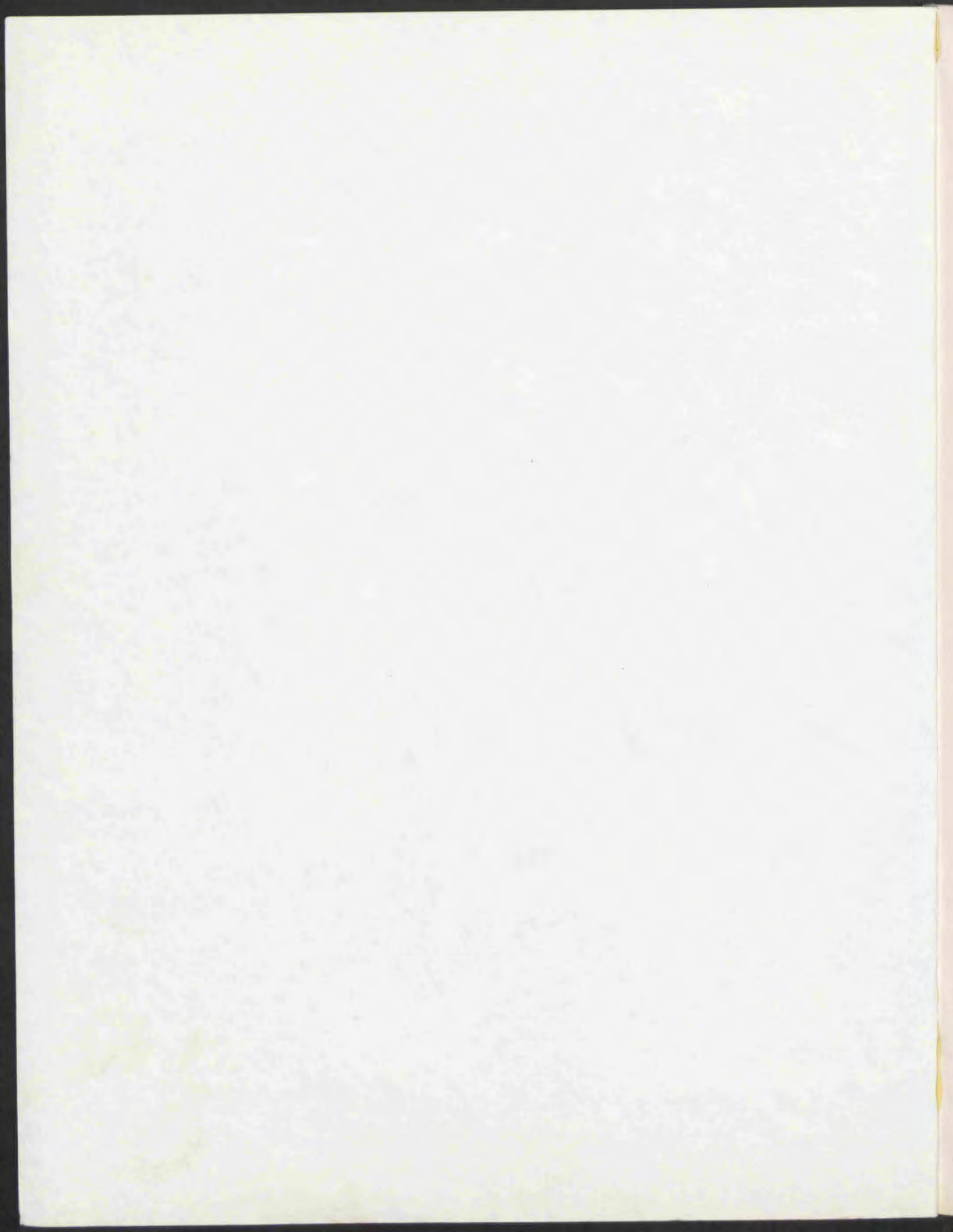


# GEOGRAPHICAL AREAS SERVICED BY BELL AND INDEPENDENT TELEPHONE COMPANIES IN THE UNITED STATES



# OT

U.S. DEPARTMENT OF COMMERCE/Office of Telecommunications



Part of Commerce

Table 1

# GEOGRAPHICAL AREAS SERVICED BY BELL AND INDEPENDENT TELEPHONE COMPANIES IN THE UNITED STATES

B. A. HART

*[Handwritten signature]*  
Chief, Policy Support Division



U.S. DEPARTMENT OF COMMERCE  
Frederick B. Dent, Secretary


OFFICE OF TELECOMMUNICATIONS  
John M. Richardson, Acting Director

FEBRUARY 1973



PREFACE

This paper was prepared by a staff member of the Institute for Telecommunication Sciences for and under the direction of the Policy Support Division of the Office of Telecommunications, U.S. Department of Commerce. It is one of a series of such reports prepared in support of the Office of Telecommunications Policy, Executive Office of the President. This particular study was undertaken because there was no single source of information on geographic coverage of individual telephone companies in the United States and because ready access to such information was required in several on-going studies. Since the information may be useful to the industry and other government agencies, it is being made available through the medium of this report.



*Scott Lothrop*  
Scott Lothrop  
Chief, Policy Support Division

U.S. DEPARTMENT OF COMMERCE  
Frederick B. Dent, Secretary  
OFFICE OF TELECOMMUNICATIONS  
John W. Wickard, Acting Director  
FEBRUARY 1973



# Table of Contents

|   |     |
|---|-----|
| Preface .....                             | ii  |
| List of figures .....                     | iv  |
| Abstract .....                            | vii |
| Text .....                                | 1   |
| Table 1 .....                             | 2   |
| Table 2 .....                             | 3   |
| Table 3 .....                             | 5   |
| Acknowledgements .....                    | 8   |
| References .....                          | 9   |
| Key to telephone company state maps ..... | 16  |
| Table 4 .....                             | 67  |

## List of Figures

| Figure |   | Page |
|--------|---|------|
| 1      | Operating areas served by Bell Telephone companies . . . . .  | 10   |
| 2      | U. S. telephone operating areas served by General Tele-<br>phone System (adapted from map furnished by GT and E<br>Corp.) . . . . . | 11   |
| 3.     | Telephone operating areas (1972) for United Telecommu-<br>nications, Inc. telephone system . . . . .                                | 12   |
| 4      | Continental Telephone Corporation operating areas<br>(courtesy of USITA) . . . . .  | 13   |
| 5      | Central Telephone Exchanges in the U. S. (adapted from<br>map furnished by USITA) . . . . .   | 14   |
| 6      | Telephone operating areas served by Mid-Continent<br>Telephone Corporation (from annual 1971 report) . . . . .                      | 15   |
| 7      | Alabama telephone company operating areas . . . . .   | 17   |
| 8      | Alaska telephone company operating areas . . . . .  | 18   |
| 9      | Arizona telephone company operating areas . . . . .   | 19   |
| 10     | Arkansas telephone company operating areas . . . . .  | 20   |
| 11     | California telephone company operating areas . . . . .  | 21   |
| 12     | Colorado telephone company operating areas . . . . .  | 22   |
| 13     | Connecticut telephone company operating areas . . . . .   | 23   |
| 14     | Delaware telephone company operating areas . . . . .  | 24   |
| 15     | Florida telephone company operating areas . . . . .   | 25   |
| 16     | Georgia telephone company operating areas . . . . .   | 26   |
| 17     | Hawaii telephone company operating areas . . . . .  | 27   |
| 18     | Idaho telephone company operating areas . . . . .   | 28   |
| 19     | Illinois telephone company operating areas . . . . .  | 29   |
| 20     | Indiana telephone company operating areas . . . . .   | 30   |
| 21     | Iowa telephone company operating areas . . . . .  | 31   |
| 22     | Kansas telephone company operating areas . . . . .  | 32   |

| Figure |  | Page |
|--------|--|------|
| 23     | Kentucky telephone company operating areas .....       | 33   |
| 24     | Louisiana telephone company operating areas .....      | 34   |
| 25     | Maine telephone company operating areas .....          | 35   |
| 26     | Maryland telephone company operating areas .....       | 36   |
| 27     | Massachusetts telephone company operating areas .....  | 37   |
| 28     | Michigan telephone company operating areas .....       | 38   |
| 29     | Minnesota telephone company operating areas .....      | 39   |
| 30     | Mississippi telephone company operating areas .....    | 40   |
| 31     | Missouri telephone company operating areas .....       | 41   |
| 32     | Montana telephone company operating areas .....        | 42   |
| 33     | Nebraska telephone company operating areas .....       | 43   |
| 34     | Nevada telephone company operating areas .....         | 44   |
| 35     | New Hampshire telephone company operating areas .....  | 45   |
| 36     | New Jersey telephone company operating areas .....     | 46   |
| 37     | New Mexico telephone company operating areas .....     | 47   |
| 38     | New York telephone company operating areas .....       | 48   |
| 39     | North Carolina telephone company operating areas ..... | 49   |
| 40     | North Dakota telephone company operating areas .....   | 50   |
| 41     | Ohio telephone company operating areas .....           | 51   |
| 42     | Oklahoma telephone company operating areas .....       | 52   |
| 43     | Oregon telephone company operating areas .....         | 53   |
| 44     | Pennsylvania telephone company operating areas .....   | 54   |
| 45     | Rhode Island telephone company operating areas .....   | 55   |
| 46     | South Carolina telephone company operating areas ..... | 56   |
| 47     | South Dakota telephone company operating areas .....   | 57   |
| 48     | Tennessee telephone company operating areas .....      | 58   |
| 49     | Texas telephone company operating areas .....          | 59   |
| 50     | Utah telephone company operating areas .....           | 60   |
| 51     | Vermont telephone company operating areas .....        | 61   |



| Figure | Page |
|--------|------|
| 52     | 62   |
| 53     | 63   |
| 54     | 64   |
| 55     | 65   |
| 56     | 66   |

## ABSTRACT

The geographic coverage of all telephone companies in the U.S. is presented in a series of maps. These consist of (1) U. S. maps of operating areas served by the major companies and (2) individual state maps depicting the operating areas served by Bell and each of the various Independent Companies. State by state listings of over 1500 telephone companies and their headquarters are also given.

The principal subsidiaries of the American Telephone and Telegraph Co. (AT&T) are listed in Table 1. The geographic operating areas are delineated in Figure 1. All the Bell companies are referred to as "Bell" telephone companies.

In January 1, 1971, the total number of telephones in the U. S. was 145,445,400. Table 2 gives the million-dollar state-by-state amount of investment placed in Bell phones. There were 14,000 independent telephone companies in 1971. Although the independent industry owns only 11% of the total phones, it is estimated that they served about 17% of the total U. S. geographic area. Table 3, from the F.A. O. data, lists the top 25 independent telephone companies. U. S. maps showing the general geographic coverage for the largest of these companies are given in Figures 3-6. These maps are copies of individual state maps prepared by the individual companies and are valid only for the year they were drawn.

To facilitate a better understanding of the geographic state coverage by the individual companies within the two major systems, maps were prepared of the telephone company operating areas for each of the 50 states (Fig. 7-50). Included in each map, as a general reference, are the corporate headquarters of the major independent telephone companies. These maps were completed by the U. S. Department of the Interior, Bureau of Economic Geology, and are available for use by the public. (Department of the Interior, 1971).

ABSTRACT

page 7

page 8

The geographic coverage of telephone companies in the U.S. is presented in a series of maps and charts. The maps show the operating areas of the major companies and the various independent companies. The charts show the telephone companies and their headquarters are also given.



## Geographical Areas Serviced by Bell and Independent Telephone Companies in the United States

Telephone companies in the U. S. are divided into two major categories, Bell and Independent. The principal subsidiaries of the American Telephone and Telegraph Co. (more commonly called the Bell System) are listed in table 1 and the general operating areas are designated in figure 1. All non-Bell companies are referred to as "Independent" telephone companies.

On January 1, 1972, the total number of telephones in the U. S. was 125,156,400. Table 2 gives the relationship, state by state, of the number of Independent phones to Bell phones. There were 11,002 Independent exchanges (1805 telephone companies) and 6761 Bell exchanges (24 companies) reported in Telephony's Directory, 1972. Although the Independent industry owns only 17% of the total phones, it is estimated that they cover about 1/2 of the total U. S. geographic area. Table 3 (from USITA, 1972) lists the top 25 Independent telephone companies. U. S. maps showing the general geographic coverage for the five largest of these companies are given in figures 2-6; these maps are copies or adaptations of maps supplied by the individual companies and are valid only for the year they were issued.

To establish a better understanding of the geographic areas covered by the individual companies within the two major systems, maps were prepared of the telephone company operating areas for each of the 50 states (Figs. 7-56). Included in each map, as a location reference, are the interstate highways with their number identifications. Solid lines denote completed highways as of December 31, 1971, and dotted segments show portions which are under construction or in a preliminary status (Department of Transportation, 1972).

Table 1

Principal Subsidiaries and Associated Companies of the  
American Telephone & Telegraph Co. (December 31, 1971)

| Ident. for Fig. 1                                     | Headquarters          | No. of Company Telephones |
|---|-----------------------|---------------------------|
| New England Telephone & Telegraph Co.                 | Boston, Mass.         | 5, 298, 904               |
| New York Telephone Co.                                | New York, N. Y.       | 11, 331, 424              |
| The Southern New England Telephone Co.                | New Haven, Conn.      | 2, 067, 435               |
| New Jersey Bell Telephone Co.                         | Newark, N. J.         | 4, 859, 784               |
| The Bell Telephone Co. of Pennsylvania                | Philadelphia, Pa.     | 6, 387, 094               |
| The Diamond State Telephone Co.                       | Philadelphia, Pa.     | 387, 416                  |
| The Chesapeake & Potomac Telephone Co.                | Washington, D. C.     | 911, 125                  |
| The Chesapeake & Potomac Telephone Co. of Maryland    | Baltimore, Md.        | 2, 549, 206               |
| The Chesapeake & Potomac Telephone Co. of Virginia    | Richmond, Va.         | 2, 066, 921               |
| The Chesapeake & Potomac Telephone Co. of W. Virginia | Charleston, W. Va.    | 690, 966                  |
| Southern Bell Telephone & Telegraph Co.               | Atlanta, Ga.          | 7, 511, 332               |
| South Central Bell Telephone Co.                      | Birmingham, Ala.      | 6, 703, 113               |
| The Ohio Bell Telephone Co.                           | Cleveland, Ohio       | 4, 116, 471               |
| Cincinnati Bell Inc.                                  | Cincinnati, Ohio      | 896, 418                  |
| Michigan Bell Telephone Co.                           | Detroit, Mich.        | 4, 720, 700               |
| Indiana Bell Telephone Co., Inc.                      | Indianapolis, Ind.    | 1, 699, 202               |
| Wisconsin Telephone Co.                               | Milwaukee, Wis.       | 1, 787, 587               |
| Illinois Bell Telephone Co.                           | Chicago, Ill.         | 6, 202, 765               |
| Northwestern Bell Telephone Co.                       | Omaha, Neb.           | 4, 140, 330               |
| Southwestern Bell Telephone Co.                       | St. Louis, Mo.        | 10, 993, 366              |
| The Mountain States Telephone & Telegraph Co.         | Denver, Colo.         | 4, 446, 179               |
| Pacific Northwest Bell Telephone Co.                  | Seattle, Wash.        | 2, 561, 494               |
| The Pacific Telephone & Telegraph Co.                 | San Francisco, Calif. | 10, 895, 908              |
| Bell Telephone Co. of Nevada                          | San Francisco, Calif. | (see Note)                |

Note: Wholly owned subsidiary of Pacific-Telephone and Telegraph Company. Telephones for this company are included in the totals for Pacific Telephone and Telegraph Company.

# Table 2: Number of Telephones in the United States--Distribution by States  
(January 1, 1972)

|                      | Bell       | Independent | Ind. % of total | Population U. S. Census Bureau 1970 |
|----------------------|------------|-------------|-----------------|-------------------------------------|
| Alabama              | 1,387,600  | 262,300     | 15.9            | 3,444,165                           |
| Alaska               | --         | 126,900     | 100.0           | 302,173                             |
| Arizona              | 1,022,700  | 32,500      | 3.1             | 1,772,482                           |
| Arkansas             | 668,100    | 251,400     | 27.3            | 1,923,295                           |
| California           | 10,816,200 | 2,934,600   | 21.3            | 19,953,134                          |
| Colorado             | 1,445,000  | 23,500      | 1.6             | 2,207,259                           |
| Connecticut          | 2,111,800  | 10,700      | 0.5             | 3,032,217                           |
| Delaware             | 387,400    | --          | 0.0             | 548,104                             |
| District of Columbia | 914,100    | --          | 0.0             | 756,510                             |
| Florida              | 3,071,000  | 1,475,100   | 32.4            | 6,789,443                           |
| Georgia              | 2,217,000  | 369,800     | 14.3            | 4,589,575                           |
| Hawaii               | --         | 492,500     | 100.0           | 769,913                             |
| Idaho                | 304,000    | 76,300      | 20.1            | 713,008                             |
| Illinois             | 6,087,300  | 1,255,500   | 17.1            | 11,113,976                          |
| Indiana              | 1,989,300  | 1,055,300   | 34.7            | 5,193,669                           |
| Iowa                 | 1,176,000  | 509,500     | 30.2            | 2,825,041                           |
| Kansas               | 1,120,400  | 227,100     | 16.9            | 2,249,071                           |
| Kentucky             | 1,100,500  | 417,900     | 27.5            | 3,219,311                           |
| Louisiana            | 1,755,200  | 102,200     | 5.5             | 3,643,180                           |
| Maine                | 466,500    | 54,400      | 10.4            | 993,663                             |
| Maryland             | 2,588,200  | 2,900       | 0.1             | 3,922,399                           |
| Massachusetts        | 3,635,300  | 2,900       | 0.1             | 5,689,170                           |
| Michigan             | 4,724,100  | 620,600     | 11.6            | 8,875,083                           |
| Minnesota            | 1,921,000  | 435,700     | 18.5            | 3,805,069                           |
| Mississippi          | 908,500    | 46,700      | 4.9             | 2,216,912                           |
| Missouri             | 2,348,400  | 508,700     | 17.8            | 4,677,399                           |
| Montana              | 314,400    | 61,800      | 16.4            | 694,409                             |

#Partially abstracted from Telephony's Directory, 1972.



# Table 2 (continued)

Number of Telephones in the United States -- Distribution by States  
(January 1, 1972)

|                | Bell                 | Independent         | Ind. % of total | Population U. S. Census Bureau 1970 |
|----------------|----------------------|---------------------|-----------------|-------------------------------------|
| Nebraska       | 543, 700             | 382, 800            | 41.3            | 1, 483, 791                         |
| Nevada         | 125, 300             | 237, 100            | 65.4            | 488, 738                            |
| New Hampshire  | 431, 100             | 21, 300             | 4.7             | 737, 681                            |
| New Jersey     | 4, 882, 600          | 89, 000             | 1.8             | 7, 168, 164                         |
| New Mexico     | 464, 200             | 66, 400             | 12.5            | 1, 016, 000                         |
| New York       | 11, 302, 000         | 1, 039, 800         | 8.4             | 18, 190, 740                        |
| North Carolina | 1, 341, 400          | 1, 186, 600         | 46.9            | 5, 082, 059                         |
| North Dakota   | 234, 700             | 101, 800            | 30.2            | 617, 761                            |
| Ohio           | 4, 905, 200          | 1, 473, 100         | 23.1            | 10, 652, 017                        |
| Oklahoma       | 1, 370, 500          | 184, 000            | 11.8            | 2, 559, 253                         |
| Oregon         | 976, 600             | 283, 400            | 22.5            | 2, 091, 385                         |
| Pennsylvania   | 6, 387, 500          | 1, 327, 800         | 17.2            | 11, 793, 909                        |
| Rhode Island   | 552, 400             | --                  | 0.0             | 949, 723                            |
| South Carolina | 926, 400             | 321, 300            | 25.8            | 2, 590, 516                         |
| South Dakota   | 284, 600             | 65, 900             | 18.8            | 666, 257                            |
| Tennessee      | 1, 740, 500          | 327, 500            | 15.8            | 3, 924, 164                         |
| Texas          | 5, 567, 700          | 1, 112, 600         | 16.7            | 11, 196, 730                        |
| Utah           | 614, 000             | 21, 200             | 3.3             | 1, 059, 273                         |
| Vermont        | 217, 900             | 31, 900             | 12.8            | 444, 732                            |
| Virginia       | 2, 100, 200          | 552, 100            | 20.8            | 4, 648, 494                         |
| Washington     | 1, 577, 800          | 470, 200            | 23.0            | 3, 409, 169                         |
| West Virginia  | 691, 100             | 101, 600            | 12.8            | 1, 744, 237                         |
| Wisconsin      | 1, 787, 800          | 691, 200            | 27.9            | 4, 417, 933                         |
| Wyoming        | 193, 000             | 12, 800             | 6.2             | 332, 416                            |
| <b>TOTAL</b>   | <b>103, 698, 200</b> | <b>21, 458, 200</b> | <b>17.1</b>     | <b>203, 184, 772</b>                |

#Partially abstracted from Telephony's Directory, 1972.

Table 3 (from USITA Holding Company Report, 1972)

Top 25 Independent Telephone Companies in the United States on December 31, 1971

|   | Number<br>of<br>Telephones | % of Total<br>Independent<br>Telephone<br>Industry |
|---|----------------------------|--|
| 1. General Telephone & Electronics Corp., New York, N. Y.   | 10,005,000                 | 45.88  |
| 2. United Telecommunications, Inc., Kansas City, Mo         | 2,456,200                  | 11.30  |
| 3. Continental Telephone Corp., St. Louis, Mo.              | 1,604,200                  | 7.36   |
| 4. Central Telephone Utilities Corp., Lincoln, Neb.         | 1,030,000                  | 4.72   |
| 5. Mid-Continent Telephone Corp., Hudson, Ohio <sup>‡</sup> | 560,000                    | 2.57   |
| 6. Rochester Telephone Corp., Rochester, N. Y.              | 524,500                    | 2.41   |
| 7. Puerto Rico Telephone Co., San Juan, P. R.               | 327,800                    | 1.50   |
| 8. Lincoln Telephone & Telegraph Co., Lincoln, Neb.         | 228,000                    | 1.05   |
| 9. Commonwealth Telephone Co., Dallas, Pa.                  | 145,100                    | .67  |
| 10. Florida Telephone Corp., Ocala, Fla.                    | 123,000                    | .56  |
| 11. Allied Telephone Co., Little Rock, Ark.                 | 98,900                     | .45  |
| 12. Illinois Consolidated Telephone Co., Mattoon, Ill.      | 88,800                     | .41  |
| 13. Winter Park Telephone Co., Winter Park, Fla.            | 87,100                     | .40  |
| 14. Indiana Telephone Corp., Seymour, Ind.                  | 75,000                     | .34  |
| 15. North State Telephone Co., High Point, N. C.            | 68,300                     | .31  |
| 16. Lorain Telephone Co., Lorain, Ohio                      | 65,900                     | .30  |
| 17. Anchorage Telephone Co., Anchorage, Alaska              | 65,700                     | .30  |
| 18. Telephone Utilities of Pennsylvania Inc. Export, Pa.    | 60,000                     | .28  |
| 19. The Concord Telephone Co., Concord, N. C.               | 59,300                     | .27  |
| 20. Telephone Utilities Inc., Ilwaco, Wash.                 | 57,100                     | .26  |
| 21. Telephone & Data Systems, Inc., Chicago, Ill.           | 50,200                     | .23  |
| 22. North-West Telephone Co., Tomah, Wisc. <sup>#</sup>     | 42,200                     | .19  |
| 23. Century Telephone Enterprises, Inc., Monroe, La.        | 41,600                     | .19  |
| 24. Tidewater Telephone Co., Warsaw, Va. <sup>‡</sup>       | 40,300                     | .19  |
| 25. Newark Telephone Co., Newark, Ohio                      | 40,400                     | .19  |
| TOTAL   | 17,954,600                 | 82.33  |

<sup>#</sup> Includes Boscobel Telephone Co.

<sup>‡</sup> Continental plans to acquire these companies in the near future.

The key to the shading and lettering found on the maps is given on the code sheet preceding the maps. Seven states are serviced by two Bell companies; these are designated as No. 1 and No. 2, with No. 1 being the primary serving Bell Company. The independent companies have been arbitrarily divided into classes, X, Y and Z. Class X companies are found in at least 20 states, and each controls at least one million phones. The three Class X companies are designated by standardized shadings on the state maps. Class Y are found in at least 10 states, and each controls at least 1/2 million phones. Two companies fall within this class and are designated as C and D on the state maps. Class Z contains the smaller Independent companies. It was impossible to identify each of these companies on the state maps, but the two largest Class Z companies within each state are designated as A and B on the maps, (with all others designated as E) and an alphabetical listing of each company in each state is given in table 4. Undesignated areas within a state are labelled with the letter, U. These undesignated areas may include natural features such as large lakes, deserts, and mountainous terrain; it may also include special bounded areas such as military reservations and national parks and forests, or it may represent unfranchised or unassigned territory.

U. S. telephone service areas are given in figures 2-4 for the three Class X companies and are shown in figures 5 and 6 for the two Class Y companies. However, a comparison of the individual states within these maps with those in figures 7-56 will reveal some discrepancies because, as stated before, figures 2-6 were adapted from company maps that are updated in multiple year intervals, rather than every year.

To provide some idea of the size differences between the various Class Z companies, the two (designated as A and B in each state map) with the largest number of telephones are starred, and the number of phones operated by each of these two companies is indicated in parenthesis following



the company name and headquarters listing in table 4. (Most of these data were abstracted from Telephony, 1971). It can be noted that in six states (Ark., Fla., N. Car., Ohio, Pa., and Wis.) both A and B are included in the top 25 Independent companies. (The actual number of total telephones listed in table 4 and table 3 differ because the figures in table 3 are more recent.)

The preparation of maps of telephone service areas was not a simple task; many of the maps had to be pieced together from diverse scattered sources of information and their reliability is dependent upon the accuracy and recency of the preparation of the local data. State maps for Alaska, Hawaii, Maine, North and South Dakota, Texas and upper Michigan had to be constructed almost completely from the telephone exchange data found in Telephony's Directory, 1971. The Arkansas and Iowa exchange locations were supplemented by toll station maps. Telephone company coverage maps in various forms, some very sophisticated, other rudimentary, some as current as May, 1972, and others four or five years old, were available from the other states. These were provided by the state Independent Telephone Associations, various Bell Telephone headquarters, the state public service and utilities commissions, and Bell-Independent relations offices. A list of these sources are available on request from the author. However, most of the organizations who supplied the maps pointed out that many of the boundary lines were approximate and could not be used as legal boundaries.

Attempting to delineate the telephone service areas in those states where no previous map was available in any form presented the most challenging task. Texas, which does not have a state public utility office, was especially difficult with its 906 Independent exchanges and 325 Bell exchanges (including 106 suburban zones). These exchanges were located and classified as to telephone company on a large detailed U. S. Geological Survey Map; then twelve different Bell and Independent offices

in Texas and the headquarters of the three Class X companies were contacted by mail and phone to try to determine approximate telephone company operating areas.

Every attempt was made to insure that the boundaries for the company operating areas within each state were as accurate as possible. For example, all the companies and their exchanges were updated to the April, 1971, cutoff date of the 1971 Telephony's Directory. When discrepancies were found, this directory was used as the final authority. (The 1972 Telephony's Directory is now available, but this study was near completion when the 1972 directory was published, and time did not permit the inclusion of the changes in company ownership revealed in this more current issue.) Because the boundaries fluctuate from year to year due to various company mergers and purchases, and because these boundaries are subject to various interpretations and limitations, it is suggested that the telephone company operating areas in each state be submitted periodically to interested organizations and associations within that state for review and revision.

#### Acknowledgements

The author wishes to express appreciation to the following:

Dale Hatfield who directed the research and gave assistance and encouragement when needed,  
Harold Millie who contacted a large number of companies and associations for telephone coverage materials,  
Felicita Whelan who drafted the many complex figures,  
Ferminia Ulibarri who typed the text,  
Dennis Holt and Richard Martin who assisted in the analysis and organization of the data,  
Richard Gabel, Martin Gray and Barbara Widick who provided constructive suggestions in their reviews of the material, and the many individuals who, by phone or letter, responded courteously and promptly to requests for information on telephone operating areas.

## References

Department of Transportation News, Quarterly report on the federal-aid highway program, December 31, 1971, published in 1972 by the Federal Highway Administration, Washington, D. C.

Mid-Continent Telephone Corporation annual report, 1971, (published March, 1972), Hudson, Ohio.

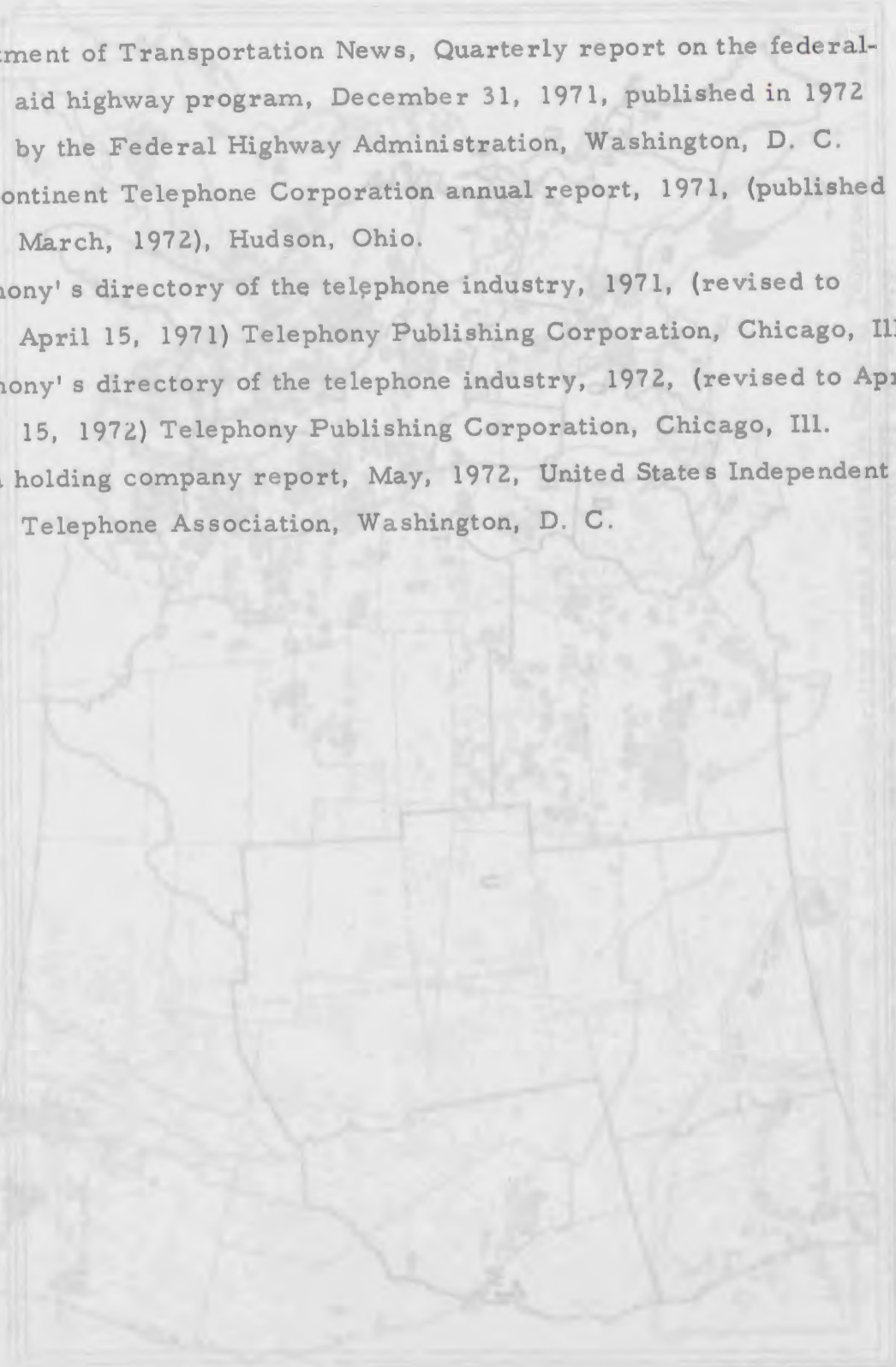
Telephony's directory of the telephone industry, 1971, (revised to April 15, 1971) Telephony Publishing Corporation, Chicago, Ill.

Telephony's directory of the telephone industry, 1972, (revised to April 15, 1972) Telephony Publishing Corporation, Chicago, Ill.

USITA holding company report, May, 1972, United States Independent Telephone Association, Washington, D. C.

GENERAL TELEPHONE & ELECTRIC COMPANY

1972





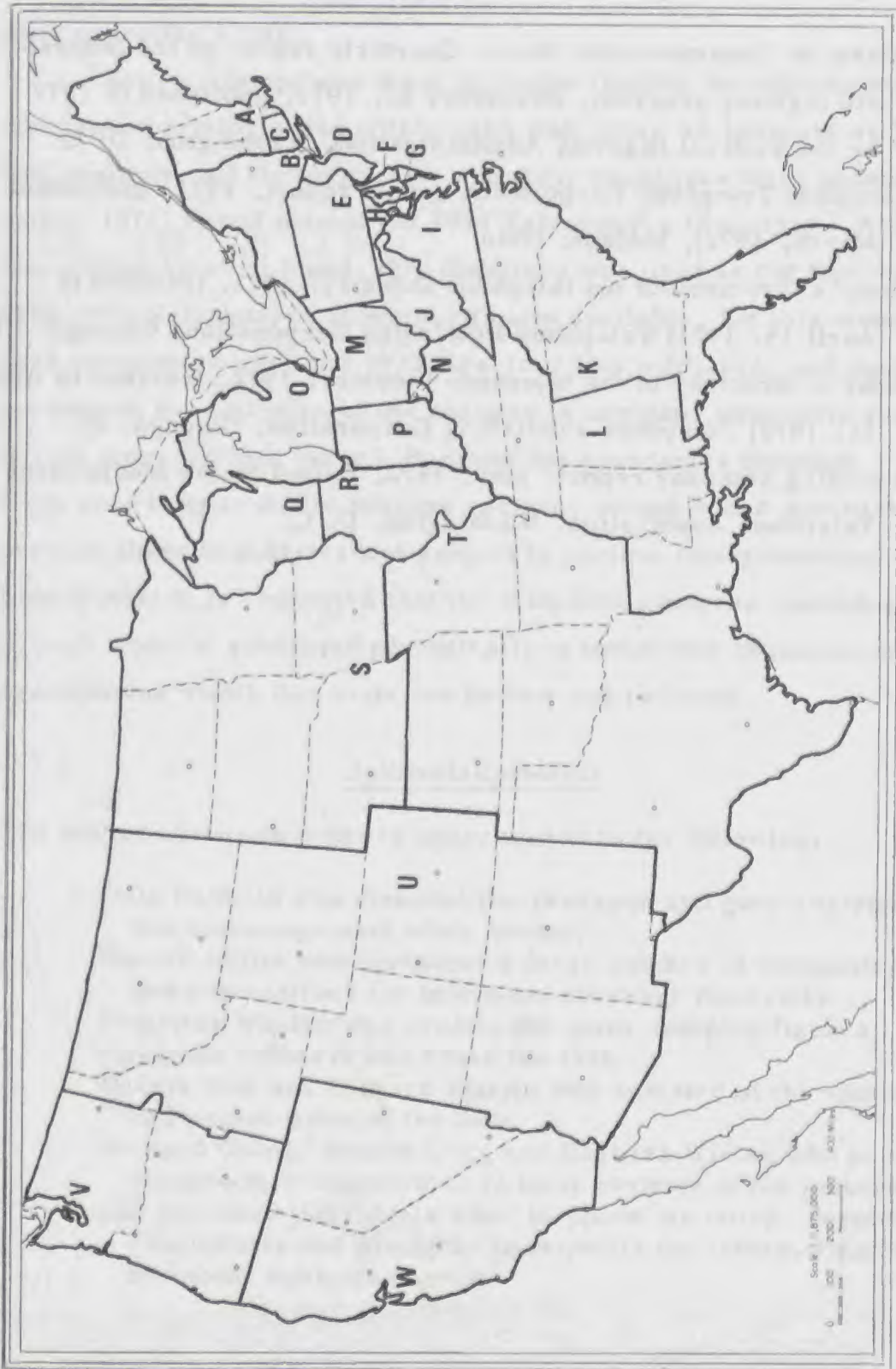


Figure 1. Operating Areas Served by Bell Telephone Companies (See Table 1).

GENERAL TELEPHONE AND  
ELECTRONICS CORPORATION  
( 1972 )

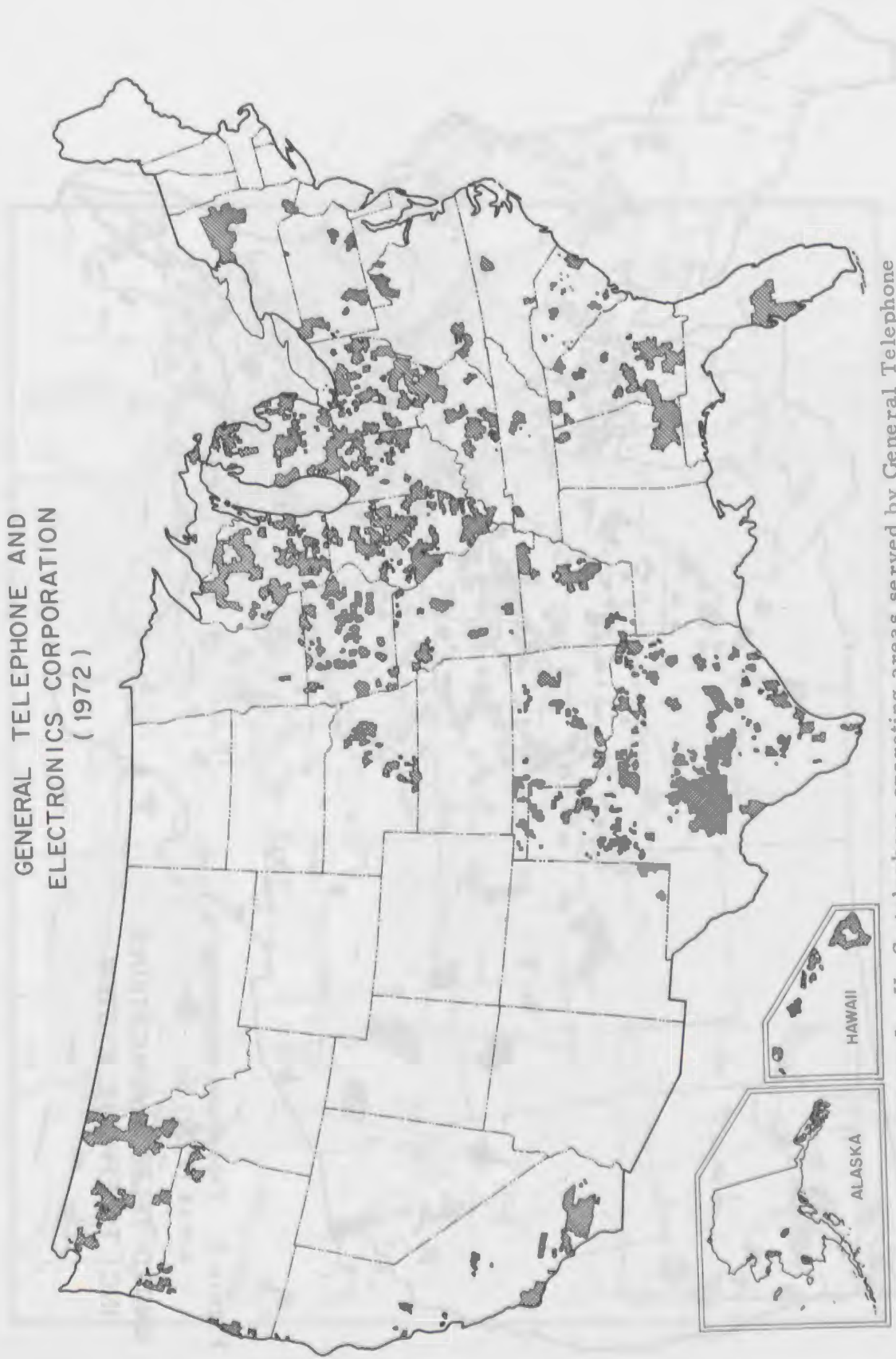


Figure 2. U. S. telephone operating areas served by General Telephone System (adapted from map furnished by GT and E Corp.)



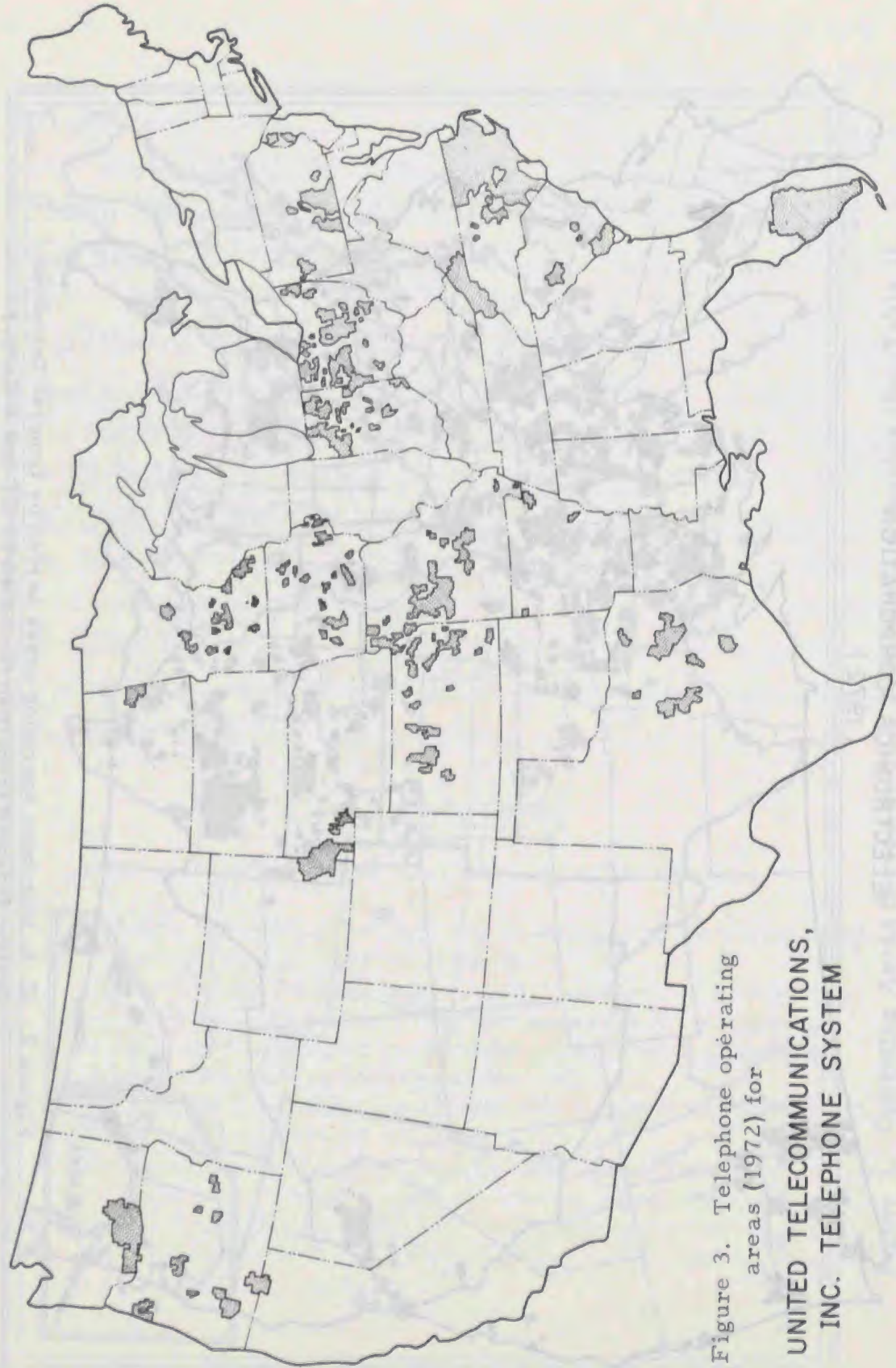


Figure 3. Telephone operating areas (1972) for UNITED TELECOMMUNICATIONS, INC. TELEPHONE SYSTEM





Figure 4. Continental Telephone Corporation operating areas (courtesy of USITA).





ALABAMA TELEPHONE COMPANY  
 KEY TO TELEPHONE SERVICE AREAS



Figure 6. Telephone operating areas served by Mid-Continent Telephone Corporation (from annual 1971 report).



# KEY TO TELEPHONE COMPANY STATE MAPS

## Bell System :

No. 1



No. 2



## Class X independent companies :

General Telephone and Electronics Corp.



United Telecommunications, Inc.

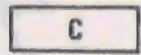


Continental Telephone Corp.

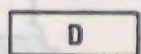


## Class Y independent companies :

Central Telephone and Utilities Corp.

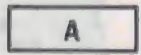


Mid - Continent Telephone Corp.

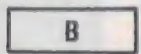


## Class Z independent companies :

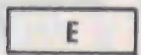
No. 1 within state



No. 2 within state



All others within state



## Undesignated areas within state

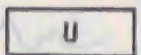


Figure 4. Telephone operating areas as used by Mid-Continent Telephone Corporation (from annual 1971 report)

# ALABAMA TELEPHONE COMPANY OPERATING AREAS

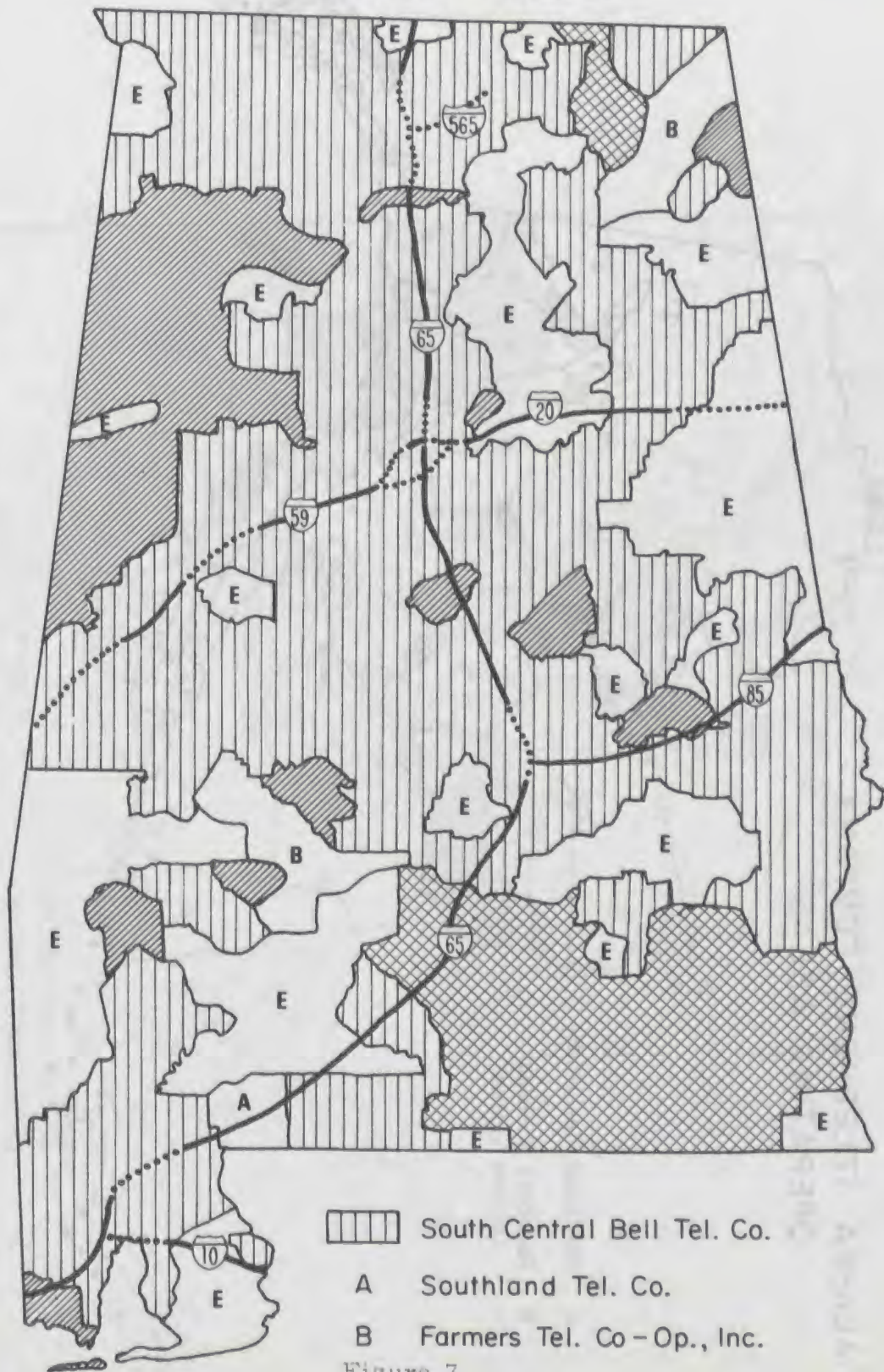


Figure 7  
17



# ALASKA TELEPHONE COMPANY OPERATING AREAS

A Anchorage Tel. Utility

B Fairbanks Municipal  
Utilities System

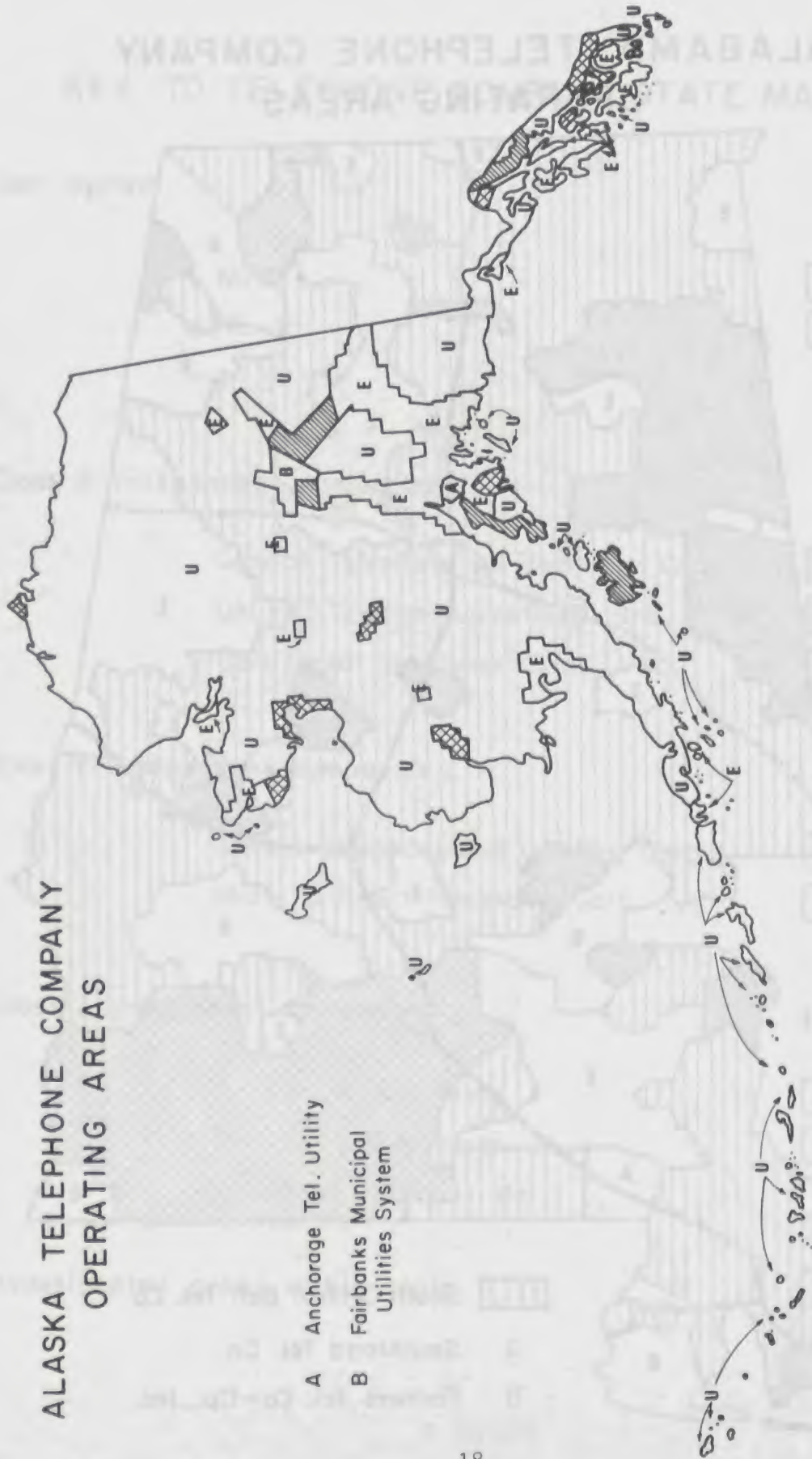
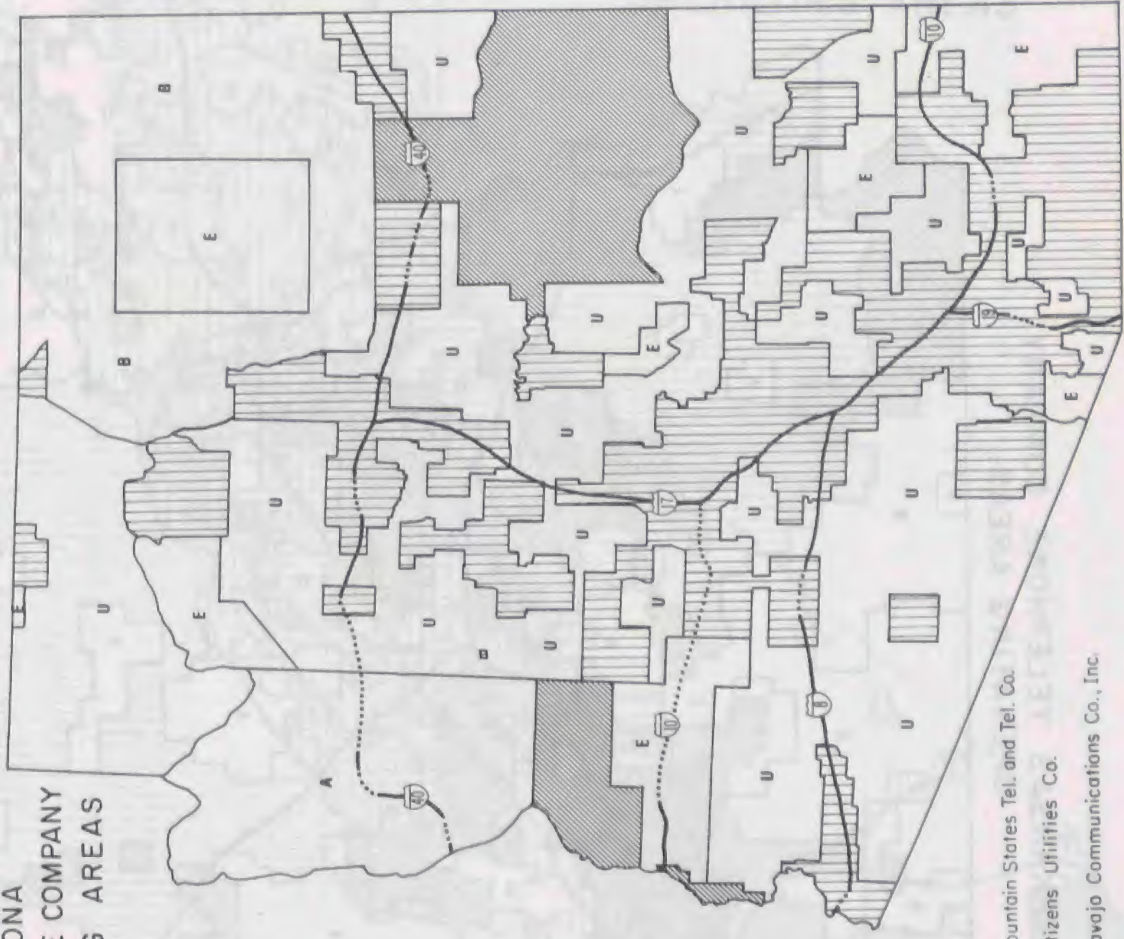


Figure 8



ARIZONA  
TELEPHONE COMPANY  
OPERATING AREAS



- Mountain States Tel. and Tel. Co.
- A Citizens Utilities Co.
- B Navajo Communications Co., Inc.

CALIFORNIA  
TELEPHONE COMPANY

Figure 9

ARKANSAS TELEPHONE COMPANY  
OPERATING AREAS

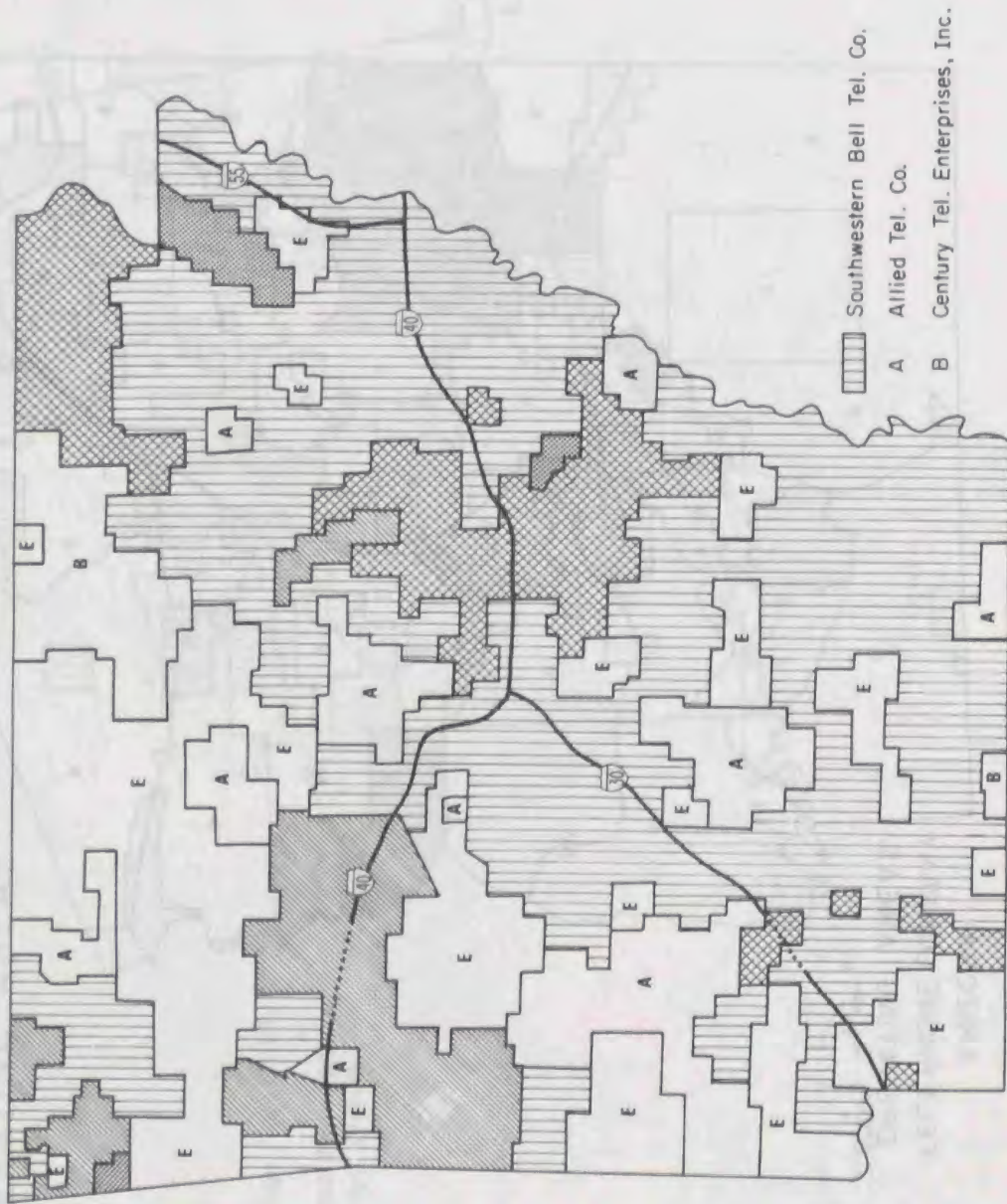
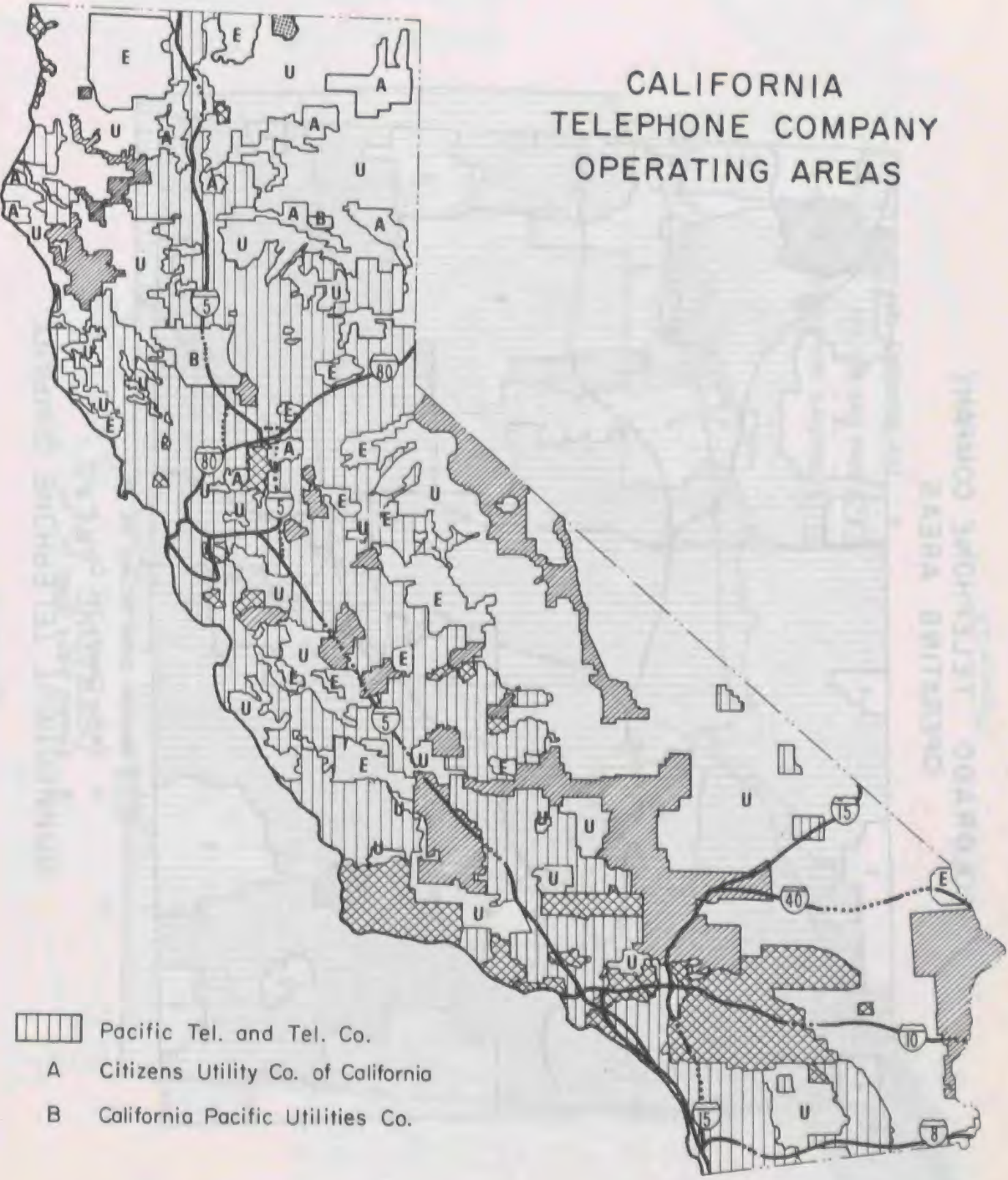


Figure 10



# CALIFORNIA TELEPHONE COMPANY OPERATING AREAS




-  Pacific Tel. and Tel. Co.
- A Citizens Utility Co. of California
- B California Pacific Utilities Co.

Figure 11



COLORADO TELEPHONE COMPANY  
OPERATING AREAS

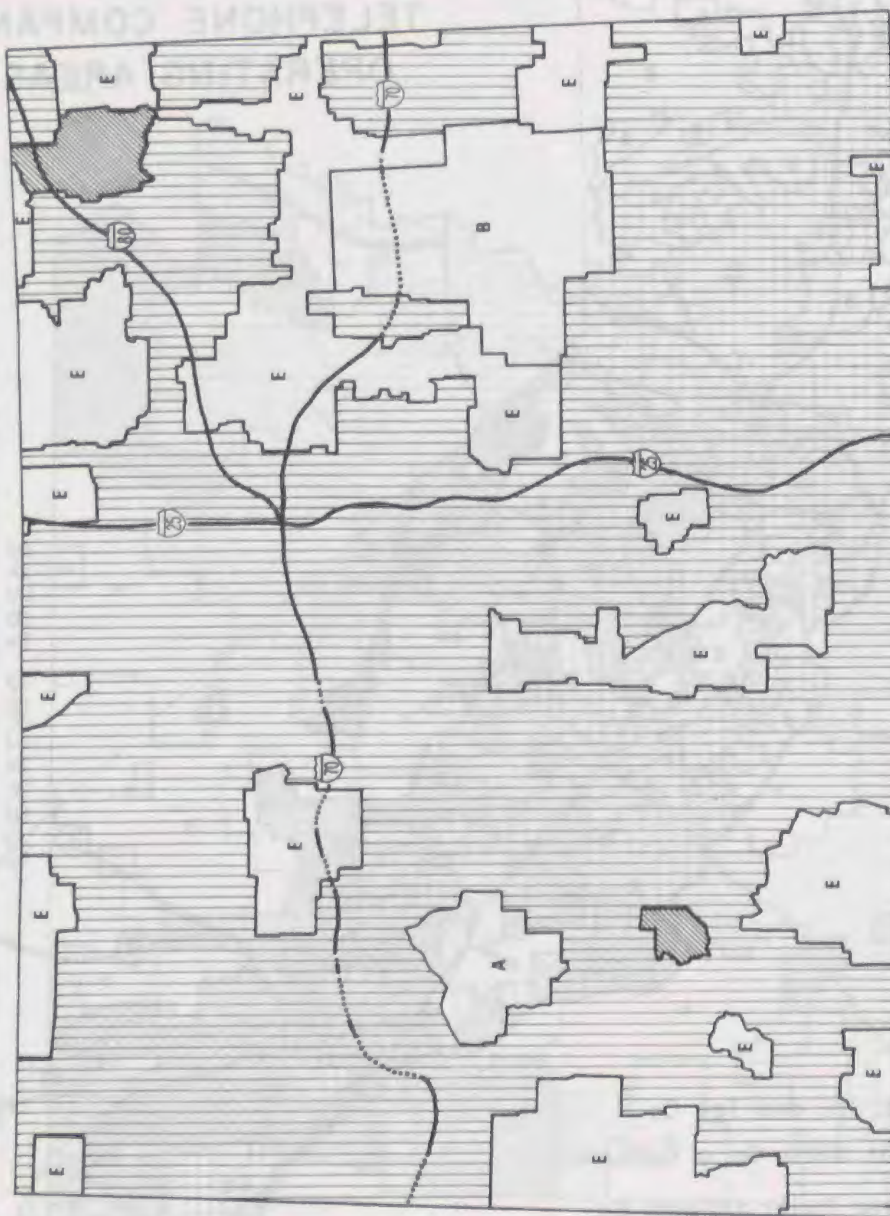


Figure 12

CONNECTICUT TELEPHONE COMPANY  
OPERATING AREAS

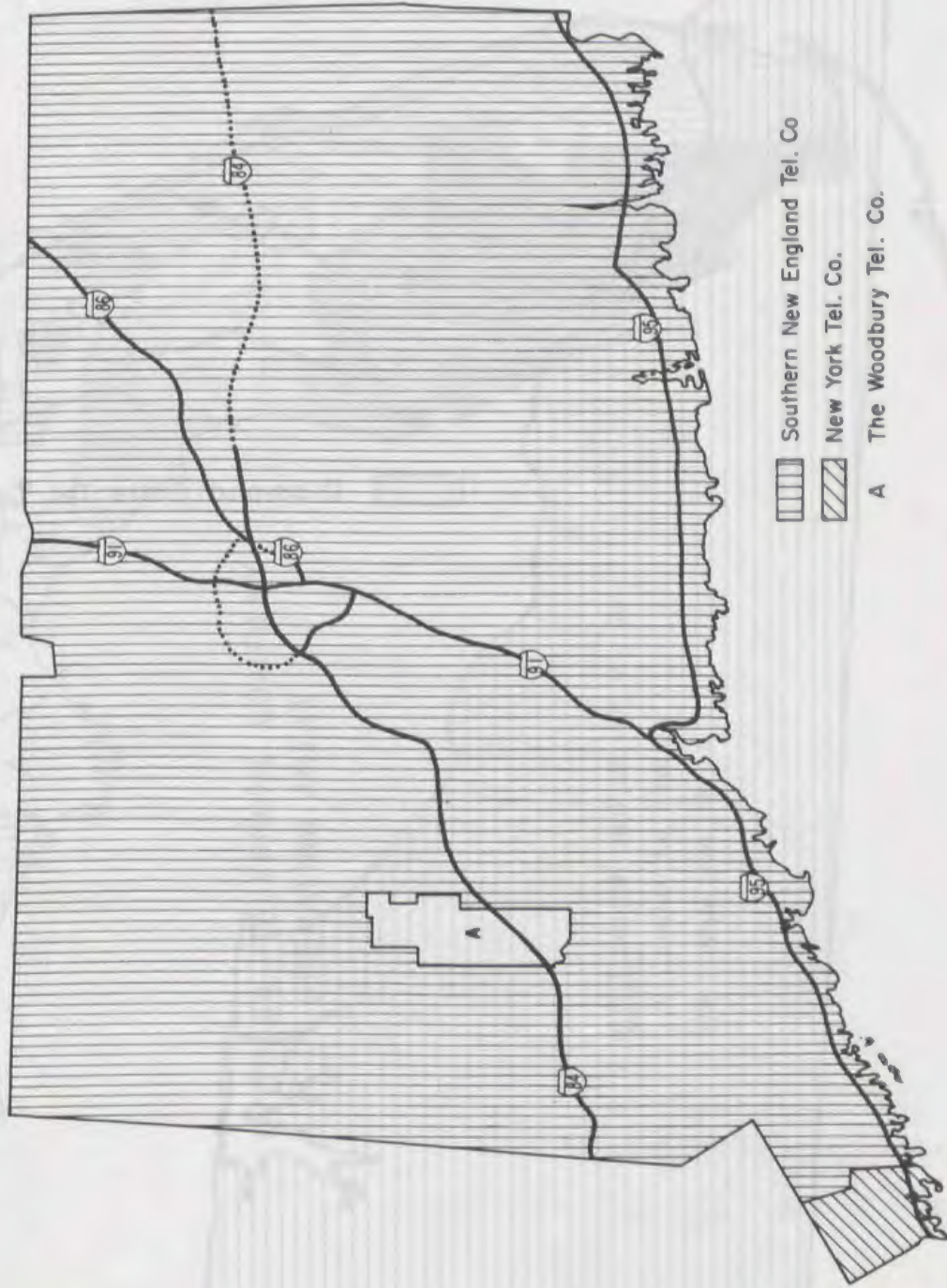


Figure 13



# DELAWARE TELEPHONE COMPANY OPERATING AREAS

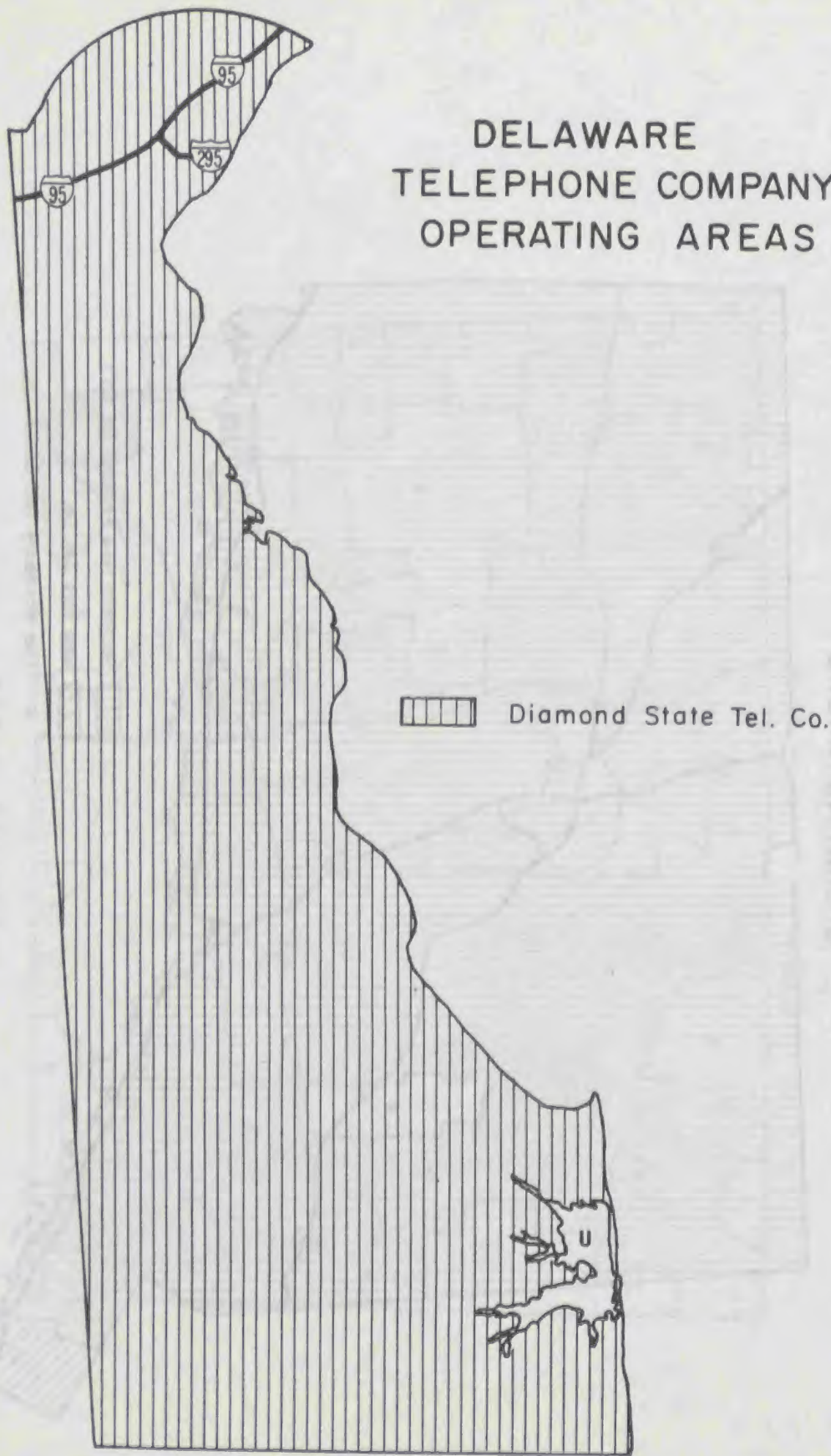
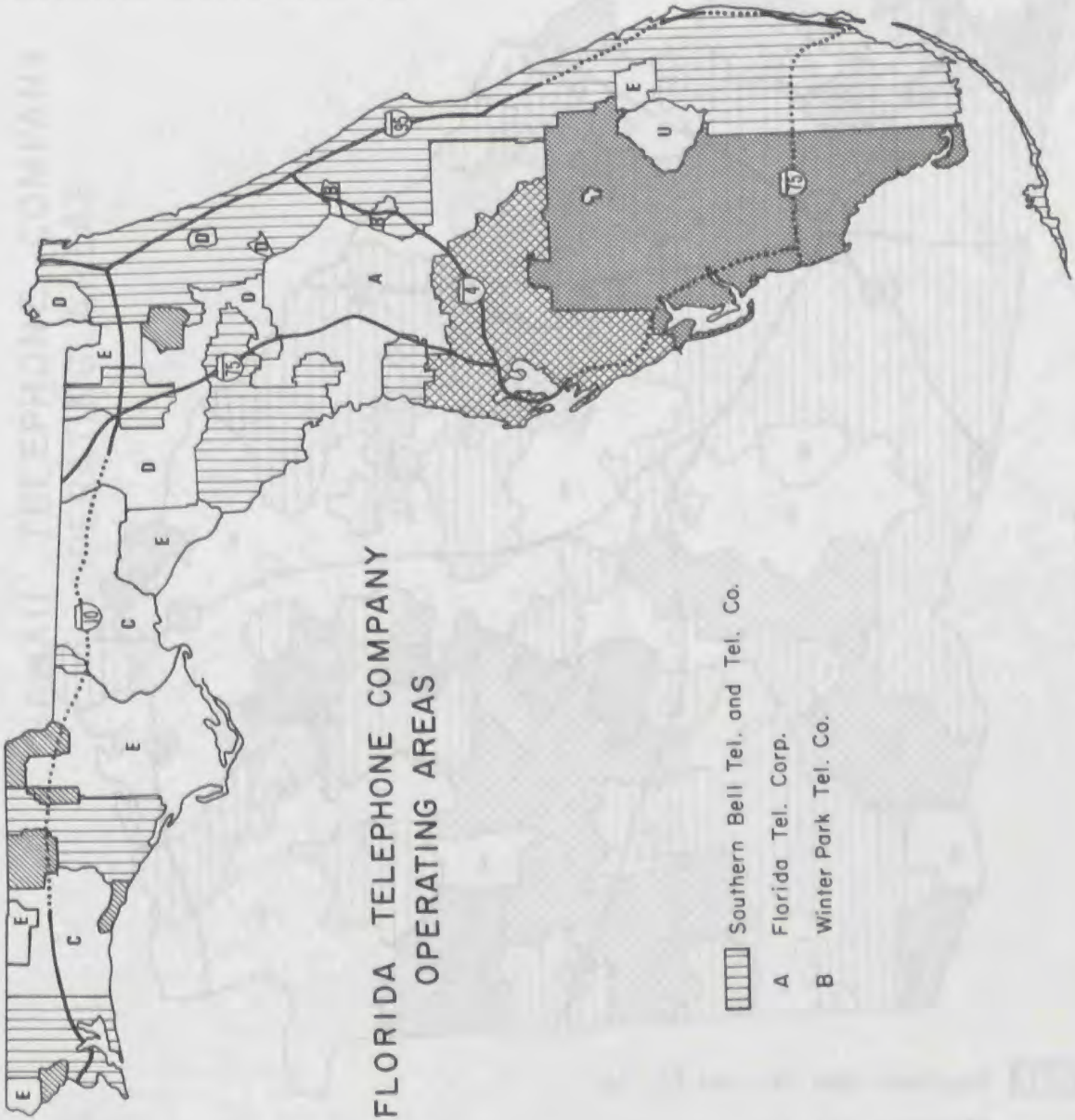


Figure 14  
24



GEORGIA  
TELEPHONE COMPANY  
OPERATING AREAS



FLORIDA TELEPHONE COMPANY  
OPERATING AREAS

Figure 15

DELAWARE  
 TELEPHONE COMPANY  
 GEORGIA  
 TELEPHONE COMPANY  
 OPERATING AREAS




-  Southern Bell Tel. and Tel. Co.
- A Standard Tel. Co.
- B Thomaston Tel. Co.

Figure 16





# IDAHO TELEPHONE COMPANY OPERATING AREAS

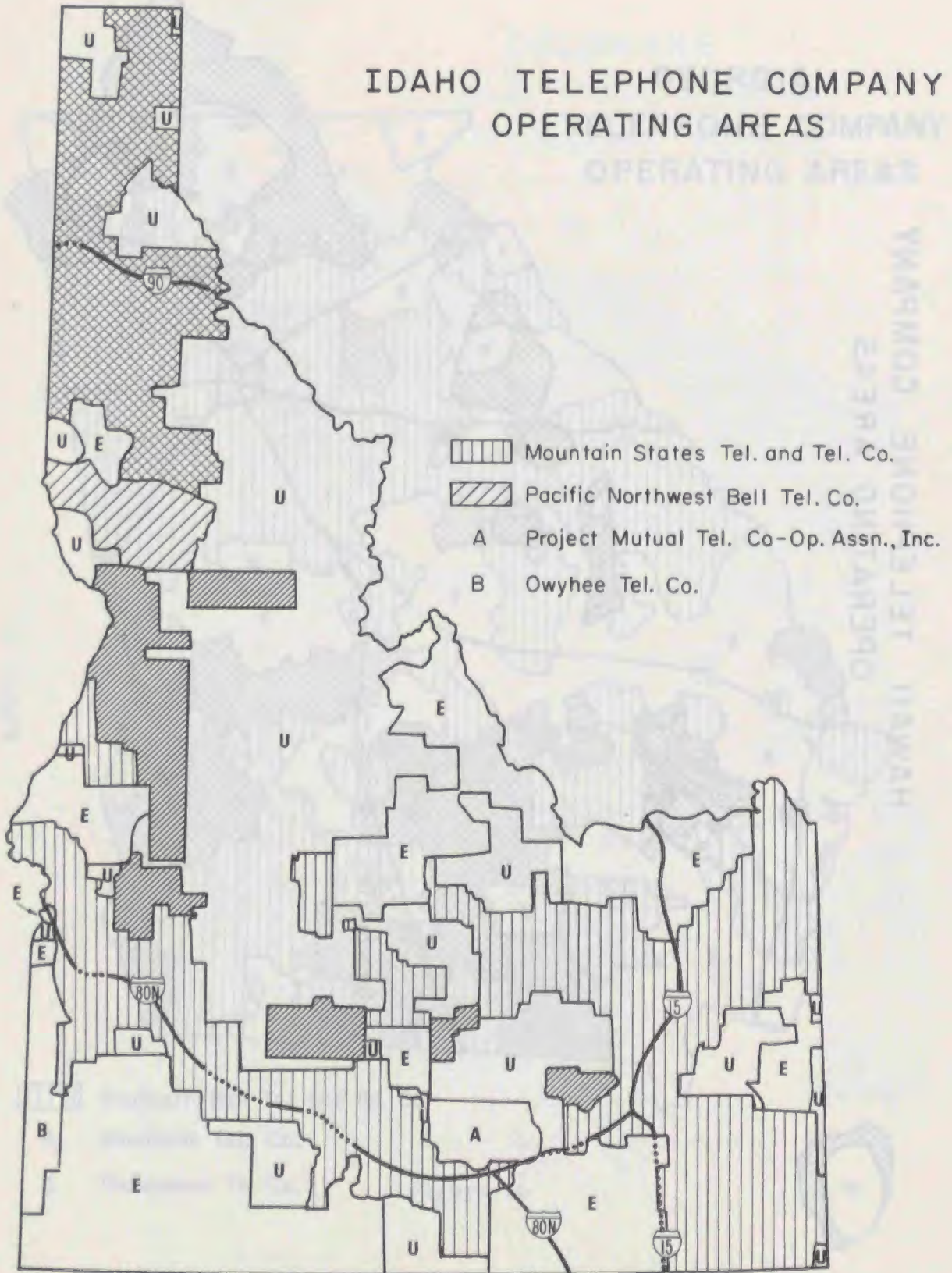




Figure 18  
28



# ILLINOIS TELEPHONE COMPANY OPERATING AREAS

-  Illinois Bell Tel. Co.
-  Southwestern Bell Tel. Co.
- A Illinois Consolidated Tel. Co.
- B Northwestern Tel. Co.

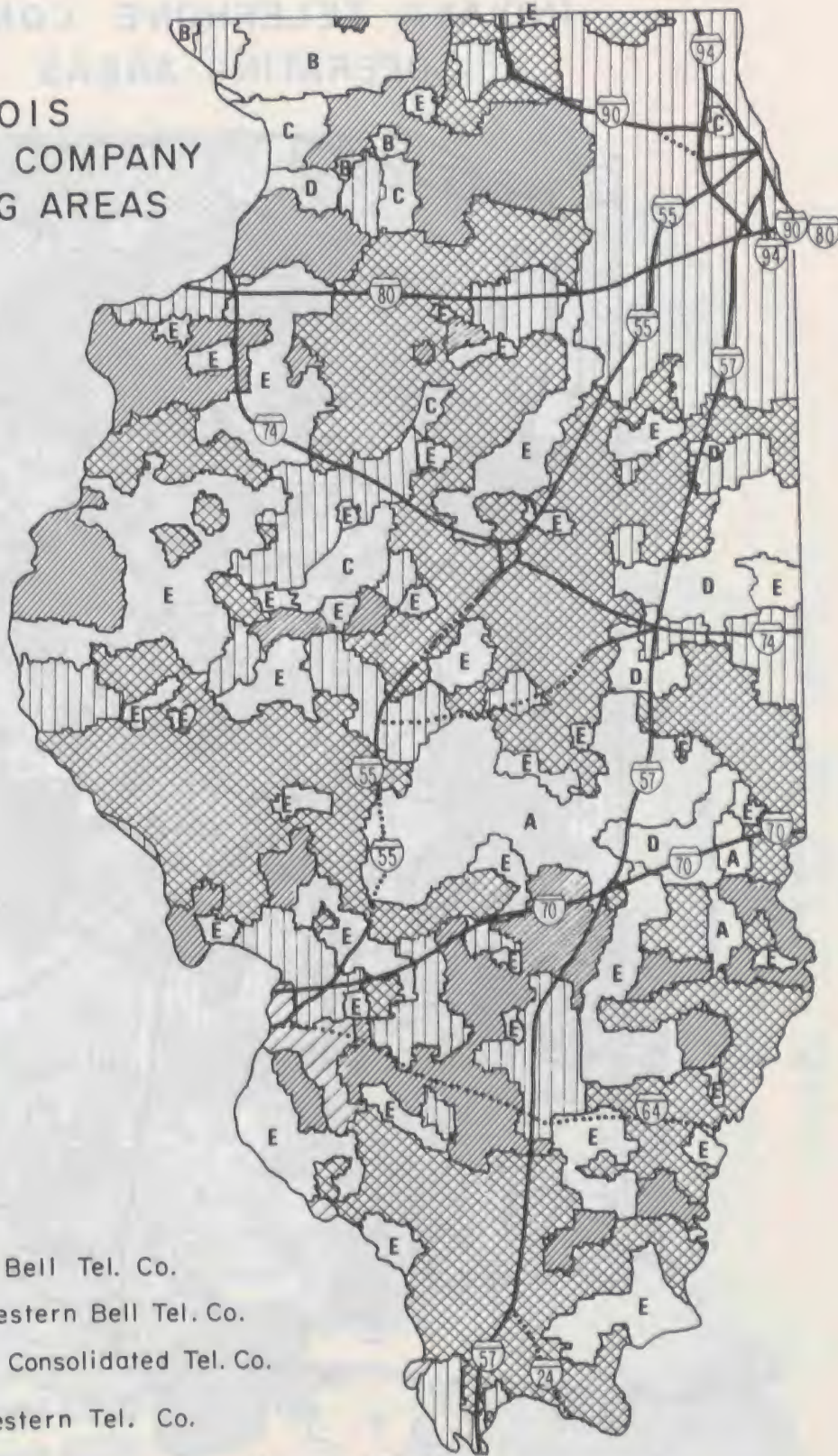


Figure 19



# INDIANA TELEPHONE COMPANY OPERATING AREAS

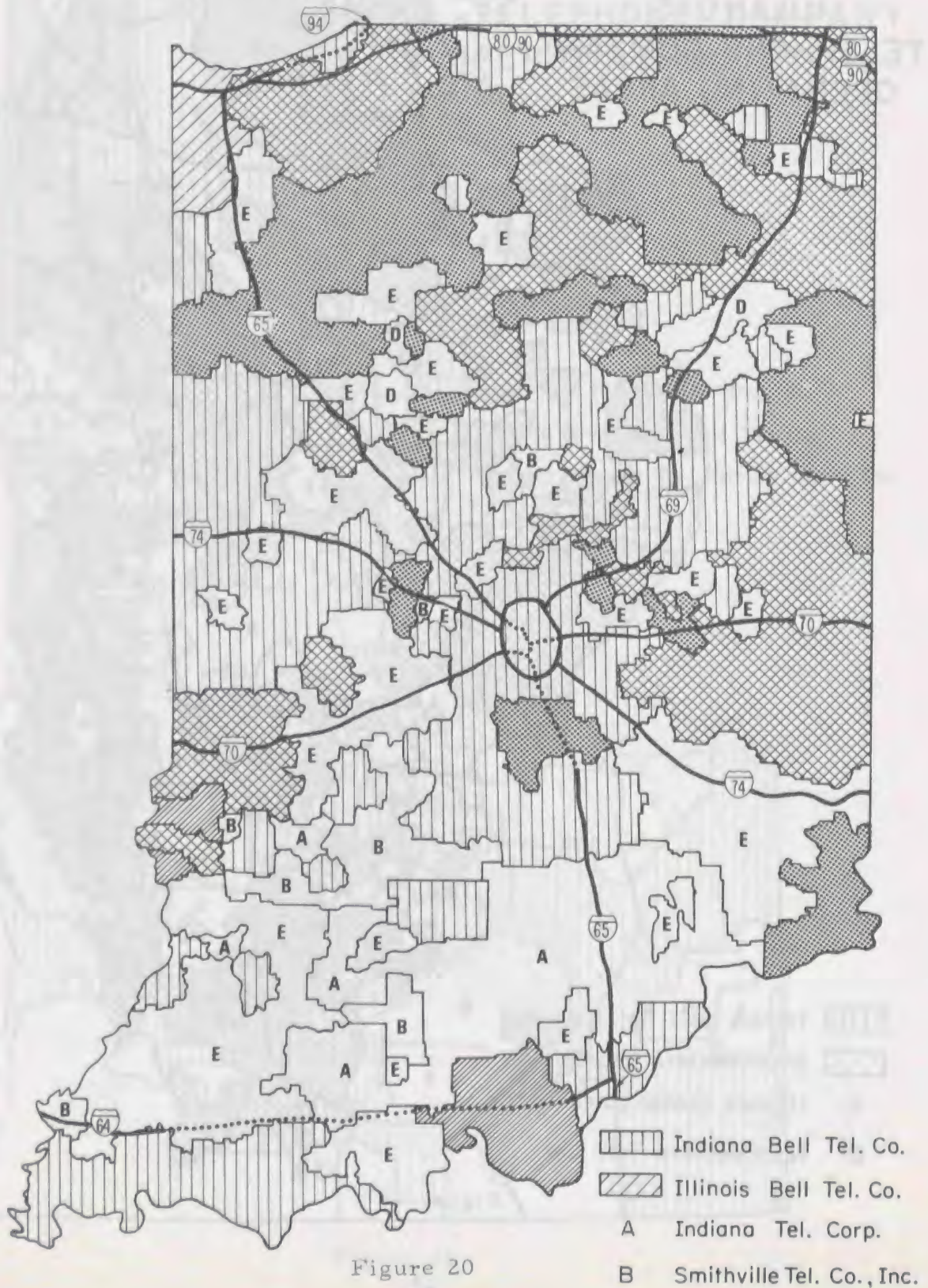
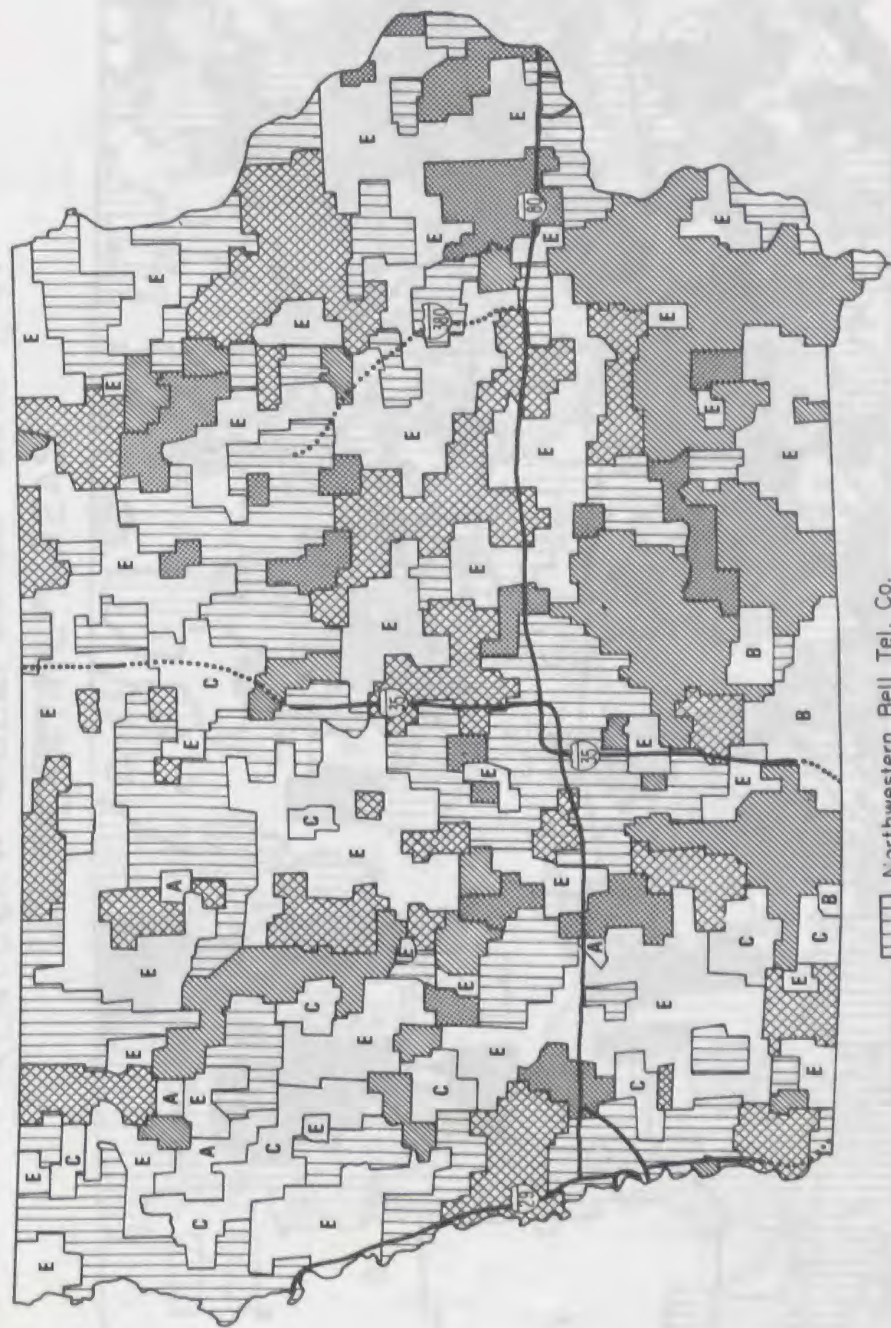


Figure 20  
30



# IOWA TELEPHONE COMPANY OPERATING AREAS



- ▤ Northwestern Bell Tel. Co.
- A ▧ West Iowa Tel. Co.
- B ▨ Grand River Mutual Tel. Corp.

Figure 21

# KANSAS TELEPHONE COMPANY OPERATING AREAS





- ▤ Southwestern Bell Tel. Co.
- A The Pioneer Tel. Assn., Inc.
- B Crow - Kan. Tel. Co-Op.

Figure 22



# KENTUCKY TELEPHONE COMPANY OPERATING AREAS

-  South Central Bell Tel. Co.
-  Cincinnati Bell, Inc.
- A** South Central Rural Tel. Co-Op., Corp., Inc.
- B** West Kentucky Rural Tel. Co-Op., Corp., Inc.

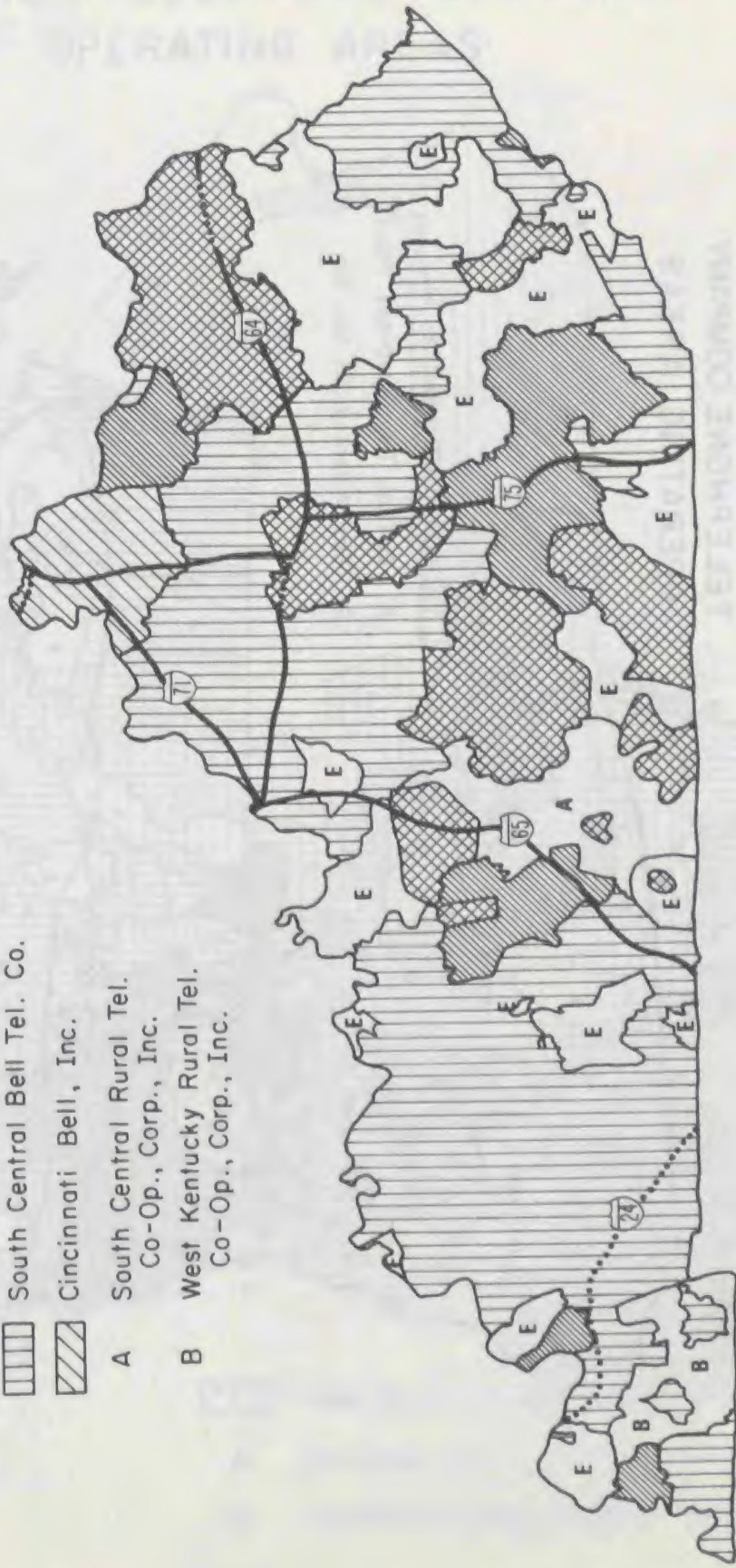
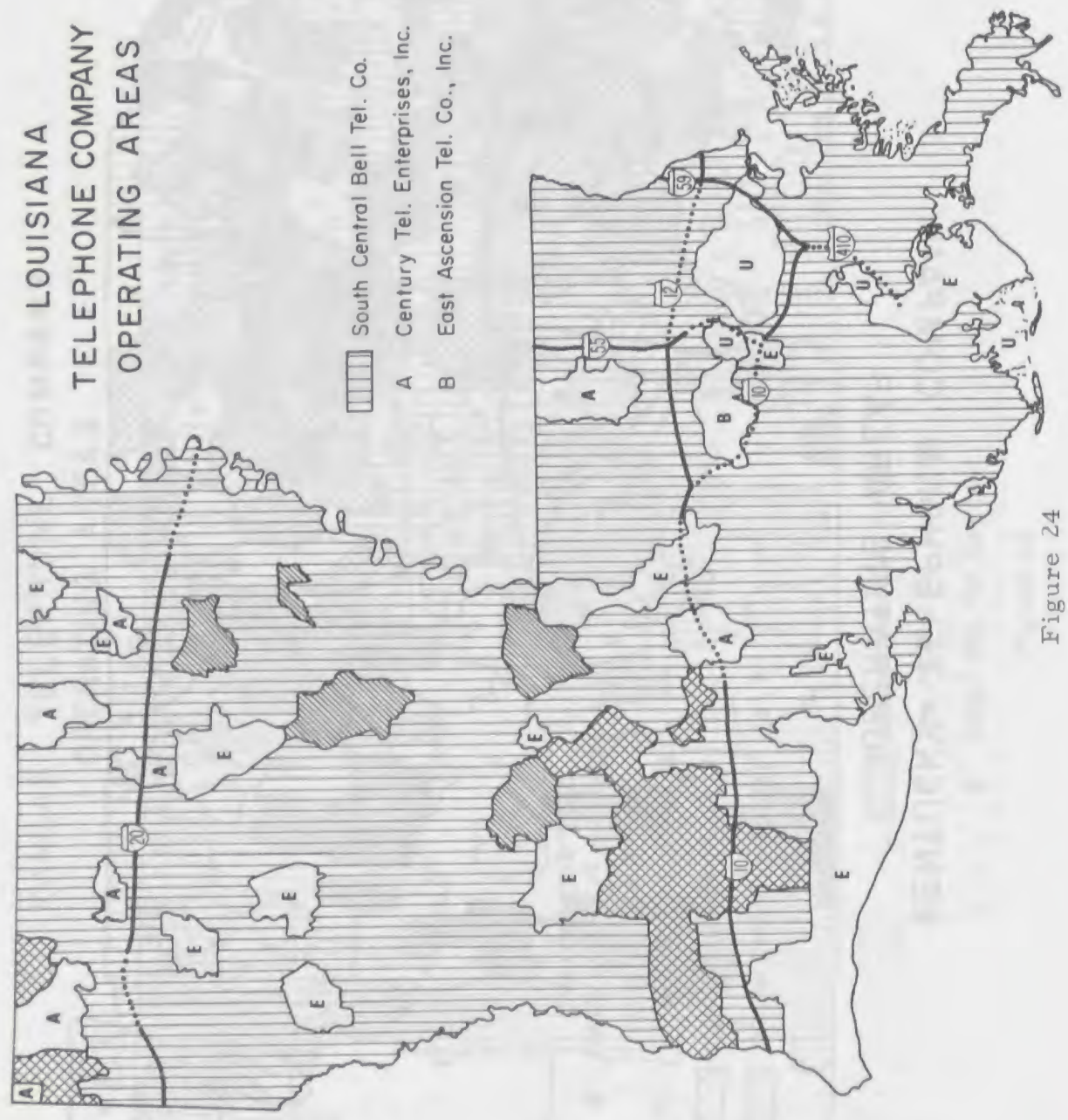


Figure 23



LOUISIANA  
 TELEPHONE COMPANY  
 OPERATING AREAS



South Central Bell Tel. Co.

A Century Tel. Enterprises, Inc.

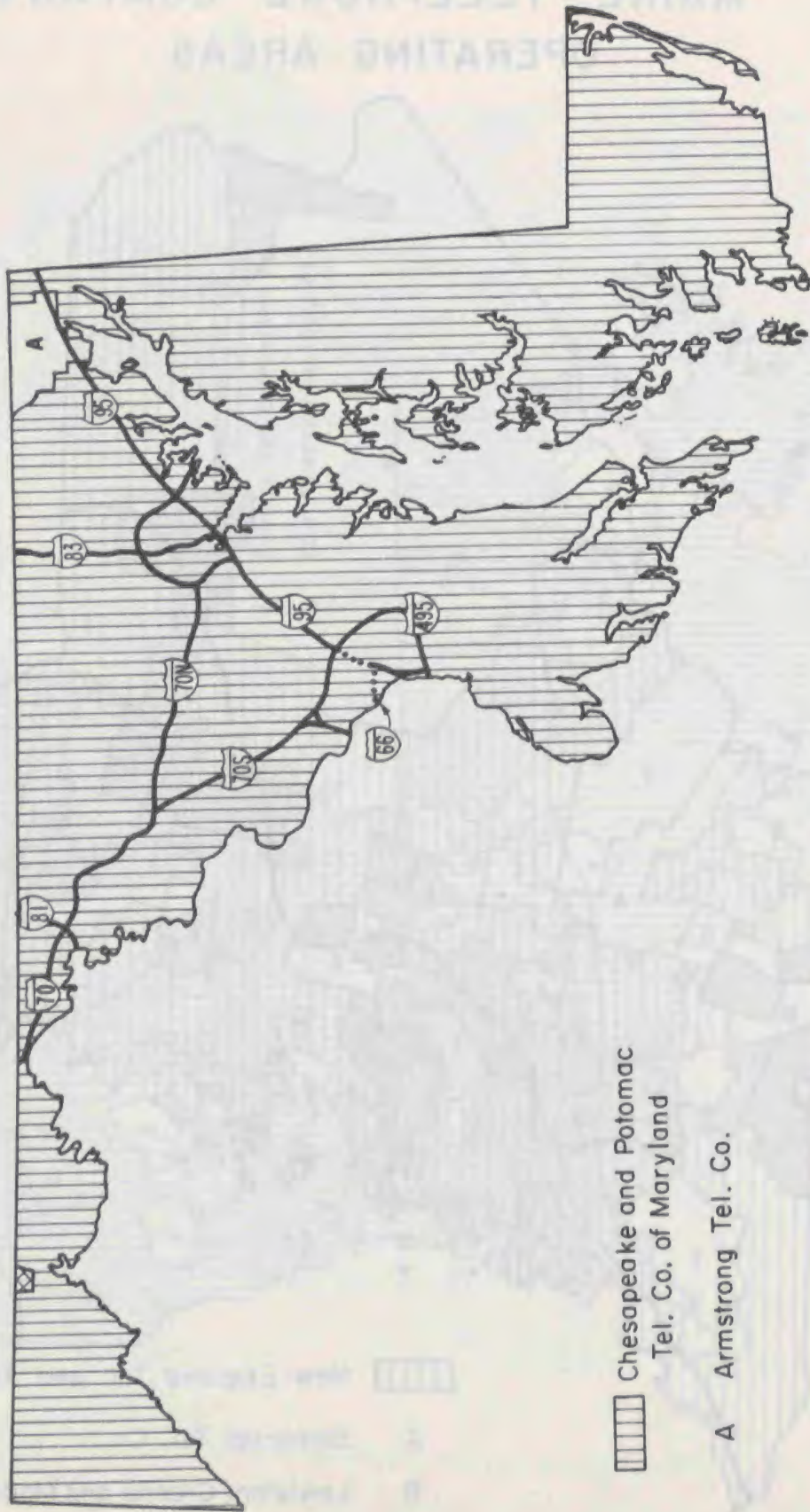
B East Ascension Tel. Co., Inc.

Figure 24





MARYLAND TELEPHONE COMPANY  
OPERATING AREAS



▨ Chesapeake and Potomac  
Tel. Co. of Maryland

A Armstrong Tel. Co.

Figure 26



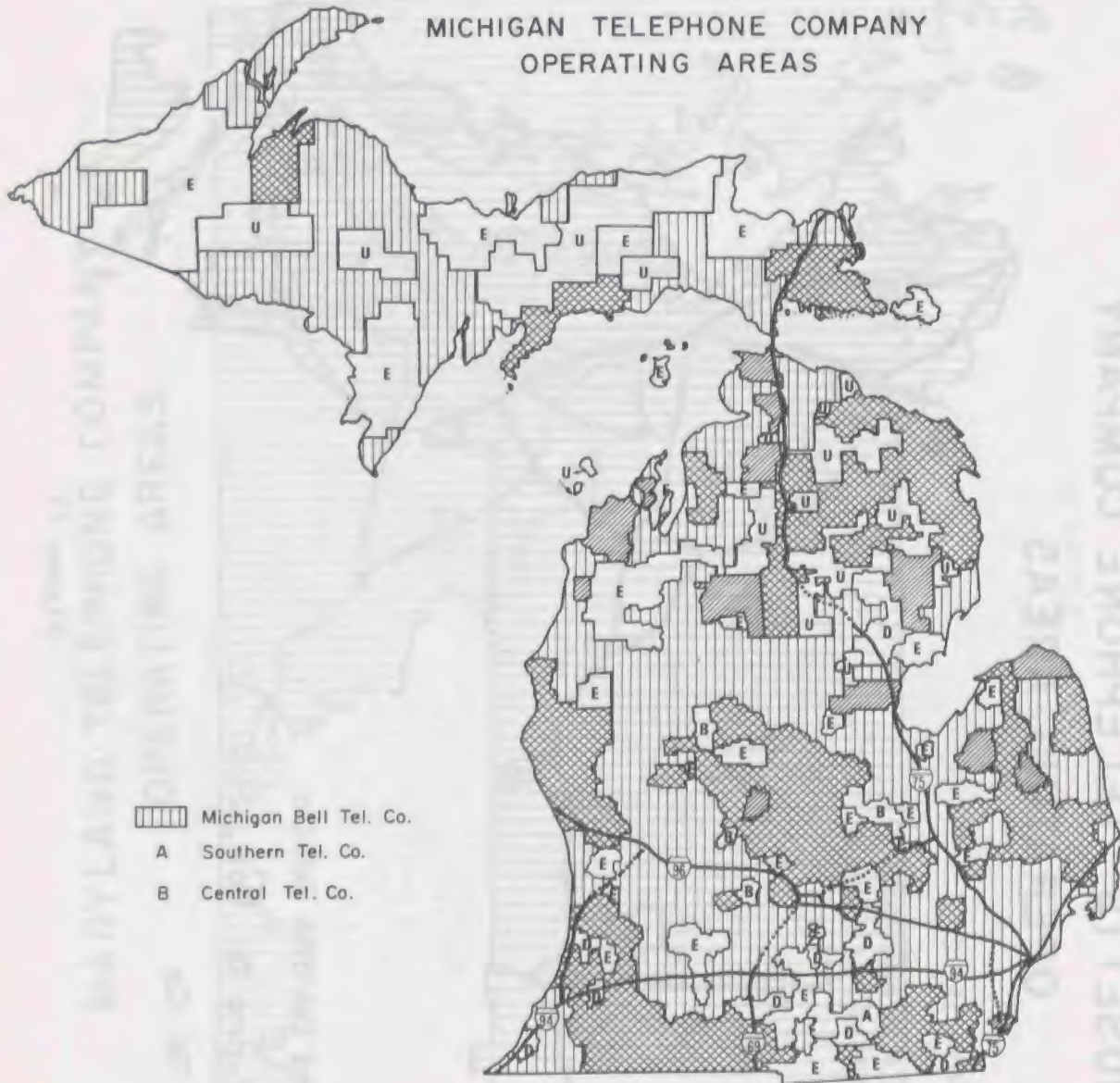
MASSACHUSETTS TELEPHONE COMPANY  
OPERATING AREAS



- ▨ New England Tel. and Tel. Co.
- A Granby Tel. and Tel. Co.
- B Richmond Tel. Co.

Figure 27

MICHIGAN TELEPHONE COMPANY  
OPERATING AREAS




-  Michigan Bell Tel. Co.
- A Southern Tel. Co.
- B Central Tel. Co.

Figure 28



# MINNESOTA TELEPHONE COMPANY OPERATING AREAS

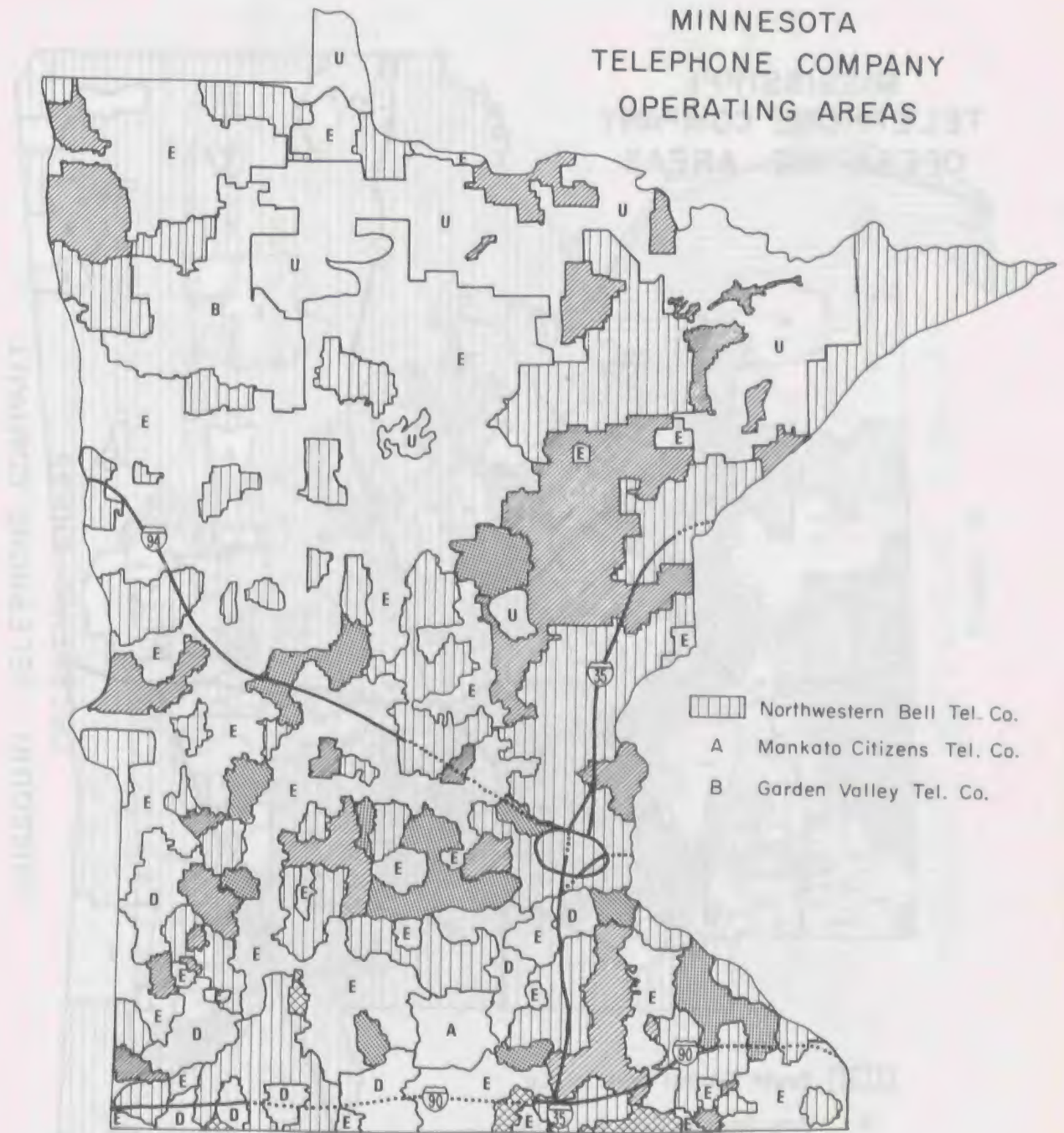


Figure 29



MISSISSIPPI  
TELEPHONE COMPANY  
OPERATING AREAS

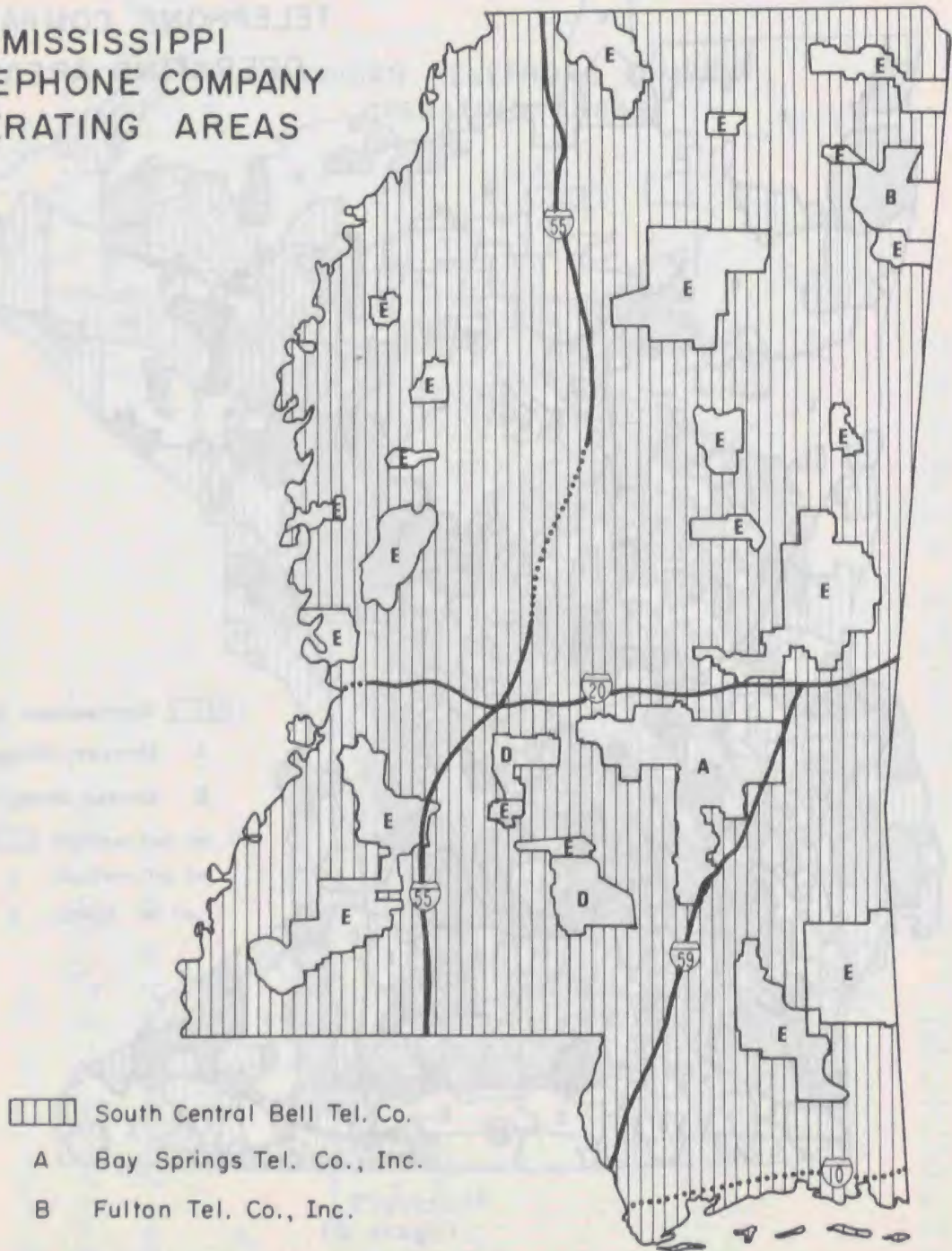


Figure 30

MISSOURI TELEPHONE COMPANY  
OPERATING AREAS

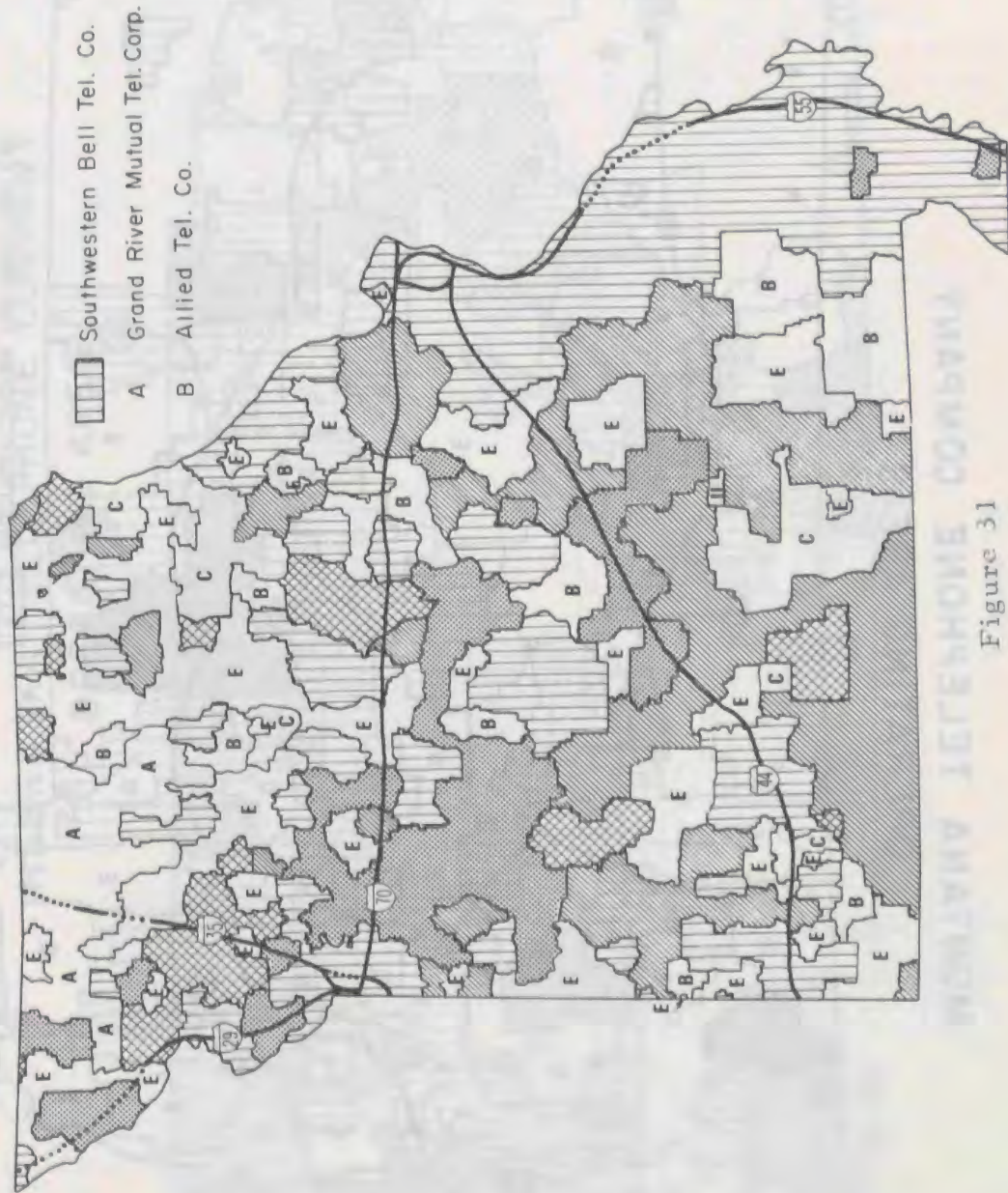


Figure 31



# MONTANA TELEPHONE COMPANY OPERATING AREAS

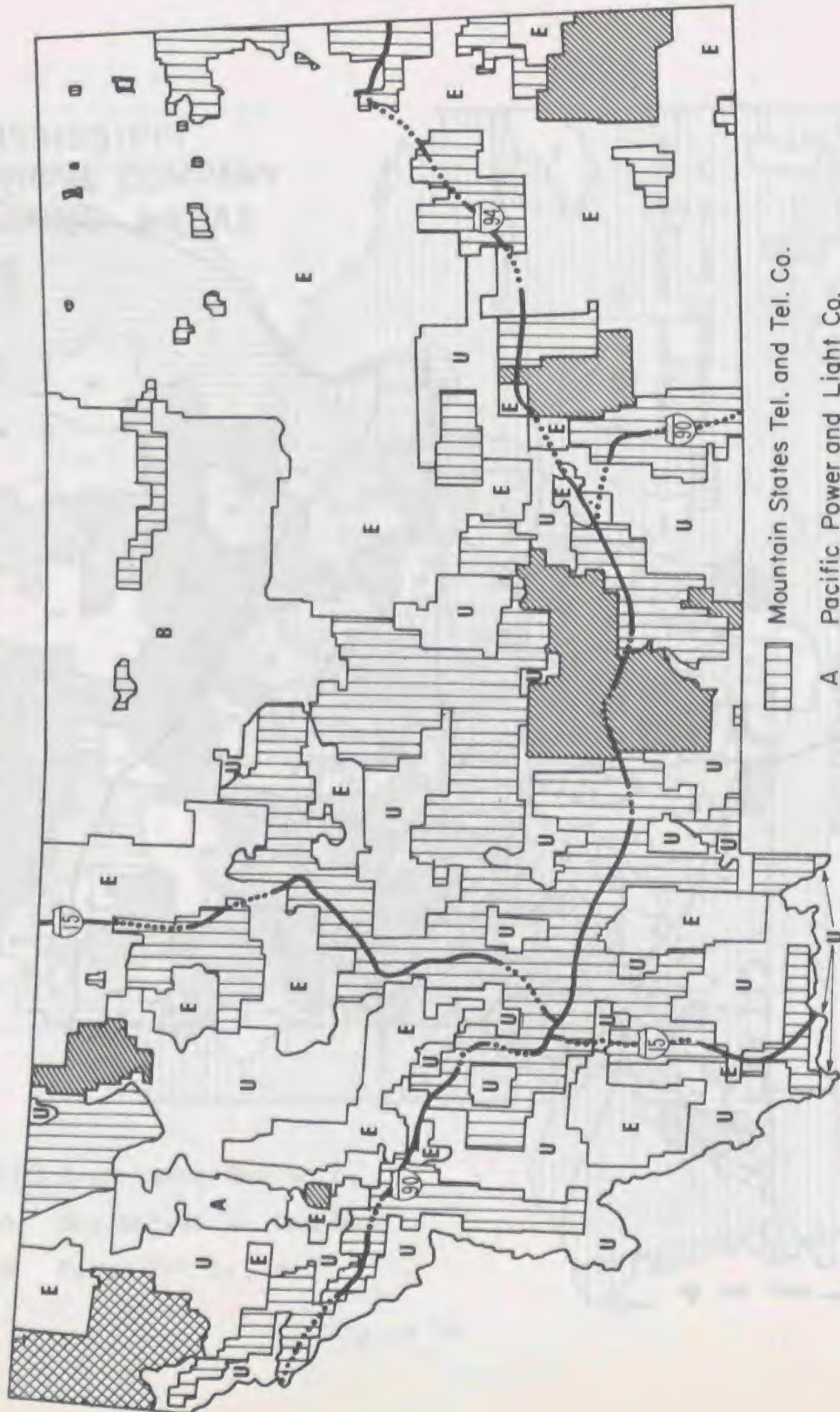
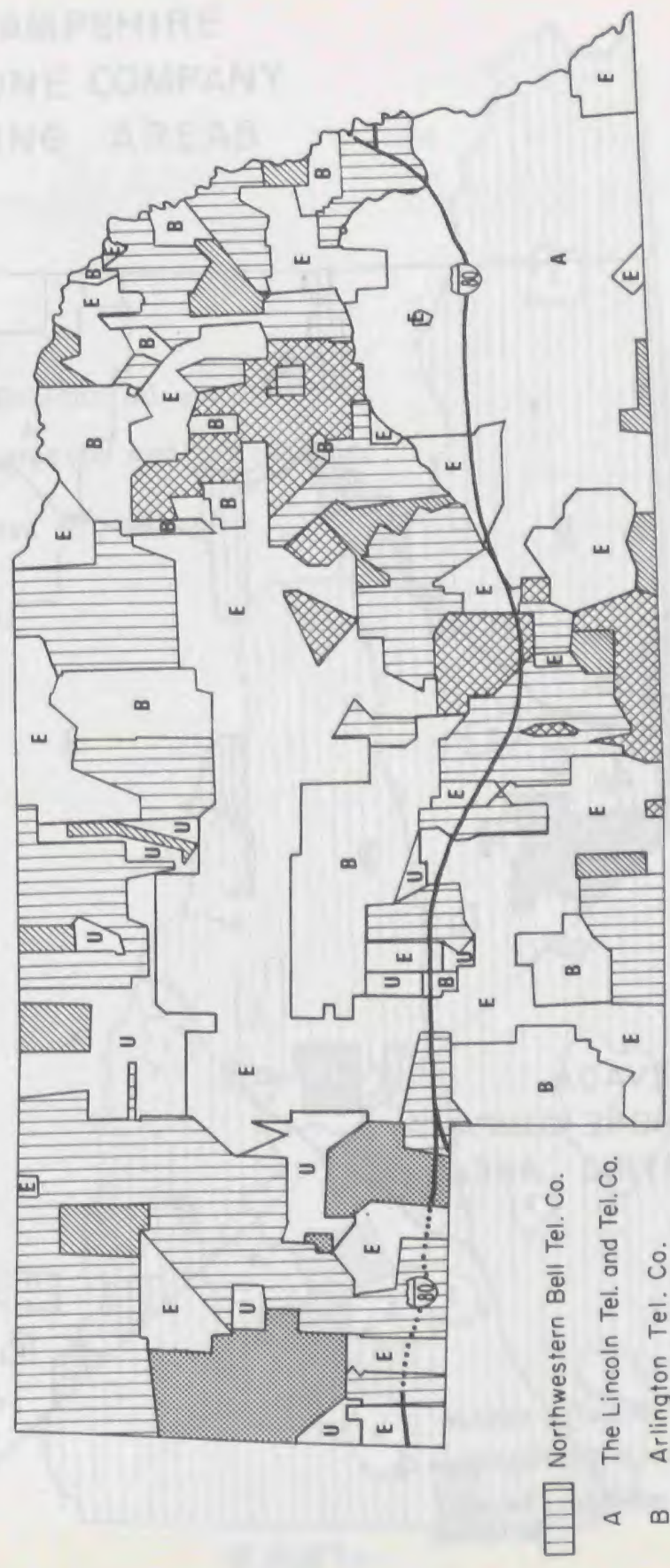


Figure 32

NEW HAMPSHIRE  
TELEPHONE COMPANY  
OPERATING AREAS

NEBRASKA TELEPHONE COMPANY  
OPERATING AREAS



Northwestern Bell Tel. Co.

A The Lincoln Tel. and Tel. Co.

B Arlington Tel. Co.

Figure 33



NEVADA  
TELEPHONE COMPANY  
OPERATING AREAS


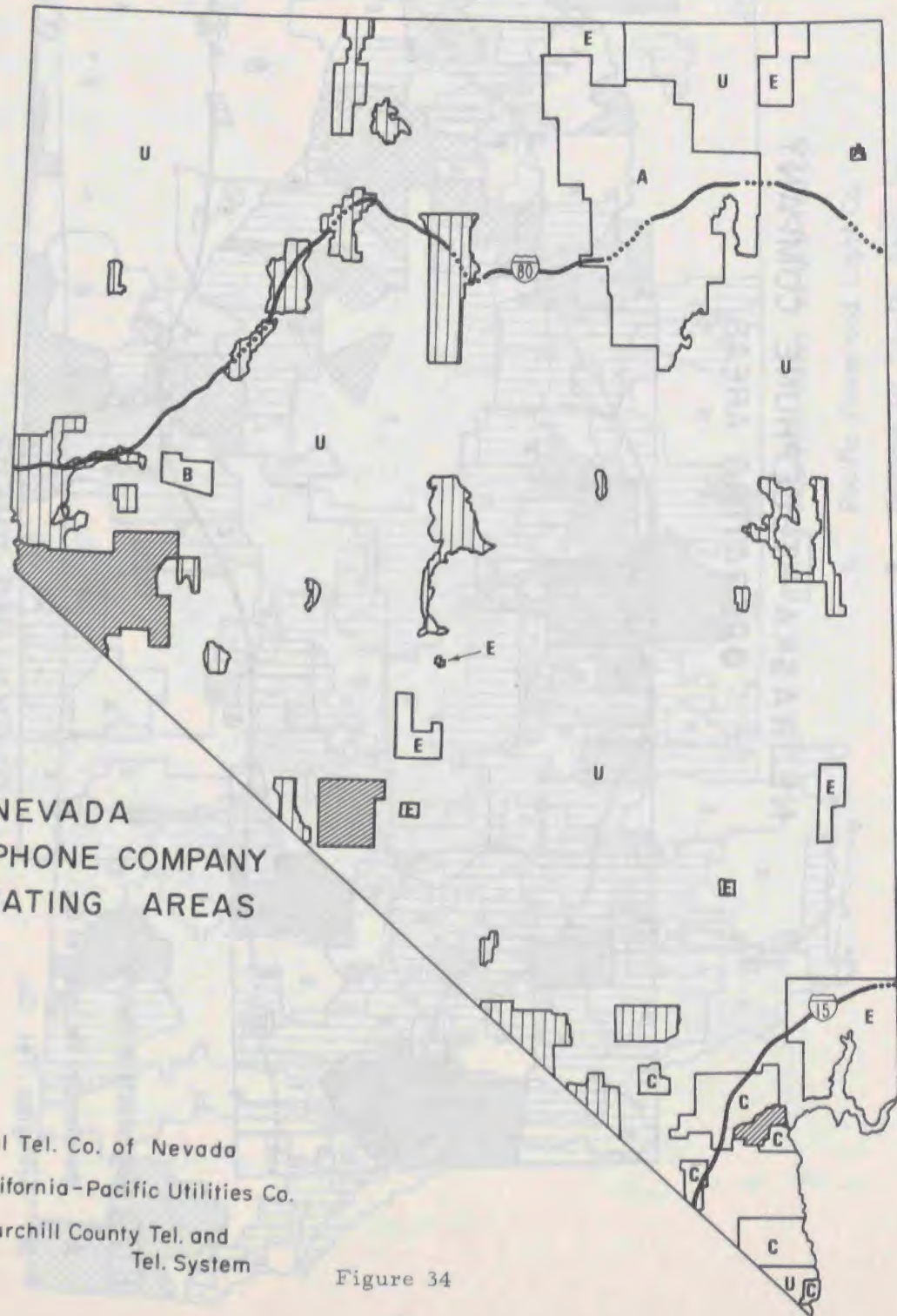

-  Bell Tel. Co. of Nevada
- A California-Pacific Utilities Co.
- B Churchill County Tel. and Tel. System

Figure 34



# NEW HAMPSHIRE TELEPHONE COMPANY OPERATING AREAS

-  New England Tel. and Tel. Co.
- A Kearsarge (Tel. and Data Systems, Inc.)
- B Chester Tel. Co.

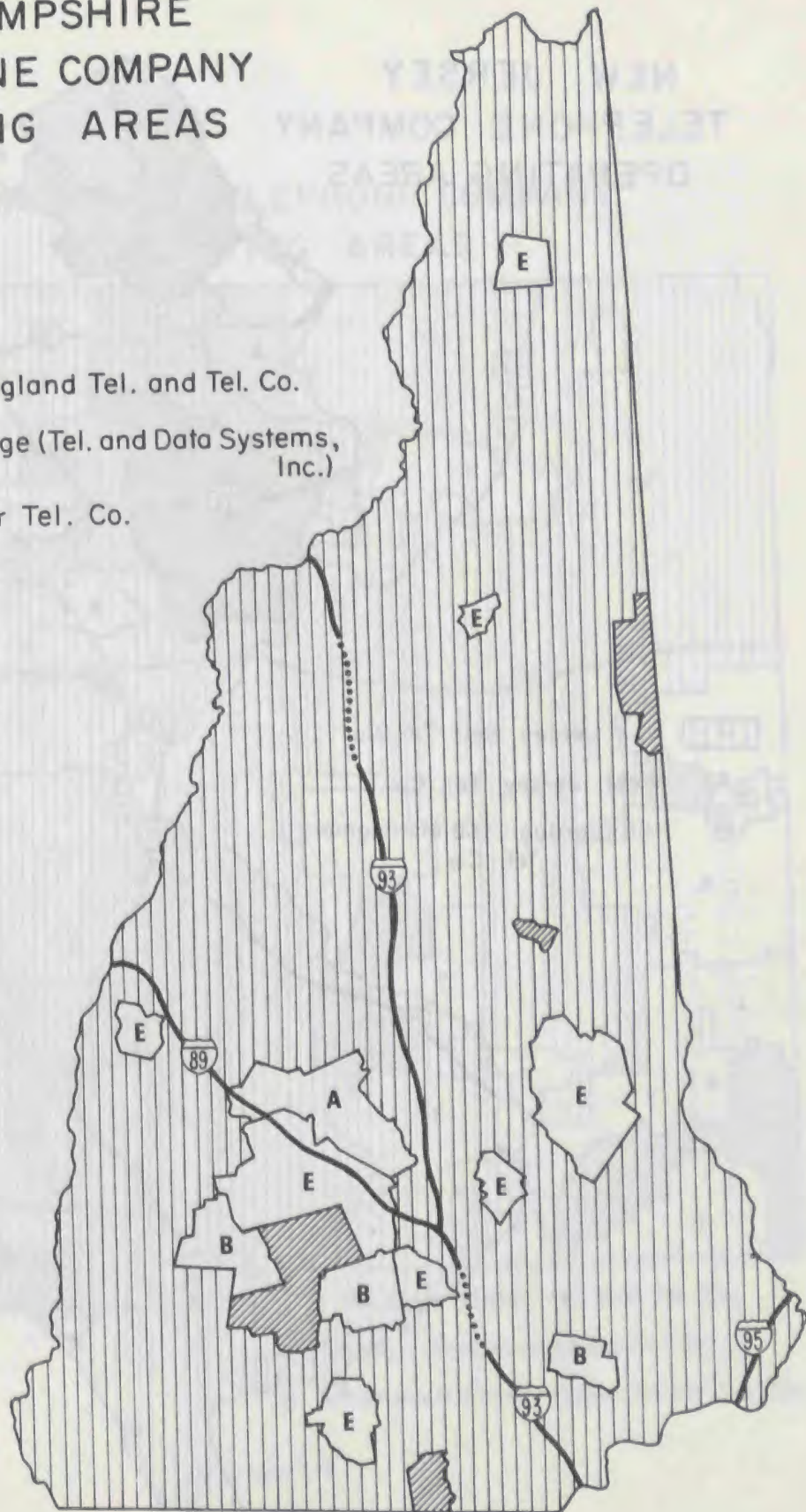





Figure 35  
45



# NEW JERSEY TELEPHONE COMPANY OPERATING AREAS

-  New Jersey Bell Tel. Co.
- A  West Jersey Tel. Co.
- B  Hillsborough and Montgomery  
Tel. Co.

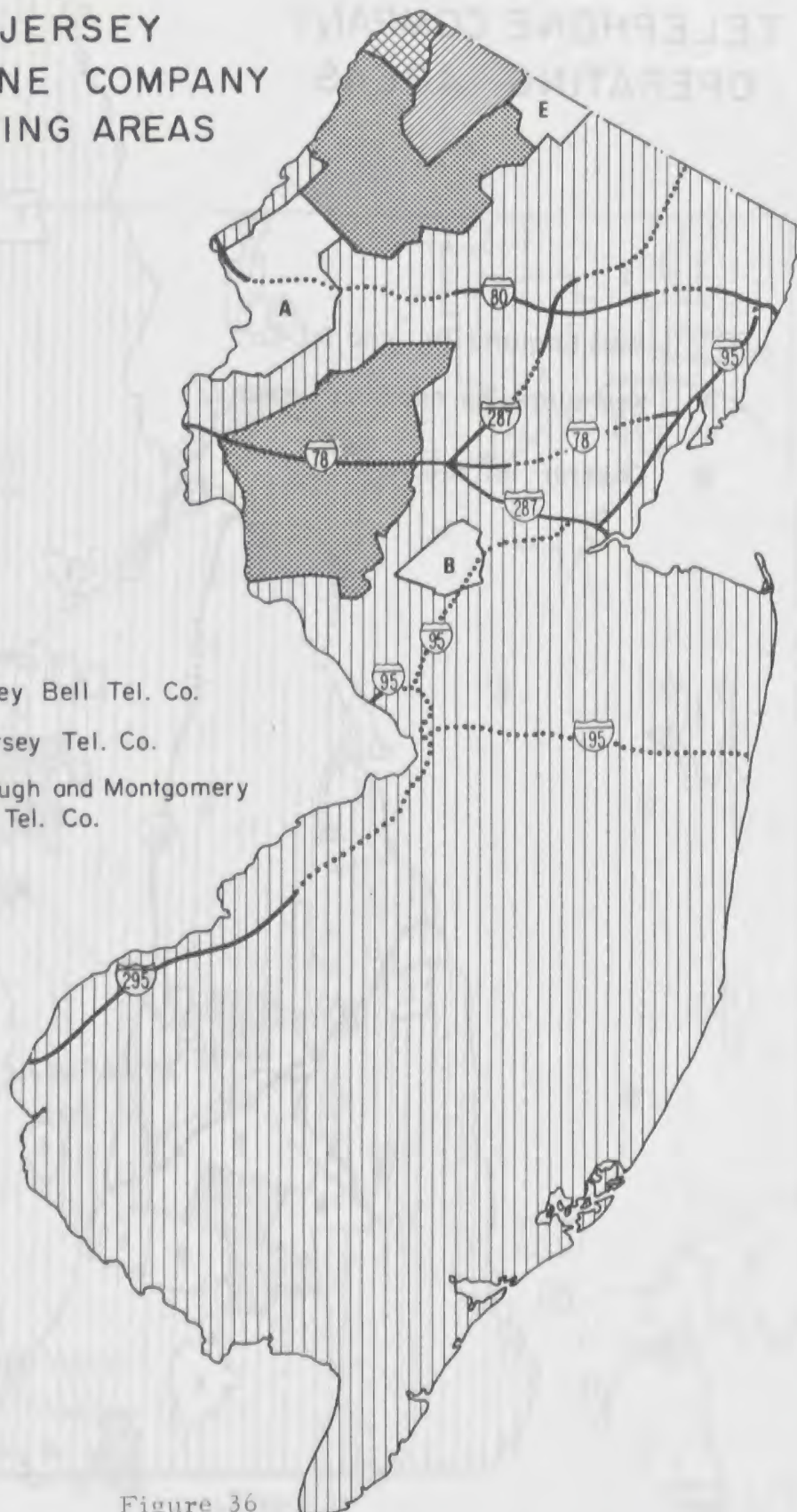


Figure 36

# NEW MEXICO TELEPHONE COMPANY OPERATING AREAS

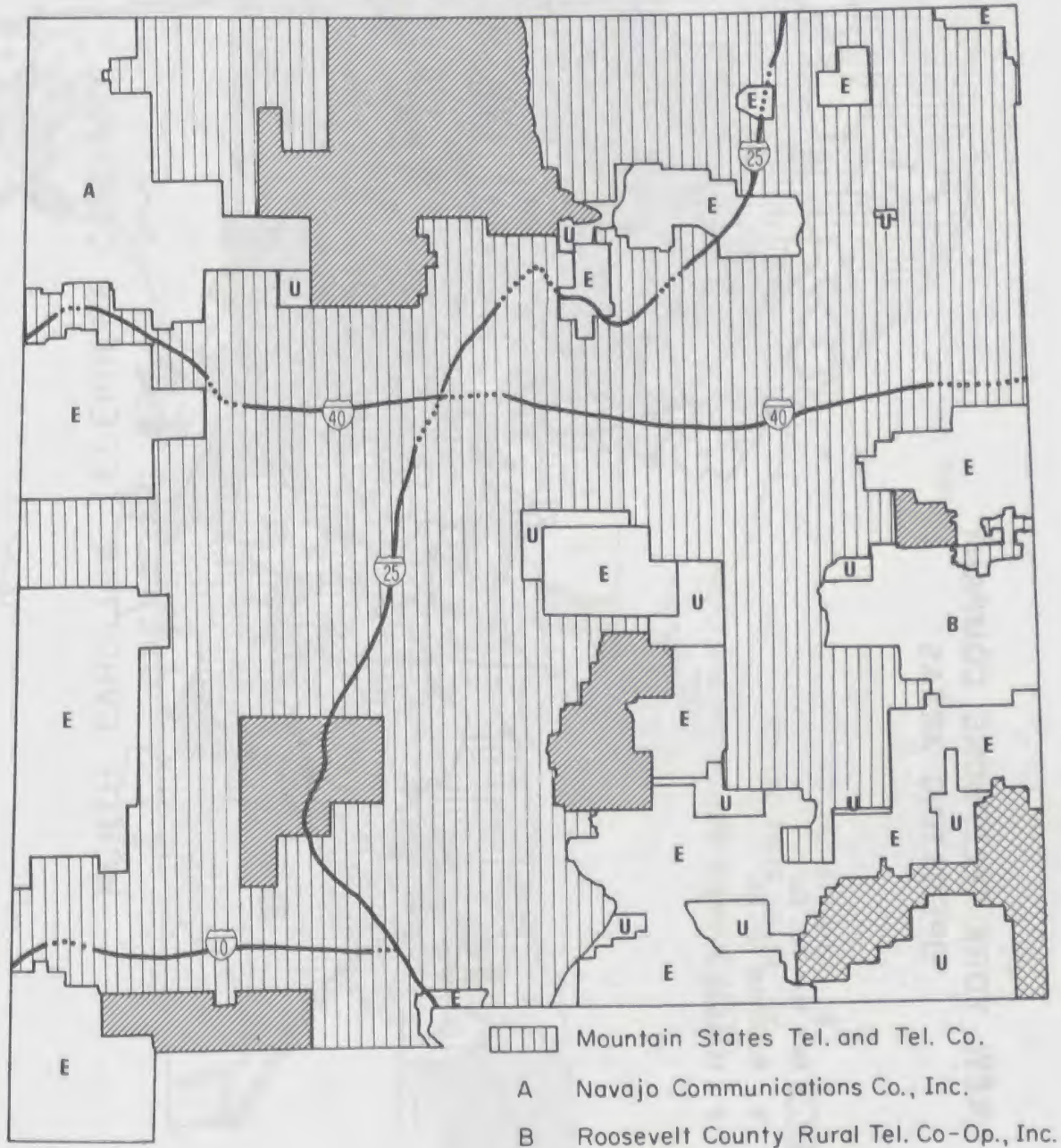





Figure 37



# NEW YORK TELEPHONE COMPANY OPERATING AREAS

-  New York Tel. Co.
- A  Rochester Tel. Co.
- B  Highland Tel. Co.

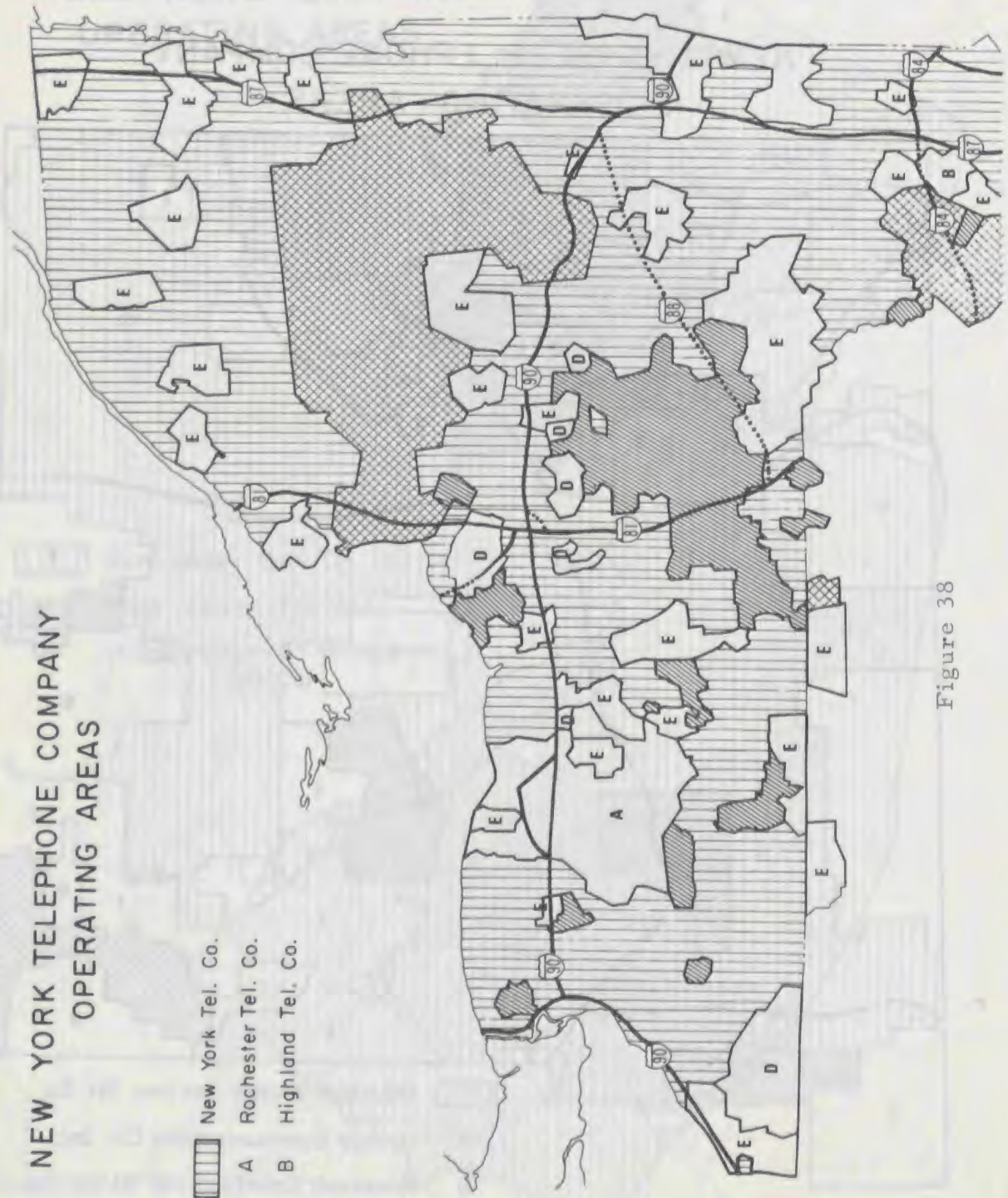
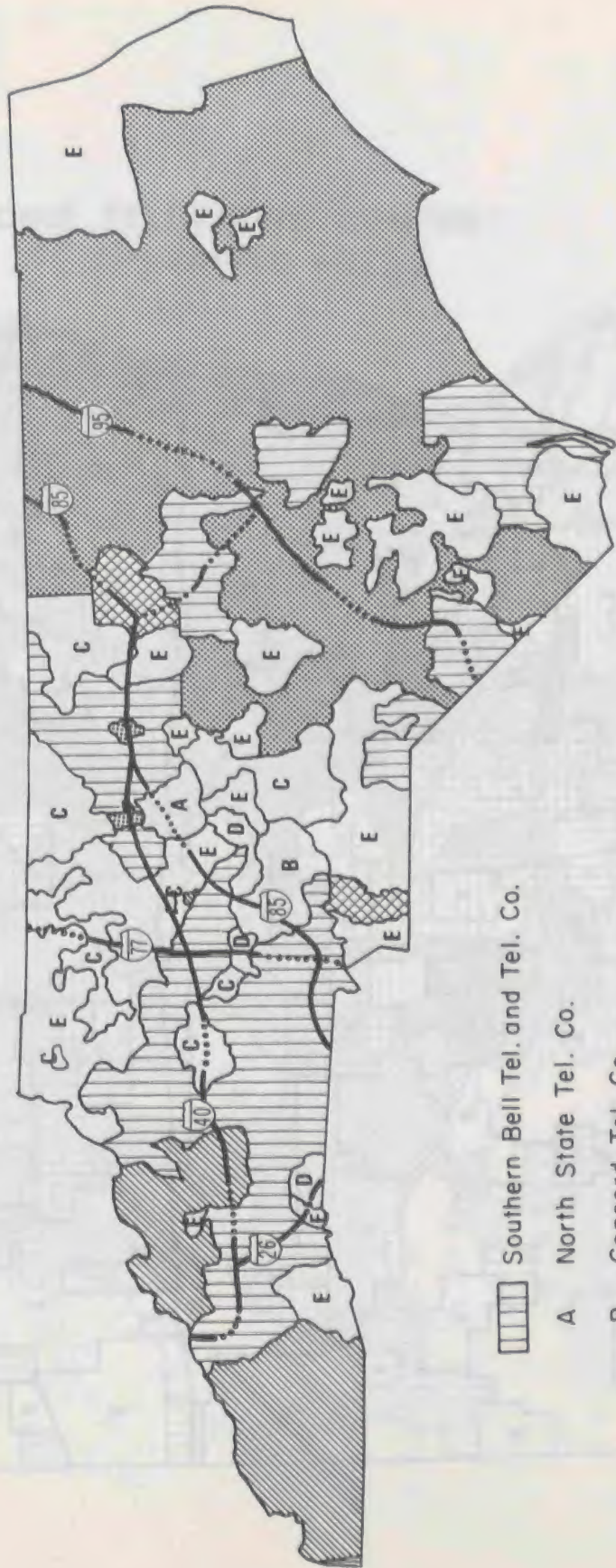


Figure 38



# NORTH CAROLINA TELEPHONE COMPANY OPERATING AREAS

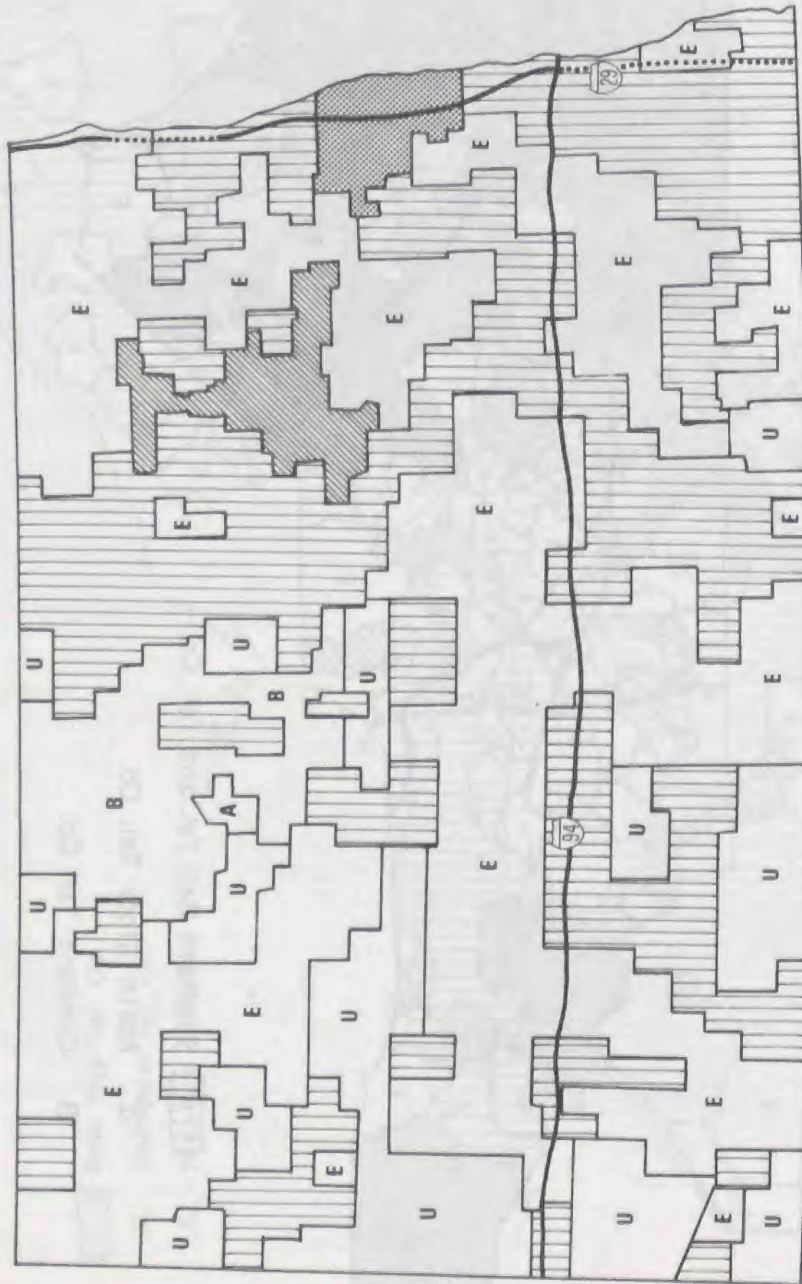


- Southern Bell Tel. and Tel. Co.
- A North State Tel. Co.
- B Concord Tel. Co.

Figure 39



NORTH DAKOTA TELEPHONE COMPANY  
OPERATING AREAS



- ▨ Northwestern Bell Tel. Co.
- A Northern States Power Co.
- B Souris River Tel. Mutual Aid Corp.

Figure 40

# OHIO TELEPHONE COMPANY OPERATING AREAS

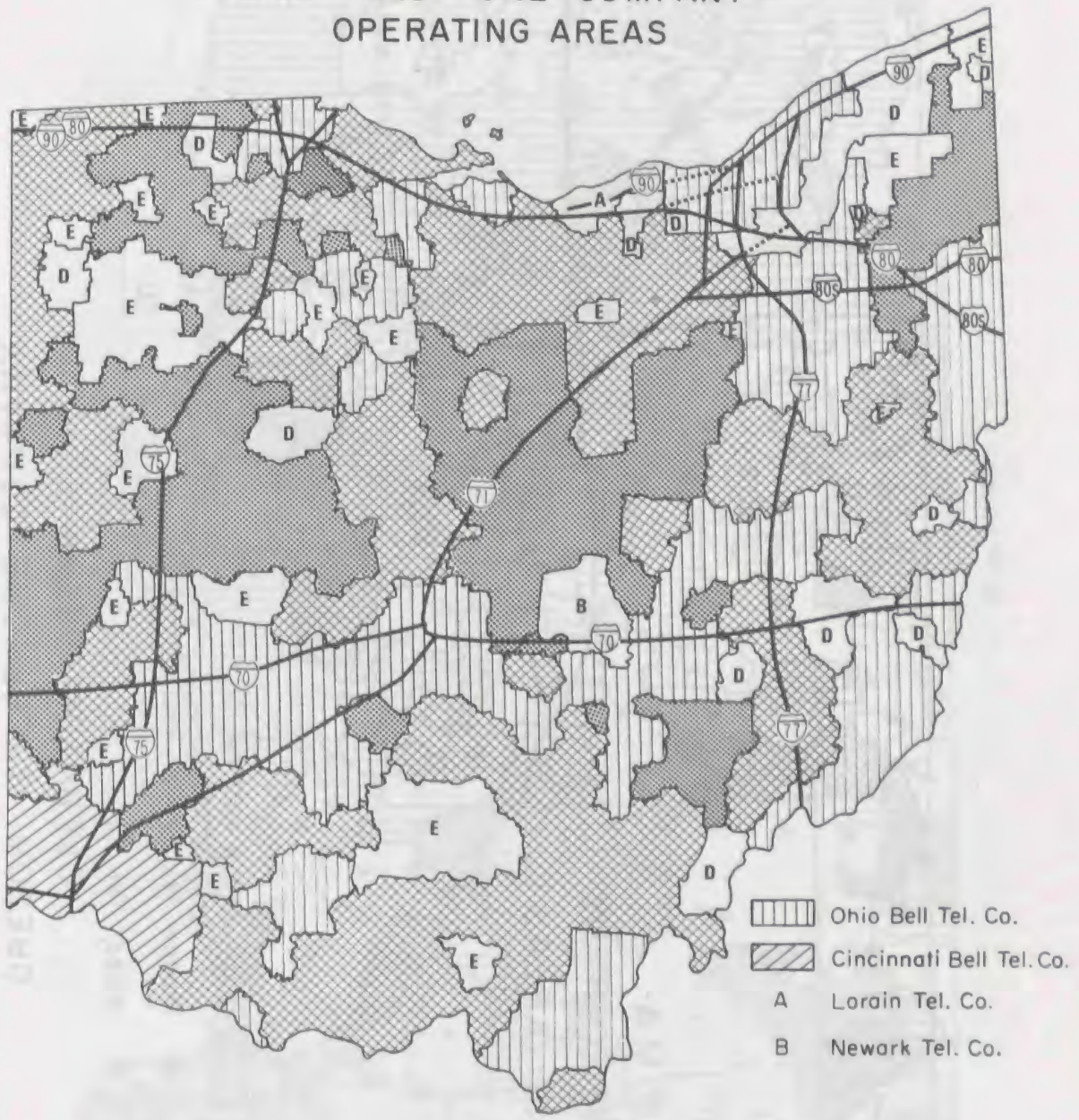
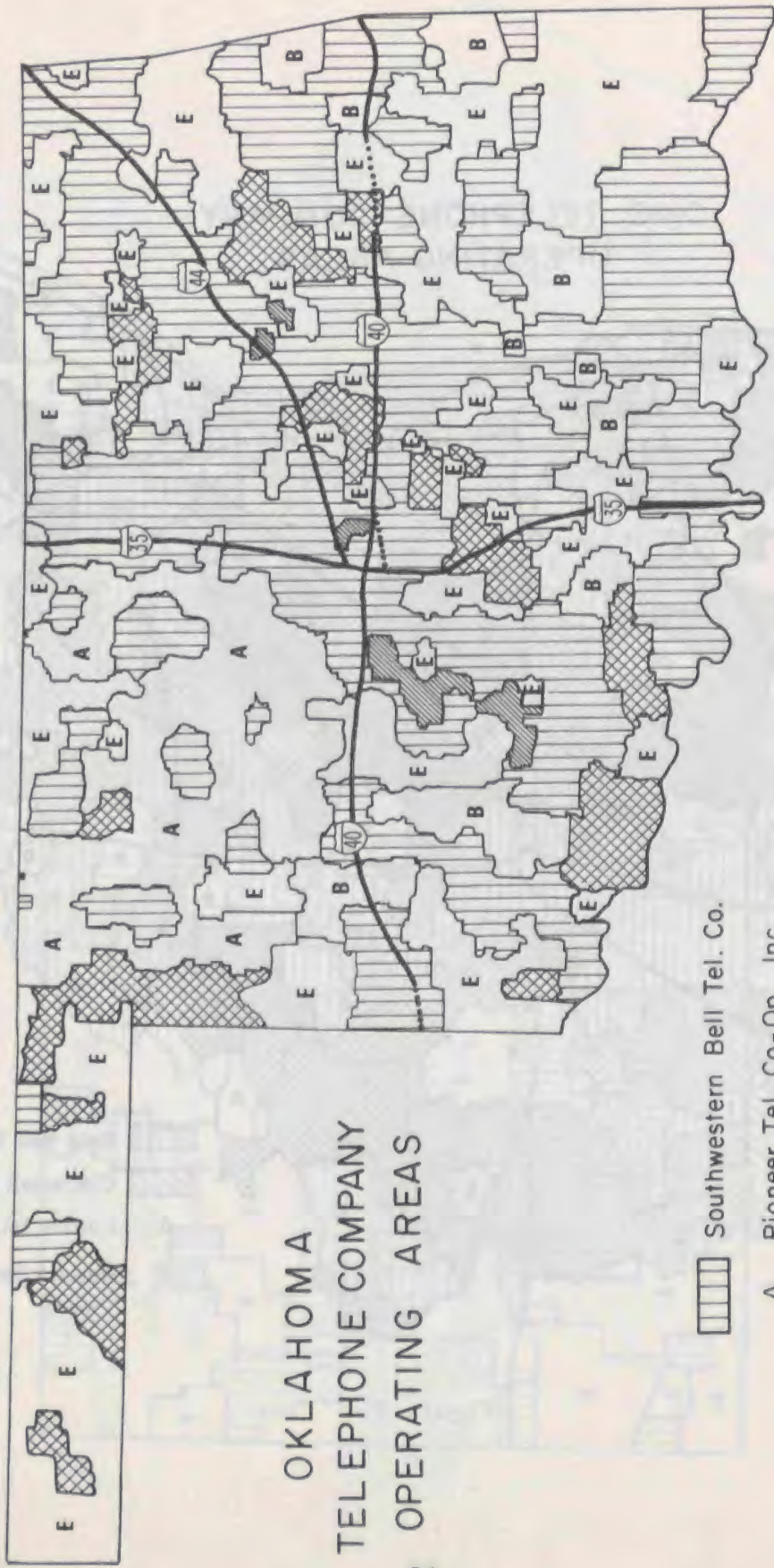


Figure 41





OKLAHOMA  
 TELEPHONE COMPANY  
 OPERATING AREAS




-  Southwestern Bell Tel. Co.
-  A Pioneer Tel. Co-Op., Inc.
-  B Allied Tel. Co.

Figure 42

OREGON TELEPHONE COMPANY  
OPERATING AREAS

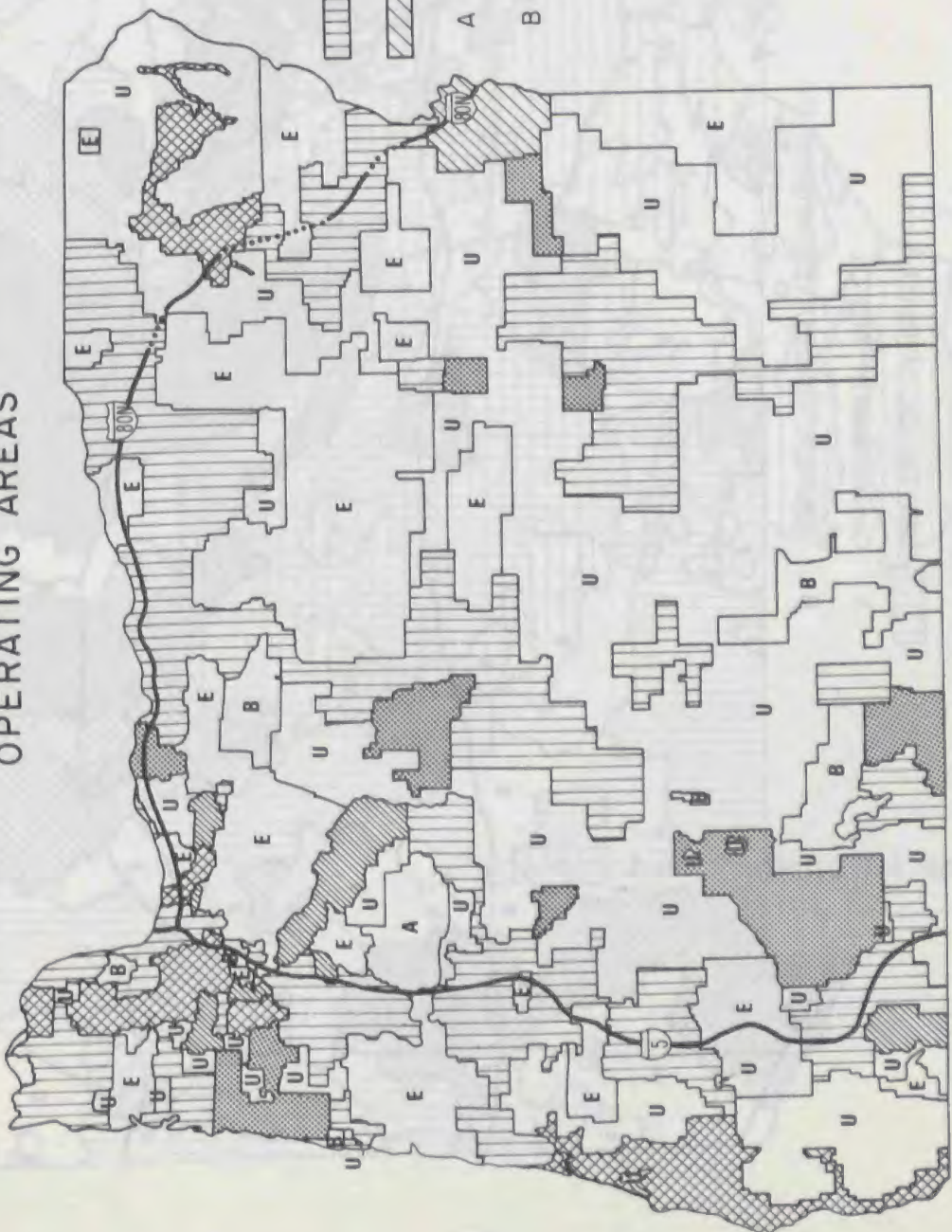
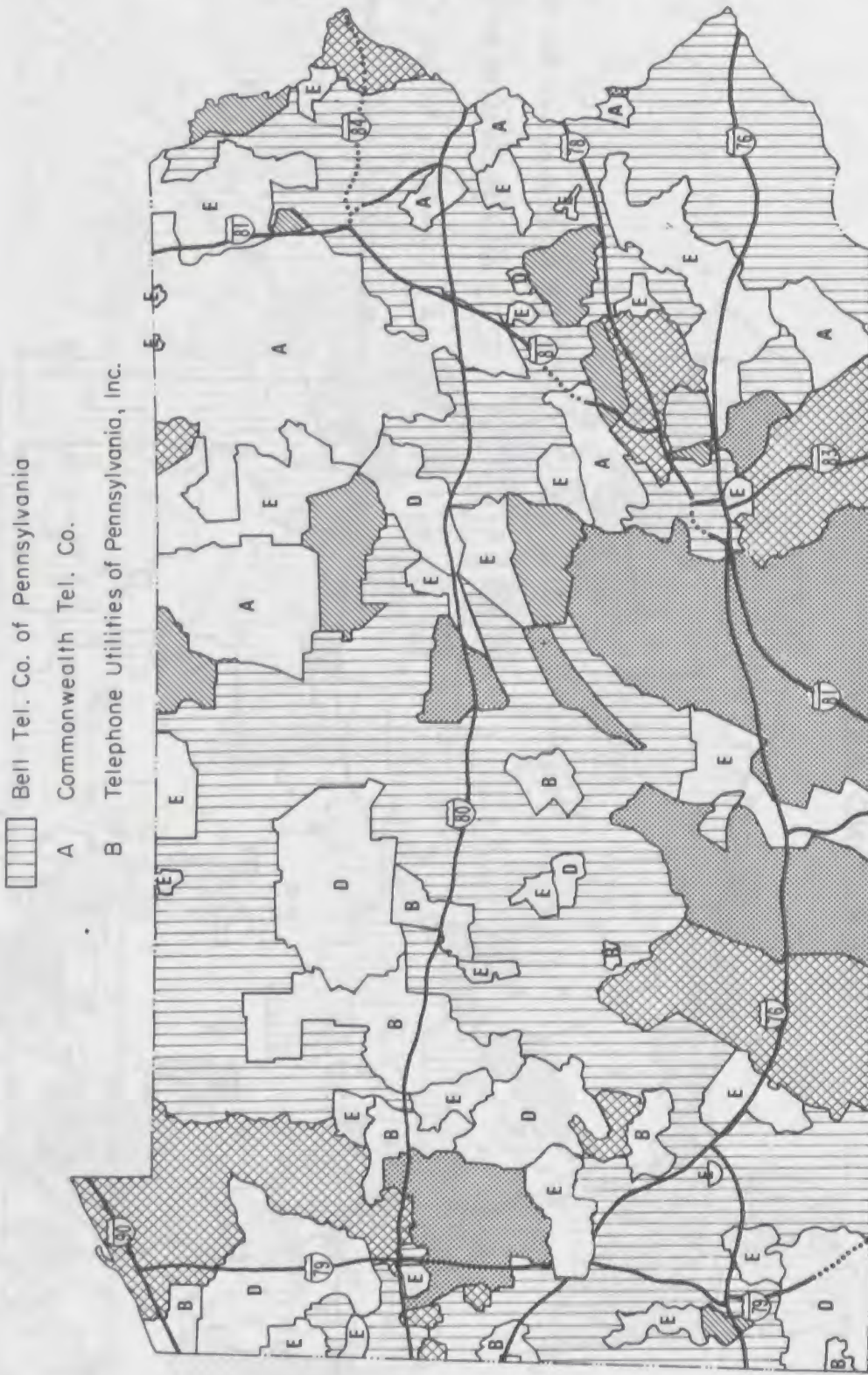


Figure 43



# PENNSYLVANIA TELEPHONE COMPANY OPERATING AREAS



UNIVERSITY MICROFILMS INTERNATIONAL

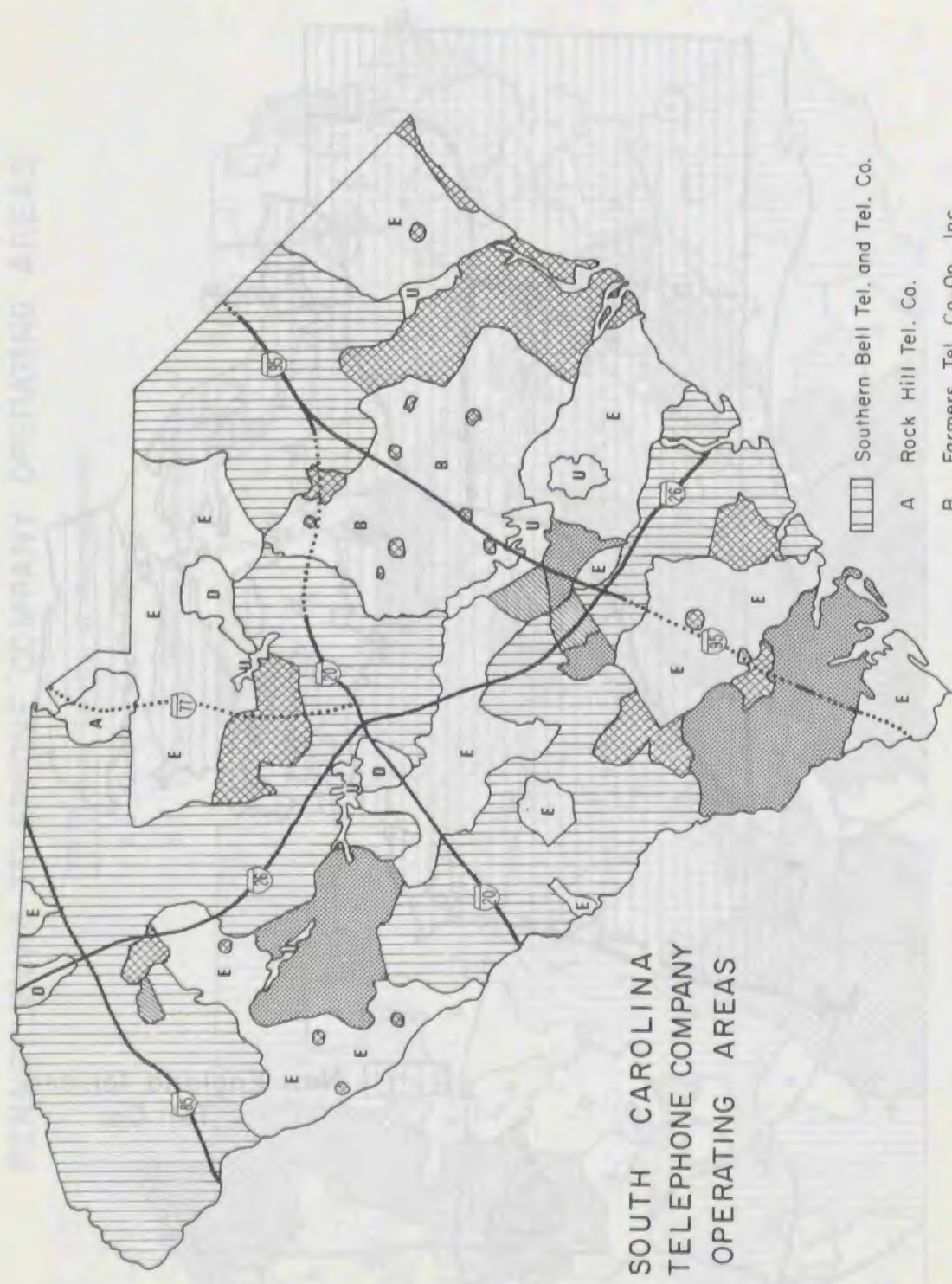
Figure 44

# RHODE ISLAND TELEPHONE COMPANY OPERATING AREAS



Figure 45



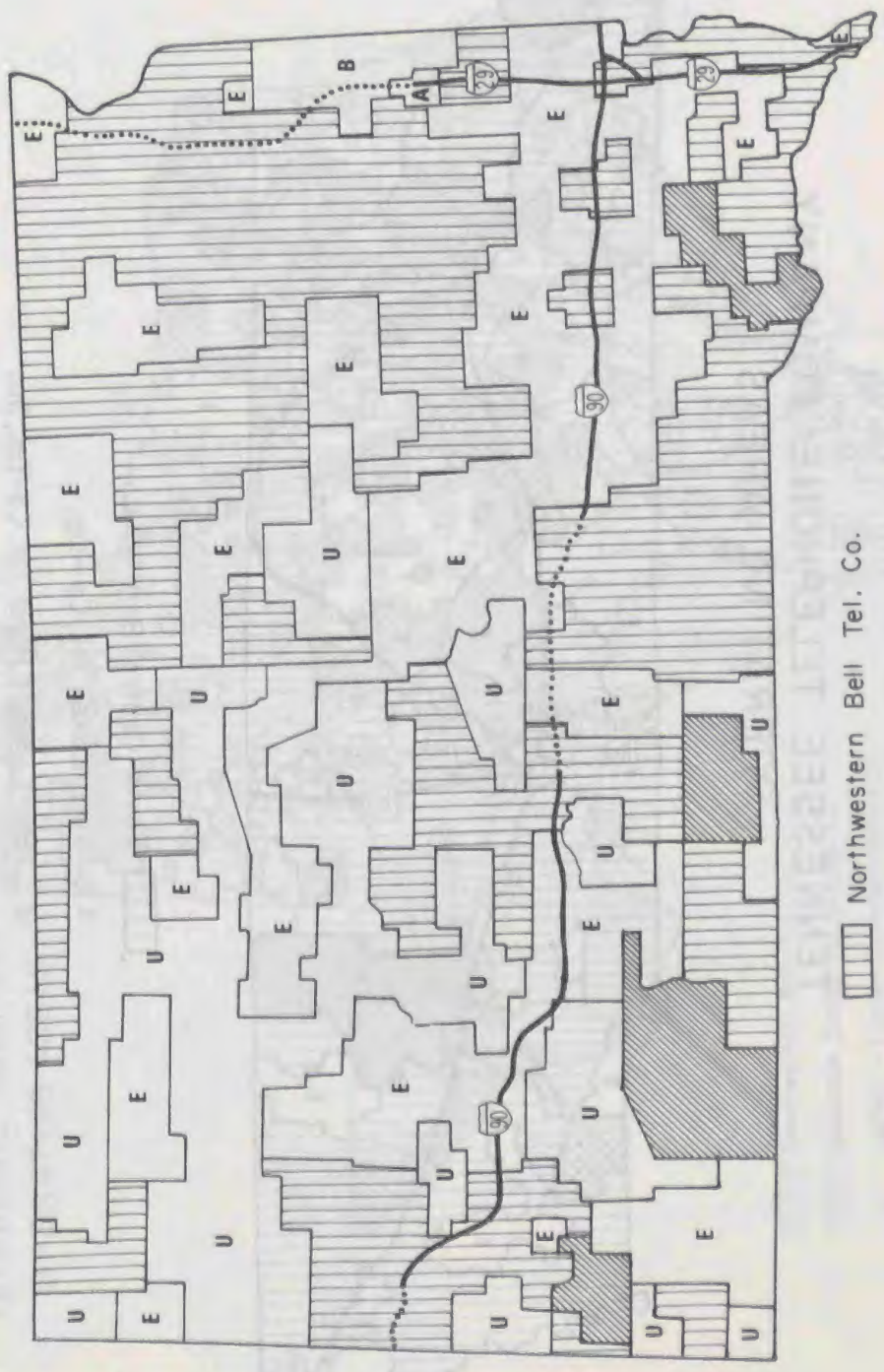


SOUTH CAROLINA  
TELEPHONE COMPANY  
OPERATING AREAS

- ▤ Southern Bell Tel. and Tel. Co.
- A Rock Hill Tel. Co.
- B Farmers Tel. Co-Op., Inc.

Figure 46

SOUTH DAKOTA TELEPHONE COMPANY  
OPERATING AREAS



Northwestern Bell Tel. Co.

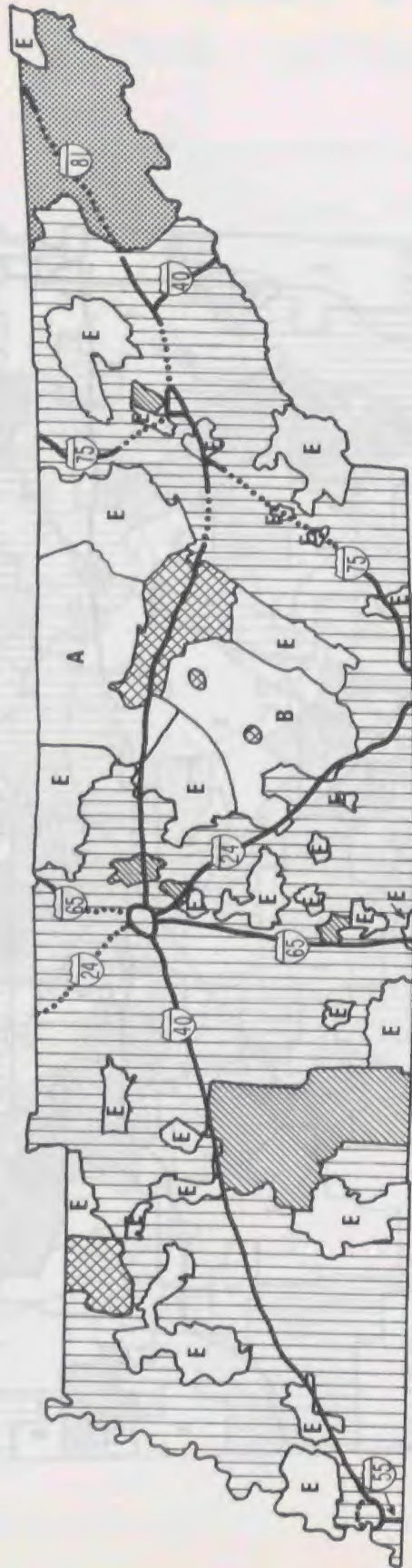
A City of Brookings Municipal Tel. Dept.

B Deuel Tel. Co - Op. Assn.

Figure 47



# TENNESSEE TELEPHONE COMPANY OPERATING AREAS






-  South Central Bell Tel. Co.
- A**  Twin Lakes Tel. Co - Op.
- B**  Ben Lomand Rural Tel. Co - Op., Inc.

Figure 48

# TEXAS TELEPHONE COMPANY OPERATING AREAS

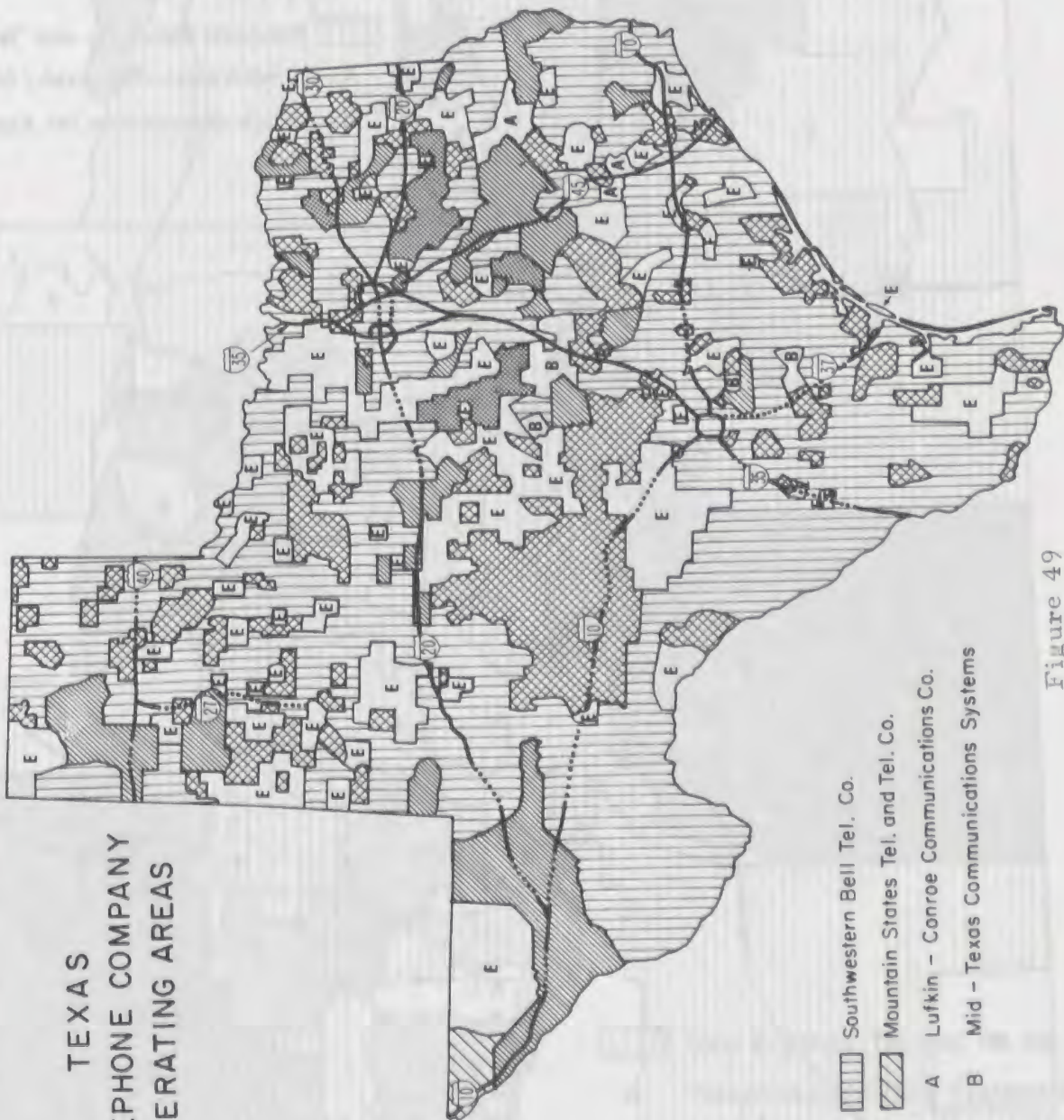


Figure 49



# UTAH TELEPHONE COMPANY OPERATING AREAS

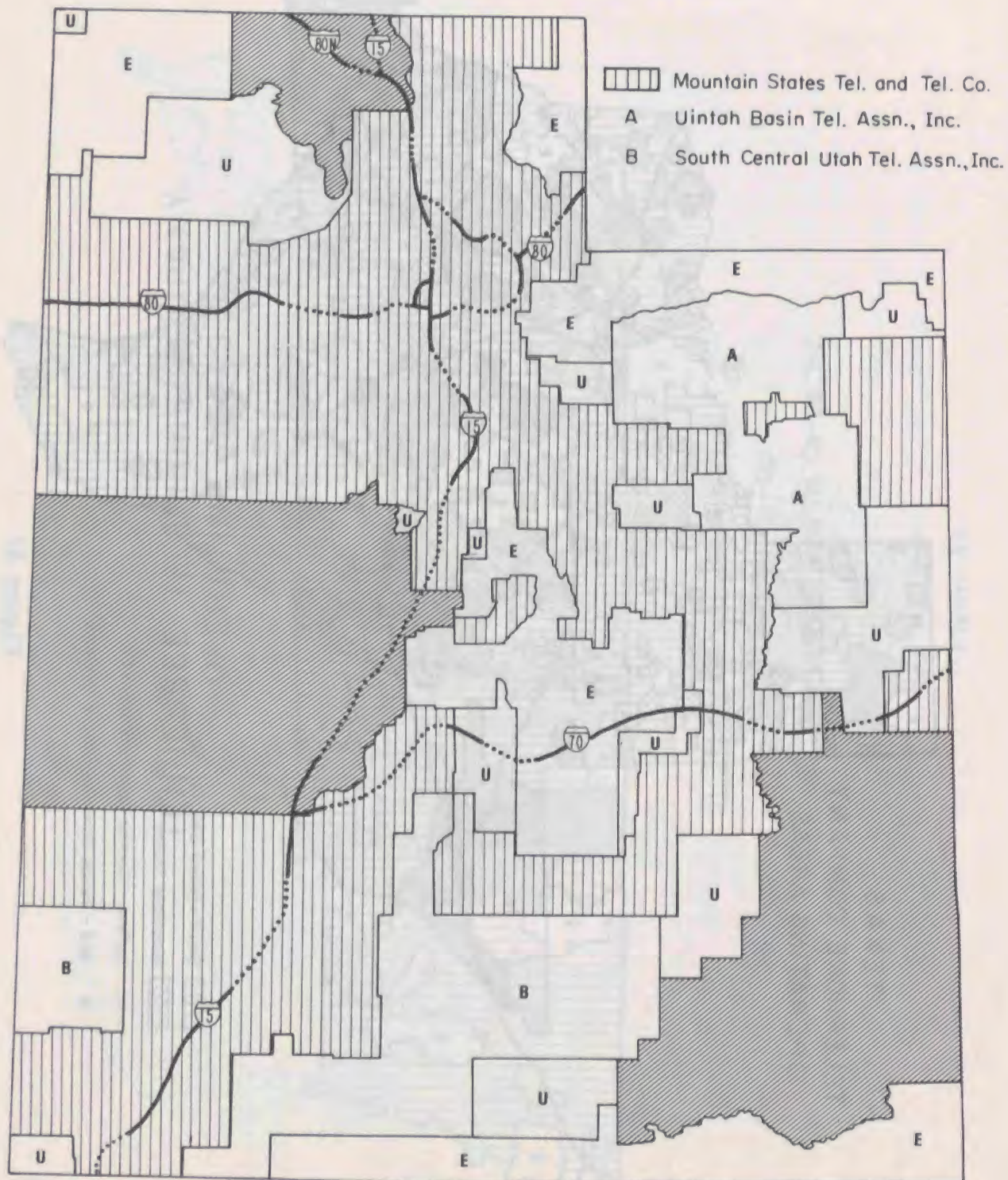


Figure 50



# VERMONT TELEPHONE COMPANY OPERATING AREAS

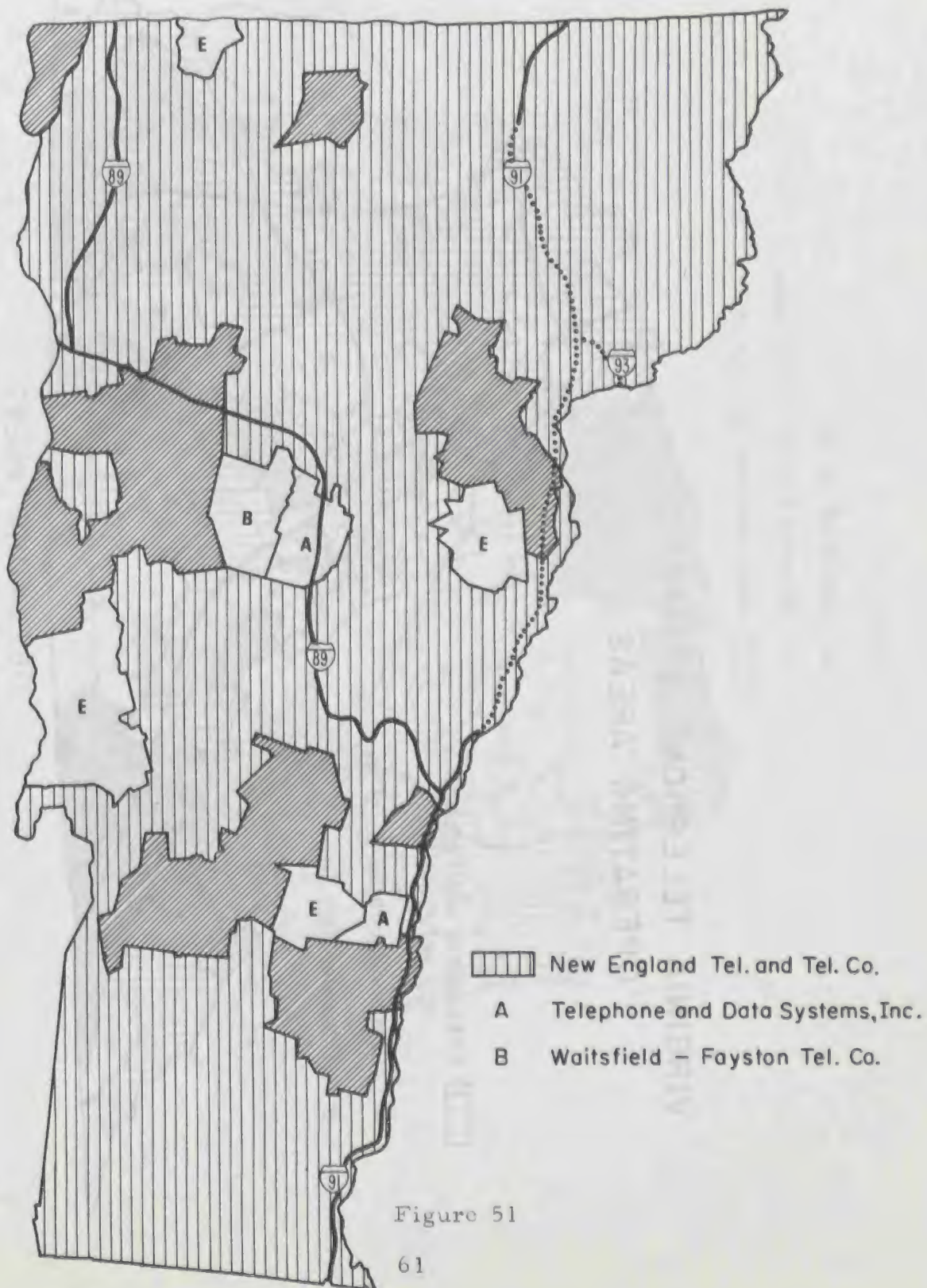
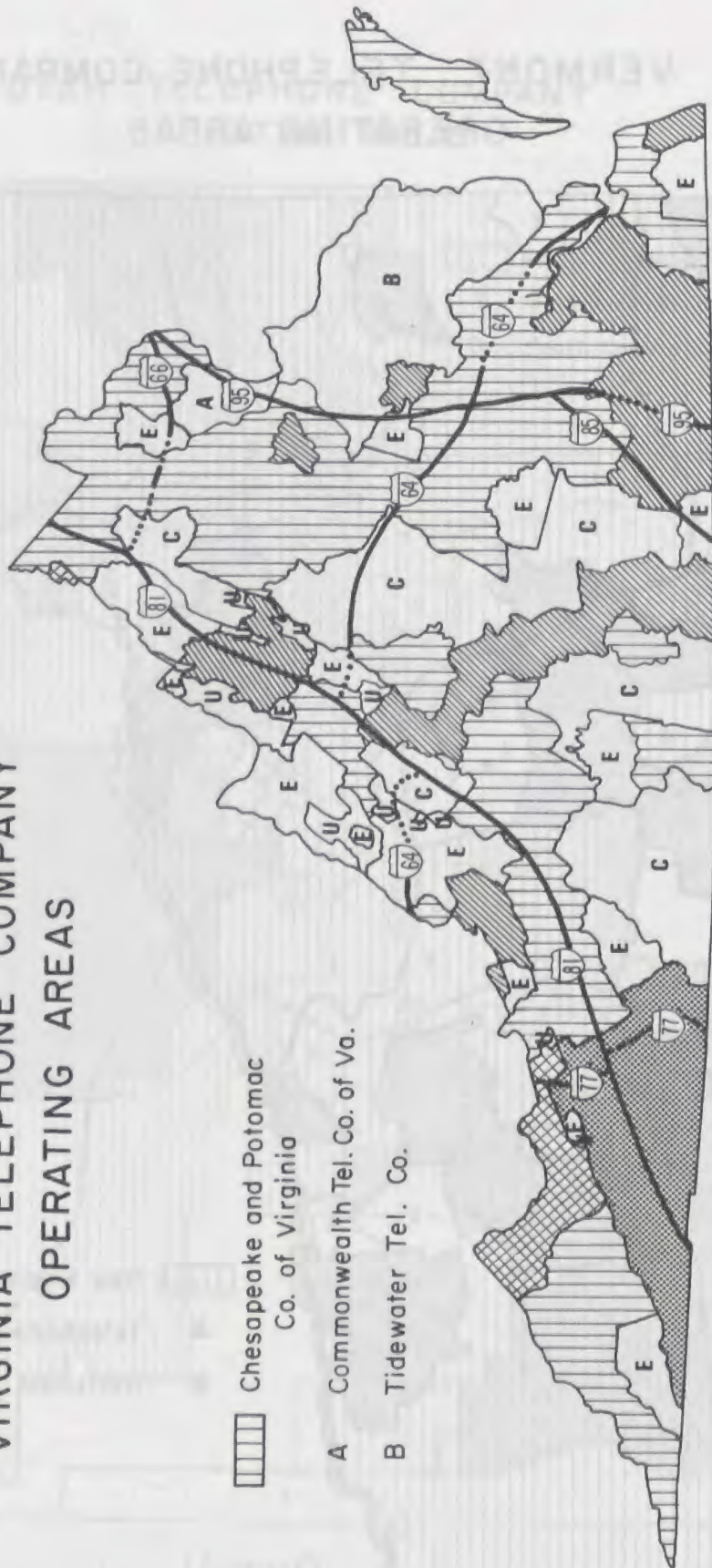


Figure 51



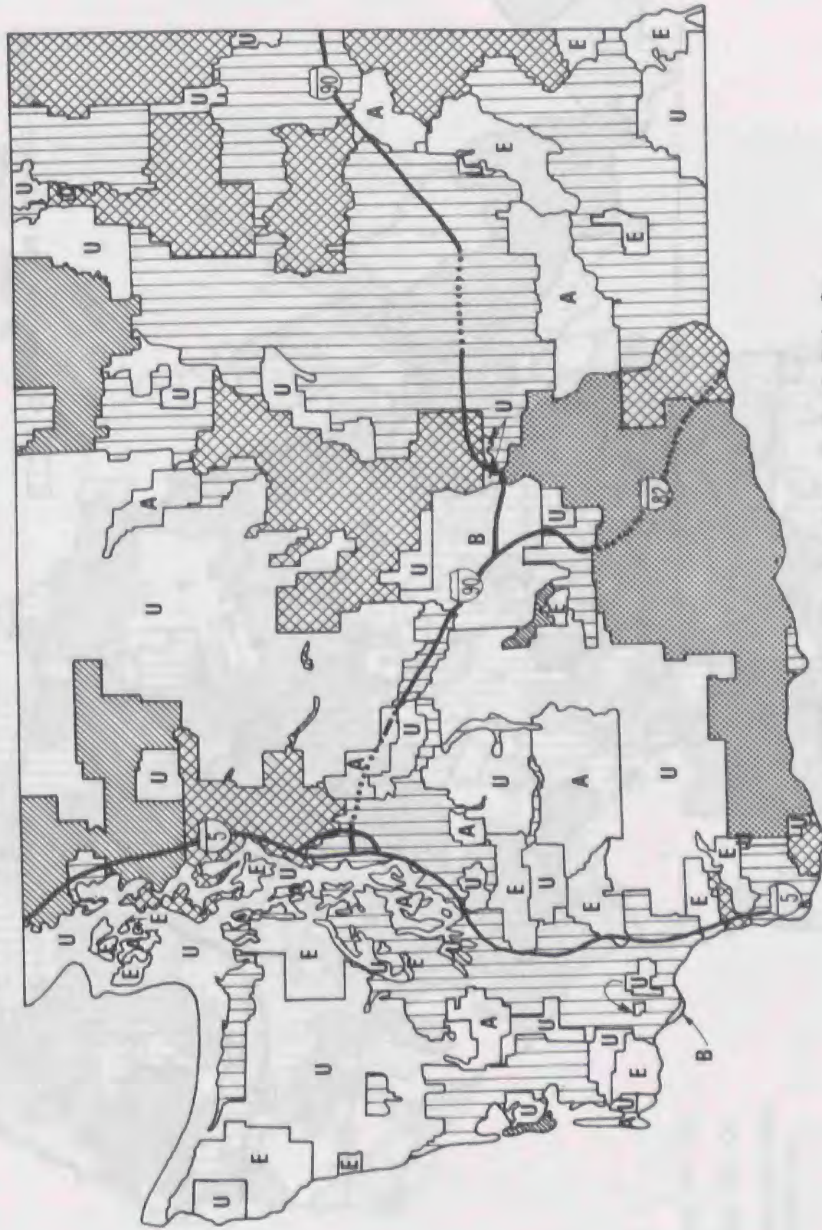
# VIRGINIA TELEPHONE COMPANY OPERATING AREAS



- ▤ Chesapeake and Potomac Co. of Virginia
- A Commonwealth Tel. Co. of Va.
- B Tidewater Tel. Co.

Figure 52

# WASHINGTON TELEPHONE COMPANY OPERATING AREAS



Pacific Northwest Bell Tel. Co.

A Telephone Utilities, Ilwaco, Wash.

B Ellensburg Tel. Co.

Figure 53



WEST VIRGINIA TELEPHONE COMPANY  
OPERATING AREAS

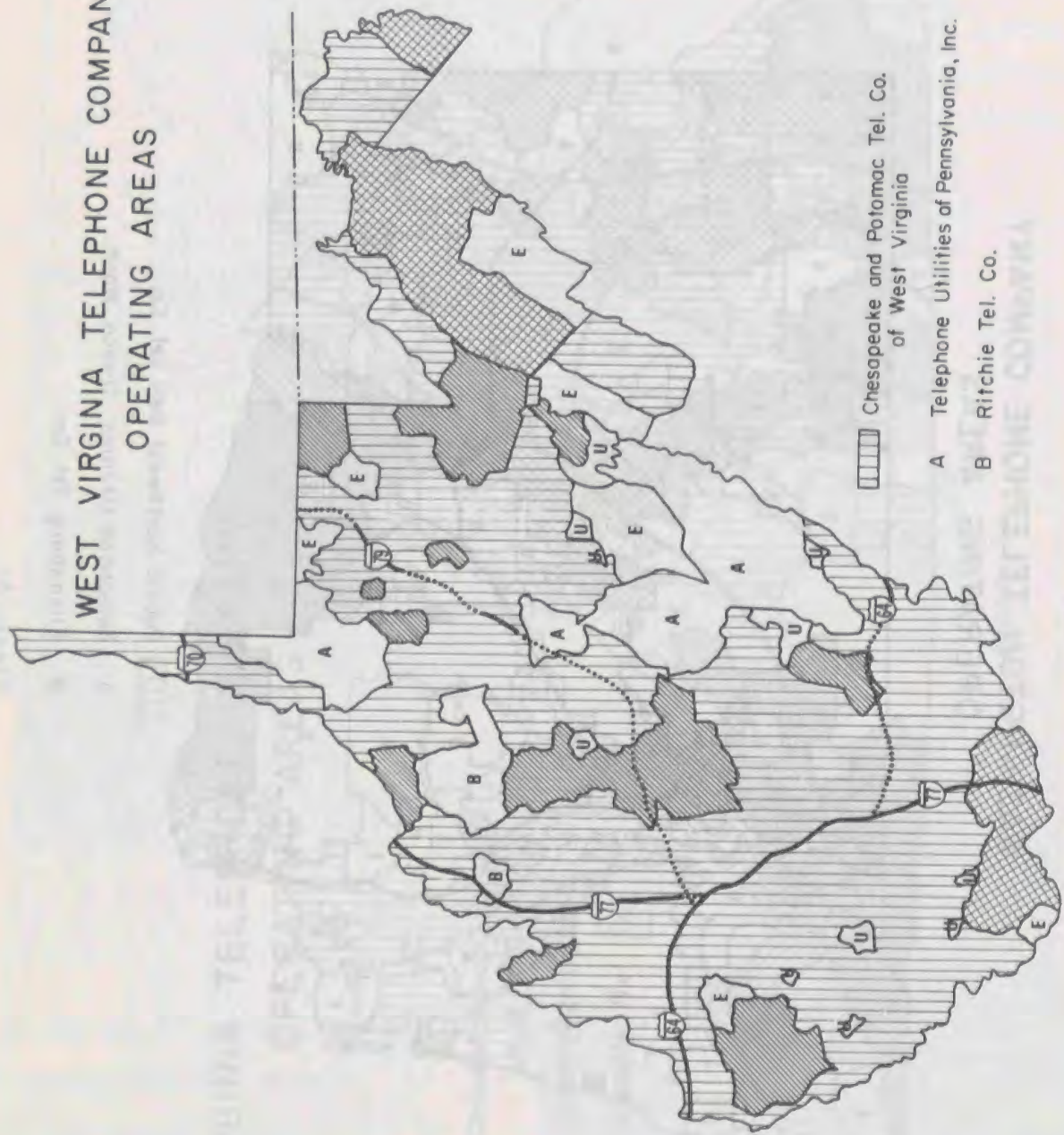
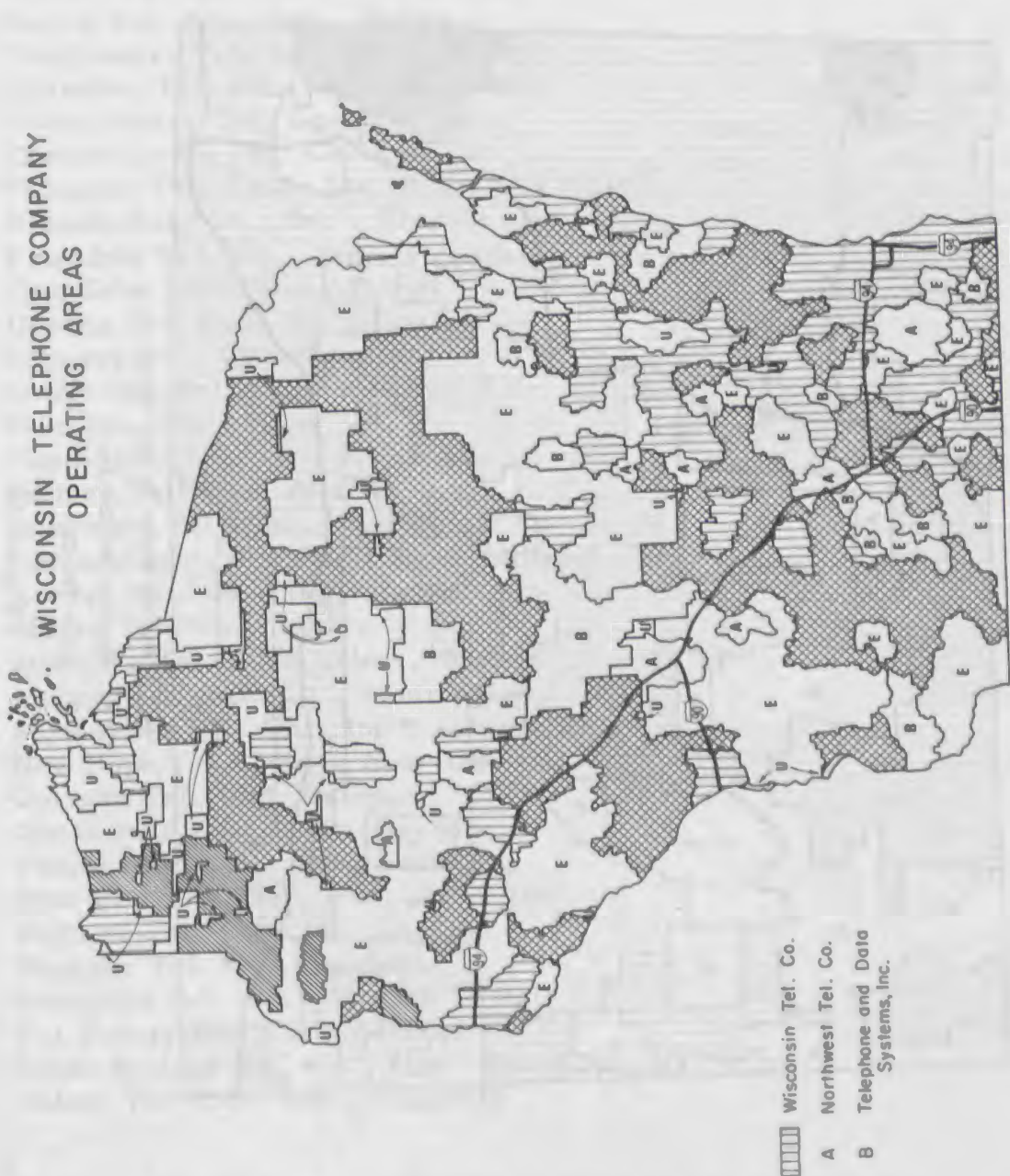


Figure 54

WISCONSIN TELEPHONE COMPANY  
OPERATING AREAS

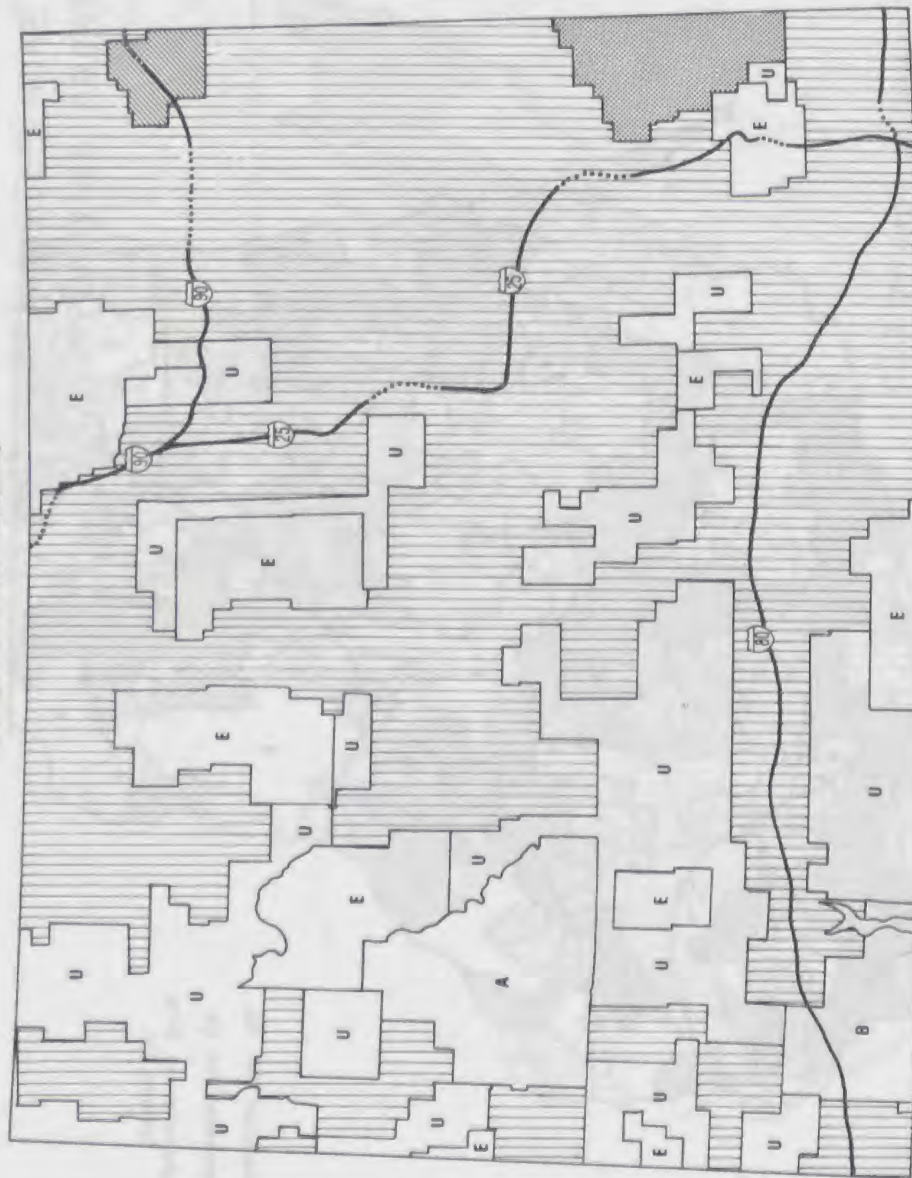


- ▣ Wisconsin Tel. Co.
- A Northwest Tel. Co.
- B Telephone and Data Systems, Inc.

Figure 55



WYOMING TELEPHONE COMPANY  
OPERATING AREAS



Mountain States Tel. and Tel. Co.

A Wyoming Tel. Co., Inc.

B Union Tel. Co.

Figure 56

Table 4: Class Z Independent Telephone Companies, with  
Headquarters, Listed Alphabetically by State

Alabama

Ardmore Tel. Co., Ardmore, Tenn.  
Blountsville Tel. Co., Blountsville  
Brindlee Mountain Tel. Co., Arab.  
Butler Tel. Co., Inc., Butler  
Castleberry Tel. Co., Castleberry  
Cherokee Tel. Co., Inc., Cherokee  
Coosa Valley Tel. Co., Pell City  
Elmore Coosa Tel. Co. Eclectic  
\*Farmers Tel. Coop. Inc. Rainsville (8,745)  
Floralta Tel. Co., Inc., Floralta  
Fruitdale Tel. Co., Inc., Fruitdale  
Gra-Ceba Tel. Co., Ashford  
Goshen Tel. Co., Inc., Goshen  
Grayson Tel. Co., Grayson  
Grove Hill Tel. Corp., Grove Hill  
Gulf Tel. Co., Foley  
Hayneville Tel. Co., Hayneville  
Hopper Tel. Co., Altoona  
Interstate Tel. Co., West Point, Ga.  
Lamar County Tel. Co., Inc., Millport  
Leeds, Tel. Co., Inc., Leeds  
Millry Tel. Co., Millry  
Mon-Cre Tel. Coop., Inc., Ramer  
Monroeville Tel. Co., Monroeville  
Moundville Tel. Co., Inc., Moundville  
New Hope Tel. Coop., New Hope  
Oakman Tel. Co., Oakman  
Oneonta Tel. Co., Inc., Oneonta  
Peoples Tel. Co., Inc., Leesburg  
Pine Belt Tel. Co., Inc., Arlington  
Ragland Tel. Co., Inc. Ragland  
Roanoke Tel. Co., Roanoke  
\*Southland Tel. Co., Atmore (9,021)  
Tri County Tel. Co., Ashland  
Union Springs Tel. Co., Inc., Union Springs  
Valley Tel. Co., Inc., Langdale

\*Footnote for all asterisk listings is given at end of Table 4.



Table 4 (continued)

Alaska

- \*Anchorage Tel. Utility, Anchorage (55,480)
  - Bush-Tell Inc., Anchorage
  - Copper Valley Tel. Coop., Glennallen
  - Cordova Public Utilities, Cordova
- \*Fairbanks Municipal Utilities System, Fairbanks (21,547)
  - Greater Anchorage Borough Telecommunications Co., Inc. Girdwood
  - Interior Tel. Co., Inc., Anchorage
  - Ketchikan Public Utilities Co., Ketchikan
  - Matanuska Tel. Assn., Inc., Palmer
  - National Utilities, Inc., Port Townsend, Wash.
  - North State Tel. Co., Anchorage
  - Sitka Tel. Co., Sitka
  - Southeastern Tel. Co., Sitka
  - Teller Tel. & Power Co., Inc., Teller
  - Wakefield Fisheries, Inc., Seattle, Wash.
  - Whittier Tel. Co., Whittier
  - Yukon Tel. Co., Tanana

Arizona

- Arizona Tel. Co., Phoenix
- \*Citizens Utilities Co., Stamford, Conn.
  - Citizens Utilities Co., Kingman (10,782)
- \*Navajo Communications, Inc., Grandview, Tex. (4,203)
  - South Central Utah Tel. Assn., Inc., Escalante, Utah
  - Southwestern Tel. Co., Salome
- Universal Tel., Inc., Milwaukee, Wis.
  - Universal Tel. Co. of Arizona, Keams Canyon
- Valley Tel. Coop., Inc., Willcox

Table 4 (continued)

Arkansas

- \*Allied Tel. Co., Little Rock, Arkansas (43,414)
  - Allied Tel. Co. of Arkansas, Inc., Little Rock
  - Allied Utilities Corp., Little Rock
  - Boone County Tel. Co., Harrison
  - Arkansas Tel. Co., Clinton
  - Central Arkansas Tel. Coop. Inc., Donaldson
- \*Century Tel. Enterprises, Monroe, La. (7,417)
  - Liberty Tel. & Comm., Inc., Hardy
  - Liberty Tel. Co., Inc., Hardy
  - Union Tel. Co., Junction City
- Cleveland County Tel. Co., Inc., Rison
- Decatur Tel. Co., Inc., Decatur
- Lavaca Tel. Exch., Lavaca
- Lincoln-Desha Tel. Co., Inc., Dumas
- Madison County Tel. Co., Inc., Huntsville
- Magazine Tel. Exch., Magazine
- Mountain Home Tel. Co., Inc., Mountain Home
- Mountain View Tel. Co., Mountain View
- Northern Arkansas Tel. Co., Flippin
- Perco Tel. Co., Perryville
- Prairie Grove Tel. Co., Prairie Grove
- Redfield Tel. Co., Redfield
- Rice Belt Tel. Co., Inc., Weiner
- E. Ritter Tel. Co., Marked Tree
- South Arkansas Tel. Co., Hampton
- Southwest Arkansas Tel. Coop., Inc., Texarkana
- Tri-County Tel. Co., Inc., Everton
- Walnut Hill Tel. Co., Lewisville
- White River Tel. Co., Elkins
- Wickes Tel. Co., Inc., Wickes
- Yelcot Tel. Co., Yellville
- Yell County Tel. Co., Inc., Danville



Table 4 (continued)

California

- Bryan Tel. Co., Paicines
- Calaveras Tel. Co., Copperopolis
- \*California Pacific Utilities Co., San Francisco (21,981)
- Capay Valley Tel. Co., Guinda
- \*Citizens Utilities Co., Stamford, Conn. (24,798)
  - Citizens Utilities Co. of California, Redding
- Colfax Tel. Exch., Colfax
- Dorris Tel. Co., Dorris
- Ducor Tel. Co., Ducor
- Evans Tel. Co., Patterson
- Farmers Exchange, No. 1, Sultana
- Foresthill Tel. Co., Inc., Foresthill
- Happy Valley Tel. Co., Anderson
- Hornitos Tel. Exchange, Hornitos
- Kerman Tel. Co., Kerman
- Kingsburg Tel. Co., Kingsburg
- Livingston Tel. Co., Livingston
- Mariposa County Tel. Co., Oakhurst
- Moraga Community Tel. Association, Moraga
- Ponderosa Tel. Co., O'Neals
- Redwood Empire Tel. Co., Santa Rosa
- Roseville Tel. Co., Roseville
- Sierra Tel. Co., Oakhurst
- Siskiyou Tel. Co., Fort Jones
- Sylvan Tel. Co., Modesto
- Tuolumne Tel. Co. Tuolumne
- Volcano Tel. Co., The, Volcano
- William Butts Tel. Co., Paicines

Table 4 (continued)

Colorado

Agate Mutual Tel. Co., Agate  
 Bennett Tel. Co., Bennett  
 Bijou Tel. Coop., Byers  
 Blanca Tel. System, Blanca  
 Columbine Tel. Co., Moffat  
 Deer Trail Tel. Co., Deer Trail  
 \*Delta County Tel. Co., Paonia (3, 852)  
 Eagle Valley Tel. Co., The, Eagle  
 \*Eastern Slope Rural Tel. Inc., Hugo (3, 055)  
 El Paso County Tel. Co., El Paso  
 Farmers Mutual Tel. Co., Pleasant View  
 Grover Tel. Exch., Grover  
 Matheson Tel. Co., Matheson  
 Nucla-Naturita Tel. Co., Nucla  
 Nunn Tel. Co., Nunn  
 Peetz Cooperative Tel., Peetz  
 Phillips County Tel. Co., Holyoke  
 Pine Drive Tel. Co., Beulah  
 Plains Cooperative Tel. Assn., Inc., Joes  
 Ramah Tel. Exch., Ramah  
 Rico Tel. Co., Rico  
 Roggen Tel. Coop. Co., Roggen  
 Rye Tel. Co., Inc., Rye  
 Simla Tel. Exch., Simla  
 Stoneham Coop. Tel. Co., Stoneham  
 Strasburg Tel. Co., Strasburg  
 Sunflower Tel. Co. Inc., Dodge City, Kan.  
 Universal Tel. Inc., Milwaukee, Wis.  
 Universal Tel. Co. of Colorado, Pagosa Springs  
 Western States Tel. Co., Phoenix, Ariz.  
 Wiggins Tel. Assn., Wiggins  
 Willard Tel. Co., Willard

\*



Table 4 (continued)

Connecticut

\*Woodbury Tel. Co. (9,376)

Delaware

(No Class Z companies)

Florida

\*Florida Tel. Corp., Ocala (107,685)  
Gulf Tel. Co., Perry  
Indiantown Tel. Co., Indiantown  
Northeast Florida Tel. Co., Inc., MacClenny  
Orange City Tel. Co., Orange City  
Quincy Tel. Co., Quincy  
St. Joseph Tel. & Tel. Co., Port St. Joe  
West Florida Tel. Co., Marianna  
\*Winter Park Tel. Co., Winter Park (15,866)

Georgia

Alma Tel. Co., Inc., Alma  
Atlas Utilities Co., Sapelo Island  
Blue Ridge Tel. Co., Blue Ridge  
Brantley Tel. Co., Nahunta  
Bulloch County Rural Tel. Coop. Inc., Statesboro  
Camden Tel. & Tel. Co., Inc., St. Marys  
Chickamauga Tel. Corp., Chickamauga  
Citizens Tel. Co., Inc., Leslie  
Coastal Utilities, Inc., Hinesville  
Commerce Tel. Co., Commerce  
Darien Tel. Co., Darien  
Ellijay Tel. Co., Ellijay  
Empire Tel. Co., Comer.

Table 4 (continued)

Georgia (continued)

Fairmount Tel. Co., Inc., Fairmount  
Georgia Tel. Corp., Blakely  
Glenwood Tel. Co., Glenwood  
Hart County Tel. Co., Hartwell  
Hawkinsville Tel. Co., Hawkinsville  
Interstate Tel. Co., Westpoint  
Loco Tel. Co., Lincolnton  
Nelson-Ball Ground Tel. Co., Nelson  
Pembroke Tel. Co., Inc., Pembroke  
Pineland Tel. Coop. Inc., Metter  
Planters Rural Tel. Coop. Inc., Newington  
Plant Tel. & Power Co., Inc., Tifton  
Progressive Rural Tel. Coop., Rentz  
Public Service Tel. Co., Reynolds  
Quincy Tel. Co., Quincy, Fla.  
Ringgold Tel. Co. Ringgold  
South Georgia Tel. Co., Inc., Sylvania  
\*Standard Tel. Co., Cornelia (19, 102)  
Statesboro Tel. Co., Statesboro  
\*Thomaston Tel. Co., Thomaston (5, 896)  
Trenton Tel. Co., Trenton  
Utelwico. Inc., The, Talbotton  
Walker County Tel. Co., LaFayette  
Waverly Hall Tel. Co., Waverly Hall  
Wilkes Tel. & Electric Co., Washington  
Wilkinson County Tel. Co., Irwinton

Hawaii

(No Class Z companies)



Table 4 (continued)

Idaho

- Albion Tel. Co., Inc., Albion
- Cambridge Tel. Co., Inc. Cambridge
- Custer Tel. Coop., Challis
- Farmers Mutual Tel. Co., Fruitland
- Filer Mutual Tel. Co., Filer
- Inland Tel. Co., Gifford
- Lemhi Tel. Co., Salmon
- Midvale Tel. Exch., Midvale
- Mud Lake Tel. Coop. Assn., Dubois
- \*Owyhee Tel. Co., Homedale (2, 944)
- Potlatch Tel. Co., Kendrick
- \*Project Mutual Tel Coop. Assn., Inc., Rupert (5, 813)
- Rockland Tel. Co., Rockland
- Silver Star Tel. Co., Inc., Freedom, Wyo.
- Tel. Utilities, Ilwaco, Wash.
- Gem State Util. Corp., Grandview
- Troy Tel. Co., Inc., Troy

Illinois

- Adams Tel. Coop., Golden
- Alhambra-Grantfork Tel. Co., Alhambra
- Cambridge Tel. Co., Cambridge
- Cass County Tel. Co., Virginia
- Chandlerville Tel. Co., Chandlerville
- C-R Tel. Co., Ransom
- Clarksville Mutual Tel. Co., Clarksville
- Crossville Tel. Co., Crossville
- Depue Tel. Co., Depue
- Easton Tel. Co., Easton
- Egyptian Tel. Coop. Assn., Steeleville
- El Paso Tel. Co., El Paso
- Equality Tel. Co., Inc., Equality
- Flat Rock Mutual Tel. Co., Flat Rock
- Geneseo Tel. Co., Geneseo
- Glasford Tel. Co., Glasford
- Grafton Tel. Co., Grafton
- Gridley Tel. Co., Gridley
- Hamilton County Tel. Coop., Dahlgren

Table 4 (continued)

Illinois (continued)

Hardin County Tel. Co., Rosiclare  
Harrisonville Tel. Co., Waterloo  
Henry County Tel. Co., Geneseo  
Hindsboro Mutual Tel. Co., Hindsboro  
Home Tel. Co., St. Jacob  
\*Illinois Consolidated Tel. Co., Mattoon (82, 011)  
Inland Tel. Co., Champaign  
Intra State Tel. Co., Galesburg  
Kinsman Mutual Tel. Co., Kinsman  
LaHarpe Tel. Co., Inc., LaHarpe  
Lakeside Tel. Co., Champaign  
Leaf River Valley Tel. Co., Leaf River  
Leonore Mutual Tel. Co., Leonore  
McDonough Tel. Coop., Colchester  
McNabb Tel. Co., McNabb  
Madison Tel. Co., Hamel  
Marseilles Tel. Co., Marseilles  
Metamora Tel. Co., Metamora  
Mid Century Tel. Coop., Inc., Canton  
Midland Tel. Co., Champaign  
Montrose Mutual Tel. Co. Inc., Dieterich  
Morrison Tel. Co., Morrison  
Moultrie Independent Tel. Co., Lovington, Ill.  
Mt. Pulaski Tel. & Electric Co., Mt. Pulaski  
New Windsor Tel. Co., New Windsor  
\*Northwestern Tel. Co., Freeport (32, 921)  
Odin Tel. Exch., Odin  
Oneida Tel. Exch. Oneida  
Orion Tel. Exch. Assn., Orion  
Prairie Tel. Co., Champaign  
Reynolds Tel. Co., Inc., Reynolds  
Rossville Tel. Co., Rossville  
Schuyler Tel. Co., Rushville  
Sharon Tel. Co., Sharon, Wis.  
Staunton Tel. Co., Staunton  
Timewell Tel. Exch., Timewell  
Tonica Tel. Co., Tonica  
Viola Home Tel. Co., Viola  
Wabash Tel. Coop., Inc., Louisville  
Woodhull Community Tel. Co., Woodhull  
Yates City Tel. Co., Yates City



Table 4 (continued)

Indiana

Bloomington Home Tel. Co., Bloomington  
Brazil Tel. Co., Inc., Brazil  
Camden Coop Tel. Co., Camden  
Canaan Mutual Tel. Co., Canaan  
Carroll Tel. Co., Inc., Delphi  
Central Indiana Tel. Co., Inc., Brookston  
Citizens Tel. Co., Fairmount  
Citizens Tel. Corp., Warren  
Clay County Rural Tel. Coop. Inc., Cloverdale  
Colfax Tel. Co., Inc., Colfax  
Craigville Tel. Co., Craigville  
Crandall Tel. Co., Inc., Crandall  
Cutler Coop. Tel. Co., Cutler  
Daviess-Martin Co., Rural Tel. Corp., Montgomery  
Elnora Tel. Co., Inc., Elnora  
Freelandville Tel. Corp., Freelandville  
Garrett Tel. Co., Garrett  
Greetingsville Tel. Co., Inc., Greetingsville  
Hancock Rural Tel. Corp., Maxwell  
Hendricks Tel. Corp., Roachdale  
Home Tel. Co. of Pittsboro, Inc., The, Pittsboro  
Home Tel. Co., Inc., Waldron  
\*Indiana Tel. Co., Seymour (42, 246)  
Kirksville Tel. Co., Inc., Princeton  
Liberty Center Tel. Co., Liberty Center  
Ligonier Tel. Co., Ligonier  
Merchants & Farmers Tel. Co., Hillsboro  
Midwest Tel. Co., Inc., Petersburg  
Monon Tel. Co. Inc., Monon  
Monrovia Tel. Corp., The, Monrovia  
Mulberry Cooperative Tel. Co., Mulberry  
New Elberfeld Tel. Co., Inc., Elberfeld  
New Lisbon Tel. Co., New Lisbon  
New Paris Tel. Inc., New Paris  
Northwestern Indiana Tel. Co., Inc., Hebron

Table 4 (continued)

Indiana (continued)

Odon-Madison Township Tel. Co., Odon  
Patoka Tel. Co., Inc., Wickliffe  
Perry-Spencer Rural Tel. Coop., Inc., Tell City  
Poseyville Tel. Co., Inc., Poseyville  
Prairie Tel. Co., Inc., Brookston  
Princeton Tel. Co., Princeton  
Public Tel. Corp., Greensburg  
Pulaski-White Tel. Coop., Star City  
Rochester Tel. Co., Inc., Rochester  
S. & W. Tel. Co., Inc., Sandborn  
Smithville Tel. Co., Inc., Ellettsville (15,748)  
Pleasantville Inc., Tel. Co., Pleasantville  
Southeastern Indiana Rural Tel. Co. Inc., Dillsboro  
Springport Rural Tel. Co., Springport  
Sulphur Springs Tel. Co., Sulphur Springs  
Sunman Tel. Co., Sunman  
Swayzee Tel. Co., Inc., The, Swayzee  
Sweetser Tel. Co., Inc., Sweetser  
Thorntown Tel. Co., Thorntown  
Tipton Tel. Co., Inc., Tipton  
Tri-County Tel. Co., Inc., New Richmond  
Wadesville Tel. Co., Inc., Wadesville  
Washington County Rural Tel. Coop., Inc., Pekin  
Waterloo Tel. Exch. Inc., Waterloo  
West Point Tel. Co., West Point  
Yeoman Tel. Co., Inc., Yeoman



Table 4 (continued)

Iowa

Ace Tel. Assn., Houston, Minn.  
 Amana Society Tel. Co., Amana  
 Andrew Tel. Co., Andrew  
 Arcadia Tel. Coop., Arcadia  
 Atkins Coop. Tel. Co., Atkins  
 Ayrshire Tel. Co., Ayrshire  
 Baldwin-Nashville Tel. Co., Baldwin  
 Barnes City Coop. Tel. Co., Barnes City  
 Bernard Tel. Co., Inc., Bernard  
 Breda Te. Corp., Breda  
 Brooklyn Mutual Tel. Co., Brooklyn  
 Burt Tel. Co., Burt  
 Butler-Bremen Tel. Co., Plainfield  
 Cascade Tel. Co., Cascade  
 Casey Mutual Tel. Co., Casey  
 Center Junction Independent Tel. Co., Center Junction  
 Central Scott Tel. Co., Eldridge  
 Chester Tel. Co., Chester  
 Citizens Mutual Tel. Co., Bloomfield  
 Clarence Tel. Co., Inc., Clarence  
 Clear Lake Ind. Tel. Co., Clear Lake  
 C-M-L Coop. Tel. Assn., Meriden  
 Colo Tel. Co., Colo  
 Coon Creek Tel. Co., Blairstown  
 Coon Valley Coop. Tel. Assn., Menlo  
 Cooperative Tel. Co., Victor  
 Cornbelt Tel. Co., Wall Lake  
 Cumberland Tel. Co., Cumberland  
 Danville Mutual Tel. Co., Danville  
 Deep River Mutual Tel. Co., Deep River  
 Defiance Tel. Co., Defiance  
 Dixon Tel. Co., Dixon  
 Dumont Tel. Co., Dumont  
 Dunkerton Mutual Tel. Co., Dunkerton  
 Earling Mutual Tel. Co., Earling  
 East Buchanan Tel. Coop., Winthrop  
 East Union Swbd. Co., Thayer  
 Ellsworth Coop. Tel. Assn., Ellsworth

Table 4 (continued)

Iowa (continued)

Ely Cooperative Tel. Assn., Ely  
 Emeline-Iron Hill Co., Emeline  
 Farmers & Business Mens Tel. Co., Wheatland  
 Farmers Cooperative Tel. Co. Dysart  
 Farmers & Merchants Mutual Tel. Co., Wayland  
 Farmers Mutual Coop. Tel. Co., Harlan  
 Farmers Mutual Coop. Tel. Co., Inc., Moulton  
 Farmers Mutual Tel. Co., Jesup  
 Farmers Mutual Tel. Co., Nora Springs  
 Farmers Mutual Tel. Co., Shellsburg  
 Farmers Mutual Tel. Co., Stanton  
 Farmers Tel. Co., Batavia  
 Farmers Tel. Co., Essex  
 Farmers Tel. Co., Riceville  
 Fenton Coop. Tel. Co., Fenton  
 Ft. Atkinson Tel. Co., Ft. Atkinson  
 Gilman Tel. Corp. Gilman  
 Goldfield Tel. Co., Goldfield  
 Graettinger Coop. Tel. Assn., Graettinger  
 Grand Mound Cooperative Tel. Assn., Grand Mound  
 Grand River Mutual Tel. Co., Grand River  
 \*Grand River Mutual Tel. Corp., Princeton, Mo. (5,461)  
 Griswold Cooperative Tel. Co., Griswold  
 Hancock Tel. Co., Hancock  
 Haverhill Tel. Co., Inc., Haverhill  
 Hawkeye Tel. Co., Hawkeye  
 Heart of Iowa Tel. Cooperative, Union  
 Hills Tel. Co., Inc., Estherville  
 Hinton Tel. Co., Inc., Hinton  
 Hoppers Tel. Exch. Hoppers  
 Hubbard Coop. Tel. Assn., Hubbard  
 Huxley Cooperative Tel. Co., Huxley  
 Iamo Tel. Co., Coin  
 Interstate "35" Tel. Co., Truro



Table 4 (continued)

Iowa (continued)

Jefferson Tel. Co., Jefferson  
 Jordan Soldier Valley Tel. Co., Soldier  
 Kalona Cooperative Swbd. Co., Kalona  
 Kelley Cooperative Tel. Assn., Kelley  
 Kellogg Cooperative Tel. Assn., Kellogg  
 Keystone Farmers Cooperative Tel. Co., Keystone  
 Killduff Tel. Co., Killduff  
 Kiron Tel. Co., Kiron  
 Lake Mills Tel. Co., Lake Mills  
 La Porte City Farmers Mutual Tel. Co., La Porte City  
 Laurel Tel. Co., Laurel  
 Lehigh Valley Coop. Tel. Assn., Lehigh  
 Lidderdale Tel. Co., Lidderdale  
 Lone Rock Co-op. Tel. Co., Lone Rock  
 Lost Nation-Elwood Tel. Co., Lost Nation  
 Lynnville Community Tel. Co., Inc., Lynnville  
 McCausland Coop. Tel. Assn., McCausland  
 Mabel Coop. Tel. Co., Mabel, Minn.  
 Manilla Tel. Co., Inc., Manilla  
 Marne & Elk Horn Tel. Co., Elk Horn  
 Martelle Coop. Tel. Assn., Martelle  
 Massena Tel. Co., Massena  
 Mechanicsville Tel. Co., Mechanicsville  
 Miles Cooperative Tel. Assn., Miles  
 Miller Tel. Co., Miller  
 Minburn Tel. Co., Minburn  
 Minerva Valley Tel. Co., Inc., Zearing  
 Modern Cooperative Tel. Co., South English  
 Montezuma Tel. Co., Montezuma  
 Morley Tel. Co., Inc., Morley  
 Mutual Tel. Co., Mediapolis  
 Mutual Tel. Co., Sioux Center  
 Mutual Tel. Co. of Morning Sun, Morning Sun  
 Nevinville Tel. Co., Nevinville  
 New Market Tel. Exch., New Market  
 North Central Tel. Co., Badger  
 Northeast Iowa Tel. Co., Monona  
 North English Coop. Tel. Co., North English  
 Northern Iowa Tel. Co., Sioux Center

Table 4 (continued)

Iowa (continued)

Northwest Iowa Tel. Co., Sloan  
 Northwest Tel. Coop. Assn., Havelock  
 Norway Rural Tel. Co., Kanawha  
 Ogden Tel. Co., Ogden  
 Olin Tel. Co., Inc., Olin  
 Onslow Cooperative Tel. Assn., Onslow  
 Oran Mutual Tel. Co., Oran  
 Otter Creek Tel. Co., Inc., Otter Creek  
 Palmer Mutual Tel. Co., Palmer  
 Palo Cooperative Tel. Assn., Palo  
 Panora Cooperative Tel. Assn., Inc., Panora  
 Peoples Tel. Co., Aurelia  
 Postville Farmer Tel. Co., Postville  
 Prairie Tel. Co., Inc., Yale  
 Prairieburg Tel. Co., Inc., Prairieburg  
 Preston Tel. Co., Preston  
 Radcliffe Tel. Co., Inc., Radcliffe  
 Readlyn Tel. Co., Readlyn  
 Reasnor Mutual Tel. Assn., Reasnor  
 Ringsted Tel. Co., Ringsted  
 Rockwell Cooperative Tel. Assn. Rockwell  
 Royal Tel. Co., Royal  
 Ruthven Tel. Co., Ruthven  
 Sac Co. Mutual Tel. Co., Odebolt  
 Sanborn Tel. Co., Sanborn  
 Scenic Ridge Tel. Co., Ossian  
 Schaller Tel. Co., Schaller  
 Scranton Tel. Co., Scranton  
 Searsboro Tel. Co., Searsboro  
 Sharon Tel. Co., Hills  
 Shell Rock Tel. Co., Shell Rock  
 South Slope Cooperative Tel. Co., Norway  
 Southwest Tel. Exch. Inc., Emerson  
 Springville Cooperative Tel. Assn., Inc., Springville  
 Stanhope Cooperative Tel. Exch., Stanhope  
 Stratford Mutual Tel. Co., Stratford



Table 4 (continued)

Iowa (continued)

Sully Tel. Assn., Sully  
Superior Tel. Coop. Superior  
Templeton Tel. Co., Templeton  
Terril Tel. Co., Terril  
Titonka Tel. Co., Titonka  
United Farmers Tel. Co., Everly  
Van Buren Tel. Co., Keosauqua  
Van Horne Cooperative Tel. Co., Van Horne  
Van Wert Rural Tel. Co., Van Wert  
Ventura Tel. Co., Ventura  
Villisca Farmers Tel. Co., Villisca  
Wallingford Tel. Coop., Wallingford  
Walnut Tel. Co., Walnut  
Webb-Dickens Tel. Corp., Webb  
Webster-Calhoun Cooperative Tel. Assn., Gowrie  
Wellman Cooperative Tel. Assn., Wellman  
West Branch Tel. Co., West Branch  
West Iowa Tel. Co., Remsen  
West Liberty Tel. Co., West Liberty  
\*Western Iowa Tel. Assn., Lawton (5,881)  
Westside Tel. Co., West Side  
Wilton Tel. Co., Wilton Junction  
Winnebago Cooperative Tel. Assn., Thompson  
Woodward Mutual Tel. Co., Woodward  
Woolstock Mutual Tel. Assn., Woolstock  
Wyoming Mutual Tel. Co., Wyoming

Table 4 (continued)

Kansas

Assaria Tel. Exch. Inc., Assaria  
 Barnes Tel. Co., Barnes  
 Bison Tel. Co., Inc., Bison  
 Blue Valley Tel. Co., Inc., Marysville  
 Burdett Tel. Co., Inc., Burdett  
 C B Tel. Co., Inc. Mission  
 Center Township Tel. Co. Inc., Olpe  
 Columbus Local Tel. Co., Columbus  
 Council Grove Tel. Co., Council Grove  
 \*Craw-Kan. Tel Cooperative, Girard (9, 808)  
 Cunningham Tel. Co., Inc., Glen Elder  
 Edna Tel. Co., Girard  
 Elkhart Tel. Co., Inc., Elkhart  
 Farmers & Citizens Tel. Co., Munden  
 Ford Mut. Tel. Co., Ford  
 Golden Belt Tel. Assn., Inc., La Crosse  
 Gorham Tel. Co., Inc., Gorham  
 Grainfield Tel. Co., Inc., Grainfield  
 H. & B. Communications Inc., Holyrood  
 Haviland Tel. Co., Haviland  
 Home Tel. Co., Inc., Galva  
 J.B.N. Tel. Co., Inc., Wetmore  
 Jetmore Tel. Co., Dodge City  
 KanOkla Tel. Assn., Inc., Anthony  
 Kansas State Tel. Co., Baxter Springs  
 LaHarpe Tel. Co., LaHarpe  
 Larkinburg Tel. Co., Larkinburg  
 Linn Rural Tel. Co., Linn  
 Little River Mutual Tel. Co., Little River  
 Madison Tel. Co., Madison  
 Mahaska Tel. Assn., Mahaska  
 Mo.-Kan. Dial Co. Inc., Louisburg  
 Moundridge Tel. Co., Moundridge  
 Palmer Rural Tel. Co., Palmer  
 Peoples Mutual Tel. Co., LaCygne  
 \*Pioneer Tel. Assn., Inc., Ulysses (10, 922)  
 Pleasanton Tel. Co., Pleasanton  
 Rainbow Tel. Coop. Assn., Inc., Everest  
 Republic Tel. Co., Agenda



Table 4 (continued)

Kansas (continued)

Roxbury Tel. Co., Inc., Roxbury  
 Rural Tel. Service Co., Inc., Lenora  
 S. & A. Tel. Co. Inc., Allen  
 S. & T. Tel. Coop. Assn., Brewster  
 Salemsborg Tel. Co., Salemsborg  
 South Central Tel. Assn., Inc., Medicine Lodge  
 Southern Kans. Tel. Co., Inc., Clearwater  
 Sunflower Tel. Co., Inc., Dodge City  
 Totah Tel. Co. Inc., Ochelata, Okla.  
 Tri-County Tel. Assn. Inc., Council Grove  
 Twin Valley Tel. Inc., Miltonvale  
 United Tel. Assn., Dodge City  
 Vinland Mut. Tel. Co., Vinland  
 Waco Tel. Co., Asbury, Mo.  
 Wamego Tel. Co., Inc., Wamego  
 Wheat State Tel. Co., Inc., Udall  
 Wilson Tel. Co., Inc., Wilson  
 Zenda Tel. Co., Inc., Zenda

Kentucky

Ballard Rural Tel. Coop., Corp., Inc., La Center  
 Brandenburg Tel. Co., Brandenburg  
 Cumberland Tel. Co., Cumberland  
 Duo County Tel. Coop. Inc., Jamestown  
 Echo Tel. Co., Inc., Shepherdsville  
 Evarts Tel. Co., Inc., Evarts  
 Foothills Rural Tel. Coop., Corp., Staffordsville  
 Harold Tel. Co., Inc., Harold  
 Highland Tel. Cooperative Inc., Sunbright, Tenn.  
 Leslie County Tel. Co., Inc., Hyden  
 Lewisport Tel. Co., Inc., Lewisport  
 Logan Tel. Coop. Inc., Auburn  
 Mountain Rural Tel. Coop., Corp. West Liberty  
 North Central Tel. Cooperative Inc., Lafayette, Tenn.  
 Peoples Rural Tel. Coop., Corp., McKee  
 Salem Tel. Co., Salem  
 \*So. Cent. Rural Tel. Coop., Corp., Inc., Glasgow (12, 841)  
 Thacker-Grigsby Tel. Co., Hindman  
 Uniontown Tel. Co., Uniontown  
 \*West Ky. Rural Tel. Coop., Corp., Inc. Mayfield (10, 566)

Table 4 (continued)

Louisiana

- Cameron Tel. Co., Sulphur
- Campti-Pleasant Hill Tel. Co., Pleasant Hill
- Central Louisiana Tel. Co., Jena
- \*Century Tel. Enterprises Inc., Marion (12,863)
  - Athens Tel. Co., Inc., Athens
  - Century Tel. Co., Inc., Greenburg
  - Coastal Tel. & Electronics Corp., Breaux Bridge
  - Northwest La. Tel. Co., Inc., Rodessa
  - Plain Dealing Tel. Co., Inc., Plain Dealing
  - Union Tel. Co., Junction City, Ark.
  - United Tel. Co. of La., Inc., Marion
- Chatham Tel. Co., Chatham
- Delcambre Tel. Co., Inc., Delcambre
- \*East Ascension Tel. Co., Inc., Gonzales (10,169)
  - Elizabeth Tel. Co., Inc., Elizabeth
  - Four States Tel. Co., San Angelo, Tex.
  - Kaplan Tel. Co., Kaplan
  - LaFourche Tel. Co., Inc., Larose
  - Northeast La., Tel. Co., Inc., Collinston
  - Reserve Tel. Co., Reserve
  - Ringgold Tel. Co., Inc., Ringgold
  - Star Tel. Co., Inc., Maringouin
- Houma Tel. Co., Houma
- Jefferson Tel. Co., Jefferson
- Kingfisher Tel. Co., Kingfisher
- Lafayette Tel. Co., Lafayette
- Madison Tel. Co., Madison
- Minerva Tel. Co., Minerva
- Monroe Tel. Co., Monroe
- Morgan City Tel. Co., Morgan City
- Natchitoches Tel. Co., Natchitoches
- Opal Tel. Co., Opal
- Port Allen Tel. Co., Port Allen
- Port Sulphur Tel. Co., Port Sulphur
- St. Charles Tel. Co., St. Charles
- St. Gabriel Tel. Co., St. Gabriel
- St. James Tel. Co., St. James
- St. Landry Tel. Co., St. Landry
- St. Martin Tel. Co., St. Martin
- St. Tammany Tel. Co., St. Tammany
- Terrebonne Tel. Co., Terrebonne
- Thibodaux Tel. Co., Thibodaux
- Thiboutaux Tel. Co., Thiboutaux
- Wabbe Tel. Co., Wabbe
- Winnfield Tel. Co., Winnfield
- Zachary Tel. Co., Zachary



Table 4 (continued)

Maine

- Bryant Pond Tel. Co., Bryant Pond
- Center Lincolnville Tel. Co., Lincolnville
- China Tel. Co., South China
- Cobbosseecontee Tel. Co., West Gardiner
- Hampden Tel. Co., Hampden
- Jonesboro Tel. Co., Jonesboro
- \*Lewiston Greene & Monmouth Tel. Co., Winthrop (4, 330)
- Mount Vernon Tel. Co., Mount Vernon
- Oxford County Tel. & Tel. Co., Buckfield
- Pine Tree Tel. & Tel. Co., Gray
- Poland Tel. Co., Raymond
- Saco River Tel. & Tel. Co., Bar Mills
- \*Somerset Tel. Co., North Anson (4, 524)
- Standish Tel. Co., Standish
- Telephone and Data Systems, Inc., Chicago, Ill.
- Hartland & St. Albans Tel. Co., Hartland
- Union River Tel. Co., Aurora
- Union Tel. Co., Union
- Unity Tel. Co., Unity
- Warren Tel. Co., Warren
- Weld Tel. Assn., Weld
- West Penobscot Tel. & Tel. Co., Corinna

Maryland

- \*Armstrong Tel. Co., Kitanning, Pa. (2, 713)

Massachusetts

- Elizabeth Islands Tel. Co., Woods Hole
- \*Granby Tel. & Tel. Co., Granby (1, 890)
- \*Richmond Tel. Co., Richmond (640)

Table 4 (continued)

## Michigan

Alba Tel. Co., Alba  
 Allendale Tel. Co., Allendale  
 Amble Tel. Co., Amble  
 Au Gres Tel. Co., Au Gres  
 Augusta Tel. Co., Augusta  
 Banfield Tel. Co., Banfield  
 Baraga Tel. Co., Baraga  
 Barry County Tel. Co., Delton  
 Blanchard Tel. Assn., Blanchard  
 Bloomingdale Tel. Co. Inc., Bloomingdale  
 Brimley Tel. Co., Brimley  
 Camden Rural Tel. Co., Camden  
 Carr Tel. Co., Carr  
 \*Central Tel. Co., Chesaning (5,996)  
 Chatham Tel. Co., Chatham  
 Clayton Tel. Co., Clayton  
 Climax Tel. Co., Climax  
 Concord Tel. Co., Inc., Concord  
 Deerfield Farmers Tel. Co., Deerfield  
 Drenthe Tel. Co., Drenthe  
 Drummond Island Tel. Co., Carney  
 Farmers Mutual Tel. Co. of Chapin, Chapin  
 Hadley Tel. Co., Inc., Hadley  
 Hickory Tel. Co., Hickory Corners  
 Hillsdale County Tel. Co., Pittsford-Osseo  
 Island Tel. Co., Beaver Island  
 Kaleva Tel. Co., Kaleva  
 Kingsley Tel. Co., Kingsley  
 Lennon Tel. Co., Lennon  
 Mesick Tel. Co., Mesick  
 Midway Tel. Co., Kenton  
 Midwest Tel. Co. Lansing  
 Morenci Home Tel. Co., Morenci  
 Munising Tel. Co., Munising  
 Northern Tel. Co., Mesick  
 Ogden Mutual Tel. Co., Ogden Center  
 Ontonagon County Tel. Co., Ontonagon  
 Parma Tel. Co., Parma  
 Peninsula Tel. Co. Old Mission



Table 4 (continued)

Michigan (continued)

Pigeon Tel. Co., Pigeon  
 Public Service Tel. Co., Montrose  
 Sand Creek Tel. Co., Sand Creek  
 Shiawassee Tel. Co., Perry  
 \*Southern Tel. Co., Brooklyn (7, 277)  
 Springport Tel. Co., Springport  
 Twining Tel. Co., Twining  
 Upper Peninsula Tel. Co., Carney  
 Waldron Tel. Co., Waldron  
 Westphalia Tel. Co., Westphalia  
 Winn Tel. Co., Winn  
 Wolverine Tel. Co., Millington

Minnesota

Ace Tel. Assn., Houston  
 Albany Mutual Tel. Co., Albany  
 Arvig Tel. Co., Pequot Lakes  
 Aure Farmers Cooperative Tel. Assn., Pinewood  
 Bena Tel. Co., Bena  
 Benton Cooperative Tel. Co., Rice  
 Blackduck Tel. Co., Blackduck  
 Blue Earth Valley Tel. Co., Blue Earth  
 Bricelyn Mut. Tel. Co., Bricelyn  
 Bridgewater Tel. Co., Monticello  
 Callaway Tel. Co., Callaway  
 Cannon Valley Tel. Co., Morrestown  
 Citizens Tel. Co., Maynard  
 City of Barnesville Tel. Co., Barnesville  
 Clara City Tel. Co., Clara City  
 Clements Tel. Co., Clements  
 Consolidated Tel. Co., Brainerd  
 Cotton Twp. Tel. Sys., Cotton  
 Danube Tel. Co., Danube  
 Darling Tel. Co., Darling  
 Deer River Tel. Co., Deer River  
 Delavan Tel. Co., Delavan  
 Deuel Tel. Coop. Assn., Clear Lake, S. D.

Table 4 (continued)

Minnesota (continued)

Dunnell Tel. Co., Inc., Dunnell  
 Eagle Valley Tel. Co., Clarissa  
 Easton Tel. Co., Easton  
 East Otter Tail Tel. Co., Perham  
 Eckles Tel. Co., New Prague  
 Emily Tel. System, Emily  
 Farmers Mutual Tel. Co., Cerro Gordo  
 Federated Tel. Cooperative, Chokio  
 Felton Tel. Exch., Felton  
 Freeborn Tel. Co., Freeborn  
 Frost Tel. Co., Frost  
 \*Garden Valley Tel. Co., Erskine (11, 114)  
 Gardonville Cooperative Tel. Assn., Brandon  
 Granada Tel. Co., Granada  
 Halstad Tel. Co., Halstad  
 Hancock Tel. Co., Hancock  
 Harmony Tel. Co., Harmony  
 Hills Tel. Co., Hills  
 Hohman Tel. Co., Pelican Rapids  
 Home Tel. Co., Grand Meadow  
 Hutchinson Tel. Co., Hutchinson  
 Johnson Tel. Co., Remer  
 Kasson & Mantorville Tel. Co., Kasson  
 K M P Tel. Co., Kerkhoven  
 Lakedale Tel. Co., Annandale  
 Lake Region Tel. Co., Pelican Rapids  
 Lake Shore Rural Tel. Co., Braham  
 Lismore Cooperative Tel. Co., Lismore  
 Little Crow Tel. Co., St. Paul  
 Lonsdale Tel. Co., Lonsdale  
 Lowry Tel. Co. Inc., Lowry  
 Mabel Cooperative Tel. Co., Mabel  
 Madelia Tel. Co., Madelia  
 Manchester-Hartland Tel. Co., Manchester  
 \*Mankato Citizens Tel. Co., Mankato (31, 189)  
     Mid-Commun. Inc., Mankato  
 Maple Ridge Rural Tel. Co., Stanchfield  
 Mazeppa Tel. Co., Mazeppa  
 Melrose Tel. Co., Melrose



Table 4 (continued)

Minnesota (continued)

Midwest Tel. Co., Parkers Prairie  
Minnesota Lake Tel. Co., Minnesota Lake  
Minnesota Valley Tel. Co., Franklin  
New Ulm Rural Tel. Co., New Ulm  
Norman County Tel. Co., Inc., Ada  
Northland Tel. Co. Inc., Hill City  
Osakis Tel. Co., Osakis  
Park Region Mutual Tel. Co., Underwood  
Paul Bunyan Rural Tel. Coop. Bemidji  
Pelican Tel. Co., Pelican Rapids  
Peoples Tel. Co., Big Fork  
Pine Island Tel. Co., Pine Island  
Racine Tel. Co., Racine  
Red River Rural Tel. Assn., Abercrombie, N. D.  
Red Rock Tel. Co., St. Paul  
Redwood County Tel. Co., Redwood Falls  
Rock Dell. Co., Rock Dell  
Rothsay Tel. Co., Inc., Rothsay  
Runestone Tel. Assn., Hoffman  
Sacred Heart Tel. Co., Sacred Heart  
Scott Rice Tel. Co., Prior Lake  
Sherburne County Rural Tel. Co., Big Lake  
Sleepy Eye Tel. Co., Sleepy Eye  
Spring Grove Cooperative Tel. Co., Spring Grove  
Starbuck Tel. Co., Starbuck  
Telephone and Data Systems, Inc., Chicago, Ill.  
    Mid-State Tel. Co., Spicer  
Twin Valley Ulen Tel. Co., Twin Valley  
Universal Tel. Inc., Milwaukee, Wis.  
    North Star Tel. Co., Mountain Lake  
Upsala Cooperative Tel. Co., Upsala  
Valley Tel. Co., Browns Valley  
Viking Tel. Co., Hanska  
Watertown Township Rural Tel. Co., Crosslake  
Wawina Township Tel. Line, Wawina  
West Central Tel. Assn., Sebeka  
Western Tel. Co., Springfield  
Wikstrom Tel. Co., Karistad  
Winnebago Coop. Tel. Assn., Thompson, Iowa  
Winsted Tel. Co., Winsted

Table 4 (continued)

Minnesota (continued)

Winthrop Tel. Co., Winthrop  
Wolverton Tel. Co., Wolverton  
Woodstock Tel. Co., Ruthton  
Wykoff Tel. Co., Wykoff  
Zumbrota Tel. Co., Zumbrota

Mississippi

Ackerman Tel. Co., Inc., Ackerman  
Artesia Tel. Co., Artesia  
\*Bay Springs Tel. Co., Inc., Bay Springs (5,857)  
Bruce Tel. Co., Bruce  
Calhoun City Tel. Co., Inc., Calhoun City  
Century Tel. Enterprises, Inc., Marion, La.  
Home Tel. Co., Olive Branch  
Mississippi Tel & Communications, Inc., Mound Bayou  
Crawford Tel. Co., Crawford  
Decatur Tel. Co., Decatur  
Delta Tel. Co., Inc., Louise  
Franklin Tel. Co., Inc., Meadville  
\*Fulton Tel. Co., Inc., Fulton (4,709)  
Georgetown Tel. Co., Georgetown  
Glen Allan Tel. Co., Glen Allan  
Hughes Tel. Co., Inc., Bailey  
Mid-South Tel. Co. Inc., Rienzi  
Mississippi Tel. Corp., Leakesville  
Noxapater Tel. Co., Inc., Noxapater  
Sherwood Tel. Co., Merigold  
Sledge Tel. Co., Sunflower  
Smithville Tel. Co., Inc., Smithville



Table 4 (continued)

Missouri

\*Allied Tel. Co., Little Rock, Ark. (11,340)

- Allied Tel. Co. of Mo., Inc., Dixon
- Liberal Tel. Co., Liberal
- Milan Tel. Co. Milan
- Southern Tel. Co., Purdy
- Vandalia Tel. Co., Vandalia
- Alma Tel. Co., Alma
- Bourbeuse Tel. Co., Gerald
- Carter County Tel. Co., Van Buren
- Chariton Valley Tel. Corp., Bucklin
- Citizens Tel. Co., Higginsville
- Deerfield Tel. Co., Deerfield
- Doniphan Tel. Co., Doniphan
- Eastern Missouri Tel. Co., Bowling Green
- Ellington Tel. Co., Ellington
- F & M Tel. Co., Farber
- Farmers Mutual Tel. Co., Fairplay
- Fidelity Tel. Co., Sullivan
- Goodman Tel. Co., Goodman
- Granby Tel. Co., Granby
- \*Grand River Mutual Tel. Corp., Princeton (14,101)
- Green Hills Tel. Corp., Breckenridge
- Halltown Switchboard Service, Halltown
- Iamo Tel. Co., Coin, Iowa
- Indian Grove Tel. Co., Mendon
- Inter-County Tel. Co., Albany
- K L M Tel. Co., Rich Hill
- Kingdom Tel Co., Auxvasse
- Lakeland Tel. Co., Bolivar
- Lathrop Tel. Co., Lathrop
- Le-Ru Tel. Co., Stella
- Mark Twain Rural Tel. Co., Hurdland
- McDonald County Tel. Co., Pineville
- Mid-Missouri Tel. Co., Cilliam
- Miller Tel. Co., Inc., Miller

## Table 4 (continued)

## Missouri (continued)

Mo-Kan Dial Co., Inc., Louisburg, Kansas  
 Myrtle Tel. Co., Myrtle  
 New Florence Tel. Co., Inc., New Florence  
 New London Tel. Co., New London  
 Nodaway Valley Tel. Co., Maltland  
 Northeast Missouri Rural Co., Green City  
 Northwest Nodaway Tel. Corp., Burlington Jct.  
 Orchard Farm Tel. Co., Orchard Farm  
 Oregon Farmers Mutual Tel. Co., Oregon  
 Peace Valley Tel. Co., Peace Valley  
 Rock Fort Tel. Co., Rock Port  
 Seneca Tel. Co., Seneca  
 Steelville Tel. Exch. Inc., Steelville  
 Stoutland Tel. Co., Stoutland  
 Verona Tel. Co., Inc., Verona  
 Waco Tel. Co., Asbury  
 Webster Co. Tel. Co., Marshfield  
 Wheeling Tel. Co., Wheeling

## Montana

Big Pine Tel. Co. Great Falls  
 Blackfoot Tel. Coop. Inc., Missoula  
 Hot Springs Tel. Co., Hot Springs  
 Hysham Tel. Co. Hysham  
 InterBel Tel. Coop. Inc., Eureka  
 Intermountain Tel. & Power Co., Custer  
 Lemhi Tel. Co., Salmon, Ida  
 Lincoln & Helena Tel. Co., Lincoln  
 Mid-Rivers Tel. Cooperative, Circle  
 Nemont Tel. Cooperative, Inc., Scobey  
 Northern Tel. Cooperative, Inc., Sunburst  
 \*Pacific Power & Light Co., Kalispell (20,056)  
 Range Tel. Cooperative, Forsyth  
 Ronan Tel. System, Ronan  
 Southern Montana Tel. Co., Wisdom  
 Telephone and Data Systems, Inc., Chicago, Ill.  
 Project Tel. Co., Inc., Worden  
 3 Rivers Tel. Coop. Inc., Fairfield  
 \*Triangle Tel. Coop. Assn., Inc., Havre (5,940)  
 Universal Tel. Inc., Milwaukee, Wis.  
 Madison Valley Tel. Co., Ennis  
 Valley Rural Tel. Coop. Assn., Inc., Glasgow



Table 4 (continued)

Nebraska

- Arapahoe Tel. Co., Arapahoe
- \*Arlington Tel. Co., Blair (22,091)
- Arthur Non-Stock Cooperative Tel. Assn., Arthur
- Benkelman Tel. Co., Inc., Benkelman
- Bingham Tel. Co., Bingham
- Blair Tel. Co., Blair
- Boyd County Tel. Corp., Lynch
- Cambridge Tel. Co., Cambridge
- Capitol Tel. Co., Hickman
- Central Nebraska Tel. Co., Blair
- Chrisp's Tel. Co., Paxton
- Clarks Tel. Co., Clarks
- Consolidated Tel. Co., Lincoln
- Cozad Tel. Co., Cozad
- Craig Tel. Co., Craig
- Curtis Tel. Co., Curtis
- Dalton Tel. Co., Dalton
- Diller Tel. Co., Diller
- Eastern Nebraska Tel. Co., Blair
- Elsie Mutual Tel. Co., Elsie
- Eustis Tel. Exch., Inc., Eustis
- Extension Tel. Co., White Clay
- Farmers Tel. Co. of Dodge County, North Bend
- Funk Tel. Co., Inc., Funk
- Glenwood Tel. Membership Corp., Blue Hill
- Gurley Tel. Co. Gurley
- Hamilton Tel. Co., Aurora
- Hartington Tel. Co., Hartington
- Hartman Tel. Exch., Inc., Danbury
- Hemingford Cooperative Tel. Co., Hemingford
- Henderson Tel. Coop. Co., Henderson
- Hershey Cooperative Tel. Co., Hershey
- Home Tel. Co., of Nebraska, Brady

Table 4 (continued)

Nebraska (continued)

Hooper Tel. Co., Hooper  
K & M Tel. Co., Inc., Chambers  
Keystone-Arthur Tel. Co, Keystone  
\*Lincoln T & T Co., Lincoln (215, 252)  
Lodgepole Tel. Co., Lodge Pole  
Maywood Tel. Co., Maywood  
Nebraska Central Tel. Co., Gibbon  
Nebraska Tel. Co., Blair  
Northeast Nebraska Tel. Co., Jackson  
Northeastern Tel. Co., Blair  
Northern Tel. Co., Blair  
Panhandle Tel. Co., Dix.  
Petersburg Tel. Co., Petersburg  
Pierce Tel. Inc., Pierce  
Plainview Tel. Co. Inc., Plainview  
Rock County Tel. Co. Inc., Plainview  
Rock County Tel. Co., Blair  
Rodeo Tel. Membership Corp., Burwell  
St. Bernard Tel. Co., St. Bernard  
Sodtoun Tel. Co., Ravenna  
Southeast Nebraska Tel. Co., Falls City  
Stanton Tel. Co., Stanton  
Tryon Tel. Co., Tryon  
Union Tel. Co., Blair  
Walnut Tel. Co., Walnut  
Wauneta Tel. Co., Wauneta

Nevada

\*Calif. -Pacific Utilities Co., San Francisco, Calif. (6, 769)  
Central Tel. and Utilities Corp., Lincoln, Nebr.  
Central Tel. Co., Las Vegas  
\*Churchill Co. Tel. & Tel. System, Fallon (5, 075)  
Lincoln County Tel. Sys., Inc., Pioche  
Moapa Valley Tel. Co., Overton  
Nevada Tel. & Tel. Co., Tonapah  
Rio Virgin Tel. Co., Mesquite



Table 4 (continued)

New Hampshire

Brenton Woods Tel. Co., Philadelphia, Pa.  
\*Chester Tel. Co., Weare (1,990)  
Chichester Tel. Co., Chichester  
Dixville Tel. Co., Dixville Notch  
Dunbarton Tel. Co., Dunbarton  
Hopkinton Tel. Co., Contoocook  
Meriden Tel. Co., Meriden  
Merrimack County Tel. Co., Warner  
\*Telephone & Data Systems, Inc., Chicago, Ill. (3,354)  
Kearsarge Tel. Co., New London  
Tuftonboro Tel. Co., Melvin Village  
Union Tel. Co., Farmington  
Wilton Tel. Co., Wilton

New Jersey

Delaware Valley Tel. Co., Milford, Pa.  
\*Hillsborough & Montgomery Tel. Co., Bellemead (5,190)  
Warwick Valley Tel. Co., Warwick, N. Y.  
\*West Jersey Tel. Co., Belvidere (8,552)

New Mexico

Corona Tel. Co., Corona  
E. N. M. R. Tel. Coop., Clovis  
La Jicarita Rural Tel. Coop. Assn., Mora  
Laughlin Tel. Co., Capulin  
Leaco Rural Coop., Inc., Lovington  
Maxwell Tel. Exch., Maxwell  
Mogollon Mts. Tel. Co., Cliff  
\*Navajo Communications Co. Inc., Grandview, Tex. (1,650)  
Penasco Valley Tel. Coop., Inc., Artesia  
\*Roosevelt County Rural Tel. Coop., Inc., Portales (1,329)  
Universal Tel. Inc., Milwaukee, Wis.  
Pecos Tel. Co., Pecos  
Suburban Tel. Co., Zuni  
Valley Tel. Corp. Inc., Willcox, Arizona

Table 4 (continued)

New York

Addison Home Tel. Co., Addison  
 Au Sable Valley Tel. Co., Inc., Keeseville  
 Berkshire Tel. Corp., Kinderhook  
 Cape Vincent Tel. Co., Inc., Cape Vincent  
 Cassadaga Tel. Corp., Fredonia  
 Champlain Tel. Co., Champlain  
 Chautauqua & Erie Tel. Corp., Westfield  
 Chazy & Westport Tel. Corp., Westport  
 Citizens Tel. Co., Hammond  
 Clymer Tel. Co., Inc., Clymer  
 Columbia & Rensselaer Tel. Corp., Chatham  
 Copake Tel. Co., Copake  
 Crown Point Tel. Corp., Crown Point  
 DeKalb Tel. Co., DeKalb Junction  
 Delaware Tel. Co., Inc., Walton  
 Delhi Tel. Co., Delhi  
 Deposit Tel. Co. Inc., Deposit  
 Dunkirk & Fredonia Tel. Co., Fredonia  
 Edwards Tel. Co., Inc., Edwards  
 Empire Tel. Corp., Prattsburg  
 Fishers Island Tel. Corp., Fishers Island  
 Germantown Tel. Co., Inc., Germantown  
 Hancock Tel. Co., Hancock  
 \*Highland Tel. Co., Monroe (23, 989)  
 Macomb Tel. Co., Macomb  
 Margaretville Tel. Co., Inc., Margaretville  
 Middleburgh Tel. Co., Middleburgh  
 Newport Tel. Co., Inc., Newport  
 Nicholville Tel. Co., Inc., Nicholville  
 Odessa Tel. Co., Odessa  
 Ogden Tel. Co., Spencerport  
 Oneida County Rural Tel. Co., Holland Patent  
 Ontario Tel. Co. Inc., Phelps  
 Oriskany Falls Tel. Corp., Oriskany Falls  
 Pattersonville Tel. Co., Rotterdam Junction  
 Port Byron Tel. Co., Port Byron  
 Red Hook Tel. Co., Red Hook



Table 4 (continued)

New York (continued)

\*Rochester Tel. Corp., Rochester (511, 959)  
Seneca-Gorham Tel. Corp., Holcomb  
State Tel. Co., Coxsackie  
Summit Tel. Co., Summit  
Sylvan Lake Tel. Co. Inc., Hopewell Junction  
Township Tel. Co., Chaumont  
Trumansburg-Home Tel. Co., Trumansburg  
Vernon Tel. Co. Inc., Vernon  
Walden Tel. Co., Walden  
Warwick Valley Tel. Co., Warwick

North Carolina

Atlantic Tel. Member Corp., Shallotte  
Barnardsville Tel. Co. Barnardsville  
Chapel Hill Tel. Co., Chapel Hill  
Citizens Tel. Co., Brevard  
\*Concord Tel. Co., Concord (56, 151)  
Ellerbe Tel. Co., Inc., Ellerbe  
Heins Tel. Co., Inc., Sanford  
Lexington Tel. Co., Lexington  
Mebane Home Tel. Co., Inc., Mebane  
Norfolk & Caroline Tel. & Tel. Co., Elizabeth City  
North Carolina Tel. Co., Matthews  
\*North State Tel. Co., High Point (64, 106)  
Old Town Tel. System, Winston-Salem  
Piedmont Tel. Membership Corp., Lexington  
Pineville Tel. & Electric Co., Pineville  
Randolph Tel. Co., Inc., Liberty  
Randolph Tel. Membership Corp., Asheboro  
Saluda Mountain Tel. Co. Saluda  
Sandhill Tel. Co., Aberdeen  
Service Tel. Co., Fair Bluff  
Skyline Tel. Membership Corp., West Jefferson  
Star Tel. Membership Corp., Clinton  
Surry Tel. Membership Corp., Dobson  
Tri-County Tel. Membership Corp., Pantego  
Wilkes Tel. Membership Corp., Wilkesboro  
Yadkin Valley Tel. Memb. Corp., Yadkinville

Table 4 (continued)

North Dakota

Absaraka Cooperative Tel. Co., Absaraka  
 BEK Tel. Mutual Aid Corp., Steele  
 Consolidated Tel. Coop., Dickinson  
 Curlew Tel. Co., Glen Ullin  
 Dakota Central Rural Tel. Cooperative Assn., Carrington  
 Dickey Rural Tel. Mutual Aid Corp., Ellendale  
 Gilby Tel. Co., Gilby  
 Griggs County Tel. Co., Cooperstown  
 Inter-Community Tel. Co., Nome  
 Midstate Tel. Co., Stanley  
 Moore & Liberty Tel. Co., Enderlin  
 Nemont Tel. Coop. Assn., Scobey, Mont.  
 Noonan Farmers Tel. Co., Noonan  
 \*Northern States Power Co., Tel. Dept., Minot (19,587)  
 Northwest Mutual Aid Tel. Corp., Ray  
 Polar Rural Tel. Corp., Park River  
 Red River Rural Tel. Assn., Abercrombie  
 Reservation Tel. Coop., Parshall  
 \*Souris River Tel. Mutual Aid Corp., Minot (11,695)  
 United Tel. Mutual Aid Corp. Langdon  
 West River Mutual Aid Tel. Corp., Hazen  
 Wolverton Tel. Co., Wolverton, Minn.  
 York Tel. Co., Stanley

Ohio

Arthur Mutual Tel. Co., Arthur  
 Ayersville Tel. Co., Ayersville  
 Bascom Mutual Tel. Co., Bascom  
 Benton Ridge Tel. Co., Benton Ridge  
 Buckland Mutual Tel. Co., Buckland  
 Camden Rural Tel. Co., Camden, Mich.  
 Champaign Tel. Co., Urbana  
 Chillicothe Tel. Co., Chillicothe  
 Citizens Mutual Tel. Co., McClure  
 Columbus Grove Tel. Co. Columbus Grove



Table 4 (continued)

Ohio (continued)

Community Tel. Co., Leipsic  
Conneaut Tel. Co., Conneaut  
Continental Tel. Co., Continental  
Doylestown Tel. Co., Doylestown  
Farmers Mutual Tel. Co., Okolona  
Fayetteville Tel. Co., Fayetteville  
Ft. Jennings Tel. Co., Ft. Jennings  
Germantown Independent Tel. Co., Germantown  
Glandorf Tel. Co., Inc., Glandorf  
Harlan Tel. Co., Butlerville  
Home Tel. Co., Middlefield  
Kalida Tel. Co., Kalida  
Kingsville Tel. Co., Kingsville  
\*Lorain Tel. Co., Lorain (63, 111)  
Middle Point Home Tel. Co., Middle Point  
Minford Tel. Co., Minford  
\*Newark Tel. Co., Newark (38, 949)  
New Bavaria Tel. Co. New Bavaria  
New Knoxville Tel. Co., New Knoxville  
North Creek Mutual Tel. Co., North Creek  
Nova Tel. Co., Nova  
Oakwood Mutual Tel. Co., Oakwood  
Old Fort Mutual Tel. Co., Old Fort  
Orwell Tel. Co., Orwell  
Ottoville Mutual Tel. Co., Ottoville  
Pattersonville Tel. Co., Pattersonville  
Ridgeville Tel. Co., Ridgeville Corners  
Sherwood Mutual Tel. Assn., Inc., Sherwood  
Sycamore Tel. Co., Sycamore  
Telephone and Data Systems, Inc., Chicago, Ill.  
Arcadia Mutual Tel. Co., Arcadia  
Tel. Service Co., Wapakoneta  
Vanlue Mutual Tel. Co., Vanlue  
Vaughnsville Tel. Co. Inc., Vaughnsville  
Wabash Mutual Tel. Co., Wabash  
West Ohio Tel. Co., Covington

Table 4 (continued)

Oklahoma

- \*Allied Tel. Co., Little Rock, Ark (17,495)
  - Allied Tel. Co. of Oklahoma, Inc., Roosevelt
  - Oklahoma Allied Tel. Co., Poteau
- Atlas Tel. Co., Welch
- Beggs Tel. Co., Inc., Beggs
- Bixby Tel. Co., Bixby
- Bromide Tel. Co., Fittstown
- Canadian Valley Tel. Co., Crowder
- Carmen Tel. Co., Inc., Carnegie
- Central Oklahoma Tel. Co., Davenport
- Cherokee Tel. Co., Calera
- Chickasaw Tel. Co., Ardmore
- Chouteau Tel. Co., Chouteau
- Cimarron Tel. Co., Mannford
- Cross Tel. Co., Warner
- Dobson Tel. Co., Inc., Cheyenne
- Elmore City Tel. Co., Elmore City
- Grand Tel. Co., Jay
- Hinton Tel. Co., Hinton
- Hydro Tel. Co., Hydro
- KanOkla Tel. Assn., Inc., Anthony Kan.
- Lavaca Tel. Co., Inc., Lavaca, Ark.
- McLoud Tel. Co., McLoud
- Madison Tel. Exch., Madison
- Medicine Park Tel. Co., Medicine Park
- Midwestern Tel. Co., Inc., Sentinel
- Oklahoma Tel. & Tel. Inc., Dustin
- Okla.-Western Tel. Co., Clayton
- Panhandle Tel. Coop., Inc., Guymon
- Pine Tel. Co., Inc., Broken Bow
- \*Pioneer Tel. Coop., Inc., Kingfisher (25,941)



Table 4 (continued)

Oklahoma (continued)

Pocasset Tel. Co., Pocasset  
Pottawatomie Tel. Co., Inc., Earlsboro  
Salina-Spavinaw Tel. Co., Salina  
Santa Rosa Tel. Coop. Inc., Vernon, Tex.  
Shidler Tel. Co., Shidler  
Sooner State Tel. Co., Oklahoma City  
South Central Tel. Assn., Medicine Lodge, Kan.  
Southwest Oklahoma Tel. Co., Duke  
Sulphur Tel. Co., Inc., Sulphur  
Terral Tel. Co., Terral  
Totah Tel. Co., Inc., Ochelata  
Universal Tel., Inc., Milwaukee, Wisc.  
Mid-America Tel., Inc., Fittstown  
Valliant Tel. Co., Valliant  
Wickes Tel. Co., Inc., Wickes, Ark.  
Wyandotte Tel. Co., Wyandotte

Oregon

Asotin Tel. Co., Asotin, Wash.  
Beaver Creek Cooperative Tel. Co., Beaver Creek  
Blue Mountain Tel. Inc., Spray  
Calif.-Pacific Utilities Co., San Francisco, Calif.  
Canby Tel. Assn., Canby  
Cascade Utilities, Inc., Estacada  
Clear Creek Mutual Tel. Co., Redland  
Colton Tel. Co., Colton  
Columbia Tel. Co., Corbett  
Creswell Tel. Co., Creswell  
Eagle Tel. Co., Richland  
Eastern Oregon Tel. Co., Pilot Rock

Table 4 (continued)

Oregon (continued)

- Fossil Tel. Exch., Fossil
- Gervais Tel. Co., Gervais
- Haines Tel. Co., Haines
- Halsey Tel. Co., Halsey
- Helix Tel. Co., Helix
- Home Tel. Co., Condon
- \*Linn County Tel. Co., Lebanon (12,877)
- Molalla Tel. Co., Molalla
- Monitor Cooperative Tel. Co., Monitor
- Monroe Tel. Co., Monroe
- Mt. Angel Tel. Co., Mt. Angel
- Nehalem Tel. & Tel. Co., Nehalem
- North State Tel. Co., Dufur
- Oregon Tel. Corp., Mt. Vernon
- Owyhee Tel. Co., Homedale, Idaho
- Peoples Tel. Co., Lyons
- Pine Tel. System, Halfway
- Pioneer Tel. Cooperative, Philomath
- Redwoods Tel. Co., Cave Junction
- St. Paul Cooperative Tel. Assn., St. Paul
- Scio Mutual Tel. Assn., Scio
- Stayton Cooperative Tel. Co., Stayton
- \*Tel. Utilities, Ilwaco, Wash. (7,483)
  - Aurora Tel. Co., Aurora
  - Beaver State Tel. Co., Lakeview
  - Depoe Bay Tel. Co., Gleneden Beach
  - Deschutes Tel. Co., Maupin
  - Knappa Tel. Co., Knappa
  - Rose Valley Tel. Co., Scappoose
- Umpqua Tel. Co., Inc., Elkton
- Yoncalla Tel. Co., Yoncalla



Table 4 (continued)

Pennsylvania

- Beallsville Tel. Co., Beallsville
- Bentleyville Tel. Co., The, Bentleyville
- Blacktown Tel. Co., Blacktown
- Breezewood Tel. Co., Breezewood
- Buffalo Valley Tel. Co., Lewisburg
- Canton Tel. Co., Canton
- Centerville Tel. Co., Centerville
- Citizens Tel. Co. of Kecksburg, Mammoth
- Citizens Utilities Co., Stamford, Conn.
- Big Run Tel. Co., New Bethlehem
- Citizens Utilities Co. of Pennsylvania, New Bethlehem
- Clearfield & Cambria Tel. Co., Coalport
- \*Commonwealth Tel. Co., Dallas (130, 377)
- Conestoga Tel. Co., Birdsboro
- Coopersburg Tel. Co., Coopersburg
- Denver & Ephrata Tel. & Tel. Co., Ephrata
- Emmaus Tel. Co., Emmaus
- Enterprise Tel. Co., New Holland
- Freeport Tel. & Tel. Co., Freeport
- Hickory-Woodrow Tel. Co., Hickory
- Ironton Tel. Co., Ironton
- Lackawaxen Tel. Co., Rowland
- Lakewood Rural Tel. Co., Barnesville
- Laurel Highland Tel. Co., Stahlstown
- Leesport Rural Tel. Co., Leesport
- Lewisberry Tel. Co., Lewisberry
- Mahonoy & Mahantango Tel. Co., Herndon
- Marianna-Scenery Hill Tel. Co., Marianna
- Midway Mutual Tel. Co., Midway
- Murdocksville Tel. Co., Murdocksville
- North Eastern Pennsylvania Tel. Co., Forest City
- North Penn Tel. Co., Roseville
- North Pittsburgh Tel. Co., Gibsonia
- Oswayo River Tel. Co., Shinglehouse
- Otto Tel. Co., Inc., Duke Center
- Palmerton Tel. Co., Palmerton
- Pennsylvania Tel. Co., Oval

Table 4 (continued)  
 Pennsylvania (continued)

Pymatuning Independent Tel. Co., Transfer  
 Saltillo Tel. Co., Orbisonia  
 South Canaan Tel. Co., South Canaan  
 Sugar Valley Tel. Co., Loganton  
 Sullivan County Tel. Co., The, Estella  
 \*Tel. Utilities of Pennsylvania, Inc., Export (44, 915)  
 Brookville Tel. Co., Export  
 Enon Valley Tel. Co., Export  
 Huntingdon & Centre County Tel. Co., Export  
 Murraysville Tel. Co., Export  
 Venus Tel. Assn., Venus  
 West Branch Tel. Co., Muncy  
 Westford Independent Tel. Co., Jamestown  
 West Jersey Tel. Co., Belvidere, N. J.  
 Yukon-Waltz Tel. Co., Yukon

Rhode Island

(No Class Z companies)

South Carolina

Bluffton Tel. & Appliance Co., Inc., Bluffton  
 Chesnee Tel. Co., Inc., Chesnee  
 Chester Tel. Co., Chester  
 Edisto Tel. Co., North  
 \*Farmers Tel. Coop., Inc., Kingstree (18, 548)  
 Fort Mill Tel. Co., Fort Mill  
 Hargray Tel. Co., Inc., Hilton Head Island  
 Home Tel. Co, Inc., Moncks Corner  
 Horry Tel. Corp. Conway  
 Jackson Tel. Co., Jackson  
 Lancaster Tel. Co., Lancaster  
 Lockhart Power Co., Lockhart  
 McClellanville Tel. Co., Inc., McClellanville  
 Norway Tel. Co., Inc., Norway  
 Palmetto Rural Tel. Coop., Inc., Walterboro  
 Piedmont Rural Tel. Coop., Inc., Laurens



Table 4 (continued)

South Carolina (continued)

Pond Branch Tel. Co., Gilbert  
 Ridge Tel. Co., Inc., Ridge Spring  
 Ridgeway Tel. Co. Inc., Ridgeway  
 \*Rock Hill Tel. Co., Rock Hill (22, 901)  
 St. Matthews Tel. Co., St. Matthews  
 St. Stephen Tel. Co., St. Stephen  
 Sandhill Rural Tel. Coop., Jefferson  
 West Carolina Rural Tel. Coop., Inc., Abbeville  
 Williston Tel. Co., Williston

South Dakota

Armour Independent Tel. Co., Armour  
 Baltic Cooperative Tel. Co., Baltic  
 Beresford Municipal Tel. Co., Beresford  
 Bristol Township Tel. Co., Bristol  
 Brookings Lake Tel. Co., Brookings  
 Camp Crook Tel. Exch., Camp Crook  
 Cheyenne River Sioux Tribe Tel. Co., Eagle Butte  
 Citizens Tel. Co., Plankinton  
 \*City of Brookings Municipal Tel. Dept., Brookings (8, 102)  
 Colton Tel. Co., Colton  
 Dakota Cooperative Tel. Co., Inc., Irene  
 \*Deuel Tel. Cooperative Assn., Clear Lake (4, 858)  
 Garretson Cooperative Tel. Assn., Garretson  
 Golden West Tel. Coop. Inc., Wall  
 Great Plains Tel. Co., Keystone  
 Hanson County Tel. Co., Alexandria  
 James Valley Cooperative Tel. Co., Groton  
 Jefferson Tel. Co., Jefferson  
 Kadoka Tel. Co., Kadoka  
 Kennebec Tel. Co., Kennebec  
 McCook Cooperative Tel. Co., Salem  
 Midstate Tel. Co., Kimball  
 Peoples Tel. & Tel. Co., Hot Springs  
 Pettigrew Tel. Line, Oelrichs  
 Roberts County Tel. Cooperative Assn., New Effington  
 Rosefield Tel. Co., Marion  
 Sanborn Tel. Coop., Woonsocket  
 Sioux Valley Tel. Co., Dell Rapids

Table 4 (continued)

South Dakota (continued)

Stockholm-Strandburg Tel. Co., Stockholm  
 Sully-Buttes Tel. Coop., Inc., Highmore  
 Tri-County Mutual Tel. Co., Emery  
 Twin Buttes Tel. Co., Academy  
 Union Tel. Co., Hartford  
 Valley Tel. Cooperative Assn., Inc., Herreid  
 Vivian Tel. Co., Vivian  
 Walworth County Tel. Co., Selby  
 Western Tel. Co., Faulkton  
 West River Cooperative Tel. Co., Bison  
 West River Mutual Aid Tel. Corp., Hazen, N. D.  
 Wood Community Tel. Co., Wood

Tennessee

Adamsville Tel. Co., Adamsville  
 Ardmore Tel. Co., Ardmore  
 \*Ben Lomand Rural Tel. Coop., Inc., McMinnville (12,531)  
 Bledsoe Tel. Cooperative, Pikeville  
 Bruceton-Hollow-Rock Tel. Co. Inc., Bruceton  
 Claiborne Tel. Co., New Tazewell  
 Concord Tel. Exch., Inc., Concord  
 Crockett Tel. Co., Inc., Friendship  
 DeKalb Tel. Coop., Alexandria  
 Englewood Tel. Co., The, Englewood  
 Highland Tel. Coop., Inc., Sunbright  
 Humphreys County Tel. Co., New Johnsonville  
 Loretto Tel. Co., Inc., Loretto  
 Millington Tel. Co., Millington  
 North Central Tel. Coop., Inc., Lafayette  
 Oltewah-Collegedale Tel. Co., Collegedale  
 Peoples Tel. Co., Inc., Erin  
 Powell Tel. Co., Powell  
 Tellico Tel. Co., Tellico Plains  
 \*Twin Lakes Tel. Coop., Gainesboro (13,327)  
 United Tel. Co., Chapel Hill  
 West Kentucky Rural Tel. Coop. Corp., Mayfield, Ky.  
 West Tennessee Tel. Co., Bradford  
 Yorkville Tel. Coop., Yorkville



Table 4 (continued)

Texas

- Allied Tel. Co., Little Rock, Ark.
- Nocona Tel. Co., Nocona
- Avery Tel. Co., Avery
- Big Bend Tel. Co., Alpine
- Blossom Tel. Co., Blossom
- Brazoria Tel. Co., Brazoria
- Brazos Tel. Coop., Inc., Olney
- Byers-Petrolia Tel. Co., Byers
- Cameron Tel. Co., Sulphur, La.
- Cap Rock Rural Tel. Cooperative, Inc., Spur
- Central Tel. Co., Inc., Decatur
- Century Tel. Enterprises, Inc., Marion, La.
- La Del Tel. Co., Argyle
- Marietta Tel. Co., Marietta
- Central Texas Tel. Coop., Goldthwaite
- Clifton Tel. Co., Clifton
- Coahoma Tel. Co., Inc., Coahoma
- Coastal Tel. Co., High Island
- Coleman County Tel. Coop. Santa Anna
- Colmesneil Tel. Co., Colmesneil
- Colorado Valley Tel. Coop., Inc., LaGrange
- Comanche County Tel. Co., Inc., Comanche
- Community Tel. Co., Windthorst
- Cranfills Gap Tel. Co., Cranfills Gap
- Cresson Tel. Co., Cresson
- Cumby Tel. Cooperative Inc., Cumby
- Dell Tel. Coop., Inc., Dell City
- Eastex Tel. Coop., Inc., Henderson
- Electra Tel. Co., Electra
- Etex Tel. Coop., Inc., Gilmer
- Five Area Tel. Coop., Inc., Mule shoe
- Ft. Bend Tel. Co., Rosenberg
- Frio Canyon Tel. Co., Leahey
- Ganado Tel. Co., Inc., Ganado
- Garrison Tel. Co., Inc., West Columbia
- Garwood Tel. Co., Garwood
- Gary Tel. Co., Gary

Table 4 (continued)

Texas (continued)

Glen Flora Tel. Exchange, Glen Flora  
Gorman Tel. Co., Gorman  
Guadalupe Valley Tel. Coop., Inc., Smithsons Valley  
Hill Country Tel. Coop., Inc., Ingram  
Home Tel. Co., Humble  
Hooks Tel. Co., Inc., Hooks  
Hopkins County Tel. Co., Inc., Greenville  
Industry Tel. Co., Industry  
Justin Tel. Co., Inc., Justin  
Karnack Tel. Co., Karnack  
Keller Tel. Co., Bridgeport  
Kerrville Tel. Co., Kerrville  
Knippa Tel. Co., Knippa  
Lake Dallas Tel. Co., Inc., Lake Dallas  
Lakeside Tel. Co., Whitehouse  
Laward Tel. Exch. Laward  
Lipan Tel. Co., Lipan  
Livingston Tel. Co., Livingston  
Lueders Tel. Co., Inc., Lueders  
\* Lufkin-Conroe Communications Co., Lufkin (30,960)  
Merkel Tel. Co., Inc., Andrews  
Mid-Plains Rural Tel. Coop., Inc., Tulia  
\* Mid-Texas Communications Systems, Inc., Killeen (28,067)  
    Mid-State Tel. Co., Killeen  
    Mid-Texas Tel. Co., Killeen  
    United Tel. Co., Inc., Killeen  
Montague Tel. Co., Montague  
Muenster Tel. Corp. of Texas, Muenster  
Mustang Tel. Co., Port Arkansas  
Navasota Tel. Co., Navasota  
Nome Tel. Co., Nome  
O' Donnell Tel. Co., Inc., O' Donnell



Table 4 (continued)

Texas (continued)

Palestine Tel. Co., Tyler  
Palo Pinto Tel. Co., Inc., Palo Pinto  
Peoples Tel. Co., Inc., Coolidge  
Peoples Tel. Coop., Inc., Quitman  
Poka-Lambro Rural Tel. Coop., Inc., Tahoka  
Rhome Tel. Co., Rhome  
Riviera Tel. Co., Inc., Riviera  
Rockspring & Nueces Canyon Tel. Co., Rockspring  
Romain Tel. Co., Inc., Plains  
Saint Jo Tel. Co., Saint Jo  
San Marcos Tel. Co., Inc., San Marcos  
Santa Rosa Tel. Coop., Inc., Vernon  
Sheffield Tel. Co., Midland  
South Plains Tel. Coop., Inc., Lubbock  
Sugar Land Tel. Co., Sugar Land  
Sweeny-Old Ocean Tel. Co., Sweeny  
Tatum Tel. Co., Tatum  
Taylor Tel. Coop., Inc., Merkel  
Telephones Inc., Andrews  
Texas Midland Tel. Co., Grandview  
Tri-County Tel. Co., Inc., Garrison  
Trinity Valley Tel. Co., Winnie  
Valley Tel. Cooperative, Inc., Raymondville  
Valley View Tel. Co., Valley View  
Warren Tel. Co., Warren  
West Texas Rural Tel. Coop., Inc., Hereford  
Wes-Tex. Tel. Coop., Inc., Stanton  
XIT Rural Tel. Coop., Inc., Dalhart

Table 4 (continued)

Utah

- Central Utah Tel. Co., Inc., Fairview
- Emery County Tel. Assn., Inc., Orangeville
- Gunnison Tel. Co., Gunnison
- Kamas-Woodland Tel. Co., Kamas
- Manti Tel. Co., Manti
- Silver Beehive Tel. Co. Inc., Reno, Nev.
- \*South Central Utah Tel. Assn., Inc., Escalante (1,205)
- \*Uintah Basin Tel. Assn., Roosevelt (1,291)
- Union Tel. Co., Mountainview, Wyo.
- Utah-Wyoming Tel., Co., Salt Lake City

Vermont

- Cornwall Tel. & Tel. Co., Shoreham
- Crandall Farm Tel. Co., Berlin
- Franklin Tel. Co., Franklin
- Ludlow Tel. Co., Ludlow
- Shoreham Tel. Co., Shoreham
- \*Telephone & Data Systems, Inc., Chicago, Ill. (2,510)
- Northfield Tel. Co., Northfield
- Perkinsville Serv. Corp., Perkinsville
- Topsham Tel. Co., East Corinth
- \*Waitsfield-Fayston Tel. Co., Waitsfield (1,524)



Table 4 (continued)

Virginia

Amelia Tel. Corp., Amelia  
 Buggs Island Tel. Coop., Chase City  
 Burke's Garden Tel. Co., Burke's Garden  
 Citizens Tel. Cooperative, Floyd  
 Clifton Forge-Waynesboro Tel. Co., Staunton  
 \*Commonwealth Tel. Co. of Va., Manassas (39,668)  
 Deerfield Tel. Co., Deerfield  
 Merchants & Farmers Tel. Co., Montpelier  
 Mountain Grove-Williamsville Tel. Co., McDowell  
 Mutual Tel. Co. of Highland, Inc., Monterey  
 New Hope Switchboard Assn., New Hope  
 Norfolk & Carolina Tel. & Tel. Co. of Va., Great Bridge  
 North River Tel. Co., Mt. Solon  
 Pembroke Tel. Cooperative, Pembroke  
 Peoples Mutual Tel. Co., Gretna  
 Piedmont Tel. Co., Haymarket  
 Prince George Tel. Co., Disputanta  
 Roanoke & Botetourt Tel. Co., Daleville  
 Scott County Tel. Cooperative, Inc., Gate City  
 Shenandoah Tel. Co., Edinburg  
 \*Tidewater Tel. Co., Warsaw (38,361)  
 Virginia Hot Springs, Inc., Hot Springs

Washington

Asotin Tel. Co., Asotin  
 Cowiche Tel. Co., Cowiche  
 East Peninsula Tel. Co., Quilcene  
 \*Ellensburg Tel. Co., Ellensburg (13,926)  
 Evergreen Tel. Co., Morton  
 Fall City Tel. Co., North Bend  
 Hat Island Tel. Co., Langley  
 Hood Canal Tel. Co., Union  
 Inland Tel. Co., Roslyn  
 Inter Island Tel. Co., Friday Harbor  
 Kalama Tel. Co., Kalama  
 Lewis River Tel. Co., La Center  
 McDaniel Tel. Co., Salkum  
 Mashell Tel. Co. Inc., Eatonville  
 Peninsula Tel. & Telegraph Co., Forks

Table 4 (continued)

Washington (continued)

Pioneer Tel. Co., LaCrosse  
 Pouisbo Rural Tel. Assn., Poulsbo  
 Prescott Tel. & Tel. Co., Roslyn  
 St. John Tel. Co., St. John  
 \*Telephone Utilities, Inc., Ilwaco (33, 217)  
     Cascade Tel. Co., North Bend  
     Cheney Tel. Co., Cheney  
     Columbia Basin Tel. Co., Connell  
     Evergreen Tel. Co., Morton  
     Ilwaco Tel. Co., Ilwaco  
     Inland Empire Tel. Co., Spangle  
     Island Empire Tel. Co., Gig Harbor  
     Lopez Tel. Co., Lopez  
     Olympic Tel. Co., Kingston  
     Orting Tel. Co., Inc., Orting  
     Puget Island Tel. Co., Puget Island  
     Rainier Tel. Co., Twisp  
     Sound Tel. Co., Lakebay  
     Timberland Tel. Co., Montesano  
     Vashon Tel. Corp., Vashon  
 Tenino Tel. Co., Tenino  
 Toledo Tel. Co., Toledo  
 Western Wahkiakum County Tel. Co., Deep River  
 Whidbey Tel. Co., Langley  
 Yelm Tel. Co., Yelm

West Virginia

Armstrong Tel. Co., Hamlin  
 Circleville Mutual Tel. Co., Circleville  
 Daybrook Tel. Co., Daybrook  
 Hardy Tel. Co., Inc., Mathias  
 North Fork Mutual Tel. Co., Macksville  
 Preston County Light & Power Co., Masontown  
 \*Ritchie Tel. Co., The, Harrisville (3, 203)  
 \*Tel. Utilities of Pa., Export, Pa. (9, 731)  
     Short Line Tel. Co., Hundred  
     Tel. Utilities of W. Va., Inc., Marlinton  
     United Farmer's Tel. Co., Cameron  
 Tygart Valley Tel. Co., Mill Creek  
 War Tel. Co., Charleston  
 West Side Tel. Co., Morgantown



Table 4 (continued)

Wisconsin

- Almond Tel. Co., Almond
- Amberg Tel. & Tel. Co., Wausau
- Amery Tel. Co., Amery
- Amherst Tel. Co., Amherst
- Baldwin Tel. Co., Baldwin
- Belmont Tel. Co., Belmont
- Bergen Tel. Co., Bergen
- Bloomer Tel. Co., Bloomer
- Boscobel Tel. Co., Tomah
- Bruce Tel. Co., Bruce
- Casco Tel. Co., Casco
- Chequamegon Tel. Coop., Inc., Cable
- Chibardun Tel. Coop., Inc., Dallas
- Citizens Tel. Coop., Inc., New Auburn
- Clear Lake Tel. Co., Clear Lake
- Cochrane Coop. Tel. Co., Cochrane
- Coloma Tel. Co., Coloma
- Coon Valley Farmers Tel. Co., Coon Valley
- Crandon Tel. Co., Crandon
- Cumberland Tel. Co., Cumberland
- Dahlberg Light & Power Co., Iron River
- Dickeyville Tel. Corp., Dickeyville
- Fair Water-Brandon-Alto Tel. Co., Brandon
- Farmers & Merchants Tel. Co., Coleman
- Farmers Independent Tel. Co., Grantsburg
- Farmers Tel. Co., Lancaster
- Footville Tel. Co., Footville
- Greenwood Tel. Co., Inc., Greenwood
- Hager City Tel. Co., Hager City
- Headwaters Tel. Co., Rhineland
- Hillsboro Tel. Co., Inc., Hillsboro
- Lakefield Tel. Co., Newtonburg
- Lakeshore Tel. Co., Cecil
- LaValle Tel. Coop., LaValle
- Lemonweir Valley Tel. Co., Camp Douglas
- Luck Tel. Co., Luck
- Madeline Island Tel. Co., LaPointe
- Manawa Tel. Co., Manawa

Table 4 (continued)

Wisconsin (continued)

Maple Tel. Coop., Inc., Maple  
Marquette-Adams Tel. Coop., Inc., Oxford  
Mid-Plains Tel. Inc., Middleton  
Milltown Tel. Co., Milltown  
Milton Tel. Co., Tomah  
Mondovi Tel. Co., Mondovi  
Mosinee Tel. Co., Mosinee  
Mt. Horeb Tel. Co., Mt. Horeb  
Nelson Tel. Coop., Durand  
Niagara Tel. Co., Wittenberg  
Northeast Tel. Co., Pulaski  
\*North-West Tel. Co., Tomah (36, 041)  
Northwestern Tel. Co., Freeport, Ill.  
Novy's Tel. Co., Kendall  
Oconto Rural Tel. Co., Abrams  
Ogdensburg Tel. Co., Ogdensburg  
Peoples Tel. Co., Randolph  
Platteville Tel. Co., Platteville  
Preston Tel. Co., Inc., Weyerhauser  
Price County Tel. Co., Phillips  
Rhineland Tel. Co., Rhineland  
Rib Lake Tel. Co., Rib Lake  
Richland-Grant Tel. Coop., Blue River  
Rock River Tel. Co., Johnson Creek  
St. Croix Tel. Co., New Richmond  
Sharon Tel. Co., Sharon  
Shell Lake Tel. Co., Shell Lake  
Siren Tel. Co., Inc., Siren  
Somerset Tel. Co., Inc., Somerset  
Southeast Tel. Co., Waterford  
Spring Valley Tel. Co., Spring Valley  
State Long Distance Tel. Co., Elkhorn  
Sullivan Tel. Co., Sullivan  
\*Telephone & Data Systems, Inc., Chicago, Ill. (34, 543)  
Badger State Tel. Co., Inc., Neillsville  
Black Earth Tel. Co., Black Earth  
Bonduel Tel. Co., Bonduel  
Burlington Brighton and Wheatland Tel. Co., Burlington



Table 4 (continued)

Wisconsin (continued)

Central State Tel. Co., Madison  
Dodge County Tel. Co., Reeseville  
Fennimore Tel. Co., Fennimore  
Midway Tel. Co., Medford  
Mosel and Centerville Tel. Co., Cleveland  
Mt. Vernon Tel. Co., Verona  
Peoples Tel. Co., Mt. Hope  
Scandinavia Tel. Co., Scandinavia  
Stockbridge and Sherwood Tel. Co., Sherwood  
Valders Tel. Co., Valders  
Waunakee Tel. Co., Waunakee  
Tenney Tel. Co., Alma  
Thorp Tel. Co., Thorp  
Tri-County Tel. Coop., Strum  
Turtle Lake Tel. Co., Turtle Lake  
Union Tel. Co., Plainfield  
United Tel. Co., Monroe  
Universal Tel., Inc., Milwaukee, Wisc.  
Chippewa County Tel., Inc., Jim Falls  
Cream Valley Tel. Co., Hawkins  
Cuba City Tel. Exch. Co., Cuba City  
Forestville Tel. Co., Brussels  
Gleason Tel. Co., Inc., Gleason  
Hammond Tel. Co., Hammond  
Larsen Tel. Co., Larsen  
Monroe County Tel. Co., Sparta  
Ogema Tel. Co., Ogema  
Readfield Tel. Co., Larsen  
Universal Tel. Co. of Northern Wisc., Inc., Manitowish Waters  
Urban Tel. Co., Clintonville  
Vernon Tel. Coop., Westby  
Viroqua Tel. Co., Viroqua  
Wayside Tel. Co., Wayside  
West Winconsin Tel. Coop., Inc., Downsville  
Weyauwega Tel. Co., Weyauwega  
Wittenberg Tel. Co., Wittenberg  
Wood County Tel. Co., Wisconsin Rapids

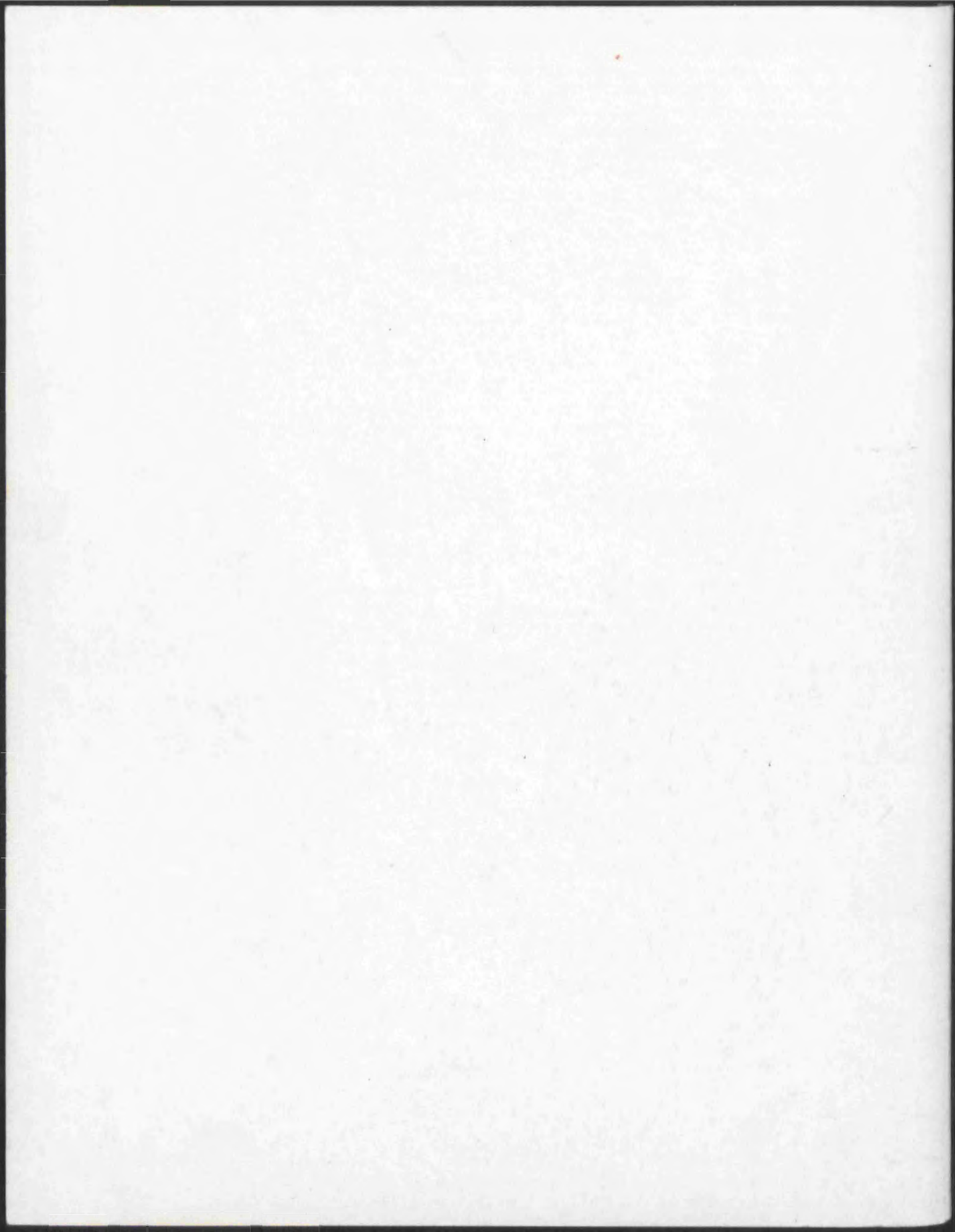
Table 4 (continued)

Wyoming

Chugwater Tel. Co., Chugwater  
Cokeville Tel. Co., Inc., Cokeville  
Dubois Tel. Exchange, Inc., Dubois  
Eden Valley Tel. Co., Rock Springs  
Medicine Bow Electric Co., Tel. Dept., Medicine Bow  
Range Tel. Coop., Inc., Forsyth, Mont.  
Silver Star Tel. Co., Inc., Freedom  
Tri-County Tel. Assn., Inc., Basin  
\*Union Tel. Co., Mountainview (1,115)  
Valley Tel. Co., Braggs  
\*Wyoming Tel. Co., Inc., Pinedale (1,785)

\* No. 1 and No. 2 Class Z Independent companies (indicated as A and B on figures 7-56).





OT SPECIAL PUBLICATION 77-13

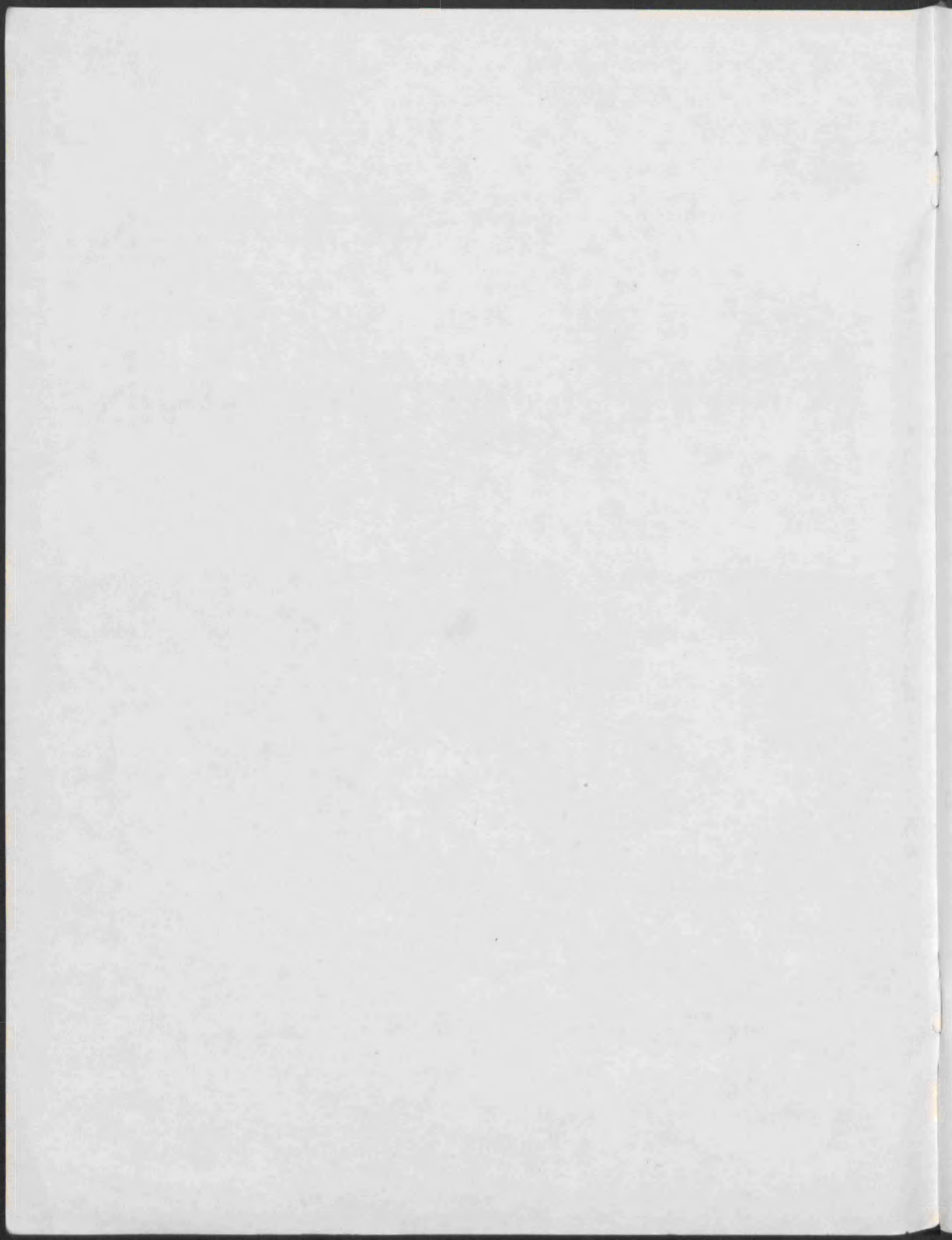
# THE POSTAL CRISIS: THE POSTAL FUNCTION AS A COMMUNICATIONS SERVICE



# OT

U.S. DEPARTMENT OF COMMERCE / Office of Telecommunications





# THE POSTAL CRISIS: THE POSTAL FUNCTION AS A COMMUNICATIONS SERVICE

**DONALD R. EWING**

**ROGER K. SALAMAN**



**U.S. DEPARTMENT OF COMMERCE**

**Juanita M. Kreps, Secretary**

**Betsy Ancker-Johnson, Ph. D.**

**Assistant Secretary for Science and Technology**

**OFFICE OF TELECOMMUNICATIONS**

**John M. Richardson, Acting Director**

**January 1977**



**UNITED STATES DEPARTMENT OF COMMERCE  
OFFICE OF TELECOMMUNICATIONS**

**STATEMENT OF MISSION**

The mission of the Office of Telecommunications in the Department of Commerce is to assist the Department in fostering, serving, and promoting the nation's economic development and technological advancement by improving man's comprehension of telecommunication science and by assuring effective use and growth of the nation's telecommunication resources.

In carrying out this mission, the Office

- Conducts research needed in the evaluation and development of policy as required by the Department of Commerce
- Assists other government agencies in the use of telecommunications
- Conducts research, engineering, and analysis in the general field of telecommunication science to meet government needs
- Acquires, analyzes, synthesizes, and disseminates information for the efficient use of the nation's telecommunication resources.
- Performs analysis, engineering, and related administrative functions responsive to the needs of the Director of the Office of Telecommunications Policy, Executive Office of the President, in the performance of his responsibilities for the management of the radio spectrum
- Conducts research needed in the evaluation and development of telecommunication policy as required by the Office of Telecommunications Policy, pursuant to Executive Order 11556

USCOMM - ERL



## PREFACE

Many papers have summarized the immediate, first-level issues that surround the postal problem. Rather than recapitulate these issues, an attempt has been made in this paper to present the concepts and data which underscore the basic questions that must be addressed if there is to be a viable, long-term solution to the present problems of the Postal Service.

The fiscal crisis in the Postal Service is but a symptom of a broader issue -- the changing nature of communications in America. Over the past two hundred years, new modes of communication have been introduced -- telegraph, telephone, radio, television, and digital networks. As new technologies have been introduced they have created new markets, but often they have also usurped some of the markets previously served by older technologies. While each change has brought flexibility in the way information and ideas can be shared, each change has also put pressure on older services to adjust. A classic example is the adjustment made by radio after the advent of television.

Today we are undergoing a particularly strong current of change in communications. New transmission technologies carry more information -- farther, quicker, and at less expense. Computer technology has radically increased the flexibility and speed of much of our communications system and opened up a whole new market of computer data transmission.

The postal service is one character in the modern cast of communications services. It too is finding it difficult but necessary to adjust to change and to reassess its role in the communications market. In the wake of these changes, policy-makers must reexamine the traditional regulatory and policy framework for the postal services.

It is important to address the issues of postal policy within the larger context of this nation's changing communications opportunities. This report attempts to view the present postal dilemma in this context.





## TABLE OF CONTENTS

|   | <u>Page</u> |
|---|-------------|
| 1. INTRODUCTION . . . . .   | 1           |
| 2. THE NATURE OF THE POSTAL CRISIS . . . . .                                  | 5           |
| 2.1 The Fiscal Crisis . . . . .   | 5           |
| 2.2 Limitations on Options . . . . .  | 10          |
| 2.3 Regulatory Barriers . . . . .   | 11          |
| 2.4 An Unreasonable Expectation . . . . .                                     | 12          |
| 3. POSTAL SERVICE IN PERSPECTIVE . . . . .                                    | 14          |
| 3.1 A Thirty-Year Perspective . . . . .                                       | 14          |
| 3.2 Significant Trends Today . . . . .  | 21          |
| 3.2.1 Repressed Volume . . . . .  | 21          |
| 3.2.2 Postal Salaries . . . . .   | 25          |
| 3.2.3 Postal Rates . . . . .  | 26          |
| 3.2.4 Parcel Post . . . . .   | 28          |
| 3.2.5 Regulatory Lag . . . . .  | 29          |
| 3.2.6 Electronic Mail . . . . .   | 29          |
| 3.3 The Importance of Postal Subsidy . . . . .                                | 30          |
| 3.3.1 Interclass Subsidy . . . . .  | 31          |
| 3.3.2 Urban-Rural Subsidy . . . . .   | 33          |
| 3.3.3 Federal Subsidy . . . . .   | 35          |
| 3.4 A Comparison with the Telephone Industry . . . . .                        | 36          |
| 3.4.1 Market Characteristics, Industry Structure,<br>and Regulation . . . . . | 36          |
| 3.4.2 Pricing . . . . .   | 38          |
| 3.4.3 Physical Systems . . . . .  | 39          |
| 4. OPTIONS FOR INDUSTRY STRUCTURE . . . . .                                   | 40          |
| 4.1 Status Quo . . . . .  | 41          |
| 4.2 Reversion to the Post Office Department . . . . .                         | 42          |
| 4.3 Regulated Private Firm . . . . .  | 42          |
| 4.4 Competition . . . . .   | 43          |
| 5. SUMMARY . . . . .  | 44          |



TABLE OF CONTENTS (Cont'd)

|   | <u>Page</u> |
|---|-------------|
| 6. ACKNOWLEDGEMENTS . . . . .   | 46          |
| 7. REFERENCES . . . . .   | 47          |
| 8. SELECTED BIBLIOGRAPHY . . . . .                                    | 49          |
| Appendix A. Historic Statistics, 1945-1975 . . . . .                  | 52          |
| Appendix B. Price Elasticity of Demand and Reduced Deficits . . . . . | 69          |
| Appendix C. Brief Description of Classes of Mail . . . . .            | 74          |
| Appendix D. Required Studies . . . . .                                | 75          |

## LIST OF FIGURES

|     |   | <u>Page</u> |
|-----|---|-------------|
| 1   | Exchange Communications Messages . . . . .  | 4           |
| 2   | Postal Operating Income and Expense . . . . .   | 7           |
| 3   | Postal Volume Per Capita . . . . .  | 16          |
| 4   | Exchange Communications Employees . . . . .   | 16          |
| 5   | Postal Productivity . . . . .   | 17          |
| 6   | Postal Efficiency . . . . .   | 18          |
| 7   | Cost per Piece of Mail . . . . .  | 18          |
| 8   | Average Salaries . . . . .  | 20          |
| 9   | Postal Labor Intensity . . . . .  | 20          |
| 10  | Postal Operating Deficit per Piece of Mail . . . . .  | 21          |
| 11  | Comparison of Gross National Product per Capita with<br>Pieces of Mail per Capita . . . . .   | 22          |
| 12  | First Class Postage in 1975 Cents . . . . .   | 27          |
| 13  | Postal Volume, Weight, and Revenue Comparisons by<br>Class of Mail . . . . .  | 34          |
| B-1 | Improvement of the Revenue/Cost Ratio Due to Rate<br>Increases, Where the Volume Elasticity of Cost is<br>Assumed to be 0.3 . . . . . | 71          |



CONTENTS

1941

CONTENTS

|     |   |
|-----|---|
| 1   | Exchange International Messages   |
| 2   | Postal Operating Income and Expense   |
| 3   | Postal Volume per Capita  |
| 4   | Exchange International Development in Officially Settled Countries  |
| 5   | Postal Productivity   |
| 6   | Postal Efficiency   |
| 7   | Cost per Piece of Mail  |
| 8   | Average Salaries  |
| 9   | Postal Labor Intensity  |
| 10  | Postal Operating Deficit per Piece of Mail  |
| 11  | Comparison of Gross National Product per Capita with Pieces of Mail per Capita  |
| 12  | First Class Postage in 1935 Cents   |
| 13  | Postal Volume, Weight, and Revenue Comparison by Class of Mail  |
| B-1 | Improvement of the Revenue/Deficit Ratio Due to Rate Increases, When the Volume Elasticity of Cost is Assumed to be 0.3 |

## LIST OF TABLES

|      |   | <u>Page</u> |
|------|---|-------------|
| 1    | A Summary of the Postal Operating Deficit . . . . .   | 9           |
| 2    | Thirty-Year Trends in Postal Service . . . . .  | 15          |
| 3    | Postal Revenue and Labor Expense, 1970-1975 . . . . .   | 26          |
|      |   |             |
| A-1  | National Statistics . . . . .   | 53          |
| A-2  | Postal Statistics I . . . . .   | 54          |
| A-3  | Postal Statistics II . . . . .  | 55          |
| A-4  | Postal Volume by 12 Classes . . . . .   | 56          |
| A-5  | Postal Weight by 12 Classes . . . . .   | 57          |
| A-6  | Postal Revenue by 12 Classes . . . . .  | 58          |
| A-7  | Postal Revenue per Piece by 12 Classes . . . . .  | 59          |
| A-8  | Postal Revenue per Pound by 12 Classes . . . . .  | 60          |
| A-9  | Postal Weight per Piece by 12 Classes . . . . .   | 61          |
| A-10 | Postal Volume by 6 Classes . . . . .  | 62          |
| A-11 | Postal Weight by 6 Classes . . . . .  | 63          |
| A-12 | Postal Revenue by 6 Classes . . . . .   | 64          |
| A-13 | Comparison of Percent Volume, Weight, Revenues,<br>and Allocated Costs for 4 Classes of Mail . . . . .          | 65          |
| A-14 | Telephone Statistics . . . . .  | 66          |
| A-15 | Telegraph and Exchange Communications Statistics . . . . .  | 67          |
| A-16 | Average Salary Comparisons . . . . .  | 68          |
|      |   |             |
| B-1  | Relative Change in Revenue/Cost Ratio Due to Price<br>Increases . . . . .                                       | 72          |
| B-2  | Revenue/Cost Ratio Resulting from Price Increase P,<br>Assuming the Initial Revenue/Cost Ratio is 0.8 . . . . . | 73          |



LIST OF TABLES

|      |  |
|------|--|
| 1    | A survey of the Postal Ignited Service   |
| 2    | Thirty-Year Trends in Postal Service   |
| 3    | Postal Revenue and Labor Expenditures, 1970-1972   |
|      |  |
| A-1  | National Statistics  |
| A-2  | Postal Statistics - A  |
| A-3  | Postal Statistics - B  |
| A-4  | Postal Volume by 12 Classes  |
| A-5  | Postal Weight by 12 Classes  |
| A-6  | Postal Revenue by 12 Classes   |
| A-7  | Postal Revenue per Pound by 12 Classes   |
| A-8  | Postal Revenue per Pound by 12 Classes   |
| A-9  | Postal Weight per Pound by 12 Classes  |
| A-10 | Postal Volume by 6 Classes   |
| A-11 | Postal Weight by 6 Classes   |
| A-12 | Postal Revenue by 6 Classes  |
| A-13 | Comparison of Recurrent Volume, Weight, Revenue, and Adjusted Costs for 6 Classes of Mail        |
| A-14 | Regional Statistics  |
| A-15 | Regional and Exchange Commission Statistics  |
| A-16 | Average Salary Comparison  |
|      |  |
| B-1  | Relative Change in Revenue/Cost Ratio Due to Price Increases                                     |
| B-2  | Revenue/Cost Ratio Resulting from Price Increases Assuming the Initial Revenue/Cost Ratio is 0.8 |

# THE POSTAL CRISIS: THE POSTAL FUNCTION AS A COMMUNICATIONS SERVICE

by

Donald R. Ewing and Roger K. Salaman

This report is distinctive in that the postal function is viewed in the context of the modern communications industry. Continuing technological advances make this broader perspective mandatory in order to derive lasting solutions to the problems of postal service. An historical perspective is developed, and options for future postal service are analyzed.

Key Words: Electronic mail, mail, personal communications, postal service, postal subsidy.

## 1. INTRODUCTION

The opportunity for Americans to post a letter dates to colonial times (Priest, 1975). In 1775, because of the trend toward war, the Continental Congress acted to establish a postal delivery organization that was secure, and therefore necessarily under government control. It was not, however, until after the war in 1782 that Congress enacted a statute which gave the Federal Government "sole and exclusive" postal power. For the first time, the post office operated at a profit in 1783. The Federal Postal System was needed at that time to maintain communications with the states and to supply revenues for the army.

The Constitution, ratified in 1789, endorsed the principle of a government postal service by stating "Congress shall have power . . . to establish postal office and post roads," but did not mandate "sole and exclusive right" of Congress to establish and regulate post offices as stated in the previous Articles of Confederation.

This same year, however, the 1782 statute was reenacted by the Congress. The Constitution does not view postal service as a right, nor does it deem

---

\*The authors are with the Policy Research Division, Office of Telecommunications, U. S. Department of Commerce, Boulder, Colorado 80302.



monopoly as necessary to effect mail delivery. The government postal monopoly was maintained as a legislative mandate rather than as a constitutional necessity.

Postal monopoly profits were used to subsidize western expansion after 1792. By 1800 the service reached the full extent of the western and southern frontiers and began lateral expansion to serve all of America. The number of postal offices essentially doubled every 10 years from 903 in 1800 to 8,450 in 1830 (Fuller, 1972). After 1832, the expansion decreased because of the smaller growth of postal revenues. Postage rates at this time were higher (relative to costs of other goods and services) than postal rates are today. Because of high postal rates, customers began to support the emergence of a private delivery industry, particularly for the rapid delivery needs of newspapers and investment companies. In spite of Congressional actions to tighten the monopoly provision of earlier legislation, postal sales had declined sufficiently by 1841 that expansion of postal routes was constrained. Court cases brought by the post office for violation of monopoly rights were not acted upon in their favor.

In 1843 and 1844, Congress failed to pass legislation to further strengthen the postal monopoly. By 1845, postal reform had become a major issue. With strong sympathy in Congress for the plight of the post office, legislation was enacted in 1845 that reflects essentially the structure and philosophy of the postal operations we have today. It both lowered postage rates and prohibited competition in the carriage of letters. Congressional debate elicited general agreement that: (1) the post office could not economically compete with private carriers, (2) service should be provided to unprofitable rural areas, and (3) losses for frontier routes should be subsidized with profits from more populated routes. In addition, subsidization of newspaper and government mail by the urban area profits were allowed to continue.

Thus, within 50 years of the birth of the nation, the postal industry was well established, but competition threatened the postal monopoly because of high postal rates and deficiencies in service. Legislation was required to maintain the monopoly. The postal service was not a natural monopoly in 1845 in the sense that it would not serve as a predominant supplier if



subject to the competitive marketplace; the monopoly was forced through legislation. The 1970 Postal Reorganization Act continued the enforced monopoly.

The 1845 legislation did not consider the possibility of other means of exchanging messages over long distances, for there were none.<sup>1</sup> In terms of the number of messages communicated (letters vs. telephone calls), the telephone exceeded the mails by 1926 (U.S. Bureau of the Census, 1976, p. 783 (Series R9-R12), p. 804 (Series R169)). Today, 80% of the nation's personal and business messages are carried by telephone, and only 20% by mail.<sup>2</sup> While it must be recognized that the telephone does not provide a direct substitute for the mail, one must grant that the growth of the telephone has played a major part in slowing the growth of the mail service (see Figure 1). One researcher estimates that the telephone reduced mail volume by 2.4 billion pieces in 1975, which is 4.7% of the first class mail and equivalent to \$240 million in postal revenues (Business Communications Co., 1976, p. 49).

Today again, as in the 1840s, there is a challenge to the postal monopoly, this time caused in part by new technologies. Electronic communications threaten the economic viability of the traditional carriage of letters. Previously, the concern was with competition from private carriers who might offer to accept, transport, and deliver letters. Now, in addition, there is concern about new electronic communications services that may substantially reduce the need to physically deliver letters. Today's reduction is partially attributable to the decreased relative cost of communications service, but more importantly, to the use of electronic communications rather than mail in personal, business, and government financial transactions. Seventy percent of the first class mail is financial transactions, including invoices, bills, payments, statements, orders, and financial papers (U. S. Postal Service, 1976, p. 13). For example, the U. S. Department of the Treasury estimates that by 1981 there will be 216 million fewer government checks moving through the mails annually, and postal officials expect an overall 4% decline in mail usage (Boulder Camera, 1976).

---

<sup>1</sup>The telegraph was not operational until 1844, the telegram in 1864, the telephone in 1876, and the radio after the turn of the century.

<sup>2</sup>See Table A-15, Appendix A.



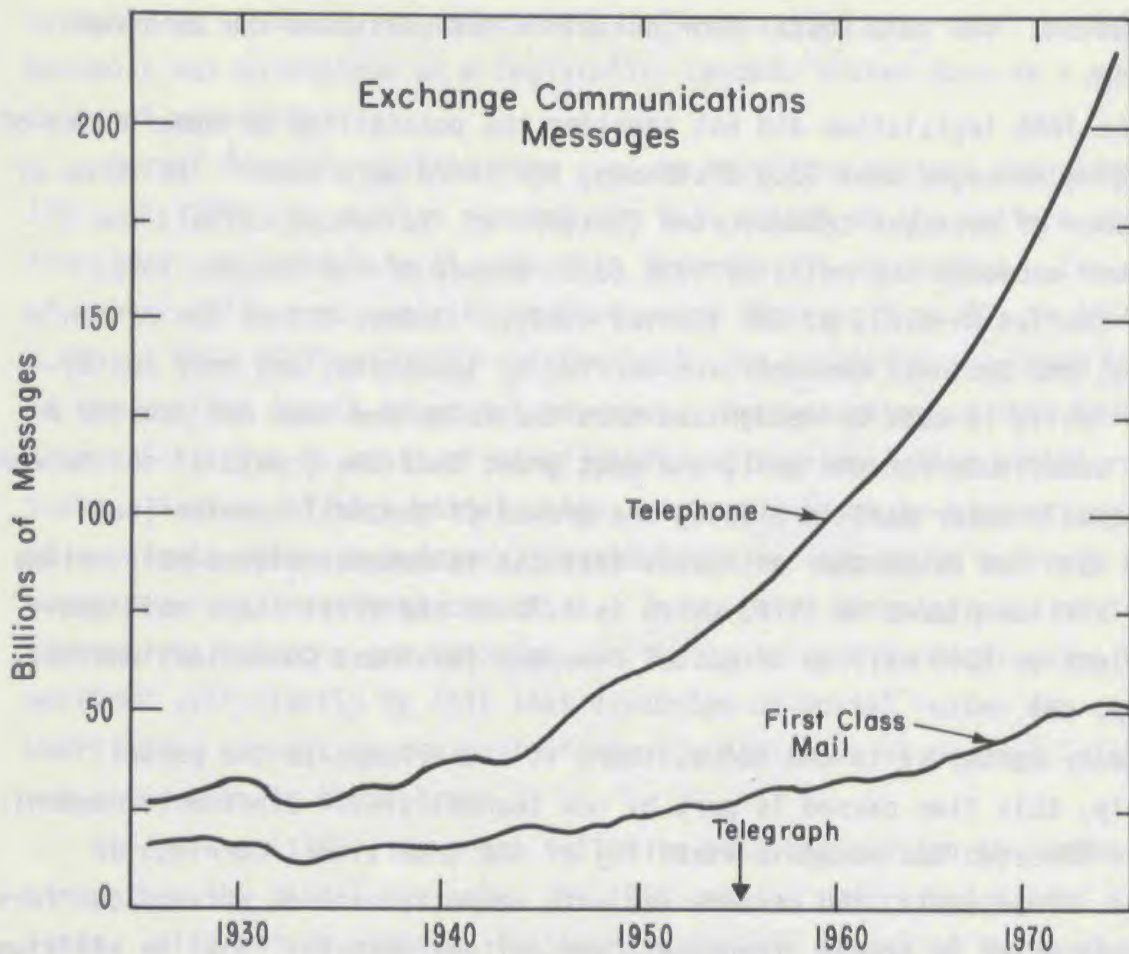


Figure 1. Exchange Communications Messages

Because electronic communications significantly affect postal service revenues, one can no longer consider the postal industry separate from the effects of electronic communications. It is necessary today to analyze the need for postal service from the broader perspective of "exchange communications."<sup>3</sup> For the first 200 years of the nation's development, it was perhaps

<sup>3</sup>Exchange communications are characterized by message transfer, from one sender to one receiver. Thus exchange communications can be contrasted with mass distribution systems such as newspapers, books, radio and television broadcasting, and "to the occupant" mail; these latter systems are characterized by one sender and many receivers. The two dominant systems for exchange communications today are the telephone and the postal service, although there are a number of other systems for exchange communications such as citizens band radio, courier services, facsimile, telegraph, and computer "mailboxes."



adequate to analyze the postal and electronic communications industries as independent entities. This will no longer suffice.

In the development of this paper, a conscious attempt was made to avoid a simplistic process of collection and rearrangement of statistics and opinion. First, the report attempts to probe the nature of the postal crisis, with a degree of empathy for the plight of the United States Postal Service (USPS). The problem of postal service demands thoughtful probing from a broader perspective. This was approached by developing a historical perspective, by placing the function of postal service in the broader context of exchange communications, and by comparing the issues of postal service with those of telephone service. In addition, Appendix D highlights the analysis needed before one can seriously debate the industry structure required to meet our communications demands and to understand the realities of any transition under consideration.

## 2. THE NATURE OF THE POSTAL CRISIS

The postal crisis is often viewed in terms of the fiscal problem of the United States Postal Service. While the fiscal problem must be understood, it is only symptomatic of more encompassing needs in the structure of the communications industry.

### 2.1 The Fiscal Crisis

In 1967, President Johnson established a Commission on Postal Organization,<sup>4</sup> chaired by Frederick R. Kappel. The opening words of the resulting report of that Commission are, "The United States Post Office faces a crisis." The Kappel Commission viewed the United States Post Office as an industry unresponsive to the needs of its customers, with inadequate service quality, in critical need of better conditions and pay for its employees, and in need of improved management incentives and practices. The Commission believed

---

<sup>4</sup>Executive Order 11341, April 8, 1967.



the Post Office was so inefficient that a 20% savings in expenses would be possible under a management comparable to a well-run business (President's Commission on Postal Organization, 1968, p. 155). The Commission's recommendations were therefore an effort to structure the system toward that end.

Many of the recommendations of the Kappel Commission were incorporated into the Postal Reorganization Act of 1970, wherein the United States Postal Service was established as an independent agency within the Executive Branch of the Federal Government. The Postal Service commenced operations on July 1, 1971.

The USPS is governed by an eleven-member Board of Governors, including nine Governors appointed by the President, a Postmaster General selected by the Governors, and a Deputy Postmaster General selected by the Governors and the Postmaster General. Decisions on changes in postage rates are recommended to the Governors by the independent Postal Rate Commission after a hearing on the record under the Administrative Procedures Act. The Commission also recommends decisions for changes in mail classification to the Governors. Decision of the Governors is final, subject only to judicial review (U.S. Government, 1976, Appendix p. 921).

The hopes of the Kappel Commission and the authors of the Postal Reorganization Act have not been fulfilled. The five-year record of the Postal Service reveals as many problems as its predecessor faced. In a speech before the Economic Club of Detroit on March 8, 1976, Postmaster General Benjamin Franklin Bailar stated that the Postal Service faces a "financial crisis," and he later indicated that the Postal Service is "heading for a potential disaster." There have been some important changes in the intervening years, but the overall condition of the postal service has not changed; the crisis continues.

The crisis today is precipitated by a combination of causes. No single factor can be isolated as the sole cause. However one might simplistically, but yet accurately, perceive the plight of the USPS and its predecessor by noting that operating expenses perennially exceed operating revenues by significant amounts (see Figure 2). The Postal Service has operated at a deficit every year since 1945. For the years prior to the Postal Reorganization Act, the operating deficit (i.e., the operating income less operating expense) was considered an expense of the Post Office Department, similar to



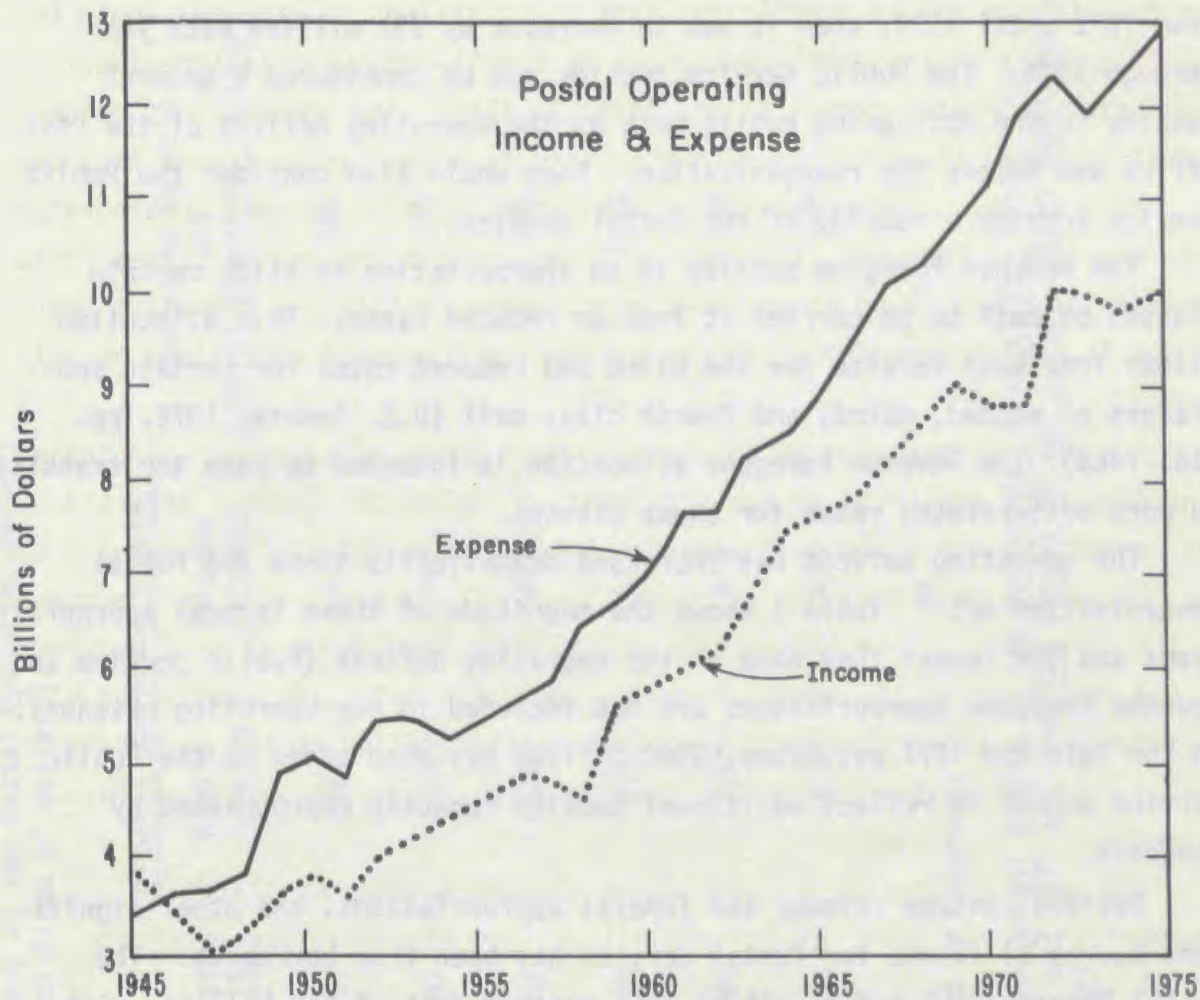


Figure 2. Postal Operating Income and Expense

the expense of any other department of the Executive Branch. This deficit was in reality, of course, a subsidy to the mail-using public from the taxpayers.<sup>5</sup> While it is true that many people are both mail users and taxpayers, there is indeed a subsidy benefiting those who use the mail out of proportion to their tax.

The Postal Reorganization Act specified two classes of subsidy: Public Service and Revenue Foregone. The Public Service subsidy was intended to allow the USPS time to become self-sufficient (by 1984). The amount of Public Service subsidy was specified at \$920 million for each of the years

<sup>5</sup> Section 3.3 is devoted to a more detailed discussion of postal subsidies.



from 1972 until 1979, then it was to decrease by \$92 million each year through 1984. The Public Service subsidy can be considered a general subsidy to the mail-using public much as the operating deficit of the Post Office was before the reorganization. Some would also consider the Public Service subsidy a subsidy of the Postal Service.

The Revenue Foregone subsidy is an appropriation to allow certain classes of mail to be carried at free or reduced rates. This allocation allows free mail service for the blind and reduced rates for certain subclasses of second, third, and fourth class mail (U.S. Senate, 1975, pp. 1461-1466). The Revenue Foregone allocation is intended to ease the transition to more cost-related rates for these classes.

The operating deficit has increased dramatically since the Postal Reorganization Act.<sup>6</sup> Table 1 shows the magnitude of these federal appropriations and the impact they have on the operating deficit (Public Service and Revenue Foregone appropriations are not included in the operating revenue). In the 1976 and 1977 estimates, \$500 million has been added to the Public Service amount to reflect additional subsidy recently appropriated by Congress.

Besides postage revenue and federal appropriations, the other significant source of income for Postal Service has been from borrowing. The Postal Reorganization Act authorizes a maximum debt of \$10 billion, with yearly limit of \$2 billion. However, the USPS is limited to using no more than \$500 million of these borrowed funds annually for operating expenses (U.S. Government, 1976, Appendix p. 921). Other federal appropriations, which may appropriately be termed "transitional," are not considered "operational", but nevertheless are part of the overall subsidy when considered in the long term. In 1975, for example, \$285 million was made available to the U. S. Civil Service Retirement and Disability Fund on behalf of the Postal Service (U.S. Government, 1976, Appendix p. 964).

---

<sup>6</sup> See Table A-1, Appendix A which lists the operating deficit from 1945-1975.

Table 1. A Summary of the Postal Operating Deficit  
(millions of dollars)

| Year           | Operating<br>Expense | Operating<br>Income | Operating<br>Deficit | Federal Operating Subsidy |                     |  | Operating Deficit<br>less<br>Federal Operating Subsidy |
|----------------|----------------------|---------------------|----------------------|---------------------------|---------------------|--|--|
|                |                      |                     |                      | Public<br>Service         | Revenue<br>Foregone |  |  |
| 1972           | 9585                 | 7884                | 1701                 | 920                       | 441                 |  | 340  |
| 1973           | 9926                 | 8339                | 1587                 | 920                       | 497                 |  | 210  |
| 1974           | 11295                | 9008                | 2287                 | 920                       | 497                 |  | 880  |
| 1975           | 12574                | 10015               | 2559                 | 920                       | 613                 |  | 1026   |
| 1976<br>(est.) | 14080                | 11117               | 2963                 | 1420*                     | 603                 |  | 940  |
| 1977<br>(est.) | 15181                | 12871               | 2310                 | 1420*                     | 485                 |  | 405  |

\* Includes \$55 million recently appropriated by Congress.

Sources: Estimates for 1972-1975 are from the Annual Report of the Postmaster General for Fiscal Year 1975, page 49. Estimates for 1976 and 1977 are from The Budget of the United States Government, Fiscal Year 1977, Appendix, page 921.



## 2.2 Limitations on Options

The Postal Service is limited in options which could rectify the situation. It is limited in power to cut operating expenses. The service currently spends 86% of its expenses for salaries and benefits, and contracts with postal unions contain "no layoff" clauses. Further, postal salaries have increased significantly since the reorganization. To reduce postal salaries now, however, would only be to invite a postal strike -- a situation which would be unpleasant for many. As mentioned above, the Postal Service is limited to the amount it can borrow -- though this is not one of its prime limitations -- and in the amount of debt which may be applied toward operational expenses. It is limited by public opinion as to how fast postage rates can rise, and it is limited by the economic fact that if rates are carried too high, the volume of mail will fall to the point of diminished revenues.

Recently, the Postal Service has considered actions to reduce such basic services as the frequency of residential delivery (to three days per week), and they have studied the cost savings associated with the closing of unprofitable offices (U.S. Postal Service, 1976, pp. 38, 46). While the estimated savings derived from the reduction of these services are significant, and three-day delivery may satisfy the needs of most households, such proposals are in opposition to established traditions of uniform and full service. We have come to expect continued or expanding flexibility in our communications -- not a reduction of service.

The Postal Service has automated many of its offices with letter sorting machines and experimented with optical address readers to more fully automate the sorting of mail (Mennis, 1976). Currently it is investigating electronic transmission of mail. While these recent attempts toward automation may eventually prove successful, major areas of the postal operation remain manual and the technologies are not yet established, nor proven to be cost effective. Local distribution, for example, remains highly labor intensive. Transportation technology has had tremendous impact on postal services, but to date the cost savings of the sorting technologies have been insufficient to eliminate the postal deficit.



Perhaps the easiest way "out" of the postal situation is the one which was recently adopted -- that of an additional subsidy from the Federal Government. However, this is really no different a solution than has traditionally been taken, for departmental expenses before the reorganization were federal subsidies also. While this solution may be the most expedient from year to year, it is not the solution which was sought at the time of the reorganization (President's Commission on Postal Organization, 1968, p. 6). It does not solve the problem of the general mail-users' subsidy, and it does not solve the problem of inefficiency.

### 2.3 Regulatory Barriers

The Postal Service of the 1970s is a type of regulated monopoly, the monopoly portion of the business being that of first class mail.<sup>7</sup> The Postal Service today is in a position not too unlike that of the American Telephone and Telegraph (AT&T) Company in the electronic communications industry. A portion of both markets are monopolistic, but competitive inroads are being made to those monopolies. Both industries must have their rates approved by a commission. Both use price averaging and there are subsidies from high traffic areas to low traffic areas. The Postal Service is in effect a common carrier; it cannot choose to serve only the profitable high traffic routes, yet it is criticized for overpricing when competitors charge lower rates in some of the more profitable markets. Both AT&T and the Postal Service are accused of subsidizing their competitive markets from their monopoly markets. It should be pointed out that AT&T, unlike the Postal Service, is rate-of-return regulated; that is, AT&T stockholders are allowed a specified rate of return on equity. In contrast, the Postal Service, not being a private corporation with stockholders, is "rate regulated" in that the primary regulatory tool is the setting of postal rates.

A number of restrictions are placed upon the Postal Service. Postal rates are set so that the prices are relatively constant over wide variations in markets. This presently restricts the Postal Service's ability to meet

---

<sup>7</sup>Section 7 of the Postal Reorganization Act called for a "study and re-evaluation" of the postal monopoly. The Board of Governors of the USPS concluded that the postal monopoly should be retained based on arguments of universal service and the desirability of rate averaging (Board of Governors, USPS, 1973).



competition in areas where cost is significantly below current postal rates. This "price averaging" tradition of the Postal Service cannot stand up under competitive pressure. A further restriction imposed by regulation is that of "regulatory lag." The rate increase proposed in 1974 did not go into effect until January 1, 1976. The resulting loss of revenues contributed substantially to the operating deficit of 1975.

While there are restrictions placed upon an industry by regulation, there are also benefits, notably the power granted by monopoly. Although the monopoly on first class mail has historically seemed quite pervasive, threats to this monopoly power seem to be gaining momentum. For example, a number of utility companies are using their employees to deliver utility bills.<sup>8</sup> Potentially more important, however, are threats posed by new electronic methods of communication.<sup>9</sup>

#### 2.4 An Unreasonable Expectation for the Postal Service

The creation of the United States Postal Service from the Post Office Department by the Postal Reorganization Act of 1970 was an effort to put the Postal Service on a more business-like foundation. Included in the expectations of the Postal Service was that it should become self-sufficient by 1984. That is, there should be no general government subsidy, only the Revenue Foregone subsidies specifically provided for in the Act to benefit specific classes of users. It was hoped that by increasing postal rates and decreasing postal expenses the Postal Service could simultaneously eliminate the annual deficit, improve the workers salaries, and improve the quality of service. Unfortunately, the postal rate increases have been absorbed by higher postal salaries and the deficit has continued. Postal productivity has increased for the past few years but efficiency (the number of pieces of mail which are handled for each postal dollar) has declined.<sup>10</sup>

---

<sup>8</sup>The Private Express Statutes do not prohibit a firm from delivering its own mail. A firm cannot deliver mail for hire for another firm or for individuals, however.

<sup>9</sup>A working paper on this subject has been prepared by Gene G. Ax, Policy Research Division, Office of Telecommunications, U. S. Department of Commerce, Boulder, Colorado 80302.

<sup>10</sup>See the discussion in Section 3.1 on productivity and efficiency.



Assistant Postmaster General James V. Jellison says the Postal Service is meeting three of the four goals set for it when it became a quasi-private operation in 1971. These goals were: (1) to improve postal workers' pay and working conditions, (2) to modernize and mechanize to improve service quality, (3) to keep postal rates among the lowest of any industrialized nation, and (4) to become self-supporting (Spokane Chronicle, 1976). The last objective has not been met, and in addition, a recent study indicates that "service today is not as good as it was before postal reorganization" (General Accounting Office, 1975, p. 3).

It is not only a decline of internal efficiency which has contributed to the postal crisis, but also the expectation placed on the Postal Service by the Reorganization Act contributes in a major way. The expectation of self-sufficiency is an expectation which is extremely difficult to fulfill considering our tradition of subsidy of postal functions. The inertia of this tradition is difficult to overcome.

The totality of demands and expectations has proved to be unreasonable. A study by the Postal Service Staff (U.S. Postal Service, 1976, p. 33) expresses the crisis as follows: "It is unrealistic to expect the Postal Service to produce economically rational results, given economically irrational constraints and expectations."

Is there a postal crisis? It may be that a historian thirty years hence will feel the term "crisis" is a bit strong to describe the present plight of the Postal Service, but to Mr. Bailar, and to those government officials responsible for insuring the availability of postal services, and indeed to the mail-using public, the term "crisis" seems appropriate. Postmaster General Bailar in a speech to the Detroit Economics Club in March 1976 predicted that by 1984 the Postal Service would be bankrupt unless rather major actions were taken to correct the situation.

If the crisis is of such significance that patchwork solutions will only emphasize the problem, then we will ultimately need to face some difficult questions? How badly do we want which postal services, and how much are we willing to pay for them? Is the industry structured correctly?



Should it be regulated differently? Should competition be allowed? The increasing urgency has been expressed by one observer (Myers, 1975) as follows:

Each additional month that postal related issues remain unresolved the more traumatic their necessary, inevitable, and final resolution. As taxpayers, we have a tremendous stake in the proper sorting out of the mails, both in terms of our pocketbooks and in terms of the service we receive. It is imperative that we face up to the present postal crisis and determine which way to go from here.

### 3. POSTAL SERVICE IN PERSPECTIVE

#### 3.1 A 30-year Perspective

The purpose of this section is to analyze postal trends of the past 30 years to gain a perspective of the causal elements of today's so-called crisis. First, how is the Postal Service of today different from the Post Office of 30 years ago? An attempt has been made to remove the distorting factors of inflation and population growth in the following analysis. Table 2 summarizes the most significant trends.

The amount of mail carried, as measured by the number of pieces, has increased by 135% over the past 30 years (see Figure 3). By weight this increase amounts to 62%. This is not too surprising as the population of the United States has also grown tremendously in this time. However, while the population has grown by only 60%, there has been a 48% per capita increase from 284 pieces in 1945 to 419 pieces in 1975. The pieces of mail per capita were highest in 1973 with an average of 428 pieces of mail per person. This statistic, like a number of others, seems to be peaking in the 1970s. It is probably too early to determine whether this phenomenon is temporary or a genuine indication of the future.<sup>11</sup>

To handle the increased volume of mail, the number of postal workers has increased 61% from 436,000 to 702,000 (see Figure 4). Here the peak was reached in 1970 with 741,000 postal workers. The postal work force as related to the overall United States work force has, however, remained relatively constant at approximately 0.8% of the work force.

---

<sup>11</sup>See Section 3.2.1 for further discussion.



Table 2. Thirty-Year Trends in Postal Service

| <u>Mail Volume per Capita</u><br>(Total Pieces of Mail per Capita) |     |        | <u>Postal Salaries</u><br>(Thousands of 1975 Dollars) |      |         |
|--|-----|--------|---|------|---------|
| 1945   | 284 |        | 1945  | 5.9  |         |
| 1975   | 419 | Up 48% | 1975  | 15.4 | Up 161% |
| Min(1946)  | 258 |        | Min(1948)   | 5.5  |         |
| Max(1973)  | 427 | Up 66% | Max(1975)   | 15.4 | Up 182% |

| <u>First Class Volume per Capita</u><br>(Pieces of First Class Mail per Capita) |     |        | <u>Operating Deficit per Piece</u><br>(Operating Deficit per Piece in 1975 Cents) |      |  |
|---|-----|--------|---|------|--|
| 1945  | 164 |        | 1945  | -1.3 |  |
| 1975  | 247 | Up 51% | 1975  | 2.9  |  |
| Min(1946)   | 148 |        | Min(1945)   | -1.3 |  |
| Max(1971,1974)  | 251 | Up 70% | Max(1971)   | 3.5  |  |

| <u>Productivity</u><br>(Thousands of Pieces of Mail per Postal Man-Year) |     |        | <u>Labor Intensity</u><br>(Percent of Postal Expense Attributable to Labor) |      |        |
|--|-----|--------|---|------|--------|
| 1945   | 95  |        | 1945  | 76.0 |        |
| 1975   | 129 | Up 36% | 1975  | 85.9 | Up 13% |
| Min(1946,1947)   | 85  |        | Min(1951)   | 69.6 |        |
| Max(1973)  | 131 | Up 54% | Max(1975)   | 85.9 | Up 23% |

| <u>Efficiency</u><br>(Pieces of Mail per 1975 Dollar) |      |          | <u>Postal Work Force per Capita</u><br>(Postal Workers per Thousand Population) |      |         |
|---|------|----------|---|------|---------|
| 1945  | 11.2 |          | 1945  | 3.27 |         |
| 1975  | 7.1  | Down 37% | 1975  | 3.29 | Up 0.6% |
| Min(1975)   | 7.1  |          | Min(1956)   | 3.03 |         |
| Max(1945)   | 11.2 | Down 37% | Max(1968,1969)  | 3.67 | Up 21%  |



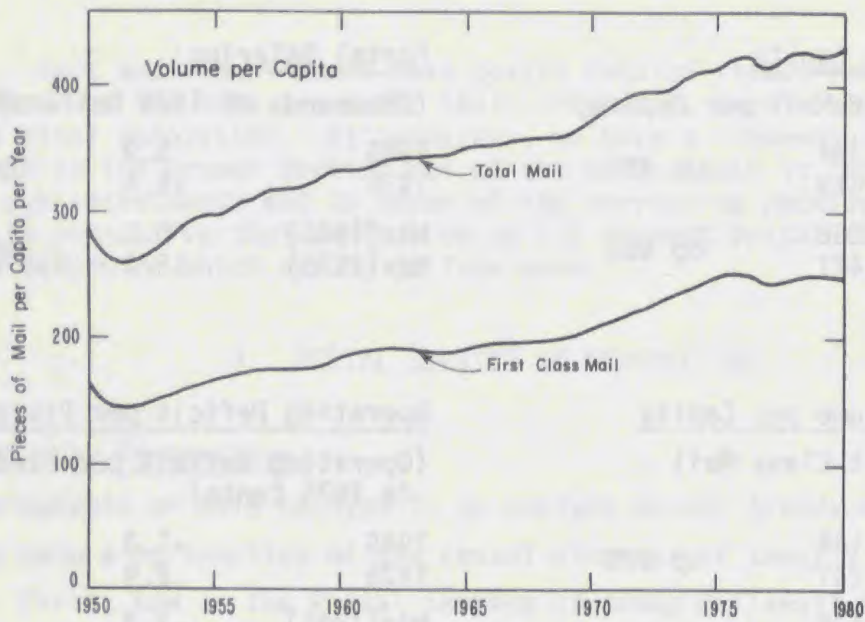


Figure 3. Postal Volume Per Capita



Figure 4. Exchange Communications Employees

There are conflicting trends in (labor) productivity and (institutional) efficiency; productivity is measured in terms of pieces of mail per man-year and efficiency measured in pieces of mail moved per dollar. Productivity has increased but efficiency has decreased. In 1945 each man-year accounted for 94,900 pieces of mail whereas in 1975 this figure increased by 35% to 128,600, as shown in Figure 5. However, this increase in productivity is not reflected in efficiency even when measured in 1975 dollars. Efficiency decreased from 33.1 pieces per dollar to 7.1 pieces per dollar. Even in 1975 dollars the decrease is from 11.2 to 7.1 pieces per dollar, a decrease of efficiency of 37% (see Figure 6). The average cost per piece of mail<sup>12</sup> has increased 58% in 1975 dollars (see Figure 7).

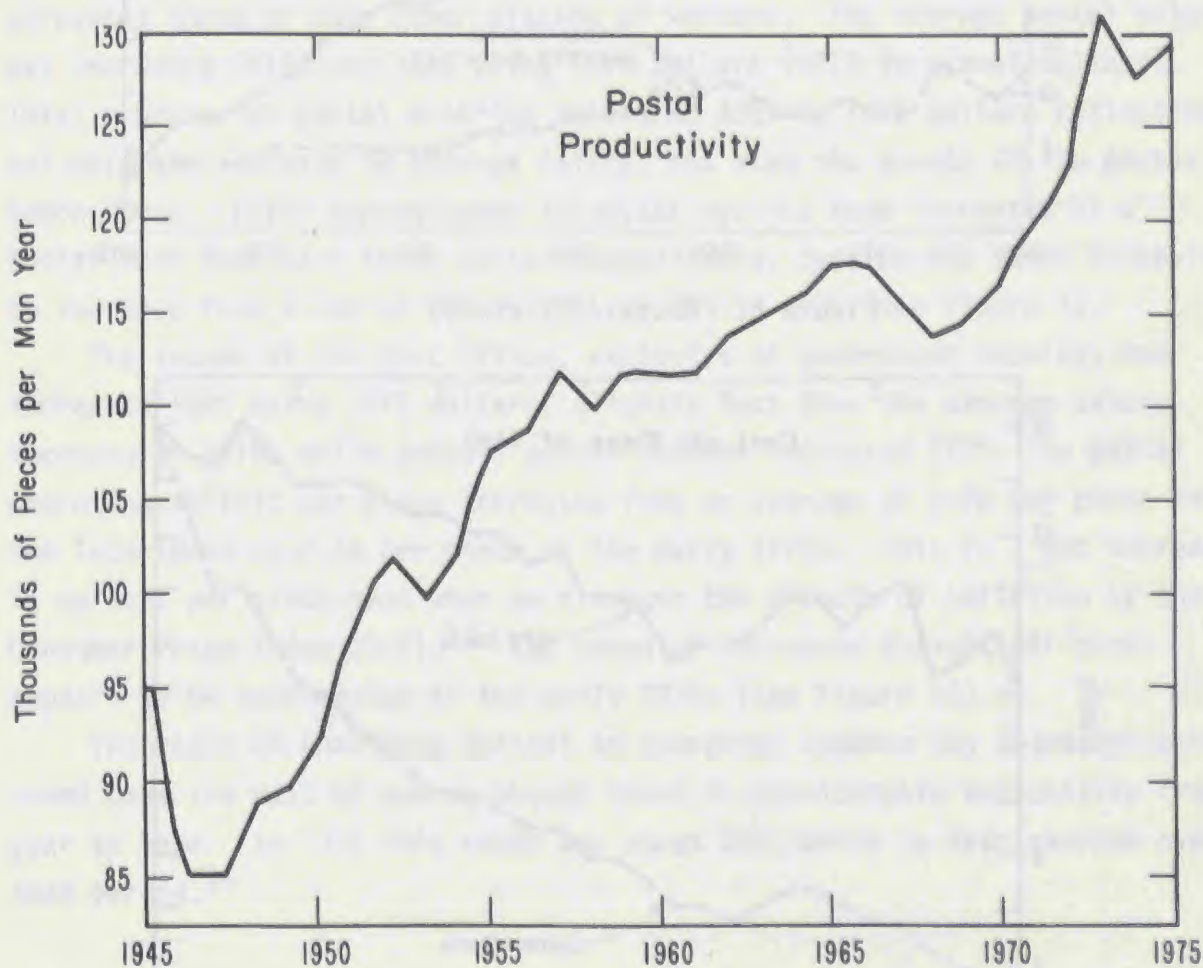


Figure 5. Postal Productivity

<sup>12</sup>Note that the average cost per piece of mail is but the inverse of "efficiency."



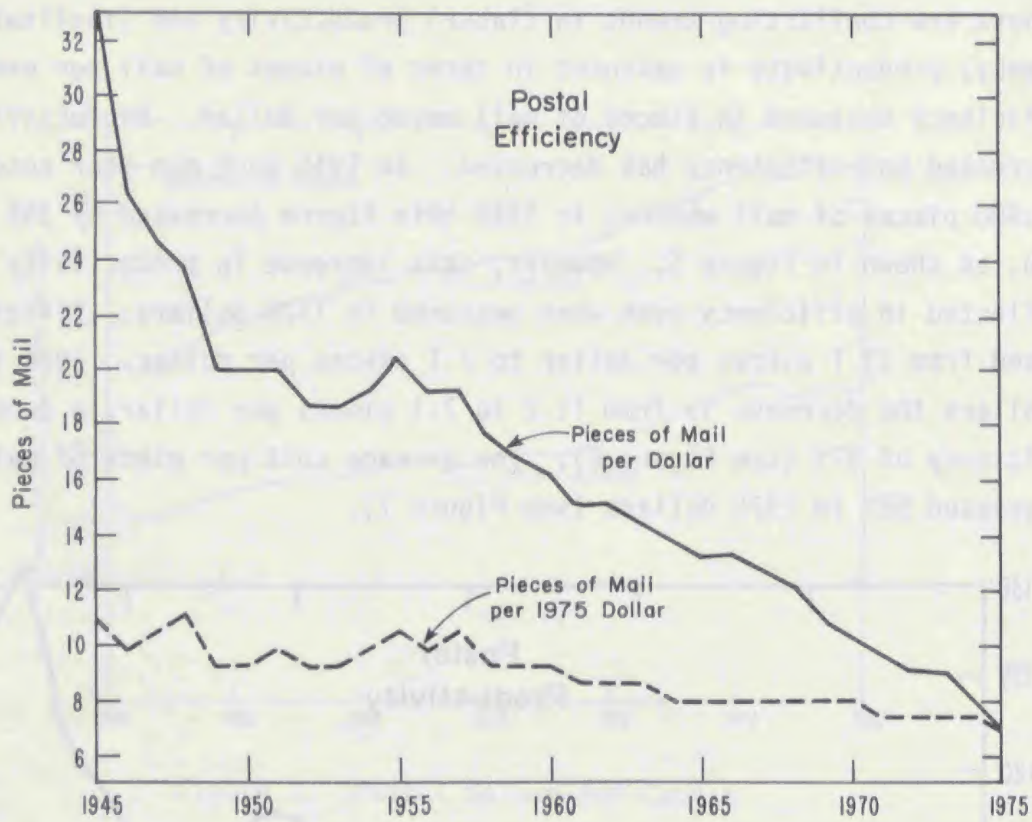


Figure 6. Postal Efficiency

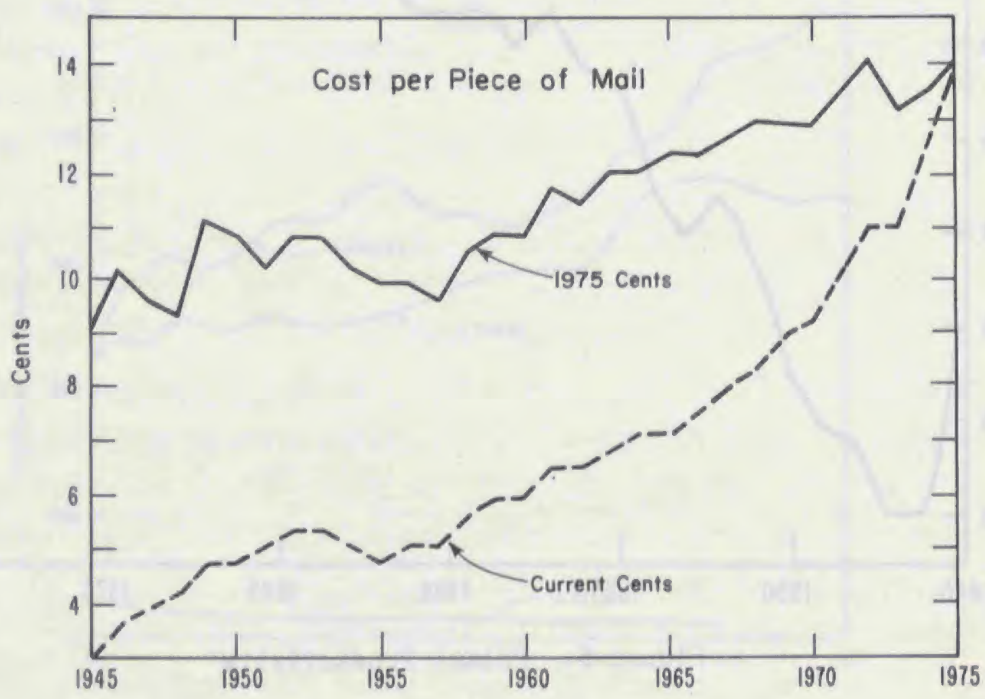


Figure 7. Cost Per Piece of Mail



To properly evaluate the trends in productivity and efficiency, one needs to compare the postal industry with other industries. From 1945 to 1970, AT&T increased productivity from 86,650 messages per employee to 174,400 messages per employee, an increase of 101.3%. During that same time period AT&T increased its efficiency from 12.6 messages per 1975 dollar to 13.8 messages per 1975 dollar, an increase in efficiency of 9.7%. It is hardly adequate however to compare the Postal Service to only one other industry, especially when that industry is one amenable to advances in electronic technology such as the telephone industry.

Perhaps the most important statistic is the rise in the average postal salary, as shown in Figure 8. The rate of increase in postal salaries has surpassed those of many other classes of workers. The average postal salary has increased 161% over 1945 using 1975 dollars (671% in actual dollars). Total expense for postal salaries increased 320% in 1975 dollars reflecting not only the increase in average salary, but also the growth in the postal labor force. Labor expenditures in postal service have increased at a faster rate than have total postal expenditures, causing the labor intensity to increase from a low of 70% in 1951 to 86% in 1975 (see Figure 9).

The income of the Post Office, exclusive of government subsidy, has increased 158% using 1975 dollars, slightly less than the average salary increase of 161%, while overall postal expense increased 272%. The postal operating deficit per piece increased from an average of 0.7¢ per piece in the late 1940s to 2.2¢ per piece in the early 1970s. This is a 60% increase in deficit per piece even when we discount the effects of inflation by the Consumer Price Index (CPI).<sup>13</sup> The trend of increased deficit per piece appears to be accelerated in the early 1970s (see Figure 10).

The ratio of operating deficit to operating expense has no recognizable trend over the past 25 years, though there is considerable variability from year to year. In 1975 this ratio was about 20%, which is near average over that period.<sup>14</sup>

---

<sup>13</sup>The operating deficit per piece is tabulated in Table A-3, Appendix A.

<sup>14</sup>See Table A-2, Appendix A.



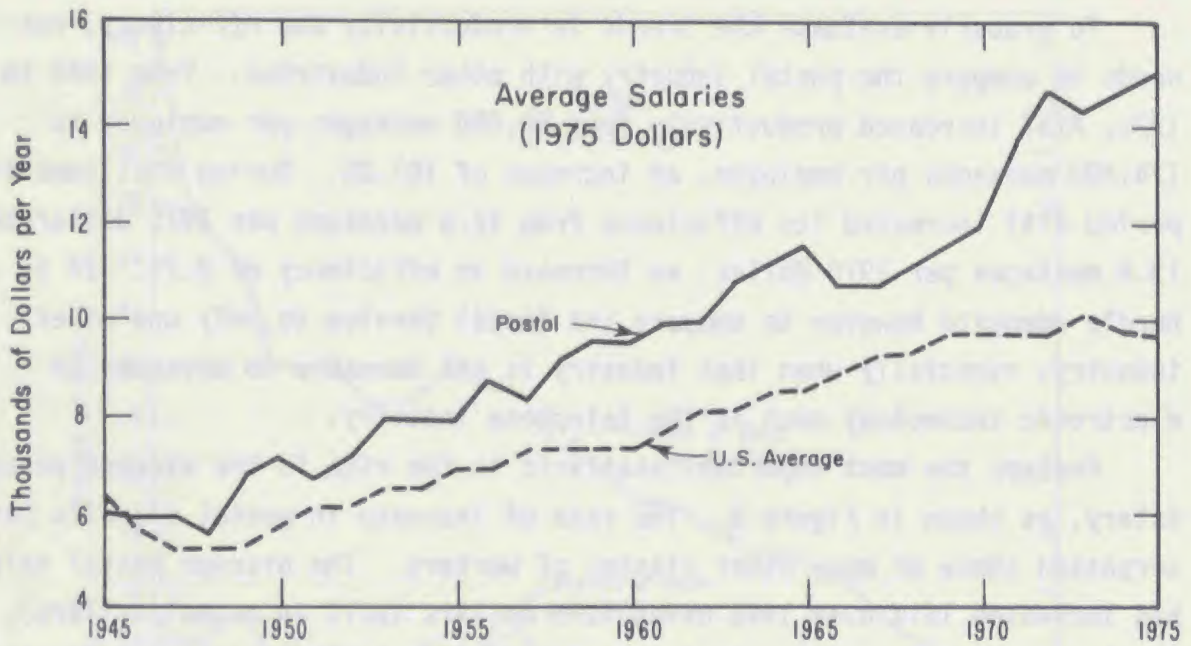


Figure 8 Average Salaries

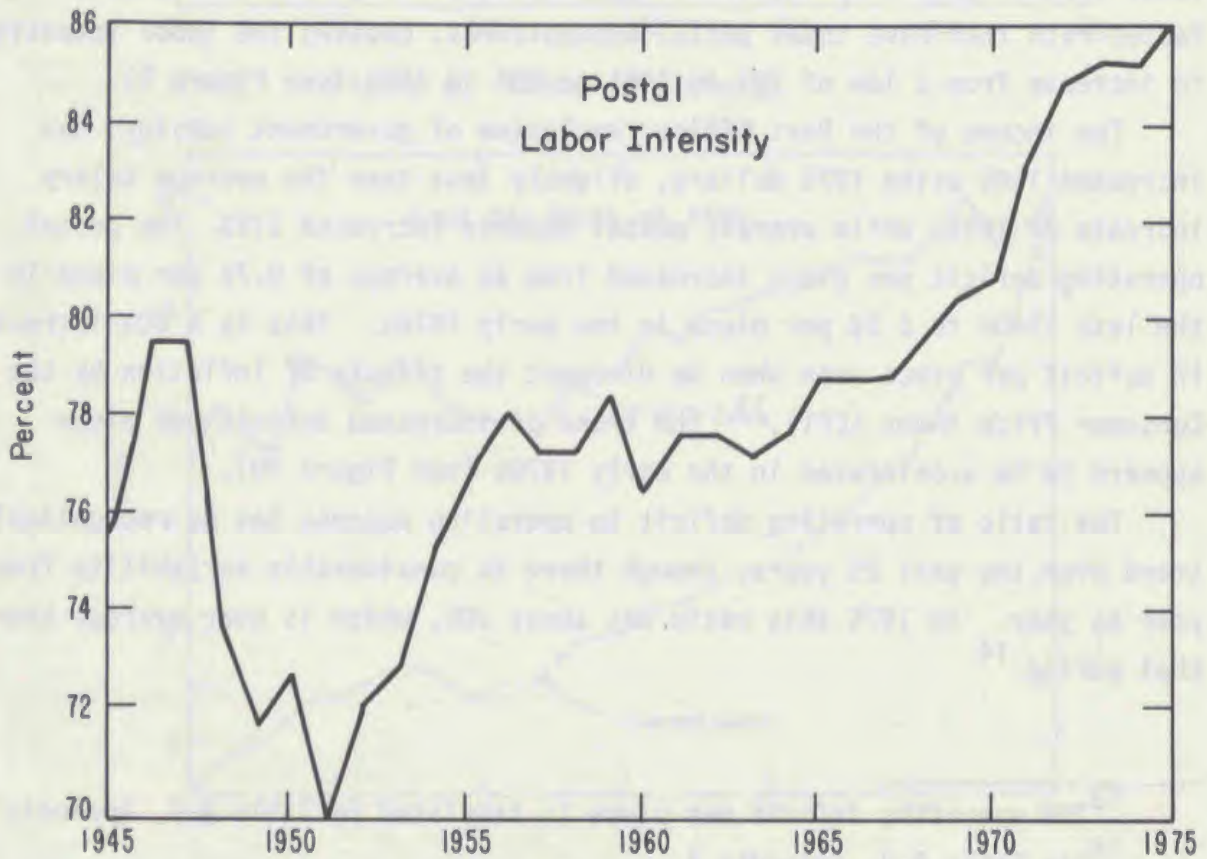


Figure 9. Postal Labor Intensity

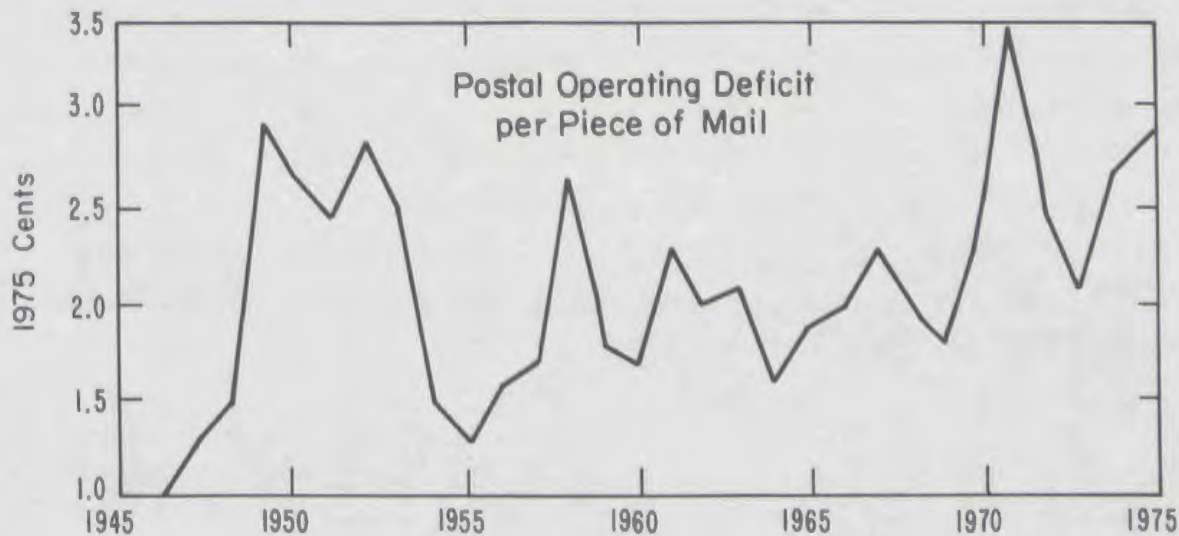


Figure 10. Postal Operating Deficit per Piece of Mail

### 3.2 Significant Trends

The last section gave a picture of trends in the Postal Service over the past 30 years. This section is intended to survey significant trends since the Postal Reorganization Act. Current trends are important in that they are indicators of today's postal situation; they are dealt with in order to effect corrective changes.

#### 3.2.1 Repressed Volume

In 1975 the total postal volume decreased for the first time since 1946, causing the Postal Service to worry about the possibility of major volume losses. Postmaster Bailar predicted that the 1974 volume would be the all-time high and expects that over the next five years this volume will fall from a high of 90 billion pieces per year to 83 or 84 billion pieces per year. It remains to be seen whether this short term trend is temporary or long range. The volume decline of recent years is caused by a combination of factors and it is unclear how important each factor is in the overall decline. Four factors which can cause volume repression are discussed below.



(1) Recession. Postmaster Bailar indicates that the combined effects of inflation and recession have hurt the postal volume. If one compares gross national product (GNP) per capita in 1975 dollars with the pieces of mail per capita, as in Figure 11, one notices a strong correlation. This correlation of mail volume with GNP leads one to view the current decline as a temporary phenomenon, for if this correlation continues to hold in the future, we can look to an increase in mail volume when the effects of the recession  $\dot{\epsilon}$  over.<sup>15</sup>

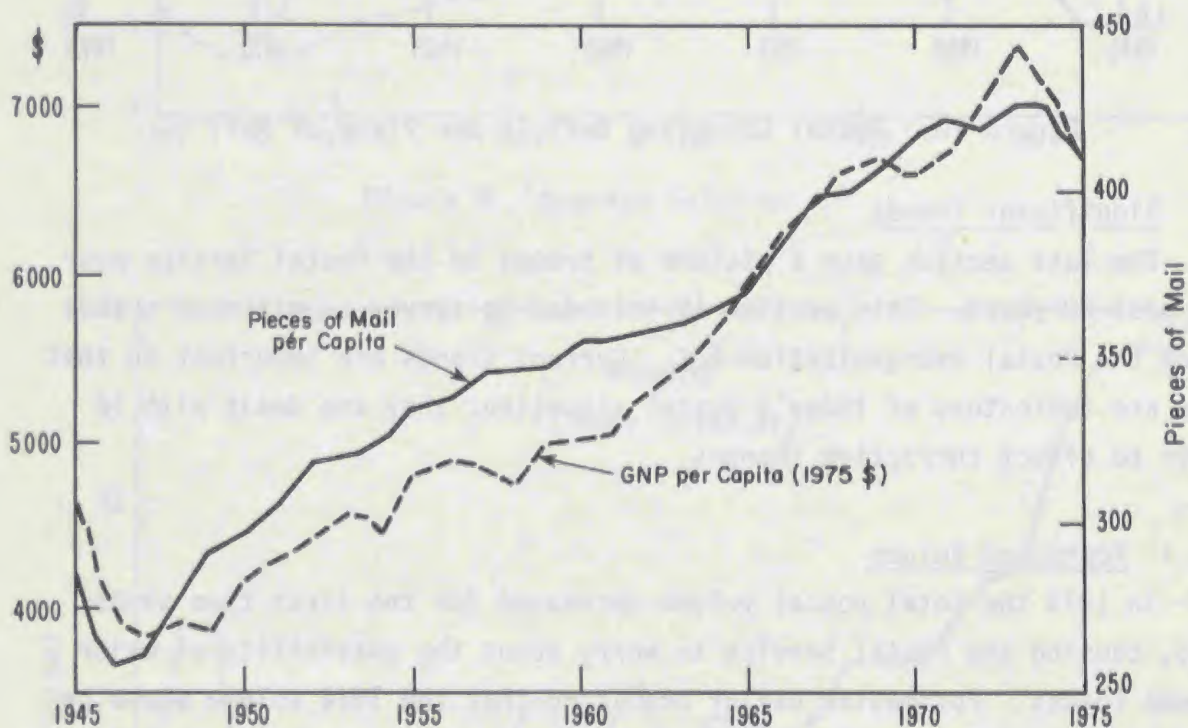


Figure 11. Comparison of Gross National Product per Capita with Pieces of Mail per Capita

<sup>15</sup>Inflationary effects on the GNP tend to be removed by expressing the GNP in 1975 dollars.



14/5 99%

(2) Substitute Services. Historically, most substitutes for first class mail have used electronic technology such as telegraph, telephone, and electronic data transfer. The number of telephone conversations per person has grown at a faster rate than has mail volume.<sup>16</sup> From 1945 to 1974, local telephone calls per person increased by 240% while toll calls increased 398%. In the same period the pieces of first class mail per person increased 153%. From 1970 to 1974, local telephone calls per capita increased by 14%, toll telephone calls per capita increased by 30%, while first class mail volume per capita increased by 2% as did the overall volume of mail per capita. Replacement of first class mail by the telephone has been enhanced in recent years by the increase in postal rates relative to telephone rates. Another substitute for first class mail is derived from the nation's electronic communications system, called "electronic mail." Seventy percent of first class mail is transactional, including such items as utility bills, mortgage payments, and fund transfers between banks. Because these kinds of transactions are often generated by a computer they are especially amenable to digital transmission techniques.

There are a number of alternatives to third class mail (advertising) including radio, television, and magazines and newspapers which are not carried through the mails. The volume of third class mail has changed little in the last decade, indicating a decline of third class mail per capita and the importance of electronic substitutes.

(3) Competition. As mentioned earlier, the United States Postal Service has a monopoly in first class mail only. Air parcel post must compete with air express and airline package services, second class mail must compete with private delivery of magazines in densely populated areas, third class mail must compete with private delivery of unaddressed circulars and newspaper inserts, and postal money orders must compete with other money order services.

However, the major competition has appeared in fourth class mail where the United Parcel Service (UPS) is the major competitor. The volume of fourth class mail has decreased from a maximum of 1.26 billion pieces in

<sup>16</sup>See Tables A-2 and A-14, Appendix A.



1952 to 0.80 billion pieces in 1975, indicating the portion of the market captured by UPS. Handling slightly more than 50% of the parcel trade (Rocky Mountain News, 1976), United Parcel Service does over \$1 billion worth of business annually.

(4) Rate Increases. Two primary points should be made concerning the impact of rate increases on volume. First, a rate increase suppresses volume relatively little. In economic terms, there is little price elasticity of demand. Elasticity is a measure of the relationship between rate increase and volume suppression. When the elasticity is between -1 and 0, we say that demand is inelastic. This simply means that the percentage of volume decrease is less than the percentage of rate increase. The closer the elasticity is to 0, the less effect a rate increase has on volume. Demand for postal services is quite inelastic, especially for first and second class mail.<sup>17</sup> For example, if first class mail has elasticity -0.1 as has been estimated,<sup>18</sup> a 30% rate increase will cause only 3% decrease in volume.

Secondly, when demand is inelastic, a rate increase will result in increased revenues in spite of reduced volume. In the above example, revenues will increase by 26.1%, overcoming the 3% decrease in volume; thus the fiscal position of the Postal Service is improved by rate increases. However, it is worth noting that eventually, with repeated rate increases, revenues will decrease, and simultaneously demand will become elastic.

Of secondary importance in analyzing the effect of decreased volume on the fiscal position of the Postal Service is the fact that lower volume means lower cost to provide the services. Thus a rate increase serves to increase revenues and lower costs simultaneously. This combined effect is the subject of a model developed in Appendix C. To continue our example we will assume that costs can be reduced proportionately 30% as much as volume is reduced. In our example, a 30% rate increase results in a 27.2% improvement in the revenue cost ratio. When the revenue cost ratio is 0.8, a 30%

---

<sup>17</sup>See Appendix B for two estimates of price elasticity of demand for four classes of mail.

<sup>18</sup>Approximately the present value for the Postal Service.



rate increase would mean that revenues would slightly exceed costs, since the new revenue to cost ratio would be  $(0.8) (1.272) = 1.018$ . As we can see the cost reduction factor is only of secondary importance, and we are ignoring many factors which accompany a rate increase.

If mail volumes decrease, without a concurrent rate increase, the effects on the Postal Service can be traumatic. For example a 10% decline in overall mail volume would decrease revenues by approximately \$1 billion or a 15% reduction in first class mail alone would have this same effect. If a volume decline occurs quickly, which is possible with an economic recession, these revenue losses increase the deficit by nearly the same amount; that is, there are essentially no cost savings because of the reduced volume. If, however, volume declines gradually, as is presumably the case when it declines because of mail substitutes, then costs can be reduced somewhat and the loss is ameliorated.

### 3.2.2 Postal Salaries

Another significant trend since 1970 concerns postal salaries. A postal career has traditionally been viewed as being secure, but relatively low paying. However, not only has the Postal Reorganization Act with its provision for collective bargaining brought about definitely higher postal salaries, but postal salaries have increased at a higher rate than has the salary of the average American worker. The average American salary has increased only 1.2% relative to the consumer price index over the years from 1970 to 1974 whereas the average postal salary has increased 14.2% relative to the CPI over the same period. The average postal salary has increased relative to the consumer price index for some time. It took 10 years from 1960 to 1970 to obtain a 28% increase, but only 5 years since 1970 to obtain a similar increase.

If postal salaries had maintained their 1970 level relative to the consumer price index, postal expenses in 1975 would be reduced by \$2.4 billion and the Postal Service would have had a slight surplus for that year. This indicates the very significant impact of changes in postal salaries.



Another way of seeing the effect of increased salaries is to look at the increased mail revenues as compared to increased expenses for salaries and benefits as shown in Table 3.

Table 3

POSTAL REVENUE AND LABOR EXPENSE, 1970-1975  
(millions of dollars)

| <u>Year</u> | <u>Mail Revenues</u> | <u>Postal Salaries &amp; Benefits</u> |
|-------------|----------------------|---------------------------------------|
| 1970        | \$8273               | \$ 8853                               |
| 1975        | 9645                 | 10805                                 |
| Increase    | 1372                 | 1952                                  |

Thus we see that the increased postal salaries more than took care of increased revenues comparing 1970 to 1975, in spite of the fact that during this period the postal work force decreased from 721,000 to 702,000 and mail volume increased from 85 billion to 89 billion pieces. The trends of employment, volume, and postal rates serve to deemphasize the effects of increased postal salaries, but even so, their impact on postal finances is clear.

Although it is clear that the Postal Service has not succeeded in holding the line with respect to salaries, we cannot say whether this could have been accomplished under the old United States Post Office Department. Certainly a continuation of salary increases will serve only to exacerbate the postal crisis.

### 3.2.3 Postal Rates

It is tempting to claim that one can solve the postal crisis by simply increasing postal rates to the point where revenues and costs roughly coincide. If, for example, the rate for first class postage were raised from 13¢ to 17¢, about \$2 billion would be added to the revenues which would greatly ease the current crisis; however, there is growing public sentiment against continued rate increases. Not only do many remember



the time when a stamp cost 3¢ or 4¢, but even when one compares postal rate increases with the consumer price index, it is quickly seen that new highs are being reached in postal rates (see Figure 12). Rates for first class mail decline relative to the consumer price index from 1945 until 1958 when the rate went from 3¢ to 4¢. In 1963, when postage went from 4¢ to 5¢, cents, rates relative to the consumer price index were about the same as they were at the end of World War II. Since 1963, continued rate increases have pushed first class mail rates ever upwards relative to the CPI until today at 13¢ this rate is approximately 37% higher than it was in 1963.

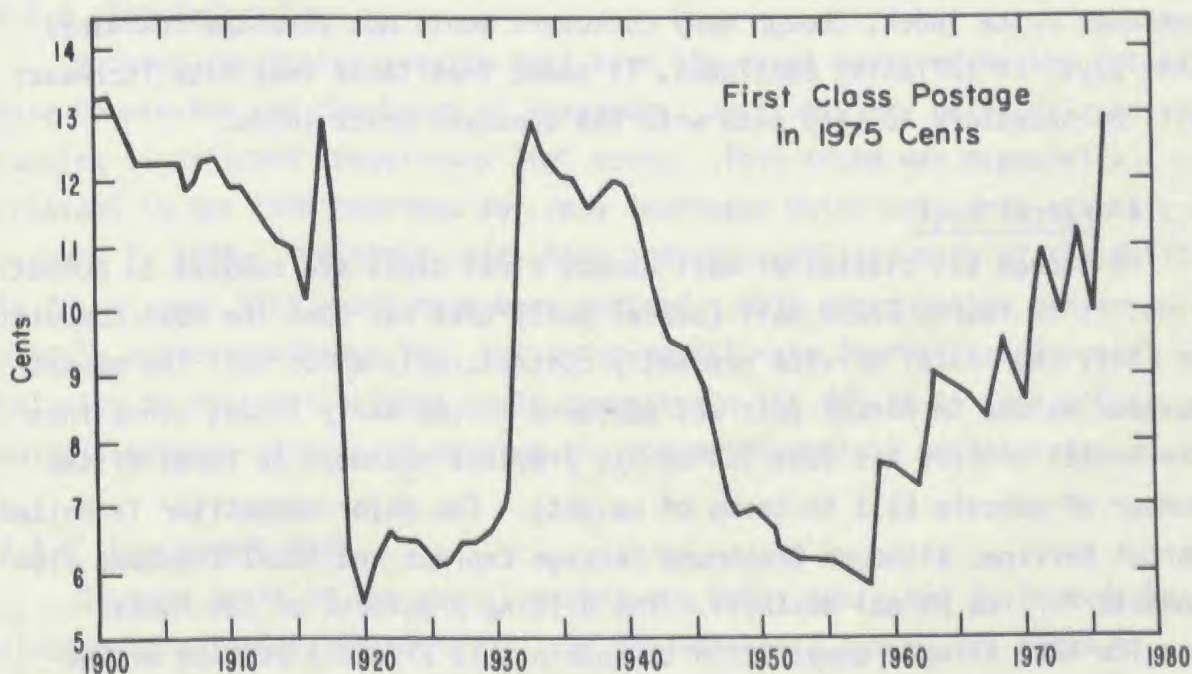


Figure 12. First Class Postage in 1975 Cents

The Postal Service and the unions point out that postal rates in the United States are not high in comparison to other countries, but public opinion depends more on recent history than on postal rates in other countries.

Continual increases in postal rates stimulate substitutes. If postal rates for first class mail increase as projected to 21¢ by 1981, the cost will be approximately the same as for a one-minute transcontinental nighttime



telephone call. Although it is very difficult to measure the amount of the market captured by telephone, increased postal rates can only accelerate the replacement of certain types of mail, and will make traditional postal delivery more costly to the consumer.

It seems clear that alternatives other than rate increases should be carefully considered to ease the postal crisis. This is apparently the position of the Postal Service also, because their projected increases from the present 13¢ for first class postage to 17¢ in April of 1977, to 19¢ in October of 1979, and 21¢ in October of 1981 are based upon an estimated increase in the consumer price index of 5.5% per year (Congressional Budget Office, 1976). These rate increases would keep prices fixed relative to the consumer price index, though many consumers would not view the increases this way. If inflation continues, it seems inevitable that rate increases will be necessary to keep pace with the consumer price index.

#### 3.2.4 Parcel Post

Although all classes of mail except first class are subject to competition, it is fourth class mail (parcel post) that has been the most competitive. In fact, the Postal Service presently controls only about half the market. Maximum volume in parcel post was achieved in the early 1950s; since then the Postal Service has lost 36% of its previous business in terms of the number of parcels (51% in terms of weight). The major competitor is United Parcel Service, although Greyhound Package Express and local truckers also compete for the parcel business. The pricing practices of the Postal Service have allowed competition to obtain this sizeable portion of the market, but it is difficult to know to what extent the Postal Service is using fourth class mail to subsidize other services since costs are not clearly identified. The UPS rates are lower for most weights and distances, although there are a few exceptions (Board of Governors of the U.S. Postal Service, 1974. p. 4-1185). Apparently in response to the competition in parcel post, the Postal Service has invested approximately \$1 billion in region centers with modern parcel handling equipment (Reader's Digest, 1975). Even with these regional centers, there is much criticism because the new technology incorporated into these regional centers has not provided an



increase in the quality of the service. Indeed, because of routing procedures, the time delay is often longer than before the regional centers were introduced, and there have been many cases of packages being damaged by machines.

If the current trend continues -- and there is no indication otherwise -- parcel service will be only a small part of the postal business. However, the impact of the loss of parcel business on the United States Postal Service is not known since cost data are not available. Apparently the only way to reverse this trend is for the Postal Service to improve its quality of service and set its rates to underprice the competition.

### 3.2.5 Regulatory Lag

Because the Postal Service must have its rates approved by the Postal Rate Commission and the Board of Governors, decisions are often delayed causing significant "regulatory lag" costs. This trend was especially critical in the 1974 hearings for rate increases which went into effect January 1, 1976. Had these rates been approved earlier, much of the deficit in fiscal year 1975 would have been avoided. Only deregulation can completely avoid regulatory lag, but tying postal rate increases and postal salaries to some price index could concentrate the debate on rate differentials between classes of service as opposed to overall postal rates.

### 3.2.6 Electronic Mail

Certain parts of the postal market are being subjected to inroads by electronic mail (see Footnote 9). In the immediate future two forms of electronic message transmission will significantly impact the Postal Service -- the telephone and electronic financial networks. Switched telephone service has several advantages over first class mail. First, in terms of time delay, the response time is nearly simultaneous in telephone service, while response time via the postal service is measured in days. Communications may take several iterations by mail, whereas one telephone call can process an exchange in a matter of minutes, multiplying the cost advantage of a telephone call over communication by letters. A second advantage of the telephone involves preparation cost: there is very little cost in



preparing for a telephone call whereas studies have shown the preparation of a letter to involve many times the price of a postage stamp.

One significant advantage of the mail is that a letter is inherently a permanent record, whereas a telephone conversation is difficult to record; it requires explicit permission by the called party and special equipment. A less well-recognized advantage of the mail is that it forces the sender to be more precise.

Even though there are undoubtedly cross-elasticities from postal service to telephone service, it is difficult to measure the extent of the substitutability because the two services are far from identical. During the period from 1970 to 1974, however, first class postal messages increased 6% in volume while telephone messages increased by 18% on a local basis and 38% on a toll basis. With current trends in postal and telephone rates, the trend from mail to telephone will continue, but the effects on the fiscal policy of the postal service are largely unmeasured at this time.

The other type of electronic mail which is making significant inroads into the postal market is "electronic funds transfer" and accounting via special electronic networks. Again, there is difficulty in measuring the effects on the Postal Service, for many of the users are large corporations and the number of messages transacted are often not available. Further, messages are not so easily quantified as are telephone messages and letters.

The Postal Service has reacted to the threat posed by electronic mail by planning an electronic mail network to compliment its traditional document transfer system. If the Postal Service should assert its dominance over electronic mail by attempting to have the definition of "letter" extended (thus extending their monopoly), a fundamental issue will have been raised with profound implications for the communications industries, and for the structure of American communications.

### 3.3 The Importance of Postal Subsidy

Most of the debate regarding postal service centers on subsidy in one form or another. Nearly all agree that significant subsidies exist, even though there is wide disagreement on the exact magnitudes. Sometimes there is even disagreement on the direction of subsidies.



Debate seems inevitable in any multiservice monopoly with significant common costs, however, for there is no universally accepted theory for the measurement of subsidy in this case. Only when a service is priced below marginal cost is it widely agreed that the service is being subsidized.

Not only is there a long history of debate on the amount of subsidies and confusion as to the identity of benefactors from each, but there has also been a long-term disagreement as to their appropriateness. The underlying philosophy of subsidy is equally important as its measurement. Many feel that the various subsidies are in the public interest, but many take the opposite view and claim that as a minimum subsidies should be made explicit.

What kind of subsidies are we talking about? Basically there are three kinds: (1) interclass subsidy, (2) urban-rural subsidy (which can also be thought of in terms of high-traffic/low-traffic subsidy), and (3) government subsidy of the Postal Service in general.

### 3.3.1 Interclass Subsidy

It is widely accepted that first class mail subsidizes other classes. Postal Service statistics support this viewpoint. In order to make this determination, costs are allocated to the various postal services according to the requirement that "each class of mail or type of mail service bear direct and indirect postal costs attributable to that class or type. . ." (39 USCA 3622 b3). The costs which are attributable in this manner to the various classes of mail constitute about 45% of total postal expenditures, leaving the majority of expenditures common to all classes of mail.<sup>19</sup>

Some of the discussion in the 1974 postal rate hearings concerned how these attributed costs should determine postal rates. However, based on these allocated costs, the Postal Service can calculate the contribution that each class of service makes to institutional (unallocated) costs. The Postal Service reported (U.S. Postal Service, 1974) that first class mail contributed 4.3¢ per piece to institutional costs, second class -1.3¢

---

<sup>19</sup>See Table A-2, Appendix A.



domestically and overall -1.9¢, controlled circulation 2.8¢, third class 1.8¢, and fourth class 26.0¢. The fourth class contribution varied widely among subclasses: parcels (zone rate) 47.6¢; catalog, catalogues, 16.9¢; special fourth class rates 1.1¢; library rate -17.3¢. The contribution for government mail was 11.7¢ per piece, while free mail for the blind was -13.7¢ per piece. International mail contributed 14.0¢, while special services mail contributed 26.3¢, although again in special services there was variation in the contribution by subservice. Thus we have a first cut at subsidy, provided the allocation of cost is reasonable.

A study completed during the 1974-1975 postal rate increase hearings reports findings in a different manner (Board of Governors of the U.S. Postal Service, 1974); however, we get some idea of the amount and extent of cross subsidy according to this study also. At that time, the first class mail rate was 10¢ per ounce and the study recommended downward adjustment to 8-1/2¢ to bring rates more in line with costs. It was recommended also that the price of postcards be reduced from 8¢ to 5¢, that airmail letter rates be increased from 13¢ to 15¢ an ounce, but that airmail postcards be reduced from 11¢ to 10¢. The largest rate increase to bring rates in line with costs was proposed for parcel post delivery, a proposed increase of 57%. Judge Wenner recommended that second class rates be increased to a point five times what they were in 1971 (Time, 1975), and that third class bulk mail rates be increased 7%. It is interesting to note here that Judge Wenner condemned the Postal Service management for failing to carry out the directives of the United States Court of Appeals in the District of Columbia in an earlier rate case. In that decision, the court held that the Postal Service had improperly attributed costs to various types of mail, with Wenner saying that the rate increases proposed for first class perpetuate this allegedly illegal procedure. He obviously felt that first class mail users bear an unfair share of the overall Postal Service costs. In August of 1975, the Postal Rate Commission overruled the recommendation of Judge Wenner and opened the way for the Postal Service to raise first class rates from 10¢ to 13¢, effective January 1, 1976 (New York Times, 1975).



A quite simple analysis can help shed light on interclass subsidies, without doing a formal cost allocation as in the studies referred to above. This is based on the fact that two quite important determinants of postal cost are volume (pieces of mail) and weight. Volume largely determines important handling costs such as sorting, while weight determines transportation and delivery costs to a significant extent. If postal rates are to be consonant with cost, and cost is in fact largely determined by volume and weight, then the percentage of total postal revenues for each class should fall somewhere between the percentage of total volume and the percentage of total weight. However, as Figure 13 shows, this is not the case for first, second, and third class mail. The implications are that first class mail subsidizes second and third class mail.

There are serious considerations regarding the total elimination of interclass subsidy even if we knew how to do this. For example, in the early days of the nation, that portion of the mail carrying newspapers and articles (now second class mail) was intended to be subsidized in order that diverse opinions could be expressed to the public. This has had important implications for First Amendment rights (Rutgers Law Review, 1975). A Congressional Committee during President Washington's administration explained, "The circulation of political intelligence is. . . justly reckoned among the surest means of preventing the degeneracy of a 'free government'" (Time, 1975).

### 3.3.2 Urban-Rural Subsidy

The second subsidy exists because postal rates are uniform throughout the nation whereas costs of providing these services are not. Usually, this subsidy is agreed upon in direction, but not in magnitude. First, let us note that there is a high concentration of mail volume in the large post offices; 13.2% of the post offices carry 93.9% of the mail and 3.8% of the post offices carry 83.5% of the mail (U.S. Post Office Department, 1966, p. 30). There is tremendous concentration of postal activity in the very large offices. This is further evidenced by the fact that 0.23% of the post offices have 50% of the employees, 56% of the mail volume, and 40% of mail revenues (President's Commission on Postal Organization, 1968). While



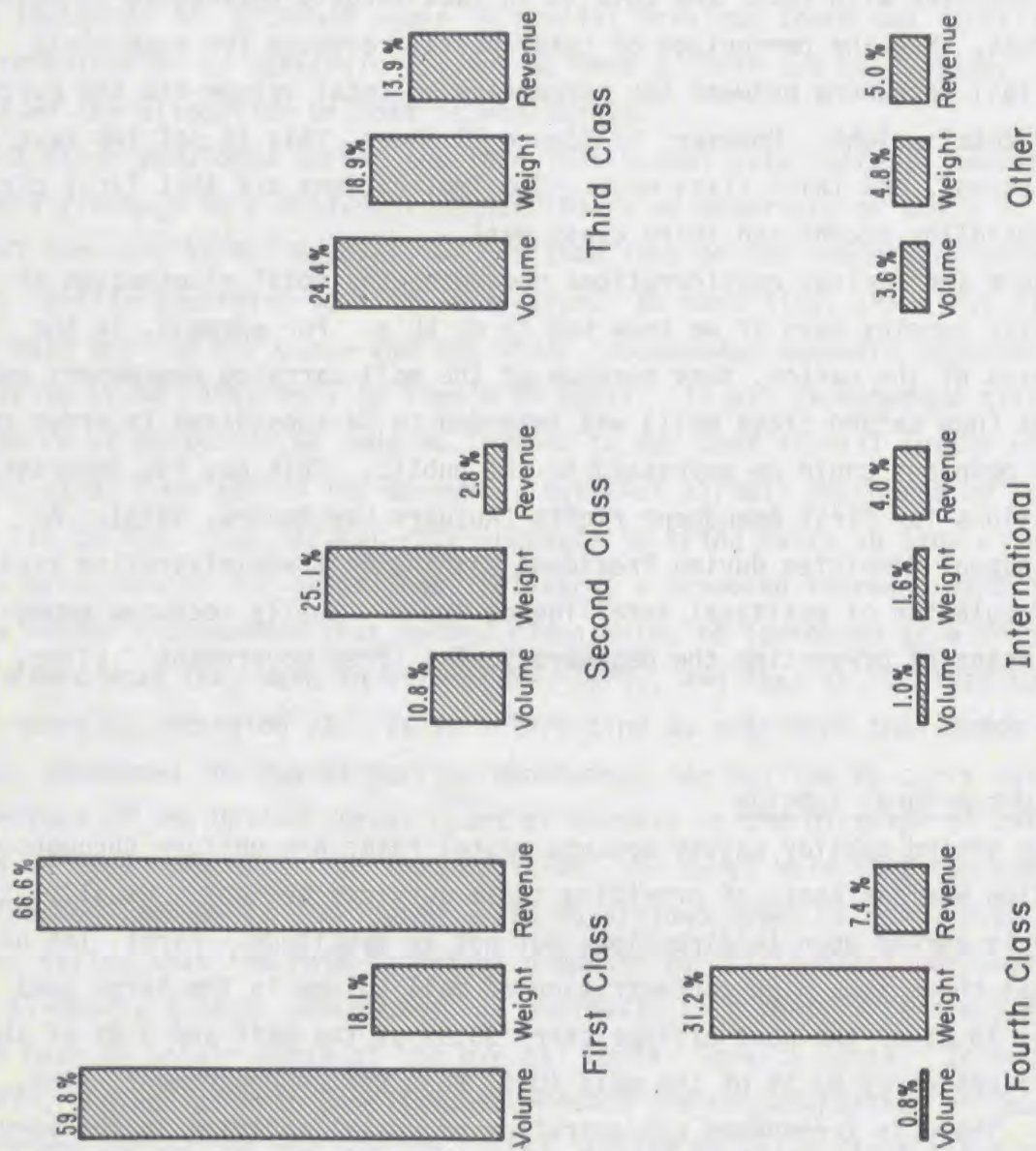


Figure 13. Postal Volume, Weight, and Revenue Comparisons by Class of Mail



traffic concentration does not necessarily imply a subsidy from high traffic areas to low traffic areas, this is likely provided that there are economies of scale (Merewitz, 1971). Some hints of economies of scale are given in Postal Service estimates of savings if a large number of small post offices were closed. A recent study by the General Accounting Office indicates that \$100 million could be saved by closing 12,000 offices, and that this action would not affect service (General Accounting Office, 1976, p. 88).

Note that the Reorganization Act of 1970 does require "uniform common nationwide rates for each class of mail." However, Congress "seems to have given its imprimatur to the setting of postal rates for each mail category equal to cost" (Priest, 1975). Thus the intent of Congress in the Reorganization Act seems to be to avoid subsidy between classes of mail. Congress apparently did not, however, intend to reduce or eliminate the high traffic, low traffic subsidy, for the Postal Service is still required to provide service to thinly populated areas where losses will be incurred. Congress promised to reimburse the Postal Service by annual appropriations for the losses it suffers by providing a nationwide service (Priest, 1975).

### 3.3.3 Federal Subsidy

The long-term operating deficit represents a subsidy of the general postal enterprise by federal funds<sup>20</sup> and benefits those who use the mails out of proportion to their taxes. Over the past 30 years, this subsidy has averaged approximately 20% of postal operating expenses.<sup>21</sup> The Postal Reorganization Act expected that the public service portion of this subsidy would cease to exist by 1984. However, few now feel this to be realistic under the present structure since the history of the first five years after the Reorganization lends no support to this expectation.

---

<sup>20</sup> See Section 2.1 for a brief discussion of the breakdown of such federal subsidy.

<sup>21</sup> See Table A-2, Appendix A.



### 3.4 The Comparison with the Telephone Industry

The postal and the telephone industries are the two major exchange communications industries. The purpose of this section is to contrast these industries to gain better perspective; there may be lessons to be learned by the experience of the telephone industry that could help in shaping the postal industry. The telephone industry is young (100 years old this year), while the postal industry is centuries old with antecedents millenia older. The similarities of the two industries are: (1) they are vital communications industries; (2) they are regulated; (3) they offer several services, but one service dominates; (4) the physical systems are "switched" to allow large numbers of people to communicate; and (5) each is dominated by a huge firm which holds monopoly power over the dominant service and is vitally interested in maintaining its monopoly powers.

#### 3.4.1 Market Characteristics, Industry Structure and Regulation

Until 1971, the United States Post Office was a department in the Executive Branch of the Federal Government. At that time it became an independent agency. The purpose of this change was to provide a structure for the Postal Service which would emulate a private firm, in the hope that this change would also allow the Postal Service to operate in a less political environment. With this change, the regulatory structure of the Postal Rate Commission and the Board of Governors was established.

In contrast, the telephone industry has been in the private sector except during the First World War when it was nationalized. The Federal Communications Commission (FCC), established in 1934, is the federal regulatory body over the telephone industry. The telephone industry, unlike the postal industry, is regulated on a two-tiered system, with the FCC having jurisdiction over interstate communications while state public utilities commissions have jurisdiction over intrastate communications. This two-tier regulatory structure for the telephone industry has been the cause of non-uniformity in rate structures and perhaps has been inefficient in the deciding of some policy issues. However, some would argue that the structure provides for balanced decision making.



Few suggest that state public utilities commissions establish jurisdiction over intrastate mails. Perhaps this is because mail service is not considered a public utility and because the Postal Service is still a Federal agency.

The primary service offered by the telephone industry is a switched voice communications service. Because of pricing conventions, we usually break this into two subservices, local service and long distance service (termed message telephone service by the industry -- MTS). The industry does, however, offer a number of other services such as a variety of private line offerings, data communications channels, video channels, mobile telephone service, and a variety of terminal equipment. The monopoly held by the telephone industry is on local service and MTS at the present time, although in the last ten years there have been increasing probes into the extent of the monopoly. Before 1956, virtually all services and ancillary functions were monopolistic, but the Hush-a-Phone decision (238 F. 2d 266,269) in 1956 followed by the Carterfone decision (13 FCC 2d 420) in 1968 began a process which allowed larger portions of the telephone services to be competitive. Competitive inroads have been primarily in the provision of long-distance, private-line services and in the provision of terminal equipment. To date, however, the vast majority of these competitive markets are still held by the established carriers, and the message toll service is under exclusive control of the established telephone industry.

The established telephone industry consists of the Bell Telephone System (American Telephone & Telegraph) together with several hundred independent telephone companies. Each telephone company maintains a monopoly over the geographical area in which it provides local telephone service. Because there is little if any competition between telephone companies, the established telephone industry is often united on policy issues. The established telephone industry has used the arguments of universal service, natural monopoly, system integrity, and price averaging in order to maintain monopoly control over the market.

The postal literature shows a similar situation, since once again there is a monopoly portion of the market and a dominant firm controlling that monopoly. The major question raised in the postal industry is whether



competition should be allowed in first class mail, leaving the industry competitive with no monopoly sector.

### 3.4.2 Pricing

Telephone rates are based on "value of service" rather than cost of providing service. A classic example of value of service pricing is that business telephone rates have historically been approximately double those of the residential user, whereas the cost of providing service to business users is probably only slightly more than the cost of providing service to residential users. Traditional pricing has held that rates should be largely independent of location. Unit cost of telephone service is cheaper between areas which have a high traffic density than along low traffic routes, but this cost differential is not reflected in rates. Thus, we find a subsidy in telephone service from areas of high traffic density to areas of low traffic density, as we do also in postal service.

In telephone service, it is charged that monopoly services subsidize competitive services. For example, local telephone service and message telephone service are thought by some to subsidize such competitive services as long-distance, private-line service. However, even if it were decided that the provision of the various telephone services should be based on their costs, this decision would be difficult to implement.

Competition in the telephone industry is far from the economic ideal of "pure competition." There are relatively few suppliers, and the competitive suppliers are dominated by the huge established carrier. Rate changes and new service offerings must be approved by the appropriate regulatory bodies, resulting in a slowly responsive market. Further, the several services are characterized by a large percentage of common cost and there has been no universally agreed upon method of allocating those common costs to the services. As a result, there is no standard methodology for determining telephone cost-based rates for various services. This is especially a problem because of the fact that there is competition in certain services while other services remain under the control of a monopoly. The result has been termed "regulated competition" by some. Regulated competition is deemed necessary because of the potential of predatory pricing on the part of the established telephone carriers.



While the telephone and postal industries share the problem of cost allocation and the market structure appears comparable in many ways, the pricing structures of the two industries are quite different. First class postage is flat rate (i.e., independent of distance); however, it does depend on weight, and in this way, depends on message length. In comparison, telephone pricing is more complex since most telephone pricing structures in the United States consist of a fixed monthly charge for local service plus charges for long distance calls, which depend both on the length of the message (time) and distance.<sup>22</sup> Thus, in reality, the local telephone charge includes access to the toll service network and might be considered a composite of network access and local usage prices. Postal pricing structure is quite simple, at least for first class mail where pricing is completely insensitive to distance and there are no costs which could be considered access charges.<sup>23</sup>

### 3.4.3 Physical Systems

The physical systems which perform the communications functions for the postal and telephone industries are conceptually similar. Messages must be "delivered" from any user to any other user, and the nature of the delivery systems are comparable. Both systems have three primary components: (1) a local gathering and distribution function, (2) a switching function, and (3) a long distance transportation function. In classical network terminology, a message travels by a local "link" from the terminal to the node or "switch," then is transported by a series of long distance links to a final switch, and the message is delivered via a final link to the receiving terminal. There are, of course, vast differences in the physical systems which perform these two forms of communications since one is electronic while the other is

---

<sup>22</sup>The trend in telephony in the 1960s was to extend the local calling area, and some have predicted the time when the telephone would be based on one monthly charge without regard to number and destination of calls. However, the nature of telephone demand and cost precludes such pricing, and the trend today is to reduce the size of local calling areas and to make even local charges dependent on the number and length of calls.

<sup>23</sup>It may be reasonable, however, to consider the federal subsidy as an access charge for postal service. This amounts to approximately \$3.00 per month per household.



mechanical and manual. The Postal Service delivers physical objects in the forms of envelopes or packages, while the telephone industry transfers messages electronically; the messages must be coded and decoded for transmission by electrical means. The speeds of transmission are vastly different.

#### 4. OPTIONS FOR POSTAL SERVICE

The United States Postal Service in 1976 faces a fiscal crisis because postal expense exceeds postal income by record amounts. Alternative fiscal solutions are to increase rates, to borrow heavily, to appropriate significant amounts from the United States Treasury, or a combination of these. These options may satisfy immediate needs; but the postal crisis is not short-term and should not be dealt with by devising short-term methods to make the Postal Service pay. Further, the convergence of other communications techniques may eventually force broader solutions to the problem. Specifically it is necessary to examine alternative industry structures which will provide a spectrum of communication functions, including, but not limited to, letter and parcel delivery.

This chapter briefly outlines postal alternatives with some indication of the implications of each. What is really needed is a careful analysis of what exactly is central to the postal function, a delineation of possible structural alternatives, and the impact of each alternative on specific user groups.

Central to consideration of alternatives is the question of "natural monopoly" in the provision of postal services. A monopoly can be "natural" in the following ways (which are not mutually exclusive): (1) if there are technological reasons for one service provider, (2) if significant economies of scale exist, or (3) if a dominant firm would emerge in the absence of governmental controls.

The postal function, unlike the provision of communications or utilities, seems to have no overriding technological reasons for monopoly. Whereas provision of utilities by multiple firms would usually require multiple conduits for provision of services, this is not the case in the same sense for the postal function. Several postal companies could use the streets



without the magnitude of inconvenience to the public that would be the case of multiple providers of power or sewage, for example. Indeed, milk delivery, trash pickup, and newspaper delivery have many of the postal delivery characteristics, without a need for monopoly. Thus the first reason for monopoly appears, on the surface, not to be compelling in the postal case.

The second reason for monopoly (economies of scale) has been studied, but the studies are somewhat inconclusive. We must remember that many production functions exhibit at least some scalar economies. For example, the manufacture of clothing or shoes no doubt exhibits economies of scale, but the American tradition is that the advantages of competition predominate in the absence of overwhelming evidence for the need of monopoly.

The third consideration for monopoly (that one firm would tend to dominate the market, naturally exerting monopoly power) does not apply to the postal function since there is already significant competition in parcel delivery and strong indication of the desire to compete in first class mail.

In the absence of compelling reasons for maintaining monopoly over first class mail, alternatives will be considered which remove the monopoly structure of the postal function. Thus it is that alternative industry structures naturally fall into two categories, one where the postal monopoly in first class mail is retained, the other where the postal statutes are revised to allow competition in all aspects of the postal function.

#### 4.1 Status Quo

It has only been five years since the United States Postal Service was established. This may not be adequate time to determine the success of the Postal Service in light of severe inflation and a recession which may be causing decreased volume. However, because such little progress is seen towards the objectives set out at the time of the reorganization, one wonders when progress will be made toward these ends. An advantage of maintaining the current structure is that there is no further reorganization cost.

Several approaches could be adopted. Rates could be increased over and above the growth in the consumer price index. Federal subsidy could become



permanent, without any expectation that the Postal Service should be self-sufficient. In addition, the public may have to accept reduced services. None of these alternatives are satisfactory to all concerned, but could be used to correct the current fiscal crisis.

There are major groups which are likely to favor retention of the status quo such as postal unions and industries which rely on present postal subsidies.

#### 4.2 Reversion to the Post Office Department

In many ways there has been little difference between the Postal Service and the old Post Office Department. Perhaps the major difference has been the provision of collective bargaining on the part of postal unions. If federal subsidy of the postal function is to continue indefinitely, there seems to be little advantage of the Postal Service as an independent agency. However, neither does there appear to be a great advantage of the postal function being performed by an executive department, since it would be quite unlikely that collective bargaining could be avoided there either. Other distinctions appear to be of minor consequence. There is little to recommend this alternative.

#### 4.3 Regulated Private Firm

Under this alternative, the monopoly on first class mail would be maintained, but the firm would truly be a private firm, entirely outside the Federal Government. Presumably it could be regulated as are the communications, utility, and transportation industries. The most common form of regulation today is rate-of-return regulation. This would provide that rates be set high enough to cover costs of providing service, plus a return for investors (shareholders). Sharply higher rates for the consumer would likely result from this alternative.

The difficulty in each of the alternatives where monopoly is maintained is the setting of postal rates (often the primary function of a regulatory body). Not only must the overall rate-of-return be determined, but the relative rates of various services in various sectors of the population must be determined. The experience in the telephone industry shows quite a



difficulty in being able to allocate costs to determine cost-based pricing; this problem is likely to continue in the Postal Service as well.

Presumably there would be a regulatory commission to oversee the Postal Service -- such as the Postal Rate Commission, or even the Federal Communications Commission or the Interstate Commerce Commission -- each alternative requiring appropriate changes in statutes.

#### 4.4 Competition

There are many similarities among the three alternatives where monopoly is retained. An alternative which is attractive to many, yet is by far the most extreme departure from status quo, is a structure which eliminates the monopoly status of the postal function. This could be done in several ways.

First, the Postal Service could be retained with its present structure. This would require little or no changeover costs. Moreover, certain postal services are subsidizing others, and subsequent rate changes to adjust rates closer to cost would be necessary. Under this structure, the Postal Service would still need to have its postal rates approved by the Postal Commission and the Board of Governors.

Alternatives to this structure (but still keeping the Postal Service regulated or controlled) include bringing the Postal Service more directly under government control as an executive department or, alternatively, regulating the Postal Service on some other basis (rate-of-return regulation, for example).

In great contrast to these options, a corporation might be formed from the Postal Service, a corporation which is unregulated in any manner. Arrangements would need to be made regarding the capital assets of the Postal Service and some would question whether the corporation would tend to dominate the industry -- essentially having monopoly power but without the checks required.

In each alternative where competition is allowed (in all services), there are questions which must be answered as to which groups would benefit and which groups would be hurt as a result of the introduction of competition. Early in this paper, we briefly discussed the subsidies involved in the postal service at the present time. There is little doubt that competition



would arise in the delivery of first class mail. As a result, rates for second and third class mail would increase markedly and those groups which are heavy users of second and third class mail would protest. There may be tremendous impact on the magazine industry and some newspapers which are delivered by mail. Likewise there would be impact on those businesses which advertise through the mails, and on non-profit groups which use bulk mailing. There are two other major groups which would oppose competition. The users from low traffic routes (specifically rural areas) would likely face higher postal rates, and in addition, the postal unions stand only to lose by the possibility of cheaper labor involved in mail delivery.

The claim for competition is that the profit incentive would encourage new kinds of service, new kinds of marketing, and open options in postal service which are not presently available. It is conceivable that private mail carriers would, for example, be innovative in using lower salaried personnel for delivery, or perhaps have mail pick up at grocery stores, gasoline service stations, etc. None of these options are given serious consideration today, and the cost differential which could come as a result is not known. In each case, it would be advisable to study the type and severity of impact before a decision is made. This would essentially involve making estimates of postal rates in these services after competition had brought rates into better relation with costs.

## 5. SUMMARY AND CONCLUSIONS

The five years experience with the United States Postal Service as an independent establishment of the Executive Branch of the Federal Government has been one of limited but significant change. The primary departure has not been changes in quality of service nor has it been the subsidy needed from the Federal Government in order to balance the postal budget, even though improvement of both were anticipated. The two significant trends have been higher postal rates and higher salaries for postal workers. These two trends have tended to balance each other out, rendering the desired improvements impossible. In fact, there has been a need for increased federal subsidy. It appears that increased postal rates and higher postal



salaries are long-term trends which are irreversible. The most likely option permitting reduced federal subsidy is for services to be curtailed. This is an option to which the public has voiced opposition.

The fiscal problems of the Postal Service are, to a significant extent, caused by changes in the nation's communications patterns and by options provided by electronic technologies. There will always be a demand for traditional postal services, although electronic communications with reduced costs and new modes of communication are certain to continue to impact on the postal business. It is wrong to think in terms of a postal market, for the market served by the Postal Service is not fundamentally "postal" in nature. Rather, it is the communications market which is fundamental to the postal problem, and any solution to the postal crisis which fails to consider the broader view is not likely to last.

There are two fundamental options for postal service, if in fact we are unwilling to accept reduced services or sharply higher postal rates. First, we might adjust to the fact that federal subsidies are needed in greater amounts than expected and change our expectations for a postal service which can meet its costs with revenues obtained through postal rates. An alternative (one which is extreme in some ways) is to open the postal function to competition and eliminate the monopoly which the Postal Service has traditionally held on first class mail. Though this would be an extreme change from an historical point of view, it would nevertheless be a move toward the American tradition of free enterprise and should be given careful consideration.

Prerequisite to a lasting solution of the postal crisis is consideration of alternative postal structures in the context of the entire communications industry. Alternative structures must be evaluated by their impact on specific user groups and by their flexibility in adapting to present and future communications demands.

Communications has greatly assisted the United States Government in providing Americans with life, liberty, and the pursuit of happiness; the postal function has played a major role in these communications. It is the intent of Congress ". . . to provide postal services to bind the Nation together. . ." (39 USC 101a). It is incumbent upon the Government to provide the structural opportunity for such expectations to be fulfilled.



## 6. ACKNOWLEDGEMENTS

The authors wish to express their appreciation to those who assisted in preparation of this paper. Paul Milich, Burgette Hart, Gene Ax, and Richard Johnson, all with the Policy Research Division, made significant contributions. Catherine Haubert and Catherine Nicoletti typed the manuscript.

We especially thank Gene Zucker (Office of Telecommunications), Charles Jackson (Federal Communications Commission), and Gregg Skall (Office of Telecommunications Policy) who reviewed the paper and provided helpful criticism. Finally, we appreciate the encouragement and counsel of Sam Williams (Office of Management and Budget) and Roger Gilbertson (U. S. Department of Commerce).



## 7. REFERENCES

- Board of Governors of the U.S. Postal Service (1973), The Private Express Statutes and Their Administration, June 29.
- Board of Governors of the U.S. Postal Service (1974), Action of the Governors under 39 U.S.C, Section 3625, and Supporting Record in the Matter of Postal Rate and Fee Increases, 1974: Docket No. R74-1 before the Postal Rate Commission.
- Boulder Daily Camera (1976), "Electronic Mail Hurts Post Office," Boulder CO, January 5.
- Busines Communications Co., Inc. (1975), Mail Delivery: Viable Alternatives, Business Opportunity Report G-015R, 471 Glenbrook Road, Stamford CN 06906, May.
- Congressional Budget Office (1975), Financing Postal Operations: Alternative Approaches and Their Budgetary Implications, Congressional Budget Office Background Paper Number 5, March 25.
- Fuller, Wayne E. (1972), The American Mail, Enlarger of the Common Life, University of Chicago Press.
- General Accounting Office (1975), A Summary of Observations on Postal Service Operations from July 1971 to January 1976, March 5.
- Merewitz, Leonard (1971), "Costs and Returns to Scale in U.S. Post Offices," Journal of the American Statistical Association, September, pp. 504-509.
- Myers, Robert J. (1975), The Coming Collapse of the Post Office, Prentice-Hall Inc., Englewood Cliffs, N.J.
- New York Times (1975), "A 13¢ Rate for First-Class Mail Reported Favored by U.S. Panel," August 27.
- President's (Kappel) Commission on Postal Organization (1968), Towards Postal Excellence, U.S. Government Printing Office, Washington, DC.
- Priest, George L. (1975), "The History of the Postal Monopoly in the United States," The Journal of Law and Economics, April, pp. 33-80.
- Reader's Digest (1975), "What Ails the U.S. Mails?," May (condensed from New York Times Magazine, February 2, 1975).
- Rocky Mountain News (1975), "Even the U.S. Using Private Mail Firms," Denver CO, May 7.
- Rutgers Law Review (1975), "Second Class Postal Rates and the First Amendment," Vol. 28, Winter, pp. 693-706.



Spokane Chronicle (1975), "Better Postal Image Sought," Spokane WA, January.

Time (1975), "Why the Postal Service Must be Changed," July 7.

U.S. Bureau of the Census (1976), Historical Statistics of the United States, U.S. Government Printing Office, Washington DC 20402.

U.S. Government (1976), Budget of the United States Government, Fiscal Year, 1977, U.S. Government Printing Office, Washington DC 20402.

U.S. Postal Service (1974), Revenue and Cost Analysis, Fiscal Year 1973, April 29, U.S. Government Printing Office, Washington DC 20402.

U.S. Postal Service (1976), Postal Service Staff Study: The Necessity for Change, U.S. Government Printing Office, Washington DC 20402.

U.S. Post Office Department (1966), 1966 Annual Report of the Postmaster General, U.S. Government Printing Office, Washington DC 20402.

U.S. Senate (1975), Senate Hearings Before the Committee on Appropriations -- Treasury, Postal Service, and General Government Appropriations for Fiscal Year 1976, U.S. Government Printing Office, Washington DC 20402.



## 8. SELECTED BIBLIOGRAPHY

- Arthur D. Little, Inc. (1974), A Survey of Technologies Applicable to Electronic Mail Handling Systems, 3 vols. plus an Executive Summary, ADL Contract No. 7401599, August 31.
- Bailar, Benjamin F. (1975), "Do We Really Need Today's Postal System?", U.S. News and World Report, March 22.
- Business Week (1975), "Hopes Fade for a Self Supporting Postal Service," March 24.
- Business Week (1976), "Why The Post Office Can't Break Even," March 29.
- Chaifetz, Richard I. (1971), "The Postal Reorganization Act: Applying the Law to the Letter," Boston College Industrial and Commercial Law Review, Vol. 12, June, pp. 1151-1175.
- Cohen, Frederick C. (1971), "Labor Features of the Postal Reorganization Act," Labor Law Journal, Vol. 22, January, pp. 44-50.
- Congressional Budget Office (1976), "Financing Postal Operations: Alternative Approaches and Their Budgetary Implications," Background Paper No. 5, March 25.
- Cullinan, Gerald (1968), The Post Office Department, Frederick A. Praeger Publishers, New York NY.
- DeMeter, Robert F. (1974), "The Franking Privilege A Threat to the Electoral Process," The American University Law Review, Vol. 23, pp. 883-921.
- Electronics (1974), "Is Postal Service Really Getting Its Act Together?", October 17, pp. 44,45.
- Geller, Henry, (1976), "Electronic Mail, Legal and Policy Considerations," Fourth Annual Conference on Telecommunications Policy Research, Airlie House VA, April.
- Haldi, John (1974), Postal Monopoly: An Assessment of the Private Express Statutes, The American Enterprise Institute for Public Policy Research, Washington DC, February.
- Hodge, G. D. (1975), "The Future Role of the USPS: Telecommunications Leader or Conveyor of Materials," Fourth Annual Conference on Telecommunications Policy Research, Airlie House VA, April.



- Jackson, Charles L. (1973), "Electronic Mail," Report CSR TR-73-2, Massachusetts Institute of Technology, Cambridge MA, April.
- Jackson, Charles L. (1975), "Electronic Mail: What is it? What might it be?", Fourth Annual Conference on Telecommunications Policy Research, Airlie House VA, April.
- Johnston, J. F., Jr. (1968), "The United States Postal Monopoly," Business Lawyer, Vol. 23, January, pp. 379-405
- Kennedy, Thomas R. (1970), "Postal Reorganization Act of 1970: Heading Off Future Postal Strikes," Georgetown Law Journal, Vol. 59, November, 1970, pp. 305-334.
- McLaughlin, John (1976), "Electronic Mail: Defining a Role for the U.S. Postal Service," Fourth Annual Conference on Telecommunications Policy Research, Airlie House VA, April.
- Mennie, Don (1976), "A Try at Automated 'Zip'," IEEE Spectrum, October, pp. 41-47.
- Newsweek (1976), "A Gathering Mail Storm," March 22, pp. 61-65.
- Nissen, David H. and Armando M. Lago (1975), "Price Elasticity of Demand for Parcel Post Mail," The Journal of Industrial Economics, Vol. 23, No. 4, June, pp. 281-299.
- Postmaster General (1971), Annual Report of the Postmaster General, July 1, 1970 - June 30, 1971, U.S. Government Printing Office, Washington DC.
- Postmaster General (1973), Annual Report of the Postmaster General, 1972-1973, U.S. Government Printing Office, Washington DC.
- Postmaster General (1975), Annual Report of the Postmaster General, 1974-1975, U.S. Government Printing Office, Washington DC.
- Saltzstein, Robert A. and Ronald E. Resh (1972), "Postal Reform, Some Legal and Practical Considerations," William and Mary Law Review, Summer, Vol 12, pp. 766-786.
- Stanley, D. S. (1969), "Postage Rates for Priority Mail," Journal of Air Law and Commerce, Spring, Vol. 35, pp. 216-225.
- Taft, John G. (1976), "It May Be Make It or Break It for the U.S. Postal Service", National Journal, July 3, pp. 932-937.
- Time (1976), "Time Letter to the President Regarding Rate Hike," January 19.
- U.S. News & World Report (1975), "Why Even More Rate Increases?", December 29.



- U.S. News & World Report (1976), "Postal Service Feels the Sting of Competition," and "Do We Really Need Today's Postal System?", March 22.
- U. S. Post Office Department (1968), Cost Ascertainment Report, 1968, U.S. Government Printing Office, Washington D.C.
- Vandergast, C.F.C. (1975), "Critical Issues in Electronic Mail," Conference on Telecommunications Policy Research, Airlie House VA, April 18.
- Virginia Law Review (1972), "Postal Reorganization Act: A Case Study of Regulated Industry Reform," Vol. 58, Summer, pp. 1030-1098.
- Walker, Gerald M. (1975), "Electronic Funds Transfer Systems," Electronics, July 24.
- Wall Street Journal (1975a), "Postal Service Efficiency" (editorial), September 18.
- Wall Street Journal (1975b), "Businesses' Problems Compounded Daily As Postal Strike Continues in Canada," November 18.
- Wall Street Journal (1976), "Dropping of Postal Service's Monopoly On Letters Is Urged by Wage-Price Panel," January 20.
- Wasmund, H. Andrew (1972), "Use and Abuse of the Congressional Franking Privilege," Loyola of Los Angeles Law Review, Vol. 5, pp. 52-86.
- Wattles, George M. (1973), "The Rates and Costs of the United States Postal Service," Journal of Law and Economics, Vol. 16, pp. 89-117.
- Wolk, Stuart R. (1969), "Postal Reform: Should Industry Bear the Burden," New York Law Forum, Vol. 15, Winter, pp. 883-888.
- Wolk, Stuart R. (1971), "Postal Reform, Fact or Fiction," Labor Law Journal, Vol. 22, June, pp. 365-374.
- Wolk, Stuart R. (1972), "Postal Reform: A Year of Failure," Labor Law Journal, Vol. 23, October, pp. 630-637.



APPENDIX A: HISTORICAL STATISTICS, 1945-1975

|            | <u>Page</u>   |
|------------|---|
| Table A-1  | National Statistics . . . . . 53  |
| Table A-2  | Postal Statistics I . . . . . 54  |
| Table A-3  | Postal Statistics II . . . . . 55   |
| Table A-4  | Postal Volume by 12 Classes . . . . . 56  |
| Table A-5  | Postal Weight by 12 Classes . . . . . 57  |
| Table A-6  | Postal Revenue by 12 Classes . . . . . 58   |
| Table A-7  | Postal Revenue per Piece by 12 Classes . . . . . 59   |
| Table A-8  | Postal Revenue per Pound by 12 Classes . . . . . 60   |
| Table A-9  | Postal Weight per Piece by 12 Classes . . . . . 61  |
| Table A-10 | Postal Volume by 6 Classes . . . . . 62   |
| Table A-11 | Postal Weight by 6 Classes . . . . . 63   |
| Table A-12 | Postal Revenue by 6 Classes . . . . . 64  |
| Table A-13 | Comparison of Percent Volume, Weight,<br>Revenues and Allocated Costs for<br>4 Classes of Mail . . . . . 65 |
| Table A-14 | Telephone Statistics . . . . . 66   |
| Table A-15 | Telegraph and Exchange Communications<br>Statistics . . . . . 67  |
| Table A-16 | Average Salary Comparisons . . . . . 68   |

Table A-1. National Statistics

| Year | United States<br>Population<br>(Millions) | Employed<br>Labor Force<br>(Millions) | Total Salaries<br>and Wages<br>(\$Billions) | Consumer<br>Price Index<br>(Rel. 1967) | Inverse<br>Consumer<br>Price Index<br>(Rel. 1975) | Gross National<br>Product<br>(\$Billions) | GNP<br>(1975 \$<br>Billions) | GNP per<br>Capita<br>(1975 \$) |
|------|---|---------------------------------------|---|--|---|---|------------------------------|--------------------------------|
| 1945 | 133.4                                     | 64.9                                  | 117.5                                       | 53.9                                   | 2.955   | 211.9                                     | 626                          | 4695                           |
| 1946 | 140.7                                     | 58.3                                  | 112.0                                       | 58.5                                   | 2.723   | 208.5                                     | 568                          | 4035                           |
| 1947 | 144.0                                     | 58.6                                  | 123.0                                       | 66.9                                   | 2.381   | 231.3                                     | 551                          | 3823                           |
| 1948 | 146.7                                     | 59.8                                  | 135.4                                       | 72.1                                   | 2.209   | 257.6                                     | 569                          | 3880                           |
| 1949 | 149.3                                     | 59.3                                  | 134.5                                       | 71.4                                   | 2.231   | 256.5                                     | 572                          | 3833                           |
| 1950 | 151.9                                     | 60.4                                  | 146.8                                       | 72.1                                   | 2.209   | 284.8                                     | 629                          | 4143                           |
| 1951 | 154.0                                     | 63.2                                  | 171.1                                       | 77.9                                   | 2.045   | 328.4                                     | 672                          | 4361                           |
| 1952 | 156.4                                     | 63.9                                  | 185.1                                       | 79.5                                   | 2.004   | 345.5                                     | 692                          | 4426                           |
| 1953 | 159.0                                     | 64.7                                  | 198.3                                       | 80.1                                   | 1.989   | 364.6                                     | 725                          | 4560                           |
| 1954 | 161.9                                     | 63.4                                  | 196.5                                       | 80.5                                   | 1.979   | 364.8                                     | 722                          | 4459                           |
| 1955 | 165.1                                     | 65.1                                  | 211.3                                       | 80.2                                   | 1.986   | 398.0                                     | 791                          | 4788                           |
| 1956 | 168.1                                     | 66.6                                  | 227.8                                       | 81.4                                   | 1.957   | 419.2                                     | 820                          | 4880                           |
| 1957 | 171.2                                     | 66.9                                  | 238.7                                       | 84.3                                   | 1.890   | 441.1                                     | 834                          | 4869                           |
| 1958 | 174.1                                     | 65.6                                  | 239.9                                       | 86.6                                   | 1.839   | 447.3                                     | 823                          | 4726                           |
| 1959 | 177.1                                     | 67.1                                  | 258.2                                       | 87.3                                   | 1.825   | 483.7                                     | 883                          | 4984                           |
| 1960 | 180.0                                     | 68.3                                  | 270.8                                       | 88.7                                   | 1.796   | 503.7                                     | 905                          | 5026                           |
| 1961 | 183.0                                     | 68.2                                  | 278.1                                       | 89.6                                   | 1.778   | 520.1                                     | 925                          | 5053                           |
| 1962 | 185.8                                     | 69.5                                  | 296.1                                       | 90.6                                   | 1.758   | 560.3                                     | 985                          | 5302                           |
| 1963 | 188.5                                     | 70.5                                  | 311.1                                       | 91.7                                   | 1.737   | 590.5                                     | 1026                         | 5442                           |
| 1964 | 191.1                                     | 72.0                                  | 333.7                                       | 92.9                                   | 1.715   | 632.4                                     | 1084                         | 5675                           |
| 1965 | 193.5                                     | 73.7                                  | 358.9                                       | 94.5                                   | 1.686   | 684.9                                     | 1155                         | 5967                           |
| 1966 | 195.6                                     | 76.0                                  | 394.5                                       | 97.2                                   | 1.639   | 749.9                                     | 1229                         | 6283                           |
| 1967 | 197.5                                     | 77.7                                  | 423.1                                       | 100.0                                  | 1.593   | 793.9                                     | 1265                         | 6403                           |
| 1968 | 199.4                                     | 79.5                                  | 464.9                                       | 104.2                                  | 1.529   | 864.2                                     | 1321                         | 6626                           |
| 1969 | 201.4                                     | 81.4                                  | 509.7                                       | 109.8                                  | 1.451   | 930.3                                     | 1350                         | 6702                           |
| 1970 | 203.8                                     | 81.7                                  | 542.0                                       | 116.3                                  | 1.370   | 977.1                                     | 1338                         | 6567                           |
| 1971 | 206.2                                     | 81.6                                  | 573.6                                       | 121.3                                  | 1.313   | 1054.9                                    | 1385                         | 6719                           |
| 1972 | 208.2                                     | 84.0                                  | 626.8                                       | 125.3                                  | 1.271   | 1158.0                                    | 1472                         | 7071                           |
| 1973 | 209.9                                     | 86.6                                  | 691.6                                       | 133.1                                  | 1.197   | 1294.9                                    | 1550                         | 7383                           |
| 1974 | 211.4                                     | 88.1                                  | 750.7                                       | 147.7                                  | 1.079   | 1397.3                                    | 1507                         | 7129                           |
| 1975 | 213.1                                     |                                       |   | 159.3                                  | 1.000   |   |                              | 6664                           |



Table A-2. Postal Statistics I

| Year | Employees<br>(Thousands) | Man-Years<br>(Thousands) | Income<br>(\$ Millions) | Operating Deficit<br>(\$ Millions) | Expense<br>(\$ Millions) | Salaries and<br>Benefits<br>(\$ Millions) | Costs Allocated<br>to Classes of Mail<br>(\$ Millions) | Costs Allocated<br>as Percent<br>of Expense | Labor Intensity<br>(Percent) | Deficit as Percent<br>of Expense | Volume per<br>Capita | First Class<br>Volume per<br>Capita |
|------|--------------------------|--------------------------|-------------------------|------------------------------------|--------------------------|---|--|---|------------------------------|----------------------------------|----------------------|-------------------------------------|
| 1945 | 436                      | 399                      | 1314                    | -169                               | 1145                     | 870                                       | 900  | 78.6  | 76.0                         | -14.8                            | 284                  | 164                                 |
| 1946 | 487                      | 426                      | 1225                    | 129                                | 1354                     | 1079                                      | 1070   | 79.0  | 79.7                         | 9.5                              | 258                  | 148                                 |
| 1947 | 471                      | 439                      | 1299                    | 206                                | 1505                     | 1197                                      | 1238   | 78.2  | 79.5                         | 13.7                             | 260                  | 149                                 |
| 1948 | 503                      | 454                      | 1411                    | 277                                | 1688                     | 1243                                      | 1360   | 80.5  | 73.6                         | 16.4                             | 275                  | 155                                 |
| 1949 | 518                      | 483                      | 1572                    | 577                                | 2149                     | 1538                                      | 1719   | 80.0  | 71.6                         | 26.8                             | 292                  | 161                                 |
| 1950 | 501                      | 483                      | 1677                    | 546                                | 2223                     | 1618                                      | 1814   | 81.6  | 72.8                         | 24.6                             | 297                  | 167                                 |
| 1951 | 498                      | 476                      | 1777                    | 564                                | 2341                     | 1629                                      | 1862   | 79.5  | 69.6                         | 24.1                             | 305                  | 173                                 |
| 1952 | 524                      | 490                      | 1947                    | 720                                | 2667                     | 1919                                      | 2203   | 82.6  | 72.0                         | 27.0                             | 319                  | 178                                 |
| 1953 | 507                      | 510                      | 2092                    | 650                                | 2742                     | 1993                                      | 2244   | 81.8  | 72.7                         | 23.7                             | 320                  | 180                                 |
| 1954 | 507                      | 508                      | 2269                    | 399                                | 2668                     | 2002                                      | 2274   | 84.9  | 75.0                         | 15.0                             | 323                  | 176                                 |
| 1955 | 512                      | 512                      | 2349                    | 363                                | 2712                     | 2084                                      | 2349   | 86.6  | 76.8                         | 13.4                             | 335                  | 183                                 |
| 1956 | 509                      | 518                      | 2419                    | 464                                | 2883                     | 2249                                      | 2490   | 86.4  | 78.0                         | 16.1                             | 336                  | 188                                 |
| 1957 | 521                      | 530                      | 2497                    | 547                                | 3044                     | 2345                                      | 2650   | 87.0  | 77.0                         | 18.0                             | 345                  | 193                                 |
| 1958 | 538                      | 542                      | 2550                    | 891                                | 3441                     | 2653                                      | 3017   | 87.7  | 77.1                         | 25.9                             | 345                  | 193                                 |
| 1959 | 550                      | 549                      | 3035                    | 605                                | 3640                     | 2855                                      | 3194   | 87.7  | 78.4                         | 16.6                             | 346                  | 190                                 |
| 1960 | 563                      | 566                      | 3277                    | 597                                | 3874                     | 2953                                      | 3391   | 87.5  | 76.2                         | 15.4                             | 354                  | 192                                 |
| 1961 | 582                      | 578                      | 3423                    | 826                                | 4249                     | 3299                                      | 3701   | 87.1  | 77.6                         | 19.4                             | 355                  | 195                                 |
| 1962 | 588                      | 584                      | 3557                    | 775                                | 4332                     | 3362                                      | 3797   | 87.7  | 77.6                         | 17.9                             | 358                  | 198                                 |
| 1963 | 587                      | 592                      | 3879                    | 820                                | 4699                     | 3624                                      | 3997   | 85.1  | 77.1                         | 17.5                             | 360                  | 198                                 |
| 1964 | 585                      | 602                      | 4276                    | 652                                | 4928                     | 3829                                      | 4190   | 85.0  | 77.7                         | 13.2                             | 365                  | 201                                 |
| 1965 | 596                      | 610                      | 4483                    | 793                                | 5276                     | 4157                                      | 4507   | 85.4  | 78.8                         | 15.0                             | 371                  | 205                                 |
| 1966 | 675                      | 639                      | 4784                    | 943                                | 5727                     | 4517                                      | 4858   | 84.8  | 78.9                         | 16.5                             | 387                  | 216                                 |
| 1967 | 717                      | 676                      | 5102                    | 1147                               | 6249                     | 4928                                      | 5278   | 84.5  | 78.9                         | 18.4                             | 397                  | 223                                 |
| 1968 | 731                      | 697                      | 5660                    | 1021                               | 6681                     | 5328                                      | 5616   | 84.1  | 79.7                         | 15.3                             | 399                  | 227                                 |
| 1969 | 739                      | 714                      | 6256                    | 1023                               | 7279                     | 5863                                      | 3209   | 44.1  | 80.5                         | 14.1                             | 407                  | 240                                 |
| 1970 | 741                      | 726                      | 8473                    | 1510                               | 7983                     | 6462                                      | 3550   | 44.5  | 80.9                         | 18.9                             | 416                  | 247                                 |
| 1971 | 729                      | 724                      | 6665                    | 2290                               | 8955                     | 7467                                      | 3895   | 42.4  | 83.4                         | 32.9                             | 422                  | 251                                 |
| 1972 | 706                      | 708                      | 7884                    | 1701                               | 9585                     | 8146                                      | 4403   | 44.4  | 85.0                         | 17.7                             | 419                  | 243                                 |
| 1973 | 701                      | 684                      | 8339                    | 1587                               | 9926                     | 8451                                      |  |   | 85.1                         | 16.0                             | 427                  | 250                                 |
| 1974 | 710                      | 704                      | 9008                    | 2287                               | 11295                    | 9642                                      |  |   | 85.4                         | 20.2                             | 426                  | 251                                 |
| 1975 | 702                      | 693                      | 10015                   | 2559                               | 12574                    | 10805                                     |  |   | 85.9                         | 20.4                             | 419                  | 247                                 |



Table A-3. Postal Statistics II

| Year | First Class Postage (¢) | First Class Postage (1975 ¢) | Deficit per Piece (¢) | Deficit per Piece (1975 ¢) | Cost per Piece (¢) | Cost per Piece (1975 ¢) | Efficiency (Pieces per \$) | Efficiency (Pieces per \$) 1975 \$) | Productivity (Pieces per Man-Year) | Postal Expense \$ per \$1000 GNP | Employees per 1000 U.S. Population | Employees per 1000 Labor Force |
|------|-------------------------|------------------------------|-----------------------|----------------------------|--------------------|-------------------------|----------------------------|-------------------------------------|------------------------------------|----------------------------------|------------------------------------|--------------------------------|
| 1945 | 3                       | 8.2                          | -0.4                  | -1.3                       | 3.0                | 8.9                     | 33.1                       | 11.2                                | 95                                 | 5.40                             | 3.27                               | 6.71                           |
| 1946 | 3                       | 8.2                          | 0.4                   | 1.0                        | 3.7                | 10.2                    | 26.8                       | 9.8                                 | 85                                 | 6.49                             | 3.46                               | 8.36                           |
| 1947 | 3                       | 7.1                          | 0.6                   | 1.3                        | 4.0                | 9.6                     | 24.9                       | 10.4                                | 85                                 | 6.51                             | 3.27                               | 8.03                           |
| 1948 | 3                       | 6.6                          | 0.7                   | 1.5                        | 4.2                | 9.3                     | 23.9                       | 10.8                                | 89                                 | 6.55                             | 3.43                               | 8.41                           |
| 1949 | 3                       | 6.7                          | 1.3                   | 3.0                        | 4.9                | 11.0                    | 20.3                       | 9.1                                 | 90                                 | 8.38                             | 3.47                               | 8.74                           |
| 1950 | 3                       | 6.6                          | 1.2                   | 2.7                        | 4.9                | 10.9                    | 20.3                       | 9.2                                 | 93                                 | 7.81                             | 3.30                               | 8.30                           |
| 1951 | 3                       | 6.1                          | 1.2                   | 2.5                        | 5.0                | 10.2                    | 20.1                       | 9.8                                 | 99                                 | 7.13                             | 3.23                               | 7.88                           |
| 1952 | 3                       | 6.0                          | 1.4                   | 2.9                        | 5.3                | 10.7                    | 18.7                       | 9.3                                 | 102                                | 7.72                             | 3.35                               | 8.20                           |
| 1953 | 3                       | 6.0                          | 1.2                   | 2.5                        | 5.4                | 10.7                    | 18.6                       | 9.3                                 | 100                                | 7.52                             | 3.19                               | 7.83                           |
| 1954 | 3                       | 5.9                          | 0.8                   | 1.5                        | 5.1                | 10.1                    | 19.6                       | 9.9                                 | 103                                | 7.31                             | 3.13                               | 8.00                           |
| 1955 | 3                       | 6.0                          | 0.7                   | 1.3                        | 4.9                | 9.6                     | 20.4                       | 10.3                                | 108                                | 6.81                             | 3.10                               | 7.86                           |
| 1956 | 3                       | 5.9                          | 0.8                   | 1.6                        | 5.1                | 10.0                    | 19.6                       | 10.0                                | 109                                | 6.88                             | 3.03                               | 7.64                           |
| 1957 | 3                       | 5.7                          | 0.9                   | 1.7                        | 5.2                | 9.7                     | 19.4                       | 10.3                                | 112                                | 6.90                             | 3.04                               | 7.79                           |
| 1958 | 4                       | 7.4                          | 1.5                   | 2.7                        | 5.7                | 10.5                    | 17.5                       | 9.5                                 | 111                                | 7.69                             | 3.09                               | 8.20                           |
| 1959 | 4                       | 7.3                          | 1.0                   | 1.8                        | 5.9                | 10.8                    | 16.8                       | 9.2                                 | 112                                | 7.52                             | 3.11                               | 8.19                           |
| 1960 | 4                       | 7.2                          | 0.9                   | 1.7                        | 6.1                | 10.9                    | 16.4                       | 9.2                                 | 112                                | 7.69                             | 3.13                               | 8.25                           |
| 1961 | 4                       | 7.1                          | 1.3                   | 2.3                        | 6.5                | 11.6                    | 15.3                       | 8.6                                 | 112                                | 8.17                             | 3.18                               | 8.53                           |
| 1962 | 4                       | 7.0                          | 1.2                   | 2.0                        | 6.5                | 11.5                    | 15.3                       | 8.7                                 | 114                                | 7.73                             | 3.16                               | 8.46                           |
| 1963 | 5                       | 8.7                          | 1.2                   | 2.1                        | 6.9                | 12.0                    | 14.4                       | 8.3                                 | 115                                | 7.96                             | 3.11                               | 8.33                           |
| 1964 | 5                       | 8.6                          | 0.9                   | 1.6                        | 7.1                | 12.1                    | 14.1                       | 8.2                                 | 116                                | 7.79                             | 3.06                               | 8.13                           |
| 1965 | 5                       | 8.4                          | 1.1                   | 1.9                        | 7.3                | 12.4                    | 13.6                       | 8.1                                 | 118                                | 7.70                             | 3.08                               | 8.08                           |
| 1966 | 5                       | 8.2                          | 1.2                   | 2.0                        | 7.6                | 12.4                    | 13.2                       | 8.1                                 | 118                                | 7.64                             | 3.45                               | 8.88                           |
| 1967 | 5                       | 8.0                          | 1.5                   | 2.3                        | 8.0                | 12.7                    | 12.5                       | 7.9                                 | 116                                | 7.87                             | 3.63                               | 9.22                           |
| 1968 | 6                       | 9.2                          | 1.3                   | 2.0                        | 8.4                | 12.8                    | 11.9                       | 7.8                                 | 114                                | 7.73                             | 3.67                               | 9.20                           |
| 1969 | 6                       | 8.7                          | 1.2                   | 1.8                        | 8.9                | 12.9                    | 11.3                       | 7.8                                 | 115                                | 7.82                             | 3.67                               | 9.08                           |
| 1970 | 6                       | 8.2                          | 1.8                   | 2.4                        | 9.4                | 12.9                    | 10.6                       | 7.8                                 | 117                                | 8.17                             | 3.64                               | 9.07                           |
| 1971 | 8                       | 10.5                         | 2.6                   | 3.5                        | 10.3               | 13.5                    | 19.7                       | 7.4                                 | 120                                | 8.49                             | 3.54                               | 8.93                           |
| 1972 | 8                       | 10.2                         | 2.0                   | 2.5                        | 11.0               | 14.0                    | 9.1                        | 7.2                                 | 123                                | 8.28                             | 3.39                               | 8.40                           |
| 1973 | 8                       | 9.6                          | 1.8                   | 2.1                        | 11.1               | 13.2                    | 9.0                        | 7.5                                 | 131                                | 7.67                             | 3.34                               | 8.09                           |
| 1974 | 10                      | 10.8                         | 2.5                   | 2.7                        | 12.5               | 13.5                    | 8.0                        | 7.4                                 | 128                                | 8.08                             | 3.36                               | 8.06                           |
| 1975 | 10                      | 10.0                         | 2.9                   | 2.9                        | 14.1               | 14.1                    | 7.1                        | 7.1                                 | 129                                | 8.85                             | 3.29                               |                                |



Table A-4. Volume (Millions of Pieces of Mail) by 12 Classes

| Year | First Class | Airmail | Priority | Second Class | Controlled Circulation | Third Class | Fourth Class | International Surface | International Air | Penalty | Franked | Free for Blind | Total |
|------|-------------|---------|----------|--------------|------------------------|-------------|--------------|-----------------------|-------------------|---------|---------|----------------|-------|
| 1945 | 21010       | 876     |          | 5522         |                        | 5446        | 1028         | 235                   | 1584              | 2185    | 25      | 2              | 37912 |
| 1946 | 20059       | 716     |          | 5832         |                        | 6055        | 995          | 230                   | 672               | 1719    | 28      | 2              | 36308 |
| 1947 | 20665       | 772     |          | 6124         |                        | 6803        | 1068         | 272                   | 94                | 1602    | 26      | 2              | 37428 |
| 1948 | 21948       | 796     |          | 6344         |                        | 8188        | 1142         | 289                   | 121               | 1419    | 30      | 2              | 40280 |
| 1949 | 23206       | 856     |          | 6987         |                        | 9389        | 1209         | 296                   | 120               | 1469    | 20      | 2              | 43555 |
| 1950 | 24500       | 853     |          | 6265         |                        | 10343       | 1179         | 295                   | 122               | 1472    | 32      | 2              | 45064 |
| 1951 | 25578       | 1094    |          | 6520         |                        | 10534       | 1235         | 302                   | 127               | 1479    | 37      | 3              | 46908 |
| 1952 | 26502       | 1391    |          | 6956         |                        | 11630       | 1257         | 312                   | 137               | 1681    | 36      | 3              | 49906 |
| 1953 | 27257       | 1430    |          | 6763         | 56                     | 12004       | 1245         | 337                   | 149               | 1658    | 49      | 3              | 50948 |
| 1954 | 27085       | 1470    |          | 6484         | 71                     | 13866       | 1195         | 348                   | 154               | 1492    | 45      | 3              | 52213 |
| 1955 | 28713       | 1468    |          | 6740         | 85                     | 15050       | 1136         | 354                   | 158               | 1480    | 48      | 3              | 55234 |
| 1956 | 30077       | 1487    |          | 6915         | 102                    | 14676       | 1173         | 356                   | 178               | 1412    | 61      | 4              | 56441 |
| 1957 | 31561       | 1483    |          | 6888         | 126                    | 15702       | 1184         | 370                   | 189               | 1510    | 61      | 4              | 59078 |
| 1958 | 32218       | 1435    |          | 7148         | 145                    | 15849       | 1170         | 353                   | 182               | 1560    | 67      | 4              | 60130 |
| 1959 | 32274       | 1368    |          | 7099         | 126                    | 16978       | 1038         | 362                   | 191               | 1721    | 86      | 4              | 61247 |
| 1960 | 33234       | 1356    |          | 7535         | 125                    | 17910       | 1016         | 366                   | 194               | 1826    | 109     | 5              | 63675 |
| 1961 | 34289       | 1453    |          | 7966         | 153                    | 17569       | 978          | 364                   | 210               | 1860    | 86      | 5              | 64933 |
| 1962 | 35333       | 1545    |          | 8090         | 165                    | 17837       | 1024         | 287                   | 220               | 1877    | 111     | 6              | 66493 |
| 1963 | 35833       | 1545    |          | 8227         | 196                    | 18407       | 1076         | 306                   | 232               | 1927    | 95      | 7              | 67853 |
| 1964 | 36943       | 1505    |          | 8559         | 251                    | 18599       | 1066         | 320                   | 240               | 2067    | 120     | 8              | 69676 |
| 1965 | 38068       | 1629    |          | 8600         | 281                    | 19454       | 1045         | 318                   | 261               | 2088    | 122     | 7              | 71873 |
| 1966 | 40422       | 1828    |          | 8634         | 347                    | 20305       | 1066         | 298                   | 273               | 2228    | 198     | 9              | 75607 |
| 1967 | 41998       | 2111    |          | 8711         | 413                    | 20985       | 1070         | 315                   | 322               | 2240    | 194     | 8              | 78367 |
| 1968 | 43183       | 1949    | 116      | 8907         | 486                    | 20665       | 1039         | 353                   | 451               | 2180    | 179     | 10             | 79517 |
| 1969 | 46411       | 1657    | 179      | 9206         | 579                    | 19622       | 1031         | 335                   | 492               | 2284    | 191     | 18             | 82005 |
| 1970 | 48640       | 1533    | 185      | 9352         | 562                    | 19974       | 977          | 365                   | 531               | 2544    | 203     | 15             | 84882 |
| 1971 | 50036       | 1457    | 197      | 9604         | 522                    | 20532       | 968          | 365                   | 538               | 2506    | 240     | 19             | 86983 |
| 1972 | 48933       | 1360    | 208      | 9494         | 550                    | 21908       | 914          | 362                   | 554               | 2564    | 293     | 17             | 87156 |
| 1973 | 50965       | 1327    | 209      | 9034         | 582                    | 22689       | 893          | 355                   | 565               | 2756    | 293     | 16             | 89683 |
| 1974 | 51594       | 1335    | 222      | 8838         | 620                    | 22537       | 859          | 347                   | 569               | 2844    | 315     | 18             | 90098 |
| 1975 | 51373       | 1109    | 207      | 9085         | 628                    | 21867       | 801          | 346                   | 586               | 2928    | 317     | 19             | 89266 |



Table A-5. Weight (Millions of Pounds) by 12 Classes

| Year | First Class | Domestic Airmail | Priority | Second Class | Controlled Circulation | Third Class | Fourth Class | International Surface | International Air | Pendly | Franked | Free for Blind | Total |
|------|-------------|------------------|----------|--------------|------------------------|-------------|--------------|-----------------------|-------------------|--------|---------|----------------|-------|
| 1945 | 544         | 31               |          | 1423         |                        | 378         | 4614         | 81                    | 34                | 312    | 5       | 7              | 7430  |
| 1946 | 493         | 24               |          | 1653         |                        | 418         | 4565         | 195                   | 17                | 252    | 3       | 9              | 7628  |
| 1947 | 546         | 29               |          | 1991         |                        | 483         | 5294         | 366                   | 3                 | 223    | 4       | 10             | 8948  |
| 1948 | 551         | 32               |          | 2130         |                        | 554         | 6430         | 472                   | 4                 | 180    | 4       | 9              | 10367 |
| 1949 | 608         | 45               |          | 2240         |                        | 618         | 7501         | 415                   | 5                 | 178    | 5       | 11             | 11625 |
| 1950 | 620         | 53               |          | 2287         |                        | 646         | 7370         | 340                   | 5                 | 183    | 5       | 12             | 11521 |
| 1951 | 667         | 63               |          | 2355         |                        | 663         | 7697         | 259                   | 6                 | 183    | 4       | 12             | 11909 |
| 1952 | 702         | 78               |          | 2413         |                        | 712         | 7115         | 246                   | 6                 | 211    | 4       | 14             | 11501 |
| 1953 | 749         | 77               |          | 2497         | 31                     | 727         | 6652         | 236                   | 7                 | 205    | 6       | 19             | 11204 |
| 1954 | 749         | 82               |          | 2505         | 39                     | 811         | 6404         | 194                   | 7                 | 189    | 5       | 20             | 11004 |
| 1955 | 804         | 85               |          | 2582         | 44                     | 892         | 6035         | 170                   | 7                 | 201    | 5       | 20             | 10844 |
| 1956 | 874         | 91               |          | 2703         | 53                     | 915         | 5904         | 163                   | 8                 | 194    | 5       | 20             | 10929 |
| 1957 | 905         | 95               |          | 2715         | 63                     | 949         | 5931         | 170                   | 9                 | 206    | 5       | 23             | 11071 |
| 1958 | 921         | 92               |          | 2695         | 69                     | 988         | 5861         | 165                   | 9                 | 289    | 6       | 24             | 11119 |
| 1959 | 920         | 97               |          | 2708         | 58                     | 1156        | 5887         | 173                   | 9                 | 291    | 8       | 25             | 11332 |
| 1960 | 956         | 103              |          | 2883         | 63                     | 1277        | 5879         | 179                   | 10                | 305    | 9       | 26             | 11689 |
| 1961 | 996         | 112              |          | 2900         | 68                     | 1280        | 5436         | 169                   | 11                | 334    | 7       | 28             | 11342 |
| 1962 | 1061        | 122              |          | 2908         | 73                     | 1396        | 5573         | 140                   | 12                | 357    | 7       | 31             | 11680 |
| 1963 | 1082        | 128              |          | 2910         | 83                     | 1527        | 5563         | 144                   | 14                | 376    | 7       | 35             | 11868 |
| 1964 | 1130        | 137              |          | 3031         | 97                     | 1601        | 5623         | 152                   | 16                | 376    | 7       | 35             | 12202 |
| 1965 | 1200        | 155              |          | 3133         | 114                    | 1705        | 5425         | 160                   | 18                | 383    | 8       | 30             | 12330 |
| 1966 | 1290        | 182              |          | 3225         | 140                    | 1812        | 5389         | 159                   | 20                | 433    | 12      | 32             | 12694 |
| 1967 | 1403        | 229              |          | 3332         | 166                    | 1949        | 5314         | 184                   | 23                | 472    | 12      | 28             | 13110 |
| 1968 | 1438        | 89               | 247      | 3344         | 186                    | 1892        | 5245         | 210                   | 30                | 510    | 12      | 34             | 13238 |
| 1969 | 1483        | 79               | 347      | 3441         | 217                    | 2018        | 5250         | 196                   | 32                | 530    | 11      | 51             | 13656 |
| 1970 | 1562        | 74               | 370      | 3417         | 224                    | 2033        | 4786         | 192                   | 34                | 539    | 11      | 38             | 13281 |
| 1971 | 1623        | 73               | 391      | 3283         | 201                    | 2157        | 4836         | 189                   | 36                | 526    | 9       | 50             | 13373 |
| 1972 | 1572        | 72               | 412      | 3125         | 207                    | 2290        | 4421         | 174                   | 39                | 573    | 12      | 38             | 12936 |
| 1973 | 1669        | 75               | 423      | 3052         | 229                    | 2384        | 4165         | 190                   | 41                | 539    | 12      | 40             | 12820 |
| 1974 | 1706        | 78               | 452      | 2933         | 242                    | 2365        | 3983         | 191                   | 43                | 608    | 12      | 33             | 12646 |
| 1975 | 1681        | 65               | 440      | 2792         | 232                    | 2283        | 3754         | 155                   | 46                | 527    | 13      | 38             | 12025 |



Table A-6. Postal Revenue (Millions of Dollars) by 12 Classes

| Year | First Class | Domestic Airmail | Priority | Second Class | Controlled Circulation | Third Class | Fourth Class | International Surface | International Air | Pendly | Franked | Free for Blind | Total |
|------|-------------|------------------|----------|--------------|------------------------|-------------|--------------|-----------------------|-------------------|--------|---------|----------------|-------|
| 1945 | 615         | 81               |          | 29           | 76                     | 233         | 14           | 111                   |                   |        |         |                | 1159  |
| 1946 | 598         | 68               |          | 33           | 83                     | 209         | 38           | 58                    |                   |        |         |                | 1087  |
| 1947 | 627         | 54               |          | 39           | 96                     | 235         | 58           | 22                    |                   |        |         |                | 1131  |
| 1948 | 668         | 54               |          | 41           | 112                    | 272         | 73           | 24                    |                   |        |         |                | 1244  |
| 1949 | 706         | 65               |          | 44           | 136                    | 356         | 52           | 26                    |                   |        |         |                | 1385  |
| 1950 | 741         | 74               |          | 45           | 154                    | 404         | 40           | 27                    |                   |        |         |                | 1435  |
| 1951 | 785         | 95               |          | 49           | 158                    | 431         | 39           | 31                    |                   |        |         |                | 1588  |
| 1952 | 843         | 121              |          | 51           | 171                    | 485         | 39           | 32                    |                   |        |         |                | 1741  |
| 1953 | 909         | 121              |          | 58           | 218                    | 492         | 39           | 36                    |                   |        |         |                | 1874  |
| 1954 | 908         | 127              |          | 62           | 252                    | 587         | 43           | 38                    |                   | 35     | 1       |                | 2058  |
| 1955 | 968         | 130              |          | 66           | 269                    | 595         | 43           | 39                    |                   | 37     | 2       |                | 2153  |
| 1956 | 1014        | 137              |          | 66           | 266                    | 593         | 43           | 42                    |                   | 32     | 2       |                | 2201  |
| 1957 | 1066        | 140              |          | 66           | 281                    | 586         | 45           | 46                    |                   | 38     | 2       |                | 2278  |
| 1958 | 1092        | 137              |          | 66           | 288                    | 584         | 42           | 46                    |                   | 50     | 2       |                | 2314  |
| 1959 | 1439        | 153              |          | 69           | 391                    | 576         | 48           | 50                    |                   | 66     | 2       |                | 2800  |
| 1960 | 1510        | 157              |          | 81           | 441                    | 607         | 51           | 51                    |                   | 82     | 3       |                | 2993  |
| 1961 | 1558        | 171              |          | 89           | 498                    | 626         | 50           | 58                    |                   | 86     | 4       |                | 3147  |
| 1962 | 1615        | 185              |          | 94           | 510                    | 634         | 57           | 64                    |                   | 89     | 4       |                | 3260  |
| 1963 | 1824        | 200              |          | 98           | 563                    | 645         | 59           | 71                    |                   | 100    | 4       |                | 3575  |
| 1964 | 2109        | 216              |          | 108          | 612                    | 659         | 62           | 78                    |                   | 114    | 5       |                | 3977  |
| 1965 | 2193        | 243              |          | 119          | 650                    | 702         | 55           | 97                    |                   | 117    | 7       |                | 4198  |
| 1966 | 2334        | 277              |          | 126          | 682                    | 712         | 62           | 95                    |                   | 129    | 7       |                | 4444  |
| 1967 | 2442        | 329              |          | 129          | 704                    | 742         | 68           | 110                   |                   | 137    | 9       |                | 4694  |
| 1968 | 2722        | 225              | 299      | 134          | 743                    | 767         | 80           | 162                   |                   | 158    | 9       |                | 5226  |
| 1969 | 3135        | 216              | 270      | 147          | 782                    | 831         | 68           | 188                   |                   | 172    | 10      |                | 5850  |
| 1970 | 3291        | 201              | 282      | 155          | 827                    | 778         | 68           | 202                   |                   | 188    | 11      |                | 6039  |
| 1971 | 3506        | 198              | 303      | 157          | 844                    | 819         | 69           | 208                   |                   | 192    | 14      |                | 6342  |
| 1972 | 4379        | 210              | 348      | 177          | 1006                   | 810         | 73           | 225                   |                   | 272    | 22      |                | 7556  |
| 1973 | 4578        | 213              | 352      | 186          | 1162                   | 759         | 77           | 239                   |                   | 374    | 30      |                | 8008  |
| 1974 | 5019        | 231              | 394      | 213          | 1214                   | 732         | 82           | 261                   |                   | 440    | 31      |                | 8656  |
| 1975 | 5798        | 219              | 411      | 236          | 1348                   | 718         | 85           | 304                   |                   | 450    | 35      |                | 9645  |

Table A-7. Postal Revenue (Cents) Per Piece by 12 Classes

| Year | First Class | Airmail Domestic | Priority | Second Class | Controlled Circulation | Third Class | Fourth Class | International Surface | International Air | Pendly | Franked | Free for Blind | Total |
|------|-------------|------------------|----------|--------------|------------------------|-------------|--------------|-----------------------|-------------------|--------|---------|----------------|-------|
| 1945 | 2.9         | 9.3              |          | 0.5          |                        | 1.3         | 22.6         | 5.9                   | 7.0               |        |         |                | 3.0   |
| 1946 | 3.0         | 9.6              |          | 0.6          |                        | 1.4         | 21.0         | 16.4                  | 8.6               |        |         |                | 3.0   |
| 1947 | 3.0         | 7.0              |          | 0.6          |                        | 1.4         | 22.1         | 21.4                  | 23.1              |        |         |                | 3.1   |
| 1948 | 3.0         | 6.7              |          | 0.7          |                        | 1.4         | 23.8         | 25.2                  | 19.7              |        |         |                | 3.2   |
| 1949 | 3.0         | 7.6              |          | 0.6          |                        | 1.4         | 29.5         | 17.7                  | 21.4              |        |         |                | 3.3   |
| 1950 | 3.0         | 8.7              |          | 0.7          |                        | 1.5         | 34.2         | 13.4                  | 22.4              |        |         |                | 3.4   |
| 1951 | 3.1         | 8.7              |          | 0.7          |                        | 1.5         | 34.9         | 12.9                  | 24.6              |        |         |                | 3.5   |
| 1952 | 3.2         | 8.7              |          | 0.7          |                        | 1.5         | 38.5         | 12.4                  | 23.4              |        |         |                | 3.7   |
| 1953 | 3.3         | 8.5              |          | 0.9          | 5.6                    | 1.8         | 39.5         | 11.4                  | 24.1              |        |         |                | 3.9   |
| 1954 | 3.4         | 8.7              |          | 1.0          | 5.8                    | 1.8         | 49.2         | 12.4                  | 24.8              | 2.3    | 2.6     |                | 3.9   |
| 1955 | 3.4         | 8.9              |          | 1.0          | 5.7                    | 1.8         | 52.4         | 12.3                  | 24.9              | 2.5    | 4.2     |                | 3.9   |
| 1956 | 3.4         | 9.2              |          | 1.0          | 5.6                    | 1.8         | 50.5         | 12.1                  | 23.9              | 2.3    | 3.4     |                | 3.9   |
| 1957 | 3.4         | 9.4              |          | 1.0          | 5.4                    | 1.8         | 49.5         | 12.3                  | 24.1              | 2.5    | 3.4     |                | 3.8   |
| 1958 | 3.4         | 9.5              |          | 0.9          | 5.1                    | 1.8         | 49.9         | 11.9                  | 25.5              | 3.2    | 3.4     |                | 4.6   |
| 1959 | 4.5         | 11.2             |          | 1.0          | 5.4                    | 2.3         | 55.4         | 13.3                  | 26.1              | 3.8    | 2.7     |                | 4.7   |
| 1960 | 4.5         | 11.6             |          | 1.1          | 6.0                    | 2.5         | 59.8         | 14.0                  | 26.4              | 4.5    | 3.0     |                | 4.8   |
| 1961 | 4.5         | 11.8             |          | 1.1          | 5.4                    | 2.8         | 64.0         | 13.6                  | 27.5              | 4.6    | 4.5     |                | 4.9   |
| 1962 | 4.6         | 11.9             |          | 1.2          | 5.3                    | 2.9         | 61.9         | 19.8                  | 29.0              | 4.7    | 3.6     |                | 5.3   |
| 1963 | 5.1         | 12.9             |          | 1.2          | 5.2                    | 3.1         | 59.9         | 19.2                  | 30.7              | 5.2    | 4.5     |                | 5.7   |
| 1964 | 5.7         | 14.4             |          | 1.3          | 5.1                    | 3.3         | 61.9         | 19.3                  | 32.4              | 5.5    | 3.9     |                | 5.8   |
| 1965 | 5.8         | 14.9             |          | 1.4          | 5.4                    | 3.3         | 67.2         | 17.4                  | 37.1              | 5.6    | 5.3     |                | 5.9   |
| 1966 | 5.8         | 15.2             |          | 1.5          | 5.5                    | 3.4         | 66.8         | 21.0                  | 34.9              | 5.8    | 3.7     |                | 6.0   |
| 1967 | 5.8         | 15.6             |          | 1.5          | 5.4                    | 3.4         | 69.4         | 21.6                  | 34.1              | 6.1    | 4.4     |                | 6.6   |
| 1968 | 6.8         | 11.5             | 172.3    | 1.5          | 5.3                    | 3.6         | 73.8         | 22.7                  | 35.9              | 7.2    | 5.3     |                | 6.6   |
| 1969 | 6.7         | 13.0             | 151.1    | 1.6          | 5.6                    | 4.0         | 80.6         | 20.2                  | 38.1              | 7.5    | 5.3     |                | 7.1   |
| 1970 | 6.8         | 13.1             | 152.9    | 1.7          | 6.3                    | 4.1         | 79.6         | 18.7                  | 38.1              | 7.4    | 5.6     |                | 7.3   |
| 1971 | 7.0         | 13.6             | 153.8    | 1.6          | 6.2                    | 4.1         | 84.7         | 18.8                  | 38.7              | 7.6    | 6.1     |                | 8.7   |
| 1972 | 8.9         | 15.4             | 167.8    | 1.9          | 6.1                    | 4.6         | 88.5         | 20.2                  | 40.6              | 10.6   | 7.5     |                | 8.9   |
| 1973 | 9.0         | 16.0             | 168.5    | 2.1          | 6.3                    | 5.1         | 85.0         | 21.8                  | 42.3              | 13.6   | 10.1    |                | 9.6   |
| 1974 | 9.7         | 17.3             | 177.5    | 2.4          | 6.5                    | 5.4         | 85.2         | 23.6                  | 45.9              | 15.5   | 9.8     |                | 10.8  |
| 1975 | 11.3        | 19.7             | 199.2    | 2.6          | 6.5                    | 6.2         | 89.6         | 24.6                  | 51.9              | 15.4   | 10.9    |                |       |



Table A-8. Postal Revenue (Dollars) per Pound by 12 Classes.

| Year | First Class | Airmail Domestic | Priority | Second Class | Controlled Circulation | Third Class | Fourth Class | International Surface | International Air | Pendly | Franked | Free for Blind | Total |
|------|-------------|------------------|----------|--------------|------------------------|-------------|--------------|-----------------------|-------------------|--------|---------|----------------|-------|
| 1945 | 1.13        | 2.63             |          | .02          |                        | .20         | .05          | .17                   | 3.22              |        |         |                | .16   |
| 1946 | 1.21        | 2.91             |          | .02          |                        | .20         | .05          | .19                   | 3.49              |        |         |                | .14   |
| 1947 | 1.15        | 1.91             |          | .02          |                        | .20         | .04          | .16                   | 6.79              |        |         |                | .13   |
| 1948 | 1.21        | 1.65             |          | .02          |                        | .20         | .04          | .15                   | 5.70              |        |         |                | .12   |
| 1949 | 1.16        | 1.44             |          | .02          |                        | .22         | .05          | .13                   | 5.13              |        |         |                | .12   |
| 1950 | 1.19        | 1.39             |          | .02          |                        | .24         | .05          | .12                   | 5.03              |        |         |                | .13   |
| 1951 | 1.18        | 1.50             |          | .02          |                        | .24         | .06          | .15                   | 5.55              |        |         |                | .13   |
| 1952 | 1.20        | 1.54             |          | .02          |                        | .24         | .07          | .16                   | 5.25              |        |         |                | .15   |
| 1953 | 1.21        | 1.58             |          | .02          | .10                    | .30         | .07          | .16                   | 5.44              |        |         |                | .17   |
| 1954 | 1.21        | 1.56             |          | .02          | .11                    | .31         | .09          | .22                   | 5.57              | .18    | .24     |                | .19   |
| 1955 | 1.20        | 1.54             |          | .03          | .11                    | .30         | .10          | .26                   | 5.53              | .18    | .44     |                | .20   |
| 1956 | 1.16        | 1.51             |          | .02          | .11                    | .29         | .10          | .26                   | 5.37              | .17    | .43     |                | .20   |
| 1957 | 1.18        | 1.47             |          | .02          | .11                    | .30         | .10          | .27                   | 5.29              | .18    | .41     |                | .21   |
| 1958 | 1.19        | 1.49             |          | .02          | .11                    | .29         | .10          | .25                   | 5.39              | .17    | .40     |                | .21   |
| 1959 | 1.56        | 1.58             |          | .03          | .12                    | .34         | .10          | .28                   | 5.49              | .23    | .31     |                | .25   |
| 1960 | 1.58        | 1.53             |          | .03          | .12                    | .35         | .10          | .29                   | 5.14              | .27    | .38     |                | .26   |
| 1961 | 1.56        | 1.53             |          | .03          | .12                    | .39         | .12          | .29                   | 5.19              | .26    | .55     |                | .28   |
| 1962 | 1.52        | 1.51             |          | .03          | .12                    | .37         | .11          | .41                   | 5.22              | .25    | .57     |                | .28   |
| 1963 | 1.69        | 1.56             |          | .03          | .12                    | .37         | .12          | .41                   | 5.00              | .27    | .66     |                | .30   |
| 1964 | 1.87        | 1.58             |          | .04          | .13                    | .38         | .12          | .41                   | 4.93              | .30    | .69     |                | .33   |
| 1965 | 1.83        | 1.57             |          | .04          | .13                    | .38         | .13          | .35                   | 5.37              | .31    | .78     |                | .34   |
| 1966 | 1.81        | 1.52             |          | .04          | .14                    | .38         | .13          | .39                   | 4.67              | .30    | .60     |                | .35   |
| 1967 | 1.74        | 1.44             |          | .04          | .14                    | .36         | .14          | .37                   | 4.84              | .29    | .73     |                | .36   |
| 1968 | 1.89        | 2.52             | .81      | .04          | .14                    | .39         | .15          | .38                   | 5.43              | .31    | .78     |                | .39   |
| 1969 | 2.11        | 2.74             | .78      | .04          | .15                    | .39         | .16          | .35                   | 5.77              | .32    | .96     |                | .43   |
| 1970 | 2.11        | 2.73             | .76      | .05          | .16                    | .41         | .16          | .36                   | 5.89              | .35    | .99     |                | .45   |
| 1971 | 2.16        | 2.70             | .78      | .05          | .16                    | .39         | .17          | .36                   | 5.85              | .36    | 1.65    |                | .47   |
| 1972 | 2.79        | 2.93             | .84      | .06          | .16                    | .44         | .18          | .42                   | 5.78              | .47    | 1.87    |                | .58   |
| 1973 | 2.74        | 2.84             | .83      | .06          | .16                    | .49         | .18          | .41                   | 5.78              | .69    | 2.53    |                | .62   |
| 1974 | 2.94        | 2.95             | .87      | .07          | .17                    | .51         | .18          | .43                   | 6.00              | .72    | 2.61    |                | .68   |
| 1975 | 3.45        | 3.38             | .93      | .08          | .17                    | .59         | .19          | .55                   | 6.57              | .85    | 2.73    |                | .80   |

Table A-9. Postal Weight (Pounds) Per Piece By 12 Classes

| Year | First Class | Domestic Airmail | Priority | Second Class | Controlled Circulation | Third Class | Fourth Class | International Surface | International Air | Penalty | Franked | Free for Blind | Total |
|------|-------------|------------------|----------|--------------|------------------------|-------------|--------------|-----------------------|-------------------|---------|---------|----------------|-------|
| 1945 | .026        | .035             |          | .287         | .069                   | 4.487       | .347         | .022                  | .143              | .205    | 4.728   | .196           |       |
| 1946 | .025        | .033             |          | .284         | .069                   | 4.590       | .847         | .025                  | .147              | .108    | 4.826   | .210           |       |
| 1947 | .026        | .037             |          | .325         | .071                   | 4.959       | 1.344        | .034                  | .139              | .152    | 4.967   | .239           |       |
| 1948 | .025        | .041             |          | .336         | .068                   | 5.629       | 1.636        | .035                  | .127              | .146    | 4.603   | .257           |       |
| 1949 | .026        | .053             |          | .321         | .066                   | 6.202       | 1.403        | .042                  | .121              | .236    | 4.758   | .267           |       |
| 1950 | .025        | .062             |          | .365         | .062                   | 6.230       | 1.149        | .045                  | .124              | .148    | 5.029   | .256           |       |
| 1951 | .026        | .058             |          | .361         | .063                   | 6.229       | .861         | .044                  | .124              | .104    | 4.754   | .254           |       |
| 1952 | .026        | .056             |          | .347         | .061                   | 5.660       | .790         | .045                  | .126              | .111    | 5.465   | .230           |       |
| 1953 | .027        | .054             |          | .369         | .060                   | 5.345       | .701         | .044                  | .123              | .122    | 6.983   | .220           |       |
| 1954 | .028        | .056             |          | .386         | .059                   | 5.358       | .556         | .045                  | .127              | .107    | 7.217   | .211           |       |
| 1955 | .028        | .058             |          | .383         | .052                   | 5.314       | .480         | .045                  | .136              | .095    | 6.046   | .196           |       |
| 1956 | .029        | .061             |          | .391         | .052                   | 5.032       | .458         | .044                  | .137              | .078    | 5.752   | .194           |       |
| 1957 | .029        | .064             |          | .394         | .050                   | 5.010       | .460         | .045                  | .136              | .084    | 5.814   | .187           |       |
| 1958 | .029        | .064             |          | .377         | .047                   | 5.009       | .469         | .047                  | .185              | .086    | 5.883   | .185           |       |
| 1959 | .029        | .071             |          | .381         | .048                   | 5.671       | .478         | .048                  | .169              | .087    | 5.830   | .185           |       |
| 1960 | .029        | .076             |          | .383         | .052                   | 5.787       | .489         | .051                  | .167              | .079    | 5.606   | .184           |       |
| 1961 | .029        | .077             |          | .364         | .047                   | 5.557       | .464         | .053                  | .180              | .081    | 5.259   | .175           |       |
| 1962 | .030        | .079             |          | .359         | .049                   | 5.443       | .489         | .055                  | .190              | .063    | 5.103   | .176           |       |
| 1963 | .030        | .083             |          | .354         | .042                   | 5.170       | .470         | .061                  | .195              | .068    | 4.812   | .175           |       |
| 1964 | .031        | .091             |          | .354         | .0385                  | 5.276       | .474         | .066                  | .182              | .057    | 4.370   | .175           |       |
| 1965 | .032        | .095             |          | .364         | .046                   | 5.192       | .502         | .069                  | .183              | .069    | 4.068   | .172           |       |
| 1966 | .032        | .099             |          | .374         | .043                   | 5.055       | .533         | .075                  | .194              | .061    | 3.727   | .168           |       |
| 1967 | .033        | .108             |          | .382         | .042                   | 4.967       | .585         | .071                  | .211              | .061    | 3.521   | .167           |       |
| 1968 | .033        | .046             | 2.130    | .375         | .0383                  | 5.047       | .596         | .066                  | .234              | .068    | 3.371   | .166           |       |
| 1969 | .033        | .047             | 1.944    | .374         | .0375                  | 5.093       | .585         | .066                  | .232              | .055    | 2.907   | .167           |       |
| 1970 | .032        | .048             | 2.006    | .365         | .0399                  | 4.898       | .525         | .065                  | .212              | .057    | 2.447   | .156           |       |
| 1971 | .032        | .050             | 1.984    | .342         | .0385                  | 4.997       | .517         | .066                  | .210              | .037    | 2.721   | .154           |       |
| 1972 | .032        | .053             | 1.986    | .329         | .0377                  | 4.835       | .482         | .070                  | .224              | .040    | 2.216   | .148           |       |
| 1973 | .033        | .056             | 2.026    | .338         | .0394                  | 4.663       | .536         | .073                  | .196              | .040    | 2.401   | .143           |       |
| 1974 | .033        | .059             | 2.032    | .332         | .0390                  | 4.636       | .550         | .076                  | .214              | .037    | 1.860   | .140           |       |
| 1975 | .033        | .058             | 2.132    | .307         | .0370                  | 4.685       | .447         | .079                  | .180              | .030    | 1.985   | .135           |       |



Table A-10. Volume (Millions of Pieces of Mail) by 6 Classes

| Year | First <sup>1</sup> Class | %    | Second <sup>2</sup> Class | %    | Third Class | %    | Fourth Class | %   | Inter-national | %   | Other | %   |
|------|--------------------------|------|---------------------------|------|-------------|------|--------------|-----|----------------|-----|-------|-----|
| 1945 | 21886                    | 57.7 | 5522                      | 14.6 | 5446        | 14.3 | 1028         | 2.7 | 1818           | 4.7 | 2211  | 5.8 |
| 1946 | 20775                    | 57.2 | 5832                      | 16.1 | 6055        | 16.6 | 995          | 2.7 | 902            | 2.4 | 1749  | 4.8 |
| 1947 | 21437                    | 57.3 | 6124                      | 16.4 | 6803        | 18.1 | 1068         | 2.8 | 366            | 0.9 | 1629  | 4.3 |
| 1948 | 22744                    | 56.5 | 6344                      | 15.8 | 8188        | 20.3 | 1142         | 2.8 | 409            | 1.0 | 1450  | 3.6 |
| 1949 | 24062                    | 55.2 | 6987                      | 16.0 | 9389        | 21.5 | 1209         | 2.7 | 416            | 0.9 | 1491  | 3.4 |
| 1950 | 25353                    | 56.3 | 6265                      | 13.9 | 10343       | 22.9 | 1179         | 2.6 | 417            | 0.9 | 1506  | 3.3 |
| 1951 | 26672                    | 56.9 | 6520                      | 13.9 | 10534       | 22.4 | 1235         | 2.6 | 428            | 0.9 | 1513  | 3.2 |
| 1952 | 27893                    | 55.9 | 6956                      | 13.9 | 11630       | 23.3 | 1257         | 2.5 | 449            | 0.9 | 1720  | 3.4 |
| 1953 | 28687                    | 56.7 | 6819                      | 13.4 | 12004       | 23.5 | 1245         | 2.4 | 485            | 0.9 | 1709  | 3.3 |
| 1954 | 28555                    | 54.7 | 6554                      | 12.6 | 13866       | 26.5 | 1195         | 2.2 | 502            | 0.9 | 1540  | 2.9 |
| 1955 | 30181                    | 54.6 | 5825                      | 12.4 | 15050       | 27.2 | 1136         | 2.0 | 511            | 0.9 | 1530  | 2.7 |
| 1956 | 31564                    | 55.9 | 7017                      | 12.4 | 14676       | 26.0 | 1173         | 2.0 | 534            | 0.9 | 1478  | 2.6 |
| 1957 | 33044                    | 55.9 | 7014                      | 11.9 | 15702       | 26.5 | 1184         | 2.0 | 558            | 0.9 | 1574  | 2.6 |
| 1958 | 37653                    | 56.0 | 7293                      | 12.1 | 15849       | 26.3 | 1170         | 1.9 | 534            | 0.8 | 1630  | 2.7 |
| 1959 | 33642                    | 54.9 | 7225                      | 11.8 | 16978       | 27.7 | 1038         | 1.6 | 553            | 0.9 | 1811  | 2.9 |
| 1960 | 34590                    | 54.3 | 7659                      | 12.0 | 17910       | 28.1 | 1016         | 1.5 | 559            | 0.8 | 1938  | 3.0 |
| 1961 | 35742                    | 55.0 | 8119                      | 12.5 | 17569       | 27.0 | 978          | 1.5 | 574            | 0.8 | 1951  | 3.0 |
| 1962 | 36878                    | 55.5 | 8255                      | 12.4 | 17837       | 26.8 | 1024         | 1.5 | 506            | 0.7 | 1993  | 2.9 |
| 1963 | 37378                    | 55.1 | 8423                      | 12.4 | 18407       | 27.1 | 1076         | 1.5 | 538            | 0.7 | 2029  | 2.9 |
| 1964 | 38448                    | 55.2 | 8810                      | 12.6 | 18599       | 26.6 | 1066         | 1.5 | 559            | 0.8 | 2194  | 3.1 |
| 1965 | 39697                    | 55.2 | 8882                      | 12.4 | 19454       | 27.0 | 1045         | 1.4 | 578            | 0.8 | 2217  | 3.0 |
| 1966 | 42250                    | 55.9 | 8981                      | 11.9 | 20305       | 26.8 | 1066         | 1.4 | 570            | 0.7 | 2435  | 3.2 |
| 1967 | 44109                    | 56.3 | 9124                      | 11.6 | 20985       | 26.7 | 1079         | 1.3 | 637            | 0.8 | 2441  | 3.1 |
| 1968 | 45248                    | 56.9 | 9392                      | 11.8 | 20665       | 25.9 | 1039         | 1.3 | 803            | 1.0 | 2368  | 2.9 |
| 1969 | 48247                    | 58.8 | 9785                      | 11.9 | 19622       | 23.9 | 1030         | 1.2 | 826            | 1.0 | 2493  | 3.0 |
| 1970 | 50358                    | 59.3 | 9914                      | 11.7 | 19974       | 23.5 | 977          | 1.1 | 896            | 1.0 | 2761  | 3.2 |
| 1971 | 51690                    | 59.4 | 10126                     | 11.6 | 20532       | 23.6 | 968          | 1.1 | 902            | 1.0 | 2764  | 3.1 |
| 1972 | 50500                    | 57.9 | 10044                     | 11.5 | 21908       | 25.1 | 914          | 1.0 | 916            | 1.0 | 2873  | 3.2 |
| 1973 | 52501                    | 58.5 | 9616                      | 10.7 | 22689       | 25.2 | 893          | 0.9 | 919            | 1.0 | 3065  | 3.4 |
| 1974 | 53151                    | 59.0 | 9458                      | 10.5 | 22537       | 25.0 | 859          | 0.9 | 915            | 1.0 | 3176  | 3.5 |
| 1975 | 52689                    | 59.0 | 9713                      | 10.9 | 21867       | 24.4 | 801          | 0.8 | 931            | 1.0 | 3284  | 3.6 |

<sup>1</sup>Includes Domestic Airmail and Priority Mail

<sup>2</sup>Includes Controlled Circulation Mail



Table A-11. Postal Weight (Millions of Pounds) by 6 Classes

| Year | First Class | %    | Second Class | %    | Third Class | %    | Fourth Class | %    | International | %   | Other | %   |
|------|-------------|------|--------------|------|-------------|------|--------------|------|---------------|-----|-------|-----|
| 1945 | 575         | 7.7  | 1423         | 19.1 | 378         | 5.1  | 4614         | 62.1 | 116           | 1.6 | 325   | 4.4 |
| 1946 | 517         | 6.8  | 1654         | 21.7 | 418         | 5.5  | 4565         | 59.8 | 211           | 2.8 | 264   | 3.5 |
| 1947 | 574         | 6.4  | 1991         | 22.3 | 483         | 5.4  | 5294         | 59.2 | 369           | 4.1 | 237   | 2.6 |
| 1948 | 583         | 5.6  | 2130         | 20.5 | 554         | 5.3  | 6430         | 62.0 | 476           | 4.6 | 193   | 1.9 |
| 1949 | 554         | 5.6  | 2240         | 19.3 | 618         | 5.3  | 7501         | 64.5 | 420           | 3.6 | 193   | 1.7 |
| 1950 | 673         | 5.8  | 2287         | 19.8 | 647         | 5.6  | 7370         | 64.0 | 345           | 3.0 | 200   | 1.7 |
| 1951 | 730         | 6.1  | 2355         | 19.8 | 663         | 5.6  | 7697         | 64.6 | 265           | 2.2 | 199   | 1.7 |
| 1952 | 780         | 6.8  | 2413         | 21.0 | 712         | 6.2  | 7115         | 61.9 | 252           | 2.2 | 229   | 2.0 |
| 1953 | 825         | 7.4  | 2527         | 22.6 | 727         | 6.5  | 6652         | 59.4 | 243           | 2.2 | 229   | 2.0 |
| 1954 | 831         | 7.5  | 2543         | 23.1 | 811         | 7.4  | 6404         | 58.1 | 200           | 1.8 | 214   | 1.9 |
| 1955 | 889         | 8.2  | 2626         | 24.2 | 892         | 8.2  | 6035         | 55.6 | 177           | 1.6 | 225   | 2.1 |
| 1956 | 965         | 8.8  | 2756         | 25.2 | 915         | 8.4  | 5904         | 54.0 | 171           | 1.6 | 219   | 2.0 |
| 1957 | 999         | 9.0  | 2779         | 25.1 | 949         | 8.6  | 5931         | 53.6 | 179           | 1.6 | 234   | 2.1 |
| 1958 | 1013        | 9.1  | 2764         | 24.9 | 988         | 8.9  | 5861         | 52.7 | 174           | 1.6 | 319   | 2.9 |
| 1959 | 1017        | 9.0  | 2766         | 24.4 | 1156        | 10.2 | 5887         | 51.9 | 182           | 1.6 | 324   | 2.9 |
| 1960 | 1058        | 9.1  | 2946         | 25.2 | 1277        | 10.9 | 5879         | 50.3 | 189           | 1.6 | 339   | 2.9 |
| 1961 | 1108        | 9.8  | 2968         | 26.2 | 1280        | 11.3 | 5436         | 47.9 | 180           | 1.6 | 369   | 3.3 |
| 1962 | 1184        | 10.1 | 2981         | 25.5 | 1396        | 12.0 | 5573         | 47.7 | 153           | 1.3 | 394   | 3.4 |
| 1963 | 1210        | 10.2 | 2993         | 25.2 | 1527        | 12.9 | 5553         | 46.9 | 158           | 1.3 | 418   | 3.5 |
| 1964 | 1266        | 10.4 | 3127         | 25.6 | 1601        | 13.1 | 5623         | 46.1 | 168           | 1.4 | 417   | 3.4 |
| 1965 | 1355        | 11.0 | 3247         | 26.3 | 1705        | 13.8 | 5425         | 44.0 | 178           | 1.4 | 421   | 3.4 |
| 1966 | 1471        | 11.6 | 3365         | 26.5 | 1812        | 14.3 | 5389         | 42.5 | 179           | 1.4 | 478   | 3.8 |
| 1967 | 1632        | 12.4 | 3498         | 26.7 | 1949        | 14.9 | 5314         | 40.5 | 207           | 1.6 | 511   | 3.9 |
| 1968 | 1774        | 13.4 | 3530         | 26.7 | 1892        | 14.3 | 5245         | 39.6 | 240           | 1.8 | 556   | 4.2 |
| 1969 | 1909        | 14.0 | 3658         | 26.8 | 2018        | 14.8 | 5250         | 38.4 | 228           | 1.7 | 592   | 4.3 |
| 1970 | 2006        | 15.1 | 3642         | 27.4 | 2033        | 15.3 | 4786         | 36.0 | 226           | 1.7 | 589   | 4.4 |
| 1971 | 2087        | 15.6 | 3484         | 26.1 | 2157        | 16.1 | 4836         | 36.2 | 225           | 1.7 | 585   | 4.4 |
| 1972 | 2055        | 15.9 | 3333         | 25.8 | 2290        | 17.7 | 4421         | 34.2 | 213           | 1.6 | 623   | 4.8 |
| 1973 | 2167        | 16.9 | 3281         | 25.6 | 2385        | 18.6 | 4165         | 32.5 | 231           | 1.8 | 591   | 4.6 |
| 1974 | 2236        | 17.7 | 3175         | 25.1 | 2365        | 18.7 | 3983         | 31.5 | 234           | 1.9 | 653   | 5.2 |
| 1975 | 2186        | 18.2 | 3024         | 25.1 | 2283        | 19.0 | 3754         | 31.2 | 201           | 1.7 | 578   | 4.8 |

<sup>1</sup> Includes Domestic Airmail and Priority Mail

<sup>2</sup> Includes Controlled Circulation Mail



Table A-12. Revenue (Millions of Dollars) by 6 Classes

| Year | First <sup>1</sup><br>Class | %    | Second <sup>2</sup><br>Class | %   | Third<br>Class | %    | Fourth<br>Class | %    | Inter-<br>national | %    | Other | %   |
|------|-----------------------------|------|------------------------------|-----|----------------|------|-----------------|------|--------------------|------|-------|-----|
| 1945 | 697                         | 60.1 | 29                           | 2.5 | 75             | 6.5  | 232             | 20.0 | 124                | 10.7 |       |     |
| 1946 | 666                         | 61.3 | 33                           | 3.1 | 83             | 7.6  | 209             | 19.2 | 96                 | 8.8  |       |     |
| 1947 | 681                         | 60.2 | 39                           | 3.4 | 96             | 8.5  | 235             | 20.8 | 80                 | 7.1  |       |     |
| 1948 | 722                         | 58.0 | 41                           | 3.3 | 112            | 9.0  | 272             | 21.9 | 96                 | 7.8  |       |     |
| 1949 | 771                         | 55.7 | 44                           | 3.1 | 136            | 9.8  | 356             | 25.7 | 78                 | 5.6  |       |     |
| 1950 | 815                         | 54.9 | 45                           | 3.0 | 154            | 10.4 | 404             | 27.2 | 67                 | 4.5  |       |     |
| 1951 | 880                         | 55.4 | 49                           | 3.1 | 158            | 9.9  | 431             | 27.2 | 70                 | 4.4  |       |     |
| 1952 | 963                         | 55.3 | 51                           | 3.0 | 171            | 9.8  | 485             | 27.8 | 71                 | 4.1  |       |     |
| 1953 | 1030                        | 54.9 | 61                           | 3.3 | 218            | 11.6 | 492             | 26.2 | 74                 | 4.0  |       |     |
| 1954 | 1036                        | 50.3 | 66                           | 3.2 | 252            | 12.3 | 587             | 28.5 | 81                 | 4.0  | 335   | 1.7 |
| 1955 | 1098                        | 51.0 | 71                           | 3.3 | 269            | 12.5 | 595             | 27.6 | 83                 | 3.8  | 39    | 1.8 |
| 1956 | 1151                        | 52.3 | 72                           | 3.3 | 266            | 12.1 | 593             | 26.9 | 86                 | 3.9  | 35    | 1.6 |
| 1957 | 1206                        | 52.9 | 73                           | 3.2 | 281            | 12.4 | 586             | 25.7 | 91                 | 4.0  | 40    | 1.8 |
| 1958 | 1229                        | 53.1 | 73                           | 3.2 | 288            | 12.4 | 584             | 25.2 | 88                 | 3.8  | 52    | 2.2 |
| 1959 | 1592                        | 56.8 | 76                           | 2.7 | 391            | 14.0 | 576             | 20.6 | 98                 | 3.5  | 68    | 2.4 |
| 1960 | 1667                        | 55.7 | 89                           | 3.0 | 441            | 14.7 | 607             | 20.3 | 102                | 3.4  | 86    | 2.9 |
| 1961 | 1729                        | 54.9 | 97                           | 3.1 | 498            | 15.8 | 626             | 19.9 | 108                | 3.4  | 90    | 2.8 |
| 1962 | 1799                        | 55.2 | 103                          | 3.2 | 510            | 15.7 | 634             | 19.5 | 121                | 3.7  | 93    | 2.8 |
| 1963 | 2024                        | 56.6 | 108                          | 3.0 | 563            | 15.8 | 645             | 18.0 | 130                | 3.6  | 105   | 2.9 |
| 1964 | 2325                        | 58.5 | 121                          | 3.0 | 612            | 15.4 | 659             | 16.6 | 140                | 3.5  | 119   | 3.0 |
| 1965 | 2436                        | 58.0 | 134                          | 3.2 | 650            | 15.5 | 702             | 16.7 | 152                | 3.6  | 124   | 2.9 |
| 1966 | 2611                        | 58.8 | 145                          | 3.3 | 681            | 15.3 | 712             | 16.0 | 158                | 3.5  | 136   | 3.1 |
| 1967 | 2771                        | 59.0 | 152                          | 3.2 | 704            | 15.0 | 742             | 15.8 | 178                | 3.8  | 146   | 3.1 |
| 1968 | 3146                        | 60.2 | 160                          | 3.1 | 743            | 14.2 | 767             | 14.7 | 242                | 4.6  | 167   | 3.2 |
| 1969 | 3621                        | 61.9 | 180                          | 3.1 | 782            | 13.4 | 831             | 14.2 | 255                | 4.4  | 182   | 3.1 |
| 1970 | 3775                        | 62.5 | 190                          | 3.2 | 827            | 13.7 | 778             | 12.9 | 274                | 4.5  | 199   | 3.3 |
| 1971 | 4007                        | 63.2 | 189                          | 3.0 | 844            | 13.3 | 819             | 12.9 | 277                | 4.4  | 206   | 3.3 |
| 1972 | 4937                        | 65.3 | 210                          | 2.8 | 1006           | 13.3 | 810             | 10.7 | 298                | 3.9  | 294   | 3.9 |
| 1973 | 5143                        | 64.2 | 223                          | 2.8 | 1162           | 14.5 | 759             | 9.5  | 317                | 4.0  | 404   | 5.0 |
| 1974 | 5644                        | 65.2 | 253                          | 2.9 | 1214           | 14.0 | 732             | 8.5  | 343                | 4.0  | 471   | 5.4 |
| 1975 | 6428                        | 66.6 | 277                          | 2.9 | 1348           | 14.0 | 718             | 7.4  | 390                | 4.0  | 484   | 5.0 |

<sup>1</sup>Includes Domestic Airmail and Priority Mail

<sup>2</sup>Includes Controlled Circulation Mail



Table A-13. Comparison of Percent Volume, Weight, Revenues, and Allocated Costs for 4 Classes of Mail

| Year | First Class <sup>1</sup> |      |      | Second Class |      |      | Third Class |       |      | Fourth Class |      |     |      |      |      |
|------|--------------------------|------|------|--------------|------|------|-------------|-------|------|--------------|------|-----|------|------|------|
|      | %V                       | %W   | %R   | %V           | %W   | %R   | %V          | %W    | %R   | %V           | %W   | %R  | %V   | %W   | %R   |
| 1945 | 57.7                     | 7.7  | 60.1 | 47.1         | 19.1 | 2.5  | 16.1        | 14.3  | 5.0  | 6.5          | 11.0 | 2.7 | 62.1 | 20.0 | 25.7 |
| 1946 | 57.2                     | 6.7  | 61.2 | 47.1         | 21.6 | 3.0  | 16.9        | 16.6  | 5.4  | 7.6          | 12.6 | 2.7 | 59.8 | 19.2 | 23.3 |
| 1947 | 57.2                     | 6.4  | 60.2 | 45.9         | 22.2 | 3.4  | 16.2        | 18.1  | 5.4  | 8.4          | 13.8 | 2.8 | 59.1 | 20.8 | 24.1 |
| 1948 | 56.4                     | 5.6  | 58.0 | 42.7         | 15.7 | 20.5 | 3.3         | 15.4  | 20.3 | 9.0          | 14.7 | 2.8 | 62.0 | 21.8 | 27.0 |
| 1949 | 55.2                     | 5.6  | 55.6 | 42.6         | 19.2 | 3.1  | 13.6        | 21.5  | 5.3  | 9.8          | 15.5 | 2.7 | 64.5 | 25.7 | 28.2 |
| 1950 | 56.2                     | 5.8  | 54.9 | 42.6         | 19.8 | 3.0  | 13.3        | 22.9  | 5.6  | 10.3         | 16.0 | 2.6 | 63.9 | 27.1 | 27.8 |
| 1951 | 56.6                     | 6.1  | 55.4 | 42.6         | 19.7 | 3.0  | 13.1        | 22.4  | 5.5  | 9.9          | 15.3 | 2.6 | 64.6 | 27.1 | 28.8 |
| 1952 | 55.8                     | 6.7  | 55.3 | 42.4         | 20.9 | 2.9  | 13.0        | 23.3  | 6.1  | 9.7          | 16.3 | 2.5 | 61.8 | 27.8 | 28.0 |
| 1953 | 56.3                     | 7.3  | 54.9 | 43.6         | 22.2 | 3.0  | 11.9        | 23.5  | 6.4  | 11.6         | 16.6 | 2.4 | 59.3 | 26.2 | 27.7 |
| 1954 | 54.6                     | 7.5  | 50.3 | 43.1         | 22.7 | 2.9  | 13.1        | 26.5  | 7.3  | 12.2         | 16.4 | 2.2 | 58.1 | 28.5 | 27.4 |
| 1955 | 54.6                     | 8.1  | 51.0 | 43.2         | 23.8 | 3.0  | 12.7        | 27.2  | 8.2  | 12.5         | 18.8 | 2.0 | 55.6 | 27.6 | 25.2 |
| 1956 | 55.9                     | 8.8  | 52.2 | 43.8         | 24.7 | 2.9  | 12.7        | 26.0  | 8.3  | 12.0         | 18.9 | 2.0 | 54.0 | 26.9 | 24.4 |
| 1957 | 55.9                     | 9.0  | 52.9 | 43.5         | 24.5 | 2.9  | 12.3        | 26.5  | 8.5  | 12.3         | 19.9 | 2.0 | 53.5 | 25.7 | 24.1 |
| 1958 | 55.9                     | 9.1  | 53.1 | 44.9         | 24.2 | 2.8  | 11.6        | 26.3  | 8.8  | 12.4         | 20.2 | 1.9 | 52.7 | 25.2 | 23.1 |
| 1959 | 54.9                     | 8.9  | 56.8 | 44.8         | 23.8 | 2.4  | 11.6        | 27.7  | 10.2 | 13.9         | 21.2 | 1.6 | 51.9 | 20.5 | 22.1 |
| 1960 | 54.3                     | 9.0  | 55.7 | 45.1         | 24.6 | 2.7  | 12.1        | 28.1  | 10.9 | 14.7         | 20.9 | 1.5 | 50.2 | 20.2 | 21.7 |
| 1961 | 55.0                     | 9.7  | 54.9 | 45.8         | 25.5 | 2.8  | 11.9        | 27.0  | 11.2 | 15.8         | 21.2 | 1.5 | 47.9 | 19.8 | 20.9 |
| 1962 | 55.4                     | 10.1 | 55.1 | 46.5         | 24.8 | 2.8  | 11.9        | 26.8  | 11.9 | 15.6         | 20.7 | 1.5 | 47.7 | 19.4 | 20.7 |
| 1963 | 55.0                     | 10.1 | 56.6 | 46.6         | 24.5 | 2.7  | 11.3        | 27.1  | 12.8 | 15.7         | 21.8 | 1.5 | 46.8 | 18.0 | 20.1 |
| 1964 | 55.1                     | 10.3 | 58.4 | 47.6         | 24.8 | 2.7  | 11.4        | 26.6  | 13.1 | 15.3         | 21.4 | 1.5 | 46.0 | 16.5 | 19.4 |
| 1965 | 55.2                     | 10.9 | 58.0 | 47.9         | 25.4 | 2.8  | 11.0        | 27.0  | 13.8 | 15.4         | 22.1 | 1.4 | 43.9 | 16.7 | 18.7 |
| 1966 | 55.8                     | 11.5 | 58.7 | 49.3         | 25.4 | 2.8  | 10.7        | 26.8  | 14.2 | 15.3         | 21.4 | 1.4 | 42.4 | 16.0 | 18.4 |
| 1967 | 56.2                     | 12.4 | 59.0 | 50.7         | 25.4 | 2.7  | 10.4        | 26.7  | 14.8 | 15.0         | 21.1 | 1.3 | 40.5 | 15.8 | 17.6 |
| 1968 | 56.9                     | 13.4 | 60.2 | 52.7         | 25.2 | 2.5  | 10.1        | 25.9  | 14.2 | 14.2         | 20.3 | 1.3 | 39.6 | 14.6 | 16.7 |
| 1969 | 58.8                     | 13.9 | 61.8 | 57.8         | 25.1 | 2.5  | 10.9        | 23.9  | 14.7 | 13.3         | 14.3 | 1.2 | 38.4 | 14.2 | 16.8 |
| 1970 | 59.3                     | 15.1 | 62.4 | 61.2         | 25.7 | 2.5  | 8.2         | 23.5  | 15.3 | 13.6         | 14.9 | 1.1 | 36.0 | 12.8 | 15.6 |
| 1971 | 59.4                     | 15.6 | 63.1 | 62.2         | 24.5 | 2.4  | 8.8         | 23.16 | 16.1 | 13.3         | 15.0 | 1.1 | 36.1 | 12.9 | 14.0 |
| 1972 | 57.9                     | 15.8 | 65.3 |              | 24.1 | 2.3  |             | 25.1  | 17.7 | 13.3         |      | 1.0 | 34.1 | 10.7 |      |
| 1973 | 58.5                     | 16.9 | 64.2 | 62.5         |      | 2.3  | 8.2         | 25.2  | 18.6 | 14.5         | 17.2 | 0.9 | 32.4 | 9.4  | 11.9 |
| 1974 | 58.9                     | 17.6 | 65.2 |              | 23.1 | 2.4  |             | 25.0  | 18.7 | 14.0         |      | 0.9 | 31.4 | 8.4  |      |
| 1975 | 59.0                     | 18.1 | 66.6 |              | 23.2 | 2.4  |             | 24.4  | 18.9 | 13.9         |      | 0.8 | 31.2 | 7.4  |      |

<sup>1</sup>Includes Domestic Airmail and Priority Mail



Table A-14. Telephone Statistics

| Year | Messages (billions) |      |              |      |       |      | Employees (thousands) |      |        | Salaries and Wages (\$ Millions) |       |        |       |
|------|---------------------|------|--------------|------|-------|------|-----------------------|------|--------|----------------------------------|-------|--------|-------|
|      | Bell                |      | Independents |      | Total | Toll | Local                 | Bell | Indep. | Total                            | Bell  | Indep. | Total |
|      | Local               | Toll | Local        | Toll |       |      |                       |      |        |                                  |       |        |       |
| 1945 | 32.6                | 1.8  | 6.4          | 0.0  | 40.9  | 0.0  | 39.1                  | 397  | 36     | 433                              | 911   | 54     | 965   |
| 1946 | 37.9                | 2.0  | 6.8          | 0.0  | 46.8  | 2.1  | 44.7                  | 508  | 44     | 552                              | 1273  | 73     | 1346  |
| 1947 | 41.3                | 2.2  | 7.4          | 0.0  | 50.9  | 2.2  | 48.7                  | 537  | 50     | 587                              | 1395  | 94     | 1489  |
| 1948 | 45.1                | 2.2  | 8.2          | 0.0  | 55.5  | 2.2  | 53.3                  | 559  | 54     | 613                              | 1621  | 113    | 1734  |
| 1949 | 47.6                | 2.2  | 8.7          | 0.0  | 58.6  | 2.3  | 56.3                  | 528  | 60     | 588                              | 1704  | 134    | 1838  |
| 1950 | 50.7                | 2.2  | 9.3          | 0.0  | 62.3  | 2.3  | 60.0                  | 535  | 63     | 598                              | 1742  | 147    | 1889  |
| 1951 | 52.3                | 2.3  | 9.6          | 0.0  | 64.2  | 2.3  | 62.0                  | 563  | 65     | 628                              | 1928  | 156    | 2084  |
| 1952 | 53.8                | 2.3  | 10.0         | 0.0  | 66.1  | 2.3  | 63.8                  | 592  | 68     | 660                              | 2151  | 163    | 2315  |
| 1953 | 55.4                | 2.4  | 12.6         | 0.5  | 70.9  | 2.9  | 68.0                  | 600  | 70     | 670                              | 2328  | 198    | 2526  |
| 1954 | 57.5                | 2.4  | 13.1         | 0.5  | 73.6  | 3.0  | 70.6                  | 591  | 70     | 661                              | 2444  | 214    | 2658  |
| 1955 | 60.8                | 2.7  | 13.8         | 0.5  | 77.7  | 3.2  | 74.5                  | 630  | 72     | 702                              | 2631  | 224    | 2855  |
| 1956 | 64.2                | 2.9  | 15.3         | 0.6  | 82.9  | 3.5  | 79.5                  | 653  | 78     | 731                              | 2884  | 261    | 3145  |
| 1957 | 67.6                | 3.1  | 16.1         | 0.6  | 87.4  | 3.7  | 83.8                  | 656  | 81     | 737                              | 3043  | 293    | 3335  |
| 1958 | 70.7                | 3.2  | 17.6         | 0.6  | 92.1  | 3.8  | 88.3                  | 606  | 81     | 687                              | 3029  | 310    | 3339  |
| 1959 | 74.6                | 3.5  | 19.5         | 0.7  | 98.3  | 4.1  | 94.2                  | 597  | 82     | 679                              | 3138  | 331    | 3468  |
| 1960 | 78.6                | 3.7  | 21.2         | 0.7  | 104.2 | 4.4  | 99.8                  | 595  | 85     | 680                              | 3283  | 359    | 3642  |
| 1961 | 81.1                | 3.8  | 22.7         | 0.8  | 108.4 | 4.6  | 103.8                 | 581  | 84     | 665                              | 3369  | 380    | 3750  |
| 1962 | 86.8                | 4.1  | 23.8         | 0.8  | 115.5 | 4.9  | 110.6                 | 578  | 86     | 664                              | 3513  | 404    | 3917  |
| 1963 | 89.9                | 4.3  | 25.0         | 0.9  | 120.0 | 5.2  | 114.9                 | 586  | 90     | 676                              | 3660  | 440    | 4100  |
| 1964 | 93.6                | 4.7  | 26.7         | 1.0  | 126.0 | 5.7  | 120.3                 | 605  | 95     | 700                              | 3891  | 485    | 4376  |
| 1965 | 99.8                | 5.1  | 28.2         | 1.1  | 134.2 | 6.2  | 128.0                 | 627  | 101    | 728                              | 4170  | 537    | 4707  |
| 1966 | 105.1               | 5.6  | 30.2         | 1.2  | 142.2 | 6.8  | 135.3                 | 667  | 110    | 777                              | 4517  | 612    | 5129  |
| 1967 | 109.0               | 6.1  | 31.8         | 1.3  | 148.2 | 7.4  | 140.8                 | 673  | 114    | 787                              | 4792  | 671    | 5462  |
| 1968 | 113.8               | 6.7  | 33.9         | 1.4  | 155.8 | 8.1  | 147.7                 | 697  | 123    | 820                              | 5137  | 782    | 5918  |
| 1969 | 123.3               | 7.6  | 35.6         | 1.5  | 168.0 | 9.1  | 158.9                 | 755  | 133    | 888                              | 5912  | 871    | 6783  |
| 1970 | 130.1               | 8.2  | 37.2         | 1.6  | 177.1 | 9.8  | 167.3                 | 793  | 142    | 935                              | 6641  | 1001   | 7642  |
| 1971 | 136.9               | 8.8  | 41.2         | 1.8  | 188.7 | 10.6 | 178.1                 | 796  | 148    | 944                              | 7332  | 1137   | 8469  |
| 1972 | 143.8               | 9.9  | 43.4         | 2.2  | 199.3 | 12.0 | 187.2                 | 797  | 152    | 949                              | 8344  | 1294   | 9638  |
| 1973 | 151.1               | 11.0 | 45.6         | 2.6  | 210.2 | 13.5 | 196.7                 | 818  | 157    | 975                              | 9282  | 1438   | 10720 |
| 1974 |                     |      |              |      |       |      |                       | 812  |        | 812                              | 10209 |        |       |
| 1975 |                     |      |              |      |       |      |                       |      |        |                                  |       |        |       |



Table A-15. Telegraph and Exchange Communications Statistics

| Year | TELEGRAPH              |                          |                           |                        | EXCHANGE COMMUNICATIONS INDUSTRY |                           |          |        |           |        |     |      |
|------|------------------------|--------------------------|---------------------------|------------------------|----------------------------------|---------------------------|----------|--------|-----------|--------|-----|------|
|      | Messages<br>(Millions) | Employees<br>(Thousands) | Salaries<br>(\$ Millions) | Messages<br>(Billions) | Employees<br>(Thousands)         | Salaries<br>(\$ Millions) | MESSAGES |        | EMPLOYEES |        |     |      |
|      |                        |                          |                           |                        |                                  |                           | % Teleg  | % Post | % Teleg   | % Post |     |      |
| 1945 | 236                    | 63                       | 127                       | 63.0                   | 932                              | 1962                      | 64.9     | 0.2    | 46.4      | 34.7   | 6.8 | 46.8 |
| 1946 | 212                    | 58                       | 137                       | 67.7                   | 1097                             | 2563                      | 69.0     | 0.3    | 50.4      | 30.6   | 5.3 | 44.4 |
| 1947 | 214                    | 54                       | 139                       | 72.5                   | 1111                             | 2825                      | 70.2     | 0.3    | 52.8      | 30.0   | 4.8 | 42.4 |
| 1948 | 191                    | 49                       | 141                       | 78.5                   | 1165                             | 3118                      | 70.8     | 0.2    | 52.6      | 29.0   | 4.1 | 43.2 |
| 1949 | 175                    | 42                       | 126                       | 82.9                   | 1148                             | 3502                      | 70.7     | 0.2    | 51.2      | 29.0   | 3.6 | 45.1 |
| 1950 | 179                    | 40                       | 117                       | 87.8                   | 1139                             | 3624                      | 70.9     | 0.2    | 52.5      | 28.9   | 3.6 | 44.0 |
| 1951 | 180                    | 40                       | 128                       | 91.1                   | 1167                             | 3841                      | 70.5     | 0.2    | 53.9      | 29.3   | 3.5 | 42.7 |
| 1952 | 152                    | 40                       | 127                       | 94.2                   | 1224                             | 4361                      | 70.2     | 0.2    | 53.9      | 29.6   | 3.3 | 42.8 |
| 1953 | 162                    | 39                       | 139                       | 99.8                   | 1216                             | 4658                      | 71.1     | 0.2    | 55.1      | 28.7   | 3.2 | 41.7 |
| 1954 | 153                    | 37                       | 138                       | 102.3                  | 1205                             | 4797                      | 71.9     | 0.1    | 54.9      | 27.9   | 3.1 | 42.1 |
| 1955 | 154                    | 38                       | 143                       | 108.1                  | 1252                             | 5083                      | 71.9     | 0.1    | 56.1      | 27.9   | 3.0 | 40.9 |
| 1956 | 152                    | 38                       | 154                       | 114.7                  | 1278                             | 5548                      | 72.3     | 0.1    | 57.2      | 27.5   | 3.0 | 39.8 |
| 1957 | 144                    | 36                       | 159                       | 120.6                  | 1295                             | 5839                      | 72.5     | 0.1    | 56.9      | 27.4   | 2.8 | 40.2 |
| 1958 | 132                    | 34                       | 154                       | 125.9                  | 1259                             | 6146                      | 73.2     | 0.1    | 54.6      | 26.7   | 2.7 | 42.7 |
| 1959 | 131                    | 33                       | 160                       | 132.1                  | 1262                             | 6483                      | 74.4     | 0.1    | 53.8      | 25.5   | 2.6 | 43.6 |
| 1960 | 124                    | 33                       | 165                       | 138.9                  | 1276                             | 6760                      | 75.0     | 0.1    | 53.3      | 24.9   | 2.6 | 44.1 |
| 1961 | 117                    | 31                       | 166                       | 144.3                  | 1278                             | 7214                      | 75.2     | 0.1    | 52.0      | 24.8   | 2.5 | 45.5 |
| 1962 | 112                    | 30                       | 168                       | 152.5                  | 1282                             | 7447                      | 75.7     | 0.1    | 51.8      | 24.2   | 2.3 | 45.9 |
| 1963 | 104                    | 28                       | 161                       | 157.5                  | 1291                             | 7885                      | 76.2     | 0.1    | 52.4      | 23.7   | 2.2 | 45.5 |
| 1964 | 97                     | 27                       | 161                       | 164.5                  | 1311                             | 8366                      | 76.6     | 0.1    | 53.4      | 23.4   | 2.0 | 44.6 |
| 1965 | 94                     | 26                       | 165                       | 174.0                  | 1350                             | 9029                      | 77.1     | 0.1    | 53.9      | 22.8   | 1.9 | 44.1 |
| 1966 | 93                     | 27                       | 180                       | 184.5                  | 1479                             | 9826                      | 77.1     | 0.1    | 52.5      | 22.9   | 1.8 | 45.6 |
| 1967 | 89                     | 27                       | 190                       | 192.4                  | 1531                             | 10580                     | 77.0     | 0.0    | 51.4      | 22.9   | 1.7 | 46.8 |
| 1968 | 86                     | 27                       | 197                       | 201.2                  | 1577                             | 11443                     | 77.5     | 0.0    | 52.9      | 22.5   | 1.7 | 46.3 |
| 1969 | 77                     | 25                       | 204                       | 215.3                  | 1652                             | 12850                     | 77.7     | 0.0    | 53.7      | 22.3   | 1.5 | 44.7 |
| 1970 | 70                     | 24                       | 209                       | 227.5                  | 1700                             | 14313                     | 77.8     | 0.0    | 55.0      | 22.1   | 1.4 | 43.6 |
| 1971 | 44                     |                          |                           | 240.4                  |                                  |                           | 78.5     | 0.0    |           | 21.5   |     |      |
| 1972 | 40                     |                          |                           | 249.8                  |                                  |                           | 79.8     | 0.0    |           | 20.2   |     |      |
| 1973 | 37                     |                          |                           | 262.8                  |                                  |                           | 80.0     | 0.0    |           | 20.0   |     |      |
| 1974 |                        |                          |                           |                        |                                  |                           |          |        |           |        |     |      |
| 1975 |                        |                          |                           |                        |                                  |                           |          |        |           |        |     |      |



Table A-16. Average Salary Comparisons

| Year | Telephone |        | Telegraph |        | Postal |        | Exchange Communications |        | National |        |
|------|-----------|--------|-----------|--------|--------|--------|-------------------------|--------|----------|--------|
|      | \$        | 1975\$ | \$        | 1975\$ | \$     | 1975\$ | \$                      | 1975\$ | \$       | 1975\$ |
| 1945 | 2232      | 6596   | 1996      | 5900   | 1995   | 5897   | 2105                    | 6222   | 1809     | 5347   |
| 1946 | 2437      | 6637   | 2381      | 6483   | 2216   | 6033   | 2336                    | 6361   | 1922     | 5233   |
| 1947 | 2538      | 6044   | 2594      | 6177   | 2541   | 6051   | 2542                    | 6054   | 2098     | 4996   |
| 1948 | 2827      | 6245   | 2877      | 6358   | 2471   | 5460   | 2675                    | 5911   | 2265     | 5004   |
| 1949 | 3126      | 6974   | 3021      | 6741   | 2969   | 6624   | 3051                    | 6808   | 2269     | 5063   |
| 1950 | 3161      | 6983   | 2889      | 6382   | 3230   | 7135   | 3181                    | 7029   | 2431     | 5372   |
| 1951 | 3316      | 6781   | 3170      | 6483   | 3271   | 6689   | 3292                    | 6732   | 2707     | 5535   |
| 1952 | 3508      | 7030   | 3186      | 6384   | 3662   | 7338   | 3564                    | 7141   | 2897     | 5806   |
| 1953 | 3768      | 7493   | 3581      | 7121   | 3931   | 7818   | 3830                    | 7616   | 3063     | 6091   |
| 1954 | 4018      | 7952   | 3716      | 7353   | 3949   | 7814   | 3980                    | 7876   | 3099     | 6132   |
| 1955 | 4069      | 8082   | 3792      | 7532   | 4070   | 8085   | 4061                    | 8066   | 3246     | 6447   |
| 1956 | 4302      | 8419   | 4069      | 7964   | 4418   | 8647   | 4342                    | 8497   | 3420     | 6693   |
| 1957 | 4525      | 8551   | 4364      | 8247   | 4501   | 8505   | 4511                    | 8524   | 3570     | 6746   |
| 1958 | 4858      | 8937   | 4581      | 8428   | 4931   | 9071   | 4882                    | 8981   | 3655     | 6723   |
| 1959 | 5107      | 9319   | 4822      | 8798   | 5191   | 9472   | 5136                    | 9372   | 3846     | 7018   |
| 1960 | 5357      | 9622   | 5038      | 9048   | 5245   | 9420   | 5300                    | 9518   | 3967     | 7125   |
| 1961 | 5636      | 10021  | 5278      | 9384   | 5668   | 10078  | 5642                    | 10031  | 4076     | 7246   |
| 1962 | 5896      | 10366  | 5605      | 9856   | 5718   | 10053  | 5807                    | 10211  | 4260     | 7490   |
| 1963 | 6066      | 10537  | 5734      | 9962   | 6174   | 10725  | 6108                    | 10610  | 4415     | 7670   |
| 1964 | 6255      | 10725  | 6056      | 10384  | 6545   | 11224  | 6380                    | 10941  | 4636     | 7949   |
| 1965 | 6463      | 10895  | 6295      | 10611  | 6975   | 11758  | 6686                    | 11270  | 4867     | 8204   |
| 1966 | 6601      | 10819  | 6624      | 10857  | 6692   | 10967  | 6643                    | 10887  | 5191     | 8508   |
| 1967 | 6938      | 11052  | 7167      | 11417  | 6873   | 10949  | 6911                    | 11010  | 5442     | 8669   |
| 1968 | 7220      | 11037  | 7419      | 11342  | 7289   | 11143  | 7255                    | 11091  | 5850     | 8944   |
| 1969 | 7638      | 11082  | 8100      | 11752  | 7934   | 11510  | 7777                    | 11284  | 6265     | 9089   |
| 1970 | 8171      | 11193  | 8615      | 11801  | 8721   | 11945  | 8417                    | 11529  | 6634     | 9087   |
| 1971 | 8971      | 11782  |           |        | 10243  | 13452  |                         |        | 7026     | 9227   |
| 1972 | 10156     | 12912  |           |        | 11538  | 14669  |                         |        | 7458     | 9481   |
| 1973 | 10995     | 13159  |           |        | 12056  | 14429  |                         |        | 7985     | 9557   |
| 1974 | 12573     | 13560  |           |        | 13580  | 13647  |                         |        | 8523     | 9192   |
| 1975 |           |        |           |        | 15392  | 15392  |                         |        |          |        |



## APPENDIX B: PRICE ELASTICITY OF DEMAND AND REDUCED DEFICITS

The Postal Service is currently concerned about the prospect of reduced demand for postal services. At the same time postal rates have increased which represses demand even further. As mentioned in Section 3.2.1, there are a number of possible reasons for reduced demand: recession, substitute services, competition, and rate increases. The effect that rate increases have on reducing demand and the effect both have on the profitability of the Postal Service will be modeled in this Appendix. An allowance is made for reduction of postal expenditures due to the reduced demand.

The demand for postal services is price inelastic. That is, if price is increased by P percent, demand will decline, but the percent decline will be less than P. If demand is inelastic, a rate increase will result in increased revenues in spite of decreased volume.

The price elasticity of demand, defined by

$$e_D = \frac{\Delta q/q}{\Delta p/p}$$

where p is price and q is quantity, has been estimated for the various mail services. During the 1974-75 hearings before the Postal Rate Commission, Docket R74-1, there was considerable discussion about the price elasticity of demand for each service, since one major consideration for rate determination was to depend on these elasticities. The following, taken from pages 2-733 and 3-328 of Docket R74-1, gives estimates.

### Price Elasticity of Demand

|                   | <u>Officer of the<br/>Postal Commission</u> | <u>United States<br/>Postal Service</u> |
|-------------------|---|---|
| First Class Mail  | -0.076                                      | -0.100                                  |
| Second Class Mail | -0.035                                      | -0.058                                  |
| Third Class Mail  | -0.285                                      | -0.331                                  |
| Fourth Class Mail | -0.485                                      | -0.645                                  |

Since the elasticities fall between 0 and -1, a rate increase would mean an increase in revenue; thus volume decline caused by a rate increase helps the financial stature of the Postal Service.



The Postal Service characterizes its costs as having a large fixed component and a small variable component. That is, costs depend only slightly on volume; hence, they claim a decline in volume has little effect on their costs. This seems a bit unusual since the service is so highly labor intensive. On the short-term, this may be the case, however. One would expect that if repression of demand is a long-term phenomenon, a higher portion of costs could be eliminated.

For the purpose of a model, the "volume elasticity of cost" will be defined as

$$e_c = \frac{\Delta c/c}{\Delta q/q},$$

where  $c$  is cost, as a measure of variation of cost with quantity.

Let  $k$  be the relative change of the revenue to cost ratio. If  $P$  is the relative price increase, then it can be shown that

$$k = \frac{P[1 + e_D + Pe_D - e_D e_c]}{1 + Pe_D e_c},$$

which is tabulated in Table B-1. If the present revenue to cost ratio is assumed to be 0.8, we can compute the revenue to cost ratio after a price increase  $P$ . These results are tabulated in Table B-2, where it is assumed  $e_c = 0.3$ . Using this volume elasticity of cost means, for example, that if volume decreases 10%, costs would decrease only 3%. The tables show that the change in the revenue-cost ratio depends more strongly on  $e_D$  and  $P$  than on  $e_c$ .

According to this model, a rate increase of 20% would result in a revenue-cost ratio of 92% assuming the price elasticity of demand is -0.3, whereas a 30% price increase would result in a revenue-cost ratio of 97% under the same conditions. Figure B-1 graphically portrays the effect of price increases on the revenue/cost ratio, assuming an initial ratio of 0.8 and a volume elasticity of 0.3.

It must be emphasized that many assumptions are made: (1) volume is repressed only by rate increases, (2) price elasticity of demand and volume elasticity of cost can be given meaning for the postal services overall -- not only as separate services, and (3) these elasticities do not change too greatly with price. The model is useful therefore only in a general way, but can give an idea of the relative dependency of the revenue-cost ratio upon rate increases, upon price elasticity of demand, and upon volume elasticity of cost.

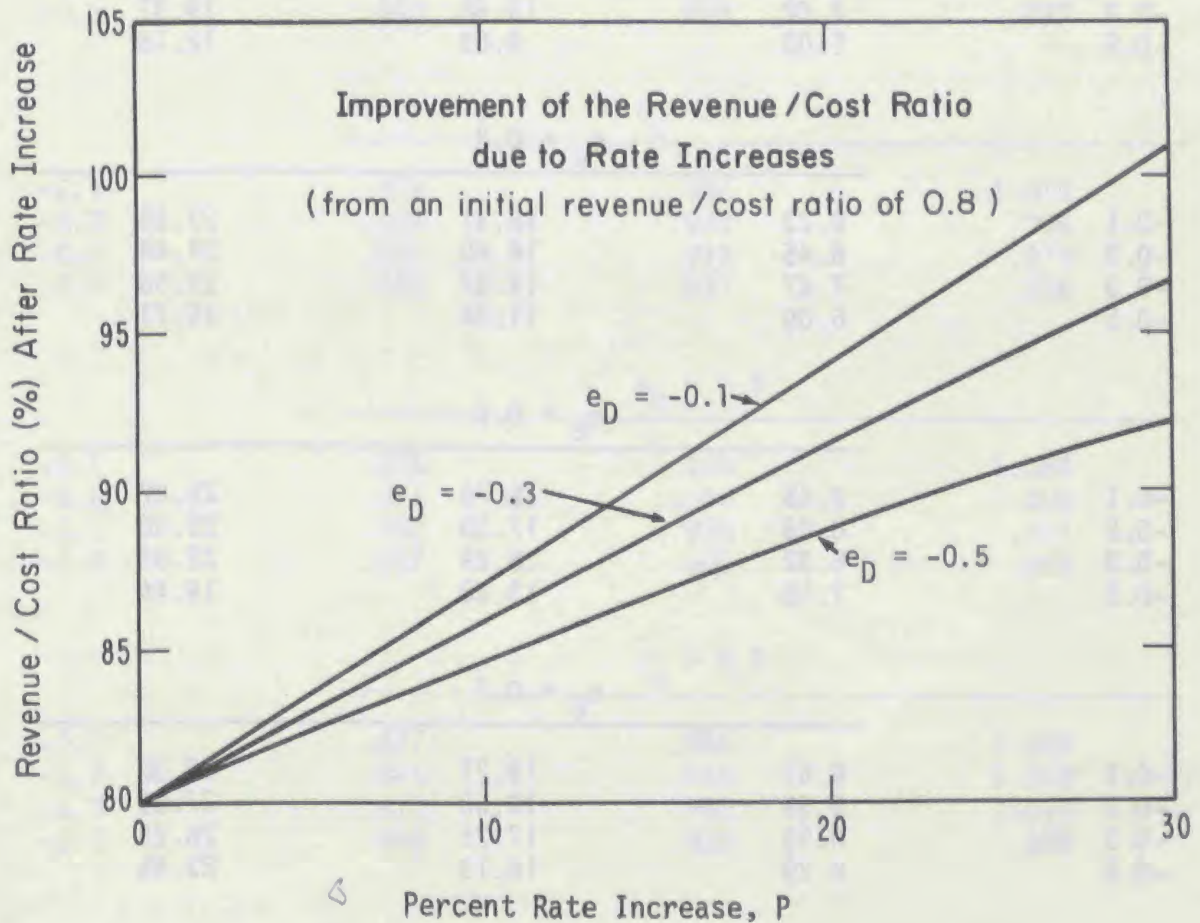


Figure B-1. Improvement of the Revenue/Cost Ratio Due to Rate Increases, Where the Volume Elasticity of Cost is Assumed to be 0.3



Table B-1. Relative Change (%) in Revenue/Cost Ratio  
Due to Price Increase P

| $e_D$       | 10%  | $\frac{P}{20\%}$ | 30%   |
|-------------|------|------------------|-------|
| $e_c = 0.1$ |      |                  |       |
| -0.1        | 9.01 | 17.84            | 26.48 |
| -0.2        | 8.02 | 15.66            | 22.94 |
| -0.3        | 7.02 | 13.48            | 19.37 |
| -0.5        | 5.03 | 9.09             | 12.18 |
| $e_c = 0.3$ |      |                  |       |
| -0.1        | 9.23 | 18.31            | 27.25 |
| -0.2        | 8.45 | 16.60            | 24.44 |
| -0.3        | 7.67 | 14.87            | 21.58 |
| -0.5        | 6.09 | 11.34            | 15.71 |
| $e_c = 0.5$ |      |                  |       |
| -0.1        | 9.45 | 18.79            | 28.02 |
| -0.2        | 8.89 | 17.55            | 25.98 |
| -0.3        | 8.32 | 16.29            | 23.87 |
| -0.5        | 7.18 | 13.68            | 19.46 |
| $e_c = 0.7$ |      |                  |       |
| -0.1        | 9.67 | 19.27            | 28.80 |
| -0.2        | 9.33 | 18.52            | 27.56 |
| -0.3        | 8.99 | 17.75            | 26.25 |
| -0.5        | 8.29 | 16.13            | 23.46 |

Table B-2. Revenue/Cost Ratio Resulting from Price Increase, P,  
Assuming the Initial Revenue/Cost Ratio is 0.8

| $e_D$       | 10%  | $\frac{P}{20\%}$ | 30%   |
|-------------|------|------------------|-------|
| $e_c = 0.1$ |      |                  |       |
| -0.1        | .872 | .943             | 1.012 |
| -0.2        | .864 | .925             | .984  |
| -0.3        | .856 | .908             | .955  |
| -0.5        | .840 | .873             | .897  |
| $e_c = 0.3$ |      |                  |       |
| -0.1        | .874 | .946             | 1.018 |
| -0.2        | .868 | .933             | .996  |
| -0.3        | .861 | .919             | .973  |
| -0.5        | .849 | .891             | .926  |
| $e_c = 0.5$ |      |                  |       |
| -0.1        | .876 | .950             | 1.024 |
| -0.2        | .871 | .940             | 1.008 |
| -0.3        | .867 | .930             | .991  |
| -0.5        | .857 | .909             | .856  |
| $e_c = 0.7$ |      |                  |       |
| -0.1        | .877 | .954             | 1.030 |
| -0.2        | .875 | .848             | 1.020 |
| -0.3        | .872 | .942             | 1.010 |
| -0.5        | .866 | .929             | .988  |



APPENDIX C: BRIEF DESCRIPTION OF CLASSES OF MAIL

1. FIRST CLASS

First Class - Letters, postcards, business reply mail, and parcels sealed against inspection (13 ounces or less)

Domestic Air - Letters, postcards, and air parcels

Priority

2. SECOND CLASS

Second Class - Periodical publications (magazines and newspapers), classroom publications, and non-profit publications

Controlled Circulations - Free circulations (issued regularly)

3. THIRD CLASS

Bulk rate circulars, bulk rate books, bulk rate non-profit mail, and miscellaneous advertising and small pieces

4. FOURTH CLASS

Parcel post, catalogues, books and records

5. INTERNATIONAL

6. GOVERNMENT

Penalty mail is that mailed by an agency of the U.S. Government. Penalty or frank privileges are available only to those agencies, officers, and individuals specifically named by statute.



## APPENDIX D: REQUIRED STUDIES

In the body of this report an attempt was made to analyze the postal industry in the context of the larger communication and information industries. This is in contrast to many recent studies which view the "postal problem" more narrowly as being one of deciding how to make the Postal Service pay its own way in some sense. The postal crisis was briefly analyzed and it was concluded that the basic structure of postal service, and more broadly of communications, must be seriously studied in order to affect anything other than a cosmetic solution.

While it may be pragmatic in the near term to investigate more limited solutions, studies of competitive postal service must be undertaken. Indeed, the single most important postal issue today is the question of retaining the monopoly in postal service. The competitive alternatives are radical without doubt, and to open all postal services to competition may allow for even more pervasive problems, but this alternative has not been seriously investigated. The reasons for postal monopoly, which at one time seemed compelling, are of questionable application today. At one time, it was apparently necessary to control communications during wartime and to facilitate an informed public, but because of the emergence of technologies which supplement postal service, these reasons for retaining monopoly no longer appear to be valid.

On the surface, competition provides an attractive alternative. However, fully competitive postal service is approached with uneasiness, since there are major areas of uncertainty associated with this alternative. Would low-density routes receive adequate service at reasonable price? Would the shortcomings of the present postal system be corrected by competition? Would open competition result in monopoly anyway, and would there be an abuse of monopoly power? Would industry regulation be required? What kinds of costs could be expected in the transition period? What are the advantages of competitive postal service in the long term with due consideration of new technologies? A number of these questions are amenable to quantitative analysis while others must be approached more qualitatively. But, in any case, it is the promise of alleviating some of the uncertainty



and simultaneously the promise of being enlightened by serious investigation that the following studies are recommended. The brief discussions are not intended to be comprehensive study descriptions, but rather to suggest the type of studies that must be conducted in the search for a solution to current postal and communications industry problems.

#### Low Density Service

Perhaps the most common fear is that competition in postal services will bring sharply higher postal rates to rural America and to those areas of low postal traffic. This fear is analogous to the fears of those opposed to telephone competition, and is succinctly worded by Lucien R. Smartt, writing in the October 7, 1976 issue of Public Utilities Fortnightly.

The Postal Service, as a quasi-independent institution which was created in the hope that it could be made to pay for itself, has gone in for the elusive goal of cost-based service rates. It takes no genius to perceive, however, that the inevitable result of such a policy, consistently carried to its logical limits, in a nation of such diverse and far-flung components as ours, will be more advantage for those who already enjoy the advantages of residing or doing business in areas of concentrated and affluent population, and deprivation and further impoverishment of those who already have the least to lose. "The rich will get richer and the poor will get poorer" -- with a vengeance! This was perceived long ago and so the principle of averaged rates was made a cornerstone of both the U.S. mail service and the privately owned telephone industry.

It is unclear, however, exactly how much higher (if any) the services to rural America would be under a system of competition in postal service. Not only are cost studies needed, but because competition would surely devise alternative methods of mail delivery, some cost studies must anticipate these alternatives. For example, the possibility of delivering mail as an "add-on" to other delivery systems should be investigated. Also, it is conceivable that mail workers could be hired at lower pay levels which would result in cost savings. An estimate of cost should be made where there is no local delivery, but users must post and receive mail at a centralized location. In each alternative there will be cost trade-offs with quality.



## Postal Labor

The characteristics of the USPS labor force are a key to some of the present postal problems and must be understood in order to determine the appropriateness of present pay schedules in comparison to other industries, and ultimately to project the cost of alternative industry structures. What is the age distribution of postal workers? What is the attrition rate, and what factors appear to influence it most? How do postal salaries compare to workers in other industries with similar education and experience? How do employee benefits compare? Can productivity and service quality be linked to an employee profile? Would postal unions likely be strong in competitive postal firms? Will a transition to competitive postal service cause major employment dislocations?

## New Technology

Transportation technology has had great influence on postal service -- from the pony express to the railroads, the automobile, and the airlines. Today, electronic technology is impacting postal service. Mailgram, a joint venture of Western Union and the Postal Service, is a hybrid system of softcopy (electronic) transmission and hardcopy (paper) delivery. The Postal Service has ongoing research toward more comprehensive "electronic mail." However, efforts to incorporate new technologies into the Postal Service over the past 10 or 20 years seem to have centered on the switching function of providing mail service, where there has been research and experimentation on machines to facilitate human reading of zip codes and research on optical readers and sorters.

This kind of technological progress may well be circumvented, however, if progress in the communications and computer industries can be adapted to provide the mail function. Little doubt exists that the efficient local and national distribution of hardcopy information is important to both business and the general public, in spite of the significant projection for electronic funds transfer and other new services. The distribution of softcopy information, however, such as voice, video, and data by electronic communications has become at least as important as that of hardcopy. In fact, the cost of electronic distribution is becoming sufficiently attractive that the economic viability of traditional letter mail service is seriously being questioned.



Further, there is now a definite technological trend towards the merging of computation and communication. In fact, the Federal Communications Commission has once again opened an inquiry attempting to distinguish between communication and computation, for they have regulatory jurisdiction only over communications. With this trend and the introduction of competition in the telephone industry, what can we foresee in the postal-communications-computation "mega-industry"? Will one firm tend to dominate the combined functions in time, or will there be forces to insure competition in the absence of regulation? Are there specific technologies on the horizon which will force a restructuring of the Postal Service?

The primary thrust of this study is to identify alternatives and innovations in technology which may erode the present postal market, but satisfy the underlying demand for communications.

#### The Postal Contribution to the American Communications Infrastructure

Public Law 91-375 of August 2, 1970 states that "The Postal Service shall have as its basic function the obligation to provide postal services to bind the Nation together through personal, educational, literary, and business correspondence of the people." Communications is a vital cornerstone of our democratic process, and the ability to send mail is a vital link in this process. It is essential to understand the unique and duplicative, the competitive and monopolistic, the independent and the interdependent natures of our total communications services environment before singling out one industry for exclusive study. The need for a solution to the postal problem is well known; but just as important are the analogous questions in the telephone industry.

Just what function does the postal ability provide in relation to other communications functions? What is its uniqueness? Who does it affect? What are the social and economic costs in relation to our total communications service requirements? First-class letter demand has incurred a peak in the last 10 years as has the daily circulation of newspapers. In contrast, telephone messages have continued to increase at a substantial rate, as have the multitude of data message services. There are no



substantial studies of the social and economic interdependence of our communications infrastructure, and certainly not of their impact on postal services.

There have been sweeping improvements in electronic technologies. The unit costs of electronic devices continues to decrease, providing new incentives for the consumer to reevaluate his communications patterns. How do these cost trends influence our communications needs, both today and in relation to changes proposed for postal functions?

What standards have or can be established for traditional services and their subsidization? What goals have been laid forth such as in the Postal Reorganization Act of 1970, the Communications Act of 1934, the Housing and Urban Development Act, or the Agricultural Act of 1970? Is it possible to articulate a set of common goals and expectations for communications as a guide to evaluate the benefits and constraints of alternative industry structures? There is little doubt that we are only beginning to realize the extent of the post-industrial revolution. But it is vitally important to have these trends before us as we contemplate a reexamination of our postal and communication industries.





## BIBLIOGRAPHIC DATA SHEET

|   |   |  |                               |
|---|---|--|-------------------------------|
|   | 1. PUBLICATION OR REPORT NO.<br>OT-SP-77-13 | 2. Gov't Accession No.                               | 3. Recipient's Accession No.  |
| 4. TITLE AND SUBTITLE<br>The Postal Crisis: The Postal Function as a Communications Service   |   | 5. Publication Date<br>January 1977                  |                               |
| 7. AUTHOR(S)<br>Donald R. Ewing and Roger K. Salaman  |   | 6. Performing Organization Code<br>OT/PRD            |                               |
| 8. PERFORMING ORGANIZATION NAME AND ADDRESS<br>Office of Telecommunications<br>Policy Research Division<br>325 Broadway<br>Boulder, Colorado 80302  |   | 9. Project/Task/Work Unit No.<br>907 7481            |                               |
| 11. Sponsoring Organization Name and Address  |   | 10. Contract/Grant No.                               |                               |
|   |   | 12. Type of Report and Period Covered                |                               |
|   |   | 13.  |                               |
| 14. SUPPLEMENTARY NOTES   |   |  |                               |
| 15. ABSTRACT (A 200-word or less factual summary of most significant information. If document includes a significant bibliography of literature survey, mention it here.)<br><br>This report is distinctive in that the postal function is viewed in the context of the modern communications industry. Continuing technological advances make this broader perspective mandatory in order to derive lasting solutions to the problems of postal service. An historical perspective is developed, and options for future postal service are analyzed. |   |  |                               |
| 16. Key words (Alphabetical order, separated by semicolons)<br><br>electronic mail, mail, personal communications, postal service, postal subsidy   |   |  |                               |
| 17. AVAILABILITY STATEMENT<br><br><input checked="" type="checkbox"/> UNLIMITED.<br><br><input type="checkbox"/> FOR OFFICIAL DISTRIBUTION.   |   | 18. Security Class (This report)<br><br>Unclassified | 20. Number of pages<br><br>79 |
|   |   | 19. Security Class (This page)<br><br>Unclassified   | 21. Price:                    |



