeration and Residence Rules .....	D-1
Processing Procedures .....	D-4

### ENUMERATION AND RESIDENCE RULES

In accordance with census practice dating back to the first United States census in 1790, each person was to be enumerated as an inhabitant of his or her "usual residence" in the 1990 census. Usual residence is the place where the person lives and sleeps most of the time or considers to be his or her usual residence. This place is not necessarily the same as the person's legal residence or voting residence. In the vast majority of cases, however, the use of these different bases of classification would produce substantially the same statistics, although there might be appreciable differences for a few areas.

The implementation of this practice has resulted in the establishment of rules for certain categories of persons whose usual place of residence is not immediately apparent. Furthermore, this practice means that persons were not always counted as residents of the place where they happened to be staying on Census Day (April 1, 1990).

#### Enumeration Rules

Each person whose usual residence was in Puerto Rico was to be included in the census, without regard to the person's legal status or citizenship. In a departure from earlier censuses, foreign diplomatic personnel participated voluntarily in the census. As in previous censuses, persons in Puerto Rico specifically excluded from the census were foreign travelers who had not established a residence in Puerto Rico.

Persons with a usual residence outside Puerto Rico were not enumerated in the 1990 census of Puerto Rico. On the other hand, persons temporarily overseas were to be enumerated at their usual residence in Puerto Rico.

#### Residence Rules

Each person included in the census was to be counted at his or her usual residence—the place where he or she lives and sleeps most of the time or the place

that the person considers to be his or her usual home. If a person had no usual residence, the person was to be counted where he or she happened to be staying on April 1, 1990.

Persons temporarily away from their usual residence, whether in Puerto Rico, the United States or overseas, on a vacation or on a business trip, were counted at their usual residence. Persons who occupied more than one residence during the year were counted at the one they considered to be their usual residence. Persons who moved on or near Census Day were counted at the place they considered to be their usual residence.

**Persons in the U.S. Armed Forces**—Members of the U.S. Armed Forces were counted as residents of the area in which the installation was located, either on the installation or in the surrounding community. Family members of U.S. Armed Forces personnel were counted where they were living on Census Day (for example, with the U.S. Armed Forces person or at another location).

Each U.S. Navy ship not deployed to the 6th or 7th Fleet was attributed to the municipio in Puerto Rico or the locality in the United States that the Department of the Navy designated as its homeport. If the homeport included more than one municipio in Puerto Rico or more than one locality in the United States, ships berthed there on Census Day were assigned by the U.S. Bureau of the Census to the municipio in Puerto Rico or the locality in the United States in which the land immediately adjacent to the dock or pier was actually located. Ships attributed to the homeport, but not physically present and not deployed to the 6th or 7th Fleet, were assigned to the municipio in Puerto Rico or the locality in the United States named on the Department of the Navy's homeport list. These rules also apply to U.S. Coast Guard vessels.

Personnel assigned to each U.S. Navy and Coast Guard ship were given the opportunity to report a residence off the ship. Those who did report an off-ship residence in the communities surrounding the homeport were counted there; those who did not were counted as residents of the ship. Personnel on U.S. Navy ships deployed to the 6th or 7th Fleet on Census Day were considered to be part of the U.S. overseas population.

**Persons on U.S. Maritime Ships**—Persons aboard U.S. maritime ships who reported an off-ship residence were counted at that residence. Those who did not were counted as residents of the ship and were attributed as follows:



1. The port where the ship was docked on Census Day, if that port was in Puerto Rico, the United States, or its other territories.
2. The port of departure if the ship was at sea, provided the port was in Puerto Rico, the United States, or its other territories.
3. The port of destination in Puerto Rico, the United States, or its other territories, if the port of departure of a ship at sea was a foreign port.
4. The overseas population if the ship was docked at a foreign port or was at sea between foreign ports.

**Persons Away at School**—College students were counted as residents of the area in which they were living while attending college, as they have been since the 1950 census. Children in boarding schools below the college level were counted at their parental home.

**Persons in Institutions**—Persons under formally authorized, supervised care or custody, such as in Commonwealth of Puerto Rico prisons; local jails; juvenile institutions; nursing, convalescent, and rest homes for the aged and dependent; or homes, schools, hospitals, or wards for the physically handicapped, mentally retarded, or mentally ill, were counted at these places.

**Persons Away From Their Usual Residence on Census Day**—In some parts of the island, Hurricane Hugo, which struck in September 1989, displaced significant numbers of households from their usual place of residence. If these persons reported a destroyed or damaged residence as their usual residence, they were counted at that location.

Persons away from their usual residence were counted by means of interviews with other members of their families, resident managers, or neighbors.

## DATA COLLECTION PROCEDURES

The 1990 Census of Puerto Rico was conducted through a combination of self-enumeration and personal interview. This method, formerly known as conventional or door-to-door enumeration, is called list/enumerate.

Spanish-language short-form questionnaires were delivered to residences by the United States Postal Service (USPS) 1 week before Census Day (April 1, 1990) in an unaddressed packet. The questionnaire packet also included general information about the 1990 census and instructions to the respondents explaining how to complete the questionnaire. English-language questionnaires were available on request.

During the enumeration of housing units in Puerto Rico, enumerators used one of the following questionnaires:

1. A short-form questionnaire that contained a limited number of basic population and housing questions; these questions were asked of all persons and housing units and are often referred to as the 100-percent questions. (This questionnaire contained the same items as the questionnaire delivered by the USPS 1 week before Census Day, but was designed to be administered by the enumerator during personal interviews.)
2. A long-form questionnaire that contained the 100-percent items and a number of additional questions; a sampling procedure was used to determine those housing units that were to answer the long-form questionnaire. This form was used by enumerators during personal interviews; thus, there were no respondent instructions.

These forms were keyable documents similar in content to the stateside forms. The Puerto Rico forms, however, included a number of questions specifically designed to meet Puerto Rico's data needs. The sampling rate used in the 1990 Census of Puerto Rico required that one in every six housing units (about 17 percent) answer the long-form or sample questionnaire.

## Enumeration of Housing Units

Starting a week before Census Day, enumerators canvassed their assigned areas, created a list of all housing units, completed long-form questionnaires as required, picked up the completed short-form questionnaires delivered by the USPS, or completed a short-form questionnaire as necessary.

## Field Followup

Followup enumerators visited those housing units for which questionnaires were missing and those initially identified as vacant to obtain a completed questionnaire or to verify the vacancy status of the unit as of Census Day.

**Coverage and Edit-Failure Followup**—The enumerators conducted an initial check of the questionnaires for completeness and consistency. The census office staff performed additional coverage and edit checks. Those households whose questionnaires did not meet specific quality standards because of incomplete or inconsistent information were contacted by telephone or by personal visit during the Field Followup operation to obtain the missing information or rectify the inconsistencies.

## Special Enumeration Procedures

Special procedures and questionnaires were used for the enumeration of persons in group quarters such as college dormitories, nursing homes, prisons, military

## COLLECTION AND PROCESSING PROCEDURES





barracks, and ships. The questionnaires (Individual Census Reports, Military Census Reports, and Shipboard Census Reports) included the 100-percent population questions but did not include any housing questions. In all group quarters, all persons were asked the basic population questions; in most group quarters, additional questions were asked of a sample (one-in-six) of persons.

### **Shelter and Street Night (S-Night)**

The Census Bureau collected data for various components of the homeless population at different stages in the 1990 census. "Shelter and Street Night" (S-Night) was a special census operation to count the population in four types of locations where homeless people are found. On the evening of March 20, 1990, and during the early morning hours of March 21, 1990, enumerators counted persons in pre-identified locations:

1. Emergency shelters for homeless persons, with sleeping facilities (public and private; permanent and temporary).
2. Shelters with temporary lodging for runaway, neglected, and homeless children.
3. Shelters for abused women and their children.
4. Open locations in streets or other places not intended for habitation.

Emergency shelters include all hotels and motels (regardless of cost) used entirely to shelter homeless persons, and pre-identified rooms in hotels and motels used for homeless persons and families, and similar places known to have persons who have no usual home elsewhere staying overnight. Enumeration in shelters usually occurred from 6 p.m. to midnight; street enumeration, from 2 a.m. to 4 a.m.; abandoned and boarded-up buildings from 4 a.m. to 8 a.m.; and shelters for abused women, from 6 p.m. on March 20 to noon on March 21.

Other components, which some consider as part of the homeless population, were enumerated as part of regular census operations. These include persons doubled up with other families, as well as persons with no other usual home living in transient sites, such as commercial campgrounds, maternity homes for unwed mothers, and drug/alcohol abuse detoxification centers. In institutions, such as local jails and mental hospitals, the Census Bureau does not know who has a usual home elsewhere; therefore, even though some are literally homeless, these persons cannot be identified separately as a component of the homeless population.

There is no generally agreed-upon definition of "the homeless," and there are limitations in the census count that prevent obtaining a total count of the homeless population under any definition. As such, the Census Bureau does not have a definition and will not

provide a total count of the "homeless." Rather, the Census Bureau will provide counts and characteristics of persons found at the time of the census in *selected* types of living arrangements. These selected components can be used as building blocks to construct a count of homeless persons appropriate to particular purposes as long as the data limitations are taken into account.

In preparation for "Shelter-and-Street-Night" enumeration, the New York Regional Census Center (RCC) mailed a certified letter (Form D-33(L) PR(S)) to the mayor of each municipio requesting that he/she identify:

1. All shelters with sleeping facilities (permanent and temporary, such as churches, armories, public buildings, and so forth, that could be open on March 20).
2. Hotels and motels used to house homeless persons and families.
3. A list of outdoor locations where homeless persons tend to be at night.
4. Places such as bus stations, airports, hospital emergency rooms, and so forth, where homeless persons seek shelter at night.
5. The specific addresses of abandoned or boarded-up buildings where homeless persons were thought to stay at night.

The letter from the RCC to the municipios emphasized the importance of listing night-time congregating sites. The list of shelters was expanded using information from other informed local sources. The street sites were limited to the list provided by the municipios. All municipios were eligible for "Shelter and Street Night." The Census Bureau encouraged persons familiar with homeless persons and the homeless themselves to apply as enumerators.

For shelters, both long- and short-form Individual Census Reports (ICR's) were distributed. For street enumeration, only short-form ICR's were used. Persons in shelters and at street locations were asked the basic population questions. Additional questions about social and economic characteristics were asked of a sample of persons in shelters only.

Enumerators were instructed *not* to ask who was homeless; rather, they were told to count all persons (including children) staying overnight at the shelters, and everyone they saw on the street except the police, other persons in uniform, and persons engaged in employment or obvious money-making activities other than begging and panhandling.

At both shelter and street sites, persons found sleeping were not awakened to answer questions. Rather, the enumerator answered the sex question by observation and estimated the person's age to the best of his or



her ability. In shelters, administrative records and information from the shelter operator were used, when available, for persons who were already asleep.

The "street" count was restricted to persons who were visible when the enumerator came to the open, public locations that had been identified by each municipio. Homeless persons who were well hidden, moving about, or in locations other than those identified were likely missed. The number missed will never be known and there is no basis to make an estimate of the number missed from census data. The count of persons in open, public places was affected by many factors, including the extra efforts made to encourage people to go to shelters for "Shelter and Street Night," the presence of the media, and distrust of the census. Expectations of the number of homeless persons on the street cannot be based on the number seen during the day because the night-time situation is normally very different as more homeless persons are in shelters or very well hidden.

For both "Shelter-and-Street-Night" locations, the Census Bureau assumed that the usual home of those enumerated was in the block where they were found (shelter or street).

The "Shelter-and-Street-Night" operation replaced and expanded the 1980 Mission Night (M-Night). This operation was aimed at counting the population who reported having no usual residence. M-Night was conducted a week after Census Day, in April 1980. Enumerators visited hotels, motels and similar places costing \$4 or less each night; missions, flophouses, local jails

and similar places at which the average length of stay was 30 days or less; and nonshelter locations, such as bus stations. Questions were asked of everyone, regardless of age. Enumerators conducted M-Night up to midnight on April 8, 1980, and returned the next morning to collect any forms completed after midnight.

## PROCESSING PROCEDURES

The Puerto Rico questionnaires were processed in a section of the Census Bureau Processing Office in Jacksonville, Florida specifically set up for the processing of keyable documents. For most items on the questionnaire, the information supplied by the respondent or obtained by the enumerator had been indicated by marking the answers in predesignated boxes.

The data processing was performed in several stages. All questionnaires passed through a check-in procedure upon their arrival at the processing office. Selected written entries on both the short and long forms were coded clerically. The coded information included written entries for industry and occupation, migration, place of birth, and household relationship. All responses to the questions on Individual Census Reports (ICRs), Military Census Reports (MCRs), and Shipboard Census Reports (SCRs) were keyed. After all coding operations were completed, the short and long forms were keyed. The resulting file was sent to the Census Bureau headquarters for computer editing, weighting, and tabulating operations.



# APPENDIX E. Facsimiles of Respondent Instructions and Questionnaire Pages

(No Respondent Instructions were provided for the long-form questionnaire.)

FORM D-2A PR(E)  <div style="text-align: center;"> <b>1990 CENSUS OF PUERTO RICO</b> </div>		<div style="text-align: right; font-size: small;">OMB No. 0607-0656; Approval Expires 12/31/90</div> <div style="font-size: x-small;">           U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS         </div> <div style="font-size: x-small; margin-top: 10px;"> <b>NOTICE</b> — Response to this inquiry is required by law (Title 13, U.S. Code). By the same law, your report to the Census Bureau is confidential. It may be seen only by sworn Census Bureau employees and may be used only for statistical purposes.         </div> <div style="text-align: center; margin-top: 10px;"> <b>INTRODUCTION</b> </div> <div style="font-size: small;"> <p>• <b>FOR PERSONAL VISIT</b>            Hello, my name is (Your name) and I'm from the United States Census Bureau. This is my identification (PAUSE) and here's some information about the purpose of my visit. (Give respondent copy of Privacy Act Notice).  <b>NEXT:</b>            Ask the questions at the top of the listing page.            Obtain a completed form from each address.</p> <p>• <b>FOR TELEPHONE INTERVIEW</b>            Hello, my name is (Your name) and I'm calling for the United States Census Bureau. Have I reached (Read address)?  <b>IF YES</b> — We are taking the 1990 Census of Puerto Rico and our records show that we have not been able to obtain a census form for this address. I'd like to complete the form now over the telephone. For the average household, this interview should take about 31 minutes.  <b>IF NO</b> — Excuse me, I might have dialed the wrong number. Is this (Read phone number)?</p> </div>			
FOR CENSUS USE					
A1. DO code	A2. Unit ID	A3. ARA	A4. Block	B. Map spot	C. Form type <b>L</b>
D. Population	E. Type of Unit Occupied 1 <input type="checkbox"/> First Form 4 <input type="checkbox"/> Continuation Vacant 1 <input type="checkbox"/> Regular 2 <input type="checkbox"/> UME	F1. Complete after 1 <input type="checkbox"/> LR    3 <input type="checkbox"/> MV    5 <input type="checkbox"/> TC    7 <input type="checkbox"/> P6    9 <input type="checkbox"/> SM 2 <input type="checkbox"/> P/F    4 <input type="checkbox"/> ED    6 <input type="checkbox"/> RE    8 <input type="checkbox"/> IA    0 <input type="checkbox"/> P1			F2. Coverage 1 <input type="checkbox"/> 1b 2 <input type="checkbox"/> 2a
G. Mailing address — Number, street, apartment number or location, rural route and box, post office box					
City		Municipio		ZIP Code	
H. Method of completion — Mark (X) ONE box 1 <input type="checkbox"/> Personal visit 2 <input type="checkbox"/> Telephone		I. Respondent's name		J. Respondent's telephone number (809)	
O. CERTIFICATION — I certify that the entries I have made on this questionnaire are true and correct to the best of my knowledge.					
Enumerator's signature				Date	
Crew leader's initials		Date		CLD number	
NOTES					



The 1990 census must count every person at his or her "usual residence." This means the place where the person lives and sleeps most of the time.

### Include

- Everyone who usually lives here such as family members, housemates and roommates, foster children, roomers, boarders, and live-in employees
- Persons who are temporarily away on a business trip, on vacation, or in a general hospital
- College students who stay here while attending college
- Persons in the Armed Forces who live here
- Newborn babies still in the hospital
- Children in boarding schools below the college level
- Persons who stay here most of the week while working even if they have a home somewhere else
- Persons with no other home who are staying here on April 1

### Do NOT include

- Persons who usually live somewhere else
- Persons who are away in an institution such as a prison, mental hospital, or a nursing home
- College students who live somewhere else while attending college
- Persons in the Armed Forces who live somewhere else
- Persons who stay somewhere else most of the week while working

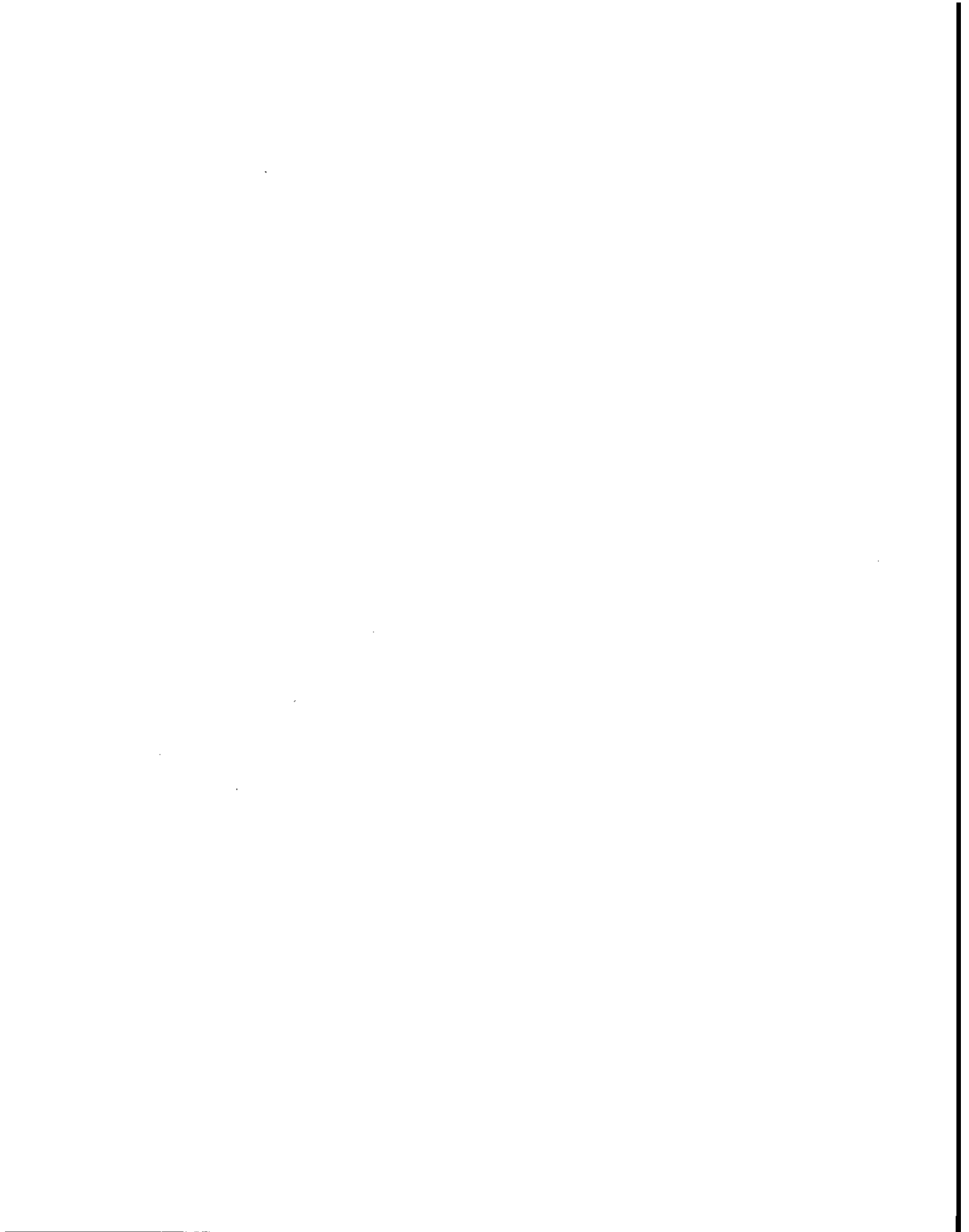
- 1a. Please give me the name of each person living here on Sunday, April 1, including all persons staying here who have no other home. If **EVERYONE** is staying here temporarily and usually lives somewhere else, give me the name of each person. Begin with the household member in whose name the home is owned, being bought, or rented. If there is no such person, start with any adult household member. *Print last name, first name, and middle initial for each person.*

LAST	FIRST	INITIAL	LAST	FIRST	INITIAL
1			7		
2			8		
3			9		
4			10		
5			11		
6			12		

- 1b. If **EVERYONE** listed above is staying here only temporarily and usually lives somewhere else, mark (X) this box ☐ and ask — Where do these people usually live?  
**DO NOT PRINT THE ADDRESS LISTED IN ITEM G ON THE FRONT COVER.**

House number	Street or road/Rural route and box number	Apartment number
City	State or Puerto Rico	ZIP Code
County/Municipio/Foreign country	Names of nearest intersecting streets or roads	





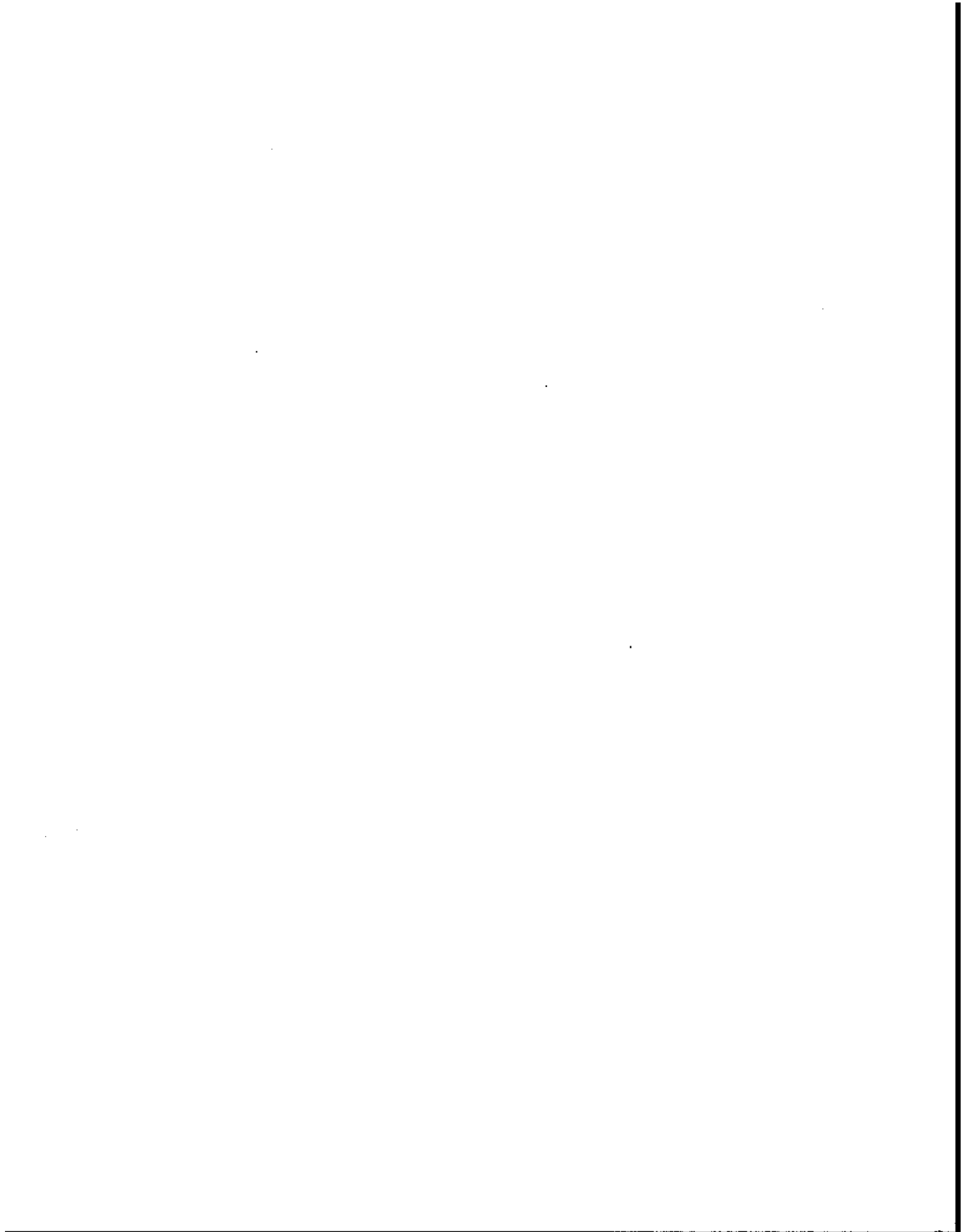
<p>Please fill one column → for each person listed in Question 1a on page 1.</p>	PERSON 1		PERSON 2	
	Last name		Last name	
	First name	Middle initial	First name	Middle initial
<p>Do not ask for Person 1.</p> <p>2. How is ... related to (Person 1)?</p> <p>Mark (X) ONE box for each person.</p> <p>If Other relative of person in column 1, mark (X) the box and print exact relationship, such as mother-in-law, grandparent, son-in-law, niece, cousin, and so on.</p>	<p>START in this column with the household member (or one of the members) in whose name the home is owned, being bought, or rented.</p> <p>If there is no such person, start in this column with any adult household member.</p>		<p>If a RELATIVE of Person 1:</p> <p>1 <input type="checkbox"/> Husband/wife</p> <p>2 <input type="checkbox"/> Natural-born or adopted son/daughter</p> <p>3 <input type="checkbox"/> Stepson/stepdaughter</p> <p>4 <input type="checkbox"/> Brother/sister</p> <p>5 <input type="checkbox"/> Father/mother</p> <p>6 <input type="checkbox"/> Grandchild</p> <p>7 <input type="checkbox"/> Other relative <span style="border: 1px dashed black; padding: 2px;"> </span></p> <p style="text-align: center;"> <input type="text"/> <input type="text"/> <input type="text"/> </p> <hr/> <p>If NOT RELATED to Person 1:</p> <p>8 <input type="checkbox"/> Roomer, boarder, or foster child</p> <p>9 <input type="checkbox"/> Housemate, roommate</p> <p>10 <input type="checkbox"/> Unmarried partner/Companion</p> <p>11 <input type="checkbox"/> Other nonrelative</p>	
<p>3. Is ... male or female?</p> <p>Mark (X) ONE box for each person.</p>	<p>1 <input type="checkbox"/> Male</p> <p>2 <input type="checkbox"/> Female</p>		<p>1 <input type="checkbox"/> Male</p> <p>2 <input type="checkbox"/> Female</p>	
<p>4. Age and year of birth</p> <p>a. How old is ... ?</p> <p>(Age should be as of April 1, 1990.)</p> <p>If unknown, say —</p> <p>Please give me your best estimate.</p> <p>Print the age in the boxes.</p> <p>b. In what year was ... born?</p> <p>Print the year of birth in the boxes.</p>	<p>a. Age <span style="border: 1px solid black; padding: 2px;"> </span> <span style="border: 1px solid black; padding: 2px;"> </span> <span style="border: 1px solid black; padding: 2px;"> </span></p> <p>b. Year of birth <span style="border: 1px solid black; padding: 2px;">1</span> <span style="border: 1px solid black; padding: 2px;"> </span> <span style="border: 1px solid black; padding: 2px;"> </span> <span style="border: 1px solid black; padding: 2px;"> </span> <span style="border: 1px solid black; padding: 2px;"> </span></p>		<p>a. Age <span style="border: 1px solid black; padding: 2px;"> </span> <span style="border: 1px solid black; padding: 2px;"> </span> <span style="border: 1px solid black; padding: 2px;"> </span></p> <p>b. Year of birth <span style="border: 1px solid black; padding: 2px;">1</span> <span style="border: 1px solid black; padding: 2px;"> </span> <span style="border: 1px solid black; padding: 2px;"> </span> <span style="border: 1px solid black; padding: 2px;"> </span> <span style="border: 1px solid black; padding: 2px;"> </span></p>	
<p>5. Is ... now married, consensually married, widowed, divorced, separated, or has ... never been married?</p> <p>Mark (X) ONE box for each person.</p>	<p>1 <input type="checkbox"/> Now married</p> <p>2 <input type="checkbox"/> Consensually married</p> <p>3 <input type="checkbox"/> Widowed</p> <p>4 <input type="checkbox"/> Divorced</p> <p>5 <input type="checkbox"/> Separated</p> <p>6 <input type="checkbox"/> Never married</p>		<p>1 <input type="checkbox"/> Now married</p> <p>2 <input type="checkbox"/> Consensually married</p> <p>3 <input type="checkbox"/> Widowed</p> <p>4 <input type="checkbox"/> Divorced</p> <p>5 <input type="checkbox"/> Separated</p> <p>6 <input type="checkbox"/> Never married</p>	



PERSON 7		NOW PLEASE ASK QUESTIONS H1a--H30b FOR THIS HOUSEHOLD	
Last name		<b>H1a.</b> When you told me the names of persons living here on April 1, did you leave anyone out because you were not sure if the person should be listed — for example, someone temporarily away on a business trip or vacation, a newborn baby still in the hospital, or a person who stays here once in a while and has no other home? 1 <input type="checkbox"/> Yes — Determine if you should add the person(s) based on the instructions for Question 1a. 2 <input type="checkbox"/> No	<b>H6.</b> Is this (house/apartment) — 1 <input type="checkbox"/> Owned by you or someone in this household with a mortgage or loan? 2 <input type="checkbox"/> Owned by you or someone in this household free and clear (without a mortgage)? 3 <input type="checkbox"/> Rented for cash rent? 4 <input type="checkbox"/> Occupied without payment of cash rent?
First name	Middle initial	<b>b.</b> When you told me the names of persons living here on April 1, did you include anyone even though you were not sure that the person should be listed — for example, a visitor who is staying here temporarily or a person who usually lives somewhere else? 1 <input type="checkbox"/> Yes — Determine if you should delete the person(s) based on the instructions for Question 1a. 2 <input type="checkbox"/> No	<b>H7a.</b> Is this house on a property of 3 or more acres? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No  <b>b.</b> In any part of the property used as: (1) A commercial establishment? ..... 1 <input type="checkbox"/> 2 <input type="checkbox"/> (2) A medical office? ..... 1 <input type="checkbox"/> 2 <input type="checkbox"/> (3) Other professional office? ..... 1 <input type="checkbox"/> 2 <input type="checkbox"/>
<b>Is a RELATIVE of Person 1:</b> 1 <input type="checkbox"/> Husband/wife 2 <input type="checkbox"/> Natural-born or adopted son/daughter 3 <input type="checkbox"/> Stepson/stepdaughter 4 <input type="checkbox"/> Brother/sister 5 <input type="checkbox"/> Father/mother 6 <input type="checkbox"/> Grandchild 7 <input type="checkbox"/> Other relative — <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div>		<b>H12.</b> Which best describes this building? Include all apartments, flats, etc., even if vacant. 1 <input type="checkbox"/> A mobile home or trailer 2 <input type="checkbox"/> A one-family house detached from any other house 3 <input type="checkbox"/> A one-family house attached to one or more houses 4 <input type="checkbox"/> A building with 2 apartments 5 <input type="checkbox"/> A building with 3 or 4 apartments 6 <input type="checkbox"/> A building with 5 to 9 apartments 7 <input type="checkbox"/> A building with 10 to 19 apartments 8 <input type="checkbox"/> A building with 20 to 49 apartments 9 <input type="checkbox"/> A building with 50 or more apartments 10 <input type="checkbox"/> Other	
<b>Is NOT RELATED to Person 1:</b> 8 <input type="checkbox"/> Roomer, boarder, or foster child 9 <input type="checkbox"/> Housemate, roommate 10 <input type="checkbox"/> Unmarried partner/Companion 11 <input type="checkbox"/> Other nonrelative		<b>H13.</b> How many rooms do you have in this (house/apartment)? Count living rooms, dining rooms, kitchens, and bedrooms, but do NOT count bathrooms, balconies, porches, or halls. 1 <input type="checkbox"/> 1 room      6 <input type="checkbox"/> 6 rooms 2 <input type="checkbox"/> 2 rooms      7 <input type="checkbox"/> 7 rooms 3 <input type="checkbox"/> 3 rooms      8 <input type="checkbox"/> 8 rooms 4 <input type="checkbox"/> 4 rooms      9 <input type="checkbox"/> 9 or more rooms 5 <input type="checkbox"/> 5 rooms	
1 <input type="checkbox"/> Male 2 <input type="checkbox"/> Female		<b>H14a.</b> Is there hot and cold piped water in this (house/apartment)? 1 <input type="checkbox"/> Yes, hot and cold piped water 2 <input type="checkbox"/> No, only cold piped water 3 <input type="checkbox"/> No piped water — Skip to H4d  <b>b.</b> Is there a bathtub or shower in this (house/apartment)? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No bathtub or shower  <b>c.</b> Is there a flush toilet in this (house/apartment)? 1 <input type="checkbox"/> Yes — Skip to H5 2 <input type="checkbox"/> No — Go to H4d  <b>d.</b> What type of toilet facilities do you have? 1 <input type="checkbox"/> Privy 2 <input type="checkbox"/> Other or none	
<b>a.</b> Age <div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>		<b>H15.</b> Is this (house/apartment) part of a condominium? A CONDOMINIUM is a building or development with individually owned apartments or houses, having commonly owned areas and grounds. 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	
<b>b.</b> Year of birth <div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block; text-align: center;">1</div>		<b>H19.</b> What is the monthly rent? If rent is NOT PAID BY THE MONTH, see your job instructions on how to figure a monthly rent. 1 <input type="checkbox"/> Less than \$60      14 <input type="checkbox"/> \$350 to \$374 2 <input type="checkbox"/> \$60 to \$79      15 <input type="checkbox"/> \$375 to \$399 3 <input type="checkbox"/> \$80 to \$99      16 <input type="checkbox"/> \$400 to \$424 4 <input type="checkbox"/> \$100 to \$124      17 <input type="checkbox"/> \$425 to \$449 5 <input type="checkbox"/> \$125 to \$149      18 <input type="checkbox"/> \$450 to \$474 6 <input type="checkbox"/> \$150 to \$174      19 <input type="checkbox"/> \$475 to \$499 7 <input type="checkbox"/> \$175 to \$199      20 <input type="checkbox"/> \$500 to \$549 8 <input type="checkbox"/> \$200 to \$224      21 <input type="checkbox"/> \$550 to \$599 9 <input type="checkbox"/> \$225 to \$249      22 <input type="checkbox"/> \$600 to \$649 10 <input type="checkbox"/> \$250 to \$274      23 <input type="checkbox"/> \$650 to \$699 11 <input type="checkbox"/> \$275 to \$299      24 <input type="checkbox"/> \$700 to \$749 12 <input type="checkbox"/> \$300 to \$324      25 <input type="checkbox"/> \$750 to \$999 13 <input type="checkbox"/> \$325 to \$349      26 <input type="checkbox"/> \$1,000 or more	
1 <input type="checkbox"/> Now married 2 <input type="checkbox"/> Consensually married 3 <input type="checkbox"/> Widowed 4 <input type="checkbox"/> Divorced 5 <input type="checkbox"/> Separated 6 <input type="checkbox"/> Never married		Please continue onto the next page.	
FOR ENUMERATOR USE			
<b>C1.</b> Vacancy status 1 <input type="checkbox"/> For rent 2 <input type="checkbox"/> For sale only 3 <input type="checkbox"/> Rented or sold, not occupied 4 <input type="checkbox"/> For seas/rec/occ 5 <input type="checkbox"/> For migrant workers 6 <input type="checkbox"/> Other vacant		<b>C2.</b> Is this unit boarded up? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	
		<b>D.</b> Months vacant 1 <input type="checkbox"/> Less than 1 2 <input type="checkbox"/> 1 up to 2 3 <input type="checkbox"/> 2 up to 6 4 <input type="checkbox"/> 6 up to 12 5 <input type="checkbox"/> 12 up to 24 6 <input type="checkbox"/> 24 or more	



<p><i>If respondent reported living in an apartment building, skip to H17.</i></p> <p><b>H10a.</b> In this house on --</p> <p>1 <input type="checkbox"/> Less than 3 corners?</p> <p>2 <input type="checkbox"/> 3 to 9 corners?</p> <p>3 <input type="checkbox"/> 10 or more corners?</p>	<p><b>H14.</b> Do you get water from --</p> <p>1 <input type="checkbox"/> A public system?</p> <p>2 <input type="checkbox"/> An individual well?</p> <p>3 <input type="checkbox"/> A cistern, tanks, or drums?</p> <p>4 <input type="checkbox"/> A spring or some other source, such as a river, irrigation canal, etc.?</p>	<p><b>H18.</b> What type of water heater do you have in this (house/apartment)?</p> <p>1 <input type="checkbox"/> Electric -- tank type</p> <p>2 <input type="checkbox"/> Shower</p> <p>3 <input type="checkbox"/> Solar</p> <p>4 <input type="checkbox"/> Other</p> <p>5 <input type="checkbox"/> None</p>
<p><b>b.</b> In 1989, what were the actual sales of all agricultural products from this property?</p> <p>1 <input type="checkbox"/> None</p> <p>2 <input type="checkbox"/> \$1 to \$99</p> <p>3 <input type="checkbox"/> \$100 to \$499</p> <p>4 <input type="checkbox"/> \$500 to \$999</p> <p>5 <input type="checkbox"/> \$1,000 to \$2,499</p> <p>6 <input type="checkbox"/> \$2,500 or more</p>	<p><b>H15.</b> Is this building connected to a public sewer?</p> <p>1 <input type="checkbox"/> Yes, connected to public sewer</p> <p>2 <input type="checkbox"/> No, connected to septic tank or cesspool</p> <p>3 <input type="checkbox"/> No, use other means</p>	<p><b>H19.</b> Which fuel is used MOST for cooking?</p> <p>1 <input type="checkbox"/> Electricity</p> <p>2 <input type="checkbox"/> Gas</p> <p>3 <input type="checkbox"/> Other</p>
<p><b>H11.</b> When did (Person listed in column 1 on page 2) move into this (house/apartment)?</p> <p>1 <input type="checkbox"/> 1989 or 1990</p> <p>2 <input type="checkbox"/> 1985 to 1988</p> <p>3 <input type="checkbox"/> 1980 to 1984</p> <p>4 <input type="checkbox"/> 1970 to 1979</p> <p>5 <input type="checkbox"/> 1960 to 1969</p> <p>6 <input type="checkbox"/> 1959 or earlier</p>	<p><b>H16.</b> How many bedrooms do you have; that is, how many bedrooms would you list if this (house/apartment) were on the market for sale or rent?</p> <p>1 <input type="checkbox"/> No bedroom</p> <p>2 <input type="checkbox"/> 1 bedroom</p> <p>3 <input type="checkbox"/> 2 bedrooms</p> <p>4 <input type="checkbox"/> 3 bedrooms</p> <p>5 <input type="checkbox"/> 4 bedrooms</p> <p>6 <input type="checkbox"/> 5 or more bedrooms</p>	<p><b>H20.</b> Do you have COMPLETE kitchen facilities; that is, a sink with piped water, a range or cookstove, and a refrigerator?</p> <p>1 <input type="checkbox"/> Yes</p> <p>2 <input type="checkbox"/> No</p>
<p><b>H12.</b> About when was this building first built?</p> <p>1 <input type="checkbox"/> 1989 or 1990</p> <p>2 <input type="checkbox"/> 1985 to 1988</p> <p>3 <input type="checkbox"/> 1980 to 1984</p> <p>4 <input type="checkbox"/> 1970 to 1979</p> <p>5 <input type="checkbox"/> 1960 to 1969</p> <p>6 <input type="checkbox"/> 1950 to 1959</p> <p>7 <input type="checkbox"/> 1940 to 1949</p> <p>8 <input type="checkbox"/> 1939 or earlier</p> <p>9 <input type="checkbox"/> Don't know</p>	<p><b>H21.</b> Do you have air conditioning?</p> <p>1 <input type="checkbox"/> Yes, a central air conditioning system</p> <p>2 <input type="checkbox"/> Yes, 1 individual room unit</p> <p>3 <input type="checkbox"/> Yes, 2 or more individual room units</p> <p>4 <input type="checkbox"/> No</p>	<p><b>H22.</b> Do you have a telephone in this (house/apartment)?</p> <p>1 <input type="checkbox"/> Yes</p> <p>2 <input type="checkbox"/> No</p>
<p><b>H13.</b> Which best describes the construction material of this building?</p> <p><i>Read categories and mark (X) only ONE box.</i></p> <p>Concrete walls (poured concrete, concrete blocks, stone, etc.)</p> <p>1 <input type="checkbox"/> With concrete slab roof</p> <p>2 <input type="checkbox"/> With wood frame roof</p> <p>Wood frame walls</p> <p>3 <input type="checkbox"/> With concrete foundation, poured concrete, etc.</p> <p>4 <input type="checkbox"/> With wood sill foundation</p> <p>5 <input type="checkbox"/> Mixed concrete and wood walls</p> <p>6 <input type="checkbox"/> Other type of construction material</p>	<p><b>H17.</b> How many bathrooms do you have? A COMPLETE bathroom is a room with flush toilet, bathtub or shower, and wash basin with piped water. A HALF bathroom has a flush toilet AND a wash basin with piped water.</p> <p>1 <input type="checkbox"/> None</p> <p>2 <input type="checkbox"/> Only half bathrooms</p> <p>3 <input type="checkbox"/> 1 complete bathroom</p> <p>4 <input type="checkbox"/> 1 complete bathroom, plus half bath(s)</p> <p>5 <input type="checkbox"/> 2 or more complete bathrooms</p>	<p><b>H23.</b> How many automobiles, vans, and trucks of one-ton capacity or less are kept at home for use by members of this household?</p> <p>1 <input type="checkbox"/> None</p> <p>2 <input type="checkbox"/> 1</p> <p>3 <input type="checkbox"/> 2</p> <p>4 <input type="checkbox"/> 3</p> <p>5 <input type="checkbox"/> 4 or more</p>



**QUESTIONS FOR THIS HOUSEHOLD**

Page 5

**H24.** What is the average monthly cost for electricity for this (house/apartment)?

\$  .00  
Average monthly cost

OR

- 1 ☐ Included in rent or in condominium fee  
2 ☐ No charge or electricity not used

**b.** What is the average monthly cost for gas for this (house/apartment)?

\$  .00  
Average monthly cost

OR

- 1 ☐ Included in rent or in condominium fee  
2 ☐ No charge or gas not used

**c.** What is the average monthly cost for water for this (house/apartment)?

\$  .00  
Average monthly cost

OR

- 1 ☐ Included in rent or in condominium fee  
2 ☐ No charge

**d.** What is the yearly cost for oil, charcoal, kerosene, wood, etc. for this (house/apartment)?

\$  .00  
Yearly cost

OR

- 1 ☐ Included in rent or in condominium fee  
2 ☐ No charge or these fuels not used

**INTERVIEWER INSTRUCTION:**

Ask questions H25 TO H29, if this is a one-family house, a condominium or a mobile home that someone in this household OWNS OR IS BUYING, otherwise go to H30.

**H25.** What were the real estate taxes on THIS property last year?

\$  .00  
Yearly amount — Dollars

OR

- 0 ☐ None

**H26.** What was the annual payment for fire, hazard, and flood insurance on THIS property?

\$  .00  
Yearly amount — Dollars

OR

- 0 ☐ None

**H27a.** Is there a mortgage, deed of trust, contract to purchase, or similar debt on THIS property?

- 1 ☐ Yes, mortgage, deed of trust, or similar debt  
2 ☐ Yes, contract to purchase  
3 ☐ No — Skip to H28a

Go to H27b

**b.** How much is the regular monthly mortgage payment on THIS property? Include payment only on first mortgage or contract to purchase.

\$  .00  
Monthly amount — Dollars

OR

- 0 ☐ No regular payments required — Skip to H28a

**c.** Does the regular monthly mortgage payment include payments for real estate taxes on THIS property?

- 1 ☐ Yes, taxes included in payment  
2 ☐ No, taxes paid separately or taxes not required

**d.** Does the regular monthly mortgage payment include payments for fire, hazard, or flood insurance on THIS property?

- 1 ☐ Yes, insurance included in payment  
2 ☐ No, insurance paid separately or no insurance

**H28a.** Is there a second or junior mortgage or a home equity loan on THIS property?

- 1 ☐ Yes  
2 ☐ No — Skip to H29

**b.** How much is the regular monthly payment on all second or junior mortgages and all home equity loans?

\$  .00  
Monthly amount — Dollars

OR

- 0 ☐ No regular payment required

Ask ONLY if this is a CONDOMINIUM —

**H29.** What is the monthly condominium fee?

\$  .00  
Monthly amount — Dollars

**H30. MARK FROM OBSERVATION**

**CONDITION OF THIS HOUSING UNIT —**

**a.** Original construction

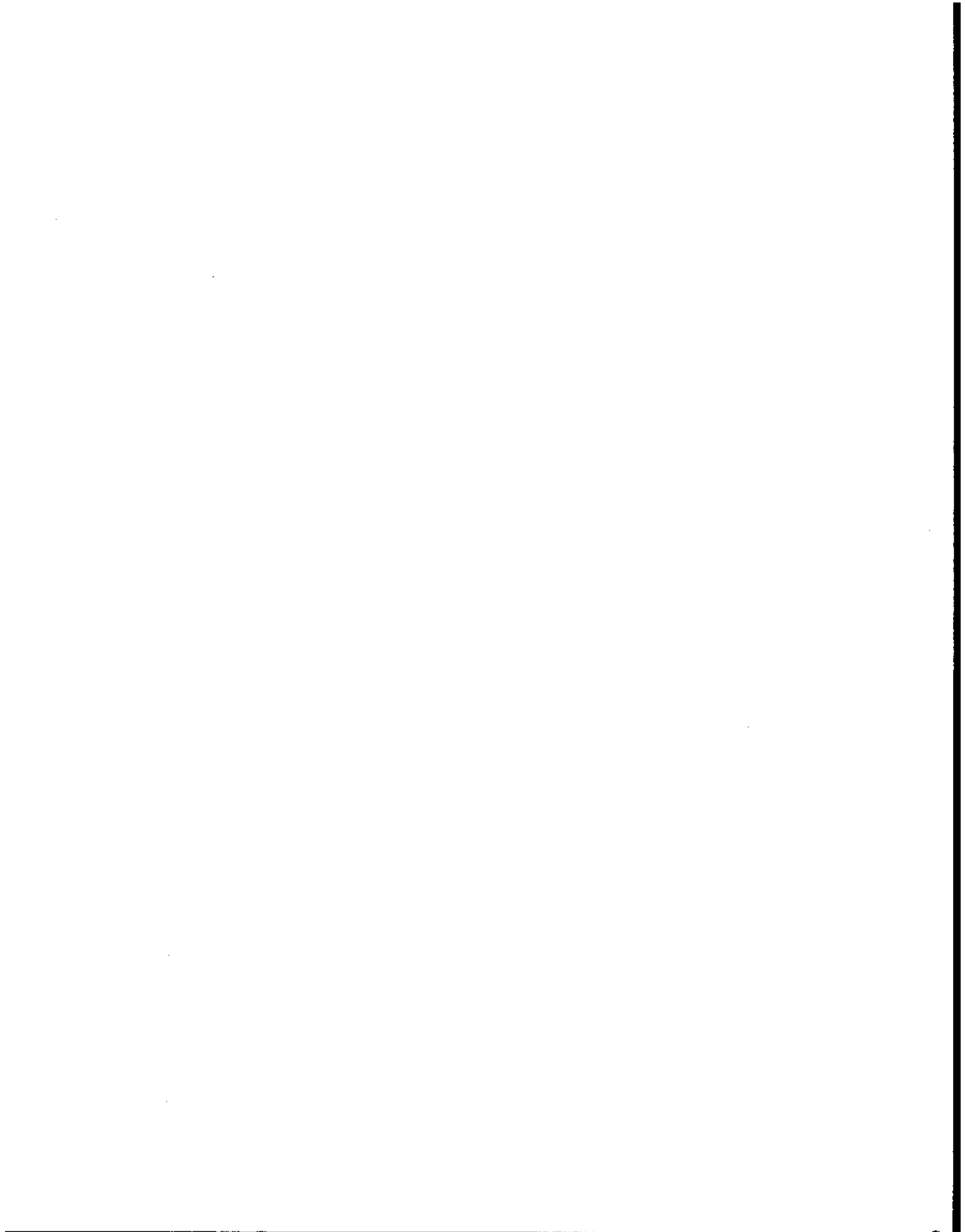
- 1 ☐ Adequate  
2 ☐ Inadequate

**b.** IF "ADEQUATE" — present condition is —

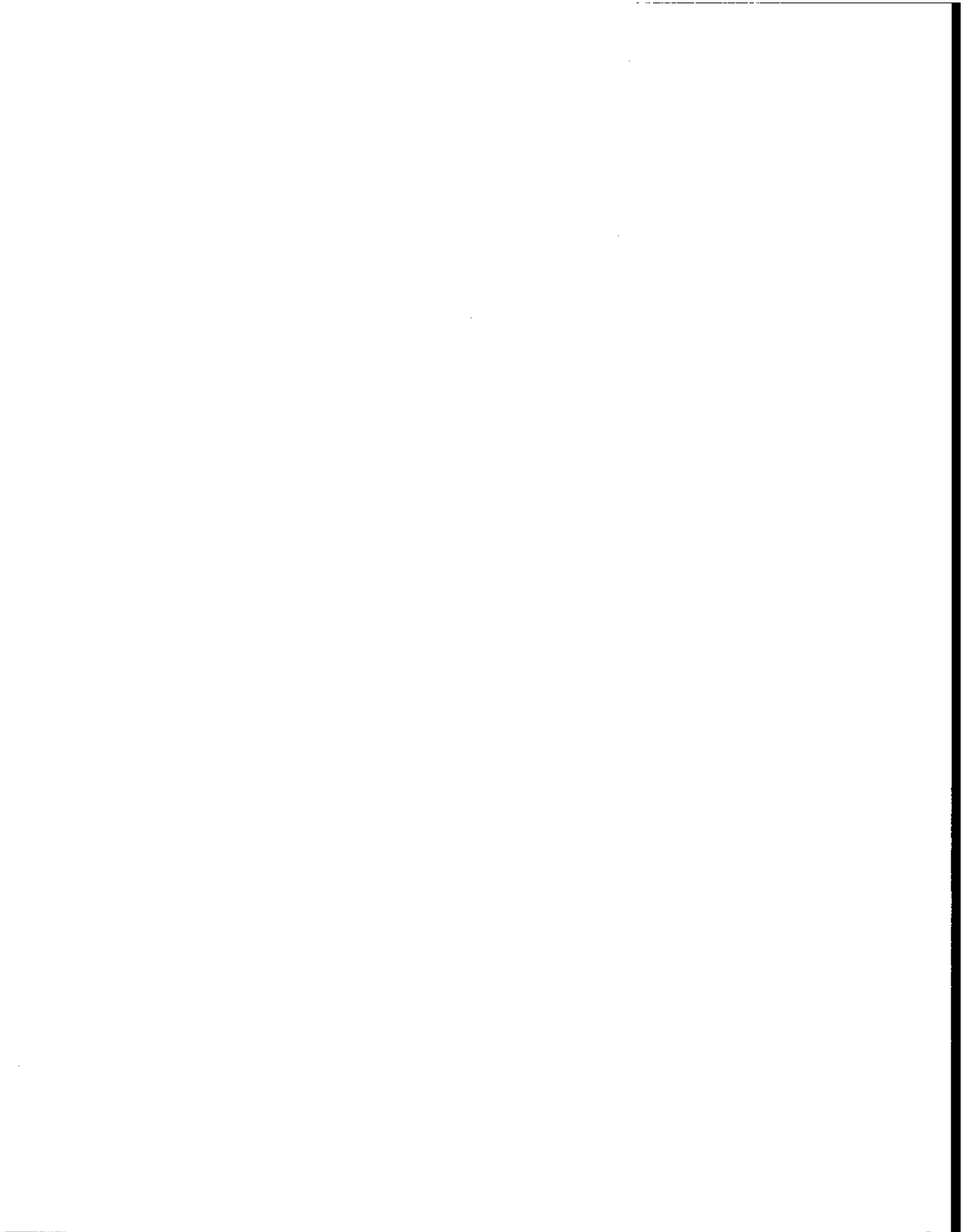
- 1 ☐ Sound  
2 ☐ Deteriorating  
3 ☐ Dilapidated

Please turn to page 6.





PERSON 1		PERSON 2	
Last name	First name Middle initial	Last name	First name Middle initial
<p>6. Where was ... born? Mark (X) the appropriate box and print the name of municipality, State, or foreign country.</p> <p>1 <input type="checkbox"/> Puerto Rico — Print name of municipality</p> <p>2 <input type="checkbox"/> United States — Print name of U.S. State</p> <p>3 <input type="checkbox"/> Elsewhere — Print name of foreign country</p>		<p>11b. Where was ...'s mother born?</p> <p>1 <input type="checkbox"/> Puerto Rico</p> <p>2 <input type="checkbox"/> United States</p> <p>3 <input type="checkbox"/> Elsewhere — Print name of foreign country</p>	
<p>7. If the answer to question 6 appears in one of the last two "Yes" categories listed below, mark (X) the appropriate "Yes" category. Otherwise, ask —</p> <p>Is ... a CITIZEN of the United States? That is, does ... have at least one American parent or is ... a citizen by naturalization?</p> <p>1 <input type="checkbox"/> Yes, born in Puerto Rico — Skip to 9</p> <p>2 <input type="checkbox"/> Yes, born in the United States, Guam, the U.S. Virgin Islands, or Northern Mariana</p> <p>3 <input type="checkbox"/> Yes, born abroad of American parent or parents</p> <p>4 <input type="checkbox"/> Yes, U.S. citizen by naturalization</p> <p>5 <input type="checkbox"/> No, not a citizen of the United States</p>		<p>12a. If person was born after April 1, 1985, mark (X) that box without asking 12a, and go to next person.</p> <p>Did ... live in this house or apartment 5 years ago (on April 1, 1985)?</p> <p>1 <input type="checkbox"/> Born after April 1, 1985 — Go to questions for the next person</p> <p>2 <input type="checkbox"/> Yes — Skip to 13a</p> <p>3 <input type="checkbox"/> No</p>	
<p>8. When did ... come to Puerto Rico to stay? If entered country more than once, mark (X) the appropriate "Yes" category. Otherwise, ask —</p> <p>What is the latest year?</p> <p>6 <input type="checkbox"/> 1987 to 1990 5 <input type="checkbox"/> 1970 to 1974</p> <p>1 <input type="checkbox"/> 1985 or 1986 6 <input type="checkbox"/> 1965 to 1969</p> <p>2 <input type="checkbox"/> 1982 to 1984 7 <input type="checkbox"/> 1960 to 1964</p> <p>3 <input type="checkbox"/> 1980 or 1981 8 <input type="checkbox"/> 1950 to 1959</p> <p>4 <input type="checkbox"/> 1975 to 1979 9 <input type="checkbox"/> Before 1950</p>		<p>13a. During the last 10 years did ... live in the United States at any time for a period of 6 or more consecutive months?</p> <p>1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No — Skip to 14</p>	
<p>9. At any time since February 1, 1990, has ... attended regular school or college? Include only pre-kindergarten, kindergarten, elementary school, and schooling which leads to a high school diploma or a college degree.</p> <p>If "Yes," ask — Public or private?</p> <p>2 <input type="checkbox"/> No, has not attended since February 1</p> <p>3 <input type="checkbox"/> Yes, public school, public college</p> <p>4 <input type="checkbox"/> Yes, private school, private college</p>		<p>13b. How long did ... live in the United States during the last period of 6 or more months?</p> <p>1 <input type="checkbox"/> 6 months to a year 4 <input type="checkbox"/> 5 years</p> <p>2 <input type="checkbox"/> 1 to 2 years 5 <input type="checkbox"/> 6 to 9 years</p> <p>3 <input type="checkbox"/> 3 to 4 years 6 <input type="checkbox"/> 10 or more years</p>	
<p>10. How much school has ... COMPLETED? Read categories if person is unsure. Mark (X) ONE box for the highest level COMPLETED or degree RECEIVED. If currently enrolled, mark the previous grade attended or highest degree received.</p> <p>20 <input type="checkbox"/> No school completed</p> <p>21 <input type="checkbox"/> Pre-kindergarten</p> <p>22 <input type="checkbox"/> Kindergarten</p> <p>Grades 1-11</p> <p>1 <input type="checkbox"/> 1st 4 <input type="checkbox"/> 4th 7 <input type="checkbox"/> 7th 10 <input type="checkbox"/> 10th</p> <p>2 <input type="checkbox"/> 2nd 5 <input type="checkbox"/> 5th 8 <input type="checkbox"/> 8th 11 <input type="checkbox"/> 11th</p> <p>3 <input type="checkbox"/> 3rd 6 <input type="checkbox"/> 6th 9 <input type="checkbox"/> 9th</p> <p>12 <input type="checkbox"/> 12th grade, NO DIPLOMA</p> <p>13 <input type="checkbox"/> HIGH SCHOOL GRADUATE - high school DIPLOMA or the equivalent (For example: GED)</p> <p>14 <input type="checkbox"/> Some college but no degree</p> <p>15 <input type="checkbox"/> Associate degree in college - Occupational program</p> <p>16 <input type="checkbox"/> Associate degree in college - Academic program</p> <p>17 <input type="checkbox"/> Bachelor's degree (For example: BA, AB, BS)</p> <p>18 <input type="checkbox"/> Master's degree (For example: MA, MS, MEng, MEd, MSH, MBA)</p> <p>19 <input type="checkbox"/> Professional school degree (For example: MD, DDS, DVM, LL.B., JD)</p> <p>20 <input type="checkbox"/> Doctorate degree (For example: PhD, EdD)</p>		<p>14. Does ... know how to read and write (in any language)?</p> <p>1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No</p>	
<p>11a. Where was ...'s father born?</p> <p>1 <input type="checkbox"/> Puerto Rico</p> <p>2 <input type="checkbox"/> United States</p> <p>3 <input type="checkbox"/> Elsewhere — Print name of foreign country</p>		<p>15a. Can ... speak Spanish?</p> <p>1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No</p>	
		<p>15b. Can ... speak English? If "Yes," ask — Does ... speak English easily or with difficulty?</p> <p>1 <input type="checkbox"/> Yes, easily</p> <p>2 <input type="checkbox"/> Yes, with difficulty</p> <p>3 <input type="checkbox"/> No</p>	
		<p>16. INTERVIEWER CHECK ITEM</p> <p>Mark (X) ONE box based on question 4.</p> <p>1 <input type="checkbox"/> Born before April 1, 1975 — Go to 17</p> <p>2 <input type="checkbox"/> Born April 1, 1975 or later — Go to questions for the next person</p>	
		<p>17. If this person is a female, ask —</p> <p>How many babies has ... ever had, not counting stillbirths? Do not count stepchildren or children ... has adopted.</p> <p>0 <input type="checkbox"/> None 1 <input type="checkbox"/> 1 5 <input type="checkbox"/> 5 9 <input type="checkbox"/> 9</p> <p>2 <input type="checkbox"/> 2 4 <input type="checkbox"/> 4 10 <input type="checkbox"/> 10</p> <p>3 <input type="checkbox"/> 3 7 <input type="checkbox"/> 7 11 <input type="checkbox"/> 11</p> <p>4 <input type="checkbox"/> 4 8 <input type="checkbox"/> 8 12 <input type="checkbox"/> 12 or more</p>	
		<p>18a. Has ... ever been on active-duty military service in the Armed Forces of the United States or ever been in the United States military Reserves or the National Guard? "Active duty" does NOT include training for the military Reserves or National Guard.</p> <p>1 <input type="checkbox"/> Yes, now on active duty</p> <p>2 <input type="checkbox"/> Yes, on active duty in past, but not now</p> <p>3 <input type="checkbox"/> Yes, service in Reserves or National Guard only — Skip to 19</p> <p>4 <input type="checkbox"/> No — Skip to 19</p>	
		<p>19. Does ... have a physical, mental, or other health condition that has lasted for 6 or more months and which —</p> <p>a. Limits the kind or amount of work ... can do at a job?</p> <p>1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No</p>	
		<p>b. Prevents ... from working at a job?</p> <p>1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No</p>	
		<p>20. Because of a health condition that has lasted for 6 or more months, does ... have any difficulty —</p> <p>a. Going outside the home alone, for example, to shop or visit a doctor's office?</p> <p>1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No</p>	
		<p>b. Taking care of his or her own personal needs, such as bathing, dressing, or getting around inside the house?</p> <p>1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No</p>	
		<p>21a. Has ... completed the requirements for a vocational training program at a trade school, business school, hospital or some other kind of school for occupational training? Do not include academic college courses.</p> <p>1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No — Skip to 22a</p>	
		<p>b. At which kind of school was the training received?</p> <p>1 <input type="checkbox"/> Business school, trade school or junior college</p> <p>2 <input type="checkbox"/> High school vocational program</p> <p>3 <input type="checkbox"/> Training program at place of work</p> <p>4 <input type="checkbox"/> Other school — Specify</p>	
		<p>22a. Did ... work at any time LAST WEEK, either full time or part time? Work includes part-time work such as delivering papers, or helping without pay in a family business or farm; it also includes active duty in the U.S. Armed Forces. Work does NOT include own housework, school work, or volunteer work.</p> <p>1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No — Skip to 25</p>	
		<p>b. How many hours did ... work LAST WEEK at all jobs? Subtract any time off and add any overtime or extra hours worked.</p> <p>Hours</p>	



Please turn to the next page and ask the questions for Person 2 on page 2. If this is the last person listed in question 1a on page 1, go to the back of the form.



## **CHECKLIST AFTER THE INTERVIEW**

**DID YOU —**

- 1.** ☐ Complete all appropriate items on the front cover?
- 2.** ☐ Complete as many of the census questions as possible, including the last resort questions?
- 3.** ☐ Complete the FOR ENUMERATOR USE section on page 3?
- 4.** ☐ Sign (certify) the questionnaire on the front cover?
- 5.** ☐ Make the necessary entries on the address listing page and map(s)?

**CENSUS '90**











# APPENDIX F.

## Data Products and User Assistance

### CONTENTS

Data Products .....	F-1
Geographic Products .....	F-2
Other Census Bureau Resources .....	F-5
Reference Materials .....	F-3
Sources of Assistance .....	F-4

The 1990 census data products for Puerto Rico, being released during 1991-93, are available in a variety of new and traditional media. The Census Bureau has increased the product options available to data users to meet a variety of requirements and maximize the usefulness of the data. For example, laser discs, called CD-ROM (compact disc—read-only memory), are a new data delivery medium.

The Census Bureau also expanded services and sources of assistance available to data users. For example, the data center program has over 1,400 organizations (including 25 in Puerto Rico) to provide data and services to the public.

This appendix provides a detailed introduction to the 1990 census data products and related materials, such as maps and reference publications. It concludes by describing sources of assistance and other Census Bureau data available to the public.

### DATA PRODUCTS

Printed reports and computer tape files traditionally are the most widely used products. The Census Bureau also offers data on microfiche, on CD-ROM laser discs, and through its online service, CENDATA™. These various products are described below. For information about prices and how to order, write or call Customer Services. (See the "Sources of Assistance" section for the address and phone number.)

The data products present statistics about the subjects covered in the 1990 census questionnaires for Puerto Rico. These subjects are listed in figure 1, page F-6. As the figure shows, there are 100-percent subjects (those covered in questions asked of everyone or about every housing unit) and sample subjects (those covered in questions asked at about one out of every six housing units). Generally, a data product presents either 100-percent data prepared by tabulating the responses to the 100-percent questions from all questionnaires, or sample data prepared by tabulating only the responses to the 100-percent and sample questions from the "long-form" questionnaires. One report, 1990 CPH-3, (see figure 2, page F-7), presents both 100-percent and sample data.

### Printed Reports

Printed reports are the most convenient and readily available source of data for most census users. The Census Bureau releases the reports in several series (see figure 2) that are grouped under three broad titles: *1990 Census of Population and Housing* (1990 CPH), *1990 Census of Population* (1990 CP), and *1990 Census of Housing* (1990 CH). In addition, there are reports, not reflected in figure 2, for the United States, the Virgin Islands of the United States, and the Pacific territories under U.S. jurisdiction. The reports are sold by the Superintendent of Documents, U.S. Government Printing Office. (See the "Sources of Assistance" section for the address and phone number.)

The content and geographic coverage of the Puerto Rico reports are listed in figure 2. Report series that present data for small areas, such as census tracts, contain limited subject-matter detail (for example, counts of people by age ranges—under 5 years, 5 to 9 years, etc.—rather than by single years). Report series that include greater amounts of subject-matter detail include less geographic detail.

### Computer Tape Files

The Census Bureau provides more data on tape and other machine-readable products than in printed reports. These products are sold by the Census Bureau's Customer Services. There are several general types of data files released on computer tape (available on both reels and cartridges). They are introduced below, and more information is presented in figures 3 and 4, pages F-8 and F-10.

**Redistricting Data**—This data file presents the counts designed and formatted for use in legislative redistricting. These counts also are available on CD-ROM and paper listings. Excerpts are available on CENDATA™. The counts, for areas as small as blocks, census tracts, and voting districts, include totals for population, population 18 years old and over, and housing units. (See figure 4.)

**Summary Tape Files (STFs)**—These computer tape files provide statistics with greater subject-matter detail than printed reports. They also present statistics for some types of areas, such as block groups and blocks, that are not included in the reports. (See figure 3.)



Here are some important features of STF's:

- Each STF presents a particular set of data tables for specific types of geographic areas.
- Most STF's have two file types (indicated by a letter suffix attached to the STF number) that differ in the geographic levels reported, but contain the same data detail.
- STF's 1 and 2 contain 100-percent data, and STF's 3 and 4 contain sample data.
- STF's 1 and 3 report on smaller areas and offer less data detail than STF's 2 and 4.
- STF's 1 through 4 offer greater data detail than the 1980 STF's 1 through 4.

**Public Use Microdata Sample (PUMS) Files**—These computer tape files (see figure 4) contain data from samples of long-form housing-unit records ("microdata") for large geographic areas. Each sample housing-unit record includes essentially all the 1990 census data collected about each person in a sample household and the characteristics of the housing unit. Information that could be used to identify an individual or a housing unit is not included in the file.

Microdata files enable users to prepare customized tabulations and cross-tabulations of most items on the census questionnaire. There are two PUMS files:

- A file presenting a 5-percent sample of housing units in which each household record includes codes to let the user know in what area, such as a single municipio, a group of municipios, or a place, the household is located. Each area identified must have a population of at least 100,000.
- A file presenting a 1-percent sample of housing units. Its household records include codes associating them with metropolitan areas (MA's). (For the 1980 census, there were two files with 1-percent samples. The 1-percent sample showing data for selected urbanized areas and other large areas will not be produced for the 1990 census.)

### Microfiche

Block statistics are available on microfiche, as they were for the 1980 census. The microfiche present, in table format, a subset of the tabulations for census blocks found in STF 1B (see figure 3). In the 1990 census, for the first time, the entire land area of Puerto Rico was block-numbered. This increased the number of blocks for which the Census Bureau provides data in Puerto Rico from 15,609 in 1980 to 50,261 in 1990.

STF's 1A and 3A are available on microfiche as well. As noted in figure 3, they provide data for a variety of geographic areas. Also, all printed reports are offered on microfiche from Customer Services soon after they are published.

F-2

### Compact Disc—Read-Only Memory (CD-ROM)

For the 1990 census, the Puerto Rico Redistricting file, an extract of STF 1B that presents selected statistics for blocks, and STF's 1A and 3A also are available on CD-ROM. (One 4 3/4-inch CD-ROM, a type of optical or laser disc, can hold the contents of approximately 1,600 flexible diskettes, or three or four high-density computer tapes.)

### Online Information Systems

The Census Bureau began CENDATA™, its online information service, in 1984. CENDATA™ is accessible through two information vendors, CompuServe and DIALOG. A number of Census Bureau reports, in whole or in part, are offered online. For the 1990 census, CENDATA™ provides up-to-date information about the availability of data products and carries selections of municipio, MA, and place data from the Redistricting Data tape file and STF's 1 and 3.

### Custom Data Products

These products are for users who require unique tabulations that are not included in standard products; for example, information for locally defined geographic areas. Users also can order special microdata files.

The cost of preparing custom products must be paid by the users who request them. Any data that the Census Bureau provides in these products are subject to the same standards applied to other data to ensure that confidential individual information is not revealed.

### User-Defined Areas Program (UDAP) Tabulations

UDAP can provide a set of predefined data tables for locally defined areas that do not correspond to standard 1990 census geographic areas. Users identify the geographic areas of interest to them by delineating boundaries around groupings of census blocks on 1990 census block maps or by electronically submitting the geographic components of their area of interest. (A contact for more information is given in the "Sources of Assistance" section.)

**Special Tabulations**—The Census Bureau can prepare special data tabulations for any specific geographic or subject-matter area. Users should rely on standard reports, tapes, CD-ROM, microfiche, or user-defined area tabulations whenever possible, since special tabulations tend to be substantially more expensive and take time to arrange and produce. (Contacts for more information are given in the "Sources of Assistance" section.)

### GEOGRAPHIC PRODUCTS

#### Maps

Census Bureau maps are necessary for virtually all uses of small-area 1990 census data. They are needed to locate the specific geographic areas for which the



census provides data and to study the spatial relationship of the data for analytic purposes. The Census Bureau prepares a variety of 1990 census maps. Among the most useful are these four series:

**County Block Maps**—These maps show census blocks and their numbers; boundaries for statistical and governmental entities, such as census tracts and places; and physical features. The maps are prepared on electrostatic plotters by municipio (Puerto Rico's equivalent of a county for reporting statistics) with one or more map sheets each, depending on the size and shape of the area and the density of the block pattern. The maps may be purchased from Customer Services.

**County Subdivision Outline Map**—This map of Puerto Rico presents the names and boundaries of the municipios, municipio subdivisions (barrios-pueblos, barrios, and subbarrios), and places. Electrostatic-plotter copies are available for purchase from Customer Services. Also, the map is printed on multiple page-size sheets in the following Puerto Rico reports: 1990 CPH-1-53, 1990 CPH-2-53, 1990 CPH-5-53, 1990 CP-1-53, 1990 CP-2-53, 1990 CH-1-53, and 1990 CH-2-53.

**Census Tract/Block Numbering Area (BNA) Outline Maps**—Maps in this municipio-based series depict census tract or BNA boundaries and numbers, and the features underlying the boundaries. They also show the names and boundaries of the municipio subdivisions and places. The Superintendent of Documents sells printed copies.

**Voting District Outline Maps**—Maps in this municipio-based series depict voting district boundaries and the features underlying the boundaries. They also show the boundaries and names of municipio subdivisions and places. They are prepared on electrostatic plotters and sold by Customer Services.

## Geographic Publications

The *Geographic Identification Code Scheme* report in the 1990 CPH-R series shows the 1990 census geographic area codes and Federal Information Processing Standards (FIPS) codes, as appropriate, for Puerto Rico and its metropolitan areas, urbanized areas, municipios, municipio subdivisions, and places, as well as for States and other entities, along with some descriptive information about the codes. The code scheme also is offered on computer tape.

## Machine-Readable Geographic Files

All 1990 census summary tape files include 1990 census geographic area codes, FIPS codes, certain area names, land and total water area in square kilometers, geographic coordinates for an internal point for each entity, and other geographic information.

## DATA PRODUCTS AND USER ASSISTANCE

The Census Bureau developed an automated geographic data base, known as the TIGER (Topologically Integrated Geographic Encoding and Referencing) System, to produce the geographic products for the 1990 census. TIGER provides coordinate-based digital map information for Puerto Rico, the entire United States, the Virgin Islands, and the Pacific territories under U.S. jurisdiction.

The TIGER System has significantly improved the utility of 1990 census maps and geographic reference products. Extract files generated from the TIGER System permit users, with appropriate software, to perform such tasks as linking the statistical data in the Redistricting Data file or the STF's and displaying selected characteristics on maps or a video display screen at different scales and with whatever boundaries they select for any geographic area included in TIGER. For example, a map for a particular municipio could show the distribution of the voting age population by block.

The first extract of selected geographic and cartographic information intended for computer applications, such as plotting maps and building geographic information systems, is called the TIGER/Line™ files. TIGER/Line™ files contain attributes for the segments of each boundary and feature (for example, roads and rivers), including 1990 census geographic codes for adjacent areas, latitude/longitude coordinates of segment end points and the curvature of segments, the name and type of the feature, and the relevant census feature class code identifying the feature segment by category. TIGER/Line™ files also provide the names of landmarks, such as lakes and golf courses, and include other information.

TIGER/Line™ files and other TIGER System extracts, such as TIGER/Boundary™ and TIGER/DataBase™, are released on computer tape and, in some cases, CD-ROM. For information on TIGER extract files, contact Customer Services.

## REFERENCE MATERIALS

The Census Bureau issues several reference publications for data users. Some are sold by the Superintendent of Documents; others are distributed free by Customer Services. Addresses and phone numbers for the Superintendent of Documents and Customer Services are given in the following section.

- *1990 Census of Population and Housing Tabulation and Publication Program for Puerto Rico*. A free report describing 1990 census products for Puerto Rico, comparing 1990 products with those of the 1980 census, and more. Request from Customer Services.
- *1990 Census of Population and Housing Tabulation and Publication Program*. A free report describing 1990 census products for the States, comparing 1990 products with those of the 1980 census, and more. Request from Customer Services.



- **Census ABC's—Applications in Business and Community.** A free booklet that highlights key information about the 1990 census and illustrates a variety of ways the data can be used. Request from Customer Services.
- **Strength in Numbers.** A free, tabloid-size booklet designed to assist people in using 1990 census data in redistricting. Among other features, it includes illustrations of maps and redistricting counts. It does not deal directly with Puerto Rico geography and census products, but it should still be of help in redistricting. Request from Customer Services.
- **TIGER: The Coast-to-Coast Digital Map Data Base.** A free booklet describing the structure and uses of the Census Bureau's TIGER System. Request from Customer Services.
- **Census and You.** The Census Bureau's monthly newsletter for data users. It reports on the latest 1990 census developments, selected new publications and computer tape files, other censuses and surveys, developments in services to users, and upcoming conferences and training courses. Subscriptions are sold by the Superintendent of Documents, U.S. Government Printing Office.
- **Monthly Product Announcement.** A free monthly listing of all new Census Bureau publications; microfiche; maps; data files on tape, diskettes, or CD-ROM; and technical documentation. To subscribe, contact Customer Services.
- **Census Catalog and Guide.** A comprehensive annual description of data products, statistical programs, and services of the Census Bureau. It provides abstracts of the publications, data files, microfiche, maps, and items online. In addition, the Catalog/Guide offers such features as information about censuses and surveys and telephone contact lists of data specialists at the Census Bureau, the State Data Centers, and other data processing service centers. It is sold by the Superintendent of Documents, U.S. Government Printing Office.

Users also can get listings of new Census Bureau products, updated daily, by subscribing to the *Daily List*. This information and selected statistics are available online through CENDATA™, the Census Bureau's online information service. For more information, contact Customer Services.

## SOURCES OF ASSISTANCE

### U.S. Bureau of the Census

The Census Bureau's Customer Services sells most of the machine-readable data products, microfiche, and maps described earlier. (The 1990 census printed reports

are sold by the Superintendent of Documents.) Also, users may consult with specialists at the Census Bureau's Washington headquarters and the New York regional office, which serves Puerto Rico. From time to time, the specialists also conduct workshops, seminars, and training courses.

**Washington, DC Contacts**—To order products, for a telephone contacts list of Census Bureau specialists, and for general information: Customer Services, U.S. Bureau of the Census, Washington, DC 20233, telephone 301-763-4100 (FAX number, 301-763-4794).

For User-Defined Areas Program (UDAP) information: UDAP Staff, Decennial Planning Division, U.S. Bureau of the Census, Washington, DC 20233, telephone 301-763-4282.

For special tabulation information: Population—Rosemarie Cowan, Population Division, U.S. Bureau of the Census, Washington, DC 20233, telephone 301-763-5476; Housing—William Downs, Housing and Household Economic Statistics Division, U.S. Bureau of the Census, Washington, DC 20233, telephone 301-763-8553.

### Regional Office Contact—

New York, NY 212-264-4730

### Superintendent of Documents, U.S. Government Printing Office

The Superintendent of Documents handles the sale of most of the Federal Government's publications, including 1990 census reports. To order reports and for information: Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, telephone 202-783-3238.

## Other Sources of Products and Services

**State Data Centers**—The Census Bureau furnishes data products, training in data access and use, technical assistance, and consultation to Puerto Rico, all States, the District of Columbia, Guam, and the Virgin Islands. Data centers, in turn, offer publications for reference, printouts from computer tape, specially prepared reports, maps, and other products and assistance to data users. The lead agency of the Puerto Rico data center program is the Junta de Planificación, Centro Gubernamental Minillas, P.O. Box 41119, San Juan, PR 00940-9985, telephone 809-728-4430. For a list of all State Data Centers, see the *Census Catalog and Guide* or contact Customer Services.

**Census Information Center (CIC)**—The CIC program provides data-related services for nationally based non-profit organizations that represent minorities or other segments of the population who have been historically





undercounted in decennial censuses. The participants include social service, business, professional, civil rights, educational, and religious groups. Through the project, five nonprofit groups now offer their clientele reports, computer tape printouts, and other information from the Census Bureau. To learn more about the program, write to the Census Information Center Branch, Data User Services Division, Bureau of the Census, Washington, DC 20233, or call 301-763-1384.

**National Clearinghouse**—The National Clearinghouse for Census Data Services is a listing of private companies and other organizations that offer assistance in obtaining and using data released by the Census Bureau. For a list of participants in the National Clearinghouse, see the *Census Catalog and Guide* or contact Customer Services.

**Depository Libraries**—There are 1,400 libraries in the United States, Puerto Rico, and other areas that receive (from the Government Printing Office) Federal publications that they think their patrons will need. Often some of these publications are Census Bureau reports. The Census Bureau provides free reports to an additional 120 census depository libraries. Also, many libraries purchase census reports and maps for their areas. The *Census Catalog and Guide* includes a list of all depository libraries.

## OTHER CENSUS BUREAU RESOURCES

The Census Bureau has more to offer than just the results of the census of population and housing for Puerto Rico, the United States, the Virgin Islands, and the Pacific territories under U.S. jurisdiction. Through other censuses, surveys, and estimates programs, it compiles and issues (in reports, computer tape, and other media) data for the United States and sometimes Puerto Rico, the Virgin Islands, and the Pacific territories on subjects as diverse as appliance sales, neighborhood conditions, and exports to other countries. Here are examples of the information published about—

- **People:** Age, race, sex, income, poverty, child care, child support, fertility, noncash benefits, education, commuting habits, pension coverage, unemployment, ancestry.
- **Business and industry:** Number of employees, total payroll, sales and receipts, products manufactured or sold.
- **Housing and construction:** Value of new construction, numbers of owners and renters, property value or rent paid, housing starts, fuels used, mortgage costs.
- **Farms:** Number, acreage, livestock, crop sales.

## DATA PRODUCTS AND USER ASSISTANCE

- **Governments:** Revenues and expenditures, taxes, employment, pension funds.
- **Foreign trade:** Exports and imports, origin and destination, units shipped.
- **Other nations:** Population, birth rates, death rates, literacy, fertility.

The other censuses, such as agriculture, retail trade, manufactures, and governments, are collected for years ending in "2" and "7." Surveys and estimates programs generate results as often as every month.

Many of the monthly "economic indicators" that measure how the Nation is doing come directly or indirectly from the Census Bureau. Examples: employment and unemployment; housing starts; wholesale and retail trade; manufacturers' shipments, inventories, and orders; export and import trade; and sales of single-family homes.

Statistical activities of the Census Bureau relevant to Puerto Rico are described below. Data users will find more information about them and descriptions of their data products in the annual *Census Catalog and Guide*. Also, special guides and brochures are prepared for most of them. Contact the Census Bureau's Customer Services for more information.

## Economic Censuses and Surveys

The economic censuses provide statistics about business establishments once every 5 years, covering years ending in "2" and "7." The 1987 Economic Censuses include the censuses of retail trade, wholesale trade, service industries, transportation, manufactures, mineral industries, and construction industries.

Several key statistics are tabulated for all industries covered in the censuses. They are number of establishments, number of employees, payroll, and measure of output (sales or receipts, and value of shipments or of work done). Other items vary from sector to sector.

The County Business Patterns program offers annual statistics on payroll and number of establishments by employment-size class for municipios.

## Agriculture Census

The agriculture census is conducted concurrently with the economic censuses. It is the only source of uniform agriculture data at the municipio level. It provides data on such subjects as the number and size of farms; land use and ownership; livestock, poultry, and crops; and value of products sold.

## Foreign Trade Statistics

Monthly U.S. merchandise trade data compiled by the Census Bureau summarize export and import transactions and are based on the official documents filed by



shippers and receivers. These figures reflect the flow of merchandise but not intangibles like services and financial commitments. The trade figures trace commodity movements out of and into the U.S. Customs jurisdiction, which includes Puerto Rico and the Virgin Islands as well as the 50 States and the District of Columbia. Data are published separately on trade between the United States and Puerto Rico, the Virgin Islands, and other U.S. territories.

### Other Statistical Activities

The Census Bureau also offers international data. It maintains an international data base, which is available to the public on computer tape and is used to produce

the biennial *World Population Profile* report. It prepares studies dealing with the demographic and economic characteristics of other countries and world regions.

Statistical compendia are another important data product. These publications (sometimes also offered in machine-readable form) draw data from many sources and reorganize them for convenient use. The most widely used compendia are the annual *Statistical Abstract of the United States*, the *County and City Data Book* (published every 5 years), and the *State and Metropolitan Area Data Book* (published approximately every 4 years).

Figure 1. Content of the 1990 Census of Puerto Rico

100-PERCENT COMPONENT	
<b>Population</b>	<b>Housing</b>
Household relationship	Number of units in structure
Sex	Number of rooms in unit
Age	Plumbing facilities
Marital status	Condominium status
	Tenure—owned or rented
	Value of owned unit or rent paid
	Vacancy characteristics
SAMPLE COMPONENT	
<b>Population</b>	<b>Housing</b>
<i>Social characteristics:</i>	Farm residence
Place of birth, citizenship, and year of entry	Year householder moved into residence
Education—enrollment and attainment	Year structure built
Birthplace of parents	Type of construction
Migration (residence in 1985)	Source of water and method of sewage disposal
U.S. residency and activity during last 10 years	Number of bedrooms and number of bathrooms
Ability to read and write	Type of water heater
Ability to speak Spanish and English	Cooking fuel
Veteran status	Complete kitchen facilities
Disability	Air conditioning
Fertility	Telephone in unit
Vocational training	Vehicles available
<i>Economic characteristics:</i>	Shelter costs, including utilities
Employment and unemployment	Condition of housing unit
Place of work and commuting to work	
Occupation, industry, and class of worker	
Work experience and income in 1989	

NOTE: Questions dealing with the subjects covered in the 100-percent component were asked of all persons and housing units. Those covered by the sample component were asked of a sample of the population and housing units.



Figure 2. 1990 Census Printed Reports for Puerto Rico

Series	Title	Report(s) issued for	Description	Geographic areas
<b>1990 CENSUS OF POPULATION AND HOUSING (1990 CPH)</b>				
<b>100-Percent Data</b>				
1990 CPH-1-53	<b>Summary Population and Housing Characteristics</b>	Puerto Rico	Population and housing unit counts, and summary statistics on age, sex, household relationship, units in structure, number of rooms, plumbing facilities, tenure, value of home or monthly rent, and vacancy characteristics	Puerto Rico, its municipios, barrios-pueblos and barrios, subbarrios, and places
1990 CPH-2-53	<b>Population and Housing Unit Counts</b>	Puerto Rico	Total population and housing unit counts for 1990 and previous censuses	Puerto Rico, its municipios, barrios-pueblos and barrios, subbarrios, places, metropolitan areas (MSA's/PMSA's and CMSA), urbanized areas (UA's), and summary geographic areas (for example, urban and rural, and metropolitan and nonmetropolitan residence)
<b>100-Percent and Sample Data</b>				
1990 CPH-3	<b>Population and Housing Characteristics for Census Tracts and Block Numbering Areas</b>	For Puerto Rico, one report will be published for each MSA/ PMSA, and one for the non-metropolitan balance	Statistics on 100-percent and sample population and housing subjects	Statistics presented in a geographic hierarchy of MSA/ PMSA-municipio-place of 10,000 or more inhabitants-census tract/block numbering area (BNA)
<b>Sample Data</b>				
1990 CPH-5-53	<b>Summary Social, Economic, and Housing Characteristics</b>	Puerto Rico	Statistics generally on sample population and housing subjects	Puerto Rico, its municipios, barrios-pueblos and barrios, subbarrios, and places
<b>1990 CENSUS OF POPULATION (1990 CP)</b>				
<b>100-Percent Data</b>				
1990 CP-1-53	<b>General Population Characteristics</b>	Puerto Rico	Detailed statistics on age, sex, marital status, and household relationship characteristics	Puerto Rico; its municipios; metropolitan areas (MSA's/ PMSA's and CMSA); UA's; barrios-pueblos and barrios, subbarrios, and places of 1,000 or more inhabitants; and summary geographic areas
<b>Sample Data</b>				
1990 CP-2-53	<b>Social and Economic Characteristics</b>	Puerto Rico	Statistics generally on sample population subjects	Puerto Rico (including summaries such as urban and rural); municipios; metropolitan areas (MSA's/PMSA's and CMSA); UA's; and barrios-pueblos and barrios, subbarrios, and places of 2,500 or more inhabitants

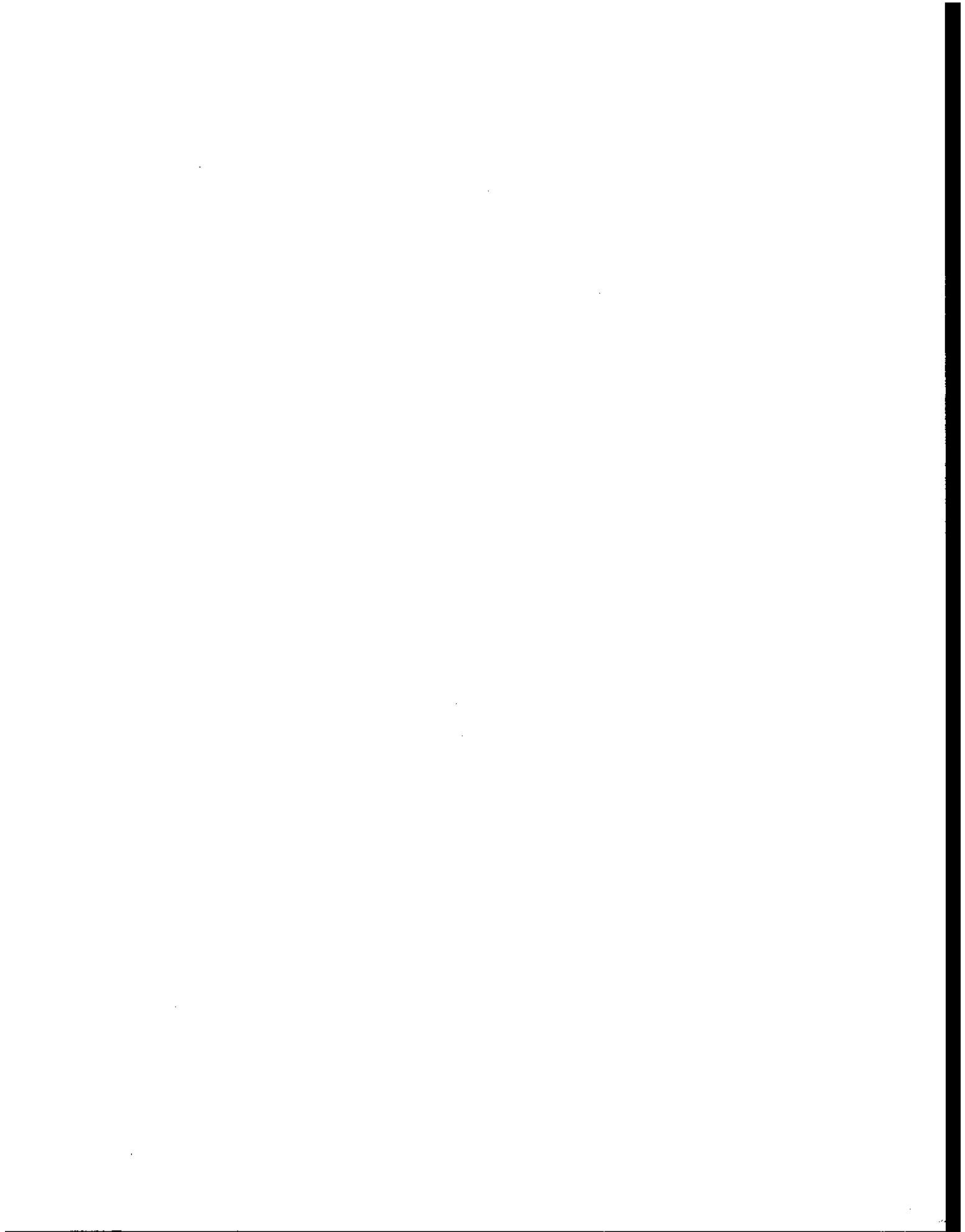


Figure 2. 1990 Census Printed Reports for Puerto Rico—Con.

Series	Title	Report(s) Issued for	Description	Geographic areas
<b>1990 CENSUS OF HOUSING (1990 CH)</b>				
<b>100-Percent Data</b>				
1990 CH-1-53	<b>General Housing Characteristics</b>	Puerto Rico	Detailed statistics on units in structure, plumbing facilities, value and rent, number of rooms, tenure, and vacancy characteris- tics	Puerto Rico, its municipios; metropolitan areas (MSA's/ PMSA's and CMSA); UA's; barrios-pueblos and barrios, subbarrios, and places of 1,000 or more inhabitants; and summary geographic areas
<b>Sample Data</b>				
1990 CH-2-53	<b>Detailed Housing Characteristics</b>	Puerto Rico	Statistics generally on sample housing subjects	Puerto Rico; municipios; metropolitan areas (MSA's/ PMSA's and CMSA); UA's; barrios-pueblos and barrios, subbarrios, and places of 2,500 or more inhabitants; and summary geographic areas





**Figure 3. 1990 Census Summary Tape Files for Puerto Rico**

<b>Summary Tape File (STF 1A, 1B) and data type (100 percent or sample)<sup>1</sup></b>	<b>Geographic areas</b>	<b>Description</b>
STF 1 (100 percent)	A <sup>2,3</sup>	Puerto Rico and its component areas in hierarchical sequence down to the block group level. Summaries also tabulated for whole barrios-pueblos and barrios, whole subbarrios, whole places, whole census tracts/block numbering areas (BNA's), and whole block groups
	B <sup>2,3</sup>	Puerto Rico and its component areas in hierarchical sequence down to the block level. Data also provided for metropolitan areas (MSA's/PMSA's and CMSA), UA's, and summary geographic areas (for example, urban and rural)
STF 2 (100 percent)	A	Data for census tracts/BNA's in metropolitan areas and in the remainder of Puerto Rico in a geographic hierarchy of municipios—places of 10,000 or more inhabitants—census tract/BNA. It also presents census tract/BNA summaries for split tracts/BNA's
	B	Puerto Rico; municipios; metropolitan areas (MSA's/PMSA's and CMSA); UA's; barrios-pueblos and barrios, subbarrios, and places of 1,000 or more inhabitants; and summary geographic areas (for example, urban and rural)
STF 3 (Sample)	A <sup>2,3</sup>	Puerto Rico and its subareas in hierarchical sequence down to the block group level. Separate summaries provided for metropolitan areas (MSA's/PMSA's and a CMSA), UA's, whole barrios-pueblos and barrios, whole subbarrios, whole places, whole census tracts/BNA's, and whole block groups
STF 4 (Sample)	A	Data for census tracts/BNA's in metropolitan areas and in the remainder of Puerto Rico in a geographic hierarchy of municipios—places of 10,000 or more inhabitants—census tract/BNA. It also presents census tract/BNA summaries for split tracts/BNA's
	B	Puerto Rico; municipios; metropolitan areas (MSA's/PMSA's and CMSA); UA's; barrios-pueblos and barrios, subbarrios, and places of 2,500 or more inhabitants; and summary geographic areas

<sup>1</sup>Similar STF's will be prepared for States, the District of Columbia, and the U.S. Virgin Islands.

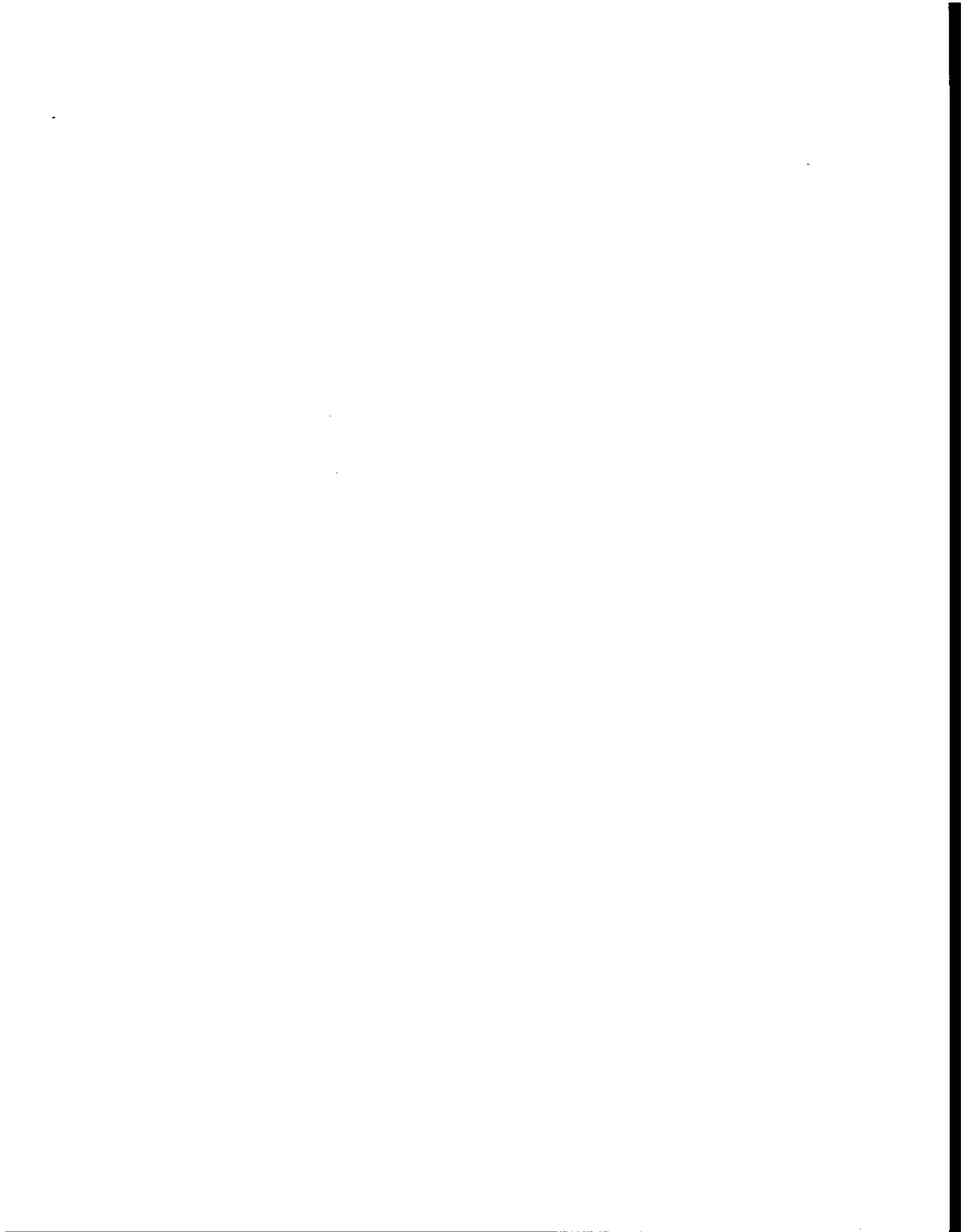
<sup>2</sup>Also available on microfiche. STF 1B microfiche provides only part of the data for blocks and other areas in the tape file.

<sup>3</sup>Also available on laser disc (CD-ROM). STF 1B CD-ROM presents the same file extract as STF 1B microfiche.



**Figure 4. Other 1990 Census Data Products for Puerto Rico**

<b>Title</b>	<b>Description</b>	<b>Geographic areas</b>
Special Supplementary Report—Detailed Population and Housing Characteristics	A series of cross-tabulations of detailed population and housing data	Puerto Rico
Puerto Rico Redistricting Data Project	Counts for the total population and population 18 years old and over, and counts of housing units (total, occupied, and vacant). Available on tape, CD-ROM, and paper listings	Puerto Rico, municipios, barrios-pueblos and barrios, subbarrios, places, census tracts/ block numbering areas, block groups, blocks, and voting districts
Public Use Microdata Sample (PUMS) Files	Machine-readable files containing a sample of individual long-form census records showing most population and housing characteristics but with identifying information removed	
5 Percent—PUMS Municipio Groups		Municipio groups or smaller areas with 100,000 or more inhabitants
1 Percent—Metropolitan Areas (1990)		MA's that will be used in the 1990 census
User-Defined Areas Tabulations	A set of standard tabulations provided on printouts, tapes, or other products with maps and narrative (if requested)	User-defined areas created by aggregating census blocks
Special Tabulations	User-defined tabulations for specified geographic areas provided on printouts, tapes, or other products	User-defined areas or standard areas



# APPENDIX G. Record Layout of Machine-Readable Data Dictionary

## CONTENTS

Geographic Description	G-1
Table (Matrix) Description	G-2

This appendix provides the record layout for the machine-readable data dictionary file that accompanies each data tape. This data dictionary was developed as a "generic" dictionary that, with some programming, could be converted for use with specific software packages.

## GEOGRAPHIC DESCRIPTION

### Geographic Record 1—Field Mnemonic, Size, and Type

Position	Description
1-2	Identifier "G1" (Geographic Record 1)
3	Blank
4-11	Field mnemonic (left justified)
12	Blank
13-14	Field size (right justified)
15	Blank
16-18	Data type (left justified)
	Note: Legal entries are A, N, and A/N
19	Blank
20-24	Begin position (right justified) (Begin position in relation to the entire record)
25	Blank
26-30	Relative begin position (right justified) (Begin position in relation to the record segment)

#### Example 1

```
61 FILEID 8 A/N 1 1 0
62 1 File Identification
```

#### Example 2

```
61 PSADC 2 A/N 289 289 0
62 289 Political/Statistical Area Description Code
63 289 01 State or State equivalent - no status is appended to the name
63 289 01 of the entity in census publications and related data products
63 289 04 Borough - county equivalent in Alaska; "Borough" is appended to
63 289 04 of the name of the entity in census publications and related data
63 289 04 to products
63 289 05 Census area - county equivalent in Alaska; "Census Area" is ap
63 289 05 pended to the name of the entity in census publications and re
63 289 05 lated data products
```

<sup>1</sup>Examples are for illustrative purposes and are not specific to this STF.

### Geographic Record 1—Con.

31	Blank
32	Number of implied decimals
33-80	Blank

### Geographic Record 2—Field Description

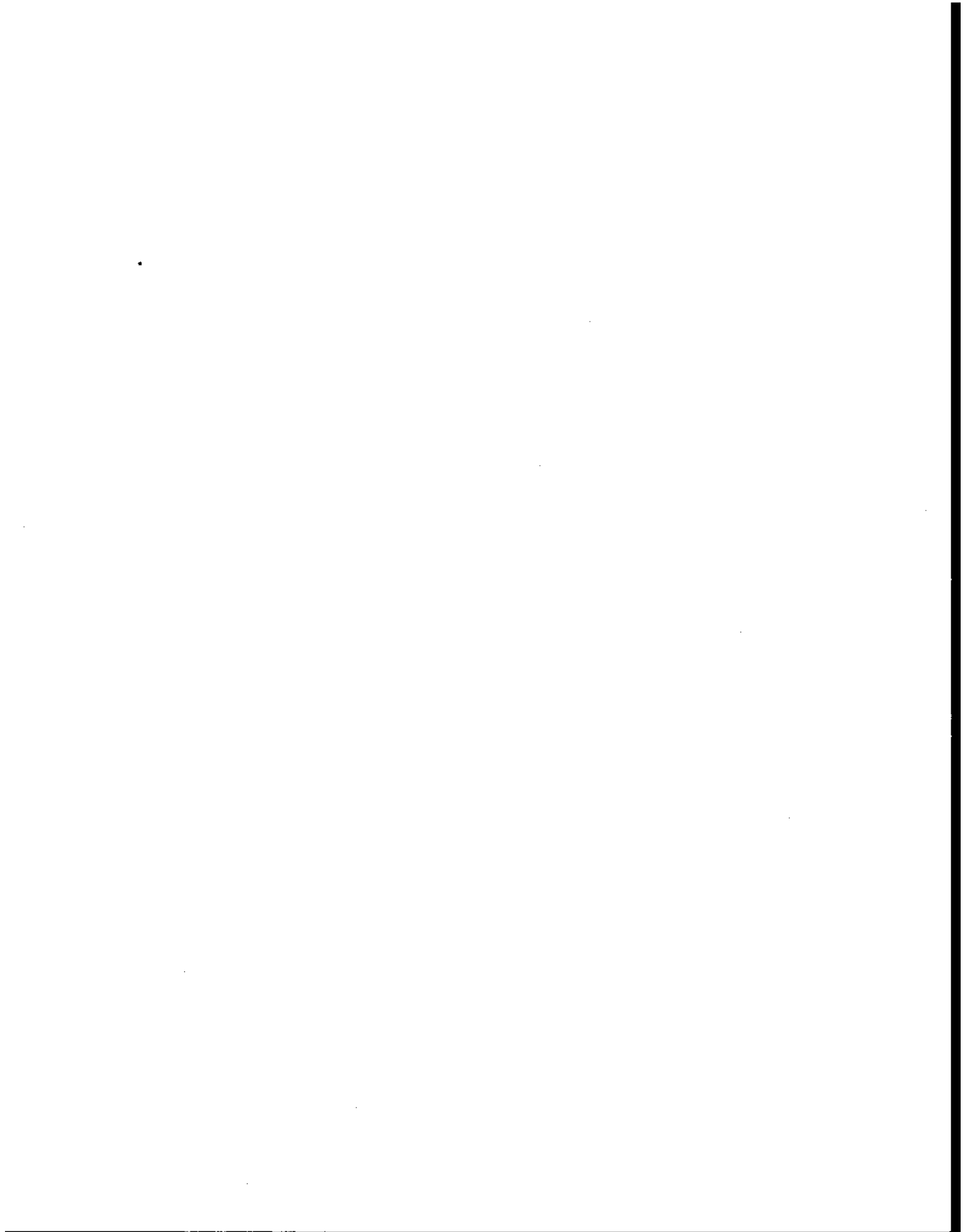
Position	Description
1-2	Identifier "G2" (Geographic Record 2)
3	Blank
4-8	Begin position (right justified) (repeat from 20-24 above)
9	Blank
10-80	Field Description (left justified)

### Geographic Record 3—Code Identification

Position	Description
1-2	Identifier "G3" (Geographic Record 3)
3	Blank
4-8	Begin position (right justified) (repeat from 20-24 in G1)
9	Blank
10-17	Codes (right justified)
18	Blank
19-80	Code Identification (left justified)

### Geographic Description Examples<sup>1</sup>

Examples of the geographic records are shown below. In example 1, there are no G3 records. G3 records will appear only for fields which have code listings in the technical documentation.



## TABLE (MATRIX) DESCRIPTION

### Table Record 1—Table Number and Characteristics

Position	Description
1-2	Identifier "T1" (Table Record 1)
3	Blank
4-9	Table (matrix) number (left justified)
10	Blank
11-17	Begin position (right justified) <sup>2</sup> (Begin position in relation to the entire record)
18	Blank
19-25	Relative begin position (right justified) <sup>2</sup> (Begin position in relation to the record segment)
26	Blank
27-28	Cell size for this table (matrix) (right justified)
29	Blank
30	Number of implied decimals for cells in this table (matrix)
31	Blank
32-38	Number of cells in this table (matrix) (right justified) <sup>2</sup>
39	Blank
40-42	Number of variables (right justified)
43-80	Blank

### Table Record 2—Table Title

Position	Description
1-2	Identifier "T2" (Table Record 2)
3	Blank
4-9	Table (matrix) number (left justified)
10	Blank
11-80	Table (matrix) title (left justified)

### Table Record 3—Universe Description

Position	Description
1-2	Identifier "T3" (Table Record 3)
3	Blank

#### Example 3

Sex (2) by Marital Status(5) [10]

T1 P14	4423	4423	9	0	10	2
T2 P14	SEX BY MARITAL STATUS					
T3 P14	Persons 15 years and over					
T4 P14	SEX					
T4 P14	Male					2
T4 P14	Female					
T5 P14	MARITAL STATUS					
T5 P14	Never married					5
T5 P14	Now married, except separated					
T5 P14	Separated					
T5 P14	Widowed					
T5 P14	Divorced					

<sup>1</sup>Examples are for illustrative purposes and are not specific to this STF.

<sup>2</sup>These positions have been increased to accommodate all record sizes. Previous products had less characters; future products (STF 3 PR, STF 3 VI, STF 4, etc.) will have the above structure.

### Table Record 3—Con.

4-9	Table (matrix) number (left justified)
10	Blank
11-80	Universe Description (left justified)

### Table Record 4—N—Table Variable Descriptions

Position	Description
1-2	Identifier "Tn" n = sequence number of variable in the table being described.
3	Blank
4-9	Table (matrix) number (left justified)
10	Blank
11-76	Variable name (left justified)
77	Blank
78-80	Number of categories for this variable (right justified)
Note: Subsequent "T" records with the same "n" will have the variable categories described in positions 11-80.	

### Filler Record

Position	Description
1-2	Identifier "F1" (Filler Record)
3	Blank
4-7	"FILL"
8-10	Blank
11-17	Begin Position (right justified) (Begin position in relation to the entire record) <sup>2</sup>
18	Blank
19-25	Relative Begin Position (right justified) (Begin position in relation to the record segment) <sup>2</sup>
26	Blank
27-30	Total number of "FILL" blanks
31-80	Blank

### Matrix Example<sup>1</sup>

See example 3 below.





# APPENDIX H. Code Lists

## CONTENTS

Industry	H-1
Occupation	H-8

## INDUSTRY

The list presents the industrial classification developed for the 1990 Census of Population and Housing. There are 235 categories for the employed, with 1 additional category for the experienced unemployed, and 7 additional categories for the Armed Forces. These categories are aggregated into 13 major groups. The classification is developed from the 1987 Standard Industrial Classification. "n.e.c." is the abbreviation for not elsewhere classified.

1990  
Census  
code

Industry category

### AGRICULTURE, FORESTRY, AND FISHERIES

010	Agricultural production, crops (01)
011	Agricultural production, livestock (02)
012	Veterinary services (074)
020	Landscape and horticultural services (078)
030	Agricultural services, n.e.c. (071, 072, 075, 076)
031	Forestry (08)
032	Fishing, hunting, and trapping (09)

### MINING

040	Metal mining (10)
041	Coal mining (12)
042	Oil and gas extraction (13)
050	Nonmetallic mining and quarrying, except fuels (14)

### 060 CONSTRUCTION (15, 16, 17)

### MANUFACTURING

#### Nondurable Goods

#### Food and kindred products

100	Meat products (201)
101	Dairy products (202)
102	Canned, frozen, and preserved fruits and vegetables (203)
110	Grain mill products (204)
111	Bakery products (205)
112	Sugar and confectionery products (206)
120	Beverage industries (208)
121	Miscellaneous food preparations and kindred products (207, 209)
122	Not specified food industries
130	Tobacco manufactures (21)

#### Textile mill products

132	Knitting mills (225)
140	Dyeing and finishing textiles, except wool and knit goods (226)
141	Carpets and rugs (227)

## CODE LISTS

H-1



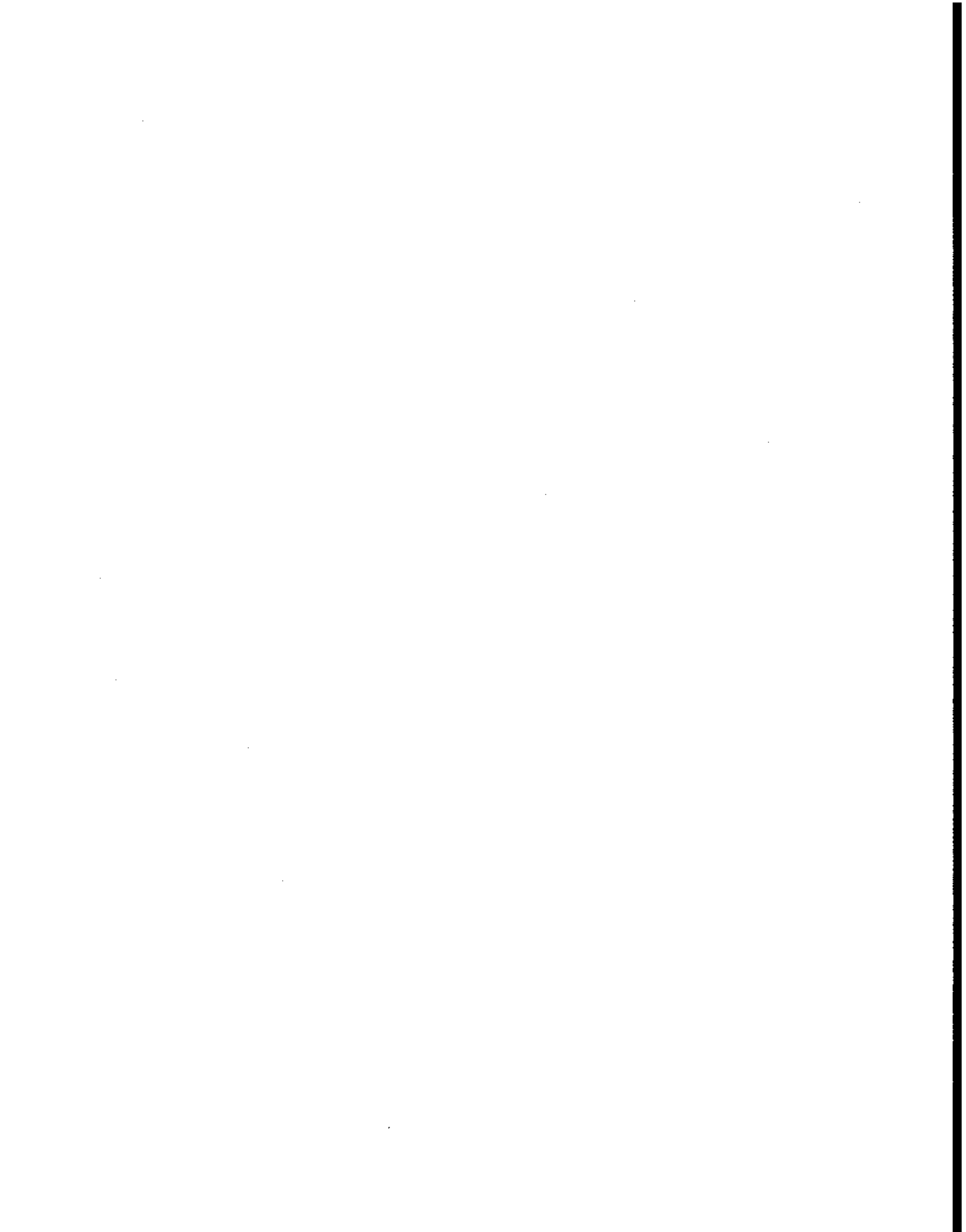
1990  
Census  
code

Industry category

**MANUFACTURING—Con.**

**Nondurable Goods—Con.**

142	Yarn, thread, and fabric mills (221-224, 228)
150	Miscellaneous textile mill products (229)
	Apparel and other finished textile products
151	Apparel and accessories, except knit (231-238)
152	Miscellaneous fabricated textile products (239)
	Paper and allied products
160	Pulp, paper, and paperboard mills (261-263)
161	Miscellaneous paper and pulp products (267)
162	Paperboard containers and boxes (265)
	Printing, publishing, and allied industries
171	Newspaper publishing and printing (271)
172	Printing, publishing, and allied industries, except newspapers (272-279)
	Chemicals and allied products
180	Plastics, synthetics, and resins (282)
181	Drugs (283)
182	Soaps and cosmetics (284)
190	Paints, varnishes, and related products (285)
191	Agricultural chemicals (287)
192	Industrial and miscellaneous chemicals (281, 286, 289)
	Petroleum and coal products
200	Petroleum refining (291)
201	Miscellaneous petroleum and coal products (295, 299)
	Rubber and miscellaneous plastics products
210	Tires and inner tubes (301)
211	Other rubber products, and plastics footwear and belting (302-306)
212	Miscellaneous plastics products (308)
	Leather and leather products
220	Leather tanning and finishing (311)
221	Footwear, except rubber and plastic (313, 314)
222	Leather products, except footwear (315-317, 319)
	<b>Durable Goods</b>
	Lumber and wood products, except furniture
230	Logging (241)
231	Sawmills, planing mills, and millwork (242, 243)
232	Wood buildings and mobile homes (245)
241	Miscellaneous wood products (244, 249)
242	Furniture and fixtures (25)
	Stone, clay, glass, and concrete products
250	Glass and glass products (321-323)
251	Cement, concrete, gypsum, and plaster products (324,327)
252	Structural clay products (325)
261	Pottery and related products (326)



1990  
Census  
code

Industry category

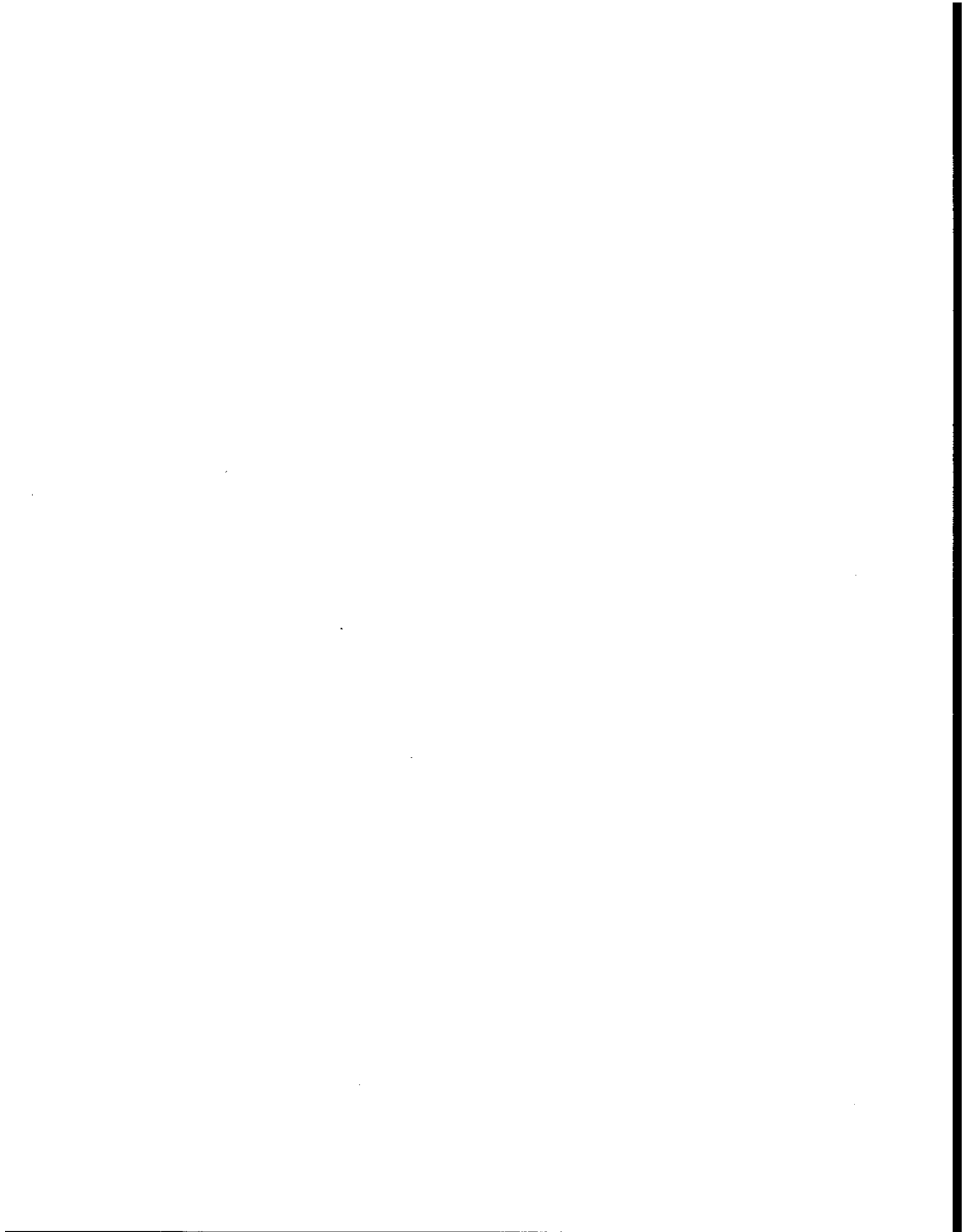
**MANUFACTURING—Con.**

**Durable Goods—Con.**

262	Miscellaneous nonmetallic mineral and stone products (328, 329)
	<b>Metal industries</b>
270	Blast furnaces, steelworks, rolling and finishing mills (331)
271	Iron and steel foundries (332)
272	Primary aluminum industries (3334, part 334, 3353-3355, 3363, 3365)
280	Other primary metal industries (3331, 3339, part 334, 3351, 3356, 3357, 3364, 3366, 3369, 339)
281	Cutlery, handtools, and general hardware (342)
282	Fabricated structural metal products (344)
290	Screw machine products (345)
291	Metal forgings and stampings (346)
292	Ordnance (348)
300	Miscellaneous fabricated metal products (341, 343, 347, 349)
301	Not specified metal industries
	<b>Machinery and computing equipment</b>
310	Engines and turbines (351)
311	Farm machinery and equipment (352)
312	Construction and material handling machines (353)
320	Metalworking machinery (354)
321	Office and accounting machines (3578, 3579)
322	Computers and related equipment (3571-3577)
331	Machinery, except electrical, n.e.c. (355, 356, 358, 359)
332	Not specified machinery
	<b>Electrical machinery, equipment, and supplies</b>
340	Household appliances (363)
341	Radio, TV, and communication equipment (365, 366)
342	Electrical machinery, equipment, and supplies, n.e.c. (361, 362, 364, 367, 369)
350	Not specified electrical machinery, equipment, and supplies
	<b>Transportation equipment</b>
351	Motor vehicles and motor vehicle equipment (371)
352	Aircraft and parts (372)
360	Ship and boat building and repairing (373)
361	Railroad locomotives and equipment (374)
362	Guided missiles, space vehicles, and parts (376)
370	Cycles and miscellaneous transportation equipment (375, 379)
	<b>Professional and photographic equipment, and watches</b>
371	Scientific and controlling instruments (381, 382 exc. 3827)
372	Medical, dental, and optical instruments and supplies (3827, 384, 385)
380	Photographic equipment and supplies (386)
381	Watches, clocks, and clockwork operated devices (387)
390	Toys, amusement, and sporting goods (394)
391	Miscellaneous manufacturing industries (39 exc. 394)
392	Not specified manufacturing industries

**TRANSPORTATION, COMMUNICATIONS, AND OTHER PUBLIC UTILITIES**

	<b>Transportation</b>
400	Railroads (40)
401	Bus service and urban transit (41, except 412)



1990  
Census  
code

Industry category

**TRANSPORTATION, COMMUNICATIONS, AND OTHER PUBLIC UTILITIES—Con.**

402	Taxicab service (412)
410	Trucking service (421, 423)
411	Warehousing and storage (422)
412	U.S. Postal Service (43)
420	Water transportation (44)
421	Air transportation (45)
422	Pipe lines, except natural gas (46)
432	Services incidental to transportation (47)
<b>Communications</b>	
440	Radio and television broadcasting and cable (483, 484)
441	Telephone communications (481)
442	Telegraph and miscellaneous communications services (482, 489)
<b>Utilities and sanitary services</b>	
450	Electric light and power (491)
451	Gas and steam supply systems (492, 496)
452	Electric and gas, and other combinations (493)
470	Water supply and irrigation (494, 497)
471	Sanitary services (495)
472	Not specified utilities

**WHOLESALE TRADE**

**Durable Goods**

500	Motor vehicles and equipment (501)
501	Furniture and home furnishings (502)
502	Lumber and construction materials (503)
510	Professional and commercial equipment and supplies (504)
511	Metals and minerals, except petroleum (505)
512	Electrical goods (506)
521	Hardware, plumbing and heating supplies (507)
530	Machinery, equipment, and supplies (508)
531	Scrap and waste materials (5093)
532	Miscellaneous wholesale, durable goods (509 exc. 5093)

**Nondurable Goods**

540	Paper and paper products (511)
541	Drugs, chemicals and allied products (512, 516)
542	Apparel, fabrics, and notions (513)
550	Groceries and related products (514)
551	Farm-product raw materials (515)
552	Petroleum products (517)
560	Alcoholic beverages (518)
561	Farm supplies (5191)
562	Miscellaneous wholesale, nondurable goods (5192-5199)
571	Not specified wholesale trade

**RETAIL TRADE**

580	Lumber and building material retailing (521, 523)
581	Hardware stores (525)
582	Retail nurseries and garden stores (526)





1990  
Census  
code

Industry category

**RETAIL TRADE—Con.**

590 Mobile home dealers (527)  
591 Department stores (531)  
592 Variety stores (533)  
600 Miscellaneous general merchandise stores (539)  
601 Grocery stores (541)  
602 Dairy products stores (545)  
610 Retail bakeries (546)  
611 Food stores, n.e.c. (542, 543, 544, 549)  
612 Motor vehicle dealers (551, 552)  
620 Auto and home supply stores (553)  
621 Gasoline service stations (554)  
622 Miscellaneous vehicle dealers (555, 556, 557, 559)  
623 Apparel and accessory stores, except shoe (56, except 566)  
630 Shoe stores (566)  
631 Furniture and home furnishings stores (571)  
632 Household appliance stores (572)  
633 Radio, TV, and computer stores (5731, 5734)  
640 Music stores (5735, 5736)  
641 Eating and drinking places (58)  
642 Drug stores (591)  
650 Liquor stores (592)  
651 Sporting goods, bicycles, and hobby stores (5941, 5945, 5946)  
652 Book and stationery stores (5942, 5943)  
660 Jewelry stores (5944)  
661 Gift, novelty, and souvenir shops (5947)  
662 Sewing, needlework and piece goods stores (5949)  
663 Catalog and mail order houses (5961)  
670 Vending machine operators (5962)  
671 Direct selling establishments (5963)  
672 Fuel dealers (598)  
681 Retail florists (5992)  
682 Miscellaneous retail stores (593, 5948, 5993-5995, 5999)  
691 Not specified retail trade

**FINANCE, INSURANCE, AND REAL ESTATE**

700 Banking (60 exc. 603 and 606)  
701 Savings institutions, including credit unions (603, 606)  
702 Credit agencies, n.e.c. (61)  
710 Security, commodity brokerage, and investment companies (62, 67)  
711 Insurance (63, 64)  
712 Real estate, including real estate-insurance offices (65)

**BUSINESS AND REPAIR SERVICES**

721 Advertising (731)  
722 Services to dwellings and other buildings (734)  
731 Personnel supply services (736)  
732 Computer and data processing services (737)  
740 Detective and protective services (7381, 7382)  
741 Business services, n.e.c. (732, 733, 735, 7383-7389)  
742 Automotive rental and leasing, without drivers (751)  
750 Automobile parking and carwashes (752, 7542)  
751 Automotive repair and related services (753, 7549)

CODE LISTS

H-5



**BUSINESS AND REPAIR SERVICES—Con.**

752 Electrical repair shops (762, 7694)  
760 Miscellaneous repair services (763, 764, 7692, 7699)

**PERSONAL SERVICES**

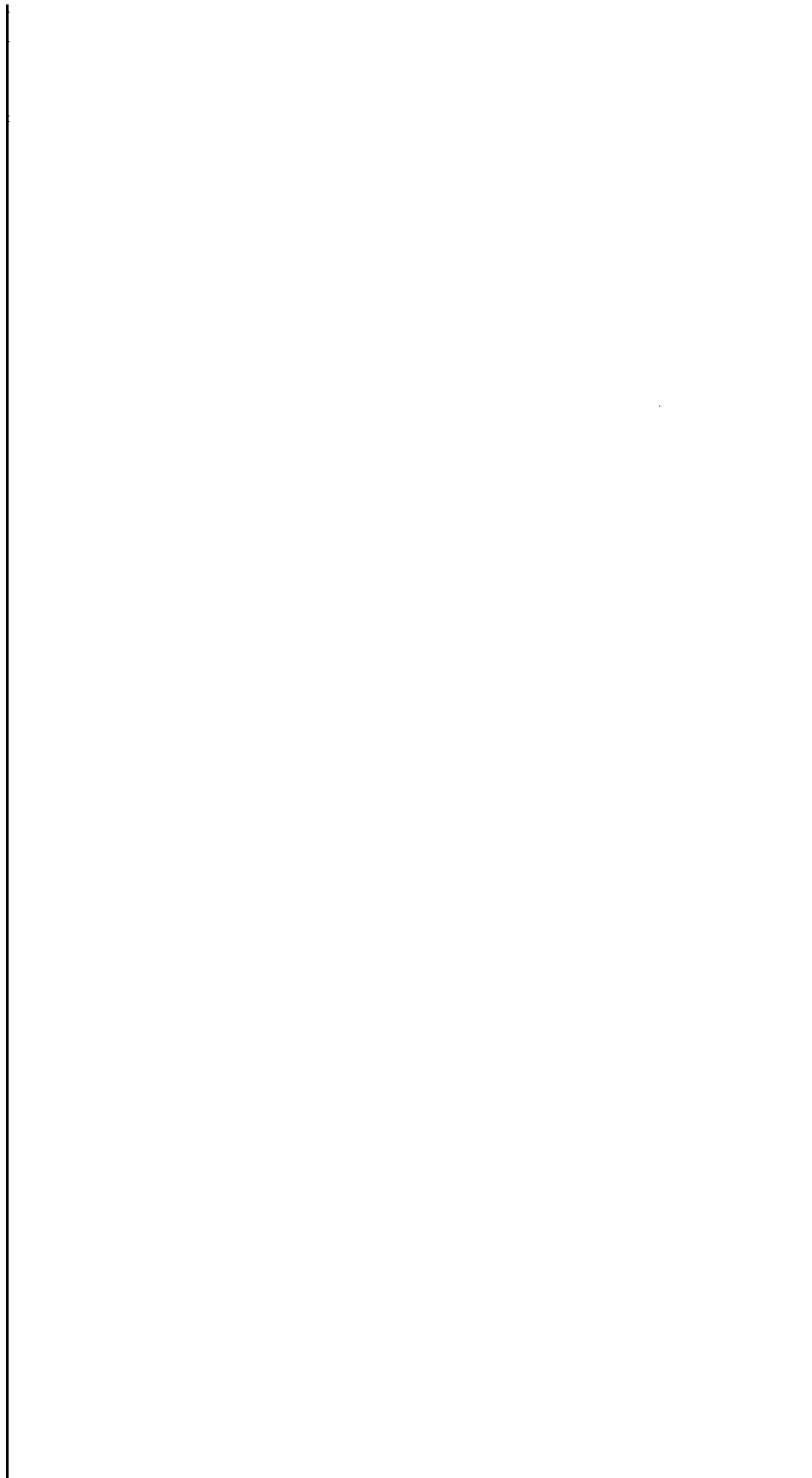
761 Private households (88)  
762 Hotels and motels (701)  
770 Lodging places, except hotels and motels (702, 703, 704)  
771 Laundry, cleaning, and garment services (721 exc. part 7219)  
772 Beauty shops (723)  
780 Barber shops (724)  
781 Funeral service and crematories (726)  
782 Shoe repair shops (725)  
790 Dressmaking shops (part 7219)  
791 Miscellaneous personal services (722, 729)

**ENTERTAINMENT AND RECREATION SERVICES**

800 Theaters and motion pictures (781-783, 792)  
801 Video tape rental (784)  
802 Bowling centers (793)  
810 Miscellaneous entertainment and recreation services (791, 794, 799)

**PROFESSIONAL AND RELATED SERVICES**

812 Offices and clinics of physicians (801, 803)  
820 Offices and clinics of dentists (802)  
821 Offices and clinics of chiropractors (8041)  
822 Offices and clinics of optometrists (8042)  
830 Offices and clinics of health practitioners, n.e.c. (8043, 8049)  
831 Hospitals (806)  
832 Nursing and personal care facilities (805)  
840 Health services, n.e.c. (807, 808, 809)  
841 Legal services (81)  
842 Elementary and secondary schools (821)  
850 Colleges and universities (822)  
851 Vocational schools (824)  
852 Libraries (823)  
860 Educational services, n.e.c. (829)  
861 Job training and vocational rehabilitation services (833)  
862 Child day care services (part 835)  
863 Family child care homes (part 835)  
870 Residential care facilities, without nursing (836)  
871 Social services, n.e.c. (832, 839)  
872 Museums, art galleries, and zoos (84)  
873 Labor unions (863)  
880 Religious organizations (866)  
881 Membership organizations, n.e.c. (861, 862, 864, 865, 869)  
882 Engineering, architectural, and surveying services (871)  
890 Accounting, auditing, and bookkeeping services (872)  
891 Research, development, and testing services (873)  
892 Management and public relations services (874)  
893 Miscellaneous professional and related services (899)



1990  
Census  
code

Industry category

**PUBLIC ADMINISTRATION**

900	Executive and legislative offices (911-913)
901	General government, n.e.c. (919)
910	Justice, public order, and safety (92)
921	Public finance, taxation, and monetary policy (93)
922	Administration of human resources programs (94)
930	Administration of environmental quality and housing programs (95)
931	Administration of economic programs (96)
932	National security and international affairs (97)

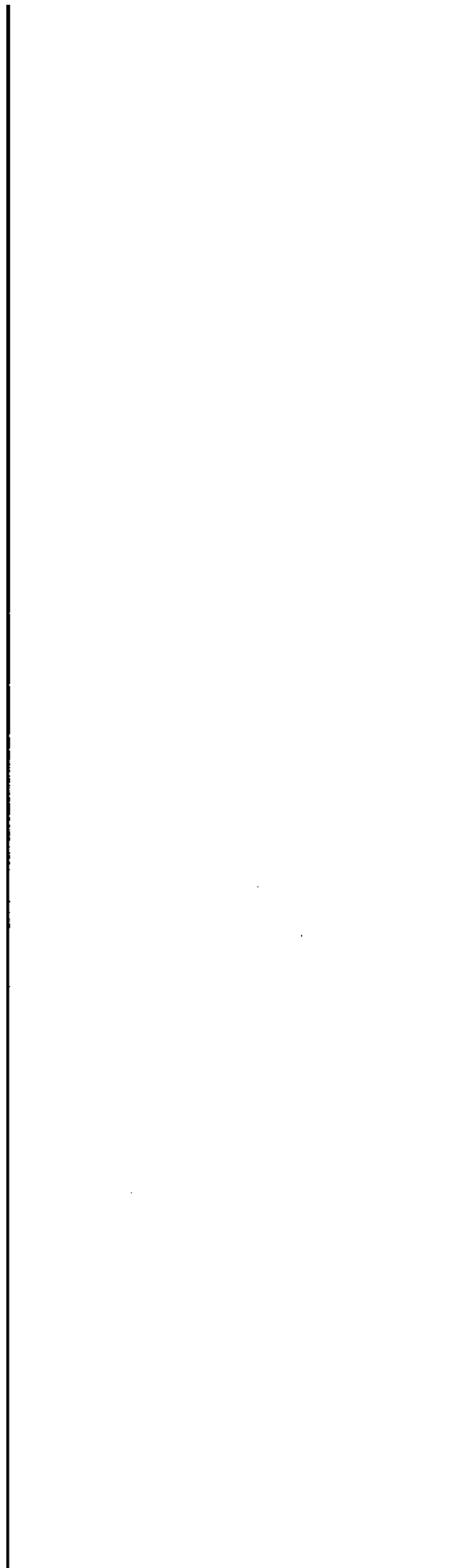
**ACTIVE DUTY MILITARY**

Armed Forces

940	Army
941	Air Force
942	Navy
950	Marines
951	Coast Guard
952	Armed Forces; Branch not specified
960	Military Reserves or National Guard

**EXPERIENCED UNEMPLOYED NOT CLASSIFIED BY INDUSTRY**

992	Last worked 1984 or earlier
-----	-----------------------------



## OCCUPATION

The list presents the occupational classification developed for the 1990 Census of Population and Housing. There are 501 categories for the employed with 1 additional category for the experienced unemployed and 3 additional categories for the Armed Forces. These categories are grouped into 6 summary groups and 13 major groups. The classification is developed from the 1980 Standard Occupational Classification. "n.e.c." is the abbreviation for not elsewhere classified.

In the Table (Matrix) Outlines and the Table (Matrix) Section, many occupation codes are presented as ranges; for example, legislators (001-003). In this appendix, the Occupation Code List includes single census occupation codes and comparable Standard Occupational Classification (SOC) code equivalents. Single census occupation codes in this appendix are equivalent to corresponding census code ranges in the Table (Matrix) Outlines and Table (Matrix) Section.

1990  
Census  
code

Occupation category

### MANAGERIAL AND PROFESSIONAL SPECIALTY OCCUPATIONS

#### Executive, Administrative, and Managerial Occupations

003	Legislators (111)
004	Chief executives and general administrators, public administration (112)
005	Administrators and officials, public administration (1132-1139)
006	Administrators, protective services (1131)
007	Financial managers (122)
008	Personnel and labor relations managers (123)
009	Purchasing managers (124)
013	Managers, marketing, advertising, and public relations (125)
014	Administrators, education and related fields (128)
015	Managers, medicine and health (131)
016	Postmasters and mail superintendents (1344)
017	Managers, food serving and lodging establishments (1351)
018	Managers, properties and real estate (1353)
019	Funeral directors (pt 1359)
021	Managers, service organizations, n.e.c. (127, 1352, 1354, pt 1359)
022	Managers and administrators, n.e.c. (121, 126, 132-1343, 136-139)

#### Management Related Occupations

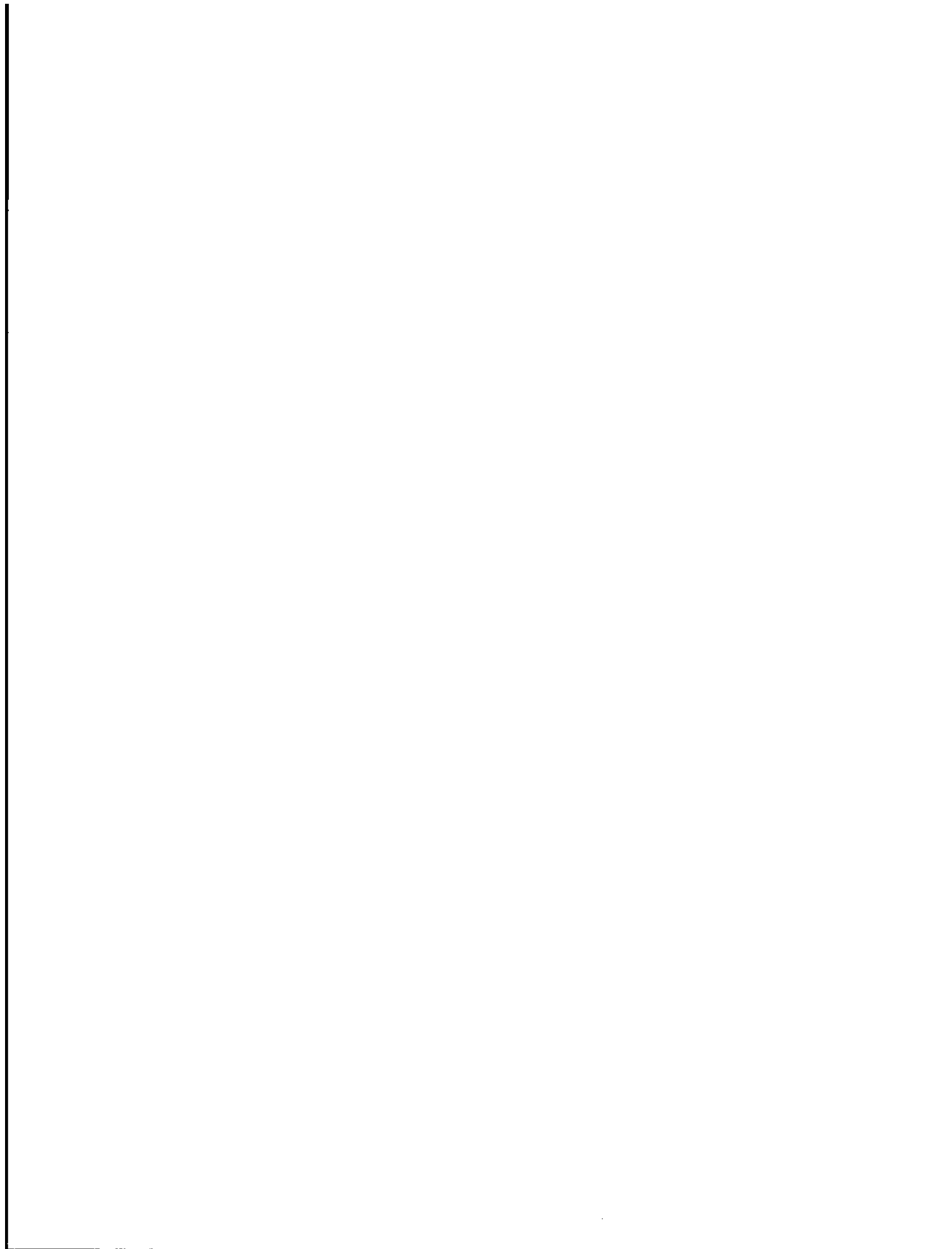
023	Accountants and auditors (1412)
024	Underwriters (1414)
025	Other financial officers (1415, 1419)
026	Management analysts (142)
027	Personnel, training, and labor relations specialists (143)
028	Purchasing agents and buyers, farm products (1443)
029	Buyers, wholesale and retail trade except farm products (1442)
033	Purchasing agents and buyers, n.e.c. (1449)
034	Business and promotion agents (145)
035	Construction inspectors (1472)
036	Inspectors and compliance officers, except construction (1473)
037	Management related occupations, n.e.c. (149)

#### Professional Specialty Occupations

##### Engineers, Architects, and Surveyors

043	Architects (161)
	Engineers
044	Aerospace (1622)
045	Metallurgical and materials (1623)
046	Mining (1624)





1990  
Census  
code

Occupation category

**MANAGERIAL AND PROFESSIONAL SPECIALTY OCCUPATIONS—Con.**

**Professional Specialty Occupations—Con.**

047	Petroleum (1625)
048	Chemical (1626)
049	Nuclear (1627)
053	Civil (1628)
054	Agricultural (1632)
055	Electrical and electronic (1633, 1636)
056	Industrial (1634)
057	Mechanical (1635)
058	Marine and naval architects (1637)
059	Engineers, n.e.c. (1639)
063	Surveyors and mapping scientists (164)

**Mathematical and Computer Scientists**

064	Computer systems analysts and scientists (171)
065	Operations and systems researchers and analysts (172)
066	Actuaries (1732)
067	Statisticians (1733)
068	Mathematical scientists, n.e.c. (1739)

**Natural Scientists**

069	Physicists and astronomers (1842, 1843)
073	Chemists, except biochemists (1845)
074	Atmospheric and space scientists (1846)
075	Geologists and geodesists (1847)
076	Physical scientists, n.e.c. (1849)
077	Agricultural and food scientists (1853)
078	Biological and life scientists (1854)
079	Forestry and conservation scientists (1852)
083	Medical scientists (1855)

**Health Diagnosing Occupations**

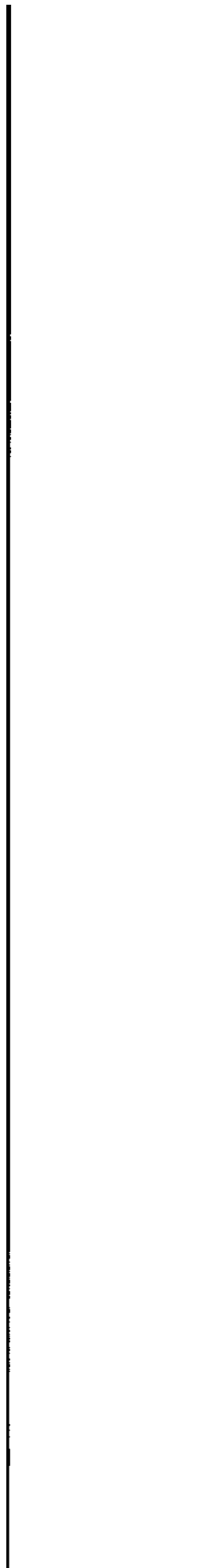
084	Physicians (261)
085	Dentists (262)
086	Veterinarians (27)
087	Optometrists (281)
088	Podiatrists (283)
089	Health diagnosing practitioners, n.e.c. (289)

**Health Assessment and Treating Occupations**

095	Registered nurses (29)
096	Pharmacists (301)
097	Dietitians (302)

**Therapists**

098	Respiratory therapists (3031)
099	Occupational therapists (3032)
103	Physical therapists (3033)
104	Speech therapists (3034)
105	Therapists, n.e.c. (3039)
106	Physicians' assistants (304)



**MANAGERIAL AND PROFESSIONAL SPECIALTY OCCUPATIONS—Con.**

**Professional Specialty Occupations—Con.**

**Teachers, Postsecondary**

113	Earth, environmental, and marine science teachers (2212)
114	Biological science teachers (2213)
115	Chemistry teachers (2214)
116	Physics teachers (2215)
117	Natural science teachers, n.e.c. (2216)
118	Psychology teachers (2217)
119	Economics teachers (2218)
123	History teachers (2222)
124	Political science teachers (2223)
125	Sociology teachers (2224)
126	Social science teachers, n.e.c. (2225)
127	Engineering teachers (2226)
128	Mathematical science teachers (2227)
129	Computer science teachers (2228)
133	Medical science teachers (2231)
134	Health specialties teachers (2232)
135	Business, commerce, and marketing teachers (2233)
136	Agriculture and forestry teachers (2234)
137	Art, drama, and music teachers (2235)
138	Physical education teachers (2236)
139	Education teachers (2237)
143	English teachers (2238)
144	Foreign language teachers (2242)
145	Law teachers (2243)
146	Social work teachers (2244)
147	Theology teachers (2245)
148	Trade and industrial teachers (2246)
149	Home economics teachers (2247)
153	Teachers, postsecondary, n.e.c. (2249)
154	Postsecondary teachers, subject not specified

**Teachers, Except Postsecondary**

155	Teachers, prekindergarten and kindergarten (231)
156	Teachers, elementary school (232)
157	Teachers, secondary school (233)
158	Teachers, special education (235)
159	Teachers, n.e.c. (236, 239)
163	Counselors, educational and vocational (24)

**Librarians, Archivists, and Curators**

164	Librarians (251)
165	Archivists and curators (252)

**Social Scientists and Urban Planners**

166	Economists (1912)
167	Psychologists (1915)
168	Sociologists (1916)
169	Social scientists, n.e.c. (1913, 1914, 1919)
173	Urban planners (192)



1990  
Census  
code

Occupation category

**MANAGERIAL AND PROFESSIONAL SPECIALTY OCCUPATIONS—Con.**

**Professional Specialty Occupations—Con.**

**Social, Recreation, and Religious Workers**

174	Social workers (2032)
175	Recreation workers (2033)
176	Clergy (2042)
177	Religious workers, n.e.c. (2049)
	<b>Lawyers and Judges</b>
178	Lawyers (211)
179	Judges (212)

**Writers, Artists, Entertainers, and Athletes**

183	Authors (321)
184	Technical writers (398)
185	Designers (322)
186	Musicians and composers (323)
187	Actors and directors (324)
188	Painters, sculptors, craft-artists, and artist printmakers (325)
189	Photographers (326)
193	Dancers (327)
194	Artists, performers, and related workers, n.e.c. (328, 329)
195	Editors and reporters (331)
197	Public relations specialists (332)
198	Announcers (333)
199	Athletes (34)

**TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS**

**Technicians and Related Support Occupations**

**Health Technologists and Technicians**

203	Clinical laboratory technologists and technicians (362)
204	Dental hygienists (363)
205	Health record technologists and technicians (364)
206	Radiologic technicians (365)
207	Licensed practical nurses (366)
208	Health technologists and technicians, n.e.c. (369)

**Technologists and Technicians, Except Health**

**Engineering and Related Technologists and Technicians**

213	Electrical and electronic technicians (3711)
214	Industrial engineering technicians (3712)
215	Mechanical engineering technicians (3713)
216	Engineering technicians, n.e.c. (3719)
217	Drafting occupations (372)
218	Surveying and mapping technicians (373)

**Science Technicians**

223	Biological technicians (382)
224	Chemical technicians (3831)
225	Science technicians, n.e.c. (3832, 3833, 384, 389)

**Technicians; Except Health, Engineering, and Science**

226	Airplane pilots and navigators (825)
227	Air traffic controllers (392)



1990  
Census  
code

Occupation category

**TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS—Con.**

**Technicians and Related Support Occupations—Con.**

228	Broadcast equipment operators (393)
229	Computer programmers (3971, 3972)
233	Tool programmers, numerical control (3974)
234	Legal assistants (396)
235	Technicians, n.e.c. (399)

**Sales Occupations**

243	Supervisors and proprietors, sales occupations (40)
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**Sales Representatives, Finance and Business Services**

253	Insurance sales occupations (4122)
254	Real estate sales occupations (4123)
255	Securities and financial services sales occupations (4124)
256	Advertising and related sales occupations (4153)
257	Sales occupations, other business services (4152)

**Sales Representatives, Commodities Except Retail**

258	Sales engineers (421)
259	Sales representatives, mining, manufacturing, and wholesale (423, 424)

**Sales Workers, Retail and Personal Services**

263	Sales workers, motor vehicles and boats (4342, 4344)
264	Sales workers, apparel (4346)
265	Sales workers, shoes (4351)
266	Sales workers, furniture and home furnishings (4348)
267	Sales workers; radio, TV, hi-fi, and appliances (4343, 4352)
268	Sales workers, hardware and building supplies (4353)
269	Sales workers, parts (4367)
274	Sales workers, other commodities (4345, 4347, 4354, 4356, 4359, 4362, 4369)
275	Sales counter clerks (4363)
276	Cashiers (4364)
277	Street and door-to-door sales workers (4366)
278	News vendors (4365)

**Sales Related Occupations**

283	Demonstrators, promoters and models, sales (445)
284	Auctioneers (447)
285	Sales support occupations, n.e.c. (444, 446, 449)

**Administrative Support Occupations, Including Clerical**

**Supervisors, Administrative Support Occupations**

303	Supervisors, general office (4511, 4513, 4514, 4516, 4519, 4529)
304	Supervisors, computer equipment operators (4512)
305	Supervisors, financial records processing (4521)
306	Chief communications operators (4523)
307	Supervisors; distribution, scheduling, and adjusting clerks (4522, 4524-4528)

**Computer Equipment Operators**

308	Computer operators (4612)
309	Peripheral equipment operators (4613)





1990  
Census  
code

Occupation category

**TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS—Con.**

**Administrative Support Occupations, Including Clerical—Con.**

**Secretaries, Stenographers, and Typists**

313 Secretaries (4622)  
314 Stenographers (4623)  
315 Typists (4624)

**Information Clerks**

316 Interviewers (4642)  
317 Hotel clerks (4643)  
318 Transportation ticket and reservation agents (4644)  
319 Receptionists (4645)  
323 Information clerks, n.e.c. (4649)

**Records Processing Occupations, Except Financial**

325 Classified-ad clerks (4662)  
326 Correspondence clerks (4663)  
327 Order clerks (4664)  
328 Personnel clerks, except payroll and timekeeping (4692)  
329 Library clerks (4694)  
335 File clerks (4696)  
336 Records clerks (4699)

**Financial Records Processing Occupations**

337 Bookkeepers, accounting, and auditing clerks (4712)  
338 Payroll and timekeeping clerks (4713)  
339 Billing clerks (4715)  
343 Cost and rate clerks (4716)  
344 Billing, posting, and calculating machine operators (4718)

**Duplicating, Mail and Other Office Machine Operators**

345 Duplicating machine operators (4722)  
346 Mail preparing and paper handling machine operators (4723)  
347 Office machine operators, n.e.c. (4729)

**Communications Equipment Operators**

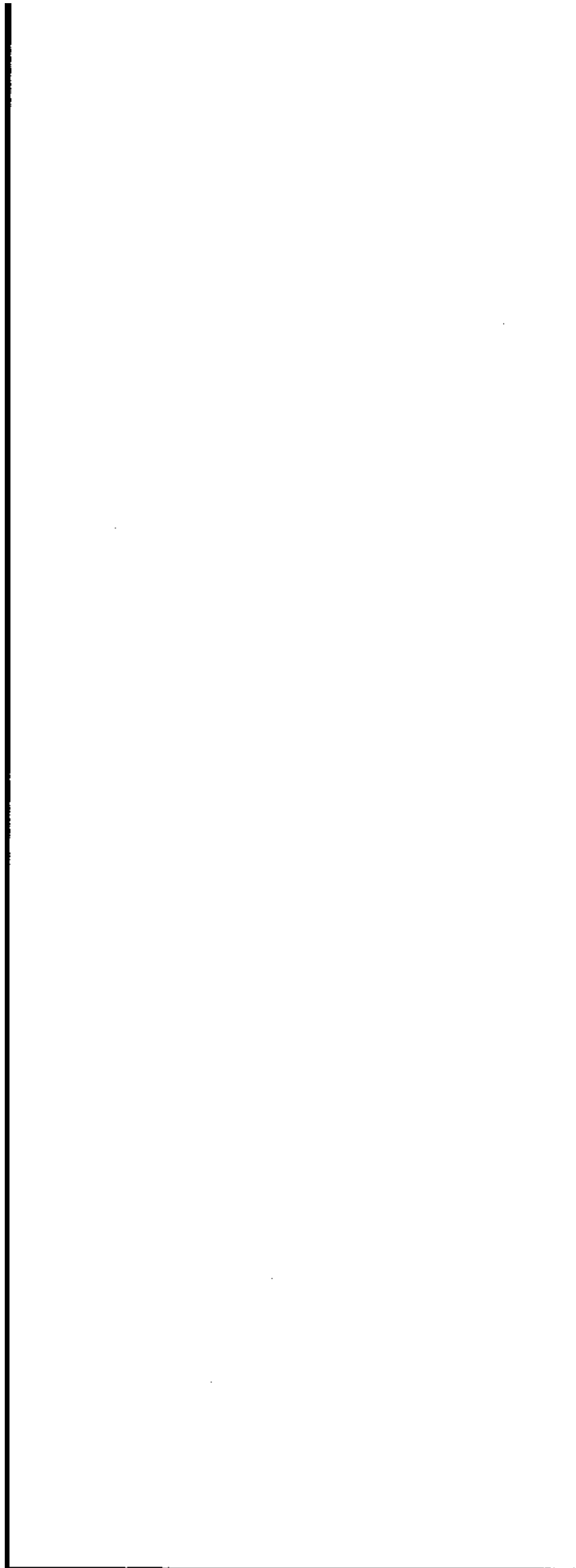
348 Telephone operators (4732)  
353 Communications equipment operators, n.e.c. (4733, 4739)

**Mail and Message Distributing Occupations**

354 Postal clerks, exc. mail carriers (4742)  
355 Mail carriers, postal service (4743)  
356 Mail clerks, exc. postal service (4744)  
357 Messengers (4745)

**Material Recording, Scheduling, and Distributing Clerks**

359 Dispatchers (4751)  
363 Production coordinators (4752)  
364 Traffic, shipping, and receiving clerks (4753)  
365 Stock and inventory clerks (4754)  
366 Meter readers (4755)  
368 Weighers, measurers, checkers and samplers (4756, 4757)  
373 Expeditors (4758)  
374 Material recording, scheduling, and distributing clerks, n.e.c. (4759)



1990  
Census  
code

Occupation category

**TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS—Con.**

**Administrative Support Occupations, Including Clerical—Con.**

**Adjusters and Investigators**

- 375 Insurance adjusters, examiners, and investigators (4782)
- 376 Investigators and adjusters, except insurance (4783)
- 377 Eligibility clerks, social welfare (4784)
- 378 Bill and account collectors (4786)

**Miscellaneous Administrative Support Occupations**

- 379 General office clerks (463)
- 383 Bank tellers (4791)
- 384 Proofreaders (4792)
- 385 Data-entry keyers (4793)
- 386 Statistical clerks (4794)
- 387 Teachers' aides (4795)
- 389 Administrative support occupations, n.e.c. (4787, 4799)

**SERVICE OCCUPATIONS**

**Private Household Occupations**

- 403 Launderers and ironers (503)
- 404 Cooks, private household (504)
- 405 Housekeepers and butlers (505)
- 406 Child care workers, private household (506)
- 407 Private household cleaners and servants (502, 507, 509)

**Protective Service Occupations**

**Supervisors, Protective Service Occupations**

- 413 Supervisors, firefighting and fire prevention occupations (5111)
- 414 Supervisors, police and detectives (5112)
- 415 Supervisors, guards (5113)

**Firefighting and Fire Prevention Occupations**

- 416 Fire inspection and fire prevention occupations (5122)
- 417 Firefighting occupations (5123)

**Police and Detectives**

- 418 Police and detectives, public service (5132)
- 423 Sheriffs, bailiffs, and other law enforcement officers (5134)
- 424 Correctional institution officers (5133)

**Guards**

- 425 Crossing guards (5142)
- 426 Guards and police, exc. public service (5144)
- 427 Protective service occupations, n.e.c. (5149)

**Service Occupations, Except Protective and Household**

**Food Preparation and Service Occupations**

- 433 Supervisors, food preparation and service occupations (5211)
- 434 Bartenders (5212)
- 435 Waiters and waitresses (5213)
- 436 Cooks (5214, 5215)
- 438 Food counter, fountain and related occupations (5216)
- 439 Kitchen workers, food preparation (5217)



1990  
Census  
code

Occupation category

**SERVICE OCCUPATIONS—Con.**

**Service Occupations, Except Protective and Household—Con.**

- 443 Waiters'/waitresses' assistants (5218)
- 444 Miscellaneous food preparation occupations (5219)

**Health Service Occupations**

- 445 Dental assistants (5232)
- 446 Health aides, except nursing (5233)
- 447 Nursing aides, orderlies, and attendants (5236)

**Cleaning and Building Service Occupations, except Household**

- 448 Supervisors, cleaning and building service workers (5241)
- 449 Maids and housemen (5242, 5249)
- 453 Janitors and cleaners (5244)
- 454 Elevator operators (5245)
- 455 Pest control occupations (5246)

**Personal Service Occupations**

- 456 Supervisors, personal service occupations (5251)
- 457 Barbers (5252)
- 458 Hairdressers and cosmetologists (5253)
- 459 Attendants, amusement and recreation facilities (5254)
- 461 Guides (5255)
- 462 Ushers (5256)
- 463 Public transportation attendants (5257)
- 464 Baggage porters and bellhops (5262)
- 465 Welfare service aides (5263)
- 466 Family child care providers (pt 5264)
- 467 Early childhood teacher's assistants (pt 5264)
- 468 Child care workers, n.e.c. (pt 5264)
- 469 Personal service occupations, n.e.c. (5258, 5269)

**FARMING, FORESTRY, AND FISHING OCCUPATIONS**

**Farm Operators and Managers**

- 473 Farmers, except horticultural (5512-5514)
- 474 Horticultural specialty farmers (5515)
- 475 Managers, farms, except horticultural (5522-5524)
- 476 Managers, horticultural specialty farms (5525)

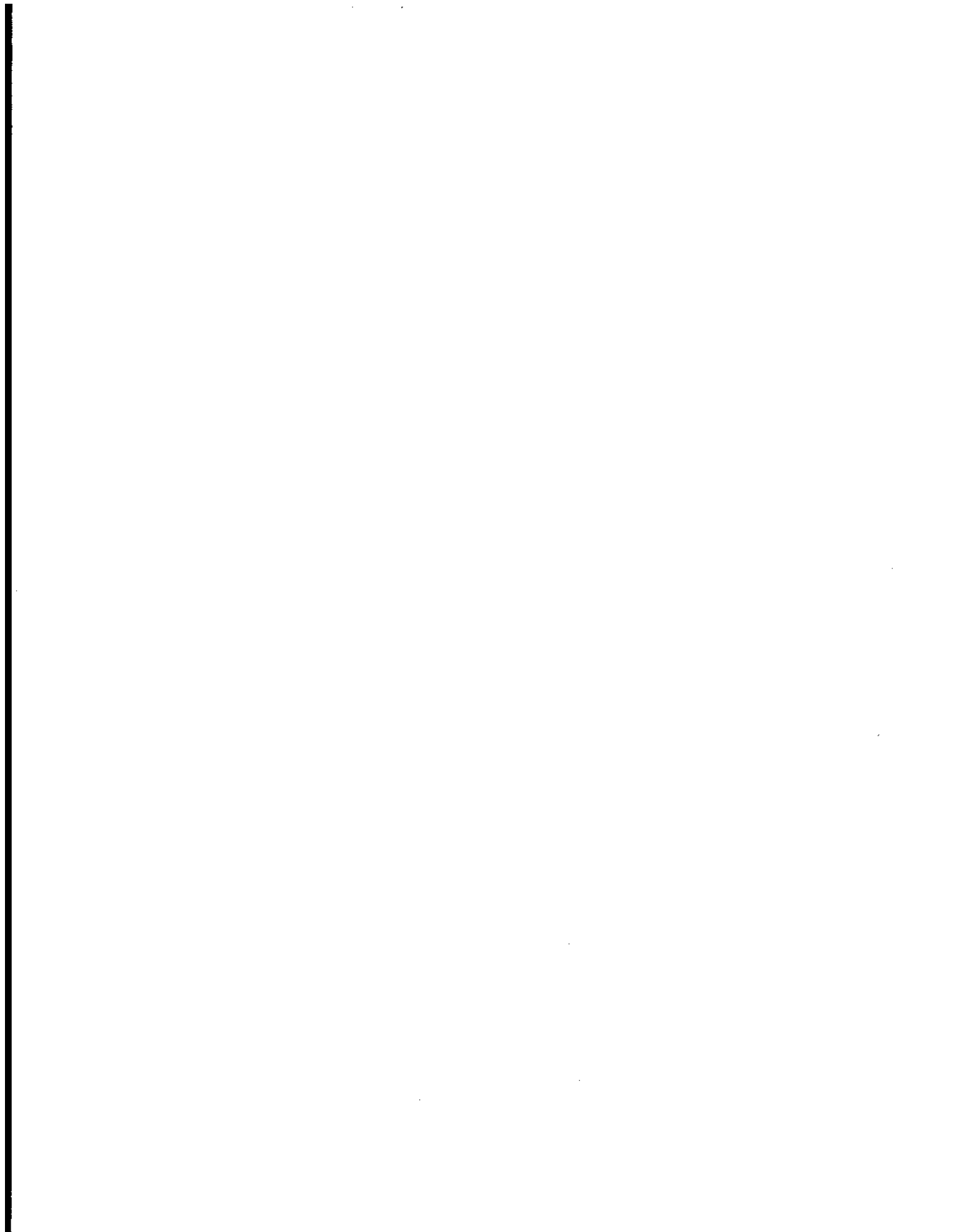
**Other Agricultural and Related Occupations**

**Farm Occupations, Except Managerial**

- 477 Supervisors, farm workers (5611)
- 479 Farm workers (5612-5617)
- 483 Marine life cultivation workers (5618)
- 484 Nursery workers (5619)

**Related Agricultural Occupations**

- 485 Supervisors, related agricultural occupations (5621)
- 486 Groundskeepers and gardeners, except farm (5622)
- 487 Animal caretakers, except farm (5624)
- 488 Graders and sorters, agricultural products (5625)
- 489 Inspectors, agricultural products (5627)



1990  
Census  
code

Occupation category

**FARMING, FORESTRY, AND FISHING OCCUPATIONS—Con.**

**Forestry and Logging Occupations**

- 494 Supervisors, forestry, and logging workers (571)
- 495 Forestry workers, except logging (572)
- 496 Timber cutting and logging occupations (573, 579)

**Fishers, Hunters, and Trappers**

- 497 Captains and other officers, fishing vessels (pt 8241)
- 498 Fishers (583)
- 499 Hunters and trappers (584)

**PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS**

**Mechanics and Repairers**

- 503 Supervisors, mechanics and repairers (60)

**Mechanics and Repairers, Except Supervisors**

**Vehicle and Mobile Equipment Mechanics and Repairers**

- 505 Automobile mechanics (pt 6111)
- 506 Automobile mechanic apprentices (pt 6111)
- 507 Bus, truck, and stationary engine mechanics (6112)
- 508 Aircraft engine mechanics (6113)
- 509 Small engine repairers (6114)
- 514 Automobile body and related repairers (6115)
- 515 Aircraft mechanics, exc. engine (6116)
- 516 Heavy equipment mechanics (6117)
- 517 Farm equipment mechanics (6118)
- 518 Industrial machinery repairers (613)
- 519 Machinery maintenance occupations (614)

**Electrical and Electronic Equipment Repairers**

- 523 Electronic repairers, communications and industrial equipment (6151, 6153, 6155)
- 525 Data processing equipment repairers (6154)
- 526 Household appliance and power tool repairers (6156)
- 527 Telephone line installers and repairers (6157)
- 529 Telephone installers and repairers (6158)
- 533 Miscellaneous electrical and electronic equipment repairers (6152, 6159)
- 534 Heating, air conditioning, and refrigeration mechanics (616)

**Miscellaneous Mechanics and Repairers**

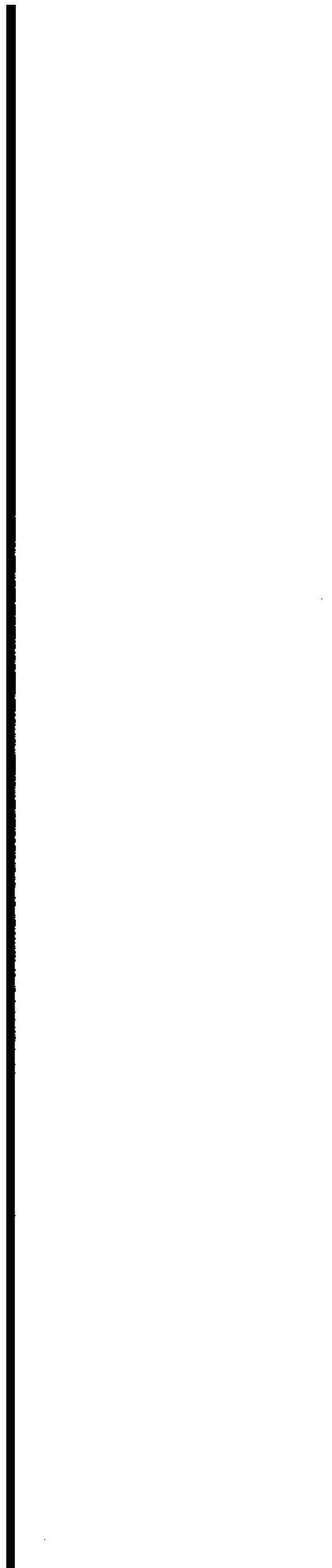
- 535 Camera, watch, and musical instrument repairers (6171, 6172)
- 536 Locksmiths and safe repairers (6173)
- 538 Office machine repairers (6174)
- 539 Mechanical controls and valve repairers (6175)
- 543 Elevator installers and repairers (6176)
- 544 Millwrights (6178)
- 547 Specified mechanics and repairers, n.e.c. (6177, 6179)
- 549 Not specified mechanics and repairers

**Construction Trades**

**Supervisors, Construction Occupations**

- 553 Supervisors; brickmasons, stonemasons, and tile setters (6312)
- 554 Supervisors, carpenters and related workers (6313)
- 555 Supervisors, electricians and power transmission installers (6314)
- 556 Supervisors; painters, paperhangers, and plasterers (6315)





1990  
Census  
code

Occupation category

**PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS—Con.**

557	Supervisors; plumbers, pipefitters, and steamfitters (6316)
558	Supervisors, construction n.e.c. (6311, 6318)
<b>Construction Trades, Except Supervisors</b>	
563	Brickmasons and stonemasons (pt 6412, pt 6413)
564	Brickmason and stonemason apprentices (pt 6412, pt 6413)
565	Tile setters, hard and soft (pt 6414, pt 6462)
566	Carpet installers (pt 6462)
567	Carpenters (pt 6422)
569	Carpenter apprentices (pt 6422)
573	Drywall installers (6424)
575	Electricians (pt 6432)
576	Electrician apprentices (pt 6432)
577	Electrical power installers and repairers (6433)
579	Painters, construction and maintenance (6442)
583	Paperhangers (6443)
584	Plasterers (6444)
585	Plumbers, pipefitters, and steamfitters (pt 645)
587	Plumber, pipefitter, and steamfitter apprentices (pt 645)
588	Concrete and terrazzo finishers (6463)
589	Glaziers (6464)
593	Insulation workers (6465)
594	Paving, surfacing, and tamping equipment operators (6466)
595	Roofers (6468)
596	Sheetmetal duct installers (6472)
597	Structural metal workers (6473)
598	Drillers, earth (6474)
599	Construction trades, n.e.c. (6467, 6475, 6476, 6479)

**Extractive Occupations**

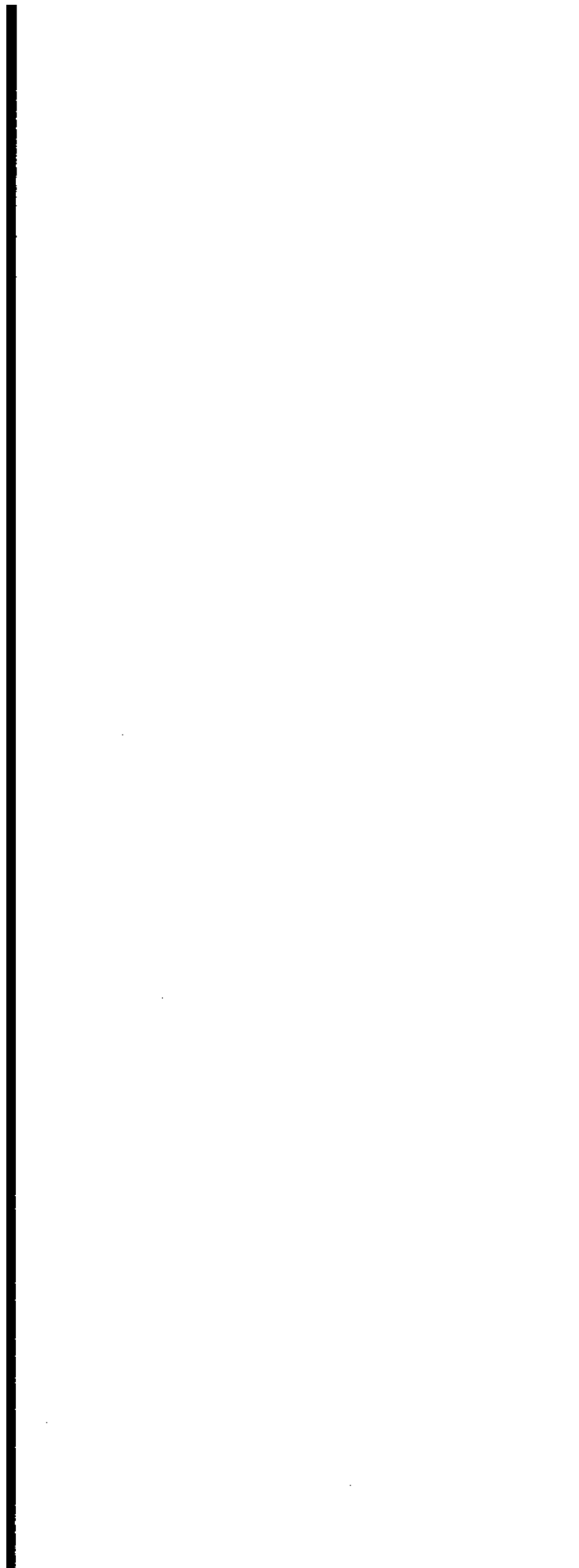
613	Supervisors, extractive occupations (632)
614	Drillers, oil well (652)
615	Explosives workers (653)
616	Mining machine operators (654)
617	Mining occupations, n.e.c. (656)

**Precision Production Occupations**

628	Supervisors, production occupations (67, 71)
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**Precision Metal Working Occupations**

634	Tool and die makers (pt 6811)
635	Tool and die maker apprentices (pt 6811)
636	Precision assemblers, metal (6812)
637	Machinists (pt 6813)
639	Machinist apprentices (pt 6813)
643	Boilermakers (6814)
644	Precision grinders, filers, and tool sharpeners (6816)
645	Patternmakers and model makers, metal (6817)
646	Lay-out workers (6821)
647	Precious stones and metals workers (Jewelers) (6822, 6866)
649	Engravers, metal (6823)
653	Sheet metal workers (pt 6824)
654	Sheet metal worker apprentices (pt 6824)
655	Miscellaneous precision metal workers (6829)



**PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS—Con.**

**Precision Woodworking Occupations**

- 656 Patternmakers and model makers, wood (6831)
- 657 Cabinet makers and bench carpenters (6832)
- 658 Furniture and wood finishers (6835)
- 659 Miscellaneous precision woodworkers (6839)

**Precision Textile, Apparel, and Furnishings Machine Workers**

- 666 Dressmakers (pt 6852, pt 7752)
- 667 Tailors (pt 6852)
- 668 Upholsterers (6853)
- 669 Shoe repairers (6854)
- 674 Miscellaneous precision apparel and fabric workers (6856, 6859, pt 7752)

**Precision Workers, Assorted Materials**

- 675 Hand molders and shapers, except jewelers (6861)
- 676 Patternmakers, lay-out workers, and cutters (6862)
- 677 Optical goods workers (6864, pt 7477, pt 7677)
- 678 Dental laboratory and medical appliance technicians (6865)
- 679 Bookbinders (6844)
- 683 Electrical and electronic equipment assemblers (6867)
- 684 Miscellaneous precision workers, n.e.c. (6869)

**Precision Food Production Occupations**

- 686 Butchers and meat cutters (6871)
- 687 Bakers (6872)
- 688 Food batchmakers (6873, 6879)

**Precision Inspectors, Testers, and Related Workers**

- 689 Inspectors, testers, and graders (6881, 828)
- 693 Adjusters and calibrators (6882)

**Plant and System Operators**

- 694 Water and sewage treatment plant operators (691)
- 695 Power plant operators (pt 693)
- 696 Stationary engineers (pt 693, 7668)
- 699 Miscellaneous plant and system operators (692, 694, 695, 696)

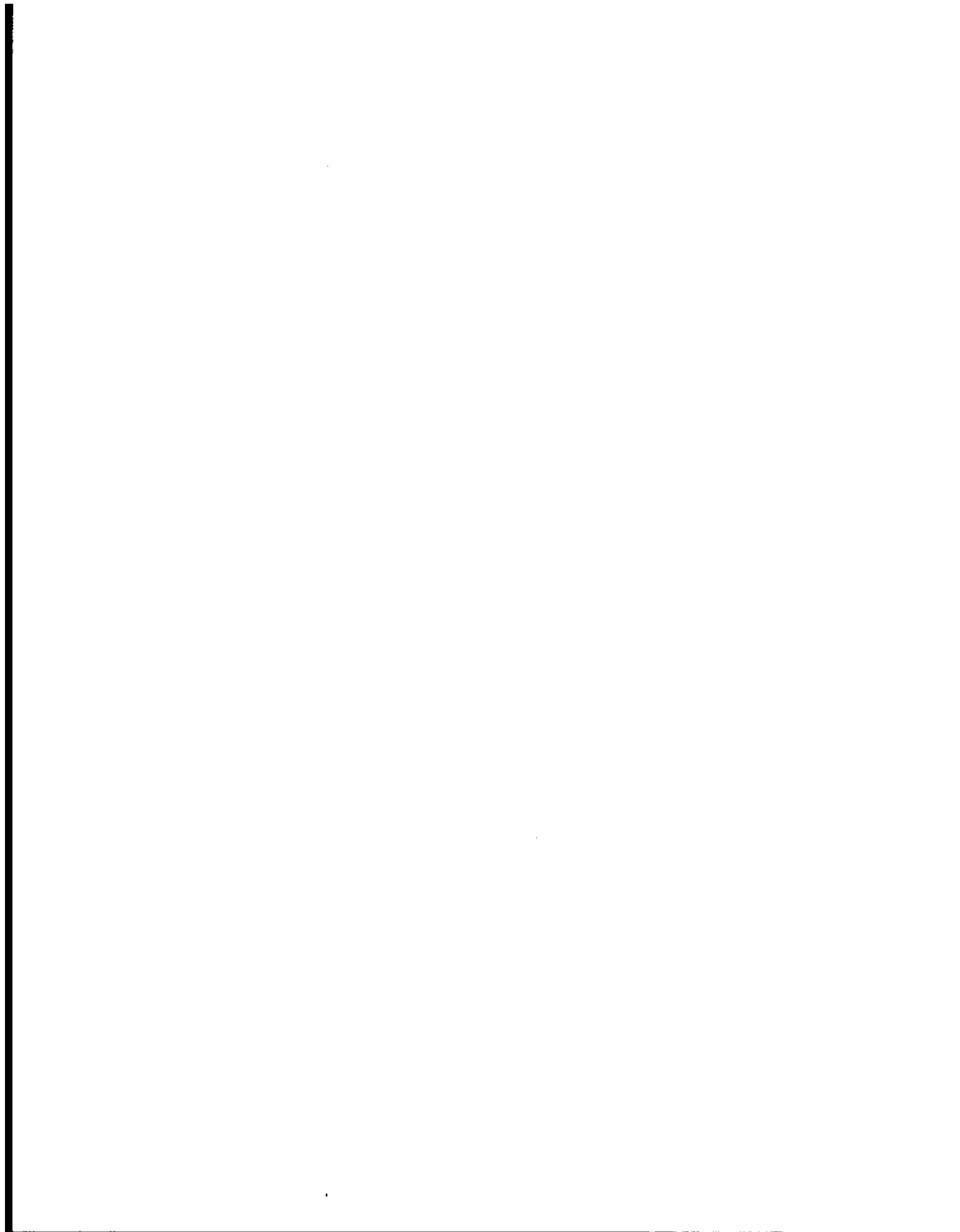
**OPERATORS, FABRICATORS, AND LABORERS**

**Machine Operators, Assemblers, and Inspectors**

**Machine Operators and Tenders, Except Precision**

**Metalworking and Plastic Working Machine Operators**

- 703 Lathe and turning machine set-up operators (7312)
- 704 Lathe and turning machine operators (7512)
- 705 Milling and planing machine operators (7313, 7513)
- 706 Punching and stamping press machine operators (7314, 7317, 7514, 7517)
- 707 Rolling machine operators (7316, 7516)
- 708 Drilling and boring machine operators (7318, 7518)
- 709 Grinding, abrading, buffing, and polishing machine operators (7322, 7324, 7522)
- 713 Forging machine operators (7319, 7519)



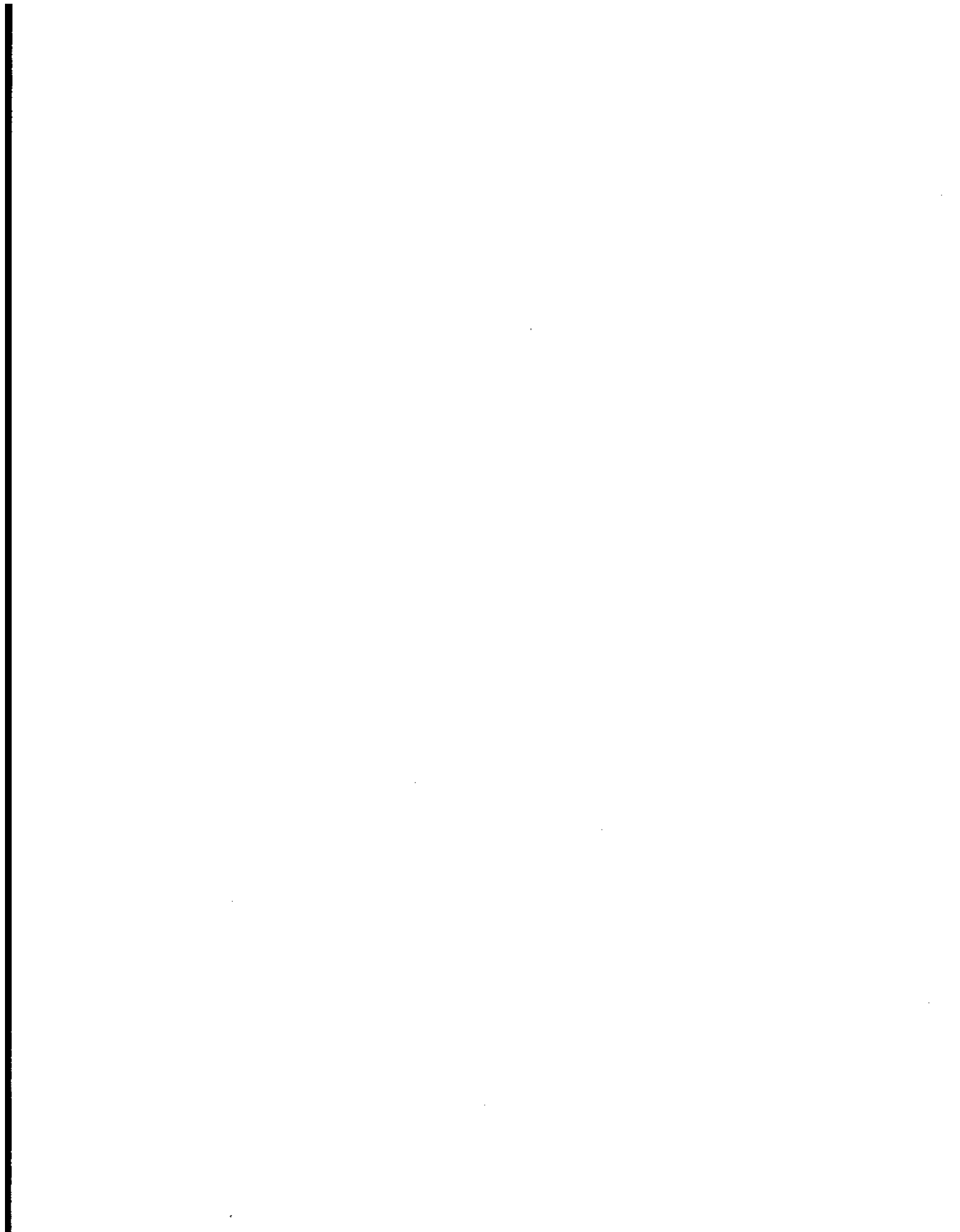
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Occupation category

**OPERATORS, FABRICATORS, AND LABORERS—Con.**

**Machine Operators, Assemblers, and Inspectors—Con.**

714	Numerical control machine operators (7326)
715	Miscellaneous metal, plastic, stone, and glass working machine operators (7329, 7529)
717	Fabricating machine operators, n.e.c. (7339, 7539)
<b>Metal and Plastic Processing Machine Operators</b>	
719	Molding and casting machine operators (7315, 7342, 7515, 7542)
723	Metal plating machine operators (7343, 7543)
724	Heat treating equipment operators (7344, 7544)
725	Miscellaneous metal and plastic processing machine operators (7349, 7549)
<b>Woodworking Machine Operators</b>	
726	Wood lathe, routing, and planing machine operators (7431, 7432, 7631, 7632)
727	Sawing machine operators (7433, 7633)
728	Shaping and joining machine operators (7435, 7635)
729	Nailing and tacking machine operators (7636)
733	Miscellaneous woodworking machine operators (7434, 7439, 7634, 7639)
<b>Printing Machine Operators</b>	
734	Printing press operators (7443, 7643)
735	Photoengravers and lithographers (6842, 7444, 7644)
736	Typesetters and compositors (6841, 7642)
737	Miscellaneous printing machine operators (6849, 7449, 7649)
<b>Textile, Apparel, and Furnishings Machine Operators</b>	
738	Winding and twisting machine operators (7451, 7651)
739	Knitting, looping, taping, and weaving machine operators (7452, 7652)
743	Textile cutting machine operators (7654)
744	Textile sewing machine operators (7655)
745	Shoe machine operators (7656)
747	Pressing machine operators (7657)
748	Laundering and dry cleaning machine operators (6855, 7658)
749	Miscellaneous textile machine operators (7459, 7659)
<b>Machine Operators, Assorted Materials</b>	
753	Cementing and gluing machine operators (7661)
754	Packaging and filling machine operators (7462, 7662)
755	Extruding and forming machine operators (7463, 7663)
756	Mixing and blending machine operators (7664)
757	Separating, filtering, and clarifying machine operators (7476, 7666, 7676)
758	Compressing and compacting machine operators (7467, 7667)
759	Painting and paint spraying machine operators (7669)
763	Roasting and baking machine operators, food (7472, 7672)
764	Washing, cleaning, and pickling machine operators (7673)
765	Folding machine operators (7474, 7674)
766	Furnace, kiln, and oven operators, exc. food (7675)
768	Crushing and grinding machine operators (pt 7477, pt 7677)
769	Slicing and cutting machine operators (7478, 7678)
773	Motion picture projectionists (pt 7479)
774	Photographic process machine operators (6863, 6868, 7671)
777	Miscellaneous machine operators, n.e.c. (pt 7479, 7665, 7679)
779	Machine operators, not specified



**OPERATORS, FABRICATORS, AND LABORERS—Con.**

**Machine Operators, Assemblers, and Inspectors—Con.**

**Fabricators, Assemblers, and Hand Working Occupations**

783	Welders and cutters (7332, 7532, 7714)
784	Solderers and brazers (7333, 7533, 7717)
785	Assemblers (772, 774)
786	Hand cutting and trimming occupations (7753)
787	Hand molding, casting, and forming occupations (7754, 7755)
789	Hand painting, coating, and decorating occupations (7756)
793	Hand engraving and printing occupations (7757)
795	Miscellaneous hand working occupations (7758, 7759)

**Production Inspectors, Testers, Samplers, and Weighers**

796	Production inspectors, checkers, and examiners (782, 787)
797	Production testers (783)
798	Production samplers and weighers (784)
799	Graders and sorters, exc. agricultural (785)

**Transportation and Material Moving Occupations**

**Motor Vehicle Operators**

803	Supervisors, motor vehicle operators (8111)
804	Truck drivers (8212-8214)
806	Driver-sales workers (8218)
808	Bus drivers (8215)
809	Taxicab drivers and chauffeurs (8216)
813	Parking lot attendants (874)
814	Motor transportation occupations, n.e.c. (8219)

**Transportation Occupations, Except Motor Vehicles**

**Rail Transportation Occupations**

823	Railroad conductors and yardmasters (8113)
824	Locomotive operating occupations (8232)
825	Railroad brake, signal, and switch operators (8233)
826	Rail vehicle operators, n.e.c. (8239)

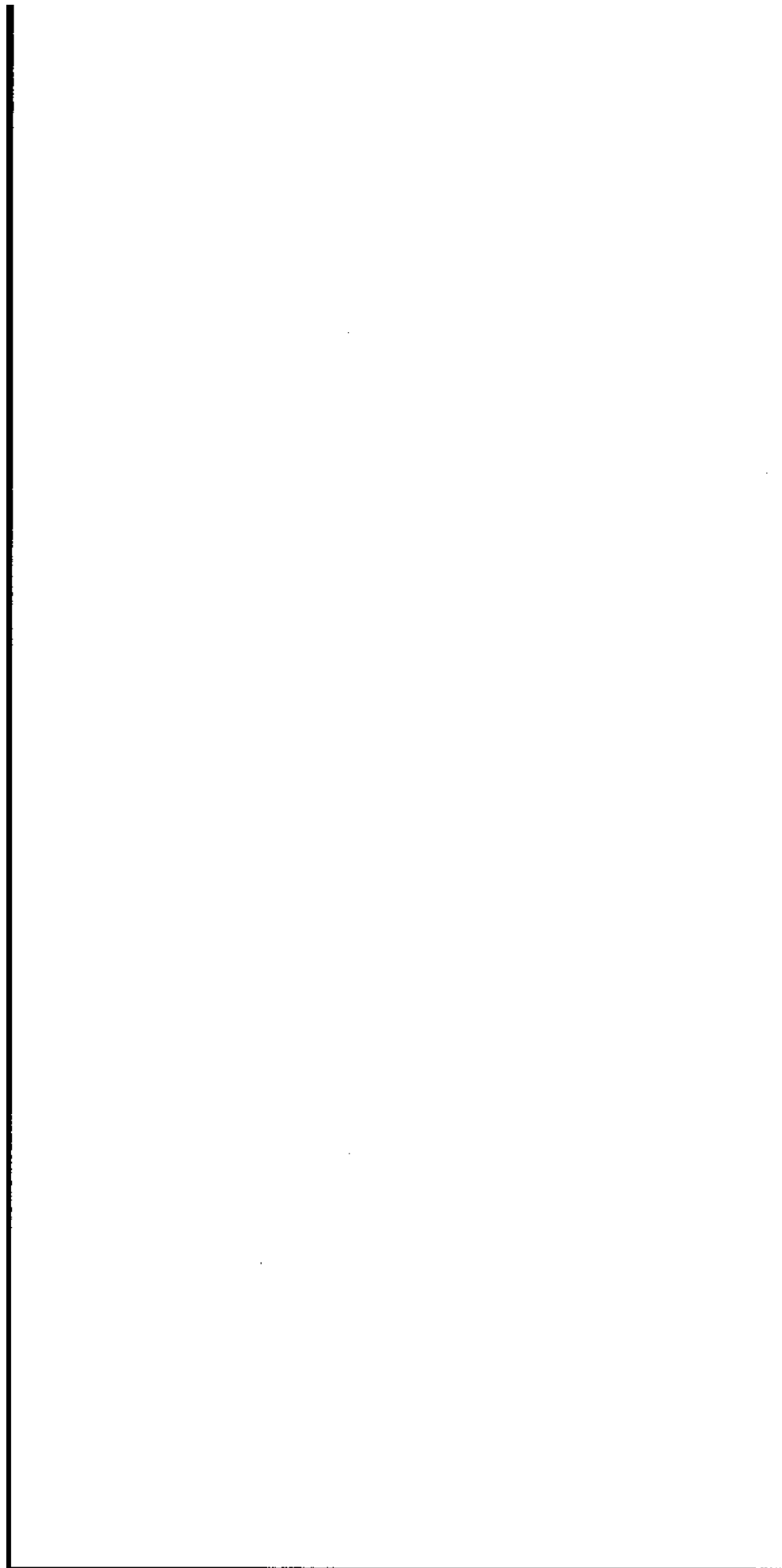
**Water Transportation Occupations**

828	Ship captains and mates, except fishing boats (pt 8241, 8242)
829	Sailors and deckhands (8243)
833	Marine engineers (8244)
834	Bridge, lock, and lighthouse tenders (8245)

**Material Moving Equipment Operators**

843	Supervisors, material moving equipment operators (812)
844	Operating engineers (8312)
845	Longshore equipment operators (8313)
848	Hoist and winch operators (8314)
849	Crane and tower operators (8315)
853	Excavating and loading machine operators (8316)
855	Grader, dozer, and scraper operators (8317)
856	Industrial truck and tractor equipment operators (8318)
859	Miscellaneous material moving equipment operators (8319)





1990  
Census  
code

Occupation category

**OPERATORS, FABRICATORS, AND LABORERS—Con.**

**Handlers, Equipment Cleaners, Helpers, and Laborers**

864 Supervisors, handlers, equipment cleaners, and laborers, n.e.c. (85)  
865 Helpers, mechanics and repairers (863)

**Helpers, Construction and Extractive Occupations**

866 Helpers, construction trades (8641-8645, 8648)  
867 Helpers, surveyor (8646)  
868 Helpers, extractive occupations (865)  
869 Construction laborers (871)  
874 Production helpers (861, 862)

**Freight, Stock, and Material Handlers**

875 Garbage collectors (8722)  
876 Stevedores (8723)  
877 Stock handlers and baggers (8724)  
878 Machine feeders and offbearers (8725)  
883 Freight, stock, and material handlers, n.e.c. (8726)  
885 Garage and service station related occupations (873)  
887 Vehicle washers and equipment cleaners (875)  
888 Hand packers and packagers (8761)  
889 Laborers, except construction (8769)

**MILITARY OCCUPATIONS**

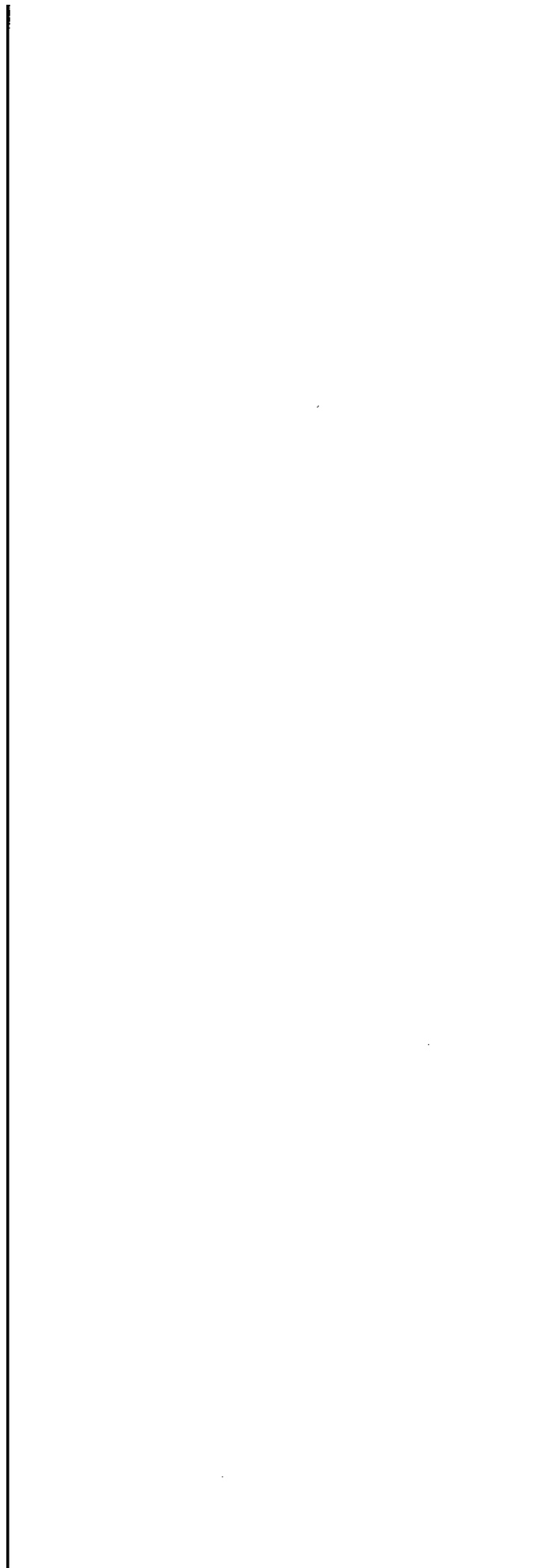
903 Commissioned Officers and Warrant Officers  
904 Non-commissioned Officers and Other Enlisted Personnel  
905 Military occupation, rank not specified

**EXPERIENCED UNEMPLOYED NOT CLASSIFIED BY OCCUPATION**

909 Last worked 1984 or earlier







# APPENDIX I.

## 1980-1990 Occupation Comparability List

### OCCUPATION — SPLIT CATEGORIES

1980 Code and Category	1990 Code and Category
019 Managers and administrators, n.e.c.	017 Managers, food serving and lodging establishments
	021 Managers, service organizations, n.e.c.
	022 Managers and administrators, n.e.c.
468 Child care workers, except private household	466 Family child care providers
	467 Early childhood teacher's assistants
	468 Child care workers, n.e.c.

### OCCUPATION — MERGED CATEGORIES

349 Telegraphers	353 Communications equipment operators, n.e.c.
353 Communications equipment operators, n.e.c.	
368 Weighers, measurers, and checkers	368 Weighers, measurers, checkers and samplers
369 Samplers	
436 Cooks, except short order	436 Cooks
437 Short-order cooks	
673 Apparel and fabric patternmakers	674 Miscellaneous precision apparel and fabric workers
674 Miscellaneous precision apparel fabric workers	
794 Hand grinding and polishing occupations	795 Miscellaneous hand working occupations
795 Miscellaneous hand working occupations	
804 Truck drivers, heavy	804 Truck drivers
805 Truck drivers, light	

### OCCUPATION — TITLE CHANGED, SAME CODE

098 Inhalation therapists	098 Respiratory therapists
558 Supervisors, n.e.c.	558 Supervisors, construction, n.e.c.
734 Printing machine operators	734 Printing press operators

### OCCUPATION — CODES CHANGED, TITLE SAME

017 Postmasters and mail superintendents	016 Postmasters and mail superintendents
016 Managers, properties and real estate	018 Managers, properties and real estate
018 Funeral directors	019 Funeral directors
463 Guides	461 Guides
464 Ushers	462 Ushers
465 Public transportation attendants	463 Public transportation attendants



**OCCUPATION – CODES CHANGED, TITLE SAME—Con.**

<b>1980 Code and Category</b>		<b>1990 Code and Category</b>	
466	Baggage porters and bellhops	464	Baggage porters and bellhops
467	Welfare service aides	465	Welfare service aides
633	Supervisors, production occupations	628	Supervisors, production occupations
863	Supervisors, handlers, equipment cleaners, and laborers, n.e.c.	864	Supervisors, handlers, equipment cleaners, and laborers, n.e.c.
864	Helpers, mechanics and repairers	865	Helpers, mechanics, and repairers
865	Helpers, construction trades	866	Helpers, construction trades
866	Helpers, surveyor	867	Helpers, surveyor
867	Helpers, extractive occupations	868	Helpers, extractive occupations
873	Production helpers	874	Production helpers





## APPENDIX J. Geographic Codes

### FIPS State and County Codes and Metropolitan Area Codes

FIPS Codes		Municipio	CMSA	MSA/ PMSA	MSA/CMSA Title
State	County				
72	003	Aguada Municipio		0060	Aguadilla, PR
	005	Aguadilla Municipio		0060	Aguadilla, PR
	007	Aguas Buenas Municipio	87	1310	San Juan-Caguas, PR
	011	Anasco Municipio		4840	Mayaguez, PR
	013	Arecibo Municipio		0470	Arecibo, PR
	017	Barceloneta Municipio	87	7440	San Juan-Caguas, PR
	021	Bayamon, Municipio	87	7440	San Juan-Caguas, PR
	023	Cabo Rojo Municipio		4840	Mayaguez, PR
	025	Caguas Municipio	87	1310	San Juan-Caguas, PR
	027	Camuy Municipio		0470	Arecibo, PR
	029	Canovanas Municipio	87	7440	San Juan-Caguas, PR
	031	Carolina Municipio	87	7440	San Juan-Caguas, PR
	033	Catano Municipio	87	7440	San Juan-Caguas, PR
	035	Cayey Municipio	87	1310	San Juan-Caguas, PR
	041	Cidra Municipio	87	1310	San Juan-Caguas, PR
	047	Corozal Municipio	87	7440	San Juan-Caguas, PR
	051	Dorado Municipio	87	7440	San Juan-Caguas, PR
	053	Fajardo Municipio	87	7440	San Juan-Caguas, PR
	054	Florida Municipio	87	7440	San Juan-Caguas, PR
	061	Guaynabo Municipio	87	7440	San Juan-Caguas, PR
	063	Gurabo Municipio	87	1310	San Juan-Caguas, PR
	065	Hatillo Municipio		0470	Arecibo, PR
	067	Hormigueros Municipio		4840	Mayaguez, PR
	069	Humacao Municipio	87	7440	San Juan-Caguas, PR
	071	Isabela Municipio		0060	Aguadilla, PR
	075	Juana Diaz Municipio		6360	Ponce, PR
	077	Juncos Municipio	87	7440	San Juan-Caguas, PR
	085	Las Piedras Municipio	87	7440	San Juan-Caguas, PR
	087	Loiza Municipio	87	7440	San Juan-Caguas, PR
	089	Luguillo Municipio	87	7440	San Juan-Caguas, PR
	091	Manati Municipio	87	7440	San Juan-Caguas, PR
	097	Mayaguez Municipio		4840	Mayaguez, PR
	099	Moca Municipio		0060	Aguadilla, PR
	105	Naranjito Municipio	87	7440	San Juan-Caguas, PR
	113	Ponce Municipio		6360	Ponce, PR
	115	Quebradillas Municipio		0470	Arecibo, PR
	119	Rio Grande Municipio	87	7440	San Juan-Caguas, PR
	125	San German Municipio		4840	Mayaguez, PR
	127	San Juan Municipio	87	7440	San Juan-Caguas, PR
	129	San Lorenzo Municipio	87	1310	San Juan-Caguas, PR
	135	Toa Alta Municipio	87	7440	San Juan-Caguas, PR
	137	Toa Baja Municipio	87	7440	San Juan-Caguas, PR
	139	Trujillo Alto Municipio	87	7440	San Juan-Caguas, PR



FIPS Codes				MSA/ PMSA	MSA/CMSA Title
State	County	Municipio	CMSA		
	143	Vega Alta Municipio	87	7440	San Juan-Caguas, PR
	145	Vega Baja Municipio	87	7440	San Jaun-Caguas, PR

