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Reference Use Only

SUMMARY OF NATIONAL TRANSPORTATION STATISTICS

JUNE 1974

FINAL REPORT

Prepared for

U.S. DEPARTMENT OF TRANSPORTATION

OFFICE OF THE SECRETARY
Assistant Secretary for Policy, Plans,
and International Affairs
Washington D C 20590

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16. Abstract

This report is a compendium of selected national-level transportation statistics. Included are cost, inventory, and performance data describing the passenger and cargo operations of the following modes: air carrier, general aviation, automobile, bus, truck, local transit, rail, water, and oil pipeline. The report includes basic descriptors of U.S. transportation, such as operating revenues and expenses, number of vehicles and employees, vehicle-miles and passenger miles, etc.

As its name implies, the report is a summary of a larger data base, consisting of time-series collected from a variety of government and private statistical handbooks. In this edition, the selected data cover the period 1962 through 1972.

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INTRODUCTION

INTRODUCTION

The 1974 edition of the *Summary of National Transportation Statistics* is essentially an updated version of the 1973 edition, although some new tables and graphs have been added to the section called "Transportation, Energy, and the Environment".

Because of the growth in the demand for information on energy, we have recently published a compendium of energy supply and demand data in a separate report entitled *Energy Statistics — A Supplement to the Summary of National Transportation Statistics.*

The statistical summaries in this document are of three types: (1) tree displays, (2) modal profiles, and (3) transportation trends. The data base from which the summaries have been drawn consists of time series covering the years 1962 - 1972.

Data summarization involves the selection of certain statistics from the data base and displaying them in such a fashion that comparisons of transportation measures and trends can be made with ease. The first step in this process is to place the selected data in a logical framework.

In general, the data can be divided into three main categories: cost, inventory, and performance. The following list indicates the type of data included in each group:

I. Cost
   - A. Expenditures (private modes)
   - B. Revenue (for-hire modes)
   - C. Operating expenses
   - D. Federal expenditures
   - E. State and local expenditures

II. Inventory
   - A. Number of companies
   - B. Number of vehicles
   - C. Number of employees
   - D. Mileage

III. Performance
   - A. Vehicle-miles
   - B. Passenger-miles
   - C. Number of passengers carried
   - D. Ton-miles
   - E. Tons of freight hauled
   - F. Average passenger trip length
   - G. Average length of freight haul
   - H. Average speed
   - I. Number of fatalities
   - J. Number of fatal accidents
   - K. Total number of accidents

As illustrated in figure 1, the data set can be described as cost, inventory, and performance statistics for each of the following major modal categories; highway, rail, air, water, pipeline, international air, and international water.

Figure 2 illustrates the detailed modal breakdown used in this report. The dotted lines indicate alternative groupings, e.g., "subway and elevated" can be considered a subset of both "local transit" and "rail."

The framework presented in figure 2 is flexible, for it reflects the structures of the various sources of transportation data. One should notice, for example, that the breakdown of the general aviation category comes from the Federal Aviation Administration *Statistical Handbook of Aviation.*

Tree Displays. Figure 2 provides the format for the tree displays. By placing numbers in the appropriate cells of the tree, it is possible to present one year's data for a given generalized measure for all modes of transportation. The following data are presented in tree format:

A. Expenditures and revenues (1972)
B. Vehicle-miles (1972)
C. Passenger-miles (1972)
D. Ton-miles (1972)
E. Number of vehicles (1972)
F. Fatalities (1972)

Some precision in definition is lost with this display technique, but the source information in the appendix attempts to qualify the statistics requiring further explanation.

Modal Profiles. A modal profile lists the most recent cost, inventory, and performance data available in the data base for a given mode. It is important to note that not all of the measures listed on page 1 are available for each mode, nor are they always applicable. This is clearly illustrated by the difference in the type and amount of data recorded for air carrier and oil pipeline.

Our intent was to provide 1962 and 1972 values for each measure. In some instances the 1972 value is not available, and either the 1971 or most recent value is listed instead.

Transportation Trends. Included in these tables are annual data from 1962 to 1972. A variety of cost, inventory, and performance items are represented in this section.

Supplementary Data. There has been a growing demand for data that relate transportation to the overall economy and the environment. This report touches on some of the major topics, such as national income derived from transportation, oil pollution from tanker accidents, and noise pollution from transportation sources.

Source Information and Glossary of Terms. Appendix A is a detailed listing of the sources of data contained in this document. A special footnote system has been devised for the tree displays (fig. 3-8). In figure 3, for example, the "local transit" cell contains the standard reference number (19) in the upper right-hand corner. In appendix A under figure 3 we find the number (19), after which the source of the local transit datum is given.

Feeling that the usefulness of transportation data depends greatly on clarity of definition, we have included in appendix B a glossary of terms. This section is organized by mode and has been assembled from existing glossaries, such as that in the Civil Aeronautics Board *Handbook of Airline Statistics.* The lack of comparable glossaries in other statistical handbooks makes it difficult to prepare a complete dictionary.

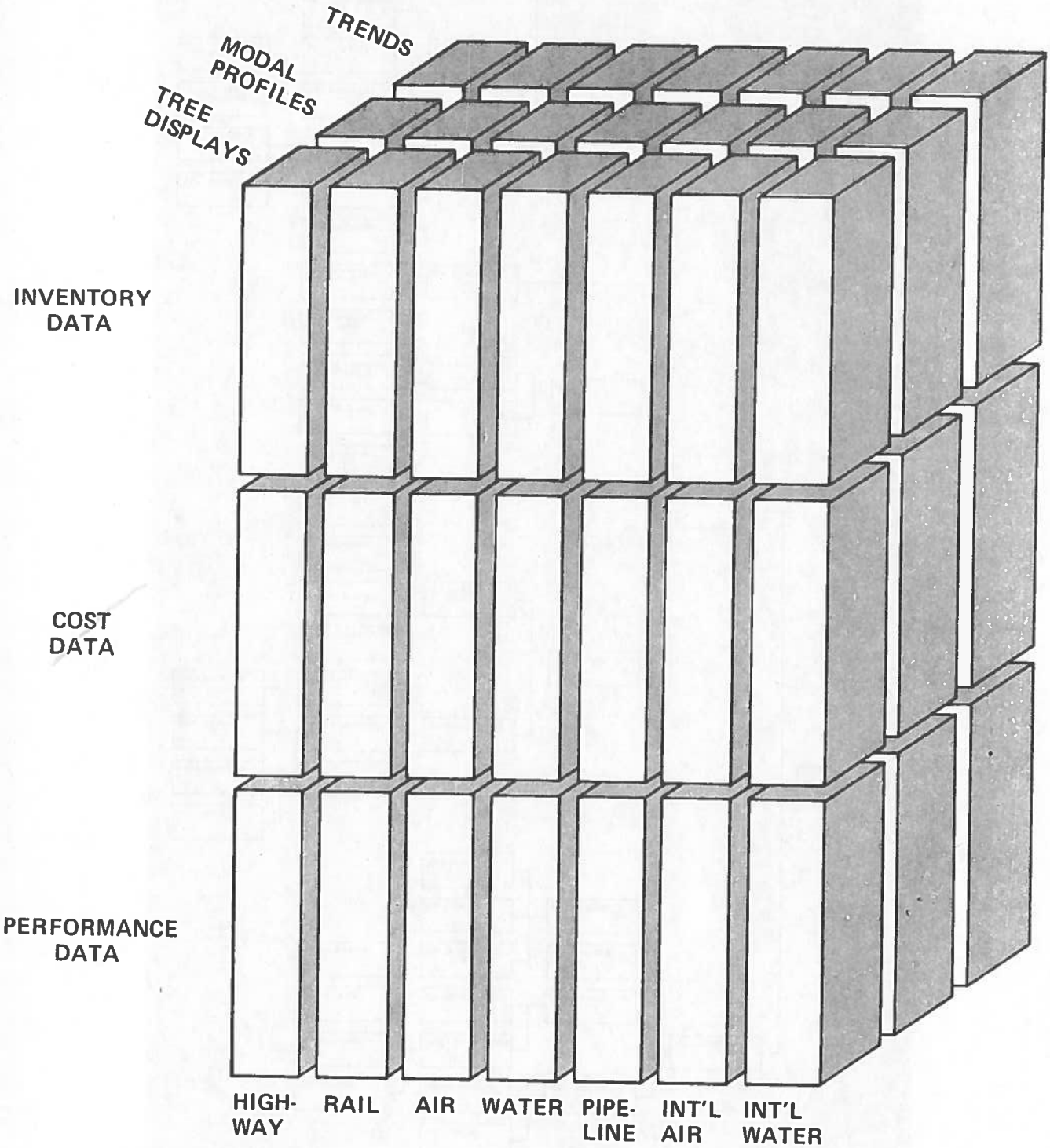


Figure 1. Organization of the Data

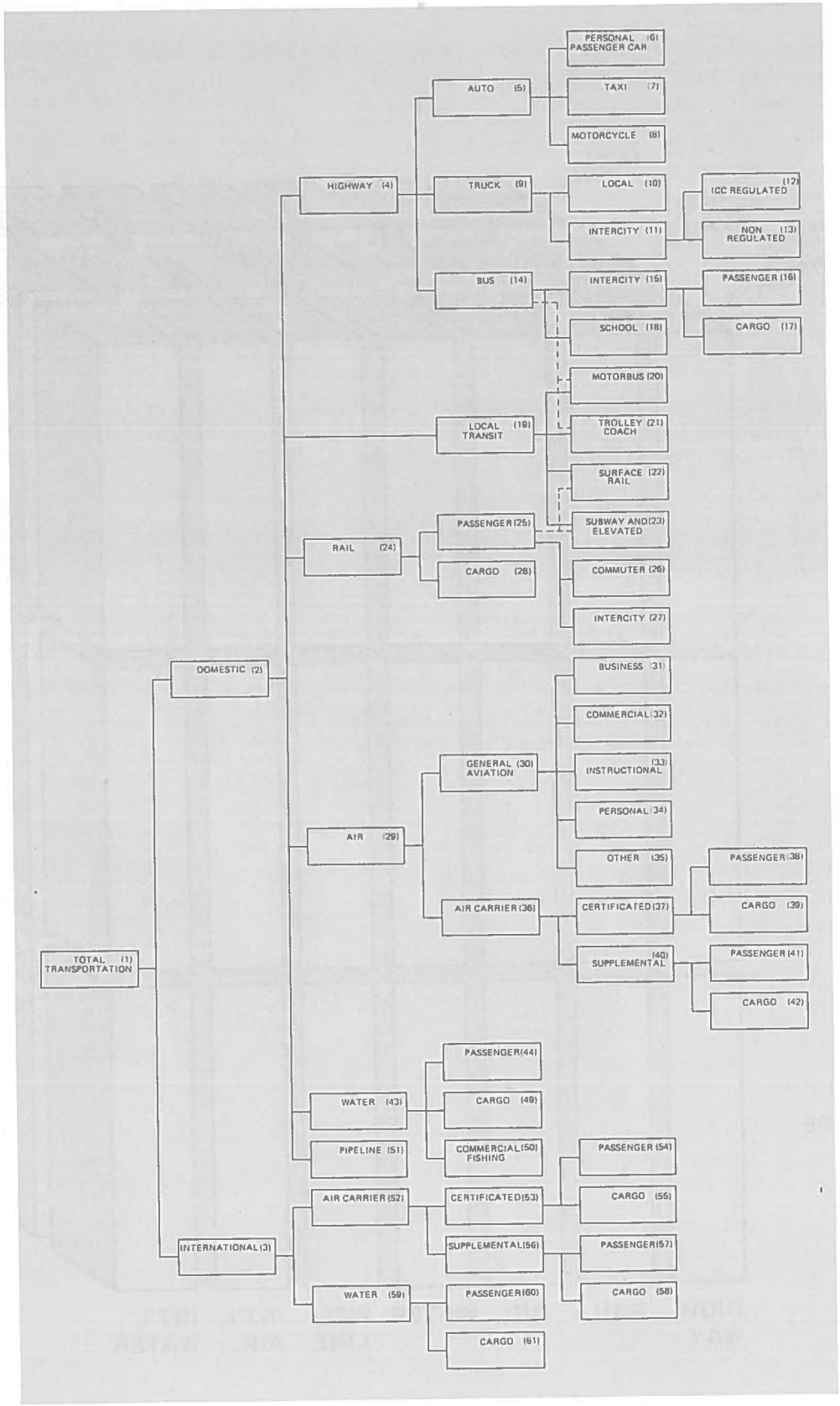
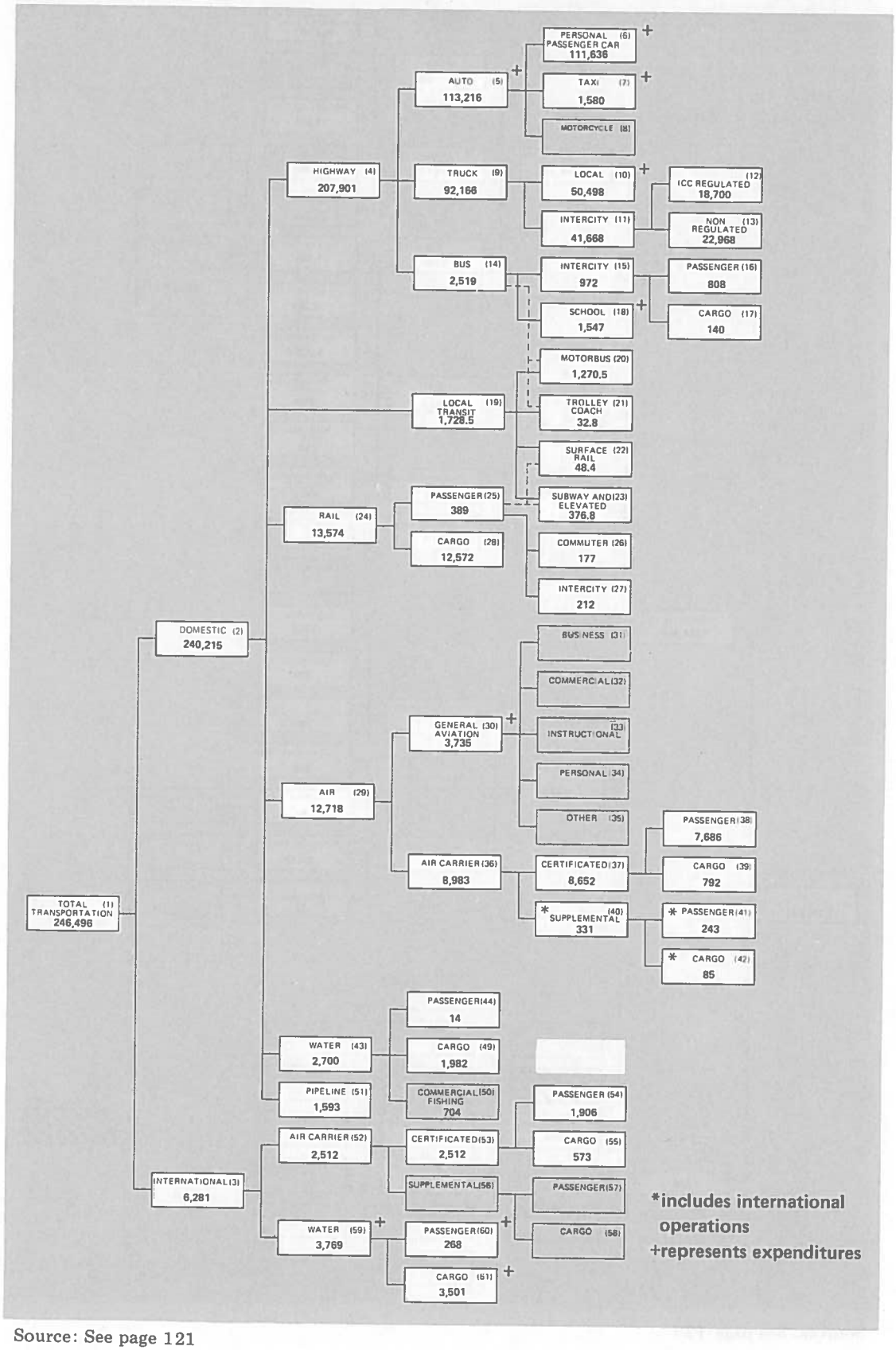


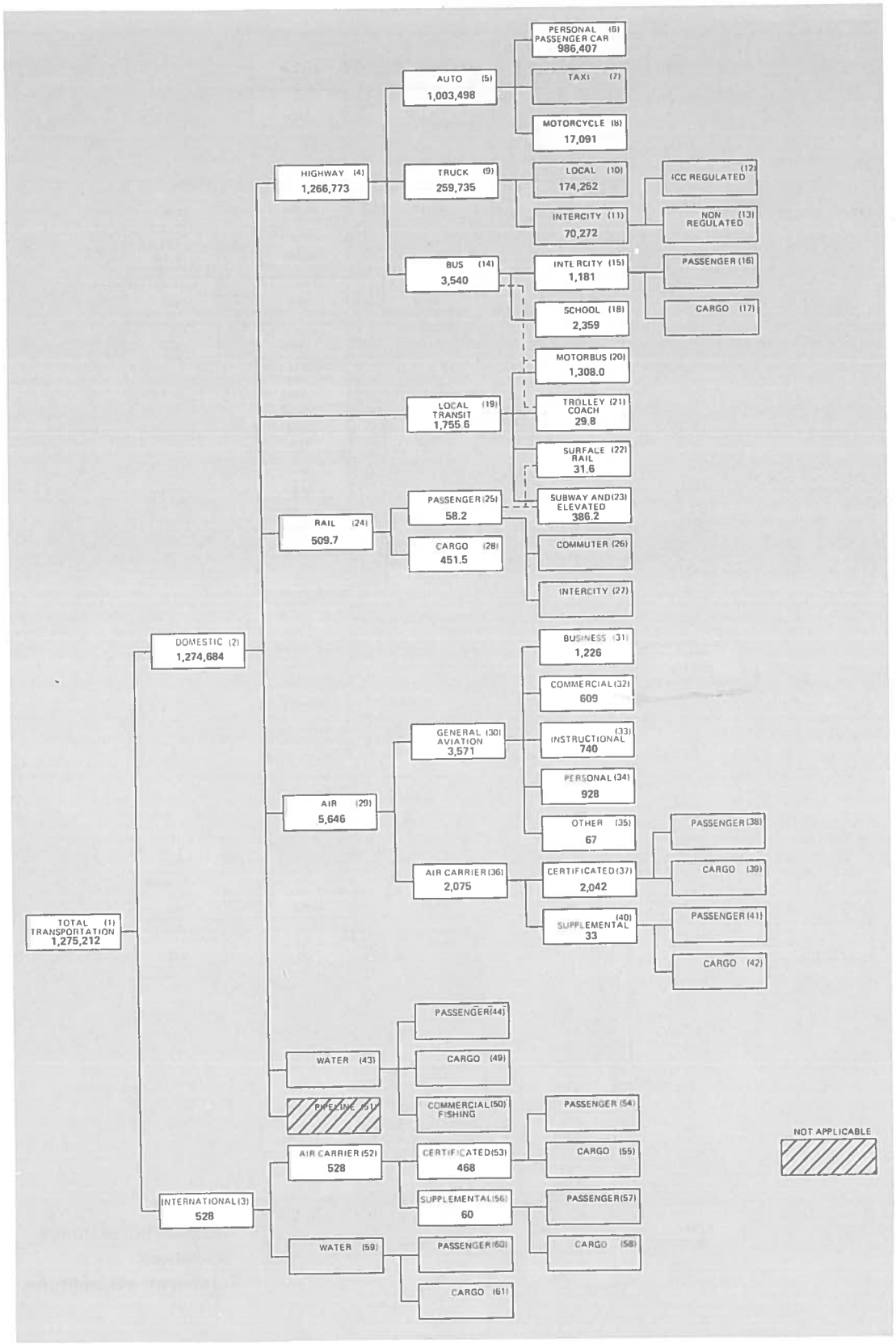
Figure 2. Modal Structure

TREE DISPLAYS



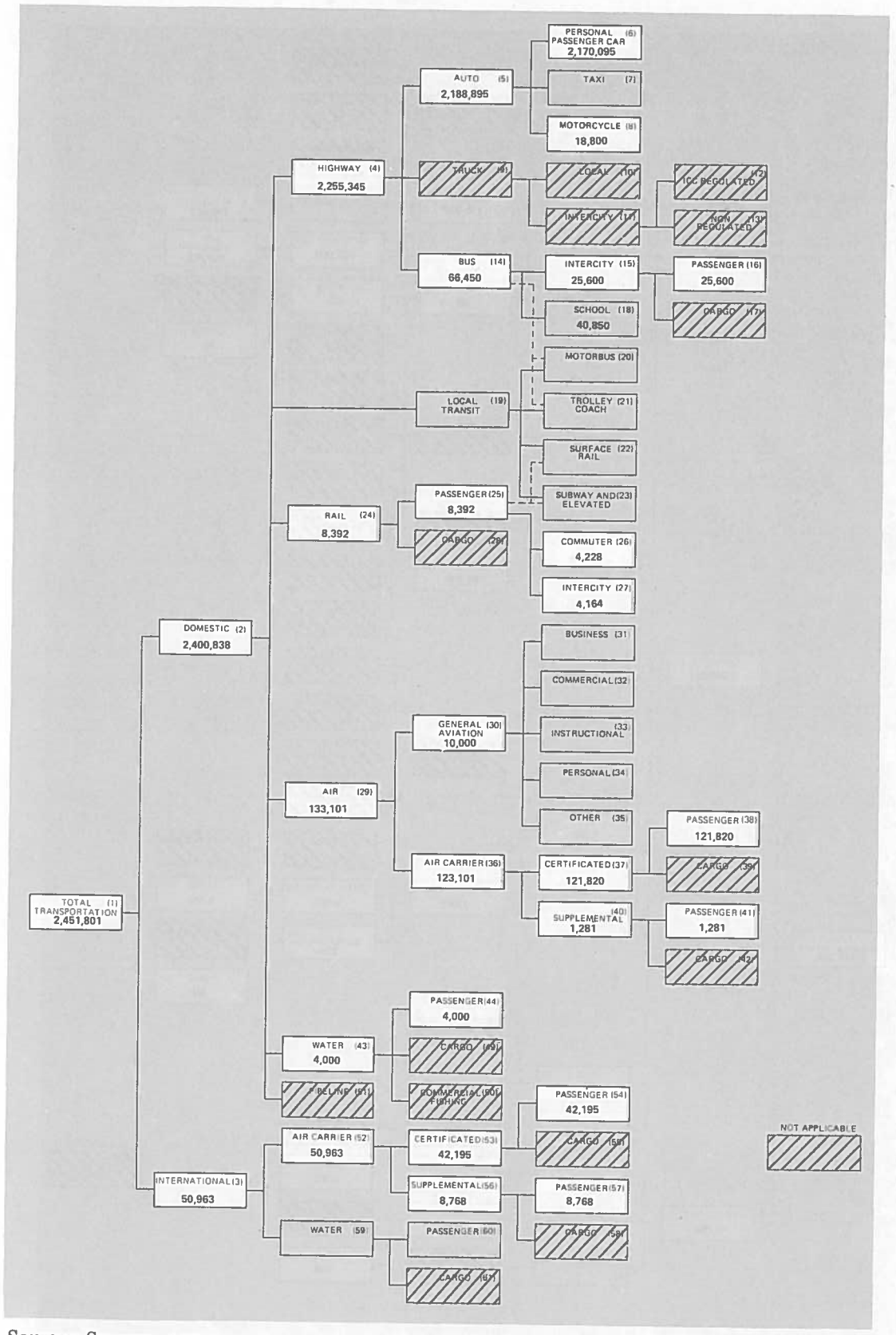
Source: See page 121

Figure 3. Expenditures & Revenues ($ Millions) - 1972



Sources: See page 123

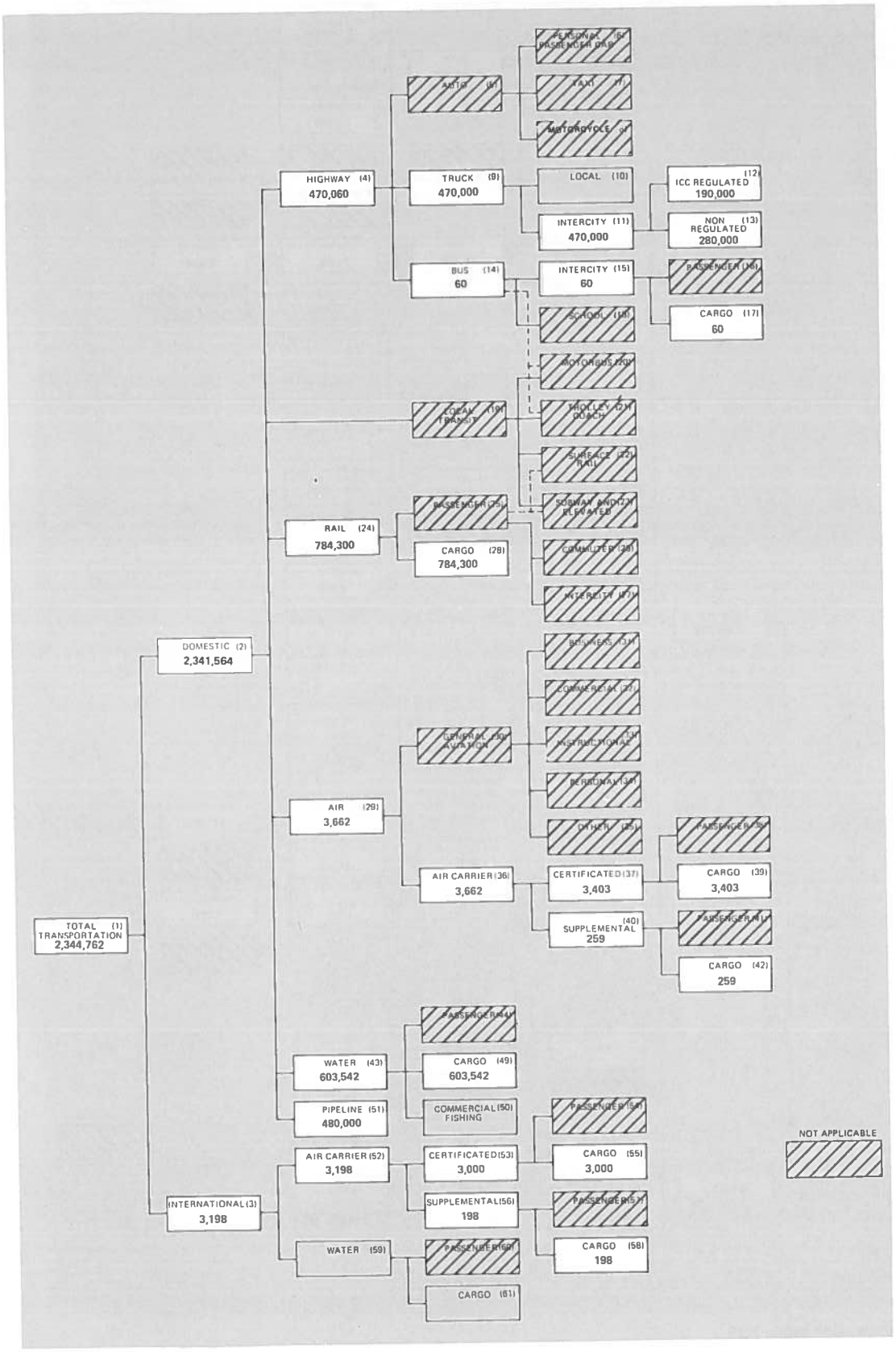
Figure 4. Vehicle Miles (Millions) - 1972



Sources: See page 125

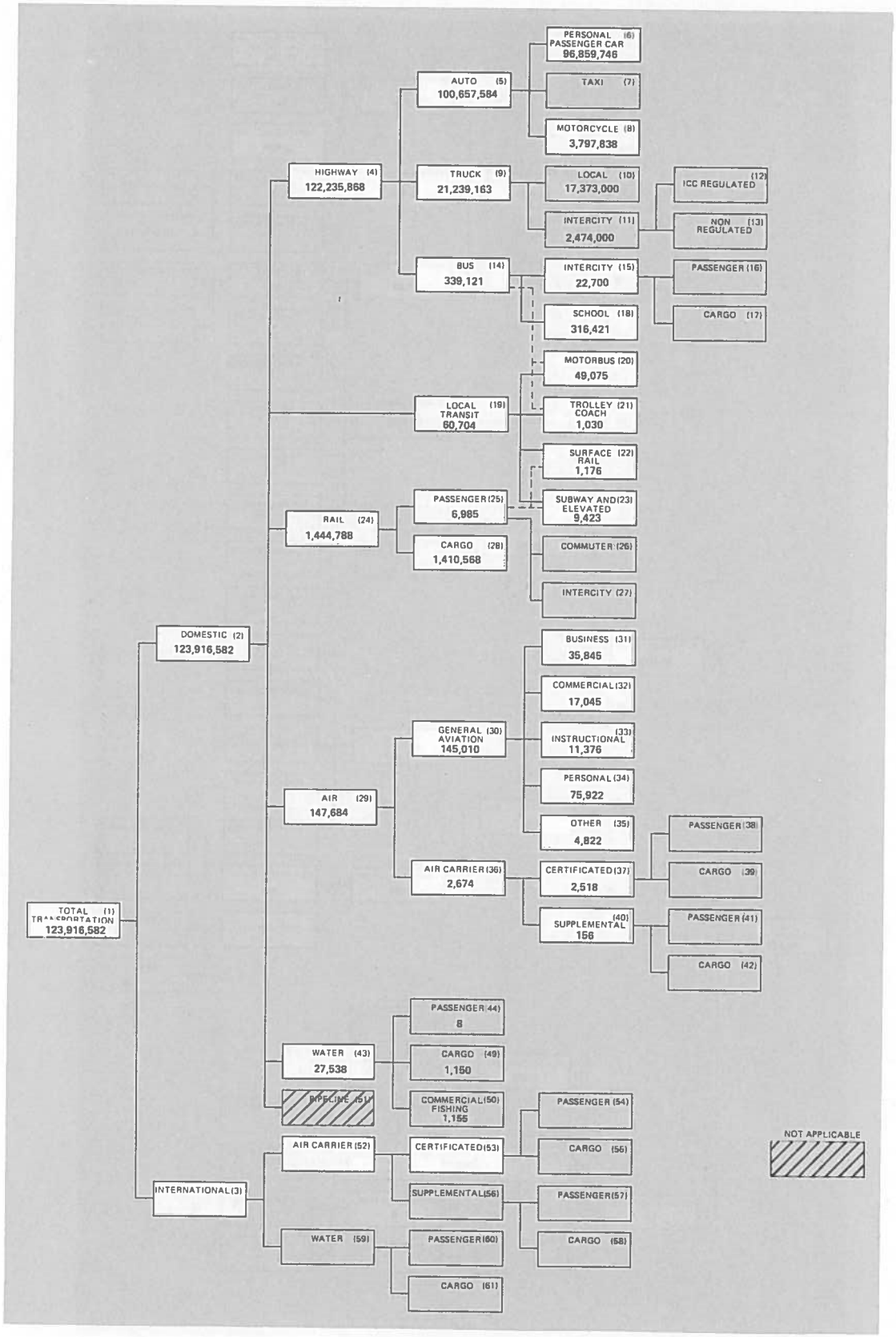
Figure 5. Passenger Miles (Millions) - 1972

554-802 O - 74 - 2



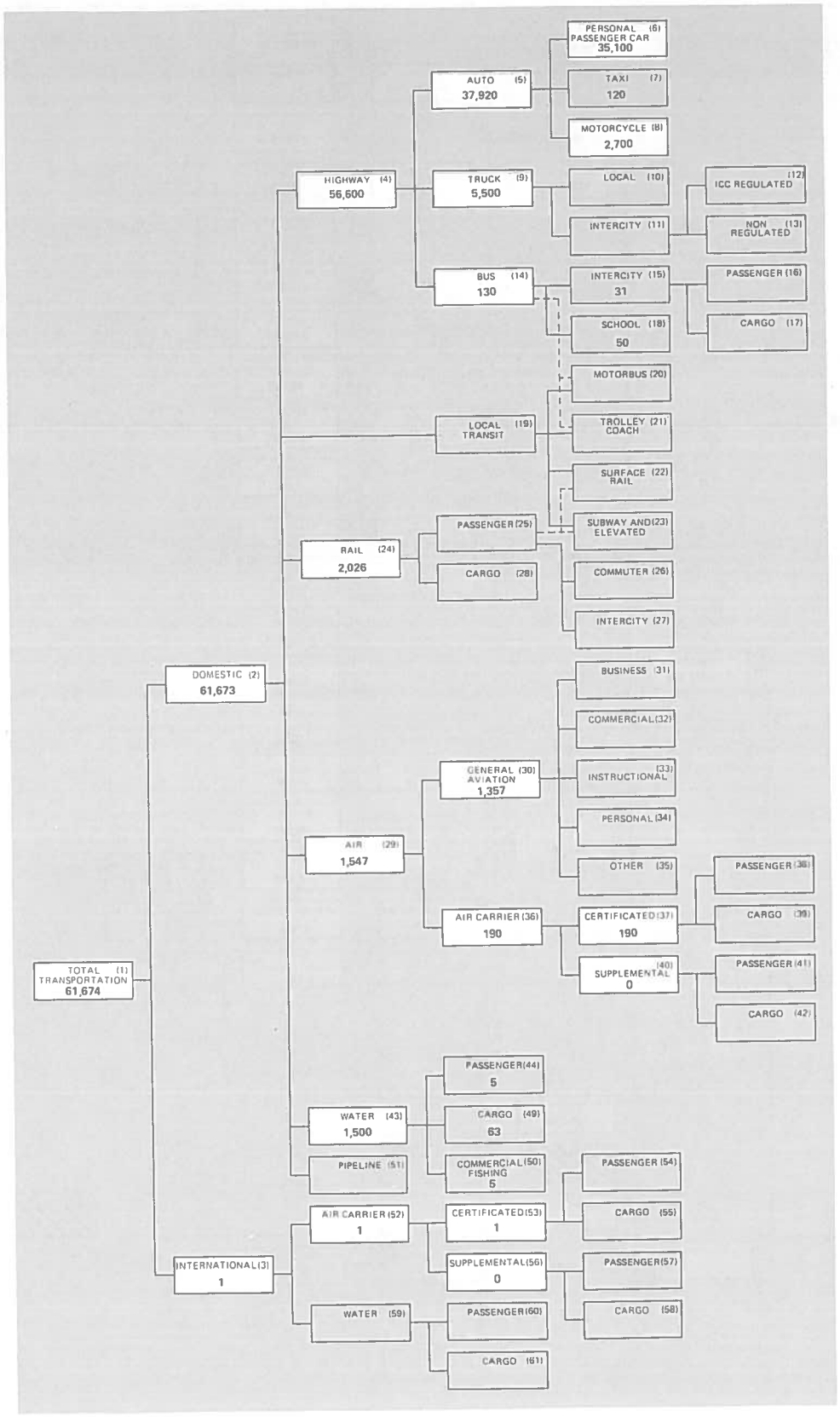
Sources: See page 126

Figure 6. Cargo Ton Miles (Millions) - 1972



Sources: See page 127

Figure 7. Number of Vehicles - 1972



Sources: See page 129

Figure 8. Number of Fatalities - 1972

MODAL PROFILES

Modal Profile Source References and % Change Calculations

The 1974 Modal Profiles have been augmented to provide specific page references for each Profile data element and to permit comparison of the most recent data entries (1972) with the 1962 and 1971 data entries.

Specific page references are obtained as follows: The first data element at the top of each Profile data column is directly followed to its right by an italicized page reference letter. This reference letter then applies to all subsequent data elements in that Profile column until the next page reference letter occurs. The next reference letter then applies to the Profile data element on its left and to all subsequent data in that Profile column until the next page reference occurs. The specific source and page reference may then be found in the list of sources at the end of that particular Profile.

% Change 1971-1972 refers to the usual per cent difference between 1972 data and 1971 data. Annual % Change 1962-1972 is obtained from the relation: $D_{72} = D_{62} (1 + X)^{10}$ where D_{62} and D_{72} refer to 1962 and 1972 data respectively and X is the Annual % Change 1962-1972.

AIR CARRIER PROFILE

I. FINANCIAL	1962	1971	1972	1962-1972 Average Annual % Change	1971-1972 % Change
Operating Revenues ($ millions)					
Certificated carriers, domestic operations					
Transport revenues	2,494.7 *a*	7,597.7 *k*	8,499.4 *k*	13.0	11.9
Nontransport revenues	93.9	155.6	152.4	5.0	−2.1
Total operating revenues	2,588.6	7,753.3	8,651.8	12.8	11.6
Certificated carriers, international operations					
Transport revenues	838.5 *b*	2,052.6 *l*	2,260.5 *l*	10.4	10.1
Nontransport revenues	11.7	27.7	23.8	7.4	−14.1
Total operating revenues	850.2	2,080.3	2,284.3	10.4	9.8
Supplemental carriers, domestic plus international operations					
Transport revenues	n/a	354.0 *m*	328.5 *m*	n/a	−7.2
Nontransport revenues	n/a	9.7	2.6	n/a	−73.2
Total operating revenues	n/a	363.7	331.1	n/a	−9.0
Operating Expenses ($ millions)					
Certificated carriers, domestics operations	2,488.3 *a*	7,496.2 *k*	8,158.5 *k*	12.6	8.8
Certificated carriers, international operations	760.4 *b*	2,050.1	2,233.9	11.4	9.0
Supplemental carriers, domestic plus international operations	99.8 *c*	355.2 *m*	326.8 *m*	12.6	−8.0
II. INVENTORY					
Number of carriers					
Domestic and international					
Certificated	53 *d*	40 *c*	38 *c*	−3.3	−5.0
Supplemental	15 *c*	12	10	−4.0	−16.7
Number of Aircraft Available for Service					
Domestic and international					
Certificated, all services	1,948 *c*	2,536 *c*	2,518 *c*	2.6	−0.7
Supplemental	225	184	156	−3.6	−15.2
Number of Employees					
Domestic					
Certificated, all services	139,976 *e*	244,492	254,646	6.2	4.2
Supplemental	2,288	5,229	5,002	8.1	−4.3
International					
Certificated, all services	32,769	47,317	46,947	3.7	−0.8

AIR CARRIER PROFILE (cont.)

III. PERFORMANCE	1962	1971	1972	1962-1972 Average Annual % Change	1971-1972 % Change
Aircraft Revenue-Miles (millions)					
Domestic					
Certificated, all services	887.0 *f*	2,044.6 *n*	2,041.7 *n*	8.7	−0.1
Scheduled service	833.3	2,003.9	1,999.5	9.1	−0.2
Nonscheduled service	43.7	40.7	42.2	−0.3	3.7
Supplemental	n/a	35.5 *o*	32.6 *o*	n/a	−8.2
International					
Certificated, all services	197.1 *g*	464.9 *p*	468.1 *p*	9.0	0.7
Scheduled service	176.5	374.0	376.3	7.9	0.6
Nonscheduled service	20.6	90.9	81.8	14.8	−10.0
Supplemental	n/a	67.2 *o*	60.4 *o*	n/a	−10.1
Total	n/a	2,612.2	2,602.9	n/a	−0.4
Revenue Passenger-Miles (millions)					
Domestic					
Certificated, all services	34,297.5 *f*	109,803.8 *n*	121,820.0 *n*	13.5	10.9
Scheduled service	33,622.6	106,438.4	118,138.0	13.4	11.0
Nonscheduled service	674.9	3,365.4	3,682.0	18.5	9.4
Supplemental	n/a	914.0 *o*	1,281.3 *o*	n/a	40.2
International					
Certificated, all services	11,972.3 *g*	39,501.5 *p*	42,195.3 *p*	13.4	6.8
Scheduled service	10,137.8	29,219.3	34,268.3	13.0	17.3
Nonscheduled service	1,834.5	10,282.2	7,927.0	15.8	−22.9
Supplemental	n/a	9,659.7 *o*	8,768.4 *o*	n/a	−9.2
Total	n/a	159,879.0	174,065.0	n/a	8.9
Revenue Passenger Load Factor (%)					
Domestic and international					
Certificated scheduled service	53.0 *h*	48.5 *n*	53.0 *n*	0.0	9.3
Domestic					
Certificated scheduled service	52.6 *f*	48.1	52.1	−0.1	8.3
Revenue Ton-Miles of Freight[1] (millions)					
Domestic					
Certificated all services	919.1	2,359.2	2,627.2	11.1	11.4
Scheduled service	567.7	2,195.3	2,480.1	15.9	13.0
Nonscheduled service	351.4	163.9	147.1	−8.3	−10.3
Supplemental	n/a	305.6	258.9	n/a	−15.3
International					
Certificated, all services	399.4 *g*	2,195.1 *p*	2,483.4 *p*	20.1	13.1
Scheduled service	330.5	1,517.0	1,737.0	18.0	14.5
Nonscheduled service	68.9	678.1	746.4	26.9	10.1
Supplemental	n/a	195.6	197.9	n/a	1.2

AIR CARRIER PROFILE (cont.)

	1962	1971	1972	1962-1972 Average Annual % Change	1971-1972 % Change
Average Overall Airborne Speed (mph)					
Domestic					
Certificated, scheduled service	289 *i*	410 *c*	410 *c*	3.6	0.0
International					
Certificated, scheduled service	389	480	480	2.1	0.0
Total Number of Accidents (injury & no-injury)[2]					
Certificated Air Carriers	68 *j*	46 *j*	48 *j*	−3.4	4.3
Scheduled service	50	42	43	−1.5	2.4
Domestic[3]	40	33	37	−0.8	12.1
International	10	9	6	−5.0	−33.3
Nonscheduled operations	18	3	5	−12.0	66.7
Domestic[3]	n/a	2	4	n/a	100.0
International	n/a	1	1	n/a	0.0
Supplemental Air Carriers	5	1	2	−8.8	100.0
Domestic[4]	n/a	1	2	n/a	100.0
International[4]	n/a	0	0	n/a	0.0
Number of Fatalities[2]					
Certificated Air Carriers	146	203	190	2.7	−6.4
Scheduled service	146	198	186	2.5	−6.1
Domestic[3]	146	194	185	2.4	−4.6
International	0	4	1	0.0	−75.0
Nonscheduled operations	139	5	4	−29.9	−20.0
Domestic[3]	n/a	5	4	n/a	−20.0
International	n/a	0	0	n/a	0.0
Supplemental Air Carriers	3	0	0	−100.0	0.0
Domestic[4]	n/a	0	0	n/a	0.0
International[4]	n/a	0	0	n/a	0.0

n/a = not available

[1] Excludes ton-miles of express mail, and excess baggage.
[2] Includes crew in passenger, cargo and nonrevenue flights.
[3] Including Alaska, Hawaii.
[4] Including military contract.

Sources: Civil Aeronautics Board, *Handbook of Airline Statistics*, 1971.
a-210, *b*-221, *d*-9, *e*-63, *f*-106, *g*-117, *h*-105, *i*-62
Civil Aeronautics Board, *Air Carrier Traffic Statistics*, Dec. 1972.
n-1, *o*-43, *p*-7,
Civil Aeronautics Board, *Air Carrier Financial Statistics*, Dec. 1972.
k-1, *l*-7, *m*-101,
National Safety Council, *Accident Facts*, 1963, 1972, 1973.
j-76
Civil Aeronautics Board, *Personal Communication c*

GENERAL AVIATION PROFILE

	1962	1971	1972	1962-1972 Average Annual % Change	1971-1972 % Change
I. COST					
Expenditures ($ millions)					
Total	1,016*a*	3,242[r]*a*	3,735*a*	13.9	15.2
Aircraft	182	429	743	15.1	73.2
Operating costs	834	2,813[r]	2,992	13.6	6.4
II. INVENTORY					
Number of Active Aircraft					
Total, all aircraft	84,121*b*	131,148*c*	145,010*c*	5.6	10.6
III. PERFORMANCE					
Number of Miles Flown (millions)					
Business	934.7*d*	1,129.0*e*	1,225.9*e*	2.7	8.6
Commercial	366.5	506.7	609.3	5.2	20.2
Instructional	256.0	651.0	739.9	11.2	13.7
Personal	387.6	794.7	928.3	9.1	16.8
Other	19.7	61.9	67.5	13.1	9.0
Total	1,964.5	3,143.3	3,570.9	6.2	13.6
Number of Hours Flown (millions)					
Business	5.4*f*	7.1*g*	7.8*g*	3.7	9.9
Commercial	3.1	4.3	6.7	8.0	55.8
Instructional	2.4	6.4	4.7	7.0	−26.6
Personal	3.5	7.2	8.4	9.1	16.7
Other	.1	.4	1.4	30.2	250.0
Total	14.5	25.4	29.0	7.2	14.2
Number of Fatalities					
Total	857*h*	1,322*h*	1,357*h*	4.7	2.6
Number of Accidents (injury and no-injury)					
Total	n/a	4,686	4,230	n/a	−9.7

[r] = revised

Sources: Federal Aviation Administration, *Statistical Handbook of Aviation*, 1970, 1972, 1973.
b-180, *c*-Table 8.2, *d*-211, *e*-Table 9.10, *f*-210, *g*-Table 9.9
National Safety Council, *Accident Facts*, 1963, 1972, 1973.
h-76
Transportation Association of America, *Transportation Facts & Trends*, Jan. 1974, Quarterly Supplement.
a-5

HIGHWAY PROFILE

	1962	1971	1972	1962-1972 Average Annual % Change	1971-1972 % Change
I. FINANCIAL					
Government Expenditures ($ millions)					
Federal	3,173 *a*	5,648 *a*	5,530 *a*	5.7	−2.1
State and local	9,129	16,819	17,541	6.7	4.3
Total	12,302	22,467	23,071	6.5	2.7
II. INVENTORY					
Rural Mileage					
Under State control					
State primary system	406,705 *b*	408,332 *b*	408,219 *b*	0.0	0.0
State secondary roads	246,647	274,399	276,269	1.1	0.7
Other State roads	19,787	30,054	27,605	3.4	−8.1
Total	673,139	712,785	712,093	0.6	−0.1
Under local control					
County roads	1,741,885	1,726,603	1,736,385	0.0	0.6
Town and township roads	542,189	497,902	483,174	−1.1	−3.0
Other local roads	67,361	31,766	32,464	−7.0	2.2
Total	2,351,435	2,256,271	2,252,023	−0.4	−0.2
Under Federal control	119,763	196,839	209,171	5.7	6.3
Municipal Mileage					
Under State control					
Extensions of State primary system	44,927	61,060	62,630	3.4	2.6
Extensions of State secondary roads	11,026	16,326	17,336	4.6	6.2
Total	55,953	77,386	79,966	3.6	3.3
Under local control					
Local city street	399,291	515,661	533,460	2.9	3.5
Total municipal mileage	455,244	593,047	613,426	3.0	3.4
Total Rural and Municipal Mileage	3,599,581	3,758,942	3,786,713	0.5	0.7

Sources: Federal Highway Administration, *Highway Statistics*, 1962, 1971, 1972.
b-Table M-1
Association of American Railroads, *Government Expenditures*, May 1963.
a-Table 5

AUTOMOBILE PROFILE

	1962	1971	1972	1962-1972 Average Annual % Change	1971-1972 % Change
I. FINANCIAL					
Expenditures ($ millions)					
New and used cars	22,093 *a*	41,687[r] *a*	46,389 *a*	7.7	11.3
Tires, tubes, accessories	3,008	7,381[r]	8,320	10.7	12.7
Gasoline and oil	15,186	27,674[r]	30,027	7.1	8.5
Tolls	385	684[r]	720	6.5	5.3
Insurance	2,398	5,085[r]	5,366	8.4	5.5
Interest on debt	2,913	5,889[r]	6,485	8.3	10.1
Auto registration fees	931	1,743[r]	1,800	6.8	3.3
Operator's permit fees	120	224[r]	251	7.7	12.1
Retail, greasing, washing, parking, storage, rental	6,118	11,324[r]	12,278	7.2	8.4
Total	53,152	101,691[r]	111,636	7.7	9.8
Revenues ($ millions)					
Taxi	828	1,535	1,580	6.7	2.9
II. INVENTORY					
Number of Vehicle Registrations					
Passenger cars and taxis	65,648,961 *b*	92,799,052 *b*	96,330,603 *b*	3.9	3.8
Motorcycles	646,102	3,323,081	3,774,996	19.3	13.6
Number of Employees					
Taxis	112,500 *c*	105,100 *e*	100,000 *d*	−1.2	−4.9
III. PERFORMANCE					
Vehicle-Miles (millions)[1]					
Urban streets	303,619 *f*	525,212 *f*	567,541 *f*	6.5	8.1
Main rural roads	242,521	323,383	330,605	3.1	2.2
Local rural roads	82,099	104,560	105,352	2.5	0.8
Total travel	628,239	954,155	1,003,498	4.8	5.2
Vehicle-Miles (millions)					
Motorcycles	n/a	15,053	17,091	n/a	13.5
Passenger car and taxis	n/a	939,102	986,407	n/a	5.0
Total	628,239	954,155	1,003,498	4.8	5.2
Passenger-Miles (millions)					
Total travel, passenger cars & taxis[2]	1,382,126	2,066,024	2,170,095	4.6	5.0
Total travel, motorcycles[3]	n/a	16,588	18,000	n/a	8.5
Average Speed (mph), Main Rural Roads[4]					
Passenger cars	55 *g*	63 *g*	62 *g*	1.2	−1.6
Number of Vehicles in All Accidents					
Motorcycles	100,000 *h*	300,000 *h*	320,000 *h*	12.3	6.7
Passenger cars	16,400,000	23,000,000	24,500,000	4.1	6.5
Taxis	150,000	190,000	180,000	1.8	−5.3

AUTOMOBILE PROFILE (cont.)

	1962	1971	1972	1962-1972 Average Annual % Change	1971-1972 % Change
Number of Vehicles in Fatal Accidents					
Motorcycles	650	2,300	2,600	14.9	13.0
Passenger cars	39,500	51,300	53,400	3.1	4.1
Taxis	100	230	200	7.2	−13.0
Number of Fatalities, Passenger Cars & Taxis	26,800 *i*	34,200 *i*	35,200 *i*	2.8	2.9
Number of Fatalities, Motorcycle Driver plus Passengers	759 *h*	2,410 *h*	2,700 *h*	13.5	12.0

n/a = not available
^{r} = revised

[1] Includes passenger cars, taxis and motorcycles.
[2] Based on vehicle-mile data from the Federal Highway Administration, Dept. of Transportation, and an average occupancy of 2.2.
[3] Based on vehicle-mile data from the Federal Highway Administration, Dept. of Transportation, and an average occupancy of 1.1.
[4] Speed of free-flowing traffic along level sections of highway.

Sources: National Safety Council, *Accident Facts*, 1963, 1972, 1973.
h-56, *i*-75
Federal Highway Administration, *Highway Statistics*, 1962, 1971, 1972.
b-Table MV-1, *f*-Table VM-1, *g*-Table VS-1
Transportation Association of America, *Transportation Facts and Trends*, Oct. 1973, Quarterly Supplement, Jan. 1974.
a-5, *e*-23,
Department of Labor, *Personal Communication d*
Transportation Association of America, *Personal Communication c*

BUS PROFILE

	1962	1971	1972	1962-1972 Average Annual % Change	1971-1972 % Change
I. FINANCIAL					
Expenditures ($ millions)					
School bus	576 *a*	1,375 *a*	1,547 *a*	10.4	12.5
Operating Revenues ($ millions)					
Intercity bus, total	621.6 *c*	953.2 *c*	974.4 *b*	4.6	2.2
Intercity bus, Class I	529.6 *d*	758.4 *d*	775.3	3.9	2.2
Operating Expenses ($ millions)					
Intercity bus, total	540.0 *c*	851.8 *c*	882.1	5.0	3.6
Intercity bus, Class I	452.8 *d*	664.4 *d*	689.6	4.3	3.8
Taxes Assignable to Operations ($ millions)[1]					
Intercity bus, total	58.4 *c*	80.7[r] *c*	84.1	3.7	4.2
Intercity bus, Class I	39.7 *d*	51.5 *d*	54.0	3.1	4.9
II. INVENTORY					
Number of Operating Companies					
Intercity bus	1,100 *c*	1,000 *c*	1,000 *c*	−0.9	0.0
Number of Vehicles					
Intercity bus	21,160	23,000	22,500 *b*	0.6	−2.2
Number of Employees of Operating Companies					
Intercity bus	45,800	50,200	49,100	0.7	−2.2
Miles of Highway Served					
Intercity	266,000 *c*	267,000 *c*	270,000 *b*	0.1	1.1
III. PERFORMANCE					
Vehicle-Miles (millions)					
Commercial bus[2]					
Urban streets	1,776 *e*	1,767 *e*	1,647 *e*	−0.8	−6.8
Main rural roads	915	925	913	0.0	−1.3
Local roads	165	193	190	1.4	−1.6
Total travel	2,856	2,885	2,750	−0.4	−4.7
School and nonrevenue bus					
Urban streets	270	429	475	5.8	10.7
Main rural roads	656	825	880	3.0	6.7
Local rural roads	694	958	1,004	3.8	4.8
Total travel	1,620	2,212	2,359	3.8	6.6
All buses					
Urban streets	2,046	2,196	2,122	0.4	−3.4
Main rural roads	1,571	1,750	1,793	1.3	2.5
Local rural roads	859	1,151	1,194	3.3	3.7
Total travel	4,476	5,097	5,109	1.3	0.2

BUS PROFILE (cont.)

	1962	1971	1972	1962-1972 Average Annual % Change	1971-1972 % Change
Revenue Passenger-Miles (millions)					
Intercity bus, total	21,800 *c*	25,500 *c*	25,600 *b*	1.6	0.4
Intercity bus, Class I[3]	14,936 *f*	14,104 *f*	13,576	−1.0	−3.7
Number of Revenue Passengers (millions)					
Intercity bus, total	355 *c*	395 *c*	393 *b*	1.0	−0.5
Intercity bus, Class I	270 *f*	167 *f*	164	−4.9	−1.8
Average Speed (mph)[4]					
Commercial bus, main rural roads	57.0 *g*	60.0 *g*	60.5 *g*	0.6	0.8
Number of Fatalities					
All buses	60	130	130	8.0	0.0
Intercity buses, Class I[5]	n/a	31	31	n/a	0.0

r = revised from 1972 Bus Facts.

[1] Excludes income taxes.
[2] Includes local transit buses. See "Local Transit Profile" for more detailed information on urban bus transportation.
[3] Regular-route intercity service. Excludes local, suburban, charter, and special service.
[4] Speed of free-flowing traffic along level sections of highway.
[5] Class I only, representing about four-fifths of total intercity bus passenger mileage.

Sources: National Association of Motorbus Owners, *Bus Facts*, 1972.
c-24, *d*-25, *f*-26
Federal Highway Administration, *Highway Statistics*, 1962, 1971, 1972.
e-Table VM-1
Transportation Association of America, *Transportation Facts and Trends*, Jan. 1974 Quarterly Supplement
a-5
National Association of Motorbus Owners, *Personal Communication b*
National Safety Council, *Accident Facts*, 1963, 1972, 1973.
g-75

TRUCK PROFILE

	1962	1971	1972	1962-1972 Average Annual % Change	1971-1972 % Change
I. FINANCIAL					
Revenues ($ millions)					
Local	16,536 *a*	41,670^{r}*a*	50,498^{p}*a*	11.8	21.2
Intercity					
ICC-regulated	8,131	16,700^{r}	18,700^{p}	8.7	12.0
Non-ICC-regulated	12,332	20,870^{r}	22,968^{p}	6.4	10.1
Operating Revenues of Class I Intercity Motor Carriers ($ millions)					
Freight, intercity, common	5,017.4 *b*	11,880.0^{r}*c*	13,720.0^{p}*c*	10.6	15.5
Freight, intercity, contract	207.7	404.4^{r}	505.5^{p}	9.3	25.0
Freight, local	65.8	503.9^{r}	586.8^{p}	24.5	16.5
Trans. for other Classes I and I carriers	37.2	102.3^{r}	159.3^{p}	15.7	55.7
Other	45.7	120.7^{r}	197.6^{p}	15.8	63.7
Total	5,373.8	13,011.2^{r}	15,169.2^{p}	10.9	16.6
Operating Expenses of Class I Intercity Motor Carriers ($ millions)	4,591.3	12,237.7^{r}	14,286.3^{p}	12.0	16.7
II. INVENTORY					
Number of Truck Registrations					
Private and commercial	12,157,663 *d*	18,805,323 *d*	20,225,745 *d*	5.2	7.6
Federal	94,538 *e*	154,864 *e*	165,113 *e*	5.7	6.6
State, county, municipal	556,949 *e*	842,303 *e*	848,305 *e*	4.3	0.7
Total	12,809,150	19,802,490	21,239,163	5.2	7.3
Total Number of Employees Trucking and Trucking Terminals	885 *g*	991,000 *f*	1,016,800 *h*	102.3	2.6
Number of Companies, Class I Intercity Carriers of Property	954 *b*	1,355^{r}*c*	1,571^{p}*c*	5.1	15.9
Number of Employees, Class I Intercity Carriers of Property	275,772	506,765^{r}	540,134^{p}	7.0	6.6
III. PERFORMANCE					
Vehicle-Miles (millions)					
Urban streets	47,507 *g*	85,567 *g*	108,452 *g*	8.6	26.7
Main rural roads	66,092	109,381	116,632	5.8	6.6
Local rural roads	21,460	32,089	34,651	4.9	8.0
Total travel	135,059	227,037	259,735	6.8	14.4
Ton-Miles (millions)					
Intercity	331,900 *h*	445,000^{r}*i*	470,000^{p}*i*	3.5	5.6
Average Speed, Main Rural Highways (mph)[1]					
All trucks	49 *j*	56 *j*	56 *j*	1.3	0.0

TRUCK PROFILE (cont.)

	1962	1971	1972	1962-1972 Average Annual % Change	1971-1972 % Change
Average Length of Haul (miles)					
Class I intercity motor carriers					
Common	263 *k*	277 *k*	280 *l*	0.6	1.1
Contract	138	173	187	3.1	8.1

p = preliminary
r = revised

[1] Speed of free-flowing traffic along level sections of highway.

Sources: Federal Highway Administration, *Highway Statistics*, 1962, 1971, 1972.
d-MV-1, *e*-MV-7, *g*-VM-1, *j*-Table VS-1
Interstate Commerce Commission, *87th Annual Report to Congress*, 1973; *77th Annual Report to Congress*, 1963.
c-135, *i*-130 *b*-231, *h*-74
Transportation Association of America, *Transportation Facts and Trends*, Oct. 1973, Quarterly Supplement, Jan. 1974.
a-4, *f*-23
Interstate Commerce Commission, *Transport Economics*, Feb. - March, 1973.
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Transportation Association of America, *Personal Communication g*
Department of Labor, *Personal Communication h*
Interstate Commerce Commision, *Personal Communication l*

LOCAL TRANSIT PROFILE

	1962	1971	1972	1962-1972 Average Annual % Change	1971-1972 % Change
I. FINANCIAL					
Passenger Revenue ($ millions)					
Motorbus	910.1 *a*	1,226.8 *a*	1,218.2 *a*	3.0	−0.7
Subway and elevated	280.1	363.8	361.5	2.6	−0.6
Surface rail	66.3	40.1	39.6	−5.0	−1.2
Trolley coach	73.7	31.2	31.4	−8.2	0.6
Total	1,330.2	1,661.9	1,650.7	2.2	−0.7
Operating Revenue ($ millions)					
Motorbus	961.2	1,280.2	1,270.5	2.8	−0.8
Subway and elevated	293.0	379.4	376.8	2.5	−0.7
Surface rail	73.3	48.8	48.4	−4.1	−0.8
Trolley coach	76.0	32.3	32.8	−8.1	1.5
Total	1,403.5	1,740.7	1,728.5	2.1	−0.7
II. INVENTORY					
Number of Companies					
Electric railways[1]	17 *b*	15 *b*	15 *b*	−1.2	0.0
Motorbus	1,177	1,046	1,028	−1.3	−1.7
Trolley coach and motorbus	11	12	2	−15.7	−83.3
Number of Vehicles					
Motorbus	48,000 *c*	49,150 *c*	49,075 *c*	0.2	−0.2
Subway and elevated	8,865	9,325	9,423	0.6	1.1
Surface rail	2,219	1,225	1,176	−6.2	−4.0
Trolley coach	3,161	1,037	1,030	−10.6	−0.7
Total	62,245	60,737	60,704	-0.3-	-0.1
Number of Employees					
Motorbus, surface rail, trolley coach, subway and elevated	149,100 *d*	139,120 *d*	138,420 *d*	−0.7	−0.5
III. PERFORMANCE					
Revenue Vehicle-Miles (millions)					
Motorbus	1,515.2 *e*	1,375.5 *e*	1,308.0 *e*	−1.5	−4.9
Subway and elevated	386.7	407.4	386.2	0.0	−5.2
Surface rail	61.5	32.7	31.6	−6.4	−3.4
Trolley coach	84.0	30.8	29.8	−9.8	−3.2
Total	2,047.4	1,846.4	1,755.6	−1.5	−4.9
Revenue Passengers Carried (millions)					
Motorbus	4,733.0 *f*	3,734.8 *f*	3,569.3 *f*	−2.9	−4.4
Subway and elevated	1,704.0	1,494.0	1,454.0	−1.6	−2.7
Surface rail	284.0	155.1	147.6	−6.3	−4.8
Trolley coach	361.0	113.1	100.1	−12.0	−11.5
Total	7,122.0	5,497.0	5,271.0	−3.0	−4.1

[1]Includes surface rail and subway and elevated.

Sources: American Transit Association, *Transit Fact Book*, 1973-1974.
a-9, *c*-19, *d*-13, *e*-15, *f*-8
American Transit Association, *Personal Communication b.*

WATER TRANSPORT PROFILE

I. FINANCIAL	1962	1971	1972	1962-1972 Average Annual % Change	1971-1972 % Change
Revenues ($ millions)					
Domestic freight	1,537 *a*	1,954 *a*	1,982 *a*	2.6	1.4
Coastal waterways	726	825	764	0.5	−7.4
Inland waterways	323	547	588	6.2	7.5
Great Lakes	185	197	205	1.0	4.1
Locks, channels, etc.	303	385	425	3.4	10.4
International freight	1,526	3,195	3,501	8.7	9.6
Domestic passengers, intercity	16	12	14	−1.3	16.7
International passenger[1]	267	241	268	0.0	11.2
Revenue of Class A & B Carriers by Inland and Coastal Waterways ($ millions)					
Line service operating revenues					
Freight	185.2 *b*	306.4[r] *c*	332.4[p] *c*	6.0	8.5
Passenger	9.2	10.2[r]	11.3[p]	2.1	10.8
Other	2.5	12.3[r]	13.1[p]	18.0	6.5
Other operating revenue	3.1	3.0[r]	8.1[p]	10.1	170.0
Revenue from terminal operations	20.8	28.9[r]	36.4[p]	5.8	26.0
Rent and motor carrier revenue	15.9	33.3[r]	31.4[p]	7.0	−5.7
Total waterline operating revenues	252.5	394.0[r]	432.7[p]	5.5	9.8
Revenues of U.S. Commercial Fishing Fleet U.S. Commercial Landings ($ millions)	396 *aa*	643 *aa*	704 *aa*	5.9	9.5
Revenues of Maritime Carriers ($ millions)					
Coastwise and intercoastal service	103 *e*	82 *d*	108[p] *d*	0.5	31.7
Charter	24	61	56[p]	8.8	−8.2
Total vessel operating revenues	533	681	810[p]	4.3	18.9
Total waterline operating revenues	628	748	885[p]	3.5	18.3
Operating Expenses of Classes A and B Carriers by Inland and Intracoastal Waterways ($ millions)	226.4 *f*	348.0 *c*	375.5 *c*	5.2	7.9
Operating Expenses of Maritime Carriers ($ millions)	593.8 *g*	728.5	846.8	3.6	16.2
Government Expenditures ($ millions)					
Federal expenditures					
Coast Guard	284 *h*	617 *h*	688 *h*	9.3	11.5
Merchant Marine	437 *i*	358 *i*	422 *i*	−0.3	17.9
Total waterways	309 *j*	408 *j*	436 *j*	3.5	6.9
Inland and intracoastal waterways[2]	166 *k*	218 *k*	233 *k*	3.4	6.9
State and local expenditures					
Coast Guard	0 *h*	0 *h*	0 *h*	0.0	0.0
Merchant Marine	0 *i*	0 *i*	0 *i*	0.0	0.0
Total waterways	282 *j*	504 *j*	525 *j*	6.4	4.2

WATER TRANSPORT PROFILE (cont.)

II. INVENTORY	1962	1971	1972	1962-1972 Average Annual % Change	1971-1972 % Change
Number of Companies, Class A and B Carriers by Inland and Coastal Waterways	95 *l*	77*r c*	77*p c*	-2.1	0.0
Number of Companies, Maritime Carriers	23 *m*	18*r d*	16*p d*	-3.6	-11.1
Number of Employees					
Ships, boat building, and repairs	141,000 *n*	169,000 *p*	178,000 *o*	2.4	5.3
Transportation services	221,000	199,000	216,800	-0.2	8.9
Number of Employees					
Maritime carriers	16,333 *q*	10,662*r d*	10,058*p d*	-4.7	-5.7
Class A and B carriers by inland and coastal waterways	12,163 *r*	8,431*r c*	8,453*p c*	-3.6	0.3
Mileage of Commercially Navigable Inland Channels	25,260 *s*	25,543 *s*	25,543 *s*	0.1	0.0
Number of Vessels					
Total non-self-propelled	16,645 *t*	19,624 *t*	20,947 *t*	2.3	6.7
Dry cargo barges and scows	13,809	16,439	17,527	2.4	6.6
Tank barges	4,076	3,185	3,420	-1.7	7.4
Self-propelled towboats and tugs	4,076	4,230	4,278	0.5	1.1
U.S. Commercial Fishing Fleet	11,511 *bb*	14,008 *bb*	n/a	n/a	n/a
U.S. Passenger Liners[4]	19 *cc*	8 cc	8 *cc*	-8.3	0.0
U.S. Merchant Marine (over 1,000 gross tons)					
Total U.S. Flag	2,880 *dd*	1,372 *dd*	1,150 *dd*	-8.8	-16.2
Privately Owned	1,895 *dd*	661 *dd*	651 *dd*	-10.1	-1.5
Government Owned	985 *dd*	711 *dd*	499 *dd*	-6.6	-29.8
III. PERFORMANCE					
Passenger-Miles, Intercity (millions)	2,700 *u*	4,100*r u*	4,000*p u*	4.0	-2.4
Ton-Miles (millions)					
Domestic waterfreight					
Coastwise	317,636 *v*	360,205 *v*	351,509 *v*	1.0	-2.4
Internal	89,614	161,339	177,539	7.1	10.0
Lakewise	65,990	70,381	73,132	1.0	3.9
Local	1,730	1,239	1,364	-2.3	10.1
Total	474,970	593,164	603,544	2.4	1.7
Ton-Miles, Domestic Deep Sea (billions)	251 *w*	276*r w*	264*p w*	0.5	-4.3
Tons of Freight Hauled (millions)					
Domestic water					
Coastwise	215 *v*	243 *v*	243 *v*	1.2	0.0
Internal	316	479	507	4.8	5.8
Lakewise	136	141	145	0.6	2.8
Local	102	81	90	-1.2	11.1
Total	769	944	985	2.5	4.3
Exports					
Great Lakes ports	25 *x*	33 *x*	35 *x*	3.4	6.1
Coastal ports	110	173	197	6.0	13.9
Total	135	206	232	5.6	12.6
Imports					
Great Lakes	15	26	25	5.2	-3.8
Coastal ports	207	334	372	6.0	11.4
Total	222	360	397	6.0	10.3
Tons of Freight, Intraterritorial (millions)	1.3 *x*	1.5 *x*	1.6 *x*	2.1	6.7

WATER TRANSPORT PROFILE (cont.)

	1962	1971	1972	1962-1972 Average Annual % Change	1971-1972 % Change
Average Haul, Domestic System (miles-per-ton)					
Coastwise	1,474.2 *v*	1,482.8 *v*	1,448.6 *v*	−0.2	−2.3
Internal	283.5	336.7	350.2	2.1	4.0
Lakewise	486.1	449.3	504.3	0.4	12.2
Local	16.9	15.2	15.1	−1.1	−0.7
Total	617.2	628.1	612.8	−0.1	−2.4
Cargo Capacity (net tons)					
Total non-self-propelled vessels	16,593,600*y*	24,602,312*y*	27,197,323*y*	5.1	10.5
Dry cargo barges and scows	12,574,487	18,272,014	19,710,605	4.6	7.9
Tank barges	4,019,113	6,330,298	7,486,718	6.4	18.3
Number of Fatalities in Water Transport[3]	1,100 *z*	1,300 *z*	1,500 *z*	3.2	15.4

[1] Revenues paid by American travelers to U.S. and foreign flag carriers.

[2] Does not include Great Lakes and coastal harbors.

[3] Excludes persons at work.

[4] Passenger capacity greater than 125.

p = preliminary
r = revised
n/a = not available

Sources:
American Waterways Operators, *Inland Waterborne Commerce Statistics*, 1972.
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v-119, *x*-5
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h-table 9, *i*-table 8, *j*-table 6, *k*-table 7
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c-137, *d*-138
Interstate Commerce Commission, *Transport Statistics in the United States*, Part V, Dec. 31, 1962.
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RAIL PROFILE

A. CLASS I RAILROADS

	1962	1971	1972	1962-1972 Average Annual % Change	1971-1972 % Change
I. FINANCIAL					
Revenues, Class I Line-Haul Railroads ($ millions)					
Passenger	619.1 *a*	294.1 *a*	257.1 *a*	−8.4*	−12.6
Commutation	126.7	173.6	174.1	3.2	0.3
Other than commutation	389.0	109.9	82.0	−14.4*	−25.4*
Freight	7,991.1 *b*	11,786.1 *b*	12,571.7 *b*	4.6*	6.7*
Mail	343.6 *c*	122.6 *c*	94.5 *c*	−12.1*	−22.9*
Express	82.0	10.8	5.3	−24.0	−50.9
Other	404.1	475.5	482.6	1.8	1.5
Total operating revenues	9,439.9 *d*	12,689.1 *d*	13,411.2 *d*	3.6	5.7
Operating Expenses, Class I Line-Haul Railroads ($ millions)	7,418.6 *e*	10,055.3 *e*	10,549.9 *e*	3.6	4.9
II. INVENTORY					
Number of Vehicles, Class I Railroads					
Freight-carrying cars	1,550,067 *f*	1,422,411 *f*	1,410,568 *f*	−0.9	−0.8
Passenger train cars	25,566 *g*	7,505 *g*	5,603 *g*	−14.1*	−25.3*
Locomotives	28,639 *h*	27,194 *h*	27,073 *h*	−0.6	−0.4
Number of Companies, Class I Railroads	n/a	71 *i*	67 *i*		−5.6
Number of Employees, Class I Railroads	700,146 *j*	544,333 *j*	526,091 *j*	−2.8	−3.4
Line Mileage, All Line-Haul Railroads	215,090 *k*	205,202 *k*	204,000 *k*	−0.5	−0.6
III. PERFORMANCE					
Car Mileage, Class I Railroads (millions)					
Freight	27,772 *l*	29,181 *l*	30,307 *l*	0.9	3.9
Passenger	2,042 *m*	355 *m*	206 *m*	−20.5*	−42.0*
Total	29,814	29,536	30,513	0.2	3.3
Train Mileage, Class I Railroads (millions)					
Freight	393.3 *n*	429.5 *n*	451.5 *n*	1.4	5.1
Passenger	193.2 *o*	53.0 *o*	31.9 *o*	−16.5*	−39.8*
Total	586.5	482.5	483.4	−1.9	0.2
Locomotive Mileage, Class I Railroads (millions)					
Freight	408.2 *p*	1,277.5 *p*	1,366.1 *p*	12.8	6.9
Passenger	173.7	22.4	61.4	−9.9*	174.1*
Total	581.9	1,299.9	1,427.5	9.4	9.8
Revenue Passengers Carried, Class I Railroads (millions)					
Commutation	195 *q*	199 *q*	188 *q*	−0.4	−5.5
Other passenger	117	63	56	−7.1*	−11.1*

RAIL PROFILE (cont.)

A. (cont.)

	1962	1971	1972	1962-1972 Average Annual % Change	1971-1972 % Change
Revenue Passenger Miles, Class I Railroads (millions)					
Commutation	4,046 *r*	4,427 *r*	4,120 *r*	0.2	−6.9
Other passenger	15,859	2,481	1,234	−22.5*	−50.3*
Average Passenger Trip Length, Class I Railroads (miles)					
Commutation	21 *q*	22 *q*	22 *q*	0.5	0.0
Passenger	135	40	22	−16.6	−45.0
Revenue Ton-Miles, Class I Railroads (millions)					
Freight	592,862 *s*	739,743 *s*	778,137 *s*	2.8	5.2
Average Haul, Class I Railroads (miles)					
Freight	261 *t*	301 *t*	305 *t*	1.6	1.3
Number of Fatalities, All Railroads[1]					
Passengers on trains	28 *u*	17 *u*	48 *u*	5.5	182.4
Employees on duty	205	134	134	−4.2	0.0
Other non-trespassers	1,334	1,396	1,296	−0.3	−7.2
Trespassers	650	564	548	−1.7	−2.8
Total	2,217	2,111	2,026	−0.9	−4.0

[1] Includes Amtrak operations.

*NOTE: % decrease largely due to separation of Amtrak operations data, May 1971.

Sources: Association of American Railroads, *Yearbook of Railroad Facts*, 1973.
a-14, *b*-13, *d*-10, *e*-15, *f*-51, *g*-54, *h*-50, *j*-58, *k*-48, *l*-38, *m*-40, *n*-37, *o*-39, *r*-32, *s*-29
National Safety Council, *Accident Facts*, 1962, 1972, 1973,
u-78
Association of American Railroads, *Statistics of Railroads of Class I*, Years 1962 to 1972, Nov. 1973.
c-1, *i*-Table of Contents, *p*-11, *q*-7, *t*-5

RAIL PROFILE

B. AMTRAK

	1962*	1971*	1972	1962-1972 Average Annual % Change*	1971-1972 % Change*
I. FINANCIAL					
Revenues					
Passenger			132,804,419 *a*		
Commutation			3,213,915		
Other than commutation			129,590,504		
Freight			0		
Mail			1,674,673		
Express			9,419		
Other			22,719,085		
Total operating revenues			157,207,596		
Operating Expenses			286,338,724		
II. INVENTORY					
Number of Vehicles					
Freight-carrying cars			0 *b*		
Passenger train cars			1,382		
Locomotives			151		
Number of Companies			1 *c*		
Number of Employees			807 *a*		
Line Mileage			23,376 *d*		
III. PERFORMANCE					
Car Mileage (millions)					
Freight			0 *a*		
Passenger			200.6		
Train Mileage (millions)					
Freight			0		
Passenger			26.3		
Locomotive Mileage (millions)					
Freight			0		
Passenger			57.7		
Revenue Passengers Carried (millions)					
Commutation			3		
Other passenger			14		
Revenue Passenger Miles (millions)					
Commutation			108		
Other passenger			2,930		

RAIL PROFILE (cont.)

B. (cont.)

	1962*	1971*	1972	1962-1972* Average Annual % Change	1971-1972* % Change
Average Passenger Trip Length (miles)					
Commutation			40		
Other passenger			210		
Revenue Ton-Miles (millions)					
Freight			0		
Average Haul (miles)					
Freight			0		

*AMTRAK came into operation in May 1971, thus no 1962 or 1971 figures are available.

Sources: Association of American Railroads, *Statistics of Railroads of Class I*, Nov. 1973. *a*-16
Interstate Commerce Commission, *Class I Railroads, Financial and Operating Statistics, Statement #100*, Dec. 31, 1972. *b*-18, *c*-2, *d*-17

OIL PIPELINE PROFILE

	1962	1971	1972	1962-1972 Average Annual % Change	1971-1972 % Change
I. FINANCIAL					
Operating Revenues ($ millions)					
ICC-regulated	811 *a*	1,249[r] *a*	1,338[p] *a*	5.1	7.1
Non-regulated	128	243[r]	255[p]	7.1	4.9
Total	939	1,492[r]	1,593[p]	5.4	6.8
Operating Expenses ($ millions)					
ICC-regulated	426.4 *b*	712.2 *c*	780.2[p] *c*	6.2	9.5
Taxes, ICC-regulated Companies ($ millions)					
Federal	115.3	135.0	127.3	1.0	−5.7
Other	41.9	85.3	91.9	8.2	7.7
II. INVENTORY					
Number of ICC-regulated Companies	92	99	99	0.7	0.0
Number of Employees, ICC-regulated Companies	19,197 *d*	14,791 *d*	14,814 *d*	−2.6	0.2
Mileage[1]	204,064 *e*	224,069[e] *e*	228,550[e] *e*	1.1	2.0
III. PERFORMANCE					
Intercity Ton-Miles (millions)					
ICC-regulated	197,311 *f*	371,800 *g*	398,400 *h*	7.3	7.2
Non-regulated	40,412	72,200	81,600	7.3	13.0
Total	237,723	444,000	480,000	7.3	8.1
Tons Transported (millions)					
Crude petroleum	339 *i*	460 *i*	488 *j*	3.7	6.1
Petroleum products	164 *k*	347 *k*	389	9.0	12.1
Total	502 *l*	807 *l*	877	5.7	8.7

[1] Regulated plus unregulated mileage of crude oil trunk and gathering lines, plus refined oil trunk lines.

[p] = preliminary
[r] = revised
[e] = TAA estimate

Sources:
Association of Oil Pipelines, *Shifts in Petroleum Transportation*, April 30, 1973.
i-Table 2, *k*-Table 3, *l*-Table 1
Interstate Commerce Commission, *87th Annual Report to Congress*, 1973.
c-140, *g*-130
Interstate Commerce Commission, *77th Annual Report to Congress*, 1963.
b-140, *f*-Table Intercity ton miles.
Transportation Association of America, *Transportation Facts and Trends*, Oct. 1973.
a-4, *e*-31
Interstate Commerce Commission, *Transport Statistics in the United States, Part 6, Pipe Lines*, Dec. 31, 1972, 1971, 1962.
d-Table 9
Interstate Commerce Commission, *Personal Communication h*
Association of Oil Pipelines, *Personal Communication j*

SELECTED PASSENGER AND CARGO PERFORMANCE INDICATORS BY MODE OF TRANSPORTATION, 1962, 1971, AND 1972.

SELECTED PASSENGER AND CARGO PERFORMANCE INDICATORS BY MODE OF TRANSPORTATION, 1962, 1971, and 1972.

AIR CARRIER	1962	1971	1972
Revenue passenger-miles per capita			
Domestic operations			
Certificated, all services	184.6	532.5	585.0
Scheduled service	181.0	516.2	567.3
Non-scheduled service	3.6	16.3	17.7
International operations			
Certificated, all services	64.5	191.6	202.6
Scheduled service	54.6	141.7	164.6
Non-scheduled service	9.9	49.9	38.1
Revenue passenger-miles per aircraft (millions)			
Domestic and international operations, certificated route air carriers, all services	23.8	58.9	65.1
Available seat-miles per capita			
Domestic operations			
Certificated, all services	348.8	1095.3	1111.2
Scheduled service	343.9	1074.2	1088.3
Non-scheduled service	4.9	21.1	22.9
International operations			
Certificated, all services	108.5	324.0	327.3
Scheduled service	100.8	282.8	292.0
Non-scheduled service	7.7	41.2	35.3
Revenue ton-miles of freight[1] per capita			
Domestic operations			
Certificated, all services	5.0	11.5	12.6
Scheduled service	3.1	10.7	11.9
Non-scheduled service	1.9	0.8	0.7
International operations			
Certificated, all services	2.2	10.7	11.9
Scheduled service	1.8	7.4	8.3
Non-scheduled service	0.4	3.3	3.6

[1] Excludes ton-miles of mail, express, excess baggage, and passengers.

Note: Per capita figures are based on 1962, 1971, and 1972 total resident populations of 185,771,000, 206,212,000 and 208,230,000 respectively. (Excludes armed forces abroad.)

SELECTED PASSENGER AND CARGO PERFORMANCE INDICATORS BY MODE OF TRANSPORTATION, 1962, 1971, and 1972 (cont.)

GENERAL AVIATION	1962	1971	1972
Average number of persons per one eligible aircraft	2,210	1,572	1,436
Total number of miles flown per capita	10.6	15.0	17.2
Total number of miles flown per aircraft	23,353	23,968	24,625
Total flight time per capita (minutes)	4.7	7.4	8.4
Total number of hours flown per aircraft	172.4	193.7	200.0
HIGHWAY			
Average number of persons per one mile of rural highway			
Under state control	276.0	289.3	292.4
Under local control	79.0	91.4	92.5
Under Federal control	1,551.2	1,047.6	995.5
Total rural roads	1,906.2	1,428.3	1,380.4
Average number of persons per one mile of municipal highway			
Under state control	3,320.1	2,664.7	2,604.0
Under local control	465.3	399.9	390.3
Total municipal mileage	3,785.4	3,064.6	2,994.3
Average number of persons per one mile of rural and municipal highway	5,691.6	4,492.9	4,374.7
Average number of autos per one mile of rural highway			
Under state control	97.5	130.2	135.3
Under local control	27.9	41.1	42.8
Under Federal control	548.2	471.4	460.5
Total rural roads	673.6	642.7	638.6
Average number of autos per one mile of municipal highway			
Under state control	1,173.3	1,199.1	1,204.6
Under local control	164.4	180.0	180.6
Total municipal mileage	1,337.7	1,379.1	1,385.2
Average number of autos per one mile of rural and municipal highway	18.3	24.6	25.4

SELECTED PASSENGER AND CARGO PERFORMANCE INDICATORS BY MODE OF TRANSPORTATION, 1962, 1971, and 1972 (cont.)

AUTOMOBILE	1962	1971	1972
Average number of persons per registered vehicle			
Passenger cars and taxis	2.8	2.2	2.2
Motorcycles	287.5	62.1	55.2
Vehicle-miles of travel per capita, passenger cars, taxis, motorcycles			
Urban streets	1,634.4	2,547.0	2,725.6
Main rural roads	1,305.5	1,568.2	1,587.7
Local rural roads	441.9	507.1	505.9
Total travel	3,381.8	4,622.3	4,819.2
Passenger-miles per capita, passenger cars and taxis, total travel	7,439.9	10,018.9	10,421.6
Vehicle-miles of travel per vehicle, passenger cars and taxis			
Urban streets	4,624.9	5,659.7	5,891.6
Main rural roads	3,694.2	3,484.8	3,432.0
Local rural roads	1,250.6	1,126.7	1,093.7
Total travel	9,569.7	10,271.2	10,417.3
Passenger-miles per vehicle, passenger cars and taxis	21,053.3	22,263.4	22,527.6
BUS			
Average number of persons per intercity bus	8,779.3	8,965.7	9,254.7
Vehicle-miles per capita			
Commercial buses	15.4	14.0	13.2
School and non-revenue buses	8.7	10.7	11.3
All buses	24.1	24.7	24.5
Vehicle-miles per capita, all buses			
Urban streets	11.0	10.6	10.2
Main rural roads	8.5	8.5	8.6
Local rural roads	4.6	5.6	5.7
Total travel	24.1	24.7	24.5
Revenue passenger-miles per capita			
Total intercity bus	117.3	123.7	122.9
Revenue passenger-miles per vehicle			
Total intercity bus (millions)	1.0	1.1	1.1

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SELECTED PASSENGER AND CARGO PERFORMANCE INDICATORS BY MODE OF TRANSPORTATION 1962, 1971, and 1972 (cont.)

TRUCK	1962	1971	1972
Average number of persons per registered truck			
Private and commercial	15.2	10.9	10.3
Federal	1,965.0	1,331.6	1,261.1
State, county municipal	333.6	244.8	245.5
Total	14.5	10.4	9.8
Vehicle-miles per capita, all trucks			
Urban streets	255.7	414.9	520.8
Main rural roads	355.8	530.4	560.1
Local rural roads	113.3	155.6	166.4
Total travel	624.8	1,100.9	1,247.3
Vehicle-miles per truck registration			
Urban streets	3,708.8	4,321.0	5,106.2
Main rural roads	5,159.7	5,523.6	5,491.4
Local rural roads	1,675.4	1,620.2	1,631.5
Total travel	10,543.9	11,464.8	12,229.1
Intercity ton-miles per capita	1,786.6	2,158.0	2,257.1
LOCAL TRANSIT			
Revenue vehicle-miles per vehicle			
Motor bus	31,567	27,986	26,653
Subway and elevated	43,621	43,689	40,985
Surface rail	27,715	26,694	26,871
Trolley coach	26,574	29,701	28,932
Total transit	129,477	128,070	123,441
Revenue vehicle-miles per capita			
Motor bus	8.2	6.7	6.2
Subway and elevated	2.1	1.9	1.9
Surface rail	0.3	0.2	0.2
Trolley coach	0.5	0.2	0.1
Total transit	11.1	9.0	8.4
Average number of persons per vehicle			
Motor bus	3,870.2	4,195.6	4,243.1
Subway and elevated	20,955.6	22,113.9	22,098.1
Surface rail	83,718.3	168,336.3	177,066.3
Trolley coach	58,769.7	198,854.4	202,165.0
Total transit	2,984.5	3,395.2	3,430.3

SELECTED PASSENGER AND CARGO PERFORMANCE INDICATORS BY MODE OF TRANSPORTATION, 1962, 1971, and 1972 (cont.)

WATER TRANSPORT	1962	1971	1972
Ton-miles per capita, domestic water			
Coastwise	1,709.8	1,746.6	1,688.1
Internal	482.4	782.3	852.6
Lakewise	355.2	340.8	351.2
Local	9.3	6.0	6.6
Total	2,556.7	2,875.7	2,898.5
Domestic deep sea ton-miles per capita	1,351.1	1,338.4	1,267.8
Tons of freight hauled per capita, domestic water			
Coastwise	1.2	1.2	1.2
Internal	1.7	2.3	2.4
Lakewise	0.7	0.7	0.7
Local	0.5	0.4	0.4
Total	4.1	4.6	4.7
CLASS I RAILROADS			
Revenue passenger-miles per capita			
Commutation	21.8	21.5	19.8
Other	85.4	12.0	5.9
Total	107.2	33.5	25.7
Revenue passenger-miles per passenger car (millions)	.8	.9	1.0
Revenue ton-miles per capita	3,191.4	3,586.9	3,552.5
Revenue ton-miles per freight car (millions)	.4	.5	.6
Average number of persons per vehicle			
Freight cars	119.8	145.1	147.6
Passenger cars	7,266.3	27,476.6	37,164.0
Locomotives	6,486.6	7,583.0	7,691.4
Total	115.8	141.5	144.3
OIL PIPELINE			
Intercity ton-miles per capita, regulated plus non-regulated pipelines	1,279.7	2,153.1	2,305.1
Intercity ton-miles per mile of line, regulated plus non-regulated lines (millions)	1.2	1.9	2.1
Tons of petroleum transported per capita	2.7	3.9	4.3
Tons of petroleum transported per mile of line	2,460.0	3,601.6	3,837.2

TRANSPORTATION TRENDS

Table 1. Average Passenger Revenue Per Passenger-Mile, 1962-1972
(Cents)

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Certificated air carrier domestic operations[1]											
Total	6.45	6.17	6.12	6.06	5.83	5.64	5.61	5.79	6.00	6.32	6.40
First class	7.57	7.17	7.26	7.33	7.24	7.24	7.33	7.78	8.30	8.58	8.70
Coach plus economy	5.76	5.62	5.58	5.52	5.28	5.13	5.11	5.27	5.45	5.82	5.88
Class I rail[2]											
Total	3.11	3.18	3.17	3.18	3.18	3.20	3.39	3.61	3.92	4.25	4.80
Commutation	3.13	3.17	3.20	3.30	3.33	3.36	3.49	3.55	3.75	3.92	4.23
Other than commutation	3.10	3.18	3.16	3.14	3.13	3.13	3.33	3.63	4.02	4.85	6.60
Class I intercity bus[3]	2.67	2.78	2.80	2.88	2.89	2.98	3.18	3.39	3.60	3.83	3.90

[1] Scheduled service.
[2] Excludes Amtrak service.
[3] Regular route intercity service.

Sources: See page 130

Average passenger revenue per passenger-mile
1962-1972

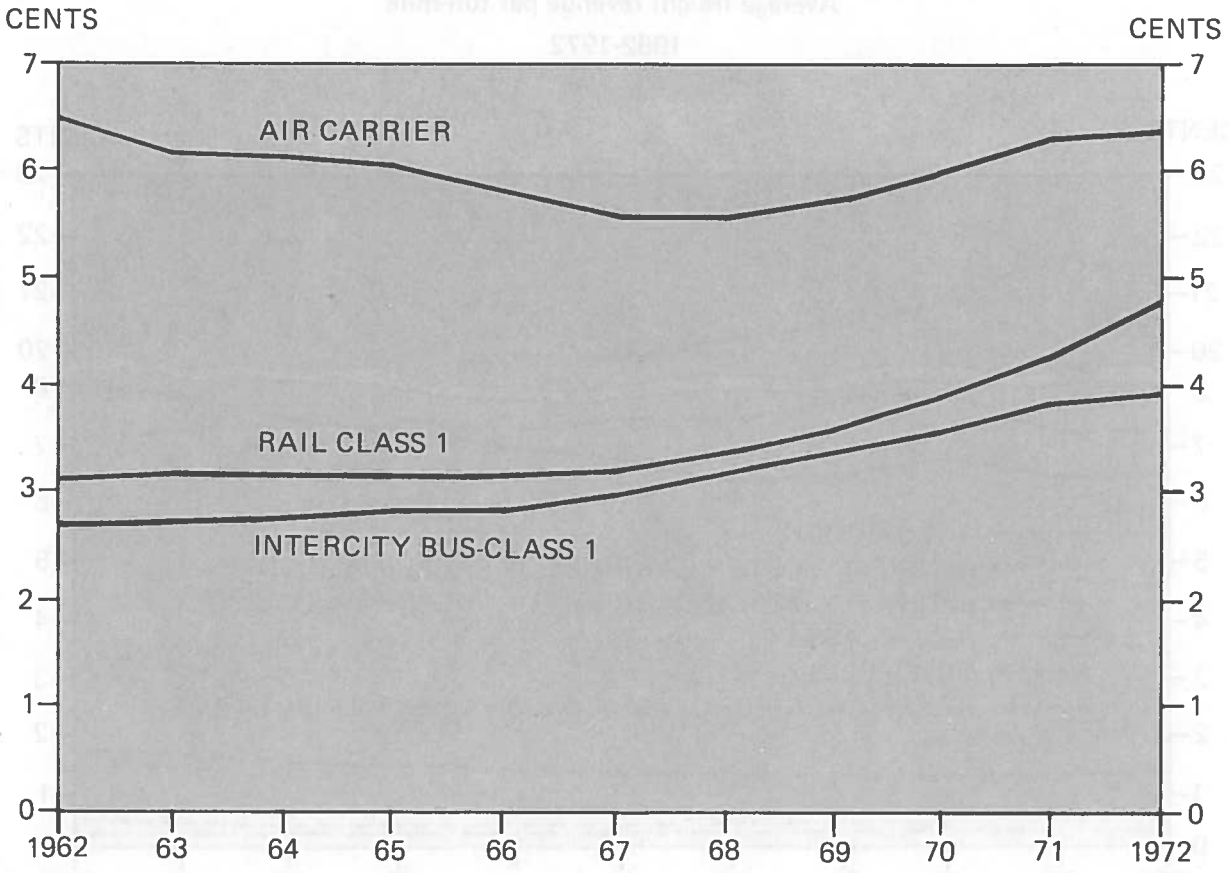

Table 2. Average Freight Revenue Per Ton-Mile, 1962-1972
(Cents)

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Air carrier certificated, domestic operations, scheduled service	21.31	21.72	20.97	20.46	20.21	19.90	19.97	21.03	21.91	22.61	22.75
Class I rail	1.35	1.31	1.28	1.27	1.26	1.27	1.31	1.35	1.43	1.59	1.62
Class I intercity motor carriers of property[1]											
Common	6.41	6.38	6.66	6.46	6.34	6.65	6.93	7.21	7.46	7.85	8.00
Contract	7.29	7.13	7.85	7.66	7.31	7.36	7.23	7.35	6.85	7.20	7.02
Oil pipelines	0.32	0.32	0.30	0.28	0.27	0.26	0.26	0.27	0.27	0.29	0.29
Class A and B water carriers	n/a	n/a	0.45	0.44	0.43	0.38	0.40	0.41	0.43	0.47	0.47

[1] Intercity service.
Sources: See page 130

Average freight revenue per ton-mile
1962-1972

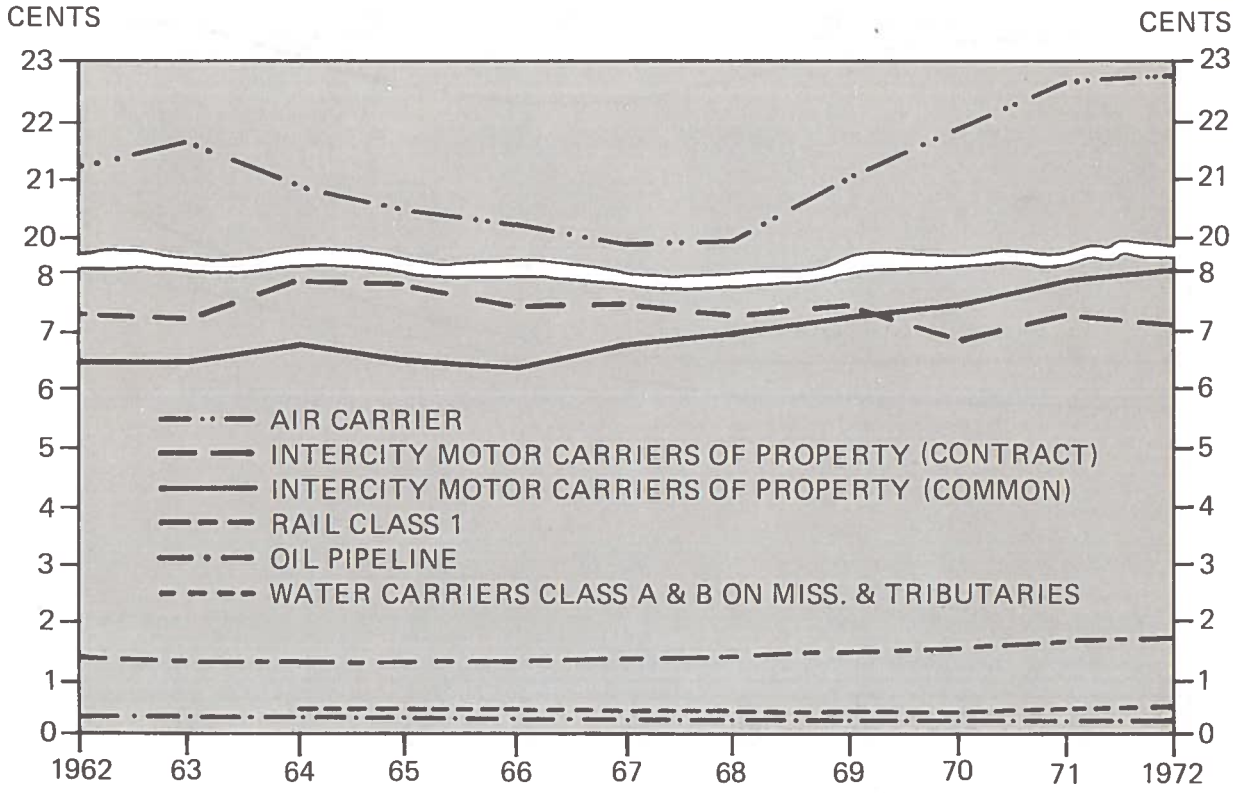

Table 3. Average Passenger Fare, 1962-1972
(Dollars)

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Air carrier											
Certificated domestic operations scheduled service	35.68	34.22	34.13	34.12	33.40	33.15	33.70	37.52	40.71	43.08	43.87
Class I bus, intercity[1]	2.43	2.52	2.55	2.73	2.71	2.79	2.91	3.55	3.81	4.19	4.30
Local transit											
Railway											
Surface rail	0.23	0.23	0.23	0.24	0.24	0.23	0.24	0.25	0.27	0.26	0.27
Subway and elevated	.16	.16	.17	.17	.19	.21	.21	.22	.23	.24	.25
Total	.17	.17	.17	.17	.19	.21	.21	.22	.24	.24	.25
Trolley coach	.20	.21	.21	.22	.22	.22	.23	.23	.24	.28	.28
Motor bus	.19	.20	.20	.21	.21	.22	.23	.26	.29	.32	.34
Grand total	.19	.19	.19	.20	.21	.22	.23	.25	.28	.30	.31
Class I rail											
Other than commutation	4.20	4.00	3.86	3.92	3.83	3.48	3.16	3.15	3.19	1.92[2]	1.47[2]
Commutation	.65	.67	.68	.71	.72	.72	.75	.78	.84	.87[2]	.93[2]

[1] Intercity regular route service
[2] Excludes AMTRAK service.

Sources: See page 131

Average passenger fare, 1962-1972

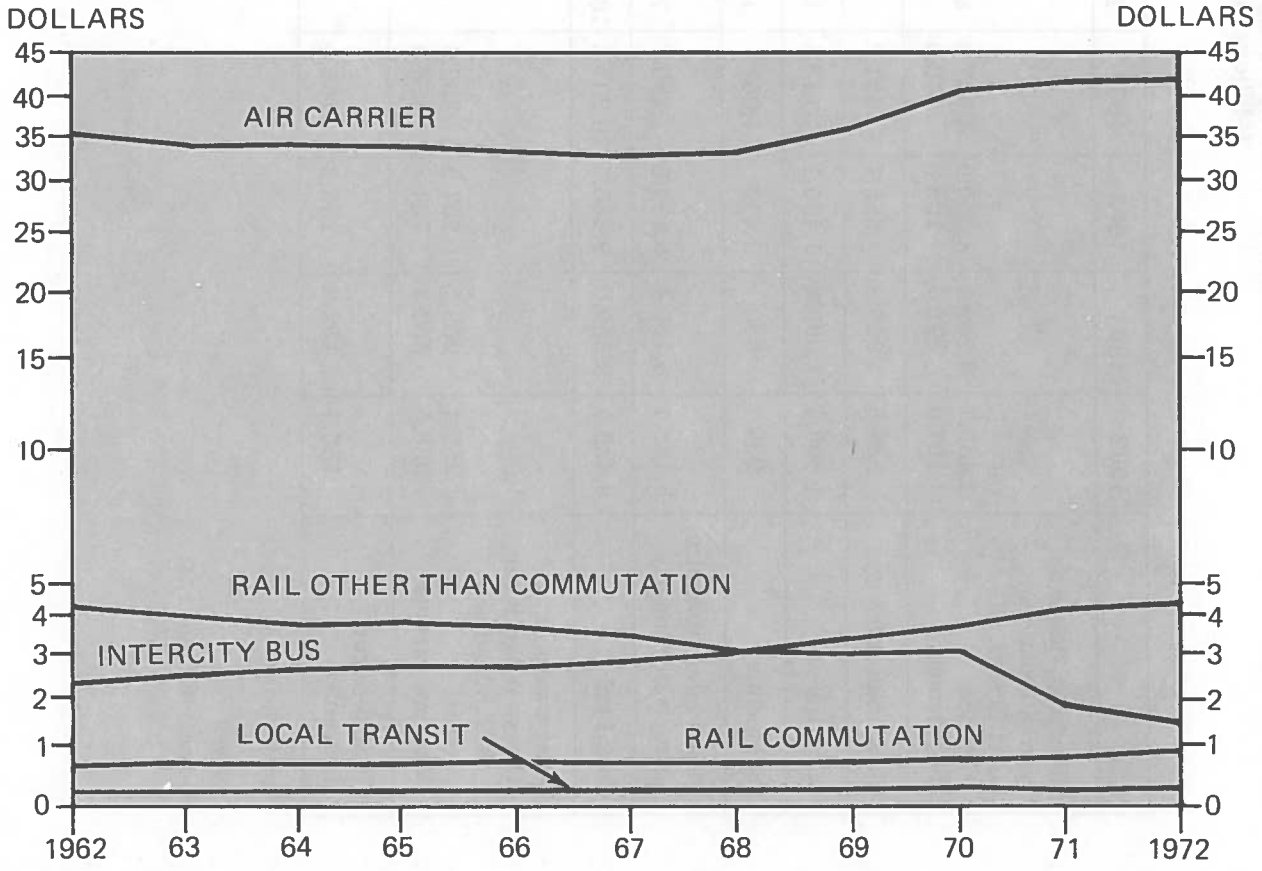

Table 4. Total Operating Revenues, 1962-1972
(Millions of Dollars)

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Air carrier, domestic and international											
Certificated, all services	3,438.7	3,759.1	4,250.9	4,957.9	5,745.0	6,864.7	7,753.2	8,790.9	9,240.2	10,045.7	11,163.3
Supplemental	107.0	92.7	105.8	140.9	209.2	258.6	328.2	361.4	336.9	363.7[r]	331.1
Class I bus, intercity	588.6	609.8	655.1	607.3	644.3	669.6	694.6	677.0	721.7	758.4	772.5[p]
Local transit	1,403.5	1,390.6	1,480.1	1,143.8	1,478.5	1,556.0	1,562.7	1,625.6	1,707.4	1,740.7	1,728.5
Oil pipeline	939	980	1,013	1,051	1,096	1,157	1,205	1,309	1,396[r]	1,492[r]	1,593[p]
Class I intercity motor carriers of property	5,428.4	5,756.4	6,199.5	7,130.7	7,896.6	8,091.3	9,592.8	10,769.7	11,137.0	13,011[r]	15,169[p]
Class I rail	9,439.9	9,559.5	9,856.5	10,207.8	10,654.6	10,366.0	10,854.7	11,450.3	11,991.7	12,689.0[r]	13,411.1
Water transport											
Classes A and B carriers, inland and coastal	252.4	258.1	257.9	282.6	298.1	296.1	307.6	327.5	371.8	394.0[r]	432.7[p]
Maritime carriers	628.5	652.7	704.8	678.9	654.5	673.9	801.9	739.3	832.7	749.0[r]	884.5[p]
Class A freight forwarders	150.4	152.2	156.2	155.4	180.0	185.7	196.9	211.1	211.0	216.1[r]	252.1[p]

[p] preliminary

[r] revised

Sources: See page 131

Total operating revenues, 1962-1972

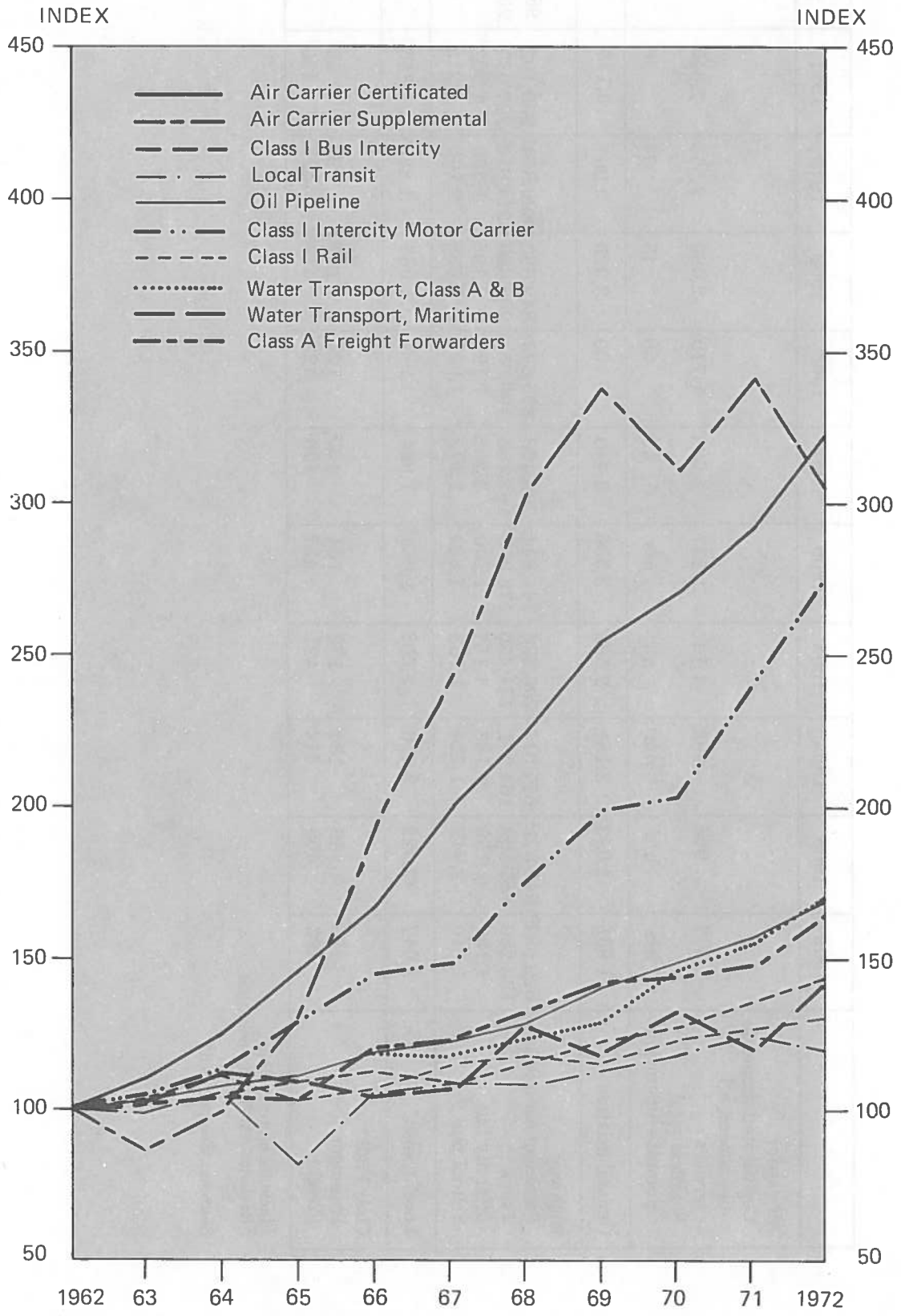

Table 5. Vehicle-Miles, 1962-1972
(Millions)

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Air carrier											
Certificated domestic operations, all services	877	926	998	1,134	1,237	1,538	1,779	2,080	2,065	2,045	2,042
Supplemental domestic operations	n/a	n/a	n/a	n/a	n/a	42	50	43	34	36	34
General aviation	1,965	2,049	2,181	2,562	3,336	3,440	3,700	3,926	3,207	3,143	3,571
Highway											
Passenger car and taxi	629,097[1]	645,371[1]	677,613[1]	706,386	744,844	766,466	805,693	849,633	890,844	939,102	986,407
Truck	133,289	155,569	164,271	171,436	173,905	182,456	196,651	206,680	214,670	227,037	259,735
Intercity bus	1,137	1,155	1,183	1,157	1,200	1,205	1,190	1,195	1,209	1,202	1,181
School bus	1,610	1,642	1,724	1,763	1,884	1,870	1,937	2,030	2,100	2,212	2,359
Local transit	2,047	2,022	2,016	2,008	1,984	1,997	1,989	1,967	1,883	1,846	1,756
Class I rail											
Passenger	193	189	184	172	164	150	123	107	93	53[2]	32[2]
Freight	393	400	414	421	437	420	429	433	427	430[2]	451[2]

[1] Includes motorcycles.
[2] Excludes AMTRAK operations.

Sources: See page 132

Vehicle-miles, 1962-1972

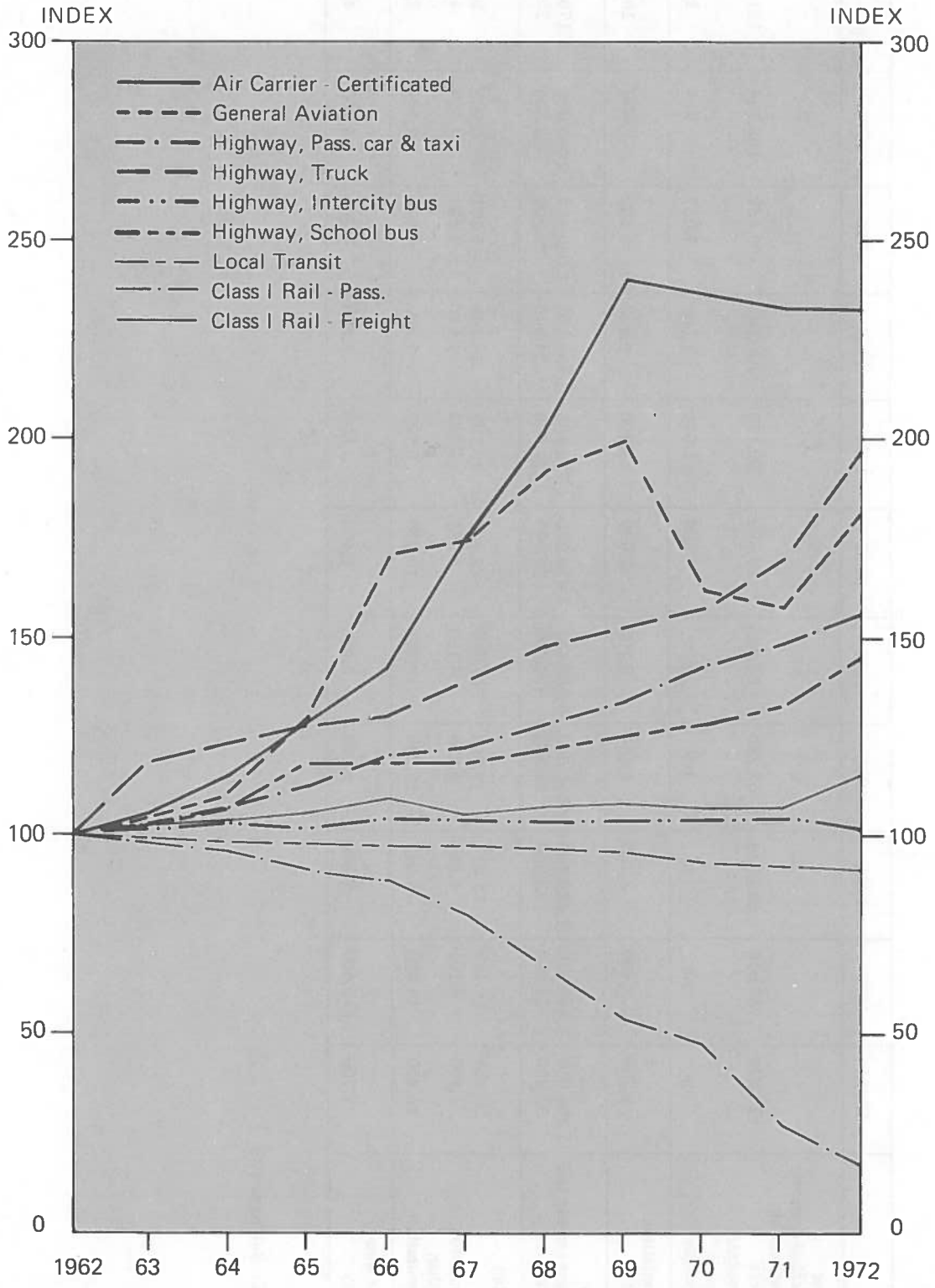

Table 6. Passenger-Miles, 1962-1972
(Millions)

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Air carrier											
Certificated domestic operations, all services	34,298	39,016	45,046	53,226	63,085	79,522	92,112	109,541	108,451	109,804	121,820
Supplemental domestic operations	n/a	n/a	n/a	n/a	n/a	709	1,620	1,560	1,057	914	1,281
General aviation, intercity	2,700	3,400	3,700	4,400	5,700	7,000	8,200	8,800	9,100	9,300[r]	10,000
Highway											
Passenger car and taxi	1,384,013	1,419,816	1,490,749	1,554,049	1,638,657	1,686,225	1,772,525	1,869,193	1,959,857	2,066,024	2,170,095
Intercity bus	21,800	22,500	23,300	23,800	24,600	24,900	24,500	24,900	25,300	25,500	25,600
Class I Rail											
Total	20,265[r]	18,497[r]	18,247	17,388	17,096[r]	15,201	13,120	12,168	10,771	6,908[r]	5,354
Commutation	4,406	4,101	4,199	4,128	4,193	4,281	4,383	4,546	4,592	4,427	4,120
Other than commutation	15,859	14,396	14,048	13,260	12,903	10,920	8,737	7,623	6,179	2,481	1,234
Domestic water, intercity	2,700	2,800	2,800	3,100	3,400	3,400	3,500	3,800	4,000	4,100	4,000

[r] revised

Sources: See page 133

Passenger Miles, 1962-1972

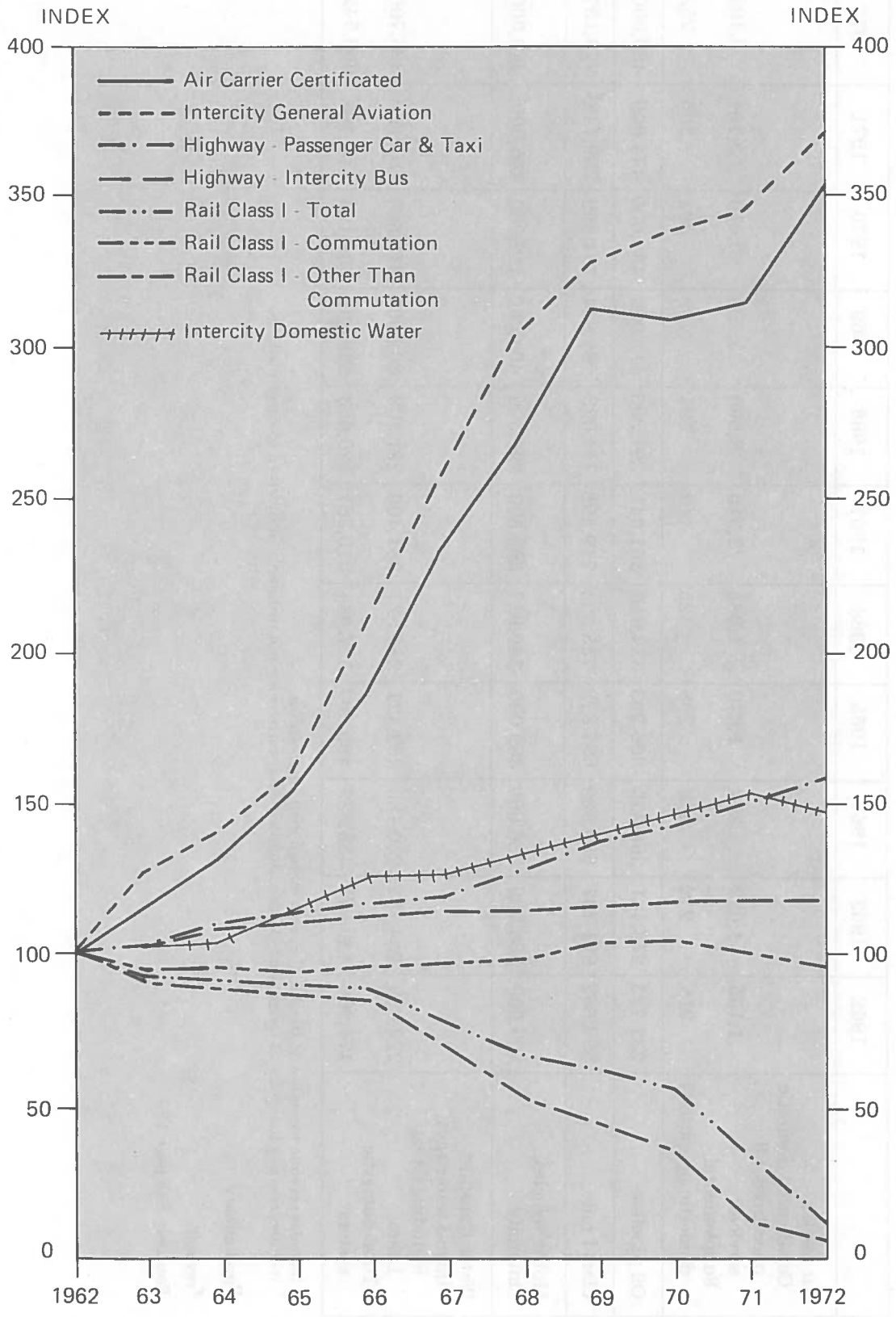

Table 7. Cargo Ton-Miles, 1962-1972
(Millions)

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Air carrier											
Certificated domestic operations, all services[1]	1,155	1,099	1,294	1,670	1,985	2,310	2,590	3,295	3,010	3,151	3,403
Supplemental domestic operations[2]	215	219	268	298	425	442	494	469	391	306	259
Oil pipeline	237,723	253,431	268,655	306,393	332,916	361,041	391,300	411,000	431,000	444,000	480,000[p]
Class I rail	592,862	621,737	658,639	697,878	738,395	719,498	744,023	767,841	764,809	739,743[r]	778,137
Motor vehicles, intercity	309,000	336,000	356,000	359,000	380,917	388,500	396,300	404,000	412,000	445,000[r]	470,000[p]
Water transport											
Inland waterways, including Great Lakes	223,089	234,172	250,165	262,421	280,527	281,400	291,409	302,901	318,560	315,030[r]	338,700[p]
Total domestic system	474,969	480,577	488,829	489,803	507,084	515,387	520,633	528,897	596,195	593,164	603,542

[1] Includes revenue ton-miles of freight, U.S. and foreign mail, and express.
[2] Includes revenue ton-miles of freight and express. Supplemental carriers are not ordinarily authorized to carry mail.

[p]preliminary

[r]revised

Sources: See page 133

Cargo Ton-Miles 1962-1972

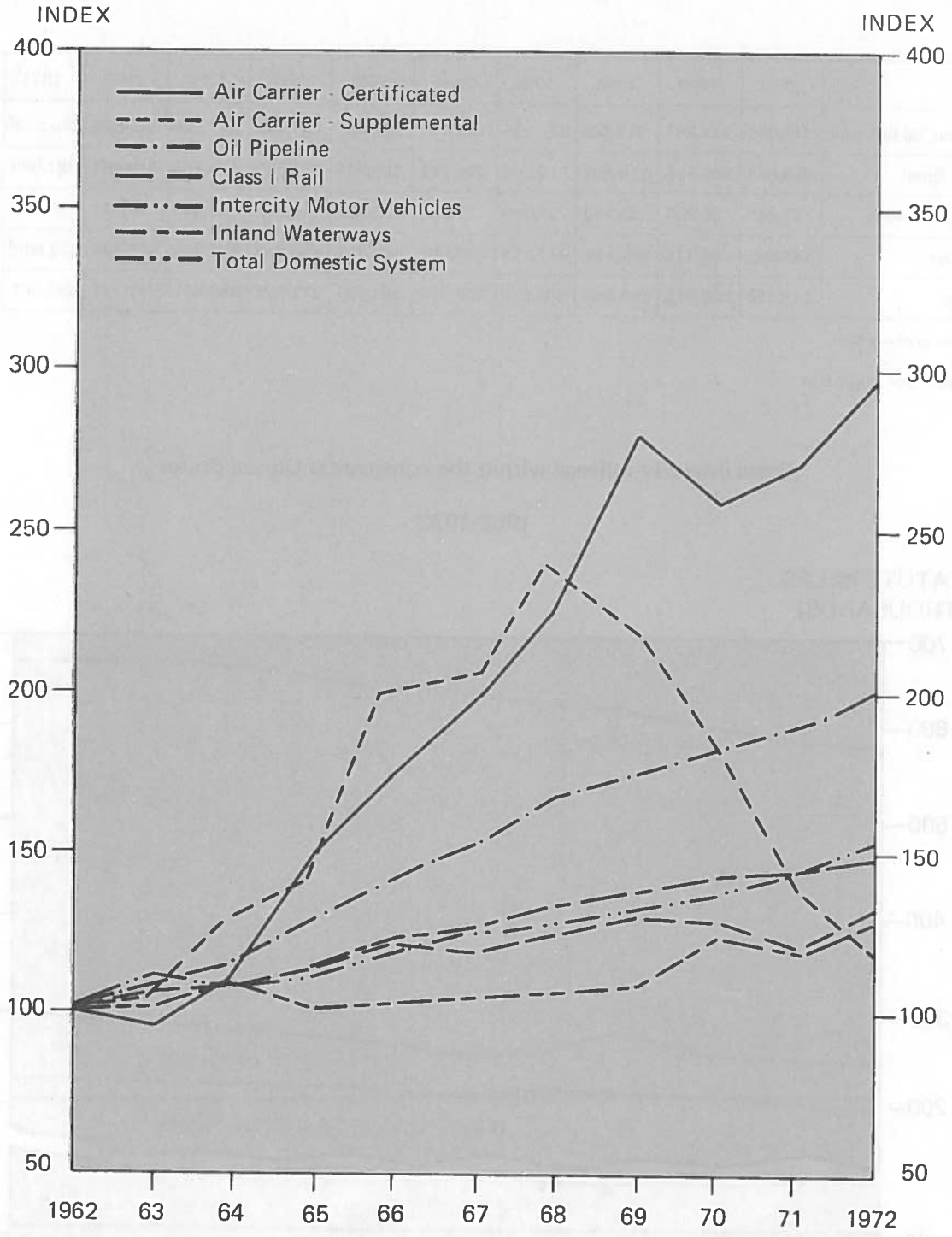

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Table 8. Basic Intercity Mileage Within the Continental United States, 1962-1972 (Statute Mileage)

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Railroads, all line haul	215,090	214,387	212,603	211,925	211,107	209,826	208,648	207,526	206,265	205,202[r]	204,000
Oil pipelines[1]	204,064	206,876	210,807	213,764	216,745	209,478	213,555	216,453	218,604	224,069	228,550
Inland waterways	25,260	25,260	25,380	25,380	25,380	25,380	25,380	25,543	25,543	25,543	25,543
Highways	583,302	594,412	606,154	617,114	628,600	640,313	648,768	657,601	665,903	672,838[r]	678,285
Airways	248,270	252,325	263,348	288,275	259,083	264,165	277,554	283,861	291,231	295,301	300,126

[1] Includes gathering lines.
[r] revised
Sources: See page 134

Basic intercity mileage within the continental United States

1962-1972

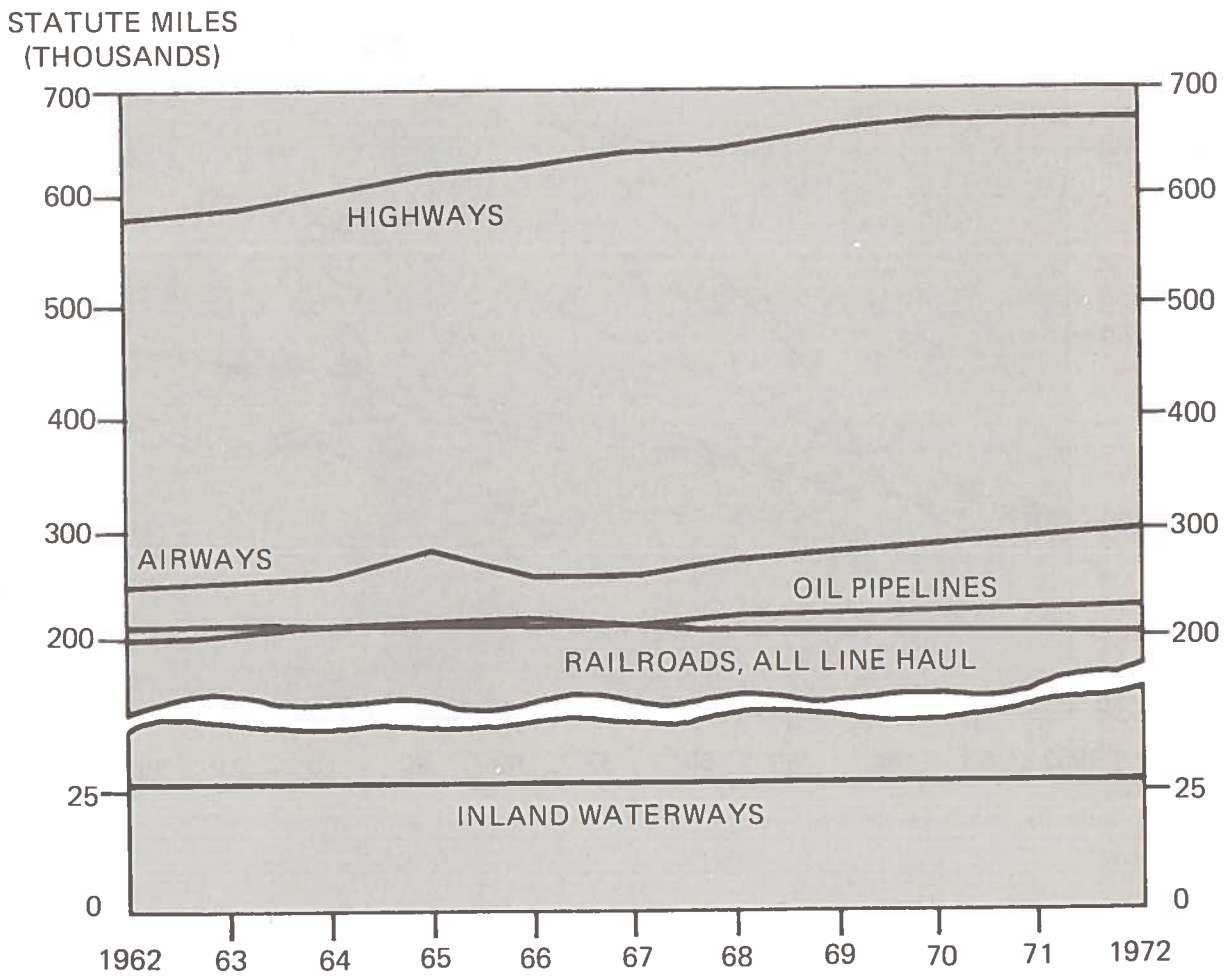


Table 9. Number of Vehicles, 1962-1972

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Air Carrier											
Domestic and International certificated all services	1,958	n/a	1,894	n/a	2,082	n/a	2,406	n/a	2,569	2,536[r]	2,518
Domestic and International supplemental	225	n/a	210	n/a	237	n/a	232	n/a	195	184[r]	156
Total	2,173	n/a	2,124	n/a	2,319	n/a	2,638	n/a	2,690	2,720[r]	2,674
General Aviation	84,121	85,088	88,742	95,442	104,706	114,186	124,237	130,806	131,743	131,148	145,010
Motorcycle	660,400	786,318	984,763	1,381,956	1,752,801	1,953,022	2,100,547	2,315,916	2,814,730	3,345,179	3,774,996
Passenger Car & Taxi	66,108,282	69,055,428	71,982,740	75,251,386	78,122,965	80,414,180	83,692,699	86,861,334	89,279,864	92,799,052	96,330,603
Intercity Bus	21,160	21,100	21,500	20,600	21,500	21,900	22,100	22,700	23,100	23,000	22,700
Local Transit											
Motorbus	48,800	49,400	49,200	49,600	50,130	50,180	50,000	49,600	49,700	49,150	49,057
Subway & Elevated	8,865	8,878	9,061	9,115	9,273	9,257	9,390	9,343	9,338	9,325	9,423
Surface Rail	2,219	1,756	1,553	1,549	1,407	1,388	1,355	1,322	1,262	1,225	1,176
Trolley Coach	3,161	2,155	1,865	1,453	1,326	1,244	1,185	1,082	1,050	1,037	1,030
Total	63,045	62,189	61,679	61,717	62,136	62,069	61,930	61,347	61,350	60,737	60,704
Class I Rail											
Freight Cars	1,550,067	1,512,306	1,488,385	1,478,005	1,488,115	1,477,166	1,453,883	1,434,824	1,423,921	1,422,411	1,410,568
Locomotives	28,639	28,449	28,300	27,816	27,886	27,687	27,376	27,033	27,086	27,194[r]	27,073
Passenger Cars & Pullman	25,566	24,602	23,057	21,327	20,016	18,610	15,384	12,426	11,177	7,505[r]	5,603
Total	1,604,272	1,565,357	1,539,742	1,527,148	1,536,017	1,523,463	1,496,643	1,474,283	1,462,184	1,457,110[r]	1,442,867
Truck											
Combinations	n/a	706,000	738,000	787,000	823,000	830,000	871,000	929,000	960,000	974,000	990,000
Single Unit	n/a	12,654,000	13,275,000	14,008,000	14,694,000	15,363,000	16,124,000	16,942,000	17,778,000	18,828,000	20,249,000
Total	12,809,000	13,360,000	14,013,000	14,795,000	15,517,000	16,193,000	16,995,000	17,871,000	18,748,000	19,802,000	21,239,000
Nonself-propelled vessels											
Dry Cargo Barges & Scows	14,280	14,415	14,432	14,241	14,241	15,830	15,379	15,379	15,890	16,439	17,527
Tank Barges	2,661	2,739	2,649	2,548	2,548	2,781	3,001	3,001	3,281	3,185	3,420
Total	16,886	17,154	17,081	16,789	16,789	18,611	18,380	18,380	19,171	19,624	20,947
Towboats & Tug	4,253	4,205	3,994	4,054	4,054	4,395	4,284	4,284	4,248	4,230	4,278
Total Vessels	21,139	21,359	21,075	20,843	20,843	23,006	22,664	22,664	23,419	23,854	25,225

[r] revised

Sources: See page 134

SUPPLEMENTARY DATA
Part 1: Transportation and the Economy

Table 10. Personal Consumption Expenditures by Transportation Sector, 1962-1972
[Millions of dollars]

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Transportation Total	45,975	49,140	51,753	57,825	60,489	62,588	71,983	77,722	77,776[r]	90,441[r]	100,159
User-Operated Transportation											
Total	42,516	45,695	48,161	54,053	56,446	58,163	67,265	72,639	72,250[r]	84,604[r]	93,949
New Cars and Net Purchases of Used Cars	19,486	21,549	22,814	26,670	26,805	26,646	32,979	35,087	31,595[r]	40,279[r]	45,745
Tires, Tubes, Accessories and Parts	2,557	2,707	2,970	3,168	3,520	3,848	4,479	5,157	5,702[r]	6,274[r]	7,072
Maintenance	5,200	5,591	5,683	6,187	6,419	6,637	7,292	7,948	8,719[r]	9,625[r]	10,436
Gasoline & Oil	12,908	13,457	14,129	15,146	16,562	17,619	18,992	20,894	22,211	23,523[r]	25,523
Tolls	327	344	381	404	447	464	504	540	545[r]	581[r]	612
Insurance	2,038	2,047	2,184	2,478	2,693	2,949	3,019	3,013	3,478[r]	4,322[r]	4,561
Purchased Local Transportation											
Total	1,981	1,977	1,988	2,022	2,099	2,216	2,266	2,386	2,505	2,578[r]	2,614
Street, Electric, Railway and Local Bus	1,266	1,252	1,261	1,278	1,317	1,385	1,397	1,477	1,557	1,579[r]	1,568
Taxicab	588	595	593	607	642	687	716	747	776	823[r]	869
Railway (commutation)	127	130	134	137	140	144	153	162	172	176[r]	177
Purchased Intercity Transportation											
Total	1,478	1,468	1,604	1,750	1,944	2,209	2,452	2,747	3,021	3,259[r]	3,596
Railway (non-commutation)	303	268	262	242	240	206	177	164	148	122[r]	137
Intercity Bus	336	316	324	329	356	358	365	377	391	412[r]	406
Airline	809	853	985	1,145	1,318	1,617	1,879	2,172	2,446	2,690[r]	3,016
Other	30	31	33	34	30	28	31	34	36	35[r]	37

[r] revised

Sources: See page 135

Personal consumption expenditures by transportation sector 1962-1972

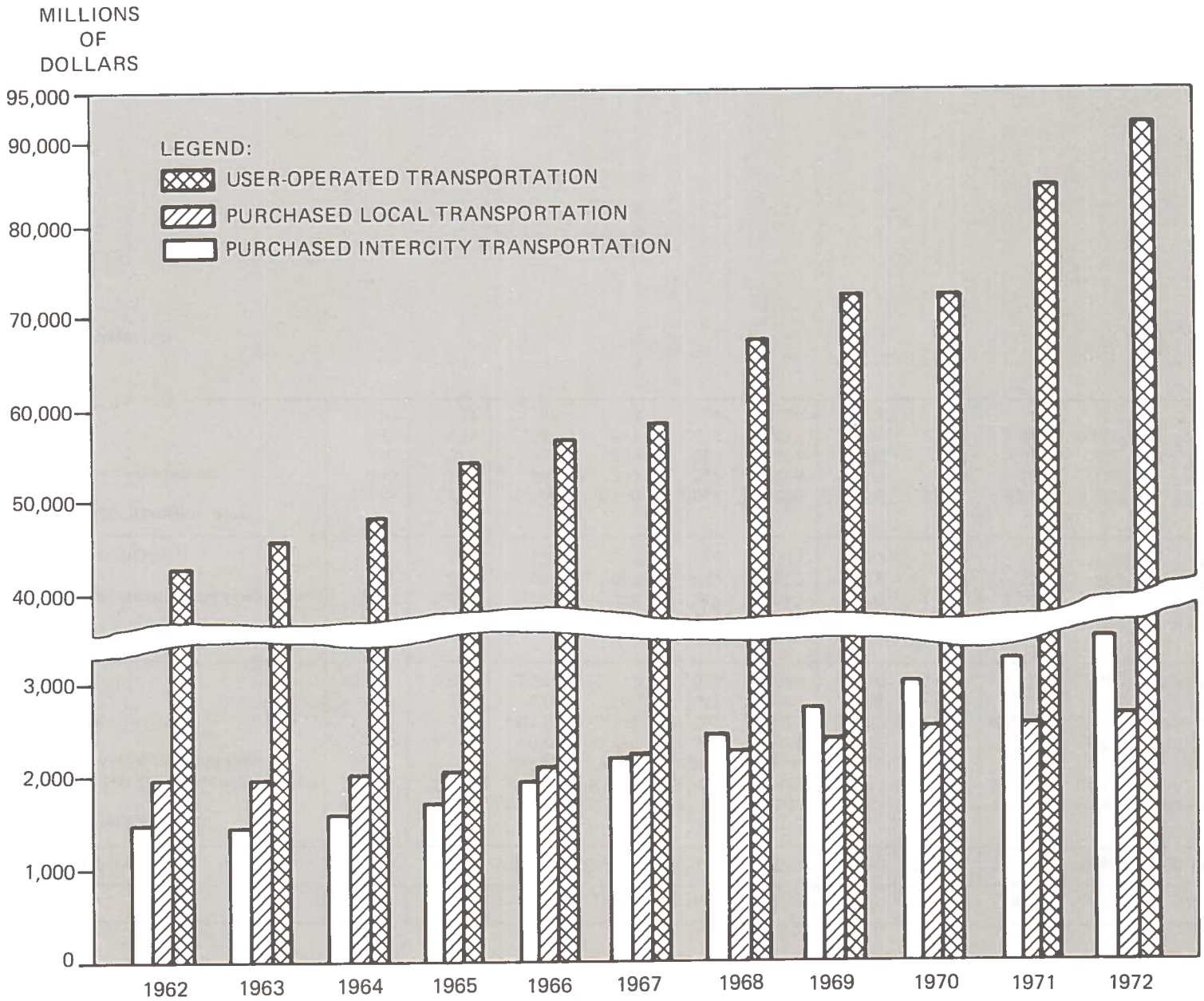


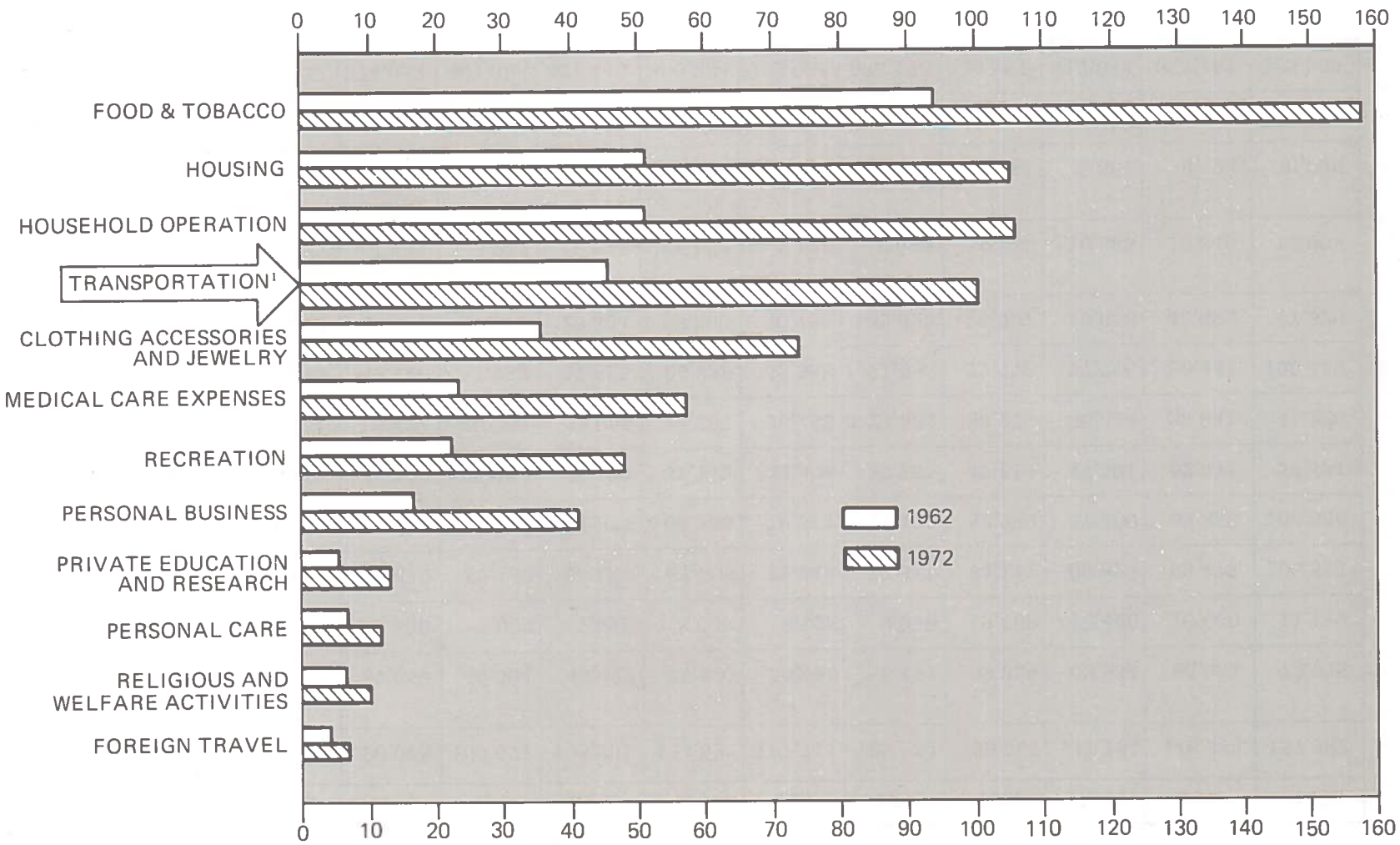
Table 11. Personal Consumption Expenditures by Type of Product, 1962-1972
(Millions of Dollars)

	1962	1963	1964	1965	1966	1967	1968	1969	1970[3]	1971[3]	1972
Food and tobacco[1]	93,054	96,008	100,671	106,791	114,621	117,744	125,134	130,707	141,181	148,344	157,892
Clothing accessories and jewelry	35,700	37,049	40,564	43,427	48,360	50,995	55,474	59,924	62,834	66,961	72,676
Personal care	6,248	6,530	7,032	7,509	8,068	8,558	9,049	9,760	10,420	10,600	11,119
Housing	51,950	55,410	59,189	63,157	67,506	71,848	77,311	84,141	90,926	98,477	105,517
Household operation	51,170	54,127	58,255	61,877	66,786	70,514	76,125	82,294	87,360	93,836	104,830
Medical care expenses	22,002	23,340	25,681	28,120	31,142	34,491	37,767	42,814	47,401	52,015	57,431
Personal business	16,481	18,422	20,066	22,055	24,287	26,182	29,532	33,277	35,314	38,641	41,226
Transportation[2]	45,975	49,140	51,753	57,825	60,489	62,588	71,983	77,772	77,776	90,441	100,159
Recreation	20,472	22,213	24,573	26,304	28,850	30,758	33,623	36,901	40,653	42,652	47,826
Private education and research	4,392	4,736	5,217	5,585	6,608	7,576	8,690	9,536	10,363	10,849	12,008
Religious and welfare activities	5,082	5,262	5,527	5,609	6,421	6,948	7,605	8,084	8,601	9,134	10,096
Foreign travel	2,529	2,745	2,828	3,206	3,196	3,864	3,795	4,247	4,815	5,201	5,726
Total	355,057	374,982	401,356	431,465	466,334	492,066	536,178	579,457[r]	617,644	667,151	726,506

[1] Includes consumer expenditures for alcoholic beverages.
[2] Excluding foreign travel
[3] Figures in the 1970-71 columns are all revised.
[r] revised

Sources: See page 135

Personal consumption expenditures by type of product, 1962-1972



[1] Excluding foreign travel.

Table 12. National Income by Transportation Sector, 1962-1972
(Millions of Dollars)

	1962	1963	1964	1965	1966	1967	1968	1969	1970[1]	1971[1]	1972
Total	19,060	20,025	21,372	22,926	24,853	25,223	26,909	28,739	29,824	32,819	36,008
Railway	6,438	6,634	6,795	7,084	7,327	6,821	6,992	7,351	7,358	8,083	8,464
Local, suburban, and highway passenger	1,703	1,716	1,771	1,857	1,951	2,049	2,210	2,163	2,285	2,373	2,349
Motor freight and warehousing	6,588	6,913	7,463	8,185	8,998	9,178	10,326	11,211	11,632	13,295	14,924
Water	1,724	1,815	2,001	2,010	2,274	2,320	2,476	2,392	2,502	2,341	2,551
Air	1,664	1,881	2,229	2,574	3,027	3,456	3,556	4,120	4,374	5,030	5,863
Pipeline	340	426	429	454	412	423	414	447	518	524	555
Transportation services	603	640	684	754	864	976	935	1,055	1,155	1,173	1,302

[1] Figures in the 1970-71 columns are all revised.

Sources: See page 135

National income by transportation sector 1962-1972

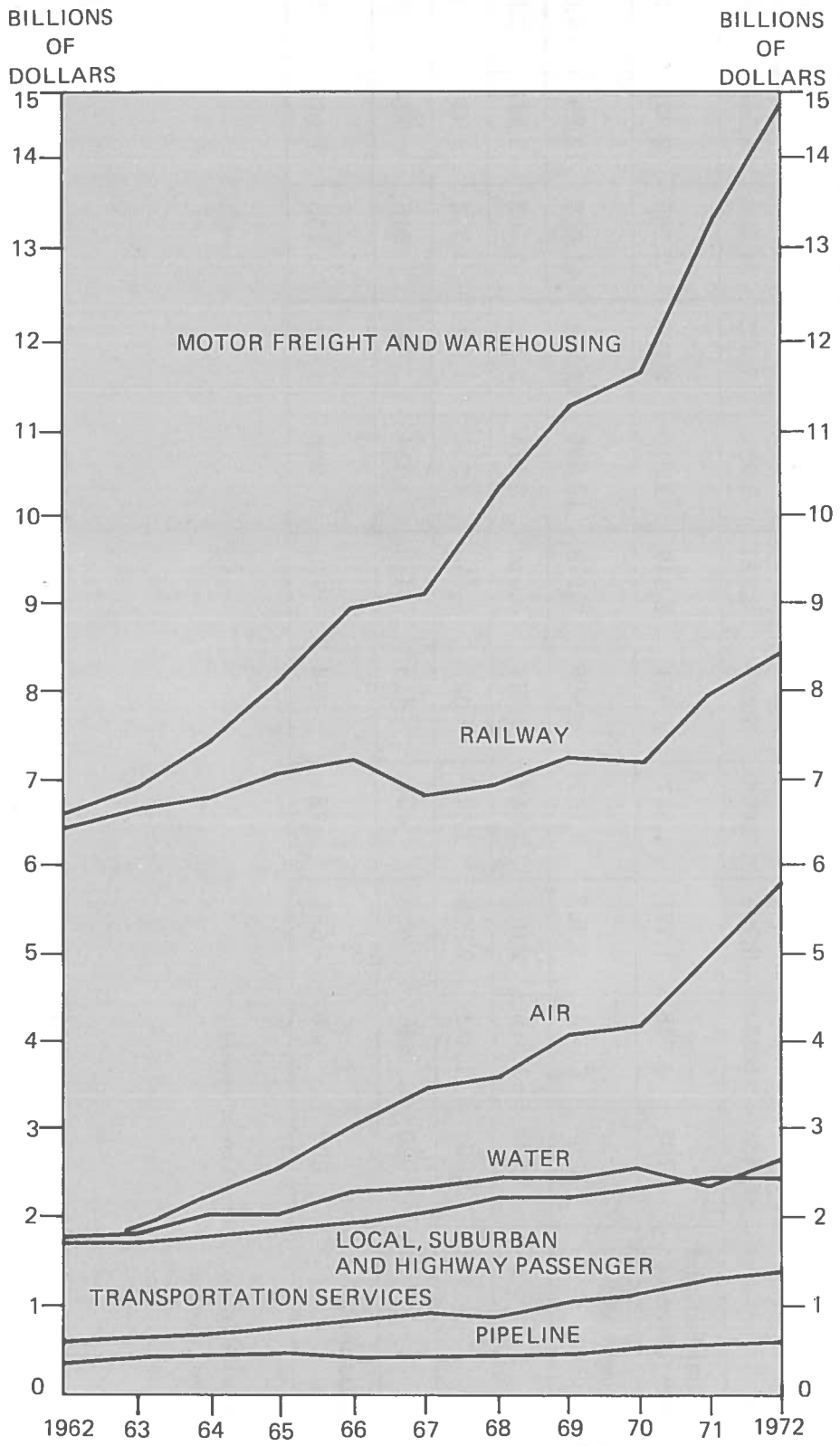


Table 13. Average Annual Earnings per Full-Time Employees by Transportation Sector, 1962-1972 (Dollars)

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Total	6,638	6,852	7,161	7,473	7,785	8,129	8,676	9,321	9,988[r]	10,920[r]	11,800
Railway	6,610	6,762	7,026	7,407	7,660	8,034	8,585	9,230	10,013[r]	11,209[r]	11,845
Local, suburban, and highway passenger	4,985	5,120	5,281	5,436	5,615	5,801	6,101	6,296	6,596[r]	6,902[r]	7,252
Motor freight and warehousing	7,031	7,328	7,719	8,030	8,362	8,672	9,287	9,906	10,430[r]	11,589[r]	12,782
Water	7,059	7,317	7,507	7,770	8,310	8,619	9,120	9,990	10,662	11,011[r]	11,639
Air	7,269	7,443	7,869	8,122	8,363	8,846	9,363	10,270	11,407[r]	12,294[r]	13,303
Pipeline	7,524	7,800	8,105	8,053	8,667	8,778	9,222	9,722	10,706	11,412	12,000
Transportation services	5,935	6,078	6,288	6,518	6,761	7,120	7,570	8,020[r]	8,608	9,029[r]	9,626

[r] revised

Sources: See page 135

Average annual earnings per full-time employees by transportation sector, 1962-1972

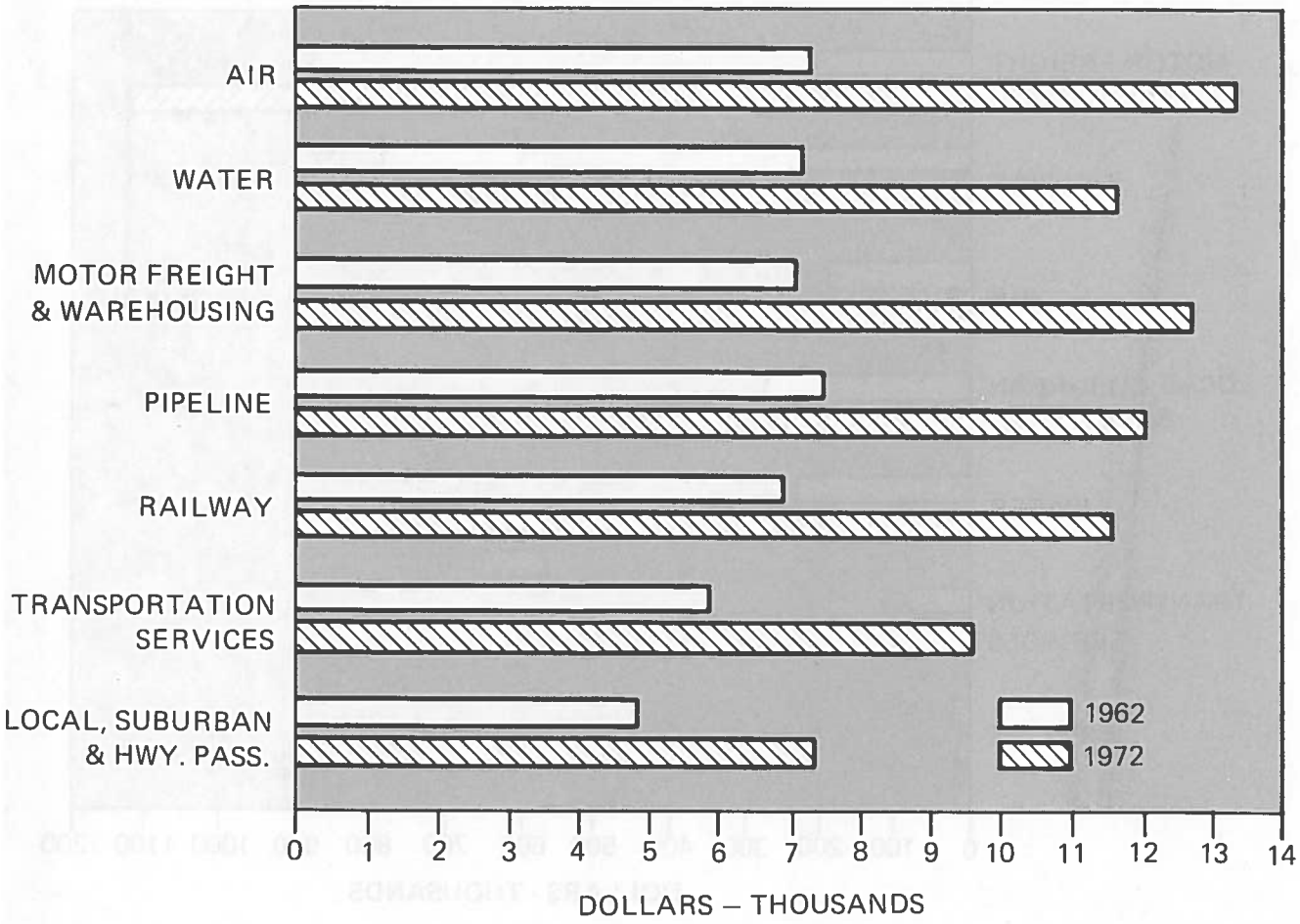


Table 14. Average Number of Full-Time and Part-Time Employees by Transportation Sector, 1962-1972 (Thousands)

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Total	2,475	2,470	2,494	2,537	2,614	2,656	2,694	2,725[r]	2,688[r]	2,633[r]	2,652
Railway	793	770	755	738	724	696	667	643	626	597[r]	575
Local, suburban, and highway passenger	273	270	268	269	272	279	280	280	280	277	270
Motor freight and warehousing	883	902	921	965	1,008	1,021	1,055	1,093	1,079[r]	1,090[r]	1,124
Water	224	221	230	226	240	242	241	227	220[r]	200[r]	203
Air	197	203	213	229	256	299	331	356	354	343	346
Pipeline	21	20	19	19	18	18	18	18	17[r]	17	17
Services	84	84	88	91	96	101	102	108[r]	112[r]	112	117

[r] revised

Sources: See page 135

Average number of full-time and part-time employees by transportation sector, 1962-1972

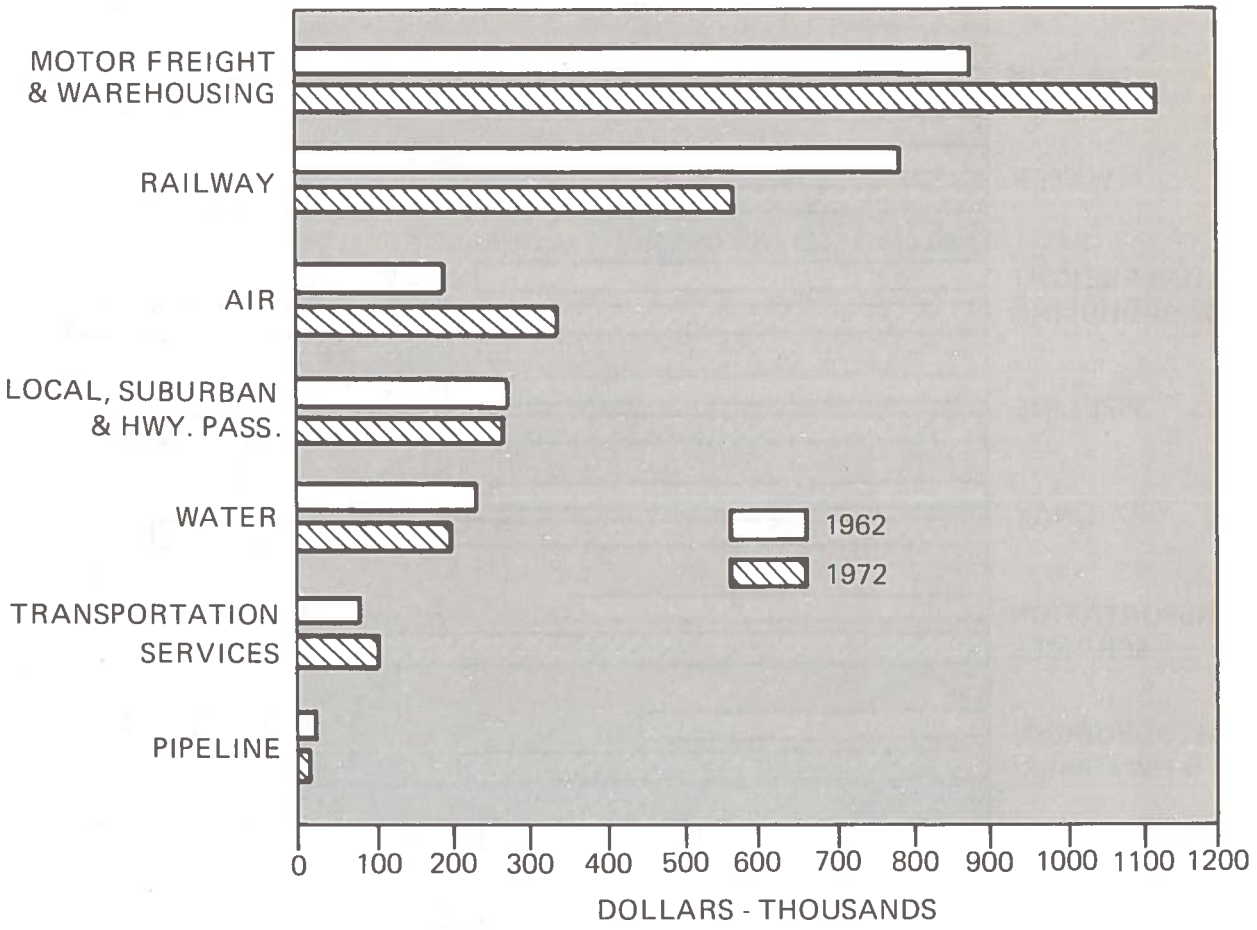


Table 15. Wages and Salaries by Transportation Sector, 1962-1972 (Millions of Dollars)

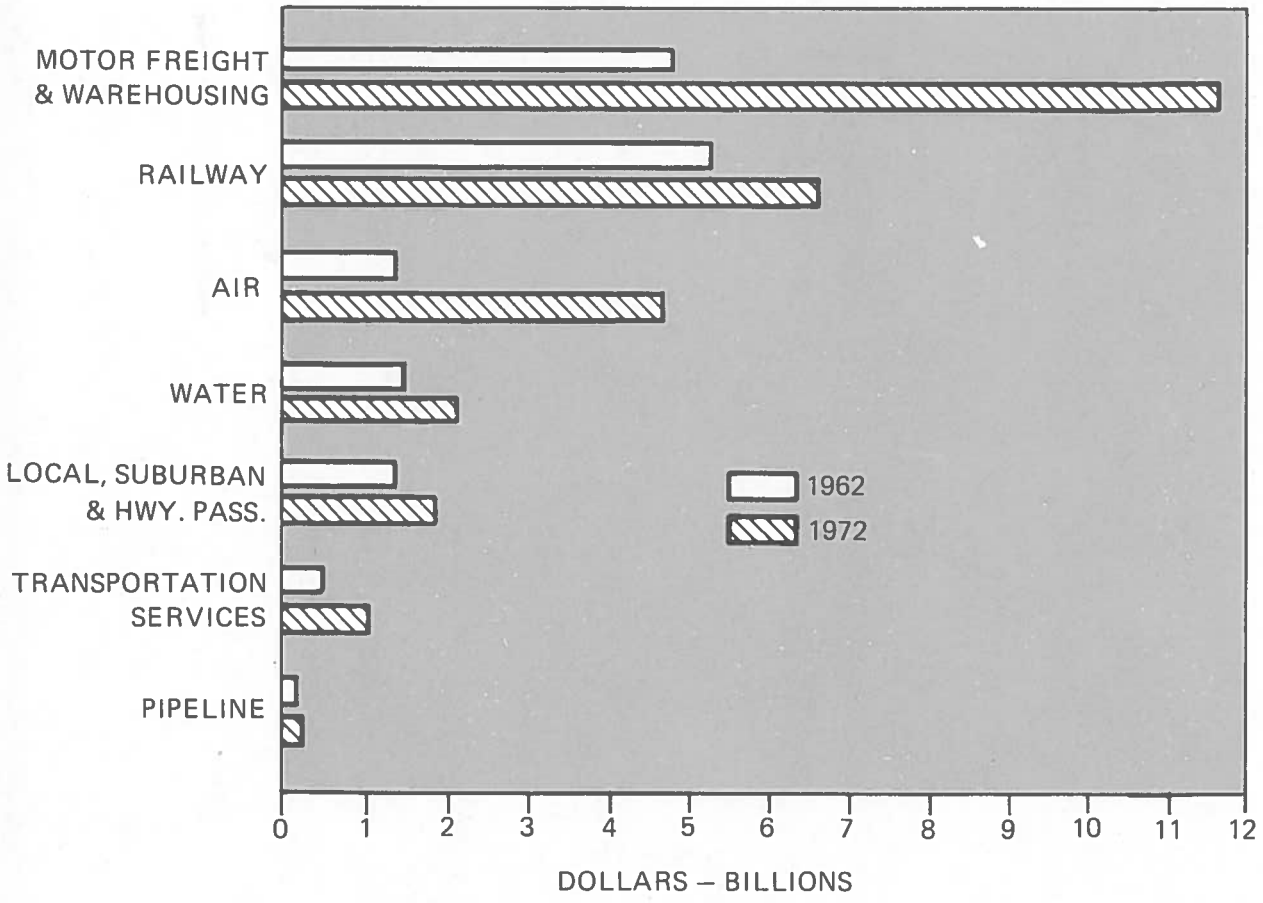
	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971[1]	1972
Total	15,008	15,417	16,248	17,217	18,458	19,574	21,160	22,977	24,270[r]	25,957	28,178
Railway	5,242	5,207	5,305	5,466	5,546	5,592	5,726	5,935	6,268[r]	6,692	6,811
Local, suburban, and highway passenger	1,301	1,321	1,352	1,397	1,460	1,543	1,629	1,681	1,761[r]	1,822	1,871
Motor freight and warehousing	4,992	5,298	5,702	6,215	6,765	7,102	7,857	8,688	9,032[r]	10,129	11,529
Water	1,426	1,456	1,554	1,585	1,795	1,879	1,979	2,048	2,141	1,982	2,130
Air	1,432	1,511	1,676	1,860	2,141	2,645	3,099	3,656	4,038	4,217	4,603
Pipeline	158	156	154	153	156	158	166	175	182	194	204
Services	457	468	503	541	595	655	704	794	878	921	1,030

[1] All figures in 1971 column are revised.

[r] revised

Sources: See page 135

Wages and salaries by transportation sector, 1962-1972



SUPPLEMENTARY DATA
Part 2: Transportation, Energy, and the Environment

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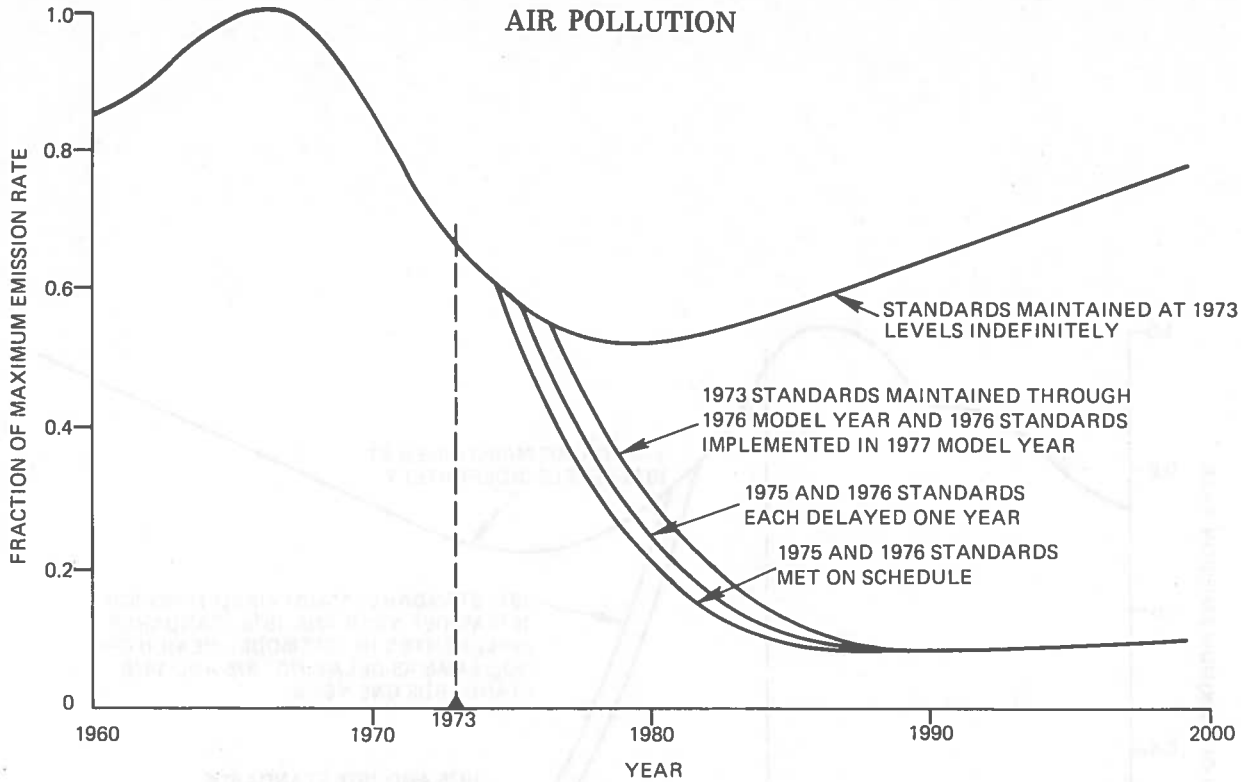
Table 16. Fuel Consumption by Mode, 1962-1972

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Class I Railroads											
Locomotives											
Diesel Oil, gals X 10^6	3,456	3,537	3,624	3,736	3,920	3,883	3,917	3,919	3,804	3,819	3,999
Fuel Oil, gals X 10^6	101	90	85	77	65	47	42	33	—	—	—
Electricity, KWH X 10^6	1,094	1,018	931	933	922	832	750	610	578	534	607
Coal, tons	8,256	7,332	6,831	3,695	3,235	2,310	1,669	1,137	1,238	1,191	1,400
Motor Cars											
Diesel Oil, gals X 10^6	7	7	7	6	6	6	5	5	8	4	3
Electricity, KWH X 10^6	592	591	583	576	576	580	567	538	763	756	715
Gasoline, gals	7,033	7,591	4,585	—	—	—	—	—	—	—	—
Air											
Certificated Carriers											
Aviation Gasoline, gals X 10^6	738	651	589	519	398	268	128	33	15	12	13
Jet Fuel, gals X 10^6	2,808	3,291	3,830	4,650	5,670	7,523	8,891	10,113	10,085	10,140	10,302
General Aviation											
Aviation Gasoline, gals X 10^6	241	250	262	292	375	396	495	522	551	508	584
Jet Fuel, gals X 10^6	20	32	41	81	106	138	n/a	168	208	226	245
Highway											
Gasoline, gals X 10^6											
Pass. Cars + Taxis	43,771*	45,246*	47,567*	50,206	53,220	55,007	58,413	62,325	65,649	69,213	73,121
Motorcycles	—	—	—	69	92	103	111	123	135	301	342
Diesel + Gasoline, gals X 10^6											
Commercial Buses	610	606	622	645	637	646	655	657	644	631	561
School Buses	227	232	242	249	259	264	277	290	300	316	320
Single-unit Trucks[1]	n/a	12,348	13,199	13,504	13,636	14,470	15,674	16,528	17,237	18,221	22,118
Combination Trucks	n/a	6,084	6,271	6,431	6,779	7,203	7,808	8,199	8,363	8,865	8,600
Water											
Vessels											
Residual Fuel Oil, gals X 10^6	3,545	3,213	3,487	3,093	3,093	3,389	3,678	3,506	3,774	3,307	3,273
Distillate Fuel Oil, gals X 10^6	665	636	672	652	699	734	766	793	819	880	1,013
Gasoline, gals X 10^6	n/a	n/a	n/a	n/a	485	501	533	569	598	645	687
Transit											
Electricity, KWH X 10^6											
Rapid Transit	2,115	2,125	2,171	2,185	2,075	2,194	2,250	2,291	2,261	2,262	2,149
Surface Rail	325	255	222	218	226	180	179	173	157	153	146
Trolley	346	262	204	181	166	157	157	154	143	141	133
Gallons of Motor Fuel, gals. X 10^6											
Gasoline	108	103	96	92	76	58	46	40	37	29	26
Diesel Oil	229	235	242	248	256	270	274	274	271	257	247
Propane	36	36	33	33	34	33	32	32	31	27	24
Pipelines (Gas & Oil)											
Natural Gas Cu. Ft. X 10^6	382,496	423,783	433,204	500,024	535,353	575,752	590,965	630,962	722,166	742,592	766,156

[1]Includes non-freight truck movements.
*Includes Motorcycles

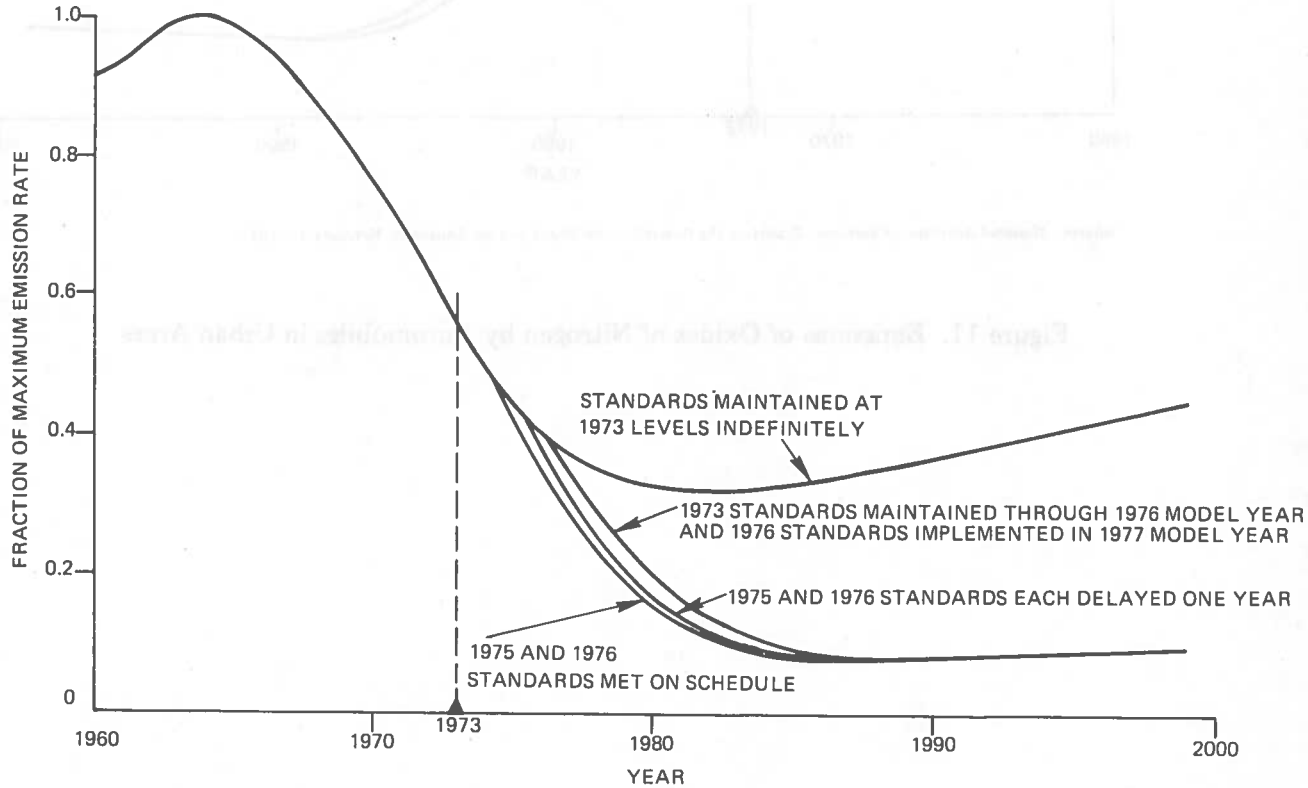
Source: 136

AIR POLLUTION



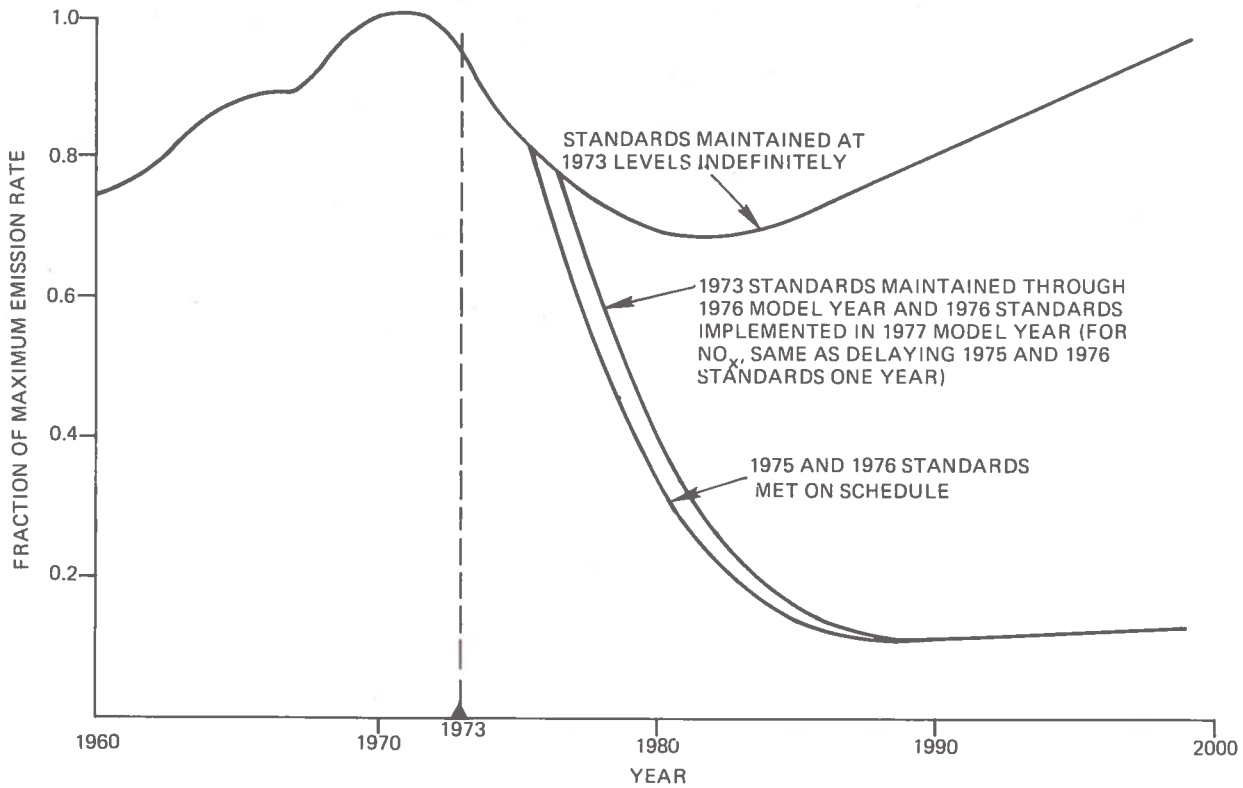
Source: National Academy of Sciences, *Report by the Committee on Motor Vehicle Emissions*, February 15, 1973

Figure 9. Emissions of Carbon Monoxide by Automobiles in Urban Areas



Source: National Academy of Sciences, *Report by the Committee on Motor Vehicle Emission*, February 15, 1973

Figure 10. Emissions of Hydrocarbons by Automobiles in Urban Areas



Source: National Academy of Sciences, *Report by the Committee on Motor Vehicle Emissions*, February 15, 1973

Figure 11. Emissions of Oxides of Nitrogen by Automobiles in Urban Areas

Table 17. National Emission Data

NATIONWIDE EMISSIONS REPORT
UNITED STATES

EMISSIONS AS OF: DEC. 19, 1973

Transportation (Area)	Particulates Tons/Yr	SO_x Tons/Yr	NO_x Tons/Yr	HC Tons/Yr	CO Tons/Yr
Land Vehicles					
Gasoline					
Light Vehicles	357856	214714	5129268	10924202	59276452
Heavy Vehicles	31628	18977	1054282	2155393	8889910
Off Highway	15140	9462	333074	1046535	5734178
Total (Gasoline)	404624	243153	6516624	14126130	73900540
Diesel					
Heavy Vehicles	42106	84212	1193007	119301	701769
Off Highway	18468	38357	525629	52563	319639
Rail	53305	138592	159914	106609	149253
Total (Diesel)	113879	261161	1878550	278473	1170662
Aircraft					
Military	150553	28749	72326	350283	376005
Civil	9379	1863	8472	41536	237349
Commercial	60476	13398	37836	145142	344247
Total (Aircraft)	220408	44009	118634	536961	957601
Vessels					
Biluminous Coal	1273	3183	191	1273	5729
Diesel Fuel	14226	36987	42677	28451	39832
Residual Oil	6985	30371	18223	911	61
Gasoline	917	573	20171	63378	347262
Total (Vessels)	23401	71114	81262	94014	392884
Gas Handling Evap. Loss	0	0	0	1000055	0
Total (Transportation)	762312	619437	8595071	16035632	76421687

Source: Environmental Protection Agency Office of Air Quality Planning & Standards.

Table 18. Air Pollutant Emissions: 1968 to 1970.
(Quantity in millions of tons per year. Estimates)

SOURCE CATEGORY	1968 Total	1969 Total	1970 Total	POLLUTANT				
				Carbon mon-Oxide	Sulfur Oxides	Hydro-carbons	Partic-ulates	Nitrogen Oxides
Total quantity	264.4	272.6	263.9	147.0	33.9	34.7	25.6	22.7
Total controllable	252.3	259.1	255.1	144.0	33.6	30.3	24.6	22.6
Transportation	145.7	144.8	143.8	111.0	1.0	19.5	0.7	11.7
Road vehicles	126.3	124.3	123.1	96.6	0.3	16.7	0.4	9.1
Fuel combustion (stationary)	43.8	45.4	44.8	0.8	26.5	0.6	6.9	10.0
Steam and electric	25.1	26.5	28.1	0.2	19.4	0.1	3.7	4.7
Industrial processes	31.9	37.1	36.4	11.4	6.0	5.5	13.3	0.2
Agricultural burning	19.4	19.3	19.2	13.8	—	2.8	2.4	0.3
Solid waste disposal	11.8	11.8	11.1	7.2	0.1	2.0	1.4	0.4
Percent of total, by source	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Transportation	55.1	53.1	54.5	75.5	2.9	56.2	2.7	51.5
Road vehicles	47.8	45.6	46.6	65.7	0.9	48.1	1.6	40.1
Fuel combustion (stationary)	16.6	16.7	17.0	0.5	78.2	1.7	27.0	44.1
Steam and electric	9.5	9.7	10.6	0.1	57.2	0.3	14.5	20.7
Industrial processes	12.1	13.6	13.8	7.8	17.7	15.9	52.0	0.9
Agricultural burning	7.3	7.1	7.3	9.4	—	8.1	9.4	1.3
Solid waste disposal	4.5	4.3	4.2	4.9	0.3	5.8	5.5	1.8
Miscellaneous	4.5	5.1	3.3	2.0	0.9	12.7	3.9	0.4
Percent of total, by pollutant	(X)	(X)	100.0	55.7	12.8	13.1	9.7	8.6
Transportation	(X)	(X)	100.0	77.2	0.7	13.6	0.5	8.1
Road vehicles	(X)	(X)	100.0	78.5	0.2	13.6	0.3	7.4
Fuel combustion (stationary)	(X)	(X)	100.0	1.8	59.2	1.3	15.4	22.3
Steam and electric	(X)	(X)	100.0	0.7	69.0	0.4	13.2	16.7
Industrial processes	(X)	(X)	100.0	31.3	16.5	15.1	36.5	0.5
Agricultural burning	(X)	(X)	100.0	71.9	—	14.6	12.5	1.6
Solid waste disposal	(X)	(X)	100.0	64.9	0.9	18.0	12.6	3.6
Miscellaneous	(X)	(X)	100.0	34.1	3.4	50.0	11.4	1.1
Miscellaneous, uncontrollable	12.0	13.9	8.8	3.0	0.3	4.4	1.0	0.1

—Respresents zero X Not applicable

Source: Statistical abstract of the United States, 1973, 94th Annual Edition, U.S. Dept. of Commerce, Bureau of Census.

WATER POLLUTION

WATER POLLUTION

Tables 19-21 pertain to 376 polluting incidents resulting from oil tanker casualties which occurred in calendar years 1971 and 1972.

Table 19 shows the frequency and magnitude of these incidents for the following selected geographical areas:

- North West Atlantic Ocean (North of the Tropic of Cancer, between 30° West and the East Coast of the U.S. and Canada);
- North East Atlantic Ocean (North of the Tropic of Cancer, between 30° West and the West Coast of Europe including the Denmark Strait and Greenland Sea);
- North West Pacific Ocean (North of the Tropic of Cancer, and between the 180th meridian and the Coast of Asia including the sea of Okhotsk, the Sea of Japan and the Yellow Sea);
- The Mediterranean Sea; and
- The East Indian Ocean (North of the Tropic of Capricorn and between 20° and 70° East longitude including the Arabian Sea, the Gulf of Aden, and the Red Sea).

These data simply state that at least on a macroscopic view, tanker accidents and oil outflow are a direct function of tanker traffic density; i.e., the accidents occur where the tanker traffic is the densest such as in the Persian Gulf, Northern Europe, Japan, etc.

Table 19. Geographical Distribution of the Frequency and Magnitude of 376 Tanker-Polluting Incidents, 1971-1972

	Number of Incidents	Total Outflow
Northwest Atlantic Ocean	42	73,765
Northeast Atlantic Ocean	85	37,411
Northwest Pacific Ocean	38	39,456
Mediterranean Sea	57	53,561
East Indian Ocean	26	137,046
Subtotal	248	341,939
All other geographical locations	128	97,815
Total	376	439,054 long tons

Source: J.J. Henry Co., Inc., Report for the U.S. Coast Guard, *An Analysis of Oil Outflows Due to Tanker Accidents*, 1971-1972.

Table 20 shows the 376 incidents and associated outflows on an area basis.

Areas are defined as follows:

- Coastal — within 50 nautical miles of any shoreline;
- Entranceway — entrance to a harbor, bay, river, etc.;
- Harbor — within the confines of harbors, bays, rivers, etc.;
- Pier — at a wharf, pier, dock, quay, etc. with tanker physically moored thereto; and
- Sea — more than 50 nautical miles from any shoreline.

Table 20 also shows that 376 incidents with an attendant outflow of 305,100 long tons occurs within 50 miles of a shoreline. It also shows that 152 incidents with an attendant outflow of 42,743 long tons occurred either at the pier or within the confines of a harbor.

Table 20. Area Location and Outflows of the 376 Tanker-Polluting Incidents, 1971-1972

Area	Number of Incidents	Amount of Outflow	Percent of Outflow
Coastal	109	245,651	56.0
Entrance	44	16,706	3.8
Harbor	95	33,478	7.6
Pier	57	9,265	2.1
Sea	68	133,951	30.5
Unknown	3	3	0.0
Total	376	439,054 long tons	100.0

Source: J.J. Henry Co., Inc., report for the U.S. Coast Guard, *An Analysis of Oil Outflows Due to Tanker Accidents, 1971-1972*

Table 21 shows on an individual basis, the frequency and magnitude of a different type of casualties. For example, in the coastal area, 82 incidents out of 109 are either groundings or collisions and account for 164,938 long tons of outflow. Other important points to note are as follows:

- In the entranceways, 16 collisions account for 8,618 long tons of outflow out of a total of 16,706 long tons that were spilled;
- In the harbors, 31 groundings had an outflow of 25,960 long tons out of a total of 33,478 long tons spilled;
- Twelve explosions at the pier had an outflow of 6,281 long tons out of a total of 9,265 long tons spilled;
- At sea, the 40 structural failures accounted for 60,659 long tons of outflow or 45.3 percent of the "at sea" total.

Table 21. Outflows of 376 Tanker-Polluting Incidents Shown by Type of Casualty and Area Locations, 1971-1972

Type of Casualty	COASTAL		ENTRANCE		HARBOR		PIER		SEA		UNKNOWN		TOTAL	
	No.	Outflow	No.	Outflow	No.	Outflow	No.	Outflow	No.	Outflow	No.	Outflow	No.	Outflow
Breakdown	4	4	1	1	2	2	1	4	7	7	0	0	15	18
Collision	36	138,087	16	8,618	35	5,002	5	241	5	163	0	0	97	152,111
Explosion	6	13,364	0	0	5	197	12	6,281	8	38,822	0	0	31	58,664
Fire	6	15	0	0	4	52	21	1,553	2	50	1	1	34	1,671
Grounding	46	26,851	23	7,110	31	25,960	0	0	0	0	1	1	101	59,922
Ramming	0	0	2	960	12	2,123	5	805	2	136	1	1	22	4,025
Structural Failure	7	45,962	2	17	4	43	11	191	40	60,659	0	0	64	106,872
Other	4	21,368	0	0	2	99	2	190	4	34,114	0	0	12	55,771
Column Totals	109	245,651	44	16,706	95	33,478	57	9,265	68	133, 951	3	3	376	439,054

Source: J.J. Henry Co., Inc., Report for the U.S. Coast Guard, *An Analysis of Oil Outflows Due to Tanker Accidents*, 1971-1972.

NOISE POLLUTION

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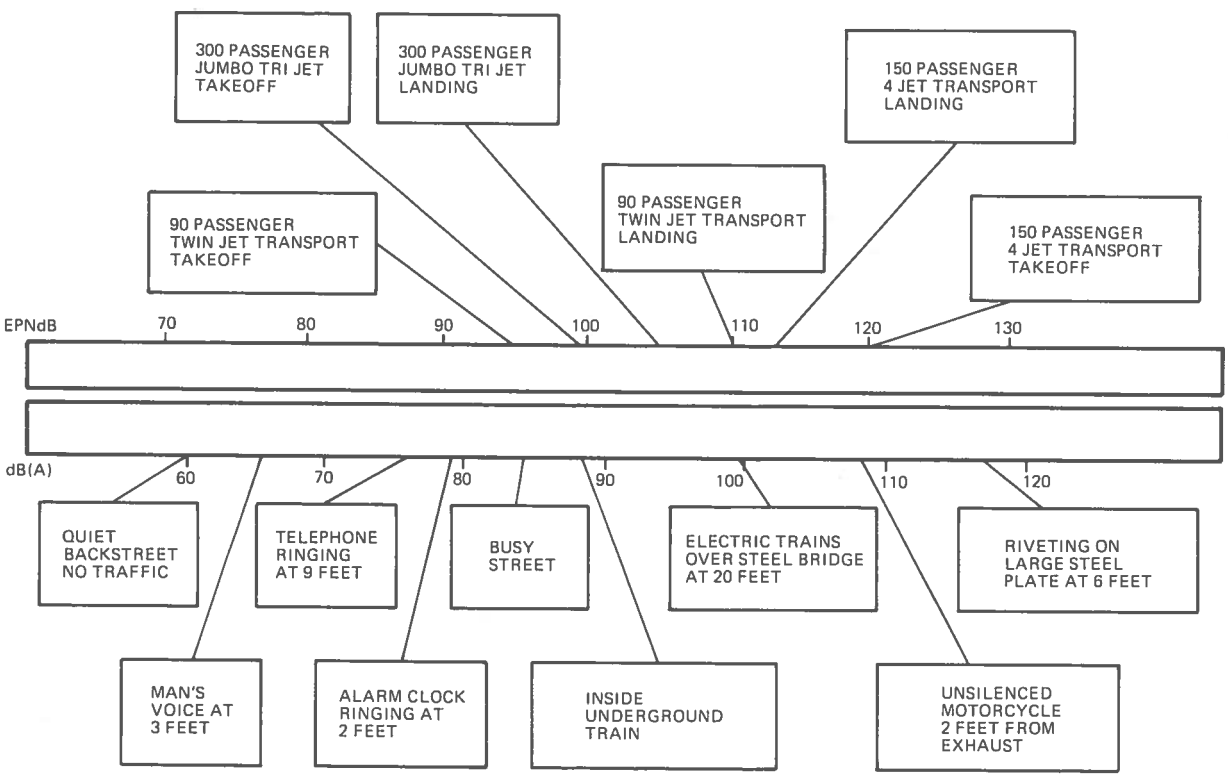
General Transportation Noise

NOISE SOURCES AND THE dB SCALE

Noise sources are governed by many factors, such as: (a) the design, construction, maintenance, and manner of operating a vehicle, and (b) the path that the sound waves travel to reach the observer (i.e., distance, obstructions, reflections off surfaces, etc.). Typical values of noise levels from some commonly occurring events are shown here to provide a familiarity with two widely-used noise-measuring scales.

Sound levels are measured by a meter in units called decibels (dB). However, because of the complex way in which the human ear works, measurement of different noises does not always correspond to their relative loudness or annoyance. Different scales have been developed, therefore, to furnish guidance in evaluating the importance of different noise sources. Aircraft noise is evaluated in EPNdB, a unit which weighs the sound pressure of the various frequencies making up the noise and adds corrections for annoying tones and durations of such sounds. Another commonly used scale, called dB(A), is based on a different method of weighting and is widely accepted for surface modes of transportation. These two scales differ by nearly a constant (i.e., EPNdB–dB(A) ≅ 13dB).

A 10-dB increase in sound level on either of these noise-level scales doubles the apparent loudness or annoyance of the sound. Conversely, a 10-dB decrease in sound level will halve the loudness of the sound, as adjudged by the hearer.



Note:
Approximate relation between EPNdB scale and dB(A) scale is shown in this comparison of various noise sources
Source: U.S. Department of Transportation, *Transportation Noise and Its Control*, June 1972

Figure 12. Typical Noise Levels

Table 22. Noise Energy For Elements of the Transportation System

Major Category		Noise Energy (Kilowatt-Hours/Day)
Aircraft	• 4-Engine Turbofan Aircraft	3,800
	• 2- and 3-Engine Turbofan Aircraft	730
	• General Aviation Aircraft	125
	Helicopters	25
Highway Vehicles	• Medium and Heavy Duty Trucks	5,000
	• Sports, Cars, Imports and Compacts	1,000
	• Passenger Cars (Standard)	800
	• Light Trucks and Pickups	500
	• Motorcycles	500
	City and School Buses	20
	Highway Buses	12
Recreational Vehicles	• Minicycles and Off-Road Motorcycles	800
	Snowmobiles	120
	Outboard Motorboats	100
	Inboard Motorboats	40
Rail Vehicles	• Locomotives	1,200
	Freight Trains	25
	High Speed Intercity Trains	8
	Rapid Transit Trains	6.3
	Passenger Trains	0.63
	Old Trolley Cars (pre WWII)	0.50
	New Trolley Cars (post WWII)	0.08
		Total-15,000

• Top 10 categories that each generate at least 125 kilowatt-hours per day.

Source: Report to the President and Congress on Noise, Administrator of the Environmental Protection Agency, February 1972

Table 23. Rank Ordering of Surface Transportation System According to A-Weighted Noise Level

	Typical A-Weighted Noise Levels at 50 ft[1] dB re: $20\mu N/m^2$	Estimated Vehicle-Miles in Urban Areas Billions
HIGHWAY		
Medium and Heavy Trucks	84 (88)	19
Motorcycles	82 (88)	n/a
Garbage Trucks	82 (88)	0.5
Highway Buses	82 (86)	0.1
Automobiles (Sport, etc.)	75 (86)	21
City Buses	73 (85)	2.2
Light Trucks	72 (86)	77
Automobiles (Standard)	69 (84)	335
RAIL		
Freight and Passenger Trains	94	n/a
Rapid Transit	86	0.33
Trolley Cars*	80	0.03
Trolley Cars**	68	0.03
RECREATIONAL VEHICLES		
Off-Road Motorcycles	85	
Snowmobiles	85	
Inboard Motorboats	80	
Outboard Motorboats	80	

[1] Values inside parentheses are typical for maximum acceleration. All other values are for normal cruising speeds. Variations of 5 dB can be expected.

n/a Not available.

*Pre-WWII

**Post-WWII

Source: Report to the President and Congress on Noise, Administrator of the Environmental Protection Agency, February 1972.

Aircraft Noise Levels

AIRCRAFT TAKEOFF AND LANDING NOISE

Takeoff Noise on the Ground. Aircraft use full power during takeoff and are therefore at their noisiest in this operation. Since the noise heard depends on both the intensity of sound at the source and the distance between the source and the listener, it is important for aircraft to reach sufficient altitude before crossing residential areas.

Landing Noise on the Ground. Aircraft engines produce less noise during landing because lower power is used. However, the noise that is generated is annoying because of the screech or whine characteristic that predominates during this operation. A gradual descent for a landing begins 5 to 10 miles away from the airport, and generally follows a 2.5 to 3-degree "glide-slope," resulting in constantly increasing noise levels on the ground as the aircraft comes closer to the airport.

CURRENT AIRCRAFT NOISE LEVELS AT ESTABLISHED GROUND MEASURING POINTS

Figures and show the noise levels of various jet transports, measured at prescribed points on the ground for prescribed aircraft operations, in accordance with the Federal Aviation Regulations, Part 36. They also show the noise level limits prescribed by the FAA for new aircraft. Takeoff noise levels were measured at a point 3.5 nautical miles from brake release along the extended centerline of the runway. Aircraft were operated with the power reduced prior to the measuring point to the minimum safe thrust that would maintain horizontal flight if one engine suddenly became inoperative. Landing approach noise levels were measured at a point one nautical mile from the threshold of the runway along the extended centerline of the runway with the aircraft on a stabilized three-degree angle of approach for landing. Maximum noise levels to the side of the takeoff path (also shown here) were also measured to describe the noise characteristics of aircraft. Such measurements are made at a point 0.25 nautical miles to the side of the takeoff path for two and three-engine aircraft and 0.35 nautical miles to the side of four-engine aircraft. The FAA sideline noise-level limits for new aircraft are the same as for approach requirements.

Note the improvement in the noise level of the DC-10 and L-1011 over the older aircraft. The newer planes are some 15 to 20 dB below equivalent weight older aircraft as a result of Government regulation.

Source: U.S. Department of Transportation, *Transportation Noise and Its Control,* June 1972

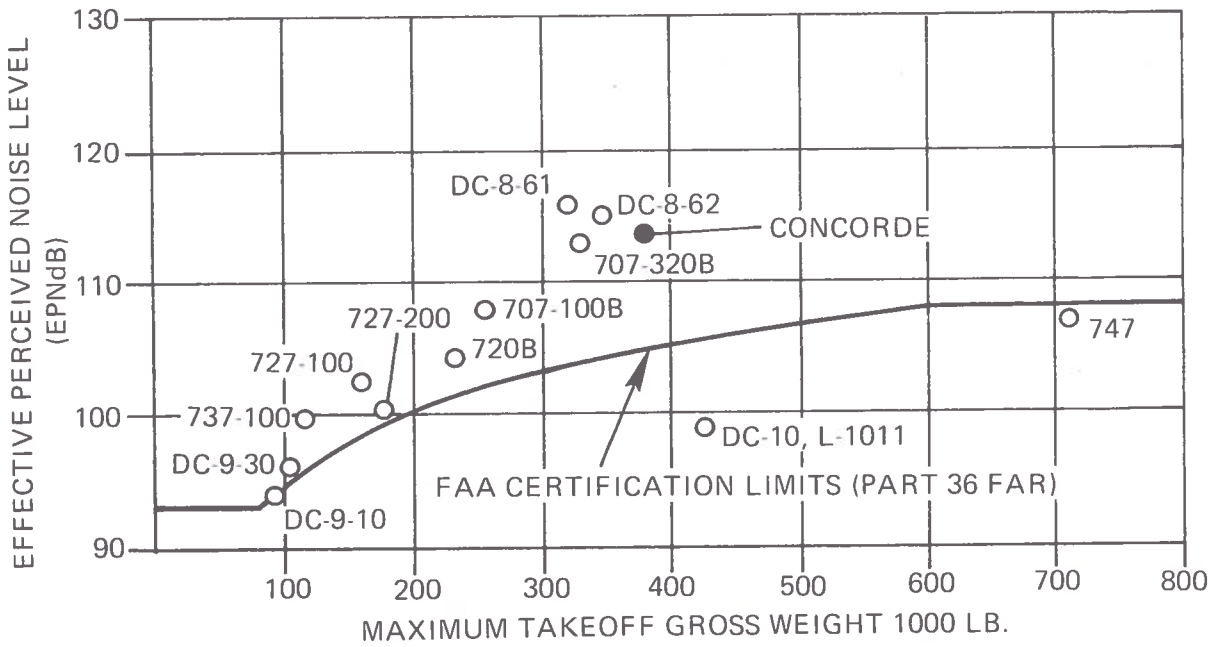


Figure 13. Aircraft-Takeoff Noise Levels 3.5 NM from Brake Release

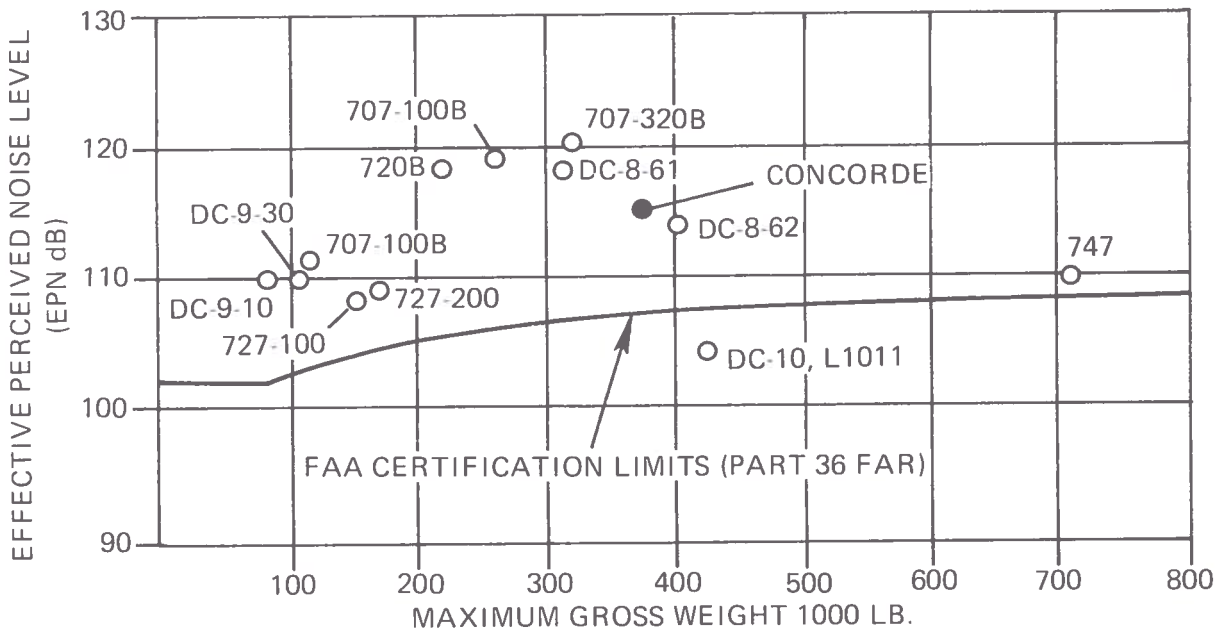


Figure 14. Aircraft-Approach Noise Levels 1 NM from Threshold

Source: U.S. Department of Transportation, *Transportation Noise and Its Control*, June 1972

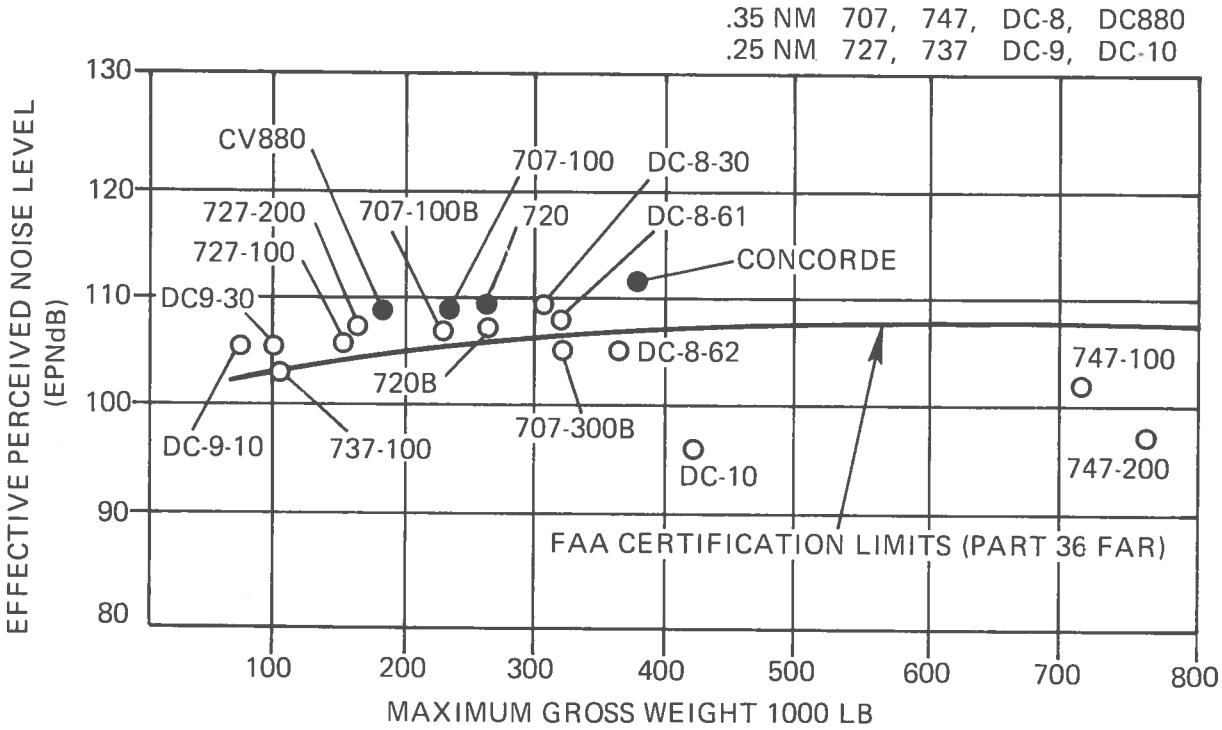


Figure 15. Aircraft Sideline Noise

Source: U.S. Department of Transportation, *Transportation Noise and Its Control*, June 1972

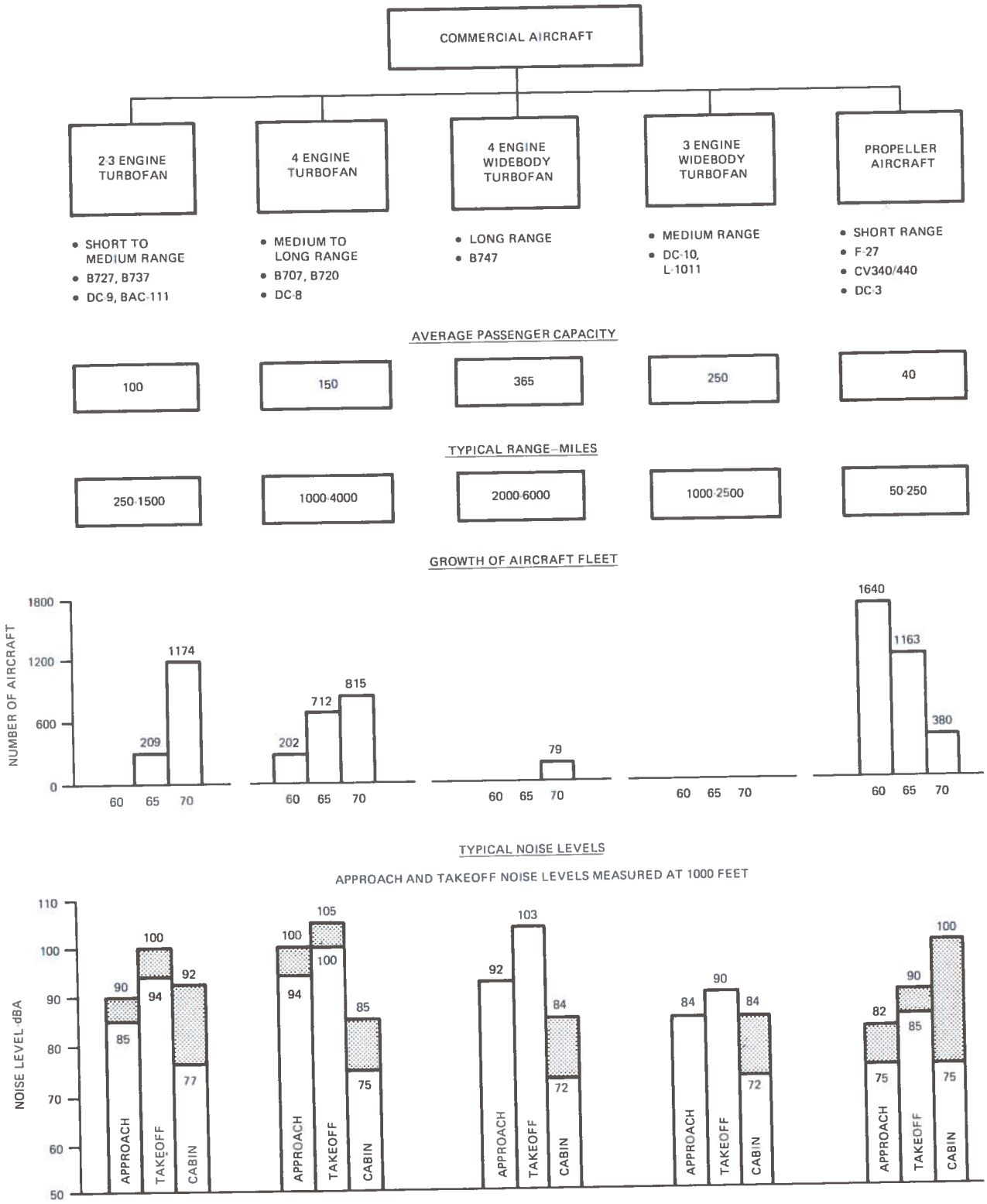


Figure 16. Characteristics of Commercial Aircraft.

Source: Report to the President and Congress on Noise, Administrator of the Environmental Protection Agency, February 1972

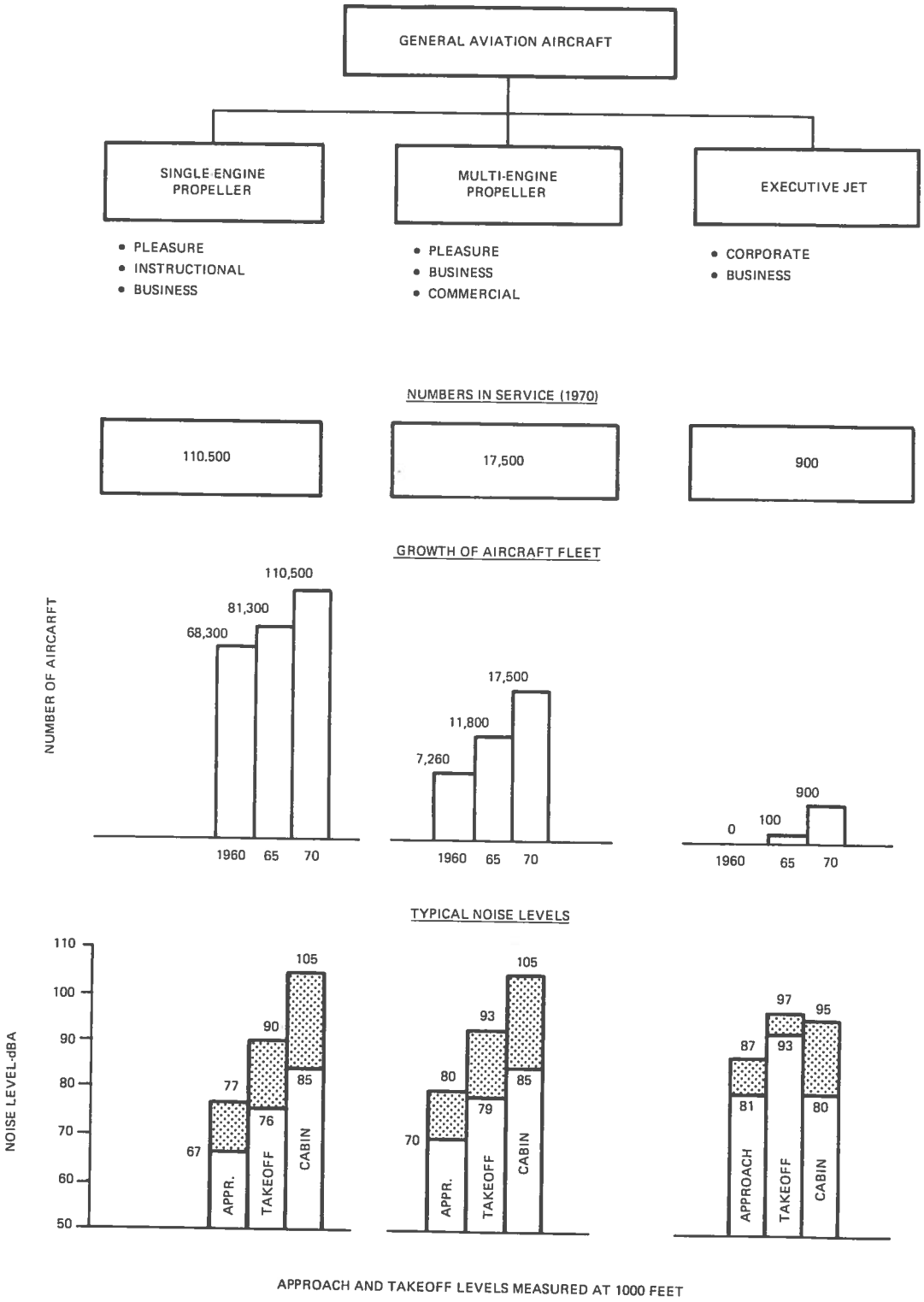


Figure 17. Characteristics of General Aviation Aircraft.

Source: Report to the President and Congress on Noise, Administrator of the Environmental Protection Agency, February 1972.

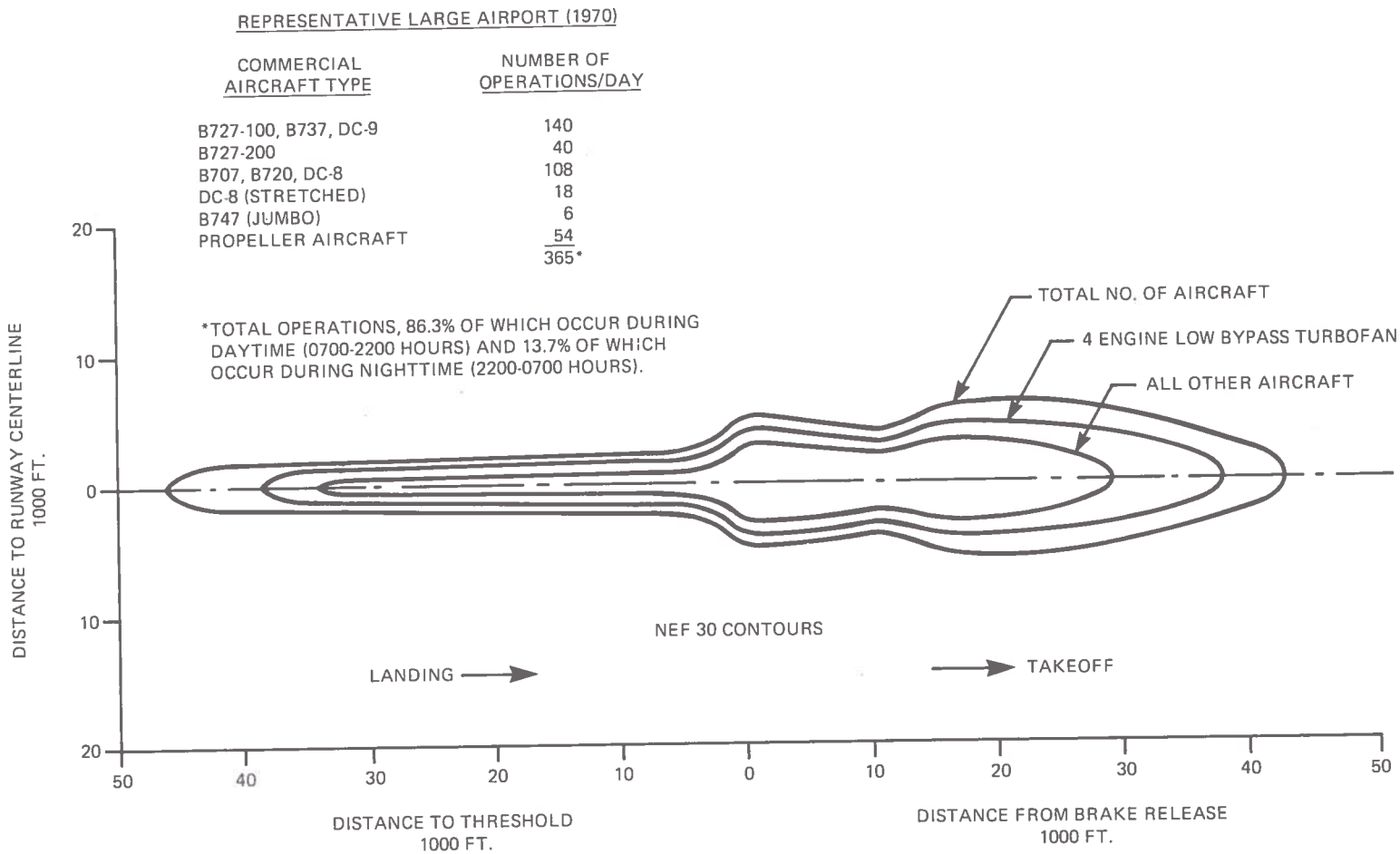


Figure 18. NEF-30 Contours for Representative (Single Runway) Airport.

Source: Report to the President and Congress on Noise, Administrator of the Environmental Protection Agency, February 1972.

Highway Vehicle Noise Levels

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Table 24. Predicted Contributions to Daytime Residual Noise Levels by Highway Vehicles for a Typical Urban Community in 1970

Source	Approximate Source Density, Units/Square Mile	Residual Noise Level dBA
Standard Passenger Cars	50	43
Sports Cars, Compacts, and Imports	20	41
Light Trucks	20	42
Heavy and Medium Trucks	1.5	33
Highway Motorcycles	1	18
City Buses	0.8	15
Total		47 dBA

The residual level was also computed with the same technique for the years 1950 and 1960. The estimated values of the daytime residual noise levels for a typical urban residential community are 45 dBA for 1950 and 46 dBA for 1960. These estimates indicate an increase over 10 years of approximately 1 dB in the residual noise level (L_{90}).

Source: Report to the President and Congress on Noise, Administrator of the Environmental Protection Agency, February 1972.

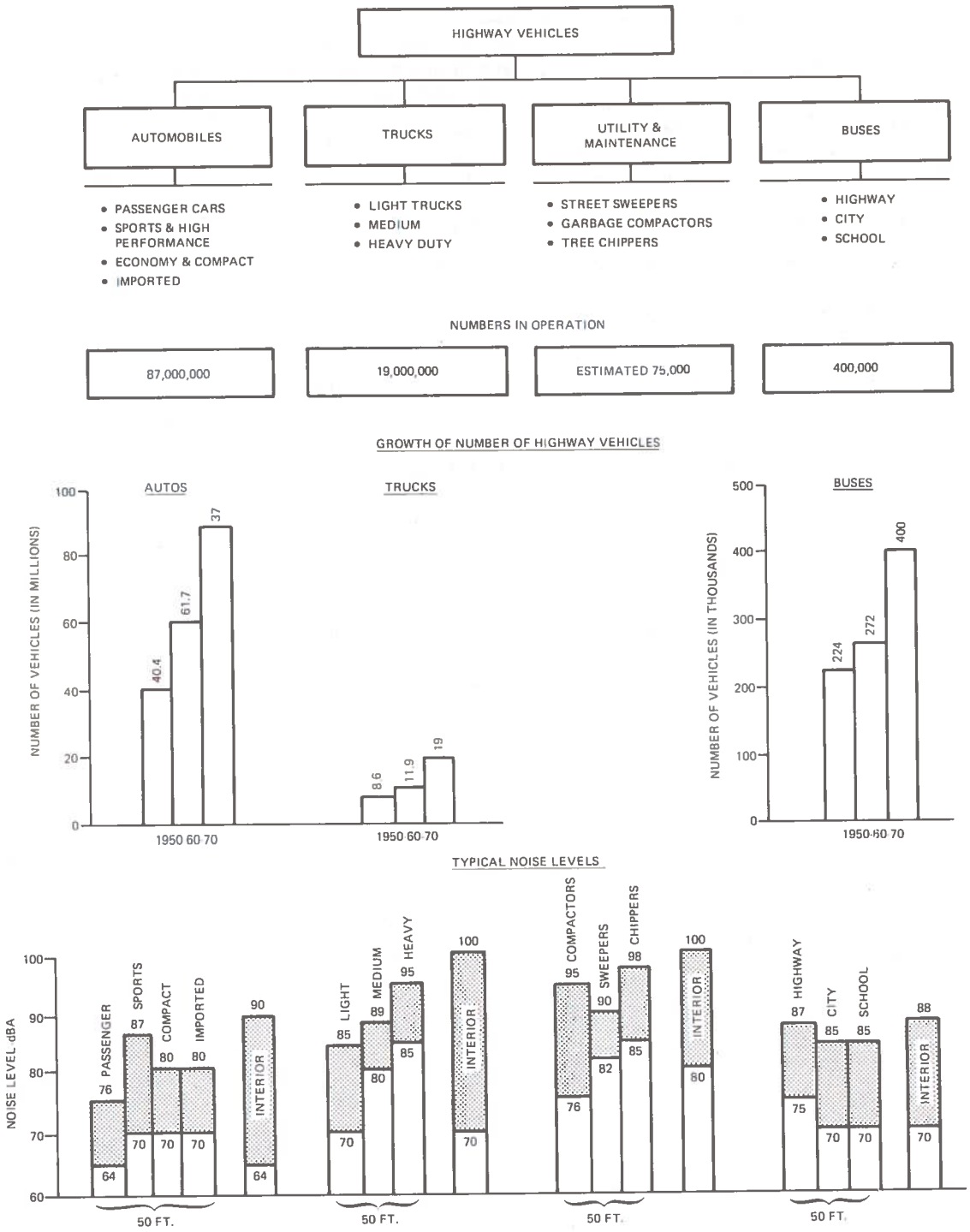


Figure 19. Characteristics of Highway Vehicles.

Source: Report to the President and Congress on Noise, Administrator of the Environmental Protection Agency, February 1972

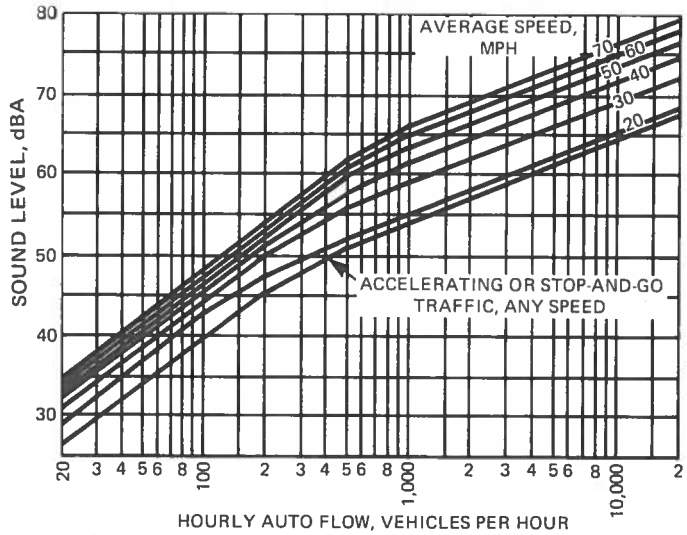


Figure 20. Noise from Cars: L_{50} for automobiles at 100 feet

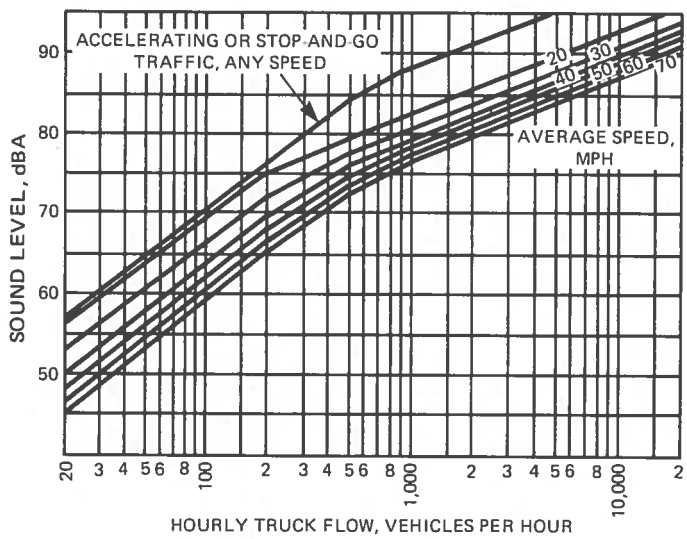


Figure 21. Noise from Trucks: L_{50} for Trucks at 1,000 feet

Note: L_{50} = Median sound level. The A-weighted sound level equaled or exceeded 50% of the time.
Source: Journal of the Air Pollution Control Association, Dec. 1973, Vol. 23, No. 12.

Railway Noise Levels

RAPID TRANSIT NOISE

As an alternative to the automobile, passenger service in metropolitan areas and densely populated corridors could be provided by rapid transit or conventional rail vehicles. The following graphed data are presented in the context of modern practices, including welded rail (which would constitute improvement on the order of 6 dB or more over bolted-rail sections) and appropriate rail and wheel maintenance to maintain true rolling surfaces (which would account for improvement on the order of another 5 dB). Also, the data is presented in the context of tangent track, or appropriately large radius turns, to prevent flange squeal. (It should be noted that most of the above modern practices are not incorporated in the older rapid-transit systems.)

The illustration presents the wayside noise levels for a one-car, two-car, eight-car and a very-long train, as a function of distance from the track centerline. The increase in noise level at small distances due to the increased number of noise sources from multiple cars is accentuated with distance. This spread-out array of sources results in higher near-field noise levels and in reduced attenuation with distance (similar to highway traffic noise). Thus, the noise from a single car will geometrically attenuate at a rate of 6 dB per doubling of distance, while noise from a very-long train attenuates at a rate of 3 dB per doubling of distance.

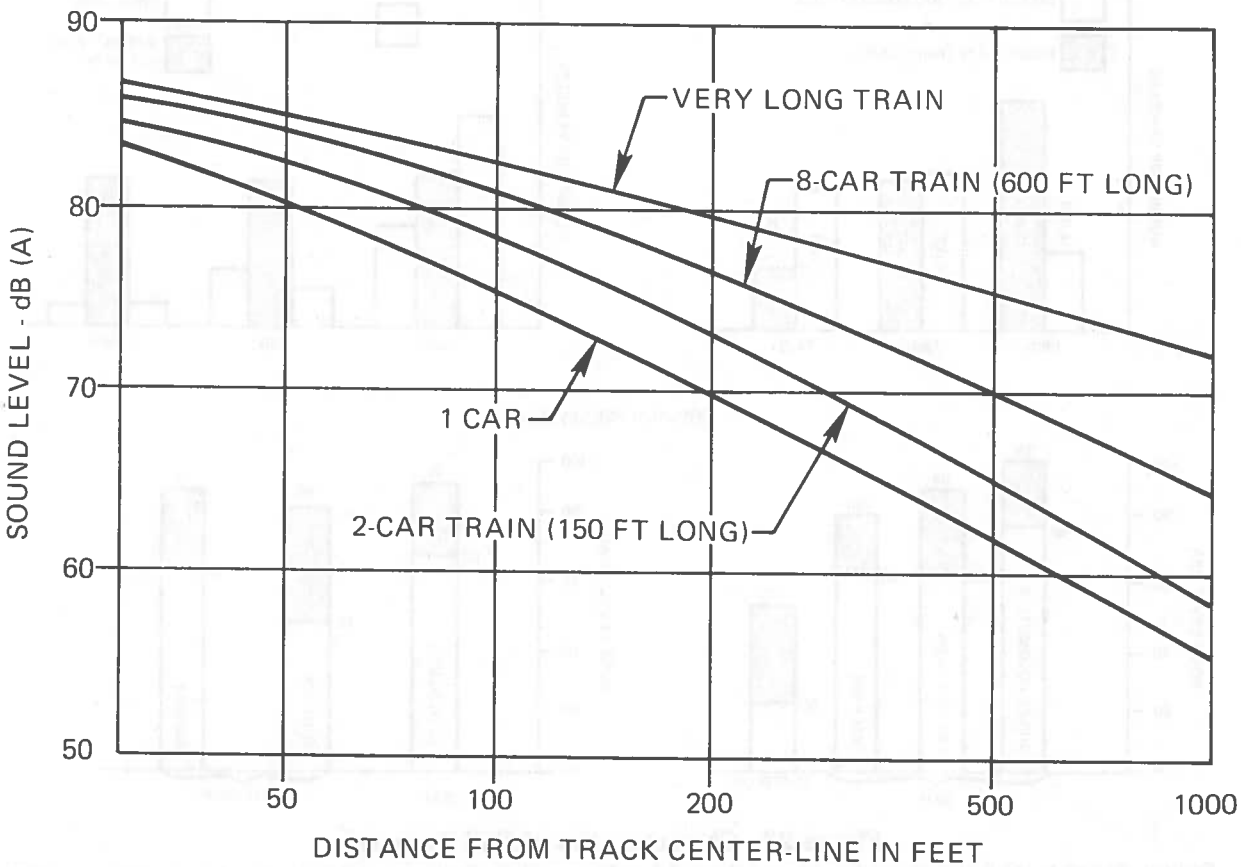
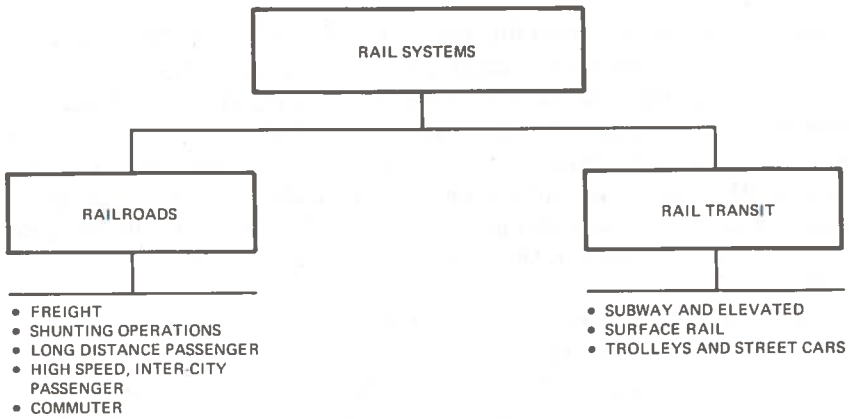
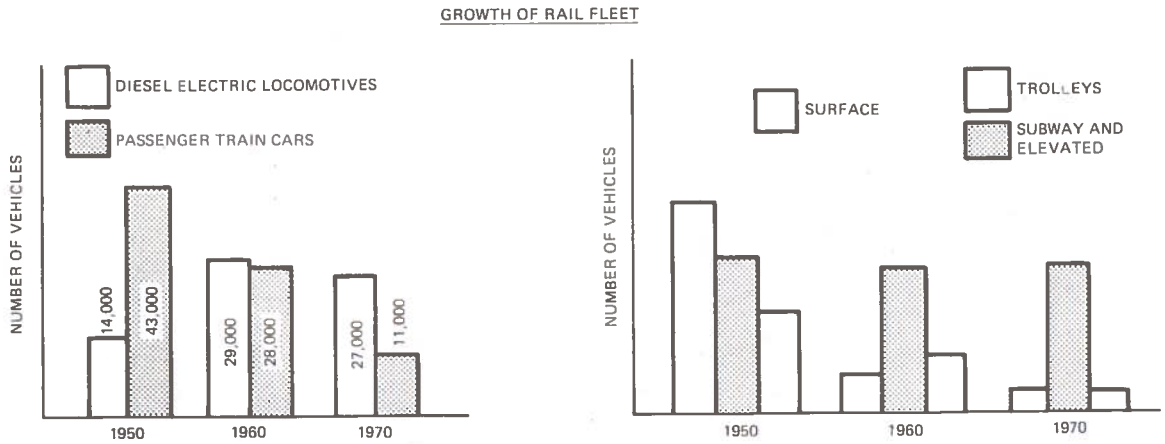


Figure 22. Wayside Noise Level for Transit Trains of Various Lengths at 40 Mph

Source: U.S. Department of Transportation, *Transportation Noise and Its Control*, June, 1972





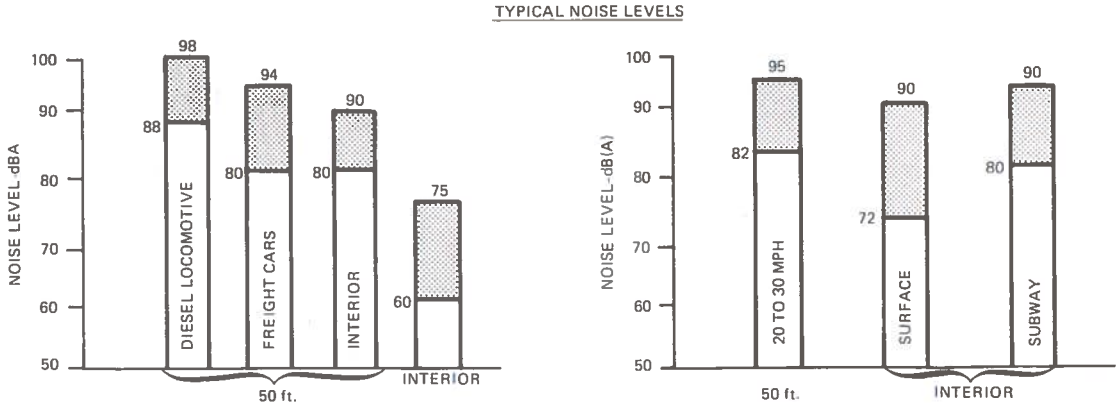


Figure 23. Characteristics of Rail Systems.

Source: Report to the President and Congress on Noise, Administrator of the Environmental Protection Agency, February 1972.

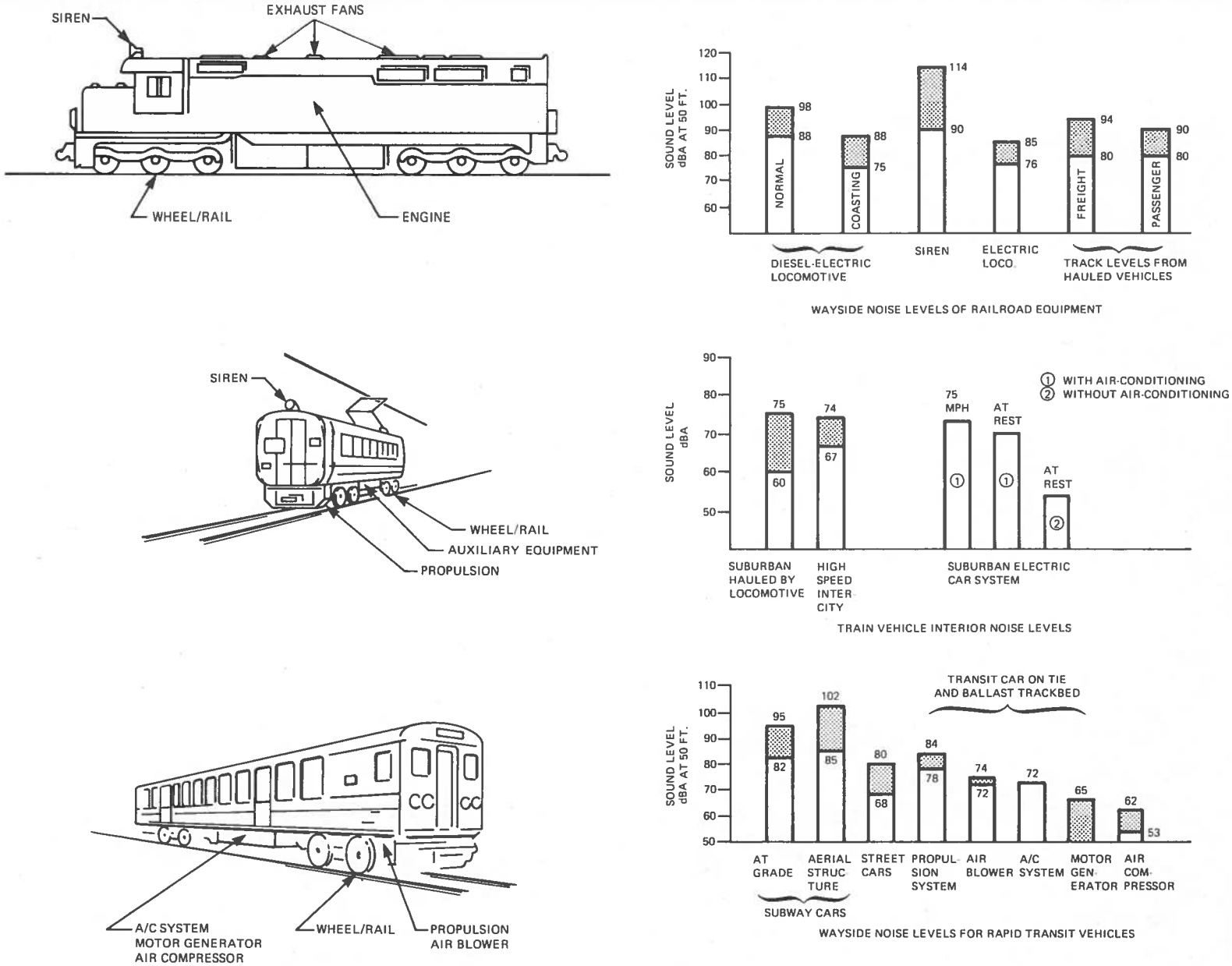


Figure 24. Rail Vehicle Noise Sources.

Source: Report to the President and Congress on Noise, Administrator of the Environmental Protection Agency, February 1972

APPENDIX A
Source Information

Figure 3: Expenditures and Revenues, 1972

(1) Total Transportation-Sum of Domestic and International.

(2) Domestic-Sum of Highway, Local Transit, Rail, Air, Water, and Pipeline.

(3) International-Sum of Air Carrier and Water.

(4) Highway-Sum of Auto, Truck, and Bus.

(5) Auto-Sum of Personal Passenger Car and Taxi.

(6) Personal Passenger Car-TAA, *Transportation Facts and Trends*, quarterly supplement, Jan. 1974, p. 5. Figure represents sum of expenditures for new and used cars, tires, tubes, accessories, gasoline and oil, tolls, insurance, interest on debt, auto registration fees, operator's permit fees, repair, greasing, washing, parking, storage, and rental.

(7) Taxi-*Ibid.*, Jan. 1974, p. 5.

(9) Truck-Sum of Local Truck and Intercity Truck.

(10) Local Truck-*Ibid.*, Jan. 1974, p. 4.

(11) Intercity Truck-Sum of ICC-Regulated Truck and Nonregulated Truck.

(12) ICC-Regulated Truck-*Ibid.*, Jan. 1974, p. 4. Revenues of the Class I, II, III motor carriers of property. Revenues include local cartage under the assumption that the majority of such revenues constitute pickup and delivery of intercity freight.

(13) Nonregulated Truck-*Ibid.*, Jan. 1974, p. 4.

(14) Bus-Sum of Intercity Bus and School Bus.

(15) Intercity Bus-NAMBO, *Bus Facts*, 1972, p. 24. Operating revenues of Class I, II, III carriers reporting to the ICC, plus intrastate carriers. Includes passenger, express, mail, station, and other revenues.

(16) Passenger, Intercity Bus-*Ibid.*, 1972, p. 25. Total passenger revenues of Class I carriers plus 25 percent of this amount as estimated passenger revenues for Class II and III and intrastate carriers.

(17) Cargo, Intercity Bus-*Ibid.*, 1972, p. 25. Total package express and mail revenues of Class I carriers plus 25 percent of this amount as estimated cargo revenues for Class II and III and intrastate carriers.

(18) School Bus-TAA, *Transportation Facts and Trends*, quarterly supplement, Jan. 1974, p. 5.

(19) Local Transit-ATA, *Transit Fact Book*, '73, '74, p. 9. Total operating revenues of Surface Rail, Subway and Elevated, Trolley Coach, and Motorbus.

(20) Motorbus-*Ibid.*, 1973-1974, p. 9. Operating revenues.

Figure 3: Expenditures and Revenues, 1972 (cont.)

(21) Trolley Coach-*Ibid.*, 1973-1974, p. 9. Operating revenues.

(22) Surface Rail-*Ibid.*, 1973-1974, p. 9. Operating revenues.

(23) Subway and Elevated-*Ibid.*, 1973-1974, p. 9. Operating revenues.

(24) Rail-A.A.R., *Yearbook of Railroad Facts*, 1973, p. 10 and A.A.R., *Statistics of Railroads of Class I*, Nov., 1973, p. 16. Sum of the total operating revenues of Class I railroads and AMTRAK.

(25) Rail, Passenger—Sum of Commuter and Intercity.

(26) Rail, Commuter—A.A.R., *Yearbook of Railroad Facts*, 1973, p. 14, and I.C.C., *Class I Railroads, Financial and Operating Statistics*, Dec. 31, 1972, p. 19, sum of the commutation passenger revenues of the Class I railroads and AMTRAK.

(27) Rail, Intercity-*Ibid.*, 1973, p. 14, and *Ibid.*, Dec. 31, 1972, p. 19. Sum of Class I and AMTRAK passenger revenues from parlor and sleeping cars and other coaches.

(28) Rail, Cargo-*Ibid.*, 1973. Sum of Class I freight revenues (p. 10) and express and mail revenues (p. 13).

(29) Air-Sum of General Aviation and Air Carrier.

(30) General Aviation-TAA, *Transportation Facts and Trends*, quarterly supplement, Jan. 1974, p. 5. Figure represents the sum of operating costs and total retail value of new general aviation aircraft.

(36) Air Carrier-Sum of Certificated and Supplemental.

(37) Certificated-CAB, *Air Carrier Financial Statistics*, Dec. 1972, p. 1, column 7, line 17. Overall operating revenues, domestic operations.

(38) Passenger, Certificated-*Ibid.*, Dec. 1972, p. 1, column 7, sum of lines 3 and 10. Total passenger revenues in scheduled and charter service.

(39) Cargo, Certificated-*Ibid.*, Dec. 1972, p. 1, column 7. Sum of lines 4, 5, 6, 7, 8, 9 and 11. Includes revenues from scheduled service of freight, express, priority U.S. mail, nonpriority U.S. mail, foreign mail, excess baggage, and charter freight.

(40) Supplemental-*Ibid.*, Dec. 1972, p. 101. Overall operating revenues of supplemental air carriers, total domestic and international operations. No separation of international and domestic revenues is available.

(41) Passenger, Supplemental-*Ibid.*, Dec. 1972, p. 101. Sum of civilian (line 1) and military (line 2) passenger revenues. Total domestic and international operations.

(42) Cargo, Supplemental-*Ibid.*, Dec. 1972, p. 101. Sum of civilian (line 3) and military (line 4) property revenues.

Figure 3: Expenditures and Revenues, 1972 (cont.)

(43) Water-Sum of Passenger, Cargo, and Commercial fishing.

(44) Passenger, Water-TAA, *Transportation Facts and Trends*, quarterly supplement, Jan. 1974, p. 5. Figure represents revenues of ICC-regulated carriers. Expenditures for private boating not available.

(49) Cargo, Water-*Ibid.*, Jan. 1974, p. 4.

(50) Commercial Fishing — U.S. Dept. of Commerce — National Oceanic and Atmospheric Administration, *Fisheries of the U.S.*, 1972, March 1973. This figure is the value of the U.S. Commercial Fisheries landings.

(51) Pipeline-*Ibid.*, Jan. 1974, p. 4. Includes revenues of regulated and unregulated oil pipelines.

(52) Air Carrier-Figure represents overall operating revenues of the certificated carriers, total international and territorial operations. Revenues of the supplemental carriers international operations are included in the domestic statistic.

(53) Certificated-CAB, *Air Carrier Financial Statistics*, Dec. 1972, p. 7, column 4, line 17. Total international and territorial operations.

(54) Passenger, Certificated-*Ibid.*, Dec. 1972, p. 7, column 4. Sum of total passenger revenues in scheduled service (line 3) and charter passenger revenues (line 10), total international and territorial operations.

(55) Cargo, Certificated-*Ibid.*, Dec. 1972, p. 7, column 4. Sum of lines 4, 5, 6, 7, 8, 9, and 11. Includes revenues from scheduled service of freight, express, priority U.S. mail, non-priority U.S. mail, foreign mail, excess baggage, and charter freight. Total international and territorial operations.

(59) Water-Sum of Passenger and Cargo.

(60) Passenger, Water-TAA, *Transportation Facts and Trends*, quarterly supplement, Jan. 1974, p. 5.

(61) Cargo, Water-*Ibid.*, Jan. 1974.

Figure 4: Vehicle-Miles, 1972

(1) Total Transportation-Sum of Domestic and International.

(2) Domestic-Sum of Highway, Local Transit, Rail, Air, and Water.

(3) International-Sum of Air Carrier and Water.

(4) Highway-Sum of Auto, Truck and Bus.

(5) Auto-Sum of Personal Passenger Car, Motorcycle, and Taxi.

(6) Personal Passenger Car, Federal Highway Administration, *Highway Statistics*, 1972, table VM-1, p. 52. Includes vehicle travel on main rural roads, local rural roads, and urban streets.

(7) Taxi-Data for taxi are included in the Personal Passenger Car category.

Figure 4: Vehicle-Miles, 1972 (cont.)

(8) Motorcycle-Federal Highway Administration, *Highway Statistics* 1972, table VM-1, p. 52. Includes vehicle travel on main rural roads, local rural roads, and urban streets.

(9) Truck-*Ibid.*, 1972, p. 52. Includes vehicle travel on main rural roads, local rural roads, and urban streets.

(10) Local Truck — *1972 Census of Trans. (U.S. Summary)*, 1972, Table 2. The local truck miles plus 71% of the unknown truck miles.

(11) Intercity Truck-*Ibid.*, 1972, Table 2. Sum of Short and Long Range truck miles plus 29% of the unknown truck miles.

(14) Bus-Sum of Intercity Bus and School Bus.

(15) Intercity Bus-NAMBO, *Bus Facts*, 1972, p. 24. Includes operations of Class I, II, and III carriers reporting to the ICC and interstate carriers.

(18) School Bus-Federal Highway Administration, *Highway Statistics*, 1972, table VM-1, p. 52. Includes vehicle travel, on main rural roads, local rural roads, and urban streets.

(19) Local Transit-Sum of Motorbus, Trolley Coach, Surface Rail, and Subway and Elevated.

(20) Motorbus-ATA, *Transit Fact Book*, 1973-1974, p. 15.

(21) *Ibid.*, 1973-1974, p. 15.

(22) *Ibid.*, 1973-1974, p. 15.

(23) *Ibid.*, 1973-1974, p. 15.

(24) Rail-Sum of Passenger and Cargo.

(25) Passenger Rail-AAR, *Yearbook of Railroad Facts*, 1973, p. 39, and I.C.C., *Class I Railroads, Financial and Operating Statistics*, Dec. 31, 1972, p. 17. This figure is the sum of the passenger train-miles of Class I railroads and AMTRAK.

(28) Rail, Cargo-AAR, *Yearbook of Railroad Facts*, 1973, p. 37. This figure is freight train-miles of the Class I railroads.

(29) Air-Sum of General Aviation and Air Carrier.

(30) General Aviation-FAA, *Statistical Handbook*, 1972, Table 9.10. Includes business, commercial instructional, personal, and other flying.

(31) Business-*Ibid.*, 1972.

(32) Commercial-*Ibid,*, 1972.

(33) Instructional-*Ibid.*, 1972.

(34) Personal-*Ibid.*, 1972.

(35) Other-*Ibid.*, 1972.

(36) Domestic Air Carrier-Sum of Certificated and Supplemental.

Figure 4: Vehicle-Miles, 1972 (cont.)

(37) Certificated-CAB, *Air Carrier Traffic Statistics*, Dec. 1972, p. 1. Sum of overall aircraft revenue-miles in scheduled service (line 31) and nonscheduled service (line 50), total domestic operations.

(40) Supplemental-CAB, *Air Carrier Traffic Statistics*, Dec. 1972, p. 43, line 21.

(52) International Air Carrier-Sum of Certificated and Supplemental.

(53) Certificated-CAB, *Air Carrier Traffic Statistics*, 1972, p. 7. Sum of overall aircraft revenue-miles in scheduled service (line 31) and nonscheduled service (line 50), total international and territorial operations.

(56) Supplemental-CAB, *Air Carrier Traffic Statistics*, 1972, p. 43, line 21.

Figure 5: Passenger-Miles, 1972

(1) Total Transportation-Sum of Domestic and International.

(2) Domestic-Sum of Highway, Local Transit, Rail, Air and Water.

(3) International-Air Carrier only. Passenger-miles in international water transport are not available.

(4) Highway-Sum of Auto and Bus.

(5) Auto-Sum of Personal Passenger Car, Taxi, and Motorcycle.

(6) Personal Passenger Car-Passenger-miles of Personal Passenger Car and Taxi. Figure represents vehicle-miles of travel from FHWA, *Highway Statistics*, 1972, table VM-1, p. 52, multiplied by an average occupancy of 2.2.

(7) Taxi-Included in Personal Passenger Car category.

(8) Motorcycle-Passenger-miles derived by multiplying vehicle-miles of travel from FHWA, *Highway Statistics*, 1972, Table VM-1, p. 52 by an average occupancy of 1.1.

(14) Bus-Sum of Intercity Bus and School Bus passenger-miles.

(15) Intercity Bus-NAMBO, *Bus Facts*, 1972, p. 24. Includes Classes I, II, III carriers reporting to ICC plus intrastate carriers.

(18) School Bus-Computed by the Driver Education and Licensing Division NHTSA.

(24) Rail-Same as Passenger (25) in same ref.

(25) Passenger Rail-Sum of Commuter and Intercity.

Figure 5: Passenger-Miles, 1972 (cont.)

(26) Commuter Rail-A.A.R., *Yearbook of Railroad Facts*, 1973, p. 32, and I.C.C., *Class I Railroads, Financial and Operating Statistics*, Dec. 31, 1972, p. 19. Sum of the commutation passenger miles of the Class I railroads and AMTRAK.

(27) Intercity Rail-*Ibid.*, 1973, p. 32, and *Ibid.*, Dec. 31, 1972, p.19. Sum of Class I and AMTRAK passenger miles from parlor and sleeping cars and other coaches.

(29) Air-Sum of General Aviation and Air Carrier.

(30) General Aviation-TAA, *Transportation Facts and Trends*, Oct. 1973. p. 18. Intercity passenger-miles.

(36) Air Carrier-Sum of Certificated and Supplemental.

(37) Certificated-CAB, *Air Carrier Traffic Statistics*, Dec. 1972, p. 1. Sum of revenue passenger-miles in scheduled service (line 9) and nonscheduled service (line 43), total domestic operations.

(40) Supplemental-*Ibid.*, Dec. 1972, p. 43. Total revenue passenger-miles in domestic operations.

(43) Water-TAA, *Transportation Facts and Trends*, Oct. 1973, p. 18. Intercity passenger-miles.

(52) Air Carrier-Sum of Certificated and Supplemental.

(53) Certificated-CAB, *Air Carrier Traffic Statistics*, Dec. 1972, p. 7. Sum of revenue passenger-miles in scheduled service (line 9) and nonscheduled service (line 43). Total international and territorial operations.

(56) Supplemental-*Ibid.*, Dec. 1972, p. 43. Total revenue passenger-miles in international operations.

Figure 6: Ton-Miles, 1972

(1) Total Transportation-Sum of Domestic and International.

(2) Domestic-Sum of Highway, Rail, Air, Water and Pipeline.

(3) International-Sum of Air Carrier and Water.

(4) Highway-Figure represents total ton-miles of intercity truck transport plus ton-miles of intercity bus. Local truck ton-miles are not available.

(9) Truck-Includes intercity truck only.

(11) Intercity Truck-ICC, *87th Annual Report*, 1973, p. 130. Figure includes the intercity common and contract motor carriers of property operating under ICC authority, plus the intercity ton-miles of all private trucks and for-hire trucks not subject to economic regulation by the ICC, plus intercity ton-miles of local ICC carriers.

Figure 6: Ton-Miles, 1972 (cont.)

(12) ICC-Regulated Intercity Truck-ICC, *87th Annual Report*, 1973, p. 130. The 1972 federally regulated percentage of total intercity ton-miles assumed equal to the 1971 percentage (40.4 percent).

(13) Nonregulated Intercity Truck-*Ibid.*, 1973, p. 130. 1972 nonregulated percentage of total intercity ton-miles assumed equal to the 1971 percentage (59.6 percent).

(14) Bus-Rough estimate by the Office of Systems Research and Analysis for cargo ton-miles in 1972 is 60 million.

(24) Rail-ICC, *87th Annual Report*, 1973, p. 130. Intercity ton-miles of all railroads and electric railways, excluding express and mail.

(29) Air-Air Carrier only.

(36) Air Carrier-Sum of Certificated and Supplemental.

(37) Certificated-CAB, *Air Carrier Traffic Statistics*, Dec. 1972, p. 1. Revenue ton-miles of freight, express, U.S. and foreign mail in domestic operations, all services.

(40) Supplemental-*Ibid.*, 1972, p. 43. Revenue ton-miles of freight and express in total domestic operations of the supplemental carriers. Supplemental carriers are ordinarily not authorized to carry mail.

(43) Water-Department of the Army, Corps of Engineers, *Waterborne Commerce of the United States*, 1972, Part 5, p. 119. Total domestic ton-miles.

(51) Pipeline-ICC, *87th Annual Report*, 1973, p. 130. Intercity ton-miles of oil pipelines.

(52) Air Carrier-Sum of Supplemental and Certificated.

(53) Certificated-CAB, *Air Carrier Traffic Statistics*, Dec. 1972, p. 7. Revenue ton-miles of freight, express, U.S. and foreign mail in total international and territorial operations, all services of the certificated carriers.

(56) Supplemental-*Ibid.*, 1972, p. 43. Revenue ton-miles of freight and express in total international operations. Supplemental carriers are ordinarily not authorized to carry mail.

Figure 7: Number of Vehicles, 1972

(1) Total Transportation-Sum of Domestic and International.

(2) Domestic-Sum of Highway, Local Transit, Rail, Air, Water, and Pipeline.

(3) International-Sum of Air Carrier and Water.

Figure 7: Number of Vehicles, 1972 (cont.)

(4) Highway-Sum of Auto, Truck, and Bus.

(5) Auto-Sum of Personal Passenger Car and Motorcycle.

(6) Personal Passenger Car-FHWA, *Highway Statistics*, 1972, table MV-1, p. 33. This figure includes private and commercial vehicles (including taxicabs) as well as publicly owned vehicles for the 50 States and the District of Columbia.

(7) Taxi-Data for Taxi are included in the Personal Passenger Car category.

(8) Motorcycle-FHWA, *Highway Statistics*, 1972, table MV-1, p. 33. This figure is the sum of the private and commercial vehicles plus the publicly owned vehicles.

(9) Truck-*Ibid.*, 1972, table MV-1, p. 33.

(10) Local Truck — *1972 Census of Trans. (U.S. Summary)*, 1972, Table 2. The number of local trucks plus 87.5% of the unknown trucks.

(11) Intercity Truck-*Ibid.*, 1972, Table 2. Sum of the number of Short and Long Range trucks plus 12.5% of the number of unknown trucks.

(14) Bus-Sum of Intercity Bus and School Bus.

(15) Intercity Bus-NAMBO, *Bus Facts*, 1972, p. 24. This figure includes operations of Class I, II, and III carriers reporting to the ICC and intrastate carriers.

(18) School FHWA, *Highway Statistics*, 1972, table MV-10, p. 36. For some States, church, industrial and other private buses are included: in other States, privately owned school buses could not be segregated from commercial buses and are included with the latter.

(19) Local Transit-Sum of Motorbus, Trolley Coach, Surface Rail, and Subway and Elevated.

(20) Motorbus-ATA, *Transit Fact Book*, '73-'74, p. 19. This figure does not include sightseeing buses or school buses.

(21) Trolley Coach-*Ibid.*, '73-'74, p. 19.

(22) Surface Rail-*Ibid.*, '73-'74, p. 19. This figure does not include commuter or suburban railroads.

(23) Subway and Elevated-*Ibid.*, '73-'74, p. 19.

(24) Rail-A.A.R., *Yearbook of Railroad Facts*, 1973, pp. 54, 51, 50, and I.C.C., *Class I railroads, Financial and Operating Statistics*, Dec. 31, 1972, p. 18. This figure is the sum of passenger train cars, freight cars, and locomotives owned by the Class I railroads and AMTRAK.

(25) Rail, Passenger-*Ibid.*, 1973, p. 54, and *Ibid.*, Dec. 31, 1972, p. 18. Sum of passenger train cars owned by the Class I railroads and AMTRAK.

(28) Rail, Cargo-*Ibid.*, 1973, p. 51. Freight cars, Class I railroads.

(29) Air-Sum of General Aviation and Air Carrier.

(30) General Aviation-FAA, *Statistical Handbook of Aviation*, 1973, Table 8.2.

(31) Business-*Ibid.*, 1973. This category includes business and executive transportation.

Figure 7: Number of Vehicles, 1972 (cont.)

(32) Commercial-*Ibid.*, 1973. This category includes air taxi, aerial application, and rental.

(33) Instructional-*Ibid.*, 1973.

(34) Personal-*Ibid.*, 1973.

(35) Other-*Ibid.*, 1973. This category includes other and industrial/special.

(36) Air Carrier-Sum of Certificated and Supplemental.

(37) Certificated-Civil Aeronautics Board, Bureau of Accounts and Statistics. This figure represents owned aircraft, excluding those leased to others, plus aircraft leased from others, without regard to aircraft withdrawn from service for economic, mechanical, or technical reasons.

(40) Supplemental-CAB, Bureau of Accounts and Statistics.

(43) Water-American Waterways Operators, *Inland Waterborne Commerce Statistics*, 1972, p. 2. This figure represents the sum of self-propelled and non-self-propelled towing vessels and barges in the United States plus the cargo vessels (49), the commercial fishing vessels (50), and the passenger liners (44) in the U.S.

(44) Passenger-Personnel Communication — Maritime Administration. This figure is the number of U.S. passenger liners.

(49) Cargo — Shipbuilders Council of America; *Statistical Quarterly, Third Quarter 1973.* This figure represents the sum of U.S. Oceangoing steam and motor ships of 1,000 gross ton and over as of December 31, 1972.

(50) Commercial Fishing, U.S. Department of Commerce, National Marine Fisheries Service, *Fisheries of the U.S. 1973*, March 1974, p. 85.

(52) International Air Carrier — This figure is included in the respective categories of the domestic operations.

(59) International Water — This figure is included in the respective categories of the domestic operations.

Figure 8: Number of Fatalities, 1972

(1) Total Transportation-Sum of Domestic and International.

(2) Domestic-Sum of Highway, Rail, Air, and Water.

(3) International-Air Carrier only. Fatalities in international water transport not available.

(4) Highway-National Safety Council, *Accident Facts*, 1973, p. 42. Includes deaths involving mechanically or electrically powered highway transport vehicles in motion (except those on rails), both on and off the highway or street. Includes 10,700 pedestrians.

(5) Auto-Sum of Personal Passenger Car, Taxi, and Motorcycle.

(6) Personal Passenger Car-*Ibid.*, 1973, p. 56. No. of occupant fatalities.

(7) Taxi-*Ibid.*, 1973, p. 56. No. of occupant fatalities.

(8) Motorcycle-*Ibid.*, 1973, p. 56. Fatalities of motorcycles, motor scooters, motor bikes.

Figure 8: Number of Fatalities, 1972 (cont.)

(9) Truck-*Ibid.*, 1973, p. 56. No. of occupant fatalities.

(14) Bus-*Ibid.*, 1973, p. 75. Passenger fatalities of all buses (intercity, school, and local transit).

(15) Intercity Bus-*Ibid.*, 1973, p. 75. Passenger fatalities on Class I buses.

(18) School Bus-*Ibid.*, 1973, p. 56. No. of occupant fatalities.

(24) Rail-*Ibid.*, 1973, p. 78. Includes Class I Railroads and AMTRAK fatalities of passengers on trains, employees on duty, other nontrespassers.

(29) Air-Sum of General Aviation and Air Carrier. Includes fatalities of passengers, crew, and others.

(30) General Aviation-*Ibid.*, 1973, p. 76.

(36) Air Carrier-Sum of Certificated and Supplemental.

(37) Certificated-*Ibid.*, 1973, p. 76.

(40) Supplemental-*Ibid.*, 1973. p. 76.

(43) Water-*Ibid.*, 1973, p. 74. Sum of drowning and other.

(44) Passenger-Personnel Communication — U.S. Coast Guard — This figure includes both large and small passenger vessels and ferries.

(49) Cargo — Personnel Communication — U.S. Coast Guard — This figure is the total commercial vessel casualties minus commercial fishing and passenger/ferry deaths.

(50) Commercial Fishing-*Ibid.* This figure is the number of commercial fishing industry deaths.

(52) Air Carrier-Sum of Certificated and Supplemental. Includes passengers, crew, and others.

(53) Certificated-*Ibid.*, 1973, p. 76.

(56) Supplemental-*Ibid.*, 1973, p. 76.

Table 1: Average Passenger Revenue Per Passenger-Mile, 1962-1972

Certificated air carrier, domestic operations, scheduled service:
CAB, *Air Carrier Traffic Statistics*, Dec. 1972, p. 1; *Air Carrier Financial Statistics*, Dec. 1972. p. 1. passenger revenues divided by revenue passenger-miles.

Class I rail:
AAR, *Yearbook of Railroad Facts*, 1973, Total: p. 34; commutation: commutation passenger revenues (p. 14) divided by commutation passenger-miles (p. 37); other than commutation: sum of columns 3 and 4 (p. 14) divided by column 2 (p. 32)

Class I intercity bus:
NAMBO, *Bus Facts*, 1973, p. 27.

Table 2. Average Freight Revenue Per Ton-Mile, 1962-1972

Certificated air carrier domestic operations, scheduled service:
1961-70: CAB, *Handbook of Airline Statistics*, 1971, p. 93, 1972: CAB, *Air Carrier Financial Statistics*, Dec. 1972; *Air Carrier Traffic Statistics*, Dec. 1972. Freight revenues divided by revenue ton-miles of freight.

Table 2. Average Freight Revenue Per Ton-Mile, 1961-1971 (cont.)

Class I rail:
AAR, *Yearbook of Railroad Facts*, 1973, p. 31.

Class I intercity motor carriers of property, common and contract:
1962-1971: ICC, *Transport Economics*, Feb.-March, 1973, p. 8. 1972, called the I.C.C.

Oil pipelines:
1962-1971: ICC, *Transport Economics*, Feb.-March, 1973, p. 8. 1972, called the I.C.C.

Classes A and B water carriers, barge lines operating on Mississippi River and tributaries:
1962-1971: ICC, *Transport Economics*, Feb.-March, 1973, p. 8. 1972, called the I.C.C.

Table 3: Average Fare

Certificated air carrier domestic operations, scheduled service:
1961-70: CAB, *Handbook of Airline Statistics*, 1971. Total passenger revenues (p. 210, line 3) divided by revenue passenger enplanements (p. 106, line 20). 1971: Total passenger revenues (CAB, *Air Carrier Financial Statistics*, Dec. 1972, p. 1., column 8, line 3) divided by revenue passengér enplanements (CAB, *Air Carrier Traffic Statistics*, Dec. 1972, p. 1., column 12, line 17.)

Class I bus, intercity:
NAMBO, *Bus Facts*, various editions. Passenger revenue in regular intercity service divided by passengers carried in such service.

Local Transit:
ATA, *Transit Fact Book*, '73-'74, p. 11.

Class I rail:
AAR, *Statistics of the Railroads of Class I*, Nov. 1973, p. 7. Commutation, line 19; other than commutation: line 20.

Table 4: Operating Revenues, 1962-72

Certificated air carriers:
1961-70: CAB, *Handbook of Airline Statistics*, 1971. Sum of overall operating revenues in total domestic operations (p. 210) and total international and territorial operations (p. 221). 1972: CAB, *Air Carrier Financial Statistics*, Dec. 1972, p. 1., column 3, line 17.

Supplemental air carriers:
1961-70: CAB, *Handbook of Airline Statistics*, 1971, p. 69. 1972: CAB, *Air Carrier Financial Statistics*, Dec. 1972, p. 101., column 1, line 9.

Intercity bus, Class I:
1960-67: ICC, *84th ICC Annual Report*, 1970, p. 143: 1969-70: ICC, *85th ICC Annual Report*, 1971, p. 127; 1971: NAMBO, *Bus Facts*, 1972, p. 25.

Table 4: Operating Revenues, 1962-72 (cont.)

Local Transit:
ATA, *Transit Fact Book*, '73-'74, p. 9. Includes motorbus, subway and elevated surface rail, trolley coach.

Oil Pipeline:
TAA, *Transportation Facts and Trends*, quarterly supplement, Jan. 1974, p. 4.

Class I rail:
AAR, *Yearbook of Railroad Facts*, 1972, p. 9.

Class I intercity motor carriers of property:
ICC, *87th Annual Report*, 1973, p. 135, and equivalent tables in earlier editions.

Water:
Classes A and B carriers, inland and coastal waterways: ICC, *87th Annual Report*, 1973, p. 137, and equivalent tables in earlier editions.

Maritime carriers:
ICC, *87th Annual Report*, 1973, p. 138, and equivalent tables in earlier editions.

Class A freight forwarders:
1960-67: ICC, *84th Annual Report*, 1970, p. 151; 1968-1971: ICC, *87th ICC Annual Report*, 1973, p. 133.

Table 5: Vehicle-Miles, 1962-72

Air carriers:
Certificated-CAB, *Handbook of Airline Statistics*, 1971, p. 106. Aircraft revenue miles in scheduled service (line 35) plus nonscheduled service (line 56); 1971: CAB, *Air Carrier Traffic Statistics*, December 1972, p. 1. Aircraft revenue miles in scheduled service (line 31) plus nonscheduled service (line 50). Supplemental-CAB, *Handbook of Airline Statistics*, 1971, p. 199; 1972: CAB, *Air Carrier Traffic Statistics*, (line 21), p. 43, Dec. 1972.

General Aviation:
FAA, *Statistical Handbook of Aviation*, Table 9.10, 1972.

Highway:
Passenger car and taxi-FHWA, *Highway Statistics*, annual editions, table VM-1, p. 52.
Truck-Same source as passenger car and taxi.
School bus-Same source as passenger car and taxi.
Intercity bus-NAMBRO, *Bus Facts*, 1972, p. 24, and equivalent table in 1970 edition.

Local Transit:
ATA, *Transit Fact Book*, 1973-74, p. 15.

Class I rail:
AAR, *Yearbook of Railroad Facts*, 1973. Freight train-miles, p. 37; passenger train-miles, p. 39.

Table 6: Passenger-Miles

Air Carrier:

Certificated-CAB, *Handbook of Airline Statistics*, 1969 and 1971, p. 106. Sum of total domestic passenger-miles in scheduled service (line 11) and nonscheduled service (line 47); 1972: CAB, *Air Carrier Traffic Statistics*, Dec. 1972, p. 1. Sum of lines 9 and 43. Supplemental-CAB, *Handbook of Airline Statistics*, 1971, p. 199; 1972: CAB, *Air Carrier Traffic Statistics*, Dec. 1972, line 4, p. 43.

General Aviation:

TAA, *Transportation Facts and Trends*, Oct. 1973, p. 18.

Highway:

Passenger Car and taxi-FHWA vehicle-miles multiplied by a constant average occupancy of 2.2. Intercity bus-TAA, *Transportation Facts and Trends*, Oct. 1973, p. 18.

Class I rail:

AAR, *Yearbook of Railroad Facts*, 1973, Total: = commutation passenger-miles + other than commutation: p. 32.

Domestic water:

TAA, *Transportation Facts and Trends*, Oct. 1973, p. 18.

Table 7: Cargo Ton-Miles

Air Carrier:

Certificated-CAB, *Handbook of Airline Statistics*, 1969 and 1971, p. 106. Sum of revenue ton-miles of freight, express, U.S. and foreign mail (lines 2, 3 and 4); 1972-CAB, *Air Carrier Traffic Statistics*, Dec. 1972, p. 1. Sum of lines 2, 3 and 4. Supplemental-CAB, *Air Carrier Traffic Statistics*, Dec. 1972, p. 43.

Oil Pipeline:

ICC, *87th Annual Report*, 1973, p. 130 and equivalent tables in earlier editions.

Class I rail:

AAR, *Yearbook of Railroad Facts*, 1973, p. 29.

Motor vehicles:

ICC, *87th Annual Report*, 1973, p. 130 and equivalent tables in earlier editions.

Inland waterways including Great Lakes:

ICC, *87th Annual Report*, 1973, p. 130 and equivalent tables in earlier editions.

Total domestic waterways:

U.S. Army Corps of Engineers, *Waterborne Commerce of the U.S.*, Part 5, 1972, p. 123.

Table 8: Basic Intercity Mileage Within the Continental United States, 1962-1972

Railroads, all line haul:
AAR, *Yearbook of Railroad Facts*, 1973, p. 49. Data represent aggregate length of roadway of all line-haul railroads, excluding mileage of yard tracks or sidings. Jointly used track is counted only once.

Oil pipelines:
TAA, *Transportation Facts and Trends*, Oct. 1973, p. 31.

Inland waterways:
American Waterways Operators, *Inland Waterborne Commerce Statistics*, 1972, p. 1.

Highways:
For 1972: FHWA, *Highway Statistics*, 1972, table SM-2, p. 174. Total surfaced mileage of State primary and secondary roads, less col. D-E mileage, plus total toll facility mileage, with Alaska and Hawaii mileage deleted. Earlier years from earlier editions of *Highway Statistics*.

Airways:
TAA, *Transportation Facts and Trends*, Oct. 1973, p. 31.

Table 9: Number of Vehicles

Air Carrier:
CAB, Bureau of Accounts and Statistics.

General Aviation:
FAA, *Statistical Handbook of Aviation*, table 8.2, 1972 edition.

Passenger car, taxi, and motorcycle:
FHWA, *Highway Statistics*, 1972, table MV-1, p. 32, and same table in earlier editions.

Intercity bus:
NAMBO, *Bus Facts*, 1972, p. 24.

Local transit:
ATP, *Transit Fact Book*, '73-'74, p. 19.

Class I rail:
AAR, *Yearbook of Railroad Facts*, 1973, Locomotives, (p. 50), freight cars (p. 51), passenger cars, and pullman (p. 54).

Truck:
FHWA, *Highway Statistics*, 1972, table VM-1, p. 52, and same table in earlier editions.

Water vessels:
American Waterways Operators, *Inland Waterborne Commerce Statistics*, 1973, p. 2.

Table 10: Personal Consumption Expenditures by Transportation Sector, 1962-1972

U.S. Department of Commerce, Office of Business Economics, *The National Income and Product Accounts of the United States*, 1929-1965, table 2.6, 1966-1972 are from (p. 29), table 2.5 in the July 1973 issue of "*The Survey of Current Business*".

Table 11: Personal Consumption Expenditures by Type of Product, 1962-1972

U.S. Department of Commerce, Office of Bureau Economics, *The National Income and Product Accounts of the United States*, 1929-1965, and 1966-1972 are from (p. 29), table 2.5 in the July 1973 issue of "*The Survey of Current Business*".

Table 12: National Income by Transportation Sector, 1962-1972

U.S. Department of Commerce, Office of Business Economics, *The National Income and Product Accounts of the United States*, 1929-1965, and 1966-1972 are from (p. 22), table 1.12 in the July 1973 issue of "*The Survey of Current Business*".

Table 13: Average Annual Earnings Per Full-Time Employees by Transportation Sector, 1962-1972

U.S. Department of Commerce, Office of Business Economics, *The National Income and Product Accounts of the United States*, 1929-1965, table 6.5. 1966-1972 are from (p. 42), table 6.5 in the July 1973 issue of "*The Survey of Current Business*".

Table 14: Average Annual Number of Full-Time and Part-Time Employees by Transportation Sector, 1962-1972

U.S. Department of Commerce, Office of Business Economics, *The National Income and Product Accounts of the United States*, 1929-1965, table 6.3. 1966-1972 are from (p. 41), table 6.3 in the July 1973 issue of the "*The Survey of Current Business*".

Table 15: Wages and Salaries by Transportation Sector, 1962-1972

U.S. Department of Commerce, Office of Business Economics, *The National Income and Product Accounts of the United States*, 1929-1965, table 6.2. 1966-1972 are from (p. 41), table 6.2 in the July 1973 issues of "*The Survey of Current Business*".

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Table 16: Fuel Consumption

Class I rail:

AAR, *Statistics of Class I Railroads*, 1962-72, Nov. 1973, p. 15.

Air carrier:
Civil Aeronautics Board, called Bureau of Accounts and Statistics.

General Aviation:
FAA, *Statistical Handbook of Aviation*, 1972, table 9.12.

Highway:
FHWA, *Highway Statistics*, 1972, table VM-1, p. 52, and same table in earlier editions.

Vessels:
Residual-API, called Bureau of Mines, Technical Info.
Distillate-*Ibid.*
Gasoline-FHWA; *Highway Statistics*, 1971, table MF-24, p. 8, and same table in earlier editions.

Transit:
ATA, *Transit Fact Book*, '73-'74, p. 19.

Pipelines:
American Gas Association, *Gas Facts*, 1972, Table 77, p. 92.

APPENDIX B

Glossary

GLOSSARY

Air Carrier Terminology

OPERATING REVENUES:

Revenues from the performance of air transportation and related incidental services. Includes:

(1) *transport* revenues from the carriage of all classes of traffic in scheduled and nonscheduled services including aircraft charters; thus passenger, freight, express, mail, excess baggage, and other transport revenues are included.

(2) *nontransport* revenues consist of Federal subsidy (where applicable) and the net amount of revenues less related expenses from services incidental to air transportation.

CERTIFICATED CARRIERS:

One of a class of air carriers holding certificates of public convenience and necessity issued by the CAB, authorizing the performance of scheduled air transportation over specified routes and a limited amount of nonscheduled operations. This general carrier grouping includes the all-purpose carriers (i.e., the so-called passenger/cargo carriers) and the all-cargo carriers, and comprises all of the airlines certificated by the Board, except the supplemental air carriers. Certificated route air carriers are often referred to as "scheduled airlines," although they also perform nonscheduled service.

DOMESTIC OPERATIONS:

In general, operations within and between the 50 States of the United States. Includes domestic operations of the certificated trunk carriers and the local service, helicopter, intra-Alaska, intra-Hawaii, domestic all-cargo and other carriers, also includes transborder operations conducted on the domestic route segments of U.S. air carriers.

INTERNATIONAL OPERATIONS:

In general, operations outside territory of the United States, including operations between the United States and foreign countries and the United States and its territories and possessions. Includes both the combination passenger/cargo carriers and the all-cargo carriers engaged in international and territorial operations.

SUPPLEMENTAL AIR CARRIERS:

One of a class of air carriers now holding certificates, issued by the CAB, authorizing them to perform passenger and cargo charter services supplementing the scheduled service of the certificated route air carriers. Supplemental air carriers are often referred to as "nonskeds," i.e., nonscheduled carriers.

OPERATING EXPENSES:

Expenses incurred in the performance of air transportation; which includes direct aircraft operating expenses and ground and indirect operating expenses.

AIRCRAFT REVENUE MILES:

The miles (computed in airport-to-airport distances) for each interairport lop actually completed in revenue service, whether or not performed in accordance with the scheduled pattern. For this purpose, operation to a flag stop is a lop completed even though a landing is not actually made. In cases where the interairport distances are inapplicable, aircraft miles flown are determined by multiplying the normal cruising speed for the aircraft type by the airborne hours.

SCHEDULED SERVICE:

Transport service operated over an air carrier's certificated routes, based on published flight schedules, including extra sections and related nonrevenue flights.

NONSCHEDULED SERVICE:

Revenue flights, such as charter flights, that are not operated in regular scheduled service and all nonrevenue flights incident to such flights.

REVENUE PASSENGER-MILE:

One revenue passenger transported 1 mile in revenue service. Revenue passenger-miles are computed by summation of the products of the revenue aircraft-miles flown on each interairport flight stage and multiplied by the number of passengers carried on that flight stage.

REVENUE PASSENGER LOAD FACTOR:

The percent that revenue passenger-miles are of available seat-miles in revenue passenger services, presenting the proportion of aircraft seating capacity that is actually sold and utilized.

REVENUE TON-MILE OF FREIGHT:

One short ton of freight transported 1 statute mile. Ton-miles are computed by summation of the products of the aircraft-miles flown on each interairport flight stage multiplied by the number of tons carried on that flight stage.

AIRBORNE SPEED:

Often called "wheels-off wheels-on speed." The average speed of an aircraft while airborne, computed using great-circle airport-to-airport distance.

Highway Terminology

FEDERAL EXPENDITURES:

Intergovernmental payments to the States, District of Columbia, and local governments plus direct expenditures for capital outlay, maintenance, administration, and research.

STATE AND LOCAL EXPENDITURES:

Disbursements for capital outlay, maintenance and traffic surfaces, administration, and research, highway law enforcement and safety, and interest on debt.

RURAL MILEAGE:

Roads outside city, municipal district, or urban boundaries.

STATE PRIMARY SYSTEM:

This refers to highways that have been so officially designated by States.

STATE SECONDARY ROADS:

This mileage is reported in the tables for the States (taken from the Highway Statistics 1970 Bulletin) that have designated both a primary and a secondary system.

MUNICIPAL MILEAGE:

Roads inside city, municipal district, or urban boundaries.

Automobile Terminology

REVENUES - TAXI:

Fares paid by passengers riding in taxis.

VEHICLE-MILES (BY TYPE OF STREET):

These figures represent the total number of miles traveled by passenger cars, taxis, and motorcyles on the different types of streets. One vehicle traveling 1 mile generates 1 vehicle-mile.

VEHICLE-MILES:

Automobile vehicle-miles are estimated by calculating the number of gallons of gas sold from gasoline tax receipts and multiplying by the average number of miles per gallon.

PASSENGER-MILES:

This figure represents the total distance traveled by all passengers in passenger cars and taxis. One passenger traveling 1 mile generates 1 passenger-mile.

URBAN STREETS:

Streets within urban boundaries.

MAIN RURAL ROADS:

Streets outside urban boundaries that are generally recognized as principal arteries of travel.

LOCAL RURAL ROADS:

Streets outside urban boundaries other than principal arteries of travel.

Bus Terminology

EXPENDITURES-SCHOOL BUS:

This is the total expenditure for operation, maintenance, insurance, depreciation, operating taxes, licenses, and operating rents for vehicles used as school buses.

INTERCITY BUS - TOTAL:

This figure includes Class I, II, and III interstate carriers, all of which report to the Interstate Commerce Commission, and interstate carriers.

INTERCITY BUS - CLASS I:

An interstate motor carrier of passengers with an average annual gross revenue of at least $1,000,000 is defined by the ICC as a Class I carrier.

VEHICLE-MILE:

One vehicle traveling 1 mile generates 1 vehicle-mile. Total vehicle-miles, thus, is the total distance traveled by all vehicles.

COMMERCIAL BUS:

Any bus used to carry passengers at rates specified in tariffs; charges may be computed per passenger (as in regular route service) or per vehicle (as in charter service).

SCHOOL AND NONREVENUE BUS:

Passengers using these are not directly charged for transportation, either on a "per passenger" or on a "per vehicle" basis.

REVENUE PASSENGER-MILES:

One revenue passenger carried 1 mile generates 1 passenger-mile. The revenue passenger miles reported thus represent the total distance traveled by all bus passengers.

REVENUE PASSENGERS:

Passengers on a commercial bus.

LOCAL RURAL ROADS:

These are roads outside urban areas that are not main thoroughfares.

Truck Terminology

REVENUE:

The total amounts received by carriers for transportation and other services incidental thereto.

ICC-REGULATED CARRIER:

A motor common carrier operating in interstate commerce commission under a grant of authority from the Interstate Commerce Commission and subject to its economic regulation.

NON-ICC-REGULATED CARRIER:

A motor carrier not subject to the economic regulation of the ICC. The category includes intrastate carriers, private carriers hauling only the goods of their owners, and carriers of commodities, the transportation of which is exempt from ICC economic regulation.

OPERATING REVENUES OF CLASS I INTERCITY MOTOR CARRIERS:

This term is defined by the ICC to include the five categories of revenue listed in the text.

OPERATING EXPENSES:

This includes expenditures for equipment maintenance, supervision, wages, fuel, equipment rental, terminal operations, insurance, safety, and administrative and general functions.

VEHICLE-MILES:

This term includes miles operated by power units upon urban streets, main rural streets, and local rural roads.

TON-MILES:

The transportation of 1 ton of freight a distance of 1 mile generates 1 ton-mile.

AVERAGE LENGTH OF HAUL (MILES):

The total number of ton-miles divided by the total number of tons carried.

Local Transit Terminology

PASSENGER REVENUE:

The total of all moneys paid by passengers to ride on scheduled trips. This includes single trip fares, and charges for transfers, weekly, monthly, and other unlimited-usage tickets.

OPERATING REVENUE:

Includes passenger revenue and revenue from charter and contract services.

OPERATING EXPENSES:

These expenditures include outlays for maintenance, wages, fuel, licensing, insurance, rent, safety, operating taxes, and station operations.

REVENUE VEHICLE-MILES:

One vehicle (bus, trolley car, subway car, etc.) traveling 1 mile while revenue passengers are on board generates 1 revenue vehicle-mile. The revenue vehicle-miles reported thus represent the total mileage traveled by vehicles in scheduled or unscheduled revenue-producing services.

SUBWAY AND ELEVATED:

Rail rapid transit services.

SURFACE RAIL:

Street car or trolley car operations, including private right-of-way operations, typified by low platform stations, one-man operation at all times, capability for on-board fare collection, actual on-board fare collection most of the time.

TROLLEY COACH:

A vehicle with the steering capability of a motor coach, running on rubber tires, but drawing power from electric overhead wires.

Water Transport Terminology

DOMESTIC FREIGHT:

All waterborne commercial movements between points in the United States, Puerto Rico and the Virgin Islands, excluding traffic with the Panama Canal Zone. Cargo moved for the military in commercial vessels is reported as ordinary commercial cargo; military cargo moved in military vessels is omitted.

INTERNATIONAL (FOREIGN) FREIGHT:

Movements between the United States and foreign countries and between Puerto Rico, the Virgin Islands and foreign countries. Trade between U.S. territories and possessions (i.e., Guam, Wake, American Samoa, etc.) and foreign countries is excluded. Traffic to or from the Panama Canal Zone is included.

COASTWISE OR COASTAL WATERWAYS:

Traffic moves over a coastwise (coastal) waterway when it moves over the ocean, or the Gulf of Mexico, e.g., between New Orleans and Baltimore, New York and Puerto Rico, San Francisco and Hawaii, Puerto Rico and Hawaii. Traffic between Great Lakes ports and seacoast ports, when having a carriage over the ocean, it also deemed to be over a coastwise (coastal) waterway. The Chesapeake Bay and Puget Sound are considered internal bodies of water rather than arms of the ocean; traffic confined to these areas is deemed to be "internal" rather than coastal or coastwise.

INTERNAL OR INLAND WATERWAYS:

Traffic moves over an internal (inland) waterway when the entire movement between ports or landings takes place on inland waterways. The following types of movements are also deemed to be entirely on inland waterways; movements involving carriage on both inland waterways and waters of the Great Lakes, inland movements that cross short stretches of open waters that link inland systems; marine products, sand and gravel taken directly from beds of the oceans, the Gulf of Mexico and important arms thereof; and movements between offshore installations and inland waterways.

LAKEWISE OR GREAT LAKES:

These terms apply to traffic between U.S. ports on the Great Lakes system. The Great Lakes system is treated as a separate system rather than as a port of the inland system.

IMPORTS:

Inbound international freight.

EXPORTS:

Outbound international freight including re-export of foreign merchandise.

LOCAL:

Movements of freight within the confines of a port, whether the port has only one or several arms or channels, except car-ferry and general ferry are termed "local." The term is also applied to marine products, sand, and gravel taken directly from the Great Lakes.

DOMESTIC PASSENGER:

Any person traveling on a public conveyance by water between points in the United States, Puerto Rico, and the Virgin Islands.

CLASS A CARRIERS BY INLAND AND COASTAL WATERWAYS:

A class A carrier by water is one with an average annual operation revenue that exceeds $500,000.

CLASS B CARRIERS BY INLAND AND COASTAL WATERWAYS:

A class B carrier by water is one with an average annual operating revenue greater than $100,000 but less than $500,000.

INTERNATIONAL PASSENGER:

Any person traveling on a waterborne public conveyance between the United States and foreign countries and between Puerto Rico and the Virgin Islands and foreign countries.

MARITIME:

Maritime carriers operate on the open sea, i.e., their operations must include a foreign or international component, and may include a domestic component.

MARITIME REVENUE:

Revenue received for operations in international or foreign shipping.

NON-SELF-PROPELLED:

Vessels not containing within themselves the means for their own propulsion.

DRY CARGO BARGES:

Large, flat-bottomed non-self-propelled vessels used to transport dry bulk materials such as coal and ore.

SCOWS:

Large, flat-bottomed non-self-propelled vessels used to transport sand, gravel, or refuse.

TANK BARGES:

Large, flat-bottomed non-self-propelled vessels used to transport fluids such as oil.

SELF-PROPELLED TOWBOAT:

A compact, shallow-draft boat with a squared bow and towing "knees" for pushing tows of barges on inland waterways.

TUG:

A strongly built boat used for towing and pushing, self-propelled.

INTRATERRITORIAL TRAFFIC:

Traffic between ports in Puerto Rico and the Virgin Islands, which are considered as a single unit.

TONS OF FREIGHT HAULED:

The figures for tons of freight hauled on domestic waterways include exports and imports.

Railroad Terminology

CLASS I RAILROAD:

A railroad with an annual operating revenue of greater than $5,000,000.

COMMUTATION TICKET:

A ticket intended for use by a person traveling on a daily basis, i.e., to and from work, such a ticket is typically valid for an extended time period (i.e., a week or a month); the charge for such a ticket reflects a discount from the sum of the one-way fares that would be paid by the ticket-holder for the period of validity in the absence of such a reduced-rate ticket.

PASSENGER REVENUE - COMMUTATION:

Revenue from the sale of commutation tickets.

PASSENGER REVENUE - OTHER THAN COMMUTATION:

Revenue from the transportation of paying passengers not holding commutation tickets; this classification includes basic one-way and round trip fares, discounted fares offered for the clergy and military, special excursion fares offered to travelers meeting the requirements for eligibility for those fares, (i.e., origin/destination, time of travel, length of stay at destination), revenue from the extra charges made of occupancy for space in parlor and sleeping cars, and revenue from the transportation of corpses.

FREIGHT REVENUE:

Revenue from the transportation of freight and from the exercise of transit, stop-off, diversion, and reconsignment privileges, as provided for in tariffs.

MAIL REVENUE:

Revenue from the transportation of mail at established rates, and for services and facilities provided in connection with the handling of U.S. mail.

EXPRESS REVENUE:

Revenue from transportation of express shipments and from the use of facilities on trains and at stations incidental to such transportation.

OTHER REVENUE:

This is a general heading that includes revenues from miscellaneous operations (i.e., dining and bar car services), income from lease of road and equipment, miscellaneous rent income, income from non-operating property, profit from separately operated properties, dividend income, interest income, income from sinking and other reserve funds, release or premium on funded debt, contributions from other companies, and other miscellaneous income.

OPERATING EXPENSES:

Expenses of furnishing transportation service including maintenance and depreciation.

PASSENGER TRAIN CARS:

Cars typically found in the consists of passenger trains, including coaches, sleeping cars (formerly called Pullman cars), parlor cars, dining cars, lounge cars, baggage cars, crew-dormitory cars, and observation cars.

LOCOMOTIVES:

Self-propelled units of equipment designed solely for moving other equipment.

LINE MILEAGE:

The aggregate length of roadway of all line-haul railroads. It does not include the mileage of yard tracks or sidings, nor does it reflect the fact that a mile of railroad may include two or more parallel tracks. Jointly-used track is counted only once.

CAR MILEAGE:

Movement of a car 1 mile is a car-mile.

TRAIN MILEAGE:

Movement of a train 1 mile is a train-mile; the number of cars in a train is irrelevant.

LOCOMOTIVE MILEAGE:

Movement of a locomotive unit 1 mile is a locomotive-mile.

REVENUE PASSENGERS CARRIED - COMMUTATION:

Number of one-way trips made by persons holding commutation tickets.

REVENUE PASSENGERS CARRIED - OTHER THAN COMMUTATION:

Number of one-way trips by passengers paying their fares at other than commutation ticket rates; this excludes passengers lawfully traveling without paying.

REVENUE PASSENGER-MILE:

One revenue passenger traveling 1 mile generates 1 revenue passenger-mile. The revenue passenger-miles reported thus represent the total distance traveled by all railroad passengers.

AVERAGE PASSENGER TRIP LENGTH:

Calculated by dividing the number of revenue passengers by the number of passengers carried.

REVENUE TON-MILES:

The product of weight of the contents of a freight car in tons and the distance transported in miles; i.e., n tons moving m miles generate nxm ton-miles.

AVERAGE HAUL:

The average distance in miles that 1 ton was carried. It is computed by dividing the number of ton-miles generated by the number of tons carried to generate that number of ton-miles.

Oil Pipeline Terminology

ICC-REGULATED PIPELINE:

A pipeline company operating in interstate commerce under a grant of authorization from the Interstate Commerce Commission, and subject to economic regulation by the Commission. Such a pipeline company is required to report relevant statistics to the ICC.

NON-REGULATED PIPELINE:

A pipeline company not operating as common carrier in interstate commerce, hence neither required to secure a grant of operating authority from the Commission nor to report to it.

OPERATING REVENUE:

Revenue from the transportation of oil and from services incidental to such transportation.

OPERATING EXPENSES:

Expenditures necessarily made while providing services by which operating revenue is earned.

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