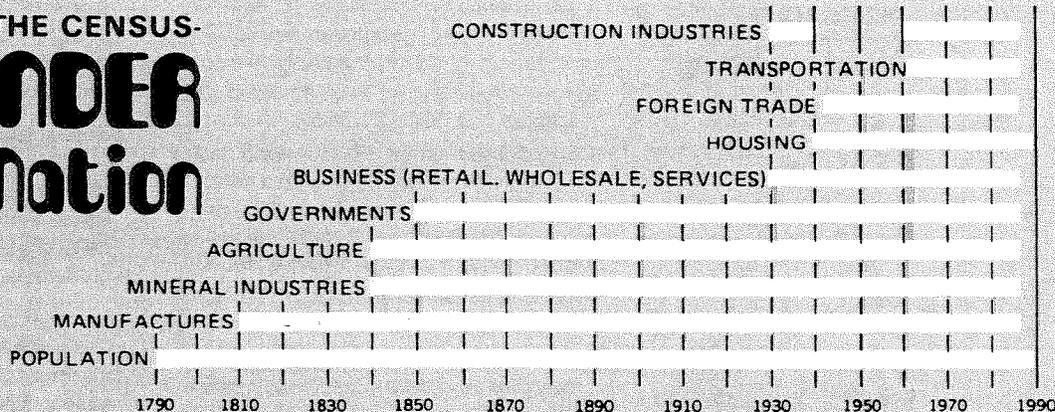


U.S. BUREAU OF THE CENSUS- FACTFINDER for the Nation



CFF No. 8 (Rev.)

Issued March 1991

CENSUS GEOGRAPHY—CONCEPTS AND PRODUCTS

INTRODUCTION

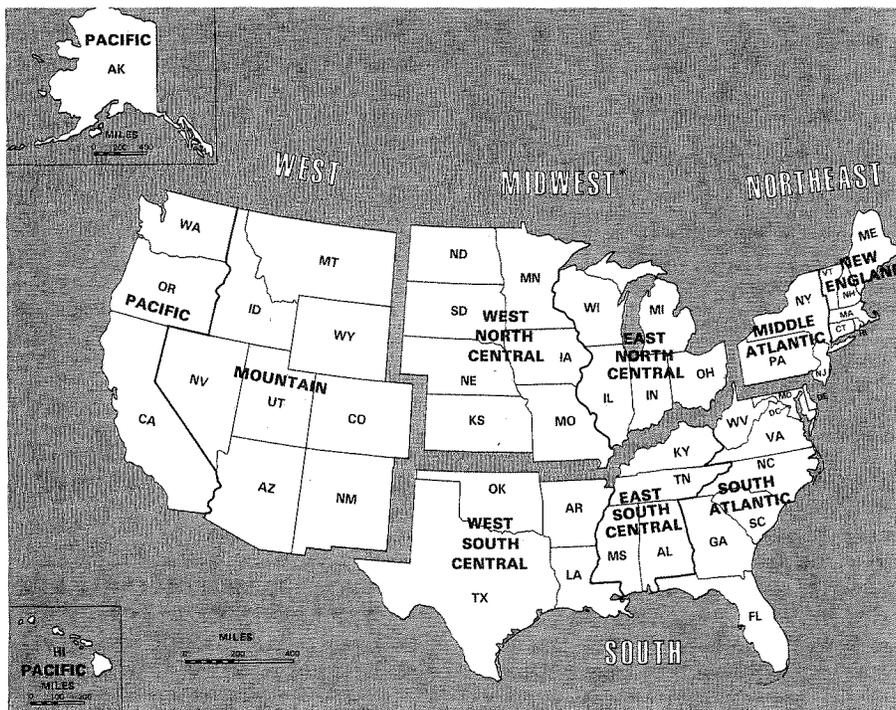
The Census Bureau produces published and unpublished statistics from its censuses and surveys for States, counties, cities, etc., and from the decennial census, for smaller areas down to the size of a city block. Some of these geographic entities are governmental (i.e., legally defined) units, while others are established specifically for statistical purposes. Preparing for and taking a census also requires a variety of geographic tools and products that are helpful to the data user as well as to the Bureau in activities such as computerized location-coding, mapping, and graphic display.

These tools allow users to interrelate local and census statistics for a variety of planning and administrative purposes.

This *Factfinder* outlines and illustrates some of the Bureau's geographic concepts and lists important statistical and reference products and related geographic tools available to the data user. The legend on page 5 tells where to obtain them and explains the media symbols.

Most of the definitions and references are those used for the 1990 Census of Population and Housing. The Bureau's demographic surveys; the 1987 Economic, Agriculture, and Governments Censuses and their related surveys; and other statistical programs share much of the geography above the level of census tracts. Figure 4 on page 3 summarizes the geographic areas from which

FIGURE 1. CENSUS REGIONS AND DIVISIONS



data are available from the latest decennial census as well as from other censuses and selected surveys. For censuses earlier than 1987, the reader should see *Factfinder* CFF 8 (1985 edition). All governmental boundaries are those reported in effect as of January 1 of the particular census year.

REPORTING AREAS

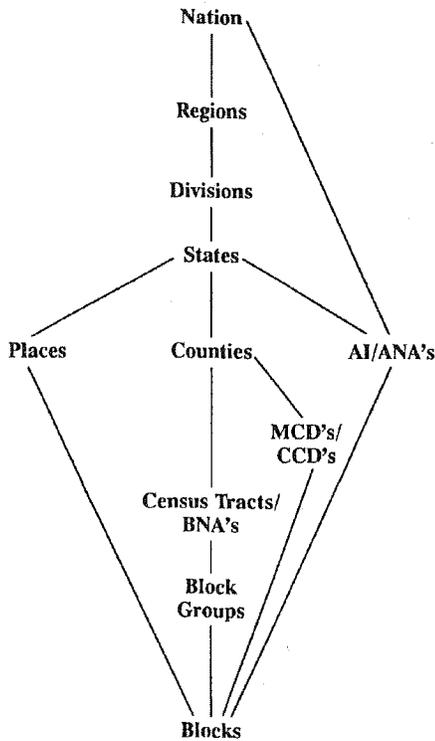
A number of relationships, illustrated in figures 2 and 3, exist among the basic geographic areas for which the Census Bureau reports data. Statistical areas are italicized in the text; all others are governmental. In the categories below, the first parenthetical number following the



U.S. Department of Commerce
BUREAU OF THE CENSUS

For sale by Customer Services (DUSD), Bureau of the Census, Washington, DC 20233. Postage stamps not acceptable; currency submitted at sender's risk. Remittances from foreign countries must be by international money order or by draft on a U.S. bank. Price, 40 cents per copy. A discount of 25 percent is available on orders of 100 copies or more sent to a single address.

FIGURE 2. BASIC 1990 CENSUS GEOGRAPHIC HIERARCHY



Note that places (incorporated and census designated) and American Indian/Alaska Native areas (AI/ANA's) are not shown within the county and county-subdivision hierarchy because they may cross those areas' boundaries. A few decennial census tables and most electronic data files do show places within MCD or CCD, in which case the data pertain only to that part of a place that is within each MCD/CCD. Similarly, American Indian areas may be shown in partial records below the State record, and census tracts/BNA's below the MCD/CCD record. Block groups (BG's) are the lowest-level entities for which the Census Bureau tabulates sample data; these data also are provided for the portion of each BG formed by other boundaries.

area name is the number of these areas in the United States only. The second number, if present, represents all areas for which the agency provides data.

United States. The 50 States and the District of Columbia. (The Bureau also collects data for Puerto Rico and several "outlying areas"—American Samoa, Guam, the Northern Mariana Islands, Palau, and the Virgin Islands of the United States.)

Regions/divisions. The Census Bureau groups the 50 States and the District of Columbia into four regions, each composed of two or more divisions, of which there are nine. (See fig. 1.)

Governmental units. These comprise the following:

States (50) and statistically equivalent areas (7): the District of Columbia, Puerto Rico, and the outlying areas (see **United States** above).

Counties and statistically equivalent areas (3,141; 3,248). (In the text below, the word "counties" also refers to their statistically equivalent areas.)

Minor civil divisions (MCD's) of counties, such as townships (29,450; 30,440); the Bureau also recognizes sub-MCD's (145 subbarrios) in Puerto Rico.

Incorporated places, such as cities and villages (19,300; 19,365).

Consolidated cities (6) combine their governmental functions with a county or MCD, but continue to contain governmentally active incorporated places within and as part of those cities.

American Indian reservations (310, both Federal and State).

American Indian trust lands (50) include individual as well as tribal off-reservation trust lands.

(The last two entities above, together with the four that follow, are known collectively as "American Indian and Alaska Native areas" [AI/ANA's].)

Statistical areas. These consist of the following:

Alaska Native village statistical areas (217)

Alaska Native regional corporations (12)

Tribal jurisdiction statistical areas (17), delineated by federally recognized American Indian tribes for 1990 census data-tabulation purposes, replace the "Historic Areas of Oklahoma (excluding urbanized areas)" reported in the 1980 census.

Tribal designated statistical areas (19) were delineated by federally and State-recognized American Indian tribes outside Oklahoma that do not have legally defined reservations.

County subdivisions (5,904). In 21 States where MCD's are not adequate for reporting subcounty decennial census statistics, Bureau and local officials

delineated 5,581 *census county divisions (CCD's)* for this purpose. This category also includes 40 *census subareas* in Alaska and 283 *unorganized territories* in 9 other States.

Census designated places (CDP's). These (4,150; 4,440) are closely settled population centers without legally established limits. State and local officials delineate CDP's following Census Bureau guidelines.

Special economic urban areas (SEUA's) (433) are MCD's treated as the equivalents of places in the economic censuses. Specifically, they are MCD's with 10,000 or more inhabitants outside incorporated places in New England and several other States.

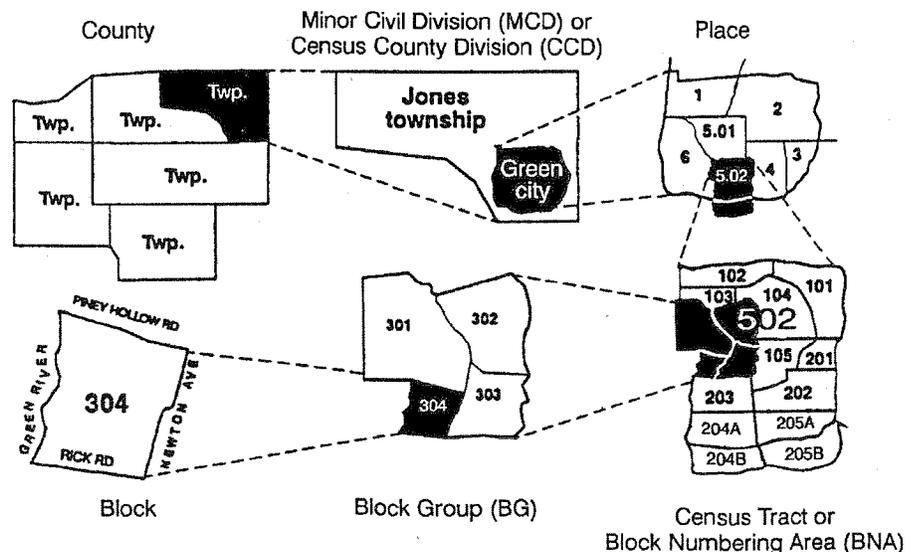
Census tracts/block numbering areas (BNA's) are statistical subdivisions of counties. Census tracts (49,960; 50,660) average 4,000 inhabitants. Following Census Bureau guidelines, local committees delineate them for metropolitan areas and approximately 200 other counties. State officials and the Bureau delineate BNA's (11,300; 11,550) for the purpose of grouping and numbering blocks in counties for which census tracts have not been established.

Block groups (BG's) are subdivisions of census tracts and BNA's. BG's comprise all blocks with the same first digit in each census tract/BNA. Data relate to entire BG's (226,000; 229,000) and the portion of each BG (350,000; 356,000 tabulated parts) within a higher-level area.

Blocks are bounded primarily by streets, other visible features, and the boundaries of governmental units. Blocks

Text continues on page 5.

FIGURE 3. GEOGRAPHIC RELATIONSHIPS



SYMBOLS USED ON 1990 CENSUS MAPS

LEGEND

SYMBOL DESCRIPTION	SYMBOL	NAME STYLE	FIPS CODE	CENSUS CODE
International	*****	CANADA		
American Indian Reservation	XXXXXXXXXX	CAMPO RESVN	10522	(0450)
Trust Land	XXXXXXXXXX		10522	(0450T)
Alaska Native Regional Corporation	◇◇◇◇◇◇◇◇	ALEUT ANRC		(14)
Alaska Native Village Statistical Area, Tribal Jurisdiction Statistical Area, or Tribal Designated Statistical Area	◇◇◇◇◇◇◇◇	KAW TJSA	38870	(5340)
State ¹	#####	NEW YORK	(36)	
County ¹	#####	ERIE COUNTY	(029)	
Minor Civil Division ²	#####	YORK TWP	83908	(070)
Census County Division	#####	KULA DIV	91890	(030)
Incorporated Place	#####	Rome City	63418	(3120)
Census Designated Place	#####	Zena	84187	(4100)
Voting District ³	▲▼▲▼▲▼▲▼▲	C004		
Corporate Corridor	○○○○○○○○○	1660		
Census Tract or Block Numbering Area	██████████	5702.01		
Block Number (With Asterisk) ⁴	326*			
Fishhook ⁵	←			
Crew-of-Vessel	↑ Tract ↓ Block	↑ 2130.99 ↓ 9012		

Note: An international boundary also depicts a state boundary and a county boundary; a state boundary also depicts a county boundary. The symbols for all other coincident boundaries are shown alternately. The voting district symbol alternates with all other coincident boundaries as shown in the example:
 e.g.: ▼▲▲▲▲▼▲▲▲▼

FEATURE	SYMBOL	NAME STYLE
Interstate Highway and Limited Access Road ⁶	—————	Interstate 635
Other Highway ⁶	—————	Rte 101
City Street, Other Connecting Road, or Dirt Road ⁶	—————	Marsh Ln
Jeep Trail, Walkway, or Stairway	- - - - -	Labella Walk
Railroad	—+—+—+—+—	
Ferry Crossing	- FERRY -	
Pipeline or Power Transmission Line	- x - - - x -	
Ridge, Fence, Canyon, or Other Physical Feature	- . - - - . -	RISE
Nonvisible Boundary or Other Feature Not Elsewhere Classified	PROPERTY LINE
Perennial Stream, or Shoreline of Perennial Water Body	~~~~~	Tumbling Creek
Intermittent Stream, or Shoreline of Intermittent Water Body	~~~~~	Piney Creek
Large River, Lake, or Other Water Body	██████████	Pleasant Lake
Military Installation	N/A	Fort Belvoir
Park (National, State, or Local)	██████████	Yosemite
Mountain Peak	▲	Pikes Peak
Inset Area	A	

¹ State or County; or their equivalent area for statistical purposes.

² A five-spoked asterisk following a minor civil division indicates that the minor civil division is coextensive with an incorporated place and has the same name.

³ If an asterisk follows a voting district code, then the state participant identified this as a true voting district, and the boundary shown on the map represents the actual boundary of the voting district. If an asterisk does not follow the voting district code, then the state participant moved the voting district boundary to coincide with a nearby census block boundary (a 1990 census program requirement for tabulation purposes only). If there are no asterisks shown within an entire county, the state participant chose not to distinguish between the two types of voting districts for that county.

⁴ An asterisk following a block number indicates that the block number is repeated elsewhere in the block or is shown partially on an adjacent map sheet.

⁵ A fishhook across a map feature or boundary indicates that the areas on both sides of the feature or boundary belong to the same census block.

⁶ A % symbol indicates that there was insufficient space to plot a road name. Road names in parentheses indicate that the road has more than one name.

(6.96 million; 7.0 million) are identified (numbered) in all 50 States, the District of Columbia, Puerto Rico, and the outlying areas.

Metropolitan areas (MA's) (established by the Office of Management and Budget, following published standards): A **metropolitan statistical area (MSA)** comprises one or more counties containing either a place with at least 50,000 inhabitants, or an urbanized area and an MA total population of at least 100,000 (75,000 in New England). Contiguous counties are included if they have close social and economic links with the area's population nucleus. (MA's in New England comprise cities and towns, rather than counties.) There currently are 267 MSA's, including 4 in Puerto Rico.

A **consolidated metropolitan statistical area (CMSA)** (21, including 1 in Puerto Rico) is an MSA with a population of 1 million or more that has been divided into smaller **primary metropolitan statistical areas (PMSA's)** (73, including 2 in Puerto Rico) that have close social and economic links with each other and with the CMSA's nucleus.

Urbanized areas (UA's) (415 E; 425 E) are delineated by the Census Bureau, based on published criteria. A UA consists of a central place and the surrounding densely settled territory that together have a population of 50,000 or more.

Metropolitan/Nonmetropolitan. "Metropolitan" includes all territory, population, and housing within MA's; the remainder is termed "nonmetropolitan."

Urban/Rural. "Urban" consists of all territory, population, and housing in UA's and in places (both incorporated and census designated) of 2,500 or

LEGEND

The following symbols are used in this brochure:

- ☐ Printed reports on paper
- ▨ Microfiche
- Ⓜ Computer tapes
- Ⓢ CD-ROM (compact disc, read-only memory)
- Ⓛ Flexible diskettes
- Ⓜ Maps
- Ⓜ CENDATA™ (on-line service available from DIALOG, telephone 800/334-2564, and CompuServe, telephone 800/848-8199)

* GPO—most current reports can be purchased from:
 Superintendent of Documents
 U.S. Government Printing Office
 Washington, DC 20402
 Telephone 202/783-3238,
 FAX 202/275-0019

+ Census Bureau—maps, computer tapes, microfiche, CD-ROM, diskettes, selected reports, and information about all products:
 Customer Services
 Bureau of the Census
 Washington, DC 20233
 Telephone 301/763-4100,
 FAX 301/763-4794

Geographers and information specialists in the Bureau's regional offices can be reached at the following telephone numbers:

Atlanta	404/347-2274
Boston	617/421-1440
Charlotte	704/521-4400
Chicago	312/353-0980
Dallas	214/767-7105
Denver	303/969-7750
Detroit	313/354-1990
Kansas City	816/891-7562
Los Angeles	818/892-6684
New York	212/264-4730
Philadelphia	215/597-8313
Seattle	206/728-5314

more inhabitants outside UA's; the remainder is termed "rural." The urban and rural classification cuts across the basic hierarchy; there can be both urban and rural within both metropolitan and nonmetropolitan areas and their various geographic subdivisions.

A few incorporated places contain extensive areas of low population density and are referred to as "extended cities"; the extended portion of each is considered to be rural.

There are other geographic units for which the 1990 census tabulates data. Some appear in regular publications and/or data files. These units include **congressional districts** (435) and, in many States, **voting districts** (147,000, 149,000; sometimes referred to as **election precincts** or **wards**). Data for other units—**school districts** (16,000E), **ZIP Codes** (40,000E), and **traffic analysis zones** (200,000E)—are available on electronic products only or by special order. The 1990 census includes a "User-Defined Areas Program," in which users may order tabulations based on their own configurations (neighborhoods, service areas, etc.) of the standard 1990 census geographic entities. (Details on request. +)

In addition to the SEUA's mentioned above, the economic and agriculture censuses variously tabulate data for selected governmental areas, ZIP Codes, and such entities as irrigation and drainage districts, water resource regions, and offshore areas (for petroleum). The census of governments and its related surveys also deal with "special districts," and the Bureau's foreign trade statistics program covers customs districts, countries, and world areas.

GEOGRAPHIC SUPPORT FOR THE CENSUS

Virtually all uses of small-area data require maps in order to locate the specific geographic entities for which the Census Bureau presents statistics, and to analyze the spatial and data relationships among them.

For the 1990 census, the Bureau replaced the maps and related products it used for 1980. In cooperation with the U.S. Geological Survey (USGS), it created an automated, seamless geographic data base covering the United States, Puerto Rico, and the outlying areas. This base, called the TIGER (Topologically Integrated Geographic Encoding and Referencing) system, made it possible to automate geographic support activities needed for the 1990 and subsequent censuses and surveys. These included producing the maps for the enumeration itself, assigning residential and employer addresses to their geographic locations for data-tabulation purposes, providing the geographic structure for tabulating the collected data, and producing maps for data analysis and display. From the TIGER system, the Bureau can plot maps for virtually any census geographic area at any scale. Because the data base is partitioned by county for ease of operations, requests

FIGURE 5. COUNTY BLOCK MAP SAMPLE

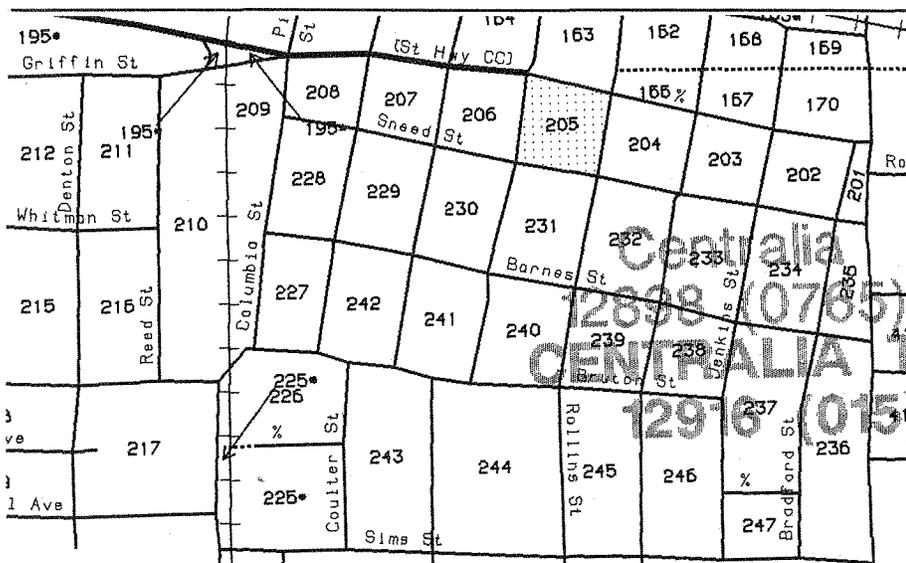
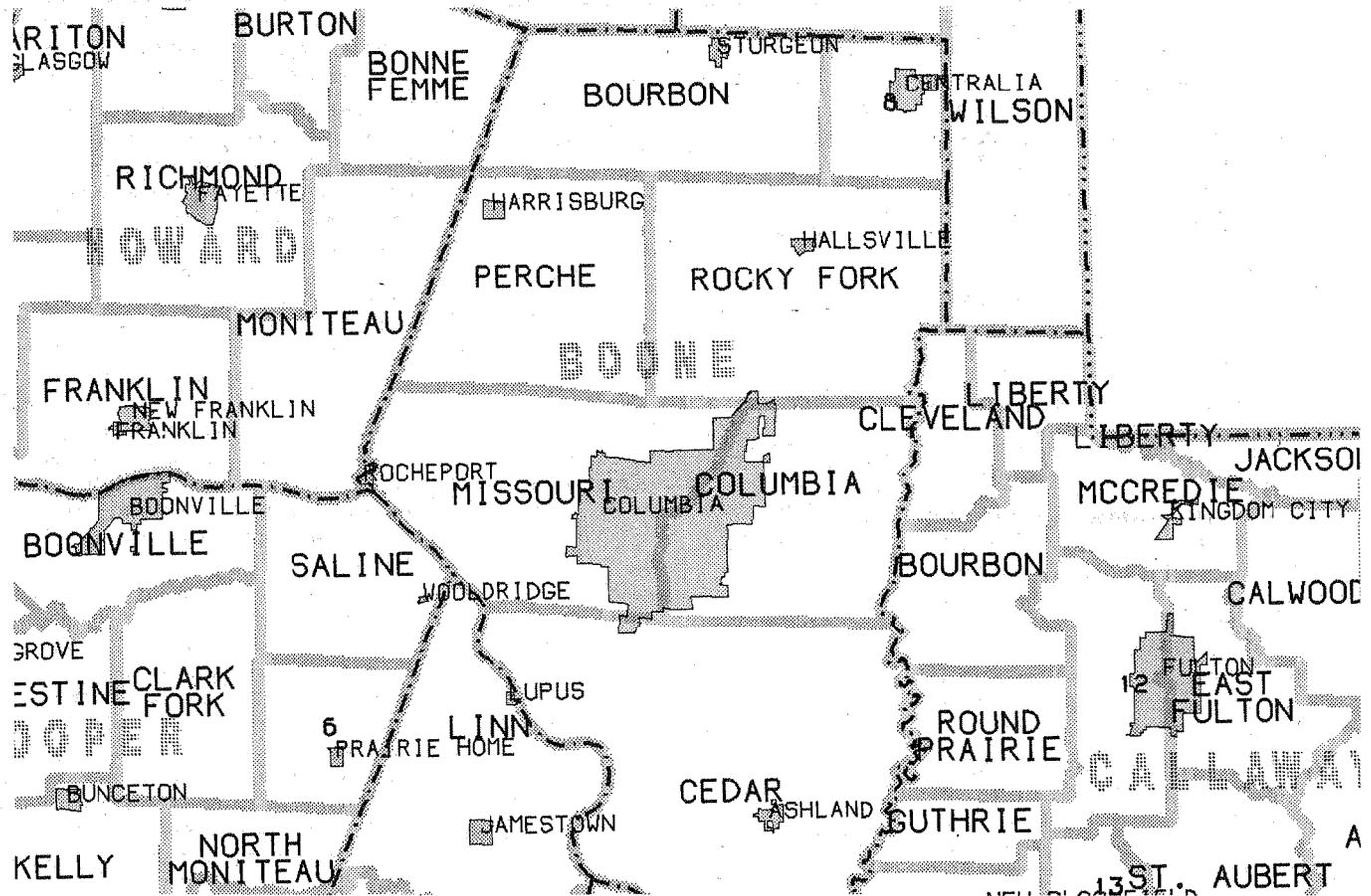


FIGURE 6. COUNTY SUBDIVISION OUTLINE MAP SAMPLE



for some public-use TIGER extract products (described below) must be for specific counties. Users must have (or obtain from commercial sources) the software or computer systems necessary to work with these extracts. (Lists of vendors and processors available on request. +)

- **TIGER/Line™ files** (ⓄⓄ) + are detailed public-use extracts for each county in the United States, Puerto Rico, and the outlying areas. The final set reflects all 1990 census geographic boundaries, codes, latitude and longitude coordinates (to six decimal places), feature names, and, in the urban cores of MA's, address ranges and ZIP Codes.
- **TIGER/Boundary™ files** (ⓄⓄ) + comprise several different versions of files that contain the latitude and longitude coordinate values (to six decimal places) of the boundaries of various geographic entities such as States, counties, county subdivisions, places, AI/ANA's, census tracts/BNA's, and districts of the 103rd Congress. The files' principal use is for computer mapping.
- **TIGER/Census Tract Comparability™ file** (Ⓞ) + compares the 1980 and 1990 census tract codes where their numbers and/or boundaries have changed.
- **TIGER/DataBase™** (Ⓞ) + (1991) contains, in addition to the **TIGER/Line™**

file data, the computer-readable linkages necessary to define the file's topological structure. This file conforms to the Federal Information Processing Standards (FIPS) Spatial Data Transfer Standard requirements.

- **TIGER/Census Tract Street Indexes™** (Ⓞ) (computer printout) (ⓄⓄ) + (1991-92) allow manual assignment of census tract numbers to street addresses in the 345 largest U.S. urban centers, and to road segments between inter-sections by tract or BNA elsewhere.

1990 CENSUS MAPS

- **County Block Maps** (Ⓞ) + Each county appears on one or more mapsheets, depending on the county's area, shape, and the density of its road network. Accordingly, the map scales of adjacent counties may differ. The maps display block numbers, features (roads, railroads, rivers, lakes, etc.), and feature identifiers, as well as the boundaries, names, and codes of county subdivisions, places, AI/ANA's, and census tracts or BNA's for which the Bureau tabulated data. Each county map consists of one or more "parent" sheets at a single scale, plus larger-scale inset sheets for densely settled areas, where required, and an index

map showing the location of each parent and inset mapsheet. A separate version of these maps displays voting districts in those counties where State officials identified them for the Bureau. (See fig. 5.)

- **State Metropolitan Area Outline Maps** appear in most 1990 census reports (Ⓞ) * (Ⓞ) + and are available in a page-size national set (Ⓞ) +. The maps show for each State its counties, MSA's, CMSA's, and PMSA's, and the locations of larger places. The scale varies by State.
- **County Subdivision Outline Maps** show the names and boundaries of all counties and their subdivisions (MCD's/CCD's, sub-MCD's), places, and AI/ANA's for which 1990 census data were tabulated. Most are single maps by State at a scale of about 1:500,000 (Ⓞ) +; partitioned into multiple page-size sheets at various scales with a county locator index, they appear in several 1990 census report series (Ⓞ) * (Ⓞ) +. (See fig. 6 for illustration.)
- **American Indian/Alaska Native Area (AI/ANA) Outline Maps** (Ⓞ) + depict the boundaries of each American Indian reservation (including off-reservation trust lands), tribal jurisdiction statistical area, tribal designated statistical

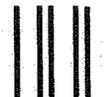
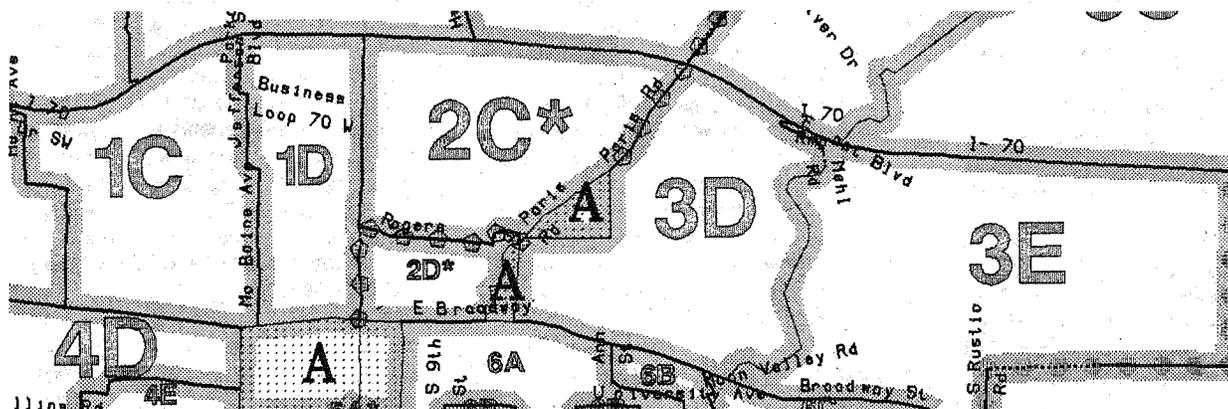


FIGURE 8. VOTING DISTRICT OUTLINE MAP SAMPLE



Economic Censuses to records containing ZIP Codes, post office names, and State abbreviations.

- *Area Measurements of the United States* □ + (1991) reports land area and inland water area, in square miles and square kilometers, for States, counties, county subdivisions, places, and AI/ANA's for which 1990 census data were tabulated. Tables include 1990 census population totals and population per square mile/kilometer of land area.
- *AC87-S-1, Agricultural Atlas of the United States* □ * contains a series of dot- and multicolor-pattern maps illustrating major items from the 1987 Census of Agriculture.
- *1990 Census Summary Tape Files (STF's)* Ⓢ, some Ⓢ ⊕ and Ⓢ (1991-1993) identify the geographic components of each State, the District of Columbia, Puerto Rico, and each outlying area by code (census and FIPS where applicable) and name, with population and housing characteristics for every component, some to the block or block-group level. Records include area measurements and geographic coordinates of "internal points."

OTHER REFERENCE SOURCES

A number of brochures □ (free +) introduce the 1990 census and its geography: *Introduction to 1990 Census Products*, *Census '90 Basics*, *Census*

ABC's—Applications in Business and Community, *TIGER: The Coast-to-Coast Digital Map Data Base*, and *1990 Census of Population and Housing Tabulation and Publication Program* are nontechnical reviews. (A more technical booklet on machine-readable products is planned.) *Strength in Numbers: Your Guide to 1990 Census Redistricting* is comprehensive. Other useful materials are:

- *1990 Census of Population and Housing: Guide*, series CPH-R-1 □ * (1991) details data collection, subject scope, data limitations, census geography, publication contents and media, reference sources, glossary of terms, etc.
- *Monthly Product Announcement* □ + (free) □ lists every new report, computer tape, map, CD-ROM, etc., with price and ordering information.
- *Census and You* □ * (subscription; sample copy free +). This monthly newsletter for data users discusses activities and new products and services as they become available. Occasional articles highlight important features and/or uses of particular geographic entities and their related statistics.
- *Census Catalog & Guide* □ * is an annual publication describing all Census Bureau products, with complete ordering information. Appendixes include addresses and telephone numbers for other information sources such as those described below.

About 1,500 Federal and Census depository libraries across the country have Bureau products in various media. There are State Data Centers in all States, the District of Columbia, Guam, Puerto Rico, and the U.S. Virgin Islands; Business and Industry Data Centers in a number of States; several National Services Information Center networks serving minority nonprofit organizations; and private and public organizations, registered with the Bureau's National Clearinghouse for Census Data Services and located throughout the country, that are able to provide tape copies, software, and related services to their customers. (Lists on request. +)

The Census Bureau's 12 regional offices have geographers and information specialists available to assist users, and Bureau headquarters has customer services staff and subject specialists who can answer questions about census and survey data. (See legend box on p. 5; telephone contact list on request. +)

Conceptual and definitional information about census geography is available from—

Geographic Assistance Staff
Geography Division
Bureau of the Census
Washington, DC 20233
Telephone 301/763-5720,
FAX 301/763-4749