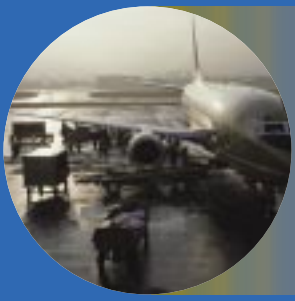
Bureau of Transportation Statistics

Pocket Guide to Transportation



1998

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America's transportation system has changed along with the nation's society and economy. The following table puts those changes in perspective:

Characteristic	1970	1996
Resident population	203,984,000	265,284,000
Land area (square miles)[1]	3,540 million	3,536 million
Total civilian labor force	83 million	134 million
Gross Domestic Product*	$3.4 trillion	$6.9 trillion
Median household income*	$29,600	$32,000
Average household expenditures*	24,600	$30,800
Number of households	63,401,000	99,627,000
Average life expectancy	70.8 years	76.1 years
Labor force participation of women	46%	59.3%

Note: All dollar amounts are in 1992 chained dollars.

[1] Land areas were derived from different base data and changed due to construction of reservoirs, draining of lakes, etc.

* Converted from current dollars to 1992 chained dollars using implicit deflators for disposable personal income or personal consumption expenditures in table 699 of source publication.

Source: U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States: 1997*, 117th edition (Washington, DC: 1997), various tables; and www. census.gov. U.S. Department of Labor, Bureau of Labor Statistics, *Consumer Expenditure Survey, 1966*, unpublished detailed table 1400, Aug. 6, 1998. Centers for Disease Control and Prevention at www.cdc.gov/nchswww/fastats.

The statistics in this Pocket Guide to Transportation were compiled by the Bureau of Transportation Statistics from multiple sources. The guide is divided into four sections:

Transportation System Extent and Use 2

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Transportation, Energy, and the Environment 26

1 Transportation System Extent and Use

America is moving! In 1996, the U.S. transportation system served 265 million people and 6 million businesses and supported 4.4 trillion passenger-miles and 3.7 trillion ton-miles. The data presented in this section confirm that local and long-distance passenger travel and freight activity continue to grow. Many factors are influencing this growth: population increases, vehicle availability, the expanding economy, and higher consumer incomes.

Table 1.
The Transportation Network: 1996

Mode	Components
Highway	***Public roads***
	46,036 miles of Interstate highway
	112,467 miles of other National Highway System roads
	3,760,947 miles of other roads
Air	***Public-use airports***
	5,389 airports
	Airports serving large certificated carriers
	29 large hubs (72 airports), 417 million enplaned passengers
	31 medium hubs (55 airports), 89 million enplaned passengers
	60 small hubs (73 airports), 37 million enplaned passengers
	622 nonhubs (650 airports), 15 million enplaned passengers
Rail	***Miles of track operated***
	126,682 miles by Class I freight railroads
	19,660 miles by regional freight railroads
	27,554 miles by local freight railroads
	24,500 miles by Amtrak (passenger)

Mode	Components
Urban Transit	***Directional route-miles serviced****
	Bus: 158,310
	Commuter rail: 3,682
	Heavy rail: 1,478
	Light rail: 638
	Stations
	Commuter rail: 823
	Heavy rail: 989
	Light rail: 513
Water	26,000 miles of navigable waterways
	275 locks
	329 miles of ferry service*
	Ports
	Great Lakes: 362 terminals, 507 berths
	Inland: 1,811 terminals
	Ocean: 1,578 terminals, 2,672 berths
Pipeline	***Oil***
	Crude lines: 114,000 miles of pipe (1995)
	Product lines: 86,500 miles of pipe (1995)
	Gas
	Transmission: 259,400 miles of pipe
	Distribution: 952,100 miles of pipe

* Directly operated service. Does not include contracted service.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *Transportation Statistics Annual Report 1998*, BTS98-S-01 (Washington, DC: 1998), table 1-1.

Table 2.
Number of Vehicles

Mode	1970	1980	1990	1995	1996
Air carriers	2,690	2,818	4,727	5,567	5,961
General aviation	125,618	202,487	196,800	182,605	187,312
Passenger cars and motorcycles[r 1]	92,067,655	127,294,783	137,959,958	132,283,966	133,599,578
Other 2-axle, 4-tire vehicles[r]	14,210,591	27,875,934	48,274,555	65,738,322	68,933,798
Trucks:					
Single-unit[r]	3,681,405	4,373,784	4,486,981	5,023,670	5,264,554
Combination[r]	905,082	1,416,869	1,708,895	1,695,751	1,741,854
Buses[r 2]	377,562	528,789	626,987	685,503	696,609
Passenger rail:					
Amtrak					
Cars	N	2,128	[r]1,863	[r]1,722	1,730
Locomotives	N	419	318	[r]313	299
Commuter railcars and locomotives	N	4,500	4,415	4,565	[p]4,665
Transit[3]	10,548	10,654	11,332	11,156	[p]11,341
Class I rail:					
Freight cars	1,423,921	1,168,114	658,902	583,486	570,865
Locomotives	27,077	28,094	18,835	18,812	19,269
Other freight cars	360,260	542,713	553,359	635,441	669,708
Inland water vessels[r,4,5]	25,832	38,788	39,445	39,641	41,104
Oceangoing ships (1,000+ gross tons)[r]	1,579	864	636	509	495
Recreational boats	7,400,000	8,600,000	10,996,253	11,735,000	11,877,938

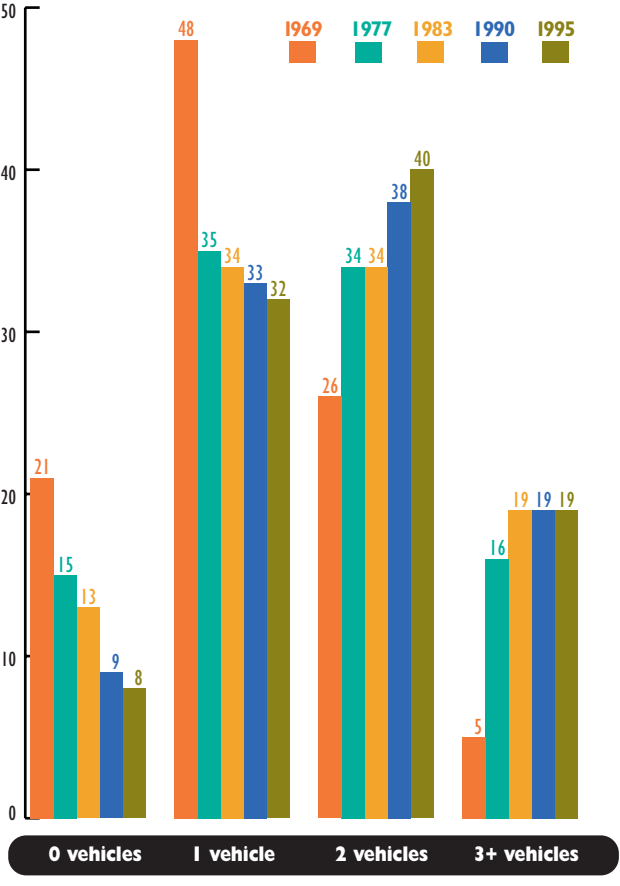
N Data do not exist. r Revised. p Preliminary.

[1]In July 1997, the U.S. DOT/FHWA issued revised data, reassigning some vehicles from "passenger car" to "other 2-axle, 4-tire." [2]Includes municipally owned transit, commercial, federal, and school buses. [3]Includes light and heavy rail. [4]See glossary, page 31. [5]About 3 percent of barges included here are deep draft and thus not considered inland water vessels.

Note: Does not include demand response, ferry boat, aerial tramway, automated guideway transit, cablecar, inclined plane, monorail, and vanpool.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics 1998, table 1-25, at www.bts.gov/ntda/nts.

Figure 1.
Households by Number of Vehicles
Percent



Source: U.S. Department of Transportation, Federal Highway Administration, *National Personal Transportation Survey, Our Nation's Travel* (Washington, DC: 1997).

Table 3.
Vehicle Miles
(In millions)

Mode	1970	1980	1990	1995[r]	1996
Air carriers (domestic)	2,068	2,523	3,963	4,629	4,811
General aviation	3,207	5,204	[r]4,830	3,795	3,524
Passenger cars and motorcycles	920,000	1,122,000	1,418,000	1,448,000	1,478,000
Other 2-axle, 4-tire vehicles[1]	123,000	291,000	[r]575,000	790,000	815,000
Trucks:					
Single unit	27,100	39,800	[r]51,900	62,700	64,000
Combination	35,100	68,700	[r]94,300	115,500	118,800
Buses[2]	4,500	6,100	[r]5,700	6,400	6,500
Other[3]	N	15	324	543	[p]662
Rail:					
Transit[4]	441	403	561	572	[p]580
Commuter	N	179	213	238	[p]242
Class I freight*	29,890	29,277	26,159	30,383	31,715
Intercity/Amtrak*[5]	690	235	[r]301	292	U

N Data are nonexistent. U Data are unavailable. r Revised. p Preliminary.
* Car-miles.
[1] In July 1997, the U.S. DOT/FHWA issued revised vehicle-miles data, reassigning some vehicle-miles from "passenger car" to "other 2-axle, 4-tire."
[2] Includes municipally owned transit, commercial, federal, and school buses.
[3] Includes demand response, ferry boat, and other transit not specified; 1980 data include "other" only.
[4] Includes light and heavy rail.
[5] Amtrak began operations in 1971.
Note: "Passenger cars and motorcycles" and "Other 2-axle, 4-tire vehicles" have been rounded to the nearest billion; trucks and buses have been rounded to the nearest 100 million.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics 1998, table 1-9, at www.bts.gov/ntda/nts.

Table 4.
Passenger–Miles
(In millions)

Mode	1970	1980	1990	1995r	1996
Air carriers	108,400	204,400	345,900	403,900	434,700
General aviation	9,100	14,700	13,000	10,500	10,600
Passenger cars and motorcycles[1]	1,837,000	2,014,000	2,141,000	2,298,000	2,345,000
Other 2-axle, 4-tire vehicles	192,000	439,000	896,000	1,256,000	1,296,000
Trucks:					
Single-unit	27,100	39,800	51,900	62,700	64,000
Combination	35,100	68,700	94,300	115,500	118,800
Buses[2]	N	N	121,400	136,100	138,500
Other[3]	N	390	841	1,140	p1,193
Rail:					
Transit[4]	N	10,981	12,071	11,460	p12,450
Commuter	4,600	6,500	7,100	8,200	p8,400
Intercity/Amtrak[4]	6,200	4,500	6,000	5,500	5,100

N Data do not exist. r Revised. p Preliminary.

[1] In July 1997, the U.S. DOT/FHWA issued revised passenger-miles data, reassigning some vehicles from "passenger car" to "other 2-axle, 4-tire."

[2] Includes municipally owned transit, federal, commercial, and school buses.

[3] Includes demand response, ferry boat, and other transit not specified; 1980 data include ferry boat and "other" only.

[4] Includes light and heavy rail.

[5] Amtrak began operation in 1971.

Note: "Passenger cars and motorcycles" and "Other 2-axle, 4-tire vehicles" have been rounded to the nearest billion; trucks and buses have been rounded to the nearest 100 million.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics 1998, table 1-10, at www.bts.gov/ntda/nts.

Figure 2.
Person-Miles Traveled per Day: 1995
(On average)

49	Per person in households with 2 or more adults, youngest child aged 6–15[1]
48	Per person in households with incomes over $50,000
47	Persons aged 30–49
45	Drivers; per person in households with incomes between $25,000 and $49,000, no children[1]
44	Males
41	Whites; per person in housholds with incomes between $25,000 and $49,000
39	**U.S average (mean)**
35	Single adult household with youngest child under 6[1]
34	Females; Hispanics
31	Blacks
29	Per person in households with incomes under $25,000; Asians
25	Persons over 65; persons aged 5–15
22	Nondrivers
17	Persons over 75

[1] Per adult 20 years or older. Note: Some numbers may not differ statistically.

Source: U.S. Department of Transportation, Federal Highway Administration, *Nationwide Personal Transportation Survey, Our Nation's Travel* (Washington, DC: 1997).

Figure 3.
Long-Distance Trips per Person: 1995
(Trips of over 100 miles one way)

6.3	Per person in households with income over $50,000
6.0	Persons aged 45–54[1]
5.2	Per person, married couples without children
4.7	Per person in households with income between $25,000 and $50,000
4.5	Men[2]
4.4	Whites
4.0	**U.S. average**
3.7	Per person, married couples with children under 18
3.5	Women
2.9	Persons over 65
2.8	Asians and Pacific Islanders[3]
2.3	Persons under age 18
2.2	Hispanics
1.9	Blacks
1.6	Per person in households with income under $25,000

[1] Not statistically different from per person in households earning over $50,000.
[2] Not statistically different from whites.
[3] Not statistically different from persons over 65.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, American Travel Survey data, October 1997.

Table 5.
Population and Long-Distance Travel: 1977 and 1995
(Trips of over 100 miles one way)

Characteristic	1977	1995	% change 1977–95
Resident population (*thous.*)	220,239	262,755	19.3
Total trips (*thous.*)	539,289	1,042,615	93.3
Domestic	521,427	1,001,319	92.0
International	17,862	41,296	131.2
Trips per capita	2.45	3.97	62.0
Domestic	2.37	3.81	61.0
International	0.08	0.16	93.8
Mean trip length (*domestic only*)	733	826	12.6

U.S. Department of Transportation, Bureau of Transportation Statistics, American Travel Survey data, October 1997; U.S. Department of Commerce, Bureau of the Census, *National Travel Survey: Travel During 1977* (Washington, DC: 1979); U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States: 1997* (Washington, DC: 1998).

Table 6.

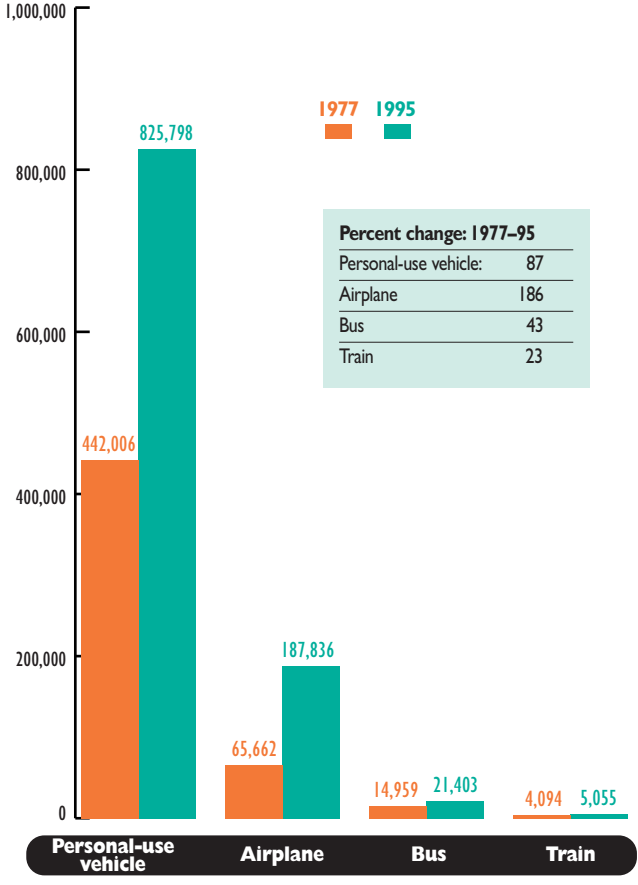
Long-Distance Trips per Person by Age and Purpose: 1977 and 1995

(Trips of over 100 miles one way)

Age and reason for trip	1977	1995	% change 1977–95
18 to 24 years:			
Business	0.3	0.4	60.0
Visit friends or relatives	0.9	1.5	61.5
Leisure	0.7	1.2	69.8
Personal business and other	0.4	0.7	96.6
25 to 34 years:			
Business	0.8	1.0	21.5
Visit friends or relatives	1.2	1.5	30.7
Leisure	0.9	1.1	34.3
Personal business and other	0.5	0.5	0.6
35 to 44 years:			
Business	1.2	1.7	45.7
Visit friends and relatives	1.0	1.2	24.2
Leisure	0.8	1.4	82.8
Personal business and other	0.7	0.6	-17.5
45 to 54 years:			
Business	0.9	1.9	98.1
Visit friends and relatives	1.0	1.5	45.0
Leisure	0.6	1.7	178.8
Personal business and other	0.8	0.9	10.1
55 to 64 years:			
Business	0.6	1.2	115.1
Visit friends and relatives	1.1	1.6	48.1
Leisure	0.6	1.7	184.0
Personal business and other	0.5	0.8	49.9
65 years and over:			
Business	0.2	0.4	108.6
Visit friends or relatives	0.7	1.1	64.6
Leisure	0.3	0.9	195.5
Personal business and other	0.4	0.5	46.0

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, American Travel Survey data, October 1997.

Figure 4.
Long-Distance Person-Trips by Mode: 1977 and 1995
Trips of over 100 miles one way
(thousands)



Percent change: 1977–95	
Personal-use vehicle:	87
Airplane	186
Bus	43
Train	23

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, American Travel Survey data, October 1997; U.S. Department of Commerce, Bureau of the Census, *National Travel Survey, Travel During 1977* (Washington, DC: 1979).

Table 7.

Top 20 U.S. Passenger Airports

(Enplaned passengers on large, certificated air carriers, in thousands)

		1996	1986		
Rank	Airport	Total enplaned passengers	Rank	Total enplaned passengers	% change 1986-96
1	Chicago (O'Hare), IL	30,526	1	24,794	23
2	Atlanta (Hartsfield), GA	30,372	2	21,377	42
3	Dallas/Ft. Worth, TX	26,623	3	19,094	39
4	Los Angeles, CA	22,722	4	17,696	28
5	San Francisco, CA	16,287	7	12,354	32
6	Denver, CO	15,246	5	16,087	-5
7	Phoenix (Sky Harbor), AZ	14,807	15	7,720	92
8	Detroit (Wayne Co.) MI	14,117	13	8,206	72
9	Las Vegas (McCarran), NV	14,054	24	5,329	164
10	St. Louis (Lambert–St. Louis), MO	13,547	9	9,825	38
11	Newark, NJ	12,916	6	14,405	-10
12	Minneapolis/St.Paul, MN	12,616	14	7,982	58
13	Miami, FL	11,906	12	8,589	39
14	Houston (Intercontinental), TX	11,622	20	6,560	77
15	Seattle-Tacoma, WA	11,489	18	6,652	73
16	Orlando, FL	10,828	21	5,947	82
17	Boston (Logan), MA	10,653	10	9,696	10
18	Charlotte (Douglas Municipal), NC	10,008	22	5,687	76
19	New York (John F. Kennedy), NY	9,703	11	9,125	6
20	New York (La Guardia), NY	9,594	8	10,429	-8

Source: U.S. Department of Transportation, Federal Aviation Administration, FAA Statistical Handbook of Aviation.

Table 8.

Top U.S.-Canadian Border Land-Passenger Gateways: 1996

Land gateway	Number entering the U.S.
Personal Vehicles	
Total, U.S.-Canadian land gateways	**39,536,634**
Detroit, MI	8,324,004
Buffalo-Niagara Falls, NY	7,574,485
Blaine, WA	4,666,856
Port Huron, MI	2,074,940
Sault Ste. Marie, MN	1,616,296
Passengers in Personal Vehicles	
Total, U.S.-Canadian land gateways	**100,443,651**
Detroit, MI	23,510,684
Buffalo-Niagara Falls, NY	16,516,951
Blaine, WA	11,387,402
Port Huron, MI	5,391,721
Sault Ste. Marie, MN	5,325,033
Passengers on Buses	
Total, U.S.-Canadian land gateways	**3,871,163**
Buffalo-Niagara Falls, NY	1,418,675
Blaine, WA	479,278
Detroit, MI	564,349
Champlain-Rouses Pt., NY	288,043
Sault Ste. Marie, MN	121,902
Pedestrians	
Total, U.S.-Canadian land gateways	**614,169**
Buffalo-Niagara Falls, NY	263,872
Sumas, WA	57,907
Calais, ME	41,978
Bar Harbour and Portland, ME[1]	35,057
International Falls-Ranier, MN	33,990

[1] Gateway is a pedestrian/ferry combination crossing.

Note: Data reflect all personal vehicles and passengers that entered the United States across the U.S.-Canadian border, regardless of nationality.

Source: U.S. Department of Treasury, U.S. Customs Service, Office of Field Operations, Operations Management Database, 1998.

Table 9.

Top U.S.-Mexican Border Land-Passenger Gateways: 1996

Land gateway	Number entering the U.S.
Personal Vehicles	
Total, U.S.-Mexican land gateways	**75,588,988**
San Ysidro/Otay Mesa, CA	17,160,270
El Paso, TX	15,095,553
Laredo, TX	6,792,925
Calexico, CA	6,138,688
Brownsville, TX	6,073,623
Passengers in Personal Vehicles	
Total, U.S.-Mexican land gateways	**203,998,973**
San Ysidro/Otay Mesa, CA	42,863,607
El Paso, TX	41,483,220
Hildago, TX	19,221,425
Calexico, CA	18,296,272
Laredo, TX	16,932,272
Passengers on Buses	
Total, U.S.-Mexican land gateways	**2,755,287**
San Ysidro/Otay Mesa, CA	1,095,147
Hildago, TX	737,697
Laredo, TX	531,402
Brownsville, TX	111,400
El Paso, TX	105,757
Pedestrians	
Total, U.S.-Mexican land gateways	**42,540,584**
San Ysidro/Otay Mesa, CA	9,392,652
Calexico, CA	7,373,815
Nogales, AZ	4,417,030
El Paso, TX	4,405,140
Brownsville, TX	3,801,203

Note: Data reflect all personal vehicles and passengers that entered the United States across the U.S.-Mexican border, regardless of nationality. Data for San Ysidro are U.S. Customs combined totals for San Ysidro, San Diego, and Otay Mesa.

Source: U.S. Department of the Treasury, U.S. Customs Service, Office of Field Operations, Operations Management Database, 1998.

Table 10.
U.S. Freight Shipments by Transportation Mode: 1993

Mode	Tons		Ton-miles		Value	
	Number *(millions)*	%	Number *(millions)*	%	Dollars *(billions)*	%
Total[1]	**12,157**	**100.0**	**3,627,919**	**100.0**	**$6,124**	**100.0**
Truck (for-hire and private)	6,386	52.5	869,536	24.0	4,403	71.9
Water	2,128	17.5	886,085	24.4	251	4.1
Rail	1,544	12.7	942,561	26.0	247	4.0
Pipeline	1,343	11.0	592,900	16.3	180	2.9
Air (includes truck and air)	3	0.03	4,009	0.1	139	2.3
Intermodal total[2]	**208**	**1.7**	**235,856**	**6.5**	**660**	**10.8**
Parcel, postal, and courier services	19	0.2	13,151	0.4	563	9.2
Truck and rail	41	0.3	37,675	1.0	83	1.4
Other intermodal combinations[3]	149	1.2	185,030	5.1	13	0.2
Unknown	**544**	**4.5**	**96,972**	**2.7**	**243**	**4.0**

[1] Commodity Flow Survey plus Oak Ridge National Laboratory estimates for water and pipelines.
[2] A combination of parcel, postal, and courier services; truck and rail; and other intermodal combinations, including truck and water and rail and water. Excludes truck and air combination, which is added to air transportation.
[3] Includes truck and water, rail and water, and other combinations.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *Transportation Statistics Annual Report 1997*, BTS97-S-01 (Washington, DC: 1997), table 9-5.

Table 11.
Top 20 U.S. Ports
(Million tons)

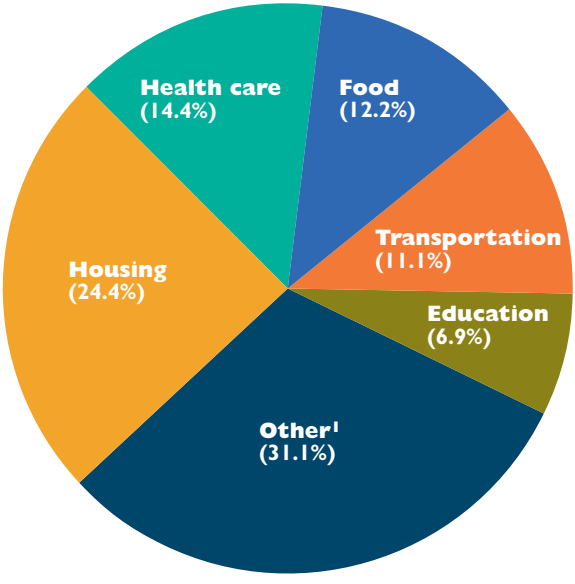
		1996	1990		
Rank	Port	Total tons	Rank	Total tons	% change 1990–96
1	South Louisana, LA	189.8	1	194.2	-2.3
2	Houston, TX	148.2	3	126.2	17.4
3	New York, NY & NJ	131.6	2	140.0	-6.0
4	New Orleans, LA	83.7	6	62.7	33.4
5	Baton Rouge, LA	81.0	5	78.1	3.7
6	Corpus Christi, TX	80.5	7	62.0	29.7
7	Valdez, AK	77.1	4	96.0	-19.6
8	Plaquemine, LA	66.9	8	56.6	18.2
9	Long Beach, CA	58.4	10	52.4	11.4
10	Texas City, TX	56.4	12	48.1	17.3
11	Pittsburgh, PA	50.9	19	35.5	43.3
12	Mobile, AL	50.9	15	41.1	23.6
13	Tampa, FL	49.3	11	51.6	-4.4
14	Norfolk Harbor, VA	49.3	9	53.7	-8.3
15	Lake Charles, LA	49.1	16	40.9	20.1
16	Los Angeles, CA	45.7	13	46.4	-1.4
17	Baltimore, MD	43.6	18	39.5	10.2
18	Philadelphia, PA	41.9	14	41.8	0.1
19	Duluth-Superior, MN & WI	41.4	17	40.8	1.6
20	Port Arthur, TX	37.2	20	30.7	21.1

Source: U.S. Army Corps of Engineers, *Waterborne Commerce of the United States, Calendar Years 1990 and 1995* (New Orleans, LA: 1991 and 1997), part 5, table 5-2.

II Transportation and the Economy

Transportation not only gives us personal mobility, it enables us to transport goods quickly throughout the Nation. Transportation's share of the Gross Domestic Product (GDP) has held steady at about 11 percent since 1989, and contributed $847 billion to a $7.64 trillion GDP in 1996.

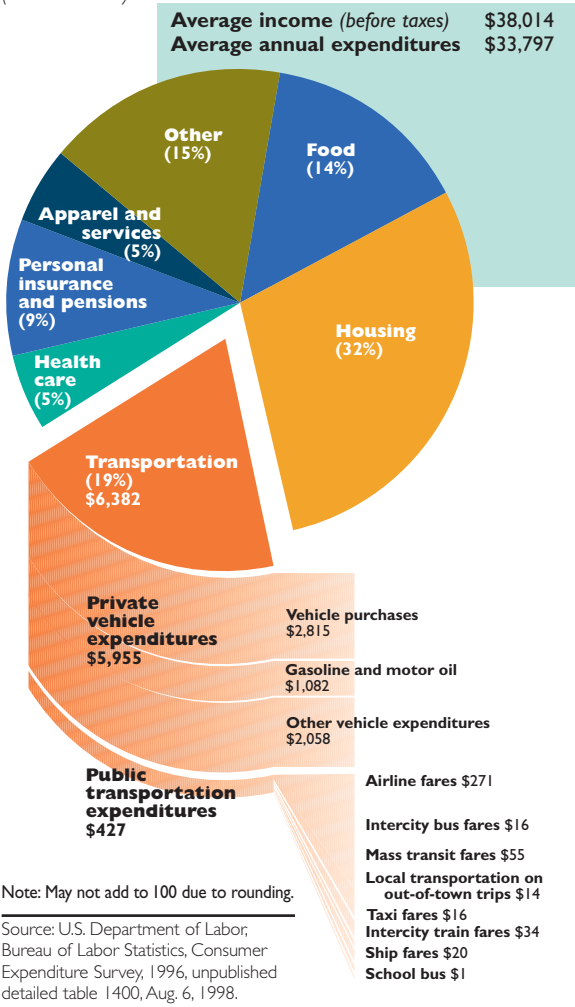
Figure 5.
U.S. Gross Domestic Product by Major Societal Function: 1996



[1]Includes all other categories, such as entertainment, personal care, personal insurance, and pensions.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *Transportation Statistics Annual Report 1998*, BTS98-S-01 (Washington, DC: 1998), table 2-3.

Figure 6.
Average Household Expenditures by Major Category: 1996
(In 1996 dollars)



Note: May not add to 100 due to rounding.

Source: U.S. Department of Labor, Bureau of Labor Statistics, Consumer Expenditure Survey, 1996, unpublished detailed table 1400, Aug. 6, 1998.

Table 12.
U.S. Merchandise Trade by Mode and Region: 1996
(In billions of 1996 dollars)

Mode and region	Value of imports	Value of exports
U.S.-Canada border:		
Truck	$98.4	102.7
Rail	39.8	15.7
Pipeline	12.8	0.2
U.S.-Mexico border:		
Truck	48.4	44.1
Rail	12.3	5.1
Pipeline	NS	NS
Atlantic Coast:		
Waterborne[1]	140.8	98.3
Pacific Coast:		
Waterborne[2]	187.5	82.6
Gulf Coast:		
Waterborne	57.4	54.4
Great Lakes:		
Waterborne	3.4	3.1
All air freight	185.9	196.2

NS Not significant. [1] Contain data for Puerto Rico and the U.S. Virgin Islands. [2] Contain data for Hawaii and Alaska.

Note: Excludes data for imports that are valued at less than $1,250, and exports that are valued at less than $2,500. Import value is for U.S. general imports, custom value basis. Export value is FAS (free alongside ship) and represents the value of exports at the port of export, including the transaction price and inland freight, insurance, and other charges. Values for truck, rail, and pipeline trade contain data for transshipments (shipments that entered or exited the United States through U.S. Customs ports even when the actual origin or final destination was other than the United States). Values for waterborne data include merchandise shipped through the United States in transit from one foreign country to another and for merchandise shipped through inland ports in the Atlantic, Pacific, Gulf, and Great Lakes regions.

Sources: Truck, rail, and pipeline data: U.S. Department of Transportation, Bureau of Transportation Statistics, Transborder Surface Freight Data. Waterborne data: U.S. Department of Transportation, Maritime Administration, Office of Statistical and Economic Analysis, *U.S. Waterborne Exports and General Imports, 1996*. Air freight data: U.S. Department of Commerce, Bureau of the Census, Foreign Trade Division, *FT920: U.S. Merchandise Trade: Selected Highlights, 1996*.

Table 13.
Top Foreign Trade Freight Gateways: 1996
(Billions of 1996 dollars)

Rank	Port	Exports	Imports	Total trade
1	Port of Long Beach, CA (w)	$23.3	$63.7	$87.0
2	Port of Detroit, MI (l)	44.2	41.1	85.3
3	JFK International Airport (a)	38.5	42.1	80.6
4	Port of Los Angeles, CA (w)	15.8	57.0	72.8
5	San Francisco International Airport (a)	33.8	37.2	71.0
6	Port of New York, NY and NJ (w)	22.2	44.8	67.0
7	Los Angeles International Airport, CA (a)	32.6	29.1	61.7
8	Port of Buffalo-Niagara Falls, NY (l)	31.1	27.6	58.7
9	Port of Laredo, TX (l)	18.2	20.7	38.9
10	Port of Seattle, WA (w)	11.6	22.5	34.1
11	Port of Houston, TX (w)	19.4	14.7	34.1
12	Port of Port Huron, MI (l)	11.1	22.2	33.3
13	Chicago O'Hare International Airport (a)	17.9	14.9	32.8
14	Port of Oakland, CA (w)	10.9	15.9	26.8
15	Port of Charleston, SC (w)	12.4	13.6	26.0
16	Port of Norfolk, VA (w)	13.7	10.9	24.6
17	Port of El Paso, TX (l)	9.3	12.8	22.1
18	Port of Tacoma, WA (w)	4.6	15.9	20.5
19	Port of Baltimore, MD (w)	7.9	11.4	19.3
20	Miami International Airport, FL (a)	12.5	6.3	18.8

Sources:
(a) Air: U.S. Department of Commerce, Bureau of the Census, Foreign Trade Division, Special Tabulation.
(w) Maritime and Great Lakes: U.S. Department of Commerce, Bureau of the Census, Foreign Trade Division. *U.S. Waterborne Exports and General Imports, Annual 1996* (Washington, DC: July 1997).
(l) Surface: U.S. Department of Transportation, Bureau of Transportation Statistics, Transborder Surface Freight Data, 1997.

Table 14.
Employment in Transportation and Related Industries
(In thousands)

	1970	1980	1990	1995	1996
Total transportation and related industries employment	r8,724	8,803	10,150	10,554	10,261
For-Hire Transport Sector Total	**r2,649**	**3,175**	**3,732**	**4,099**	**4,210**
Air	352	453	745	788	1,122
Local and inter-urban passenger transit	203	265	338	424	440
Pipeline	[1]50	236	223	194	186
Railroad	634	532	279	239	231
Transportation services	115	198	345	413	417
Trucking and warehousing	1,083	1,280	1,625	1,867	1,641
Water	212	211	177	174	173
Equipment Manufacturing Total	**1,949**	**1,995**	**2,073**	**1,865**	**1,862**
Other Related Industries Total	**3,415**	**2,962**	**3,672**	**3,929**	**4,090**
Automotive and home supply stores	N	261	337	373	381
Automotive repair services, and parking; gasoline service stations	997	1,132	1,516	1,667	1,754
Highway and street construction	331	268	239	227	235
Motor vehicle wholesalers/retailers and other automotive retailers	2,087	1,301	1,535	1,662	1,720
Government Employment[2] Total	**711**	**671**	**673**	**661**	**[3]99**

N Data do not exist. r Revised.
[1] Includes only liquid and natural gas transmission pipelines.
[2] Includes only U.S. DOT.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics 1998, table 2-23 at www.bts.gov/ntda/nts.

Table 15.
Federal, State, and Local Transportation Revenues and Expenditures
(In millions)

	1985	1990	1994	1995
Current dollars				
Revenues:				
Federal	18,388	21,532	25,553	30,223
State	24,355	34,629	42,861	44,846
Local	9,294	13,740	17,565	18,647
Expenditures:				
Federal (less grants)	27,705	30,166	38,672	39,930
Federal grants to states and localities	18,227	19,786	23,721	25,034
State and local	46,810	69,703	85,407	89,359

Note: Statistics in this table are based on data from the U.S. Department of Commerce, Bureau of the Census, which uses different definitions and accounting methods than those used by some modal administrations of the U.S. Department of Transportation. For example, revenues in this table are limited to gasoline taxes, tolls, and other sources that are collected directly from transportation users. Revenue statistics published by the Federal Highway Administration also include other items such as investment income and other taxes and fees.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *Government Transportation Financial Statistics, FY 1985-95*, (Washington, DC: forthcoming).

III Transportation and Safety

Transportation has been the cause of roughly half of all accidental deaths in the United States over the last 26 years. Crashes involving motor vehicles account for about 95 percent of all transportation fatalities and most injuries. Despite this enormous toll, transportation safety has improved: there were far fewer fatalities in 1996 than in 1970, even though vehicle-miles of travel doubled.

Table 16.
Fatalities by Transportation Mode

Mode	1970	1980	1990	1995	1996
Large air carrier	146	1	39	168	380
Commuter air	N	37	7	9	14
On-demand air taxi	N	105	50	52	63
General aviation	1,310	1,239	r765	r734	631
Motor vehicles[1]	52,627	51,091	44,599	41,817	41,907
Rail[2]	785	584	599	567	551
Transit	N	N	339	274	264
Waterborne	178	206	85	46	50
Recreational boating	1,418	1,360	865	829	709
Gas and hazardous liquid pipeline	r30	19	9	21	20

N Data do not exist or are not cited because of reporting changes.
r Revised.
[1] Includes occupants and nonoccupants and motor vehicle fatalities at railroad crossings.
[2] Includes fatalities from nontrain incidents, as well as train incidents and accidents. Also includes train occupants and nonoccupants, except motor vehicle occupants at grade crossings.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *Transportation Statistics Annual Report 1998*, BTS98-S-01 (Washington, DC: 1998), table 3-1.

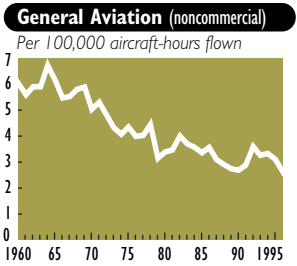
Table 17.
Distribution of Transportation Fatalities: 1996

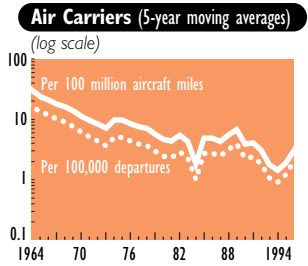
Category	Number	Percent
Total	**44,505**	**100.0**
Passenger car occupants	22,416	50.4
Light-truck occupants	9,901	22.2
Pedestrians struck by motor vehicles	5,412	12.2
Motorcyclists	2,160	4.9
Pedalcyclists struck by motor vehicles	761	1.7
Recreational boaters	709	1.6
General aviation	631	1.4
Large-truck occupants	621	1.4
Railroads[1]	551	1.2
Other and unknown motor vehicle occupants	460	1.0
Air carriers	380	0.9
Other nonoccupants struck by motor vehicles[2]	153	0.3
Heavy-rail transit	74	0.2
Grade crossings (not involving motor vehicles)	73	0.2
Air taxis	63	0.1
Waterborne transportation	50	0.1
Bus occupants (school, intercity, transit)	21	<0.1
Transit buses (not related to accidents)[3]	19	<0.1
Gas distribution pipelines	14	<0.1
Commuter air	14	<0.1
Demand response transit (not related to accidents)	8	<0.1
Hazardous liquid and gas pipelines	6	<0.1
Light-rail transit	6	<0.1
Undetermined motor vehicle occupants	2	<0.1
Redundant with above:		
Grade crossings, with motor vehicles	415	NA
Transit bus, accident-related	82	NA
Commuter rail	72	NA
Passengers on railroad trains	12	NA
Demand response, accident-related	3	NA

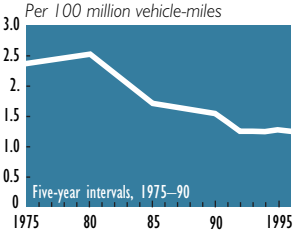
NA Not applicable.
[1] Includes fatalities on and outside trains, except at grade crossings.
[2] Excludes pedalcyclists and pedestrians.
[3] Not included under highway submodes.

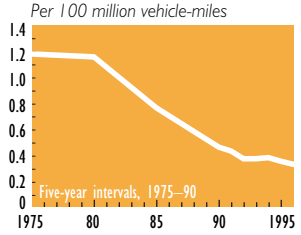
Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *Transportation Statistics Annual Report 1998*, BTS98-S-01 (Washington, DC: 1998), table 3-4.

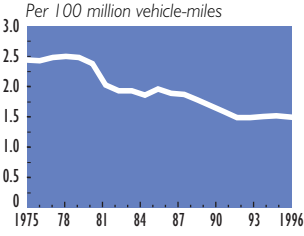
Figure 7.
Fatality Rates for Selected Modes

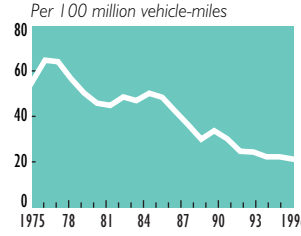




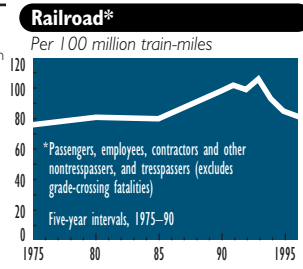








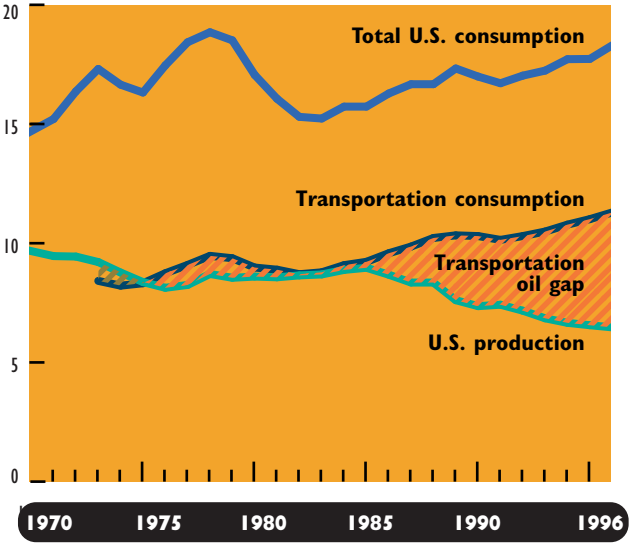
SOURCES: General aviation—For 1960–74, data include air taxi. Data from U.S. Department of Transportation, Federal Aviation Administration, *FAA Statistical Handbook of Aviation* (Washington, DC: 1960–74). For 1975– 96: National Transportation Safety Board, *Annual Review of Aircraft Accident Data, General Aviation* (Washington, DC: Annual volumes). For all other modes: U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics 1998, at www.bts.gov/ntda/nts.



IV Transportation, Energy, and the Environment

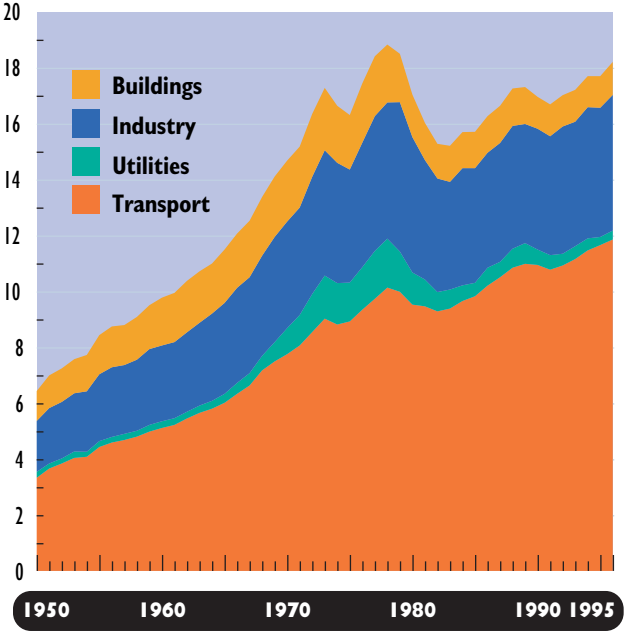
The U.S. transportation system provides many benefits, but also produces undesirable byproducts, such as air and water pollution, noise, solid waste, damage to wildllife habitats and ecosystems, and the potential for global climate change. While other sectors have moved away from oil over the last 20 years, transportation remains almost entirely dependent on petroleum—much of it imported—as its energy source. Greenhouse gas emissions from transportation are increasing because of growing freight activity and passenger travel, slowing of energy efficiency improvements, and America's continuing reliance on fossil fuels.

Figure 8.
U.S. Petroleum Production and Consumption
Quadrillion Btu



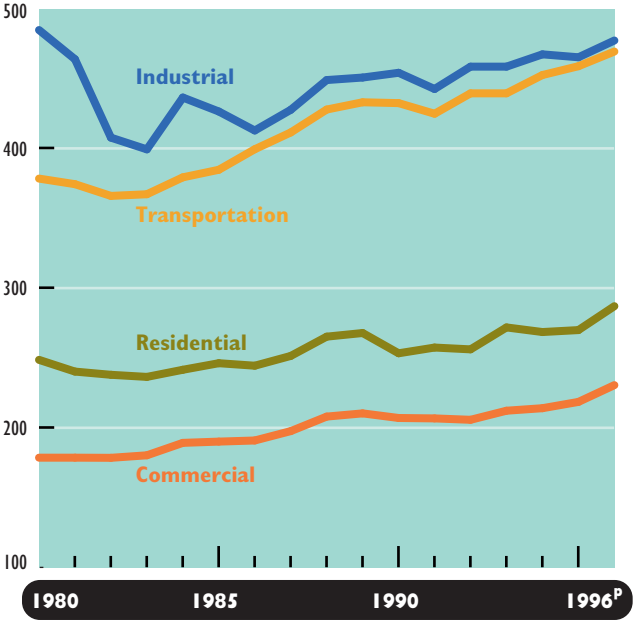
Source: S.C. Davis and D.N. McFarlin, Oak Ridge National Laboratory, *Transportation Energy Data Book, Edition 18*, ORNL-6898 (Oak Ridge, TN: 1998).

Figure 9.
Transportation's Share of U.S. Petroleum Use: 1950–96
Million barrels per day



SOURCE: U.S. Department of Energy, Energy Information Administration, *Annual Energy Review 1996*, DOE/EIA-0384(96) (Washington, DC: 1997), table 5.12.

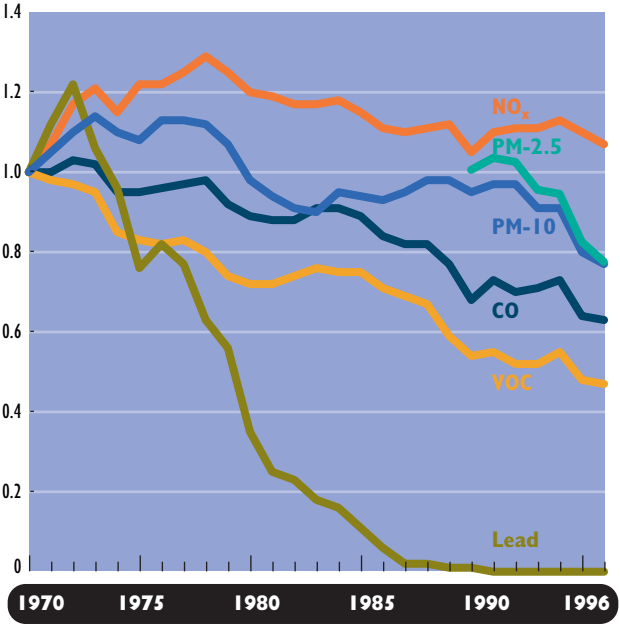
Figure 10.
Carbon Dioxide Emissions from Energy Consumption: 1980-96
Million metric tons of carbon



Note: Tons of carbon can be converted to tons of carbon dioxide gas by multiplying by 3.667. One ton of carbon equals 3.667 tons of carbon dioxide gas.

Source: U.S. Department of Energy, Energy Information Administration, *Annual Energy Review 1997*, DOE/EIA-0384(97), (Washington, DC: July 1998), table 12.2 and figure 12.2.

Figure 11.
U.S. Transportation-Related Air Emissions: 1970–96
Index (1970=1.0, 1990 =1.0 for PM-2.5)



Key: NO_x = oxides of nitrogen; PM-10 and PM-2.5= airborne particulates of less than 10 microns or 2.5 microns, respectively; CO = carbon monoxide; VOC = volatile organic compounds.

Note: Transportation emissions include all onroad mobile sources and the following nonroad mobile sources: recreational vehicles and boats, airport service equipment, aircraft, commercial marine vessels, and railroads. Other nonroad sources, such as lawnmowers and farming equipment, are not included. Lead estimates include onroad mobile sources only.

Source: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, *National Air Quality and Emission Trends, 1900 to 1996* (Research Triangle Park, NC: 1996).

Glossary

Air carrier—Certificated providers of scheduled and nonscheduled services.

Class I railroad—A railroad with an annual gross operating revenue in excess of $250 million (based on 1991 dollars).

Commuter rail—Local and regional passenger train operations between a central city and adjacent suburbs.

Directional route miles—The sum of the mileage in each direction over which transit vehicles travel while in revenue service.

Fatality—For purposes of compiling DOT safety statistics, any injury that results in death within 30 days of a transportation crash or incident.

General aviation—All civil aviation operations other than scheduled air services and nonscheduled air transportation operations.

Inland water vessels—Includes self-propelled dry cargo and offshore support vessels, passenger carriers, and vehicular and railroad car ferries, railroad cars, tankers, and towboats; and non-self-propelled dry cargo and tanker barges, and railroad car floats operating on the Atlantic, Gulf, and Pacific coasts, Mississippi River System, Gulf Intracostal Waterway, and Great Lakes System.

Other 2-axle, 4-tire vehicles—Includes vans, pickup trucks, and sport/utility vehicles.

Passenger-mile—One passenger transported one mile. One vehicle traveling 3 miles carrying 5 passengers generates 15 passenger miles.

Personal-use vehicles—Cars, pickup trucks, or vans; other small trucks; rental cars, trucks, or vans; recreational vehicles or motor homes; or motorcycles or mopeds.

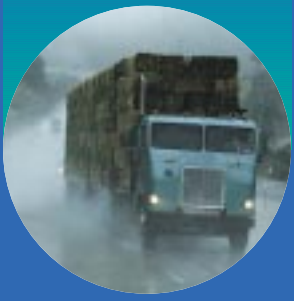
Ton-miles—A unit of measure equal to the movement of one ton over one mile.

Truck:

Single unit—A large truck on a single frame with at least 2 axles and 6 tires. Excludes "other 2-axle, 4-tire vehicles" noted above.

Combination—A power unit (truck or truck tractor) and one or more trailing units.

Vehicle-mile—One vehicle traveling one mile.

Statistics published in this *Pocket Guide to Transportation* come from a number of different sources. Some statistics are based on samples and are subject to sampling variability. Statistics may also be subject to errors, such as omission, duplication, and errors in reporting, recording, and processing data. For more information about the accuracy of statistics in this publication, refer to the sources listed.

U. S. Department of Transportation