Pocket Guide to Transportation 2021



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1200 New Jersey Avenue, SE, Room

E34-457

Washington, DC 20590

Information Service

Phone: 202-366-DATA Email: bts@dot.gov

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Pocket Guide to Transportation 2021

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U.S. Department of Transportation

Diana Furchtgott-Roth Deputy Assistant Secretary for Research and Technology

Bureau of Transportation Statistics

Patricia Hu Director

Rolf Schmitt

Deputy Director

Produced under the direction of:

Long Nguyen Acting Director, Office of Transportation Analysis

Sean Jahanmir Project Manager

William H. Moore (Spatial Front) Editor

Alpha Wingfield Visual Information Specialist

Major Contributors:

Demi Riley (Spatial Front)

Contributors:

Steve Beningo Matthew Chambers Sonya Smith-Pickel Daniel Palumbo (Spatial Front) Hoa Thai (Spatial Front)

ABOUT THE POCKET GUIDE TO TRANSPORTATION

The Bureau of Transportation Statistics' *Pocket Guide* to *Transportation* is a quick reference guide that provides transportation statistics at your fingertips. It provides key information and highlights major trends on the U.S. transportation system.

This year features an updated *Pocket Guide* mobile and web app to highlight the most recent up-to-date statistics. Download now to access all the popular features of the classic *Pocket Guide* (available for most devices and phones on the App Store and on Google Play).

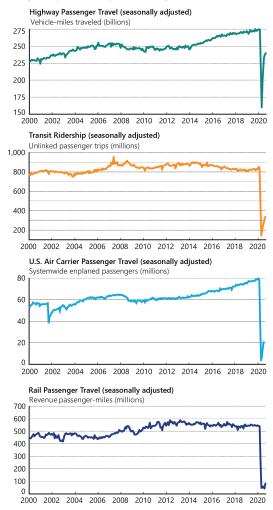
BTS welcomes comments and suggestions for improving this product.

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Major Trends

Moving People: January 2000-August 2020

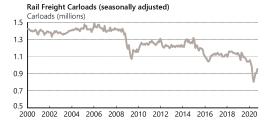


Notes: Graph scales are not comparable. Seasonally adjusted data measure the real differences in data trends by adjusting for seasonal factors, such as the change in the number of days, weekends, holidays, or other seasonal activity in a month, such as vacation travel.

Source: Seasonally adjusted transportation data—U.S. Department of Transportation, Bureau of Transportation Statistics, available at www.bts.gov as of November 2020.

Major Trends

Moving Freight: January 2000–September 2020









Notes: Graph scales are not comparable. Rail freight intermodal—Rail intermodal traffic includes shipping containers and truck trailers moved on rail cars. U.S. waterways freight—Includes tonnage carried on internal U.S. waterways.

Source: Seasonally adjusted transportation data—U.S. Department of Transportation, Bureau of Transportation Statistics, available at www.bts.gov as of November 2020.

1 INFRASTRUCTURE

The U.S. transportation system consists of a network of roads, bridges, airports, railroads, transit systems, ports, waterways, and pipelines that connect the Nation to the rest of the world.

1-1 Transportation Network Length

Mode	2008	2018
Highway		
Public roads	4,042,778	4,176,915
Public road lanes ^a	8,483,969	8,794,569
Pipeline		
Gas distribution	2,075,191	2,238,511
Gas transmission and gathering	322,913	319,496
Rail		
Class I freight railroad	94,209	92,837
Amtrak	21,178	21,407
Transit		
Commuter rail ^b	7,261	7,902
Heavy rail ^b	1,623	1,660
Light rail ^{b,c}	1,397	2,045
Water		
Navigable waterways ^d	25,000	25,000

^aMeasured in lane-miles. ^bMeasured in directional route-miles. ^cLight Rail was revised beginning in 2011 and includes light rail, street car rail, and hybrid rail. ^dEstimated length of domestic waterways.

Sources: Highway, Pipeline, Rail, Transit, Water—as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics, tables 1-1, 1-6, and 1-10, available at https://www.bts.gov/nts as of October 2020.

1-2 Transportation Facilities number

Mode	2008	2018			
Air					
Certificated airports ^a	560	523			
General aviation airports	19,370	19,116			
Highway					
Bridges	613,764	616,096			
Pipeline					
LNG facilities	U	157			
Rail					
Amtrak stations	510	526			
Transit rail					
Commuter rail stations	1,189	1,280			
Heavy rail stations	1,041	1,054			
Light rail stations ^b	787	1,106			
Water					
Ports ^c	185	181			
Cargo handling docks	8,350	8,238			
Lock chambers	238	239			

^aCertificated airports serve air carrier operations with aircrafts seating more than nine passengers. ^bLight Rail was revised beginning in 2011 and includes light rail, street car rail, and hybrid rail. ^cPorts handling over 250,000 short tons.

Key: LNG = liquified natural gas; U = Data are unavailable.

Sources: Air, Highway, Rail—as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics, stables 1-3, 1-7, and 1-28, available at https://www.bts.gov/nts as of October 2020. Pipeline—U.S. Department of Transportation, Pipeline and Hazardous Materials Administration, available at https://www.phmsa.dot.gov as of October 2020. Transit—U.S. Department of Transportation, National Transit Database, available at https://www.transit.dot.gov/ntd/ as of October 2020. Water—U.S. Army Corps of Engineers, Navigation Data Center, Transportation Facts and Information, available at https://www.navigationdatacenter.us/ as of October 2020.

1-3 Transportation Vehicles number

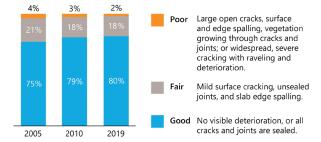
Mode	2008	2018
Air		
Air carrier aircraft	7,337	7,475
General aviation aircraft	228,663	211,749
Highway		
Light-duty vehicle ^a	236,448,155	250,709,853
Truck	10,873,275	13,233,910
Motorcycle	7,752,926	8,666,185
Rail		
Class I freight locomotive	24,003	26,086
Class I freight car	450,297	293,742
Amtrak locomotive	278	431
Amtrak car	1,177	1,403
Transit rail		
Commuter rail ^b	6,494	7,023
Heavy rail ^b	11,377	10,763
Light rail ^{b, c}	1,948	2,729
Water		
Nonself-propelled vessel	32,236	32,828
Self-propelled vessel	10,262	9,310
Oceangoing vessel	225	182
Recreational boat	12,692,892	11,852,969

^alncludes passenger cars, light trucks, vans, and sport utility vehicles. ^bIncludes revenue vehicles available for maximum service. ^cLight Rail was revised beginning in 2011.

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-11, available at https://www.bts.gov/nts as of April 2020.

1-4 Airport Runway Pavement Condition

percent of NPIAS runways

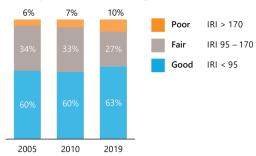


Note: National Plan of Integrated Airport Systems (NPIAS) airports include commercial service airports, reliever airports, and selected general aviation airports.

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics, table 1-25, available at https://www.bts.gov/nts as of June 2020.

1-5 National Highway System Pavement Condition

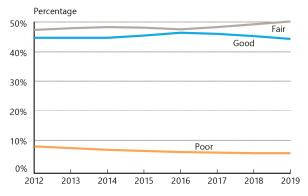
percent of NHS facility miles



Notes: Pavement condition is measured by the International Roughness Index (IRI), which takes a longitudinal profile of pavement roughness based on one-way facility centerline miles. A lower IRI indicates smoother highway conditions and a higher IRI indicates rougher highway conditions.

Source: U.S. Department of Transportation, Federal Highway Administration, Highway Statistics, table HM-47, available at https://www.fhwa.dot.gov/policyin-formation/statistics.cfm as of November 2020.

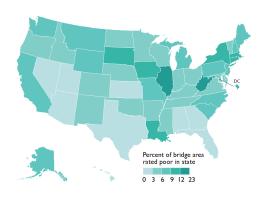
1-6 Bridge Condition by Deck Area: 2012–2019



Note: The deck area calculation was changed as of 2018 in accordance with 23 CFR 490.409.

Source: U.S. Department of Transportation, Federal Highway Administration, National Bridge Inventory, available at https://www.fhwa.dot.gov/bridge/nbi.cfm as of January 2020.

1-7 Condition of Highway Bridges by State: 2019



Source: U.S. Department of Transportation, Federal Highway Administration, National Bridge Inventory, available at https://www.fhwa.dot.gov/bridge/nbi.cfm as of January 2020.

2 Moving People

The U.S. transportation system makes personal mobility possible. Every day people use the transportation system to get to and from work, school, and shopping and for recreational, social, and personal purposes.

2-1 Vehicle-Miles Traveled millions

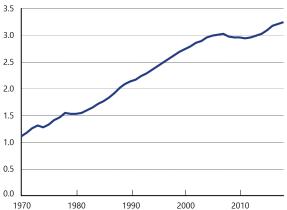
Mode	2008	2018
Air		
U.S. air carrier, domestic ^a	6,446	6,609
Highway		
Light-duty vehicle ^b	2,630,213	2,897,083
Motorcycle	20,811	20,076
Truck	310,680	304,864
Bus	14,823	18,303
Passenger rail		
Amtrak ^c	272	273
Commuter rail ^c	337	375
Heavy rail ^c	674	705
Light rail ^{c,d}	88	131

^aMeasured in revenue aircraft-miles. ^bIncludes passenger cars, light trucks, vans, and sport utility vehicles. ^cMeasured in passenger car-miles. ^dLight rail was revised beginning in 2011 and includes light rail, street car rail, and hybrid rail.

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics, table 1-35, available at https://www.bts.gov/nts as of October 2020.

2-2 Highway Travel: 1970-2018

Trillions of vehicle-miles (unadjusted)



Note: Data for 2007 and later years may not be comparable to previous years due to changes in methodology.

Source: U.S. Department of Transportation, Federal Highway Administration, Highway Statistics, available at www.fhwa.dot.gov/policyinformation/statistics.cfm as of January 2020.

2-3 Passenger-Miles Traveled millions

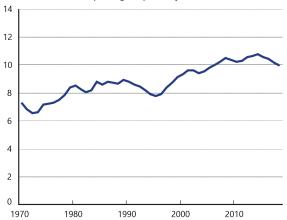
Mode	2008	2018
Air		
U.S. air carrier, domestic	570,090	722,415
Highway		
Light-duty vehicle ^a	4,248,783	4,849,254
Motorcycle	26,430	23,297
Truck	310,681	304,864
Bus	314,278	388,032
Passenger rail		
Amtrak ^b	6,179	6,361
Commuter rail	11,032	12,610
Heavy rail	16,850	16,914
Light rail ^c	2,081	2,728

^aIncludes passenger cars, light trucks, vans, and sport utility vehicles. ^bMeasured in revenue passenger-miles. ^cLight rail was revised beginning in 2011 and includes light rail, street car rail, and hybrid rail.

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-40, available at https://www.bts.gov/nts as of October 2020.

2-4 Transit Ridership: 1970-2018

Billions of unlinked passenger trips (unadjusted)



Note: Includes bus, commuter rail, demand response, heavy rail, light rail, trolley bus, ferry boat, aerial tramway, automated guideway, cable car, inclined plane, monorail, and other.

Source: American Public Transportation Association, *Public Transportation Fact Book*, Appendix, available at www.apta.com/Pages/default.aspx/ as of March 2020.

2-5 Daily Passenger Travel

	2001	2009	2017 ^a
Travel per person			
Daily person trips	4.1	3.8	3.4
Daily person-miles	36.9	36.1	36.1
Travel per driver			
Daily vehicle trips	3.4	3.0	2.7
Daily vehicle-miles of travel	32.7	29.0	25.8
Average commute			
Length in miles	12.1	11.8	11.5
Travel time in minutes	23.3	23.9	26.6
Percent of work trips by usual mode			
Private vehicles	90.8	89.4	87.5
Public Transit ^b	5.1	5.1	6.9
Walk	2.8	2.8	2.9
Other ^c	1.3	2.7	2.7

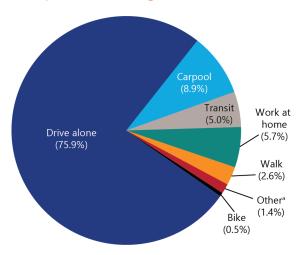
^aThe 2017 NHTS includes a different methodology compared to previous years, such as an address-based sample including more urban and cell phone only households. ^bPublic transit includes local bus, commuter bus, commuter train, subway, trolley, and streetcar. "Other" includes travel modes not specifically cited, such as motorycle, taxi, bike, truck, and other.

Note: The usual mode is defined as the means of transportation usually used to go to work in the week prior to the travel day.

Source: U.S. Department of Transportation, Federal Highway Administration, 2017 National Household Travel Survey, Summary of Travel Trends, available at https://nhts.ornl.gov/ as of September 2018.

2-6 Commute Mode Share: 2019

percent of workers age 16 and older

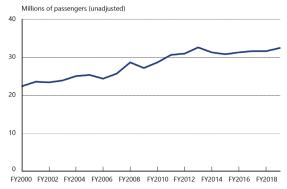


^a Includes motorcycle, taxi, and other means.

Notes: Percents may not add to 100 due to rounding. *The American Community Survey* asks for the mode usually used by the respondent to get to work. For more than one mode of transportation, respondents select the mode used for most of the distance traveled.

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics, table 1-41, available at www.bts.gov as of September 2020.

2-7 Amtrak Ridership: FY2000-FY2019



Source: U.S. Department of Transportation, Federal Railroad Administration, available at safetydata.fra.dot.gov/officeofsafety/default.aspx/ as of October 2020.

2-8 Top 10 Amtrak Stations: FY2019

by passengers

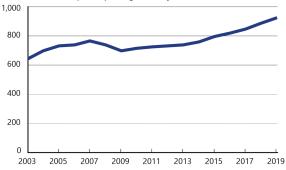


Note: Includes passenger boardings and alightings.

Source: Amtrak, National Fact Sheet and State Fact Sheet, available at www.amtrak.com/home.html as of April 2020.

2-9 U.S. Air Carrier Passenger Traffic: 2003–2019





Note: Includes passenger enplanements on scheduled services only (domestic and international flights).

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, T-100 Market data, available at www.bts.gov as of June 2020

2-10 Top 10 U.S. Airports: 2019

by enplaned passengers

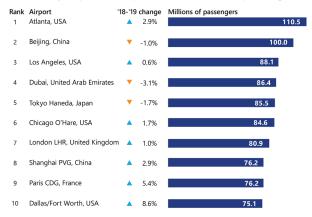


Note: Includes passenger enplanements on U.S. carrier scheduled domestic and international service and foreign carrier scheduled international service to and from the United States.

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics, table 1-44, available at www.bts.gov/nts as of July 2020.

2-11 Top 10 World Airports: 2019

by enplaned, deplaned, and in-transit passengers



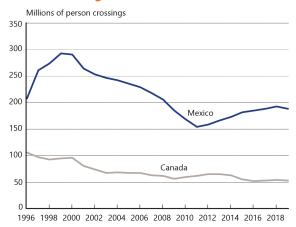
Note: Preliminary data for passengers enplaned, deplaned, and passengers in transit.

LHR = London Heathrow Airport; PVG = Shanghai Pudong Airport;

CDG = Charles de Gaulle Airport

Source: Airports Council International, available at www.aci.aero/ as of May 2020.

2-12 Incoming Land Border Person Crossings: 1996–2019



Note: Excludes drivers and passengers in commercial trucks.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, Border Crossing Entry Data, available at www.bts.gov/content/border-crossingentry-data/ as of October 2020.

2-13 Top 5 Land Ports of Entry: 2019

by incoming person crossings

U.S.-Canada ports of entry

Rank	Port	'18-'19	change	Millions of person crossings
1	Buffalo-Niagara Falls, NY	•	-1.7%	11.3
2	Blaine, WA	•	-5.2%	8.1
3	Detroit, MI	•	12.2%	7.7
4	Port Huron, MI	•	-3.3%	3.0
5	Champlain-Rouses Point, N	1Y 🔻	1.0%	2.7

U.S.-Mexico ports of entry



Note: Excludes drivers and passengers in commercial trucks.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *Border Crossing Entry Data*, available at www.bts.gov/content/border-crossingentry-data/ as of October 2020.

3 Moving Goods

The freight transportation network links natural resources, manufacturing facilities, labor markets, and customers across the Nation and with international trading partners.

3-1 Freight Shipments Within the U.S. by Mode

Value of shipments (billions of constant 2012 dollars)

Mode	2012	2018	2045
Truck	12,216	12,975	24,001
Rail	721	782	1,629
Water	431	545	872
Air and truck-air	674	593	3,208
Pipeline	1,325	1,533	1,901
Multiple modes ^a	2,122	2,265	4,970
Other ^b	241	215	484
Total	17,729	18,907	37,064

Weight of shipments (millions of tons)

Mode	2012	2018	2045
Truck	10,700	11,920	16,415
Rail	1,797	1,782	2,250
Water	658	838	942
Air and truck-air	7	6	26
Pipeline	3,031	3,346	4,766
Multiple modes ^a	418	504	800
Other ^b	342	221	273
Total	16,952	18,616	25,472

Ton-miles of shipments (billions of ton-miles)

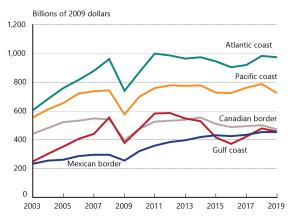
Mode	2012	2018	2045
Truck	1,886	2,070	3,274
Rail	1,461	1,431	1,760
Water	323	361	418
Air and truck-air	6	6	21
Pipeline	857	979	1,414
Multiple modes ^a	339	398	765
Other ^b	7	3	16
Total	4,879	5,251	7,668

 $^{^{\}rm a}$ Includes mail. $^{\rm b}$ Includes other, unknown, and imported crude oil with no domestic mode.

Notes: Details may not add to totals due to rounding. Includes domestic trade and the domestic portion of imports and exports.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics and Federal Highway Administration, Freight Analysis Framework, Version 4.5.1, available at www.bts.gov/fafas of November 2019.

3-2 U.S. Trade by Coasts and Borders: 2003–2019

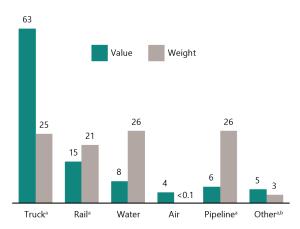


Note: Includes U.S.-international merchandise trade only.

Sources: Value—U.S. Department of Commerce, Census Bureau, Foreign Trade Division, HS Port-Level Data (Washington, DC: annual issues) as of August 2020. Implicit GDP Deflator—Organization for Economic Co-operation and Development, GDP Implicit Price Deflator in United States [USAGDPDEFA-ISMEI], retrieved from FRED, Federal Reserve Bank of St. Louis; available at https://fred.stlouisfed.org/series/USAGDPDEFAISMEI, available at <a href="https://fred.stlouisfed.org/series/USAGDPDEFAISMEI, avai

3-3 U.S. Trade with Canada and Mexico by Mode: 2019

Percent of freight trade



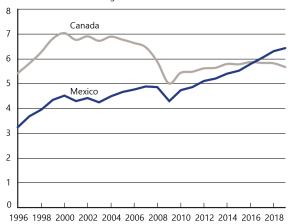
^a Export weights for land modes are estimated by the Bureau of Transportation Statistics using value-to-weight ratios derived from import data. ^b Includes mail, other, unknown, and shipments through Foreign Trade Zones.

Note: Percents may not add to 100 due to rounding.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, North American Transborder Freight Data, special tabulation, available at <u>www.bts.gov/transborder</u> as of March 2020.

3-4 Incoming Truck Border Crossings: 1996–2019

Millions of truck crossings



Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *Border Crossing Entry Data*, available at <u>data.transportation.gov/</u> as of October 2020.

3-5 Top 5 Truck Ports of Entry: 2019

by incoming truck crossings

U.S.-Canada ports of entry



U.S.-Mexico ports of entry

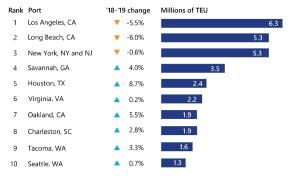


Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *Border Crossing Entry Data*, available at <u>data.transportation.gov/</u> as of October 2020.

3-6 Top 10 U.S. Water Ports: 2019 by short tons

Rank	Port	'18-'19 change	Millions of short tons		
1	Houston, TX	▲ 5.9%			284.9
2	South Louisiana, LA	▼ -13.7%		238.0	
3	New York, NY and NJ	▼ -2.6%	136.6		
4	Corpus Christi, TX	▲ 18.6%	111.2		
5	Beaumont, TX	▲ 0.6%	101.1		
6	New Orleans, LA	▼ -1.2%	92.2		
7	Long Beach, CA	▼ -6.8%	80.7		
8	Baton Rouge, LA	▼ -10.7%	73.4		
9	Los Angeles, CA	▼ -7.1%	63.0		
10	Virginia, VA	▼ -14.0%	61.7		

by TEUs



Key: TEU = twenty-foot equivalent unit.

Note: Includes domestic and foreign waterborne trade. Excludes foreign empty TEUs.

Sources: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, personal communication, as of November 2020.

3-7 Top 10 World Container Ports: 2018

TEUs, including full and empty containers

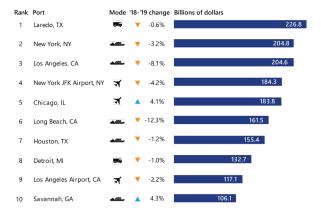


Key: TEU = twenty-foot equivalent unit.

Source: Lloyd's List, One Hundred Ports 2020, available at https://lloydslist.maritimeintelligence.informa.com/one-hundred-container-ports-2020 as of November 2020.

3-8 Top 10 U.S. International Trade Gateways: 2019

by value of shipments





Notes: Air gateways include a low level (generally less than 3% of the total value) of freight shipped through small user-fee airports located in the same area as the gateways listed. Air gateways not identified by airport name (e.g., Chicago, IL) include major airport(s) in the area and small regional airports.

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-51, available at https://www.bts.gov/nts as of November 2020.

4 SAFETY

Transportation safety is the top priority of the U.S. Department of Transportation.

4-1 Transportation Fatalities by Mode

Mode	2009	2018	2019
Air	541	395	452
U.S. air carrier	52	1	4
Commuter carrier	0	0	2
On-demand air taxi	17	16	32
General aviation	481	379	414
Highway	33,883	36,560	36,096
Passenger car occupants	13,135	12,775	12,239
Motorcyclists	4,469	4,985	5,014
Light-truck occupants	10,312	9,922	9,976
Heavy-truck occupants	499	885	892
Bus occupants	26	43	U
Pedestrians	4,109	6,283	6,205
Pedalcyclists	628	857	846
Other	705	810	924 ^a
Pipeline	13	7	12
Rail	695	815	899
Train Accidents	4	7	5
Highway-rail grade crossing ^b	248	260	298
Trespassers	416	518	570
Other	27	30	26
Transit ^c	233	260	268
Water	865	682	697
Freight vessel and Industrial/Other	67	25	40
Passenger vessel and Recreational boating	798	657	657

^a2019 Other incudes Bus occupants. ^bIndividual modes don't add up to totals due to double counting in highway, rail, and transit grade crossings. ^cIncludes transit employee, contract worker, passenger, people waiting or leaving (revenue facility occupant), and other fatalities for all modes reported to the National Transit Database. Excludes commuter rail (reporting under FRA jurisdiction). Other transit fatalities are assumed to be counted under Highway or Rail categories.

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics, table 2-1, available at www.bts.gov/nts as of October 2020.

Key: U = Data are unavailable.

4-2 Transportation Injuries by Mode

Mode	2009	2018	2019
Air	304	270	259
U.S. air carrier	26	26	18
Commuter carrier	1	0	0
On-demand air taxi	4	17	14
General aviation	273	227	227
Highway ^a	2,224,000	2,710,000	U
Passenger car occupants ^a	1,219,000	1,511,000	U
Motorcyclists ^a	89,000	82,000	U
Light-truck occupants ^a	762,000	921,000	U
Heavy-truck occupants ^a	16,000	39,000	U
Bus occupants ^a	13,000	15,000	U
Pedestrians ^a	59,000	75,000	U
Pedalcyclists ^a	51,000	47,000	U
Other ^a	14,000	20,000	U
Pipeline	64	81	36
Rail	8,023	8,282	7,914
Train Accidents	127	205	58
Highway-rail grade crossing ^b	743	845	823
Trespassers	344	489	533
Other	6,809	6,743	6,500
Transit ^c	26,289	22,831	23,311
Water	3,943	3,004	2,989
Freight vessel and			
Industrial/Other	386	279	245
Passenger vessel and			
Recreational boating	3,557	2,725	2,744

³2018 and 2019 Crash Reporting Sampling System (CRSS) estimates for injuries are not comparable with 2009 and earlier NASS GES estimates because of different sampling designs. ^bExcludes injuries involving motor vehicles at public highway-rail grade crossings, which are assumed to be counted under Highway categories. ^cIncludes transit employee, contract worker, passenger, people waiting or leaving (revenue facility occupant), and other injuries for all modes reported to the National Transit Database. Excludes commuter rail (reporting under FRA jurisdiction). Other transit injuries are assumed to be counted under Highway or Rail categories.

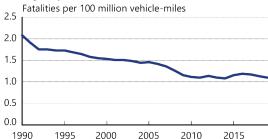
Notes: Highway numbers are estimates rather than actual counts. The estimates are calculated from data obtained from a nationally representative sample of crashes. NHTSA redesigned the nationally representative sample of police-reported traffic crashes, which estimates the number of police-reported injury and property-damage-only crashes in the US. The new system, CRSS, replaced the NASS GES in 2016 and has a different sample design. Thus, the 2018 and 2019 persons injured estimates are not comparable to earlier estimates.

Key: U = Data are unavailable.

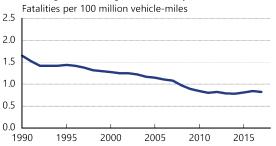
Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics, table 2-2, available at www.bts.gov/ nts as of October 2020.

4-3 Fatality Rates by Mode

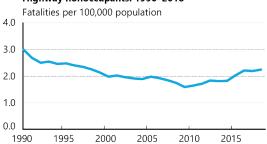




Passenger car and light-truck occupants: 1990-2018



Highway nonoccupants: 1990-2018

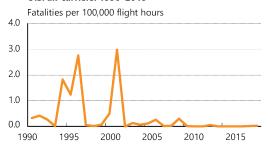


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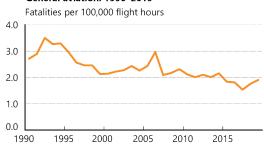
4-3 Fatality Rates by Mode (continued)

Large-truck occupants: 1990–2018 Fatalities per 100 million vehicle-miles 2.5 2.0 1.5 1.0 0.5 0.0 1990 1995 2000 2005 2010 2015

U.S. air carriers: 1990-2019



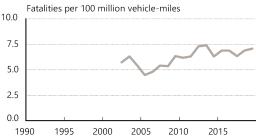
General aviation: 1990-2019



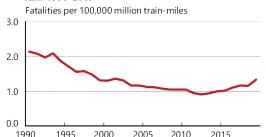
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4-3 Fatality Rates by Mode (continued)

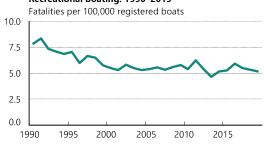
Transit: 2002-2019



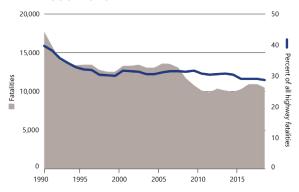
Rail: 1990-2019



Recreational boating: 1990-2019



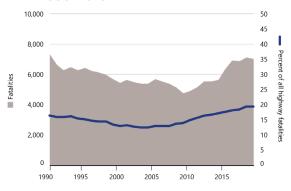
4-4 Alcohol-Impaired Driving Fatalities: 1990–2018



Note: Includes fatalities occurring in any crash involving a driver with a blood alcohol concentration (BAC) of 0.08 grams per deciliter or higher.

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration, *Traffic Safety Facts*: 2018 Fatal Motor Vehicle Crashes: Overview as of October 2019.

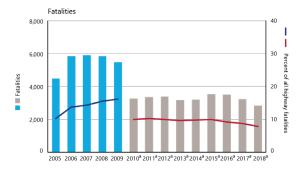
4-5 Pedestrian and Bicyclist Fatalities: 1990–2019



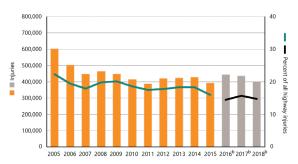
Note: Includes pedestrians and riders of nonmotorized bicycles and other pedal-powered vehicles.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics, table 2-1, available at www.bts.gov/nts as of October 2020.

4-6 Distracted Driving Fatalities and Injuries: 2005-2018



Note: Distracted driving fatality data for 2010 and on are not comparable with previous years due to changes in methodology.



^aDistracted driving fatality data for 2010 and on are not comparable with previous years due to changes in methodology. bCrash Reporting Sampling System (CRSS) estimates for injuries are not comparable with 2015 and earlier NASS GES estimates because of different sampling designs.

Note: Distracted driving involves any activity that could divert a person's attention away from the primary task of driving, such as texting, using a cell phone, eating and drinking, grooming, using a navigation system, adjusting a radio, etc.

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration, available at www.nhtsa.gov as of June 2020.

5 Performance

The physical capacity of the U.S. transportation system has not kept pace with growth in travel and commerce. The resulting congestion and delays have significant impacts on passengers and freight shippers.

5-1 Road Congestion: 1985–2017



Notes: Annual hours of delay per car commuter—the extra time spent during the year traveling at congested speeds rather than free-flow speeds by private vehicle drivers and passengers who typically travel in the peak periods.

The methodology to calculate congestion performance measures was updated to reflect more comprehensive data collection using INRIX data for each of the 494 U.S. urban areas. The congestion estimates for all study years are recalculated every time the methodology is altered to provide a consistent data trend. For a detailed explanation of the updated methodology, see the *Urban Mobility Report* at mobility.tamu.edu/ums/report/.

Source: Texas A&M Transportation Institute, *Urban Mobility Report*, available at mobility.tamu.edu/umr/report/ as of September 2019.

5-2 Top 10 Metropolitan Area Congestion Rankings: 2019

by calendar year average minutes of congestion



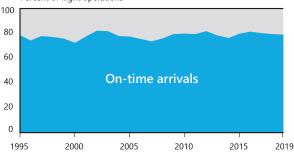
Key: MSA = Metropolitan Statistical Area

Notes: Minutes of congestion—the amount of time when freeways operate less than 90 percent of free-flow freeway speeds. Calculated by calendar year for an average duration of daily congestion.

Source: U.S. Department of Transportation, Federal Highway Administration, *Urban Congestion Report*, personal communication, as of October 2020.

5-3 U.S. Airline On-time Performance: 1995–2019

Percent of flight operations

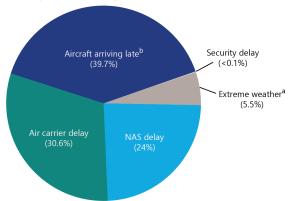


Note: Flights arriving at the gate within 15 minutes of scheduled arrival time are on time.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *Airline On-Time Performance*, available at www.bts.gov as of March 2020.

5-4 U.S. Major Airport Delays by Cause: 2019

percent of delayed time



^aIncludes weather events that prevent flying. Other weather delays that slow operations are included under other categories. ^bDelay resulting from a previous flight with the same aircraft arriving late.

Key: NAS = Delays attributable to the national aviation system (NAS) that refer to a broad set of conditions, such as non-extreme weather, airport operations, heavy traffic volume, and air traffic control.

Note: Percents may not add to 100 due to rounding.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, Airline On-Time Performance, available at transtats.bts.gov as of March 2020.

5-5 U.S. Major Airport Performance Rankings: 2019

by percent of on-time arrivals

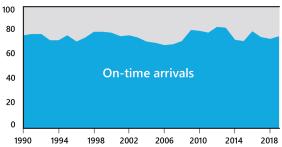


Note: Flights arriving at the gate within 15 minutes of scheduled arrival time are on time.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, *Airline On-Time Performance*, available at transtats.bts.gov as of March 2020.

5-6 Amtrak On-time Performance: FY1990–FY2019





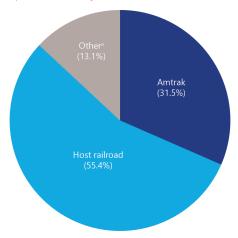
Note: On-time performance is a percentage measure of train performance. A train is considered on-time if it arrives at the final destination, or end-point, within an allowed number of minutes, or tolerance, of its scheduled arrival time. Trains are allowed a certain tolerance at the end-point based on the number of miles traveled.

Trip length	Train arrives at endpoint within
0-250 miles	10 minutes
251-350 miles	15 minutes
351-450 miles	20 minutes
451-550 miles	25 minutes
>551 miles	30 minutes

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-73, available at transtats.bts.gov as of September 2020.

5-7 Amtrak Delays by Cause: FY2019

percent of delayed time



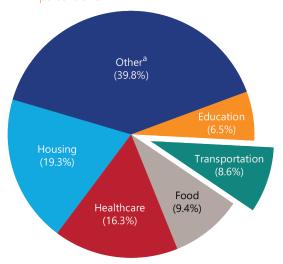
^aDelays not attributable to Amtrak or other host railroads, such as customs and immigration, law enforcement action, weather, or waiting for scheduled departure time.

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 1-73, available at www.bts.gov/nts as of September 2020.

6 Есопому

Transportation is a major sector of the U.S. economy. The transportation system moves people and goods, employs millions of workers, generates revenue, and consumes resources and services provided by other sectors.

6-1 U.S. GDP by Spending Category: 2019 percent of GDP



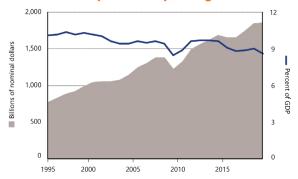
^aIncludes all other categories (e.g., entertainment, personal care products and services, and payments to pension plans).

Key: GDP = gross domestic product.

Note: Percents may not add to 100 due to rounding.

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics, table 3-9, available at www.bts.gov/nts as of November 2020.

6-2 U.S. Transportation Spending: 1995–2019



Key: GDP = gross domestic product.

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics, table 3-9, available at www.bts.gov/nts as of November 2020.

6-3 Transportation-Related Final Demand billions of chained 2012 dollars

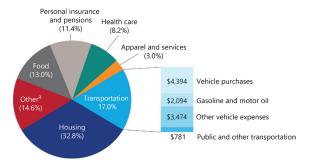
Category	2009	2019
Personal consumption of transportation	1,071	1,395
Motor vehicles and parts	347	532
Motor vehicle fuels, lubricants, and fluids	405	420
Transportation services	320	442
Gross private domestic investment	82	300
Transportation structures	9	15
Transportation equipment	73	286
Government transportation-related purchases	328	330
Federal purchases	37	40
State and local purchases	266	275
Defense-related purchases	25	15
Exports (+)	242	360
Imports (-)	279	553
Total transportation-related GDP	1,408	1,843
U.S. GDP	15,209	19,092

Key: GDP = Gross Domestic Product

Notes: Data may not add to totals due to rounding. Transportation-related final demand measures the size of transportation functions in relation to the Gross Domestic Product (GDP). It includes the transportation portion of the four components of the GDP: personal consumption, gross private domestic investment, government purchases, and net exports of goods and services.

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics, table 3-4, available at www.bts.gov/nts as of November 2020.

6-4 Household Expenses by Category: 2019percent of average annual household expenses

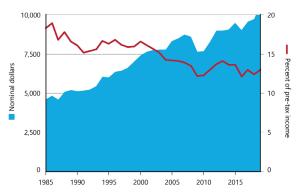


^a Includes alcoholic beverages, cash contributions, education, entertainment, personal care products and services, reading, tobacco products and smoking supplies, and other miscellaneous items.

Note: Percents may not add to 100 due to rounding.

Source: U.S. Department of Labor, Bureau of Labor Statistics, *Consumer Expenditure Survey*, available at www.bls.gov/cex as of September 2020.

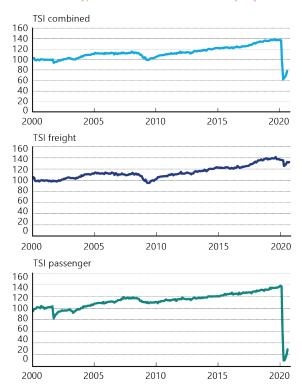
6-5 Household Transportation Expenses: 1985–2019



Source: U.S. Department of Labor, Bureau of Labor Statistics, *Consumer Expenditure Survey*, available at www.bls.gov/cex as of September 2020.

6-6 Transportation Services Index: January 2000–September 2020

chain-type index: 2000 = 100, seasonally adjusted



Notes: Drop in early 2020 indices due to effect of COVID-19.

TSI Combined—the TSI, created by the U.S. Department of Transportation, Bureau of Transportation Statistics, is a measure of the month-to month changes in the output of services provided by the for-hire transportation industries. TSI data change monthly due to the use of concurrent seasonal analysis, which results in seasonal analysis factors changing as each month's data are added. TSI Freight—includes freight railroad services (including railbased intermodal shipments, such as containers on flat cars), inland waterway traffic, pipeline movements (including principally petroleum and petroleum products and natural gas), and air freight. TSI Passenger—the passenger transportation services index consists of local mass transit, intercity passenger rail, and passenger air transportation.

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, available at www.bts.gov as of November 2020.

6-7 Employment in Transportation-Related Industries

thousands

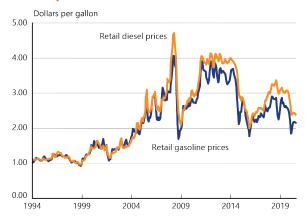
Category	2009	2019
For-hire transportation and warehousing	4,225	5,618
Air	463	503
Rail	185	175
Water	63	66
Truck	1,269	1,531
Transit and ground passenger	428	499
Pipeline	43	51
Scenic and sightseeing	28	36
Support activities	559	754
Couriers and messengers	546	816
Warehousing and storage	642	1,188
Transportation-related manufacturing ^a	1,668	2,040
Other transportation-related industries	4,738	5,680
Postal service	703	607
Government employment ^b	898	869
Total transportation-related labor force	12,233	14,815
U.S. labor force	131,296	150,939

^aIncludes transportation equipment; petroleum products; tires; rubber; plastics; search, detection, navigation, guidance, aeronautical, and nautical systems; and instrument manufacturing. ^bFiscal year data for federal, state, and local personnel.

Notes: Annual averages based on NAICS data. Details may not add to totals due to rounding.

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 3-23, available at www.bts.gov/nts as of July 2020.

6-8 Motor Vehicle Fuel Prices: April 1994–October 2020



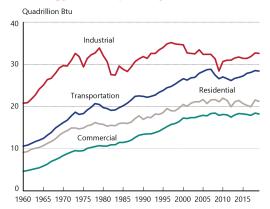
Notes: Retail gasoline prices include average nominal monthly prices of U.S. regular all formulations retail gasoline. Retail diesel prices include average nominal monthly prices of U.S. No. 2 retail diesel prices.

Source: U.S. Department of Energy, Energy Information Administration, available at https://www.eia.gov/ as of November 2020.

7 ENVIRONMENT

The U.S. transportation system is a major consumer of energy and has consequences for the human and natural environment.

7-1 Energy Consumption by Sector: 1960–2019



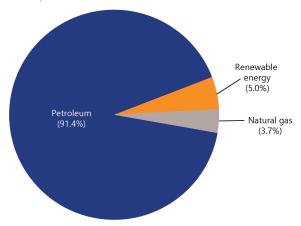
Key: Btu = British thermal unit.

Note: Includes primary energy consumption, electricity retail sales, and electrical system energy losses.

Source: U.S. Department of Energy, U.S. Energy Information Administration, Monthly Energy Review, available at www.eia.gov/totalenergy/data/monthly as of October 2020.

7-2 Transportation Energy Consumption by Source: 2019

percent of Btu consumed

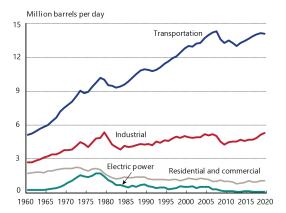


Key: Btu = British thermal unit.

Notes: Includes primary energy consumed. Excludes electricity retail sales and electrical system energy losses. Percents may not add to 100 due to rounding.

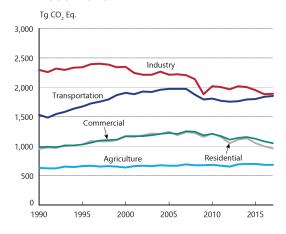
Source: U.S. Department of Energy, U.S. Energy Information Administration, Monthly Energy Review, available at www.eia.gov/totalenergy/data/monthly as of October 2020.

7-3 Petroleum Consumption by Sector: 1960–2019



Source: U.S. Department of Energy, U.S. Energy Information Administration, Monthly Energy Review, available at www.eia.gov/totalenergy/data/monthly as of October 2020.

7-4 Greenhouse Gas Emissions by Sector: 1990–2018



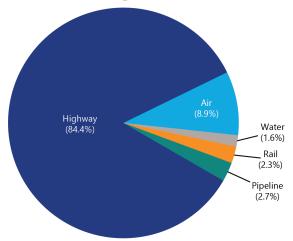
Key: Tg CO₂ Eq. = teragrams of carbon dioxide equivalent. Teragram = 1 million metric tons.

Notes: Electric power sector emissions are distributed across sectors. Emissions include CO_{γ} , $CH_{\lambda\prime}$, $N_{\gamma}O$, HFCs, PFCs, and SF_{ϵ} .

Source: U.S. Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018 Report Tables, https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2018 as of May 2020.

7-5 Greenhouse Gas Emissions by Transportation Mode: 2018

Percent of Tg CO, Eq.

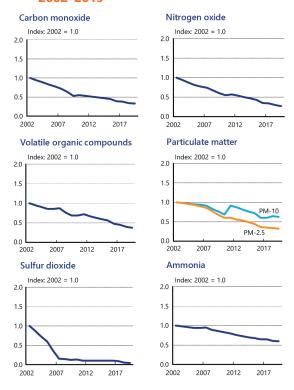


Key: Tg CO₂ Eq. = teragrams of carbon dioxide equivalent. Teragram = 1 million metric tons.

Notes: Percents may not add to 100 due to rounding. Does not include international bunker fuels.

Source: U.S. Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2018 Report Tables, available at https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2018 as of June 2020.

7-6 Highway Vehicle Air Pollutant Emissions: 2002–2019

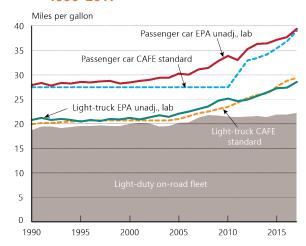


Key: PM-10 = airborne particulates of less than 10 microns; PM-2.5 = airborne particulates of less than 2.5 microns.

Notes: Indices are calculated using data on highway vehicle emissions only. Particulate matters include PM without condensibles.

Sources: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, tables 4-45 through 4-50, available at www.bts.gov/nts as of May 2020.

7-7 Fuel Economy of Light-Duty Vehicles: 1990–2017

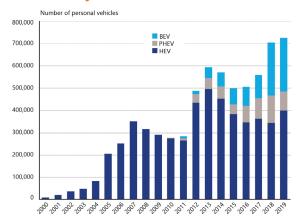


Key: CAFE = Corporate Average Fuel Economy; EPA = Environmental Protection Agency.

Notes: New fleet data and CAFE standards are for vehicle model years. Onroad fleet data include passenger cars and light trucks and are estimated using average miles traveled per gallon of fuel consumed for each calendar year. 2017 EPA unadjusted lab data are preliminary.

Source: As cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, table 4-23, available at www.bts.gov/nts.as.of October 2019.

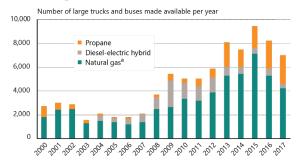
7-8 Sales of Hybrid, Plug-in Hybrid, and Battery Electric Vehicles: 2000–2019

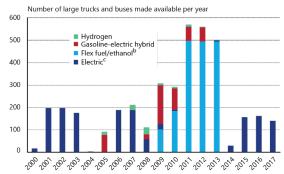


Key: BEV = Battery electric-only vehicles, HEV = Hybrid electric vehicle, PHEV = Plug-in hybrid electric vehicle

Source: Oak Ridge National Laboratory, *Transportation Energy Data Book*, Annual Issues, available at <u>tedb.ornl.gov</u> as of May 2020.

7-9 Alternative Fuel Vehicles by Fuel Type, Large Trucks and Buses: 2000–2017





Notes: ^aIncludes compressed natural gas (CNG) and liquified natural gas (LNG). Includes the total number of heavy duty vehicles that were manufactured or converted by vehicle suppliers (companies or organizations) in the associated calendar year. ^bFlex fuel/ethanol vehicles are capable of running on E85, unblended gasoline, or any ethanol-gasoline blends in between. ^cExcludes gasoline-electric and diesel-electric hybrids.

Source: U.S. Department of Energy, Energy Information Administration, Alternative Fuel Vehicle Data, Supplier Database, available at www.eia.gov/renewable/afv/ as of June 2019.

GLOSSARY

Air carrier: Certificated provider of scheduled and nonscheduled services.

Alternative fueled vehicle: A vehicle designed to operate on an alternative fuel (e.g., compressed natural gas, propane, electricity). The vehicle can be either a dedicated vehicle designed to operate exclusively on alternative fuel or a non-dedicated vehicle designed to operate on alternative fuel and/or traditional fuel.

Chained dollars: A method of adjusting to real dollar amounts to account for both changes in price-levels and the composition of output over time. This is completed by using a chain-weighted type index, or average weights in successive time periods, to get a comparable time series of data.

Class I railroad: Railroads earning adjusted annual operating revenues for three consecutive years of \$250,000,000 or more, based on 1991 dollars with an adjustment factor applied to subsequent years.

Commuter rail: Urban/suburban passenger train service for short-distance travel between a central city and adjacent suburbs run on tracks of a traditional railroad system. Does not include heavy or light rail transit service.

Demand response transit: A nonfixed-route, nonfixed-schedule form of transportation that operates in response to calls from passengers or their agents to the transit operator or dispatcher.

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

Enplanements: Total number of revenue passengers boarding aircraft.

For-hire: Refers to a vehicle operated on behalf of or by a company that provides services to external customers for a fee. It is distinguished from private transportation services, in which a firm transports its own freight and does not offer its transportation services to other shippers.

General aviation: Civil aviation operations other than those air carriers holding a Certificate of Public Convenience and Necessity. Types of aircraft used in general aviation range from corporate, multiengine jets piloted by a professional crew to amateur-built, single-engine, piston-driven, acrobatic planes.

Gross domestic product: The total value of goods and services produced by labor and property located in the United States. As long as the labor and property are located in the United States, the suppliers may be either U.S. residents or residents of foreign countries.

Heavy-rail transit: High-speed transit rail operated on rights-of-way that exclude all other vehicles and pedestrians.

Hybrid electric vehicle: Hybrid electric vehicles combine features of internal combustion engines and electric motors. Unlike 100% electric vehicles, hybrid vehicles do not need to be plugged into an external source of electricity to be recharged. Most hybrid vehicles operate on gasoline.

International Roughness Index (IRI): A scale for pavement roughness based on the simulated response of a generic motor vehicle to the roughness in a single wheel path of the road surface.

Lane-miles: One mile of one lane of road.

Light-duty vehicle: Includes passenger cars, light trucks, vans, pickup trucks, and sport/utility vehicles regardless of wheelbase.

Light-rail transit: Urban transit rail operated on a reserved rightof-way that may be crossed by roads used by motor vehicles and pedestrians.

Nominal dollars: A market value that does not take inflation into account and reflects prices and quantities that is current during the period being measured.

Nonself-propelled vessels: Includes dry cargo, tank barges, and railroad car floats that operate in U.S. ports and waterways.

Oceangoing vessels: Includes U.S. flag, privately-owned merchant fleet of oceangoing, self-propelled, cargo-carrying vessels of 1,000 gross tons or greater.

Particulates: Carbon particles formed by partial oxidation and reduction of hydrocarbon fuel. Also included are trace quantities of metal oxides and nitrides originating from engine wear, component degradation, and inorganic fuel additives.

Passenger-mile: One passenger transported one mile. For example, one vehicle traveling 3 miles carrying 5 passengers generates 15 passenger miles.

Personal communication: Involves contacting the source for data if not publicly available.

Plug-in hybrid electric vehicles: Plug-in hybrids use the electric battery as the primary energy source by relying on battery power for propulsion for a limited range (15-40 miles) before switching to internal combustion propulsion (thus reducing gasoline consumption).

Reliever airports: Airports designated by the Federal Aviation Administration to relieve congestion at commercial service airports and to provide improved general aviation access to the overall community.

Seasonally adjusted: Measures the real differences in data trends by adjusting for seasonal factors such as the change in the number of days, weekends, holidays, or other seasonal activity in a month such as vacation travel.

Self-propelled vessels: Includes dry cargo vessels, tankers, and offshore supply vessels, tugboats, pushboats, and passenger vessels, such as excursion/sightseeing boats, combination passenger and dry cargo vessels, and ferries.

Short ton: A unit of weight equal to 2,000 pounds.

Structurally deficient: Structural deficiencies are characterized by deteriorated conditions of significant bridge elements and reduced load-carrying capacity.

Real dollars: A method of adjusting nominal dollars to account for price level changes over time. It reflects purchasing power in a given period.

Tg CO₂ Eq.: Teragrams of carbon dioxide equivalent, a metric measure used to compare the emissions from various greenhouse gases based on their global warming potential.

Ton-mile: A unit of measure equal to movement of one ton over one mile

Transportation Services Index: BTS' monthly measure indicating the relative change in the volume of services over time performed by the for-hire transportation sector. Change is shown relative to a base year, which is given a value of 100. The TSI covers the activities of for-hire freight carriers, for-hire passenger carriers, and a combination of the two. See www.bts.gov for a detailed explanation.

Transportation Services Index Combined: The combined Transportation Services Index (TSI) includes available data on freight traffic, as well as passenger travel, that have been weighted to yield a monthly measure of transportation services output.

Transportation Services Index Freight: The freight TSI measures the output of the for-hire freight transportation industry and consists of data from for-hire trucking, rail, inland waterways, pipelines and air freight.

Transportation Services Index Passenger: The passenger TSI includes local transit, intercity passenger rail, and passenger air transportation, that have been weighted to yield a monthly measure of transportation services output.

Unlinked passenger trip: The number of passengers who board public transportation vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination.

Vehicle-mile: One vehicle traveling one mile.

Statistics published in this *Pocket Guide to Transportation* come from many different sources. Some statistics are based on samples and are subject to sampling variability. Statistics may also be subject to omissions and errors in reporting, recording, and processing.

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INFRASTRUCTURE

MOVING PEOPLE

MOVING GOODS

SAFETY

PERFORMANCE

ECONOMY

ENVIRONMENT

GLOSSARY

