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About APTA

APTA is a nonprofit international association of over 1,500 public and private member organizations including transit systems and commuter rail operators; planning, design, construction and finance firms; product and service providers; academic institutions, transit associations and state departments of transportation. APTA members serve the public interest by providing safe, efficient and economical transit services and products. Over ninety percent of persons using public transportation in the United States and Canada are served by APTA members.

APTA Vision Statement

Be the leading force in advancing public transportation.

APTA Mission Statement

APTA serves and leads its diverse membership through advocacy, innovation, and information sharing to strengthen and expand public transportation.

Contents

For an alphabetical list of subjects, refer to the index beginning on page 228.

Public Transportation Overview

What is Public Transportation?

Public transportation includes all multiple-occupancy vehicle services designed to transport customers on local and regional routes. These services are: private and public buses; rail; ferryboats; Amtrak, intercity bus, and taxi services operated under contract to a public transportation agency; any vanpool service operated by or under such a contract; and other transportation services for senior citizens and persons with disabilities.

Public Transportation's Customers

How many people use public transportation? In 2001, Americans took 9.7 billion trips using public transportation, an increase of 3 percent more than the previous year, outpacing growth in other travel modes. In the past six years, public transportation ridership in the U.S. has grown by more than 24 percent, faster than highway or air travel. The equivalent of almost a million new trips on public transportation were added each day in 2001.

Passengers waiting to board Dallas Area Rapid Transit light rail trains in Texas.

APTA estimates that over 14 million Americans ride on public transportation each weekday. The U.S. Department of Transportation estimates another 25 million use public transportation less frequently but on a regular basis.

Why do people use public transportation? Public transportation provides opportunities for people from every walk of life by making transportation choices and options available. Public transportation provides people with easy access to services and places important in everyday life. Access to public transportation gives people mobility, choice and freedom to accomplish what is important to them.

For everyone, including these Southeastern Pennsylvania Transportation Authority riders in Philadelphia, public transportation is there when it's needed by providing opportunities, freedom, and mobility.

Where do people go on public transportation? According to APTA data, work is the most popular destination with 54 percent of all trips ending at workplaces. Next, 15 percent of trips go to schools; 9 percent to shop; 9 percent, social visits; and 5 percent, medical appointments.

Public Transportation Modes

Modes are different ways to get around on public transportation. Road modes include bus, trolleybus, vanpool, jitney, and demand response service. Rail modes include heavy rail, light rail, commuter rail, automated guideway transit, inclined plane, cable car, monorail, and aerial tramway. Water modes include ferryboat. An explanation of each mode is found in the mode sections.

The Syracuse, New York CNY Centro system uses this typical demand response vehicle to transport persons with disabilities who are unable to use its fixed route buses.

Number of Providers

Approximately 6,000 public transportation systems operate in the U.S. and Canada. The majority of these agencies operate more than one mode of service. Over 2,250 agencies provide bus service, about 5,250 operate demand response service, and 150 operate other modes.

Two-thirds of U.S. public transportation agencies provide service designed to meet the needs of senior citizens and persons with disabilities. Also, many agencies typically contract service with private operators, further increasing the number of total public transportation providers.

Growing Investment Needs

The nation's transportation systems are showing signs of stress and unmet needs exist in public transportation. According to the U.S. Department of Transportation, in today's dollars, $20.6 billion is needed annually to maintain and improve performance of the nation's transit systems.

The American Association of State and Highway Transportation Officials (AASHTO) Bottom Line Report documented investment needs of $43.9 billion each year to improve and expand public transportation.

The public transportation industry recommends that the annual federal transit program be doubled to $14.3 billion by fiscal year 2009.

The Public Sector's Investment in Public Transportation

In fiscal year 2003, the sixth year of funding under the Transportation Equity Act for the 21st Century (TEA-21), the federal investment in public transportation is $7.2 billion. TEA-21 funding provides the federal resources to ensure that public transportation remains safe and in good condition. Financial support by federal, state and local governments also helps people make a choice among travel modes. These expenditures have a positive and high return on the public investment made by taxpayers.

Every dollar taxpayers invest in public transportation generates up to $6 in economic returns.

What it Costs to Operate Public Transportation

Public transportation funds come from two main sources, capital and operating. Capital funds are used to finance infrastructure needs such as new construction and rehabilitation of existing facilities. The federal government contributes 50 percent of all capital funding for public transportation. In Fiscal Year 2003, up to 80 percent of the total capital cost may be federally-funded. The balance is typically paid for by a combination of state and local funds; many state and local governments provide more than the required minimum 20 percent of matching funds. In many cases, capital projects are financed solely by state and local funds. Public transportation agencies raise 29 percent of capital funds from taxes levied by the transportation system, tolls, fees, and non-governmental sources. States contribute 9 percent; local governments, 11 percent.

In 2001, public transportation received a total of $11.4 billion in capital funds from all sources. Of federal funds received, bus-related projects received 44 percent; fixed guideway modernization, 35 percent; new start transit projects, 18 percent, and 3 percent for planning.

Operating funds provide income for operational expenses. Most operating funds originate from local sources (73 percent). Passenger fares pay for 35 percent of operating expenses, local governments contribute 24 percent, and non-governmental sources and taxes levied by the transportation system, tolls and fees, 14 percent. State and federal governments contribute 22 percent and 5 percent, respectively.

It takes regular capital and operating investments to keep public transportation on the move. **Capital expenses** represent money set aside for infrastructure and rolling stock and their renovation and replacement, plus planning, design, land acquisition and related costs. In 2001, public transportation invested $11.4 billion in capital needs. Facilities cost 55 percent; vehicles, 35 percent; and equipment and services, 10 percent. Of these categories, heavy rail expenses accounted for 31 percent; bus, 33 percent; commuter rail, 20 percent; and light rail, 13 percent.

Among the capital projects constructed in recent years is this massive MTA Long Island Rail Road train storage yard west of Penn Station in New York City.

In 2001, public transportation spent $23.5 billion on **operating expenses**. Salaries and wages cost 45 percent; fringe benefits, 24 percent; purchased transportation, 13 percent; and fuel and supplies, 10 percent. Services, utilities, insurance and other costs fill out the operating expense list. Of the money used to operate and maintain the vehicles used in revenue service, scheduling and operation of revenue vehicles represent 44 percent; vehicle maintenance, 18 percent; non-vehicle maintenance, 10 percent; purchased transportation, 13 percent; and 15 percent, general administration.

Employees

In 2001, the nation's 370,000 public transportation employees provided services to the highest levels of passengers since the inception of the federal transit program. These employees operate, maintain and manage all modes of public transportation. The majority of employees (60 percent), work in bus service, followed by 16 percent in demand response, 13 percent in heavy rail, and 7 percent in commuter rail.

A bus operator at Pace Suburban Bus outside Chicago takes time to share a special moment with a young passenger.

Vehicles

The public transportation fleet comprises 134,000 vehicles in active service. Of this number, buses represent 57 percent; demand response vehicles, 26 percent; heavy rail cars, 8 percent; commuter rail cars, 4 percent; light rail cars, 1 percent; and all other modes, 5 percent.

The sun sets on the fleet of the Hillsborough Area Regional Transit Authority after a long day of providing bus service for Tampa, Florida residents.

Energy Consumption

In 2001, public transportation vehicles used nearly 857 million gallons of fossil fuels and 5.6 billion kilowatt-hours of electricity, less than 1 percent of all energy consumed in the U.S.

Among fossil fuels, diesel ranked as the highest consumed at 87 percent. Top users of diesel fuel are buses, 79 percent; commuter rail at 10 percent; demand response, 7 percent; and ferryboats, 4 percent. Among the non-diesel fuels, vehicles also used fossil fuels such as gasoline (24 percent), compressed natural gas (59 percent), propane (4 percent), and liquified natural gas (12 percent).

Most electricity, 65 percent, is consumed by heavy rail vehicles; commuter rail, 24 percent; and light rail, 9 percent.

For every mile traveled, public transportation uses about one half of the fuel consumed by automobiles, and about a third of that used by sport utility vehicles and light trucks. (*Conserving Energy and Preserving the Environment: The Role of Public Transportation,"* Robert J. Shapiro, Kevin A. Hassett, and Frank S. Arnold, 2002.)

This compressed natural gas bus is operated by the Sacramento Regional Transit District in California.

Benefits of Public Transportation

Public transportation benefits the quality of life in communities across the country by providing safe, efficient and economical transportation service. Importantly, public transportation is also a vital component for a healthy economy. While public transportation benefits the people who use it, society in general benefits from its availability. Investing in public transportation:

Saves Money:
For most people, public transportation saves money. It is more cost efficient to use public transportation, especially to the central business district of an urban area.

For every dollar earned, the average household spends 18 cents on transportation, 98 percent of which is for buying, maintaining and operating cars, the largest source of household debt after mortgages.

Americans living in transit-intensive metropolitan areas save $22 billion annually in transportation costs. Savings add up for everyone: every $10 million invested in public transportation saves more than $15 million, for both highway and transit users. This includes savings of about $1,500 and 200 gallons of gas – per year.

In addition, transit availability can reduce the needs for additional cars, a yearly expense of between $4,800 and $9,700.

Annual costs for public transportation may range from $200 to $2,000 depending on mileage traveled and include transfer, distance or zone, time-of-day, express, and parking charges.

Creates and Sustains Jobs: The public transportation industry creates jobs for the nation's economy. In addition to the 370,000 people directly employed by the public transportation industry and thousands of others employed in the directly related engineering, construction, manufacturing and retail industries, other jobs are created.

Every $1 billion invested in public transportation infrastructure supports approximately 47,500 jobs, proving that transit continues to be an economic engine.

Provides Access to Jobs: Almost half of the nation's Fortune 500 companies, representing over $2 trillion in annual revenue, are headquartered in America's transit-intensive metropolitan areas. Examples of cities where companies have located near public transportation are many and include Chicago, Atlanta and Dallas.

In addition to enhancing employee recruitment, businesses tied to public transportation are experiencing more employee reliability and less absenteeism and turnover. Public assistance agencies also use public transportation to help more people to enter the work force. The Federal Transit Administration's Job Access and Reverse Commuter Program provides grants to support transportation for thousands.

Stimulates Economic Development: New analysis confirms the important and positive economic impact of public transportation investment on new development and business revenues.

A Cambridge Systematics study estimated that each $10 million in capital investment yields $30 million in increased sales, while each $10 million operating investment yields $32 million. The net return on the public investment is as high as six to one.

Communities throughout the country are spurring economic development by investing in public transportation projects like this commuter rail system in Dallas/Ft. Worth, Texas. This investment pays off with a return that is as high as 6 to 1.

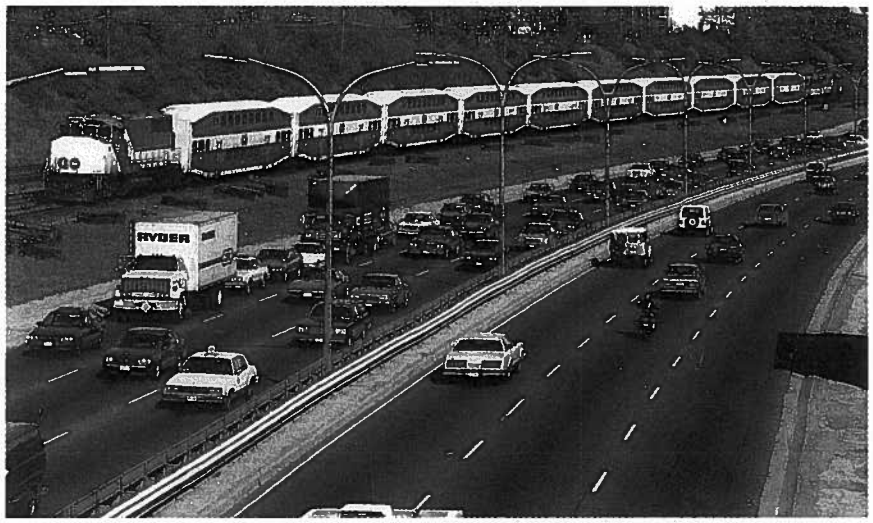
Eases Traffic Congestion: Public transportation helps to alleviate the crowded conditions on our nation's increasingly crowded network of roadways. Roadway congestion cost $67.5 billion in 2000, or the 3.6 billion hours of delays and 5.7 billion gallons of excess fuel consumes in the 75 urban areas studied, according to the *2002 Texas Transportation Institute (TTI) Annual Urban Mobility Report.* Nationwide, the total annual cost of lost hours and wasted fuel may approach $100 billion.

Urban travelers can now expect to encounter congested roadways during 7 hours of the day. Congestion is becoming more widespread by nearly 60 percent of urban roadways in 2000.

Traffic congestion in small urban and rural areas is increasing by 11 percent a year –twice the rate in urban areas.

Most Americans perceive traffic congestion as a growing problem. Recent public opinion polls suggest that nearly half of Americans believe

that traffic is a serious problem where they live, especially among suburban residents. Most people (57 percent) do not feel their commute will get better over the next three years, and nearly a quarter (24 percent) feel they will spend more time commuting, according to recent public opinion polls. (Transit Cooperative Research Program Report #63, "Enhancing the Visibility and Image of Transit in the United States and Canada")



This Toronto GO Transit train carries 1,600 passengers. If they all drove instead, the adjacent freeway would be totally gridlocked.

Fosters More Livable Communities:

Public transportation facilities and transportation corridors are "natural focal points for communities" for economic and social activities and help create strong neighborhood centers that are more economically stable, safe, and productive. These are areas where people can drive less or walk. When commuters ride public transportation or walk, face-to-face contact with neighbors tends to increase, which works to bring a community closer.

In "Transportation for Livable Cities" by Vukan R. Vuchic, Professor of Transportation at the University of Pennsylvania, the author dispels the myth that automobile-based transportation provides freedom of choice and maximum mobility. The availability of public transportation in a community provides mobility and accessibility for all people, according to Vuchic. Transportation systems in urban areas with integrated, multimodal transportation options provide more trip choices and increase the ability to travel between activities. Vuchic believes that the ability to

travel in an area conveniently, without a car, is an important component of an area's livability.

Transit-friendly walkable communities reduce reliance on cars and promote higher levels of physical activity. These more traditional settings may generate half the automobile trips of similarly sized modern day suburbs. (Katherine M. Kraft, PhD, Robert Wood Johnson Foundation, "Health Effects of Sprawl," Address to the Women's Transportation Seminar, Washington, D.C., October 2002.

The Charleston Area Regional Transportation Authority in South Carolina helps move both residents and tourists through Charleston's quaint streets.

Provides Mobility for Seniors

By the year 2020, 40 percent of the U.S. population will be senior citizens and many will be unable to drive. In fact, one-fourth of today's 75+ age group does not drive.

For America's aging population, physical isolation is a growing problem. A 2002 AARP study found that compared to people ages 50 to 74, nearly four times as many people over 85 (41 percent vs. 12 percent) had not left home the previous day.

Meeting the transportation needs of seniors is a major community objective as well as a national goal. Public transportation services such as mini buses represent a lifeline for seniors, linking them with family, friends and a changing society.

Access for Rural Areas
Public transportation is equally important to America's rural heartland, where 40 percent of residents have no access to public transportation services and another 25 percent have negligible access.

Transportation service is seen as vital for rural America's 30 million non-drivers, who include senior citizens, low-income families and people with disabilities.

Both AASHTO and APTA estimate that rural and small urban investment needs are approximately $1 billion a year over the next six-year reauthorization period.

Boosts Real Estate Values: Public transportation fuels local development, and in turn, impacts local property values. For example, in the case of developments near the light rail system in Dallas, Texas, a 2003 University of North Texas study found that office properties located near suburban Dallas Area Rapid Transit (DART) stations increased in value 53 percent more than comparable properties not served by rail, and values of residential properties near the stations rose 39 percent more than a group of properties not served by rail stations.

Improves Air Quality: Public transportation reduces pollution. Public transportation produces 95 percent less carbon monoxide (CO), more than 92 percent fewer volatile organic compounds (VOCs) and nearly half as much carbon dioxide (CO_2) and nitrogen oxides (NOx) for every passenger mile traveled.

Public transportation reduces annual emissions for the pollutants that create smog, VOCs and NOx, by more than 70,000 tons and 27,000 tons respectively.

Transit systems around the country are reducing reliance on diesel fuel for their bus fleets and investing in compressed natural gas vehicles, buying low sulfur fuel burning buses or planning a switch to diesel-electric hybrid buses. Other systems are replacing diesel buses with newer ones to reduce emissions.

Reduces Energy Consumption: Americans use more energy for transportation than for any other activity. Nearly 43 percent of America's energy resources are used in transportation. Greater use of public transportation offers the single most effective strategy currently available for achieving significant energy savings and improving air quality, without imposing new taxes government mandates or regulations.

Public transportation can significantly reduce dependency on gasoline. For every passenger mile traveled, public transportation uses about one half of the fuel consumed by cars, and about a third of that used by sport utility vehicles and light trucks.

If Americans used public transportation the same rate as Europeans, for roughly 10 percent of their daily travel needs, the U.S. would:

- Reduce its dependence on imported oil by more than 40 percent or nearly the amount of oil we import from Saudi Arabia each year.
- Save more energy every year than all the energy used by the U.S. petrochemical industry and nearly equal the energy used to produce food in the U.S.
- Reduce CO_2 emissions by more than 25 percent of the Kyoto Agreement mandate.
- Reduce CO pollution by three times the combined levels emitted by the four highest-polluting industries (chemical manufacturing oil and gas production, metals processing, and industrial use of coal).

(*Conserving Energy and Preserving the Environment: The Role of Public Transportation,"* Robert J. Shapiro, Kevin A. Hassett, and Frank S. Arnold, 2002.)

Ensures Safety: Public transportation continues to be one of the safest modes of travel in the U.S. Safe travel is a high priority of public transportation systems, federal, state and local governments and APTA.

According to the National Safety Council, riding a transit bus is 170 times safer than car travel. By train, customers are 25 times safer than traveling by car.

The public transportation industry and APTA continue to promote partnerships in safety. In 2001-2002, a full 61 public transportation systems participated in the rail, commuter rail or bus safety audit programs offered by APTA. These comprehensive programs are designed to examine every area of operations to ensure the safety of public transportation passengers.

Why Is Public Transportation So Safe?

- Transit vehicle operators are highly trained to drive defensively and anticipate potential safety problems.
- Public transportation vehicles are generally much larger and more

substantially built than personal automobiles or vans.

- Most people on rail cars and busways travel on separate rights-of-way. Light rail, commuter rail and cable cars encounter grade crossings, many of which are protected by crossing gates.
- Passengers ride approximately 3-4 feet above the ground, offering protection from the most common area of impact.
- Providing more security than roadways, many transit systems feature new visual, voice and data communications systems linking vehicles, stations and riders with state-of-the-art operations centers.

Enhances Mobility During Emergencies: Time and time again, the availability of public transportation, in emergencies, both natural and man-made, has proven to be critical in maintaining basic access, mobility and safety for individuals in harm's way.

Most notably, on September 11, 2001, public transportation systems in the New York City area moved people safely away from the World Trade Center disaster. After the attack on the Pentagon, transit systems in the Washington, D.C. area evacuated hundreds of thousands in an early rush hour. Nationwide, transit systems evacuated tens of thousands of travelers from closed airports in major cities. Emergency plans went into effect at many systems to secure the safety of passengers. Not a single life was lost among the millions of people traveling on public transportation that day.

As record snowfall to hit the east coast over the 2003 President's Day weekend, buses and trains at many systems kept the public moving from Washington, D.C. to Boston. During the peak of the storm, the Rhode Island Public Transit Authority, in Providence, extended some bus service from its regular cloning time of midnight until 3 a.m. The change was made to ensure that riders would not get stranded in the snow without access to transportation. In Philadelphia, the Southeastern Pennsylvania Transportation Authority (SEPTA) came to the aid of thousands of stranded passengers when the Philadelphia Airport shut down for approximately three days due to the heavy snow. Along with operating service at 70 to 75 percent of normal schedules on average, SEPTA also kept its paratransit services operating during the storm.

In January 2003, the worst ice storm ever to hit the Carolinas left millions without power, leaving citizens to scramble to find whatever means of warmth they could. Temporary shelters opened across the city of Charlotte, and the Charlotte Area Transit System (CATS) stepped in to transport a large amount of people to these warm locations.

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Notes

The **Public Transportation Fact Book** (formerly the **Transit Fact Book**) was first published in 1943. Available data are expanded by standard statistical methods to estimate U.S. national totals. *All data are for the U.S. only, except for the section on Canada.* Data for Canada were provided by the Canadian Urban Transit Association (CUTA).

This book includes only public transportation data and excludes taxicab, unregulated jitney, school, sightseeing, intercity, charter, military, and non-public service (e.g., governmental and corporate shuttles), and special application systems (e.g., amusement parks, airports, and international, rural, rural interstate, island, and urban park ferries).

Data are based on the annual National Transit Database (NTD) report published by the United States Government's Federal Transit Administration (FTA). APTA supplements these data with special surveys. Where applicable, data are calculated based on 2000 U.S. Census Bureau urbanized area population categories.

Because data are reported to the NTD based on transit agency fiscal years rather than calendar years, data listed for a particular year are necessarily extrapolations of the sum of data reported for all fiscal years ending in a particular calendar year.

The number of employees is based on the actual number of persons at the end of the fiscal year. Prior to 1993, the number of employees is based on the concept of employee equivalents where each employee equivalent is equal to 2,080 labor hours. Data are not continuous between 1992 and 1993.

Federal government funding data are based on reports prepared by the United States Department of Transportation.

Because of the time required to compile the large amount of data for this book, data for the last calendar year reported are preliminary and will be refined when additional data become available.

Many of the tables in this book will be updated prior to the next edition. See the statistics section of APTA's web site, www.apta.com, under the appropriate subject for updated data.

Federal Legislation

History and Provisions of the Federal Transit Act And Other Major Laws Affecting Public Transportation

In 1964 the United States Congress found that "the welfare and vitality of urban areas, the satisfactory movement of people and goods within such areas, and the effectiveness of housing, urban renewal, highway, and other federally aided programs were being jeopardized by the deterioration or inadequate provision of urban transportation facilities and services. . . ." In response, Congress enacted the Urban Mass Transportation Act of 1964, which provided federal aid to transit agencies for capital equipment purchases.

Continuing this commitment into its fourth decade, Congress enacted the Transportation Equity Act for the 21st Century (TEA 21). TEA 21 authorizes higher levels of funding for public transportation than any previous law, with the major portion of funding guaranteed to be included in budget amounts available for annual appropriations. It also continues and improves provisions of prior authorizing laws that are important to the continuing Federal commitment to improve public transportation service throughout America.

Landmarks in the evolution of the federal public transportation assistance program over the years include:

1961: The Housing and Urban Development Act of 1961 provided public transportation demonstration funding and mass transportation project loans.

1964: The Urban Mass Transportation Act of 1964 established the Urban Mass Transportation Administration (UMTA) within the Department of Housing and Urban Development to provide capital grants to transit agencies.

1966: The Urban Mass Transportation Act of 1966 expanded capital funding and allowed funding for research, planning, and training. UMTA was moved to the newly created Department of Transportation (DOT).

1970: The Urban Mass Transportation Assistance Act of 1970 authorized a $3.1 billion program of capital grants.

1973: The Federal-Aid Highway Act of 1973 increased the federally funded portion of public transportation capital projects from 66 2/3% to 80% and authorized the use of Federal-Aid Urban Systems highway funds and Interstate Highway Transfers for qualifying public transportation projects.

1974: The National Mass Transportation Assistance Act of 1974 increased authorizations for discretionary capital funding and created a formula grant program to allocate funding directly to urbanized areas that could be used for either operations or capital projects.

1978: The Federal Public Transportation Act of 1978, Title III of the Surface Transportation Assistance Act of 1978 divided the formula grant program into categorical programs that included capital grants for bus purchases and additional operating grants for fixed guideway systems and places outside of urbanized areas.

1982: The Federal Public Transportation Act of 1982, Title III of the Surface Transportation Assistance Act of 1982 provided that 1 cent of a 5 cents per gallon increase in the Highway Trust Fund tax on motor fuels would be placed into a Mass Transit Account for capital projects, increased the portion of all funding allocated through the formula grant program, and altered the formula grant program allocation formula to include public transportation service data as well as population data.

1984: The Tax Reform Act of 1984 allowed employees to receive a tax-free benefit up to $15 per month in the form of an employer-provided public transportation subsidy or pass.

1987: The Federal Mass Transportation Act of 1987, Title III of the Surface Transportation and Uniform Relocation Assistance Act of 1987 provided that a portion of the Highway Trust Fund Mass Transit Account would be allocated by formula for capital purposes.

1990: The Omnibus Budget Reconciliation Act of 1990 raised to 1.5 cents per gallon the portion of the Highway Trust Fund tax on motor fuels to be placed in the Mass Transit Account.

1990: The Americans with Disabilities Act of 1990 (ADA) required transit agencies to provide service accessible to persons with disabilities.

1990: The Clean Air Act Amendments of 1990 recast transportation planning to provide for improved air quality.

1991: The Federal Transit Act Amendments of 1991, Title III of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) extended public transportation assistance through FY 1997, increased the amounts authorized, re-named the transit law the Federal Transit Act and the Urban Mass Transportation Administration the Federal Transit Administration, and converted the rail modernization portion of Section 5309 major capital funds to a formula basis.

Surface Transportation, Title I of ISTEA provided that specific funds authorized through Federal-Aid Highways programs may be used for either public transportation or highway projects. These flexible funds are to be used for the mode of transportation best suited to meeting the needs of individual areas and states.

1991: The Omnibus Transportation Employee Testing Act of 1991 mandated the establishment of anti-drug and alcohol misuse programs for safety-sensitive employees of recipients and contractors to recipients of Major Capital Investment, Urbanized Area Formula, and Rural Area Formula public transportation funds.

1992: The Energy Policy Act of 1992 increased the tax-free amount of the public transportation commuter fringe benefit to $60 per month with an inflation provision, removed the cliff provision which had made the entire benefit taxable if the monthly limit was exceeded, and extended the benefit to vanpools.

1993: The Omnibus Budget Reconciliation Act of 1993 raised to 2 cents per gallon the portion of the Highway Trust Fund tax on motor fuels to be placed in the Mass Transit Account, effective October 1, 1995.

1994: The Federal Transit Act was codified as Title 49, Chapter 53--Mass Transportation, of the United States Code.

1997: The Taxpayer Relief Act of 1997 raised to 2.86 cents per gallon the portion of the Highway Trust Fund tax on motor fuels to be placed in the Mass Transit Account, effective October 1, 1997.

1997: Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) was extended through March 31, 1998.

1998: The Federal Transit Act of 1998, Title III of the Transportation Equity Act for the 21st Century (TEA 21) extends the public transportation program through FY 2003. TEA 21 increases public transportation funding authorizations, up to 70 percent above ISTEA appropriation levels

if all authorized amounts are appropriated. A total of $41 billion is authorized for the six-year period, of which $36 billion is guaranteed. Guaranteed amounts are protected in the budget process and can only be appropriated for public transportation uses. The guaranteed amounts, however, are subject to annual appropriation by the Congress.

TEA 21 retains and improves many provisions of ISTEA including the transportation planning process and flexible funding. The distribution of formula funds among sections 5307, 5310, and 5311 is revised. The definition of eligible uses of Urbanized Area Formula capital funds is expanded to include preventive maintenance and ADA related expenditures for all urbanized areas and to include operating expenditures for urbanized areas under 200,000 population. The Rail Modernization program formula is adjusted to increase the proportion of new funds for newer fixed-guideway systems. The public transportation commuter benefit is expanded to include employee purchase of public transportation passes with pre-tax dollars.

Two new programs are created. The Clean Fuels Formula Grant program provides funds for adoption of clean fuel technologies including purchase or lease of clean fuel buses and facilities. The Job Access and Reverse Commute program funds projects that improve job access for current and former welfare recipients and other eligible low-income individuals.

Funding Provisions of the Federal Transit Act

Funds for federal public transportation assistance come from two sources. Money from general governmental revenues is appropriated each year by Congress. In that process Congress sets a limit on the amount of money from the Highway Trust Fund Mass Transit Account that can be used to fund public transportation projects during the next year.

Transit agencies receive funds from several Federal Transit Act programs, which allocate funding to urbanized areas or states by formula or for specific projects through discretionary processes. The largest are:

Capital Investment, 49 USC 5309: Original grant program, begun in FY 1964, provides capital assistance to eligible public transportation projects in three categories: (1) construction of new fixed-guideway systems or extensions of existing systems called "New Starts," (2) modernization of existing fixed-guideway systems called "Rail Modernization," and (3) major bus related construction projects or equipment acquisition called "Bus Capital."

Status: Authorized through FY 2003.

Recipients of Funds: State or local public bodies and agencies.

Eligible Expenditures: Capital projects only.

Method of Allocation: Rail Modernization funds are distributed to urbanized areas with fixed-guideway systems in operation for at least seven years on a formula basis. New Start and Bus Capital funds are distributed to specific projects at the discretion of the Congress or the Federal Transit Administration if the Congress does not specify a distribution. Eligible New Start projects for FY 1998 through FY 2003 and some Bus Capital project amounts for FY 1999 and FY 2000 are authorized in TEA 21. Amounts for individual projects are specified in annual appropriations laws. Authorizing legislation designates 40% of the funds for New Starts, 40% for Rail Modernization, and 20% for Bus Capital.

Matching Ratio: 80% federal, 20% state and local.

Urbanized Area Formula (UAF), 49 USC 5307 and 5336: Apportions operating and capital assistance on a formula basis to urbanized areas.

Status: Authorized through FY 2003.

Recipients of Funds: Directly to urbanized areas of at least 200,000 population, through state governors to urbanized areas under 200,000 population.

Eligible Expenditures: For urbanized area of at least 200,000 population, capital expenditures by local decision. Eligible capital expenditures include acquisition of public transportation vehicles, construction of facilities including fixed-guideway rights-of-way, purchase of equipment, rehabilitation of buses, overhaul of rail vehicles, preventive maintenance, up to 10 percent of the apportioned amount for non-fixed-route ADA paratransit service, and other uses. For urbanized areas under 200,000 population, capital expenditures as for larger urbanized areas and operating expenditures.

Method of Allocation: By six formulas based on urbanized area population and mode of public transportation service. Amount is 91.23% of total UAF, RAF, and Elderly and Disabled funds beginning in FY 1999. These formulas are:

(1) Fixed guideway operations in urbanized areas of at least 200,000 population, basic formula, 28.87% of the UAF. The formula is 60% fixed guideway revenue vehicle miles operated and 40% fixed guideway route miles. Urbanized areas of at least 750,000 population that have commuter rail operations receive a minimum of 0.75% of this formula.

(2) Fixed guideway operations in urbanized areas of at least 200,000 population, incentive formula, 1.32% of the UAF. The formula is the number of fixed guideway passenger miles traveled multiplied by the number of fixed guideway passenger miles traveled per dollar of operating cost. Urbanized areas of at least 750,000 population that have commuter rail operations receive a minimum of 0.75% of this formula.

(3) Bus operations in urbanized areas of at least 1,000,000 population, basic formula, 40.31% of the UAF. The formula is 50% bus revenue vehicle miles operated, 25% urbanized area population, and 25% urbanized area population density weighted by population.

(4) Bus operations in urbanized areas from 200,000 to 999,999 population, basic formula, 14.61% of the UAF. The formula is 50% bus revenue vehicle miles operated, 25% urbanized area population, and 25% urbanized area population density weighted by population.

(5) Bus operations in urbanized areas of at least 200,000 population, incentive formula, 5.57% of the UAF. The formula is the number of bus passenger miles traveled multiplied by the number of bus passenger miles traveled per dollar of operating cost.

(6) Mass transportation operations in urbanized areas under 200,000 population, 9.32% of the UAF. The formula is 50% urbanized area population and 50% urbanized area population density weighted by population.

Matching Ratios: Operating assistance: 50% federal, 50% state and local. Capital assistance: 80% federal, 20% state and local.

Elderly and Disabled Persons, 49 USC 5310: Established by the UMT Act of 1970 to assure mass transportation availability to elderly and disabled persons.

Status: Authorized through FY 2003.

Recipients of Funds: Private, non-profit corporations and associations providing mass transportation services for the elderly and disabled or public bodies coordinating such service or providing service where no non-profit service is available, through state governors.

Eligible Expenditures: For capital equipment and cost of leased or contracted service.

Method of Allocation: Allocated by formula to states based on of elderly and disabled population. Amount is 2.4% of total UAF, RAF, and Elderly and Disabled funds beginning in FY1999.

Matching Ratio: 80% federal, 20% state and local.

Rural Area Formula (RAF), 49 USC 5311: Established by the STA Act of 1978 to apportion funds for mass transportation in rural areas outside of urbanized areas.

Status: Authorized through FY 2003.

Recipients of Funds: Mass transportation providers outside of urbanized areas through state governors.

Eligible Expenditures: Operations or capital projects.

Method of Allocation: Formula based on non-urbanized area population of each state. Amount is 6.37% of total UAF, RAF, and Elderly and Disabled funds beginning in FY 1999.

Matching Ratio: Operating assistance: 50% federal, 50% state and local. Capital assistance: 80% federal, 20% state and local.

Rural Transit Assistance Program, 49 USC 5311(b)(2): Established by the FMT Act of 1987 to provide research, technical assistance, and training grants and related support services to non-urbanized areas. Allocated separately from funds in remainder of section 5311.

Clean Fuels Formula Program, 49 USC 5308: Established by TEA 21 to expedite the adoption of clean fuels bus technologies.

Status: Authorized through FY 2003.

Recipients of Funds: Designated recipients in urbanized areas that make application for funds by January 1 of each fiscal year.

Eligible Expenditures: To purchase or lease clean fuel vehicles and related facilities, to improve existing facilities for clean fuel buses, and to re-power, retrofit, or rebuild pre-1993 engines under certain conditions. Eligible clean fuels include compressed natural gas, liquefied natural gas, biodiesel fuels, batteries, alcohol-based fuels, hybrid electric, fuel cell, clean diesel, and other low or zero emissions technology.

Method of Allocation: Funds are apportioned to grant applicants in air-quality non-attainment and maintenance areas under a formula that weighs bus fleet size and bus passenger miles by severity of non-attainment. Two thirds of funds must go to urban areas with at least 1,000,000 population and one third to urban areas under 1,000,000 population.

Matching Ratio: 80% federal, 20% state and local.

Job Access and Reverse Commute Program, Section 3037 of TEA 21: Established by TEA 21 to improve job access for current and former welfare recipients and eligible low-income individuals.

Status: Authorized through FY 2003.

Recipients of Funds: Local governmental authorities and agencies or nonprofit organizations selected by Metropolitan Planning Organizations in urbanized areas of at least 200,000 population and selected by the chief executive officer of the state for urbanized areas under 200,000 population.

Eligible Expenditures: Capital and operating costs of equipment, facilities, and associated capital maintenance items related to providing access to jobs, promoting public transportation use by workers with non-traditional work schedules, promoting the use of vouchers by appropriate agencies, the purchase or lease of vehicles for shuttle service at suburban locations, costs associated with adding reverse commute service or to otherwise facilitate transportation to suburban job opportunities, and promoting the use of employer provided transportation and public transportation pass benefits. Planning and coordination activities are not eligible.

Method of Allocation: Awarded to eligible applicants on a competitive basis with consideration given to several factors including percentage of the population that are welfare recipients, need for additional services,

coordination and use of existing services, proposal of innovative approaches, and other factors.

Matching Ratio: 50% federal, 50% state and local. Federal funds from agencies outside of the Department of Transportation that are eligible for use for transportation expenditures can be used for the state and local match.

Provisions of Other Major Federal Laws Affecting Public Transportation

Americans with Disabilities Act of 1990, prohibits discrimination based on disabilities in the areas of employment, public services, public accommodations and services operated by private entities, public transportation, and telecommunications.

Employers are prohibited from discriminating against any qualified individual with a disability in regard to job application procedures, the hiring, advancement or discharge of employees, employee compensation, job training, and other terms, conditions, or privileges of employment. All private company, state and local government, employment agency, and labor union employers with 15 or more employees had to comply by July 26, 1994.

All programs, activities and services provided or made available by state and local government, including public transportation, are prohibited from discriminating on the basis of disability, regardless of whether or not those entities receive federal financial assistance.

All new public transportation buses and rail cars must be accessible to the mobility, hearing, and sight-impaired. At least one car on every train must be accessible. All new passenger stations must be accessible, and older "key" stations must be retrofitted for accessibility, unless an extension was granted for extraordinarily expensive retrofitting. These provisions and those requiring complementary paratransit service for those unable to use fixed-route service were effective January 26, 1997. **Clean Air Act Amendments of 1990**, recast transportation planning to ensure that, in areas experiencing air quality problems, planning is geared to improved air quality as well as mobility. State and local officials are required to find ways to reduce emissions from vehicles (including public transportation buses), to develop projects and programs that will alter driving patterns to reduce the number of single-occupant vehicles, and to make alternatives such as public transportation a more important part of

the transportation network. The Act focuses on the issue of "conformity", which is a determination made by the metropolitan planning organization and the U.S. Department of Transportation that transportation plans and programs in non-attainment areas meet the requirement of reducing pollutant emissions.

The Environmental Protection Agency imposed emissions standards as a result of the Act that require public transportation bus engines to meet increasingly strict emission standards, culminating in the following in 1998: nitrogen oxides--4.0 grams/brake horsepower-hour (a 33% reduction from the 1990 pre-law standard), and particulate matter (soot)--.05 g/bhh (a 92% reduction).

No reductions in the 1990 carbon monoxide and hydrocarbon emissions levels of 15.5 g/bhh and 1.3 g/bhh were mandated, since they are not feasible due to technological limitations.

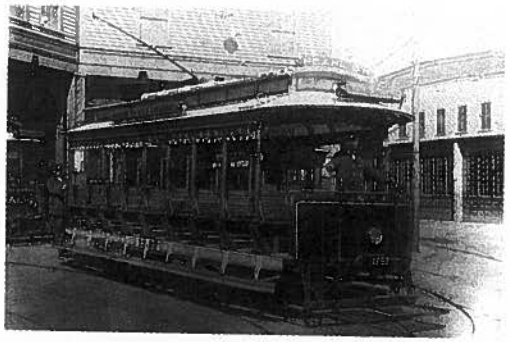
Omnibus Transportation Employee Testing Act of 1991, mandates regulations requiring recipients of financial assistance under the Capital Investment, Urbanized Area Formula, and Rural Area Formula sections of the Federal Transit Act and Section 103(e)4 of Title 23 of the United States Code to establish multifaceted anti-drug and alcohol-misuse programs for their own as well as contracted safety-sensitive employees. All transit agencies were required to implement such programs by January 1, 1996.

Safety-sensitive positions include revenue vehicle operators, dispatchers, maintenance staff, non-revenue vehicle operators if a Commercial Driver's License is required, police and security personnel carrying a firearm, and supervisors when performing safety-sensitive functions.

Commuter rail employees are exempt, since they are covered by Federal Railroad Administration regulations. Ferryboat employees are covered, but are also subject to Coast Guard regulations.

History

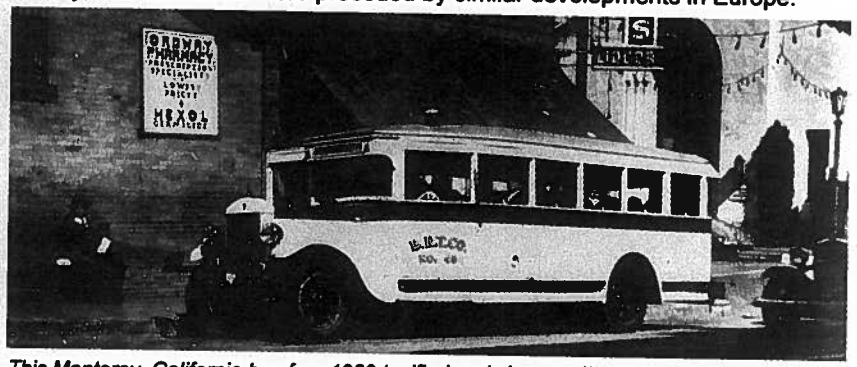
The first U.S. rail car operated underground was on a light rail line in Boston in1897 by a predecessor of today's Massachusetts Bay Transportation Authority.



Public transportation, except for ferryboats, was not a part of life until the 19th century, since home, work, and recreation were almost always within walking distance of each other. As distances in growing cities increased, horse-pulled stagecoaches were introduced to meet the need for better transportation for the few who could afford it, and the railroad was invented. The horsecar--initially a horse-pulled stagecoach body on special wheels that ran on rails--was devised to operate on the unpaved or poorly paved streets of that era.

As technology developed, elevated steam railroads, cable-pulled cars, electric streetcars, and underground electric trains all became common, and many of these developments were pioneered in the U.S. All operated on rails, and it wasn't until the 1910-1920 period that improved street pavement and internal combustion engines led to the widespread introduction of buses.

The following pages highlight important milestones in U.S. public transportation history, some of which were preceded by similar developments in Europe.



This Monterey, California bus from1939 typified early buses. It wasn't until the 1930s that the engine-in-rear, flat-front design seen today became common.

TABLE 1: Milestones in U.S. Public Transportation History

1630	Boston--reputed first publicly operated ferryboat
1740	New York--reputed first use of ox carts for carrying of passengers
1811	New York--first mechanically operated (steam-powered) ferryboat
1827	New York--first horse-drawn urban stagecoach (omnibus) line (Dry Dock & East Broadway)
1830	Baltimore--first railroad (Baltimore & Ohio Railroad Co.)
1832	New York--first horse-drawn street railway line (New York & Harlem Railroad Co.)
1835	New Orleans--oldest street railway line still operating (New Orleans & Carrollton line)
1838	Boston--first commuter fares on a railroad (Boston & West Worcester Railroad)
1850	New York--first use of exterior advertising on street railways
1856	Boston--first fare-free promotion
1861	New York--first failed attempt to form street railway labor organization
1868	New York--first cable-powered (& first elevated) line (West Side & Yonkers Patent Railway)
1870	New York--first pneumatic-powered (& first underground) line (Beach Pneumatic Railroad Co.)
1870	Pittsburgh--first inclined plane
1871	New York--first steam-powered elevated line (New York Elevated Railroad Co.)
1872	Great Epizootic horse influenza epidemic in eastern states kills thousands of horses (the motive power for most street railways)
1873	San Francisco--first successful cable-powered line (Clay St. Hill Railroad)
1874	San Francisco, CA--first recorded strike by street railway workers
1882	Boston--American Street Railway Association (APTA's original predecessor) formed
1883	New York--first publicly operated cable-powered line (Brooklyn Bridge)
1883	New York--first surviving street railway labor organization (Knights of Labor Local 2878)

TABLE 1: Milestones in U.S. Public Transportation History (continued)

1884	Cleveland--first electric street railway line (East Cleveland Street Railway)
1884	first public transportation-only publication (The Street Railway Journal)
1886	Montgomery, AL--first semi-successful citywide street railway transit agency (Capital City Street Railway Co.)
1888	Richmond, VA--first successful electric street railway transit agency (Union Passenger Railway)
1889	New York--first major strike by street railway workers
1892	Indianapolis--first national street railway labor union founded (Amalgamated Association of Street Railway Employees of America, now called the Amalgamated Transit Union)
1893	Portland, OR--first interurban rail line (East Side Railway Co.)
1894	Boston--first public transportation commission (Boston Transit Commission)
1895	Chicago--first electric elevated rail line (Metropolitan West Side Elevated Railway)
1897	Boston--first electric underground street railway line (West End Street Railway/Boston Elevated Railway Co.)
1897	Boston--first publicly-financed public transportation facility (street railway tunnel)
1898	Chicago--first electric multiple-unit controlled rail line (Chicago & South Side Rapid Transit Railroad Co.)
1904	Bismarck, ND--first state-operated street railway (State of North Dakota Capital Car Line)
1904	New York--first electric underground (& first 4-track express) heavy rail line (Interborough Rapid Transit Co.)
1905	New York--first public takeover of a private public transportation company (Staten Island Ferry)
1905	New York--first bus line (Fifth Avenue Coach Co.)
1906	Monroe, LA--first municipal street railway
1908	New York--first interstate underground heavy rail line (Hudson & Manhattan Railroad to New Jersey)
1910	Hollywood, CA--first trolleybus line (Laurel Canyon Utilities Co.)
1912	San Francisco--first publicly operated street railway in a large city (San Francisco Municipal Railway)

TABLE 1: Milestones in U.S. Public Transportation History (continued)

1912	Cleveland--first street railway to operate buses (Cleveland Railway)
1914	Los Angeles--first jitney
1916	Saint Louis--first public bus-only transit agency (St. Louis Division of Parks and Recreation Municipal Auto Bus Service)
1917	New York--last horse-drawn street railway line closed
1918	New York--APTA's predecessor organization first calls for public takeover of public transportation
1920	first bus not based on truck chassis (Fageol Safety Coach)
1921	New York--first successful trolleybus line
1923	Bay City, MI, Everett, WA, Newburgh, NY--first cities to replace all streetcars with buses
1926	highest peacetime public transportation ridership before World War II (17.2 billion)
1927	Detroit--first bus without cowl-type engine
1927	Philadelphia--first automobile park and ride lot and first bus-rail transfer facility for a non-commuter rail line
1932	New York--first publicly operated heavy rail line (Independent Subway)
1933	San Antonio--first large city to replace all streetcars with buses
1934	New York--Transport Workers Union of America founded
1935	Washington--Public Utility Holding Company Act of 1935 enacted requiring most power companies to divest themselves of public transportation operations and eliminating much private public transportation financing
1936	bus manufacturers began to assume control of or influence street railways, leading to rapid replacement of streetcars with buses
1936	New York--first industry-developed standardized street railway car (P.C.C. car) (Brooklyn & Queens Transit System)
1936	Washington--first large-scale federal government public transportation assistance (Public Works Administration)
1938	Chicago--first use of federal capital funding to build a public transportation rail line
1939	Chicago--first street with designated bus lane

TABLE 1: Milestones in U.S. Public Transportation History (continued)

1940	first time bus ridership exceeded street railway ridership
1940	San Francisco becomes last surviving cable car transit agency
1941	New York, NY--first racially-integrated bus operator workforce
1943	Los Angeles--first rail line in expressway median (Pacific Electric Railway)
1943	New York--first issue of *Transit Fact Book* (then called "The Transit Industry of the United States, Basic Data and Trends")
1946	highest-ever public transportation ridership (23.4 billion)
1946	Washington--U.S. Supreme Court bans racial segregation in interstate transportation
1952	San Francisco--last new PCC car for U.S. transit agency placed in service
1958	Washington--authority for railroads to discontinue commuter service transferred from states to U.S. Interstate Commerce Commission
1961	Washington--first significant federal public transportation legislation (Housing & Urban Development Act of 1961)
1962	Seattle--first monorail (Seattle World's Fair)
1962	New York--first automated heavy rail line (Grand Central Shuttle)
1963	Chicago becomes last surviving city with interurban line (Chicago, South Shore, & South Bend Railroad)
1964	Washington--first major U.S. government public transportation program (Urban Mass Transportation Act of 1964)
1966	New York--first public takeover of commuter railroad (Long Island Rail Road Co.)
1966	Providence--first statewide transit agency (Rhode Island Public Transit Authority)
1968	Washington--agency administering federal public transportation program re-named Urban Mass Transportation Administration and moved to new Department of Transportation
1968	Minneapolis--first downtown transit mall (Nicollet Mall)
1968	Cleveland--first rail station at an airport opened

TABLE 1: Milestones in U.S. Public Transportation History (continued)

1969	Washington--first transitway (Shirley Highway)
1969	Philadelphia--first modern heavy rail transit agency replacing former rail line (Port Authority Transit Corporation)
1970	Fort Walton Beach, FL--first dial-a-ride demand response transit agency
1971	Washington--first federally subsidized intercity passenger railroad (AMTRAK)
1972	San Francisco--first computer-controlled heavy rail transit agency (Bay Area Rapid Transit District)
1972	public transportation ridership hits all-time low (6.6 billion)
1973	Washington--some public transportation service required to be accessible to disabled (Rehabilitation Act of 1973)
1973	Washington--use of funds from cancelled Interstate Highway projects allowed for public transportation
1973	Boston, Dayton, OH, Philadelphia, San Francisco, & Seattle become last surviving trolleybus systems
1974	Boston, Cleveland, Newark, New Orleans, Philadelphia, Pittsburgh, & San Francisco become the last street railway systems
1974	Washington--first federal public transportation operating assistance legislation (National Mass Transportation Assistance Act of 1974)
1974	American Public Transit Association formed from merger of 2 organizations
1975	Morgantown, WV--first automated guideway transit agency (West Virginia University)
1977	San Diego--first wheelchair-lift-equipped fixed-route bus
1979	Washington--first standardized public transportation data accounting system (Section 15)
1980	San Diego--first completely new light rail transit agency in decades (San Diego Trolley)
1983	Washington--public transportation trust fund for capital projects created through dedication of one cent of federal gas tax
1989	Miami--first completely new commuter rail transit agency in decades (Tri-County Commuter Rail Authority)
1990	Washington--virtually all public transportation service required to be accessible to disabled (Americans with Disabilities Act of of 1990)
1990	Washington--one cent dedicated portion of federal fuel tax increased to 1.5 cents
1991	Washington--public transportation buses subject to strict pollution controls (Clean Air Act of 1990)

TABLE 1: Milestones in U.S. Public Transportation History (continued)

1991	Washington--federal government allowed to subsidize its employees' commuting costs
1991	Washington--first general authorization of use of highway funds for public transportation (Intermodal Surface Transp. Efficiency Act)
1992	Washington--first limitation on amount of tax-free employer-paid automobile parking benefits and tripling of value of tax-free benefit for public transportation use (National Energy Policy Strategy Act)
1993	Washington--public transportation workers in safety-sensitive positions subjected to drug and alcohol testing
1995	Washington--1.5 cents dedicated portion of federal fuel tax increased to 2 cents
1998	Washington--major expansion and restructuring of federal public transportation program (Transportation Equity Act for the 21st Century)
2000	American Public Transit Association changes name to American Public Transportation Association

National Summary

General Definitions

Note: for subject-specific definitions relating to expenses, funding, passengers, buses, rail, and other subjects, see the definitions in those sections.

Public transportation (transit, mass transit, mass transportation) is transportation by bus, rail, or other conveyance, either publicly or privately owned, providing to the public general or special service (but not including school buses or charter or sightseeing service) on a regular and continuing basis.

A **transit agency (transit system)** is an entity (public or private) responsible for administering and managing transit activities and services. Transit agencies can directly operate transit service or contract out for all or part of the total transit service provided. When responsibility is with a public entity, it is a **public transit agency**. When more than one mode of service is operated, it is a **multimode transit agency**.

A **mode** is the system for carrying transit passengers described by specific right-of-way, technology and operational features. Transit data are generally collected by mode.

Intermodal (multimodal) are those issues or activities which involve or affect more than one mode of transportation, including transportation connections, choices, cooperation and coordination of various modes.

Fixed-route service provided on a repetitive, fixed-schedule basis along a specific route with vehicles stopping to pick up and deliver passengers to specific locations; each fixed-route trip serves the same origins and destinations, unlike demand response. Includes route deviation service, where revenue vehicles deviate from fixed routes on a discretionary basis.

Non-fixed-route service is <u>not</u> provided on a repetitive, fixed-schedule basis along a specific route to specific locations. Demand response is the only non-fixed-route mode.

Other general definitions include:

A **carpool** is an arrangement where two or more people share the use and cost of privately owned vehicles in traveling together to and from pre-arranged destinations. Carpools are <u>not</u> public transportation.

A **commuter** is a person who travels regularly between home and work or school.

The **National Transportation System** is an intermodal system consisting of all forms of transportation in a unified, interconnected manner to reduce energy consumption and air pollution while promoting economic development and supporting the nation's preeminent position in international commerce. The NTS includes the National Highway System (NHS), public transportation and access to ports and airports.

Reverse commuting is movement in a direction opposite the main flow of traffic, such as from the central city to a suburb during the morning peak period.

Ridesharing is a form of transportation, other than a transit agency, in which more than one person shares the use of the vehicle, such as a van or car, to make a trip. Also known as "carpooling" or "vanpooling."

An **urban place** is a U.S. Bureau of the Census-designated area (less than 50,000 population) consisting of closely settled territory not populous enough to form an urbanized area.

An **urbanized area (UZA)** is an area defined by the U.S. Census Bureau that includes one or more incorporated cities, villages and towns (central place) and the adjacent densely settled surrounding territory (urban fringe) that together have a minimum of 50,000 persons. The urban fringe generally consists of contiguous territory having a density of at least 1,000 persons per square mile. UZAs do not conform to congressional districts or any other political boundaries. Most U.S. government transit funding is based on urbanized areas.

TABLE 2: Number of Transit Agencies by Mode

MODE	NUMBER
Aerial Tramway	2
Automated Guideway Transit	5
Bus	2,264
Cable Car	1
Commuter Rail	21
Demand Response	5,251
Ferryboat (b)	42
Heavy Rail	14
Inclined Plane	5
Light Rail	26
Monorail	2
Trolleybus	5
Vanpool	67
TOTAL (a)	6,000

(a) Total is not sum of all modes since many agencies operate more than one mode.
(b) Excludes international, rural, rural interstate, island, and urban park ferries.

TABLE 3: National Totals, Fiscal Year 2001

Agencies, Number of	6,000
Fares Collected, Passenger	$8,891,063,000
Fare per Unlinked Trip, Average	$0.92
Expense, Operating Total (a)	$23,516,916,000
Salaries and Wages (b)	$10,626,938,000
Fringe Benefits (b)	$5,705,586,000
Services (b)	$1,389,348,000
Fuel and Lubricants (b)	$716,776,000
Materials and Supplies, Other (b)	$1,645,758,000
Utilities (b)	$772,447,000
Casualty and Liability (b)	$492,802,000
Purchased Transportation (b) (c)	$2,976,508,000
Other (b)	$(809,247,000)
Vehicle Operations (c)	$10,438,750,000
Vehicle Maintenance (c)	$4,348,422,000
Non-vehicle Maintenance (c)	$2,290,124,000
General Administration (c)	$3,463,113,000
Expense, Capital Total	$11,418,662,000
Rolling Stock	$4,027,344,000
Facilities	$6,301,830,000
Other	$1,089,488,000
Trips, Unlinked Passenger, Average Weekday	32,994,000
Trips, Unlinked Passenger, Annual	9,652,816,000
Miles, Passenger	49,070,383,000
Trip Length, Average (miles)	5.1
Miles, Vehicle Total	4,196,245,000
Miles, Vehicle Revenue	3,715,210,000
Hours, Vehicle Total	281,723,000
Hours, Vehicle Revenue	252,236,000
Speed, Vehicle in Revenue Service, Average (m.p.h.)	14.7
Vehicles, Total	141,392
Active	134,271
Age, Average (years)	10.3
Air-conditioned	89.8%
Lifts, Wheelchair	56.8%
Ramps, Wheelchair	14.5%
Accessible Only via Stations	4.2%
Power Source, Diesel or Gasoline	70.9%
Power Source, Alternative	26.2%
Rehabilitated	12.2%
Employees, Operating	357,266
Vehicle Operations	228,091
Vehicle Maintenance	62,404
Non-vehicle Maintenance	29,963
General Administration	36,808
Employees, Capital	13,490
Diesel Fuel Consumed (gallons)	744,663,000
Other Fuel Consumed (gallons)	112,088,000
Electricity Consumed (kwh)	5,609,846,000

(a) Sum of (b) lines OR sum of (c) lines.

TABLE 4: 75 Largest Transit Agencies Ranked by Passenger Miles, Fiscal Year 2001 (Thousands)

	TRANSIT AGENCY	CITY	MILES
1	Metropolitan Transportation Authority	New York, NY	14,572,113.6
	MTA Long Island Bus	Garden City, NY	159,178.1
	MTA Long Island Rail Road	New York, NY	2,126,874.9
	MTA Metro-North Railroad	New York, NY	2,185,774.7
	MTA New York City Transit	New York, NY	10,075,300.8
	MTA Staten Island Railway	New York, NY	24,985.1
2	Regional Transportation Authority	Chicago, IL	3,595,594.3
	Chicago Transit Authority	Chicago, IL	1,770,773.9
	Northeast Illinois Regional Commuter RR	Chicago, IL	1,577,183.7
	PACE Suburban Bus	Arlington Heights, IL	247,636.7
3	New Jersey Transit Corporation	Newark, NJ	2,348,838.8
4	Washington Metropolitan Area Transit Auth	Washington, DC	1,825,314.2
5	Massachusetts Bay Transportation Authority	Boston, MA	1,818,140.3
6	Los Angeles County Metro Transp Authority	Los Angeles, CA	1,659,670.7
7	Southeastern Pennsylvania Transp Authority	Philadelphia, PA	1,332,924.4
8	San Francisco Bay Area Rapid Transit Dist	Oakland, CA	1,263,667.8
9	Metropolitan Atlanta Rapid Transit Authority	Atlanta, GA	849,507.9
10	Metropolitan Transit Auth of Harris County	Houston, TX	621,650.3
11	Maryland Transit Administration	Baltimore, MD	611,615.1
12	King County Department of Transportation	Seattle, WA	547,685.9
13	New York City Department of Transportation	New York, NY	496,295.0
14	San Francisco Municipal Railway	San Francisco, CA	458,670.5
15	Dallas Area Rapid Transit Authority	Dallas, TX	418,708.2
	Dallas Area Rapid Transit	Dallas, TX	386,438.9
	Trinity Railway Express (a)	Dallas, TX	32,269.3
16	Miami-Dade Transit Agency	Miami, FL	406,976.9
17	San Diego Metropolitan Transit System	San Diego, CA	396,931.6
	Metropolitan Transit Development Board	San Diego, CA	44,983.1
	San Diego Transit Corporation	San Diego, CA	162,748.1
	San Diego Trolley	San Diego, CA	189,200.4
18	Regional Transportation District	Denver, CO	391,143.9
19	Port Authority of Allegheny County	Pittsburgh, PA	370,174.7
20	Tri-County Metropolitan Transp District	Portland, OR	366,909.1
21	City & County of Honolulu Dept of Trp Svces	Honolulu, HI	361,390.4
22	Metropolitan Council	Saint Paul, MN	358,191.0
	Metro Mobility	Minneapolis, MN	11,489.5
	Metro Transit	Minneapolis, MN	312,516.4
	Metropolitan Council	Saint Paul, MN	34,185.1
23	Port Authority of New York and New Jersey	Jersey City, NJ	345,130.8
24	Puerto Rico Dept of Trp & Public Works	San Juan, PR	305,562.4
	Metropolitan Bus Authority	San Juan, PR	109,008.9
	Puerto Rico Dept of Trp & Public Works	San Juan, PR	187,626.2
	Puerto Rico Highway & Trp Authority	San Juan, PR	8,927.3
25	Southern California Regional Rail Authority	Los Angeles, CA	274,625.4
26	Greater Cleveland Regional Transit Authority	Cleveland, OH	268,805.0
27	Orange County Transportation Authority	Orange, CA	243,587.1
28	Academy Lines	Asbury Park, NJ	235,652.4
29	Santa Clara Valley Transportation Authority	San Jose, CA	235,549.0
30	Bi-State Development Agency	Saint Louis, MO	232,397.4
31	Alameda-Contra Costa Transit District	Oakland, CA	224,284.2
	Alameda-Contra Costa Transit District	Oakland, CA	218,660.1

TABLE 4: 75 Largest Transit Agencies Ranked by Passenger Miles, Fiscal Year 2001 (Thousands)

	TRANSIT AGENCY	CITY	MILES
	Intelitran (b)	Oakland, CA	5,624.1
32	Peninsula Corridor Joint Powers Board	San Carlos, CA	211,276.8
33	Milwaukee County Transit System	Milwaukee, WI	207,826.7
34	Suburban Transit Corporation	New Brunswick, NJ	193,849.3
35	VIA Metropolitan Transit	San Antonio, TX	187,174.1
36	Regional Transp Comm of Southern Nevada	Las Vegas, NV	178,567.1
37	City of Detroit Department of Transportation	Detroit, MI	166,353.3
38	Hudson Transit Lines	Mahwah, NJ	160,476.0
39	Regional Transit Authority	New Orleans, LA	154,873.1
40	Southwest Ohio Regional Transit Authority	Cincinnati, OH	151,075.4
41	Utah Transit Authority	Salt Lake City, UT	147,472.0
42	Broward County Division of Mass Transit	Pompano Beach, FL	146,619.2
43	Golden Gate Bridge, Highway & Trp Dist	San Francisco, CA	146,451.6
44	Westchester County Department of Transp	Mount Vernon, NY	144,313.9
45	Central Florida Regional Transportation Auth	Orlando, FL	131,094.3
46	Washington State Ferries	Seattle, WA	127,662.4
47	City of Phoenix Public Transit Department	Phoenix, AZ	127,071.6
48	Snohomish County Public Trp Benefit Area	Everett, WA	126,617.5
49	Sacramento Regional Transit District	Sacramento, CA	125,823.6
50	Connecticut Transit	Hartford, CT	119,005.7
51	Capital Metropolitan Transportation Authority	Austin, TX	114,243.9
52	Pierce Transit	Tacoma, WA	113,668.3
53	San Mateo County Transit District	San Carlos, CA	107,395.7
54	Northern Indiana Commuter Transp Dist	Chesterton, IN	105,584.9
55	North County Transit Development Board	Oceanside, CA	101,072.4
56	Foothill Transit	West Covina, CA	97,520.5
57	Suburban Mobility Authority for Regional Trp	Detroit, MI	96,299.2
58	Transp District Comm of Hampton Roads	Hampton, VA	93,313.3
59	Port Authority of Pennsylvania & New Jersey	Lindenwold, NJ	88,781.5
60	Charlotte Area Transit System	Charlotte, NC	86,081.1
61	Santa Monica's Big Blue Bus	Santa Monica, CA	83,148.7
62	Rockland Coaches	Paramus, NJ	78,440.2
63	Tri-County Commuter Rail Authority	Pompano Beach, FL	77,380.4
64	Niagara Frontier Transportation Authority	Buffalo, NY	77,113.7
65	Central Ohio Transit Authority	Columbus, OH	74,831.7
66	Virginia Railway Express	Alexandria, VA	74,695.1
67	Omnitrans	San Bernardino, CA	74,679.3
68	Montgomery County Ride-On	Rockville, MD	72,837.2
69	Trans-Bridge Lines	Bethlehem, NJ	72,043.2
70	Hartford Ridesharing Corporation	Hartford, CT	69,670.7
71	Long Beach Transit	Long Beach, CA	69,455.3
72	El Paso Mass Transit Department	El Paso, TX	68,778.7
73	City of Tucson Transit System	Tucson, AZ	68,077.2
74	Memphis Area Transit Authority	Memphis, TN	67,909.2
75	City of Los Angeles Department of Transp	Los Angeles, CA	60,996.0

Source: Federal Transit Administration National Transit Database
(a) Includes contractor services reported to Fort Worth Transportation Authority.
(b) Includes contractor services for San Francisco Bay Area Rapid Transit District.

NATIONAL SERVICE AND OPERATING DATA

Passengers

Highlights.....

- 9.7 billion unlinked trips were taken in 2001. 60.6% were by bus, 28.3% by heavy rail, and 11.1% for all other modes combined.
- Average trip length was longest for vanpools at 32.9 mile. Commuter rail averaged 22.8 miles, demand response 8.2 miles, ferryboat 6.0 miles, heavy rail 5.2 miles, light rail 4.3 miles, and bus 3.8 miles.
- 52% of trips are taken by women, 1% by people with disabilities.
- 7% of trips are by those 65 and older, 10% by those 18 and under, 31% by African Americans, 18% by Hispanics, 6% by Asian-heritage and Native Americans.
- 54% of trips are work-related, 15% school-related, 9% shopping-related, 5.5% medically-related, 9% socially-related.
- 27% are by those with family incomes below $15,000, 55% by $15,000-$50,000 families, and 17% by those with incomes over $50,000.

The U.S. Federal Transit Administration requires that annual unlinked passenger trips and passenger miles data be collected or estimated by the predominantly large and medium-sized transit agencies participating in its National Transit Database. APTA supplements this with monthly data, which includes some smaller transit agencies not eligible to participate in the NTD.

Unlinked Passenger Trips is 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.

Passenger Miles is the cumulative sum of the distances ridden by each passenger.

Average Trip Length is the average distance ridden for an unlinked passenger trip by time period (weekday, Saturday, Sunday) computed as passenger miles divided by unlinked passenger trips.

Number of People Using Public Transportation

All ridership data reported in this book relate to trips taken--not to people--because that is how data are collected and reported. The heavy use of passes, transfers, joint tickets, and cash by people transferring from one vehicle to another, one mode to another, and from one public transportation agency to another makes it impossible to count people. Only boardings (unlinked passenger trips) can be counted with any accuracy. At the largest public transportation agencies, even the number of boardings may be estimated for at least a portion of the ridership (e.g., free shuttle vehicles without fareboxes and light rail service using the "proof-of-payment" system).

The majority of people using public transportation take two trips per day (one to work, school, or another destination in the morning and one home in late afternoon or evening). A small proportion--perhaps 5%--make only one public transportation trip (e.g., they ride public transportation to the airport and then fly out of town, or they ride public transportation in the morning to work, but ride home in a friend's automobile at night). A somewhat larger proportion (primarily the public transportation-dependent) take 4, 6, 8, or even 10 trips per day.

At most agencies perhaps 10% to 30% of riders must transfer to a second (and sometimes a third) vehicle to reach their final destination. Some transfer from bus to bus, from bus to train, from one agency's vehicle to another agency's vehicle, etc.; thus, there is a large amount of double-counting of people. APTA's best estimate is that the number of people using public transportation on any day is about 45% of the number of trips reported.

Saturday ridership is often about 50% of weekday ridership, and Sunday ridership may be only 25%. In many smaller cities, public transportation service does not operate on Sundays; in a lesser number, there is no Saturday service.

Historical Ridership Trends

Public transportation's popularity has been affected by changing social and economic forces. In the beginning of the 20th Century, ridership grew steadily until the Great Depression. Between 1929 and 1939, people took fewer work trips and often could not afford to take leisure trips. Conditions during World War II inspired motor fuel rationing along with economic prosperity, positioning public transportation as the dominant mode on the transportation landscape. Ridership peaked in 1946, when Americans took 23.4 billion trips on trains, buses and trolleys.

After World War II, ridership experienced a decline due to inexpensive fuel and government policies favoring low-density suburban development and the sprawl created by the new interstate highway system. By 1960 ridership dropped to 9.3 billion trips, and it continued to decline to a low of 6.5 billion trips in 1972. Beginning in 1973, ridership rose gradually to 9.5 billion trips in 2001. Reasons for the increase include a strong economy, improved customer service, and higher levels of public and private investment in public transportation resulting from 1991 federal legislation and succeeding funding bills.

TABLE 5: Unlinked Passenger Trips by Mode, Millions

YEAR	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
1990	5,677	328	68	2,346	175	126	79	8,799
1991	5,624	318	71	2,172	184	125	81	8,575
1992	5,517	314	72	2,207	188	126	77	8,501
1993	5,381	322	81	2,046	188	121	78	8,217
1994	4,871	339	88	2,169	284	118	80	7,949
1995	4,848	344	88	2,033	251	119	80	7,763
1996	4,887	352	93	2,157	261	117	81	7,948
1997	5,013	357	99	2,430	262	121	92	8,374
1998	5,399	381	95	2,393	276	117	89	8,750
1999	5,648	396	100	2,521	292	120	91	9,168
2000	5,678	413	105	2,632	320	122	93	9,363
2001 P	5,849	419	105	2,728	336	119	97	9,653
2001 % of Total	60.6%	4.3%	1.1%	28.3%	3.5%	1.2%	1.0%	100.0%

TABLE 6: Passenger Miles by Mode, Millions

YEAR	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
1990	20,981	7,082	431	11,475	571	193	410	41,143
1991	21,090	7,344	454	10,528	662	195	430	40,703
1992	20,336	7,320	495	10,737	701	199	453	40,241
1993	20,247	6,940	562	10,231	705	188	511	39,384
1994	18,832	7,996	577	10,668	833	187	492	39,585
1995	18,818	8,244	607	10,559	860	187	533	39,808
1996	19,096	8,351	656	11,530	957	184	604	41,378
1997	19,604	8,038	754	12,056	1,035	189	663	42,339
1998	20,360	8,704	735	12,284	1,128	182	735	44,128
1999	21,205	8,766	813	12,902	1,206	186	779	45,857
2000	21,241	9,402	839	13,844	1,356	192	792	47,666
2001 P	22,022	9,548	855	14,178	1,437	187	843	49,070
2001 % of Total	44.9%	19.5%	1.7%	28.9%	2.9%	0.4%	1.7%	100.0%

P = Preliminary

TABLE 7: Annual Passenger Miles for Urbanized Areas Over 1,000,000 Population, 2001 (Thousands) (b)

RANK (a)	URBANIZED AREA	MILES
1	New York-Newark, NY-NJ-CT	18,989,759.1
2	Los Angeles-Long Beach-Santa Ana, CA	2,603,144.4
3	Chicago, IL-IN	3,711,223.2
4	Philadelphia, PA-NJ-DE-MD	1,480,400.6
5	Miami, FL	669,472.6
6	Dallas-Fort Worth-Arlington, TX	466,581.6
7	Boston, MA-NH-RI	1,850,226.4
8	Washington, DC-MD-VA	2,054,954.4
9	Detroit, MI	265,774.5
10	Houston, TX	621,650.3
11	Atlanta, GA	874,432.8
12	San Francisco-Oakland, CA	2,422,391.6
13	Phoenix-Mesa, AZ	175,607.9
14	Seattle, WA	940,154.1
15	San Diego, CA	560,116.7
16	Minneapolis-Saint Paul, MN	358,191.0
17	San Juan, PR	308,626.2
18	Saint Louis, MO-IL	250,730.8
19	Baltimore, MD	620,204.3
20	Tampa-St. Petersburg, FL	86,410.5
21	Denver-Aurora, CO	391,143.9
22	Cleveland, OH	279,516.9
23	Pittsburgh, PA	388,388.3
24	Portland, OR-WA	401,364.6
25	San Jose, CA	275,291.0
26	Riverside-San Bernardino, CA	120,522.4
27	Cincinnati, OH-KY-IN	177,636.8
28	Virginia Beach, VA	93,621.8
29	Sacramento, CA	147,205.3
30	Kansas City, MO-KS	64,926.2
31	San Antonio, TX	187,174.1
32	Las Vegas, NV	178,567.1
33	Milwaukee, WI	221,397.6
34	Indianapolis, IN	51,322.5
35	Providence, RI-MA	46,670.9
36	Orlando, FL	131,094.3
37	Columbus, OH	74,831.7
38	New Orleans, LA	172,860.2

Source: Federal Transit Administration National Transit Database.
(a) By urbanized area population in 2000 Census.
(b) Data for some areas may be understated since not all transit agencies report to the federal government. Data for some areas may be overstated since some transit agencies serve other urbanized areas and only agency-total data are reported.

TABLE 8: Average Weekday Unlinked Passenger Trips by Mode, 2001

MODE	AVERAGE WEEKDAY UNLINKED TRIPS	PER CENT OF TOTAL
Bus	20,384,000	61.8%
Commuter Rail	1,466,000	4.4%
Demand Response	372,000	1.1%
Ferryboat	167,000	0.5%
Heavy Rail	9,002,000	27.3%
Light Rail	1,086,000	3.3%
Other Rail	81,000	0.2%
Trolleybus	378,000	1.2%
Vanpool	58,000	0.2%
TOTAL	32,994,000	100.0%

TABLE 9: Gender of Passengers by Population Group

POPULATION OF URBANIZED AREA/ URBAN PLACE	MALE	FEMALE
Under 50,000	36%	64%
50,000-199,999	43%	57%
200,000-500,000	39%	61%
500,000-999,999	38%	62%
1 million and more	49%	51%
NATIONAL AVERAGE	48%	52%

Source: APTA, *Americans in Transit*, 1992.

TABLE 10: Passengers with Disabilities by Population Group

POPULATION OF URBANIZED AREA/ URBAN PLACE	PER CENT WITH DISABILITIES
Under 50,000	1.2%
50,000-199,999	1.1%
200,000-500,000	1.4%
500,000-999,999	2.5%
1 million and more	6.0%
NATIONAL AVERAGE	5.2%

Source: APTA, *Americans in Transit*, 1992.

TABLE 11: Age of Passengers by Population Group

POPULATION OF URBANIZED AREA/ URBAN PLACE	18 AND UNDER	19-64	65 AND OVER
Under 50,000	21%	61%	18%
50,000-199,999	19%	68%	13%
200,000-500,000	15%	70%	15%
500,000-999,999	9%	77%	14%
1 million and more	10%	84%	6%
NATIONAL AVERAGE	10%	83%	7%

Source: APTA, *Americans in Transit*, 1992.

TABLE 12: Annual Family Income of Passengers by Population Group

POPULATION OF URBANIZED AREA/ URBAN PLACE	UNDER $15,000	$15,000-$50,000	ABOVE $50,000
Under 50,000	61%	36%	3%
50,000-199,999	55%	39%	6%
200,000-500,000	54%	38%	8%
500,000-999,999	52%	42%	6%
1 million and more	25%	57%	18%
NATIONAL AVERAGE	28%	55%	17%

Source: APTA, *Americans in Transit*, 1992.

TABLE 13: Ethnicity and Race of Passengers by Population Group

POPULATION OF URBANIZED AREA/URBAN PLACE	WHITE	BLACK	HISPANIC	OTHER
Under 50,000	82%	6%	9%	3%
50,000-199,999	63%	24%	8%	5%
200,000-500,000	48%	34%	14%	4%
500,000-999,999	45%	41%	9%	5%
1 million and more	45%	31%	18%	6%
NATIONAL AVERAGE	45%	31%	18%	6%

Source: APTA, *Americans in Transit*, 1992.

TABLE 14: Purpose of Trips by Population Group

POPULATION OF URBANIZED AREA/URBAN PLACE	WORK	SCHOOL	SHOPPING	MEDICAL	SOCIAL	OTHER
Under 50,000	20%	9%	8%	34%	27%	2%
50,000-199,999	39%	22%	12%	6%	9%	12%
200,000-500,000	46%	19%	13%	5%	8%	9%
500,000-999,999	51%	15%	11%	5%	6%	12%
1 million and more	55%	15%	9%	5%	9%	7%
NATIONAL AVERAGE	54%	15%	9%	5%	9%	8%

Source: APTA, *Americans in Transit*, 1992.

TABLE 15: Average Unlinked Trip Length by Mode, 2001

MODE	AVERAGE TRIP LENGTH (MILES)
Bus	3.8
Commuter Rail	22.8
Demand Response	8.2
Ferryboat (b)	6.0
Heavy Rail	5.2
Light Rail	4.3
Trolleybus	1.6
Vanpool	32.9
Other (a)	1.0
TOTAL	5.1

(a) Includes aerial tramway, automated guideway transit, cable car, inclined plane, and monorail.
(b) Excludes international, rural, rural interstate, island, and urban park ferries.

TABLE 16: Means of Transportation to Work, 2000

MEANS	PER CENT
Personal Motor Vehicles	88.0%
Drive Alone	75.7%
Carpool	12.2%
Motorcycle	0.1%
Public Transportation	4.6%
Bus & Trolleybus	2.5%
Heavy Rail & Light Rail	1.5%
Commuter Rail & Intercity Rail	0.5%
Ferryboat	0.03%
Walked	2.9%
Worked at home	3.3%
Bicycle	0.4%
Taxi	0.2%
All Other	0.7%
TOTAL	100.0%

Source: U.S. Census Bureau, *2000 Census, Means of Transportation to Work*. Workers defined as age 16 and over. When more than one means is used, only the dominant means is counted.

TABLE 17: Percentage of Workers Using Public Transportation in Urbanized Areas Over 1,000,000 Population, 2000

URBANIZED AREA	URBANIZED AREA PER CENT	CENTRAL CITY PER CENT
Atlanta, GA	4.2%	15.0%
Baltimore, MD	7.6	19.5
Boston, MA-NH-RI	12.3	32.3
Chicago, IL-IN	12.6	26.1
Cincinnati, OH-KY-IN	3.6	10.1
Cleveland, OH	4.9	12.0
Columbus, OH	2.9	3.9
Dallas-Fort Worth-Arlington, TX	2.2	5.5
Denver-Aurora, CO	4.8	8.4
Detroit, MI	2.1	8.7
Houston, TX	3.8	5.9
Indianapolis, IN	1.6	2.4
Kansas City, MO-KS	1.6	3.8
Las Vegas, NV	4.5	4.8
Los Angeles-Long Beach-Santa Ana, CA	5.9	10.2
Miami, FL	3.3	11.4
Milwaukee, WI	5.0	10.3
Minneapolis-Saint Paul, MN	5.4	14.6
New Orleans, LA	7.3	13.7
New York-Newark, NY-NJ-CT	29.0	52.8
Orlando, FL	2.0	4.1
Philadelphia, PA-NJ-DE-MD	9.9	25.4
Phoenix-Mesa, AZ	2.2	3.3
Pittsburgh, PA	8.0	20.5
Portland, OR-WA	7.4	12.3
Providence, RI-MA	2.6	7.3
Riverside-San Bernardino, CA	2.0	2.2
Sacramento, CA	2.9	4.6
Saint Louis, MO-IL	2.9	10.7
San Antonio, TX	3.4	3.8
San Diego, CA	3.5	4.2
San Francisco-Oakland, CA	16.2	31.1
San Jose, CA	3.5	4.1
San Juan, PR	6.5	11.5
Seattle, WA	7.6	17.6
Tampa-Saint Petersburg, FL	1.5	2.7
Virginia Beach, VA	2.0	4.6
Washington, DC-MD-VA	13.4	33.2

Source: U.S. Census Bureau, *2000 Census, Employment Status and Commuting to Work: 2000.* Workers defined as age 16 and over.

Service Operated

Highlights.....

- 4.2 billion miles and 281.7 million hours were operated.
- Buses operated 56.6% of vehicle miles, commuter rail 6.6%, demand response 18.8%, heavy rail 14.5%, and light rail 1.3%.
- Buses operated 63.7% of vehicle hours, commuter rail 3.1%, demand response 19.1%, heavy rail 11.2%, and light rail 1.3%.
- If all service had been operated by buses, twice as many bus miles would need to have been operated.
- Average revenue service speed was highest for vanpools at 38.8 miles per hour. Commuter rail was 31.6, heavy rail 20.4 light rail 15.1, demand response 14.5, and bus 12.8.

Average Speed is vehicle revenue miles divided by vehicle revenue hours.

Directional Route Miles is the mileage in each direction over which public transportation vehicles travel while in revenue service. Directional route miles are a measure of the route path over a facility or roadway, not the service carried on the facility; e.g. number of routes, vehicles or vehicle revenue miles. Directional route miles are computed with regard to direction of service, but without regard to the number of traffic lanes or rail tracks existing in the right-of-way. Directional route miles do not include staging or storage areas at the beginning or end of a route.

Miles of Track is the sum of the number of tracks per one mile segment of right-of-way. Miles of track are measured without regard to whether or not rail traffic can flow in only one direction on the track. All track is counted, including yard track and sidings.

Total Bus Mile Equivalents is the number of vehicle miles that would have been operated by a transit mode if the service had been provided by buses. Based on average seating plus standing capacity of the vehicle as compared to the capacity including standees (70 people) of a standard-size bus.

Vehicle Hours are the hours a vehicle travels from the time it pulls out from its garage to go into revenue service to the time it pulls in from revenue service. It is often called platform time. For conventional scheduled services, it includes revenue time and deadhead time.

Vehicle Miles are the miles a vehicle travels from the time it pulls out from its garage to go into revenue service to the time it pulls in from revenue service. It is often called platform miles. For conventional scheduled services, it includes revenue time and deadhead time.

Vehicle Revenue Hours are the hours traveled when the vehicle is in revenue service (i.e., the time when a vehicle is available to the general public and there is an expectation of carrying passengers). These passengers either directly pay fares, are subsidized by public policy, or provide payment through some contractual arrangement. Vehicles operated in fare free service are considered in revenue service. Revenue service excludes school bus service and charter service. For conventionally scheduled services, vehicle revenue hours are comprised of 2 elements: running time and layover/recovery time.

Vehicle Revenue Miles are the miles traveled when the vehicle is in revenue service (i.e., the time when a vehicle is available to the general public and there is an expectation of carrying passengers). These passengers either directly pay fares, are subsidized by public policy, or provide payment through some contractual arrangement. Vehicles operated in fare free service are considered in revenue service. Revenue service excludes school bus service and charter service. For conventionally scheduled services, vehicle revenue miles are comprised of running miles only.

A Philadelphia Southeastern Pennsylvania Transportation Authority train operates in a freeway median. When counting vehicle miles and hours for trains, each car is counted, so this 6-car train operates 6 vehicle miles for each mile traveled and 6 vehicle hours for each hour in service.

TABLE 18: Vehicle Miles Operated by Mode, Millions

YEAR	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL	TOTAL BUS MILE EQUIV-ALENTS (a)
1990	2,129.9	212.7	305.9	536.7	24.2	13.8	18.3	3,241.5	4,127.5
1991	2,166.6	214.9	335.0	527.2	27.6	13.6	21.5	3,306.4	4,159.1
1992	2,178.0	218.8	363.5	525.4	28.6	13.9	26.4	3,354.6	4,187.0
1993	2,209.6	223.9	406.0	522.1	27.7	13.0	32.2	3,435.1	4,233.8
1994	2,162.0	230.8	463.7	531.8	34.0	13.7	31.5	3,467.5	4,248.2
1995	2,183.7	237.7	506.5	537.2	34.6	13.8	36.7	3,550.2	4,313.9
1996	2,220.5	241.9	548.3	543.1	37.6	13.7	45.2	3,650.3	4,397.2
1997	2,244.6	250.7	585.3	557.7	41.2	14.0	52.3	3,745.8	4,499.5
1998	2,174.6	259.5	670.9	565.7	43.8	13.6	65.5	3,793.6	4,504.1
1999	2,275.9	265.9	718.4	577.7	48.7	14.2	71.4	3,972.2	4,675.0
2000	2,314.8	270.9	758.9	595.2	52.8	14.5	73.7	4,080.8	4,788.1
2001 P	2,376.5	277.3	789.3	608.1	54.3	12.8	77.9	4,196.2	4,908.6
2001 % of Total	56.6%	6.6%	18.8%	14.5%	1.3%	0.3%	1.9%	100.0%	

P = Preliminary
(a) Estimate based on average seating plus standing capacity of vehicle compared to that of a bus (70 passengers): light rail = 1.7, heavy rail = 2.6, commuter rail = 2.2, trolleybus = 1.0, demand response = 0.2, other = 1.0.

TABLE 19: Vehicle Hours Operated by Mode, Millions

YEAR	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
1990	163.0	6.5	24.4	28.4	2.0	1.8	1.4	227.5
1991	163.8	6.4	26.3	24.6	2.2	1.8	1.4	226.5
1992	165.1	6.5	28.7	25.6	2.2	1.8	1.6	231.5
1993	166.2	6.6	30.5	27.2	2.1	1.8	1.8	236.2
1994	162.1	6.9	32.6	27.3	2.5	1.8	1.5	234.7
1995	162.9	7.2	34.9	27.6	2.5	1.8	1.6	238.5
1996	165.5	7.3	37.0	28.0	2.7	1.8	1.9	244.2
1997	167.0	7.5	39.5	28.8	2.8	1.8	2.1	249.5
1998	164.0	7.9	44.1	29.3	2.9	1.8	2.3	252.3
1999	170.1	8.5	48.2	29.9	3.2	1.9	2.5	264.3
2000	174.3	9.4	50.9	30.9	3.5	2.0	3.0	274.0
2001 P	179.4	8.8	53.8	31.6	3.6	1.8	2.7	281.7
2001 % of Total	63.7%	3.1%	19.1%	11.2%	1.3%	0.6%	1.0%	100.0%

P = Preliminary

TABLE 20: Average Vehicle Speed in Revenue Service by Mode, 2001

MODE	AVERAGE SPEED (MILES PER HOUR)
Bus	12.8
Commuter Rail	31.6
Demand Response	14.5
Ferryboat (b)	8.0
Heavy Rail	20.4
Light Rail	15.1
Trolleybus	7.1
Vanpool	38.8
Other (a)	7.8
TOTAL	14.7

(a) Includes aerial tramway, automated guideway transit, cable car, inclined plane, and monorail.
(b) Excludes international, rural, rural interstate, island, and urban park ferries.

TABLE 21: Vehicle Revenue Miles and Vehicle Revenue Hours by Mode, 2001

MODE	VEHICLE REVENUE MILES (000)	VEHICLE REVENUE HOURS (000)
Bus	2,058,290	161,055
Commuter Rail	253,243	8,025
Demand Response	670,097	46,325
Ferryboat (b)	2,896	361
Heavy Rail	591,148	28,943
Light Rail	53,515	3,542
Trolleybus	12,319	1,729
Vanpool	70,192	1,808
Other (a)	3,510	448
TOTAL	3,715,210	252,236

(a) Includes aerial tramway, automated guideway transit, cable car, inclined plane, and monorail.
(b) Excludes international, rural, rural interstate, island, and urban park ferries.

Vehicles

Highlights.....

- There were over 134,000 active vehicles providing public transportation service in 2001.
- Buses comprised 56.7%, commuter rail 3.8%, demand response 25.8%, heavy rail 8.0%, and light rail 1.0%.
- Average age of buses was 7.5 years, commuter rail cars 22.0 years, demand response 3.3 years, heavy rail 21.8 years, and light rail 18.4 years.
- Average age of buses was 39.4 feet, commuter rail cars 85.0 feet, demand response 21.8 feet, heavy rail 61.2 feet, and light rail 73.5 feet.
- 11.8% of buses used alternative power, 47.6% of commuter rail cars, 5.1% of demand response, 100% of heavy and light rail cars and trolleybuses.
- 90.7% of buses were wheelchair accessible, 66.7% of commuter rail cars, 94.4% of demand response, 98.7% of heavy rail, and 78.5% of light rail.
- About 5,800 buses and demand response vehicles used compressed natural gas and CNG blends, over 900 used liquefied natural gas and LNG blends, and over 200 used propane.
- About 300 to 400 new rail cars and 6,000 to 8,000 buses and demand response vehicles are built each year. Over 3,500 of the buses are 40 to 60 feet in length, and about 2,500 are below 27.5 feet

For definitions of vehicles used in a mode, see the "Bus and Trolleybus," "Demand Response, "Vanpool," "Rail," and "Ferryboat" sections.

Accessible Vehicle is a revenue vehicle that does not restrict access, is usable, and provides allocated space and/or priority seating for individuals who use wheelchairs.

Active Vehicle is a vehicle in the year end fleet that is available to operate in revenue service, including spares and vehicles temporarily out of service for routine maintenance and minor repairs.

High Occupancy Vehicle (HOV) is a vehicle that can carry two or more persons. Examples of high occupancy vehicles are a bus, vanpool and carpool. These vehicles sometimes have exclusive traffic lanes called "HOV lanes," "busways," "transitways" or "commuter lanes."

Passenger Vehicle is a vehicle used to carry passengers in transit service.

Rehabilitation is the rebuilding of revenue vehicles to original specifications of the manufacturer. Rebuilding may include some new components but has less emphasis on structural restoration than would be the case in a remanufacturing operation, focusing on mechanical systems and vehicle interiors.

Heavy rail, automated guideway, bus, and demand response vehicles operated by the Miami-Dade Transit Agency in Miami, Florida, illustrate the wide variety of vehicles used in public transportation.

TABLE 22: Active Passenger Vehicles by Mode

YEAR	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
1990	58,714	4,415	16,471	10,419	913	832	1,197	92,961
1991	60,377	4,370	17,879	10,331	1,095	752	1,595	96,399
1992	63,080	4,413	20,695	10,245	1,058	907	1,853	102,251
1993	64,850	4,494	23,527	10,261	1,025	851	2,308	107,316
1994	68,123	4,517	28,729	10,138	1,054	877	2,505	115,943
1995	67,107	4,565	29,352	10,157	999	885	2,809	115,874
1996	71,678	4,665	30,804	10,201	1,140	871	3,003	122,362
1997	72,770	4,943	32,509	10,242	1,229	859	3,808	126,360
1998	72,142	4,963	29,646	10,301	1,220	880	4,703	123,855
1999	74,228	4,883	31,884	10,306	1,297	859	5,059	128,516
2000	75,013	5,073	33,080	10,591	1,577	951	5,208	131,493
2001 P	76,075	5,124	34,661	10,718	1,366	600	5,727	134,271
2001 % of Total	56.7%	3.8%	25.8%	8.0%	1.0%	0.4%	4.3%	100.0%

P = Preliminary

TABLE 23: Average Vehicle Age by Mode, 2002

MODE	AVERAGE AGE (YEARS)
Bus	7.5
Commuter Rail	22.0
Commuter Rail Locomotive	17.2
Demand Response	3.3
Ferryboat	25.1
Heavy Rail	21.8
Jitney	4.0
Light Rail	18.4
Other Rail	52.8
Trolleybus	14.7
Vanpool	3.7

Source: APTA survey. Data reported are not national totals.

TABLE 24: Average Vehicle Length by Mode, 2002

MODE	AVERAGE LENGTH (FEET)
Bus	39.4
Commuter Rail	85.0
Commuter Rail Locomotive	60.3
Demand Response	21.8
Ferryboat	233.8
Heavy Rail	61.2
Jitney	23.1
Light Rail	73.5
Other Rail	45.3
Trolleybus	45.8
Vanpool	17.4

Source: APTA survey. Data reported are not national totals.

TABLE 25: Alternative Power Vehicles by Mode, 2002 (a)

MODE	PER CENT USING ALTERNATIVE POWER
Bus	11.8%
Commuter Rail	47.6%
Commuter Rail Locomotive	28.5%
Demand Response	5.1%
Ferryboat	36.5%
Heavy Rail	100.0%
Jitney	0.0%
Light Rail	100.0%
Other Rail	100.0%
Trolleybus	100.0%
Vanpool	0.5%

Source: APTA survey. Data reported are not national totals.
(a) Alternative power includes all power except straight diesel and gasoline.

This bus is powered by the most popular alternative power, compressed natural gas. Due to the low-floor configuration, the CNG tanks are located on the roof of the bus. The Pinellas Suncoast Transit Authority that serves the St. Petersburg, Florida area is the operator of this bus.

TABLE 26: Passenger Vehicle Power Sources (a)

POWER SOURCE	BUS	COMMUTER RAIL CAR	COMMUTER RAIL LOCO-MOTIVE	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
Compressed Natural Gas	5,369	0	0	297	0	0	0	18	5,684
CNG Blends	128	0	0	44	0	0	0	0	172
Diesel	50,742	13	454	6,520	0	0	0	352	58,081
Diesel with Trap	152	0	0	8	0	0	0	0	160
Electric Battery & Hybrid	113	0	0	0	0	0	0	0	113
Electric Third Rail or Catenary	0	2,395	69	0	11,157	1,629	870	58	16,178
Electric & Diesel	0	0	113	0	0	4	216	18	351
Ethanol & Blends	0	0	0	0	0	0	0	0	0
Gasoline	203	0	0	3,244	0	0	0	3,292	6,739
Liquefied Natural Gas	788	0	0	39	0	0	0	0	827
LNG Blends	91	0	0	0	0	0	0	0	91
Methanol	12	0	0	0	0	0	0	0	12
Propane	87	0	0	131	0	0	0	0	218
Other (b)	130	0	0	4	0	0	0	0	134
Unpowered	0	2,627	1	0	3	0	0	49	2,680
TOTAL	57,815	5,035	637	10,287	11,160	1,633	1,086	3,787	91,440

(a) Source: APTA January 1, 2002 survey of about 300 transit agencies.
(b) Includes bio or soy diesel blends, hydrogen, jet fuel, and propane blends.

TABLE 27: Accessible Vehicles by Mode, 2002

MODE	ACCESSIBLE VEHICLES (a)	VEHICLES REPORTED	PER CENT ACCESSIBLE (a)
Bus	52,423	57,815	90.7%
Commuter Rail	3,358	5,035	66.7%
Demand Response	9,708	10,287	94.4%
Ferryboat	18	52	34.6%
Heavy Rail	11,011	11,160	98.7%
Jitney	257	257	100.0%
Light Rail	1,282	1,633	78.5%
Other Rail	61	107	57.0%
Trolleybus	707	1,086	65.1%
Vanpool	115	3,371	3.4%

Source: APTA survey. Data reported are not national totals.
(a) Accessible vehicles include accessibility via lift, ramp, and station.

Traditional high-floor buses with steps such as this one at Riverside Transit Agency in California use lifts to accommodate wheelchair users.

Community Transit in Snohomish County, Washington operates low-floor buses with a floor only 12-16 inches off the ground that use an extendable ramp for wheelchair access.

TABLE 28: New Passenger Vehicles Delivered by Mode

YEAR	RAIL CARS (c)			BUSES & DEMAND RESPONSE (a)			TROLLEY BUS	TOTAL (b)
	COMMUTER RAIL	HEAVY RAIL	LIGHT RAIL	29 SEATS OR FEWER	30-39 SEATS	40 SEATS OR MORE	TOTAL	
1990	83	10	55	1,389	489	2,901	4,779	118	5,045
1991	187	6	17	1,781	411	2,530	4,722	149	5,081
1992	110	163	35	1,322	549	1,555	3,426	0	3,734
1993	8	260	54	1,919	566	2,351	4,836	24	5,182
1994	47	55	72	2,502	433	2,483	5,418	36	5,628
1995	38	72	38	2,823	733	2,466	6,022	3	6,173
1996	111	10	39	2,620	1,531	1,865	6,016	3	6,179
1997	198	34	76	2,910	1,090	2,329	6,329	0	6,637
1998	122	120	80	2,696	1,381	3,058	7,135	54	7,511
1999	132	122	123	2,829	1,259	2,727	6,815	0	7,192
2000	116	204	136	3,146	1,653	2,897	7,696	0	8,152
2001 P	54	751	111	4,496	2,928	3,273	10,697	220	11,833
2002 P	166	828	107	NA	NA	NA	NA	NA	NA
2001 % of Total	0.5%	6.3%	0.9%	38.0%	24.7%	27.7%	90.4%	1.9%	100.0%

P = Preliminary
(a) Buses and demand response only; excludes vanpool vans. Bus comprises about 25% of the 29-seats-or-fewer size group and virtually 100% of the other size groups.
(b) Excludes vanpool vans, ferryboats, and other modes not listed.
(c) Source for rail modes; *Railway Age*, January issue.

TABLE 29: New Buses & Demand Response Vehicles Delivered by Length (a)

YEAR	27'5" AND BELOW	27'6" - 32'5"	32'6" - 37'5"	37'6" - 45'0"	ARTICULATED/ DOUBLE DECKED	TOTAL
1990	932	450	567	2,782	48	4,779
1991	1,430	395	357	2,460	80	4,722
1992	968	338	584	1,482	54	3,426
1993	1,594	333	374	2,435	100	4,836
1994	2,333	147	350	2,513	75	5,418
1995	2,436	420	358	2,695	113	6,022
1996	2,282	383	405	2,885	61	6,016
1997	2,316	603	641	2,591	178	6,329
1998	2,206	556	463	3,698	212	7,135
1999	2,100	770	387	3,240	318	6,815
2000	2,566	747	274	3,528	591	7,696
2001 P	3,756	873	418	5,502	148	10,697
2001 % of Total	35.1%	8.2%	3.9%	51.4%	1.4%	100.0%

P = Preliminary
(a) Buses comprise about 5% of the 27'5"-and-below size group and virtually 100% of the other size groups.

Employees

Highlights.....

- There were about 357,000 operating employees, plus about 13,500 capital employees, in 2001.
- 63.8% of the operating employees were in vehicle operations, 17.5% in vehicle maintenance, 8.4% in non-vehicle maintenance, and 10.3% in general administration.
- Bus employees were 60.1%, commuter rail 6.7%, demand response 15.6%, heavy rail 13.4%, and light rail 1.9%.
- Average compensation per employee (salaries and fringe benefits) was about $44,100.

Data in this section include transit agency employees. Data exclude persons employed by other organizations under service contracts to perform certain duties. For some agencies, virtually all personnel are contracted, so employee counts only include a handful of office personnel.
There are two types of employees:

A **Capital Employee** is an employee whose labor hour cost is reimbursed under a capital grant or is otherwise capitalized. Generally, only large transit agencies have such employees.

An **Operating Employee** is an employee engaged in the operation of the transit system. Types include:

A **General Administration Employee** is an executive, professional, supervisory, or secretarial transit system person engaged in general management and administration activities: preliminary transit system development, customer services, promotion, market research, injuries and damages, safety, personnel administration, general legal services, general insurance, data processing, finance and accounting, purchasing and stores, general engineering, real estate management, office management and services, general management, and planning.

A **Non-Vehicle Maintenance Employee** is an executive, professional, supervisory, or secretarial transit system person engaged in non-vehicle maintenance, a person providing maintenance support to such persons for inspecting, cleaning, repairing and replacing all components of: vehicle movement control systems; fare collection and counting equipment; roadway and track; structures, tunnels, and subways; passenger stations; communication system; and garage, shop, operating station, general administration buildings, grounds and equipment. In addition, it includes support for the operation and maintenance of electric power facilities.

An **Other Vehicle Operations Employee** is an executive, professional, or supervisory transit system person engaged in vehicle operations, a person providing support in vehicle operations activities, a person engaged in ticketing and fare collection activities, or a person engaged in system security activities.

A **Vehicle Maintenance Employee** is an executive, professional, secretarial, or supervisory transit system person engaged in vehicle maintenance, a person performing inspection and maintenance, vehicle maintenance of vehicles, performing servicing functions for revenue and service vehicles, and repairing damage to vehicles resulting from vandalism or accidents.

A **Vehicle Operator** is a person (other than security agents) scheduled to be aboard vehicles in revenue operations including vehicle operators, conductors, and ticket collectors.

Bus operators are often the only public transportation employees most riders ever see. The Charlotte Area Transit System in Charlotte, North Carolina employs this operator.

Many employees labor behind the scenes, such as this Tri-County Metropolitan Transportation District customer information representative in Portland, Oregon.

Mechanics must undergo extensive training to be able to repair the various types of equipment used by a transit agency. This wheel-chair lift mechanic is at the Los Angeles County Metropolitan Transportation Authority.

Track workers at the MTA Metro-North Railroad in New York City pursue their never-ending task of making sure the roadbed and track are in good repair.

Commuter railroads still employ one of the oldest transportation professions--the conductor. This one is also in New York, but at the MTA Long Island Rail Road.

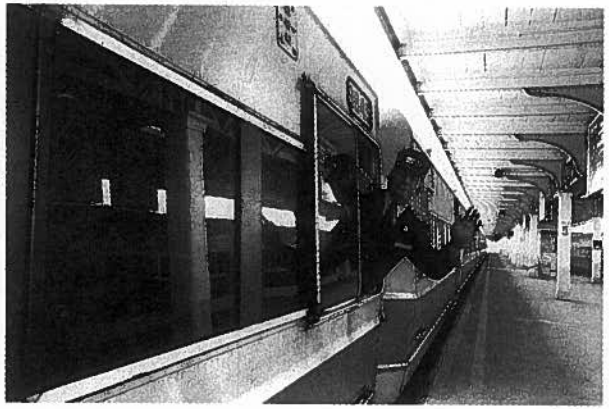


TABLE 30: Operating Employees by Mode (a) (b)

YEAR	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
1990	162,189	21,443	22,740	46,102	4,066	1,925	3,711	262,176
1991	163,555	21,083	24,196	47,423	4,175	1,826	3,599	265,857
1992	163,387	21,151	25,863	47,493	3,849	1,691	3,668	267,102
1993	177,167	20,634	30,021	52,433	3,920	1,944	3,400	289,519
1994	174,373	22,596	35,450	51,062	5,140	1,848	3,618	294,087
1995	181,973	22,320	39,882	45,644	4,935	1,871	3,866	300,491
1996	190,152	22,604	44,667	45,793	5,728	2,084	3,916	314,944
1997	196,861	21,651	44,029	45,935	5,940	2,037	4,306	320,759
1998	198,644	22,488	48,406	45,163	6,024	2,053	4,974	327,752
1999	204,179	22,896	51,186	46,311	6,058	2,140	5,115	337,885
2000	211,095	23,518	52,021	47,087	6,572	2,223	5,325	347,841
2001 P	214,674	23,851	55,846	47,865	7,021	2,008	6.001	357,266
2001 % of Total	60.1%	6.7%	15.6%	13.4%	1.9%	0.6%	1.7%	100.0%

P = Preliminary
(a) Based on employee equivalents of 2,080 labor hours equals one employee; beginning 1993 equals actual employees. Series not continuous between 1992 and 1993.
(b) Excludes capital employees and an estimated 10,000-20,000 individuals not employed by transit agencies and whose compensation is classified as "services"--e.g. boiler repairman, marketing consultant, independent auditor.

TABLE 31: Employees by Function (a) (b)

YEAR	VEHICLE OPERATIONS (c)	VEHICLE MAINTENANCE	NON-VEHICLE MAINTENANCE	GENERAL ADMINISTRATION	OPERATING TOTAL	CAPITAL	TOTAL
1990	150,556	31,424	44,282	35,914	262,176	10,663	272,839
1991	153,281	31,861	42,708	38,007	265,857	10,288	276,145
1992 (c)	169,549	48,270	24,062	25,221	267,102	11,893	278,995
1993	179,426	53,041	28,043	29,009	289,519	9,665	299,184
1994	183,673	51,405	27,004	32,005	294,087	10,207	304,294
1995	190,675	51,905	27,329	30,582	300,491	10,695	311,186
1996	199,615	54,645	27,239	33,445	314,944	11,682	326,626
1997	207,510	53,322	27,232	32,695	320,759	13,081	333,840
1998	209,047	57,128	28,335	33,242	327,752	10,963	338,715
1999	215,185	59,018	28,914	34,768	337,885	11,938	349,823
2000	221,885	61,155	29,527	35,274	347,841	11,753	359,594
2001 P	228,091	62,404	29,963	36,808	357,266	13,490	370,756
2001 % of Total	63.8%	17.5%	8.4%	10.3%	100.0%		

P = Preliminary
(a) Based on employee equivalents of 2,080 labor hours equals one employee; beginning 1993 equals actual employees. Series not continuous between 1992 and 1993.
(b) Excludes an estimated 10,000-20,000 individuals not employed by transit agencies and whose compensation is classified as "services."
(c) Beginning 1992, ticketing, fare collection, and security employees reclassified from "General Administration" to "Other Vehicle Operations," and vehicle maintenance administrative and support employees reclassified from "Non-Vehicle Maintenance" to "Vehicle Maintenance."

TABLE 32: Employee Compensation, Millions of Dollars

YEAR	NUMBER OF EMPLOYEES (a)(b)	SALARIES AND WAGES	FRINGE BENEFITS	COMPENSATION	COMPENSATION PER EMPLOYEE (ACTUAL DOLLARS)
1990	272,839	7,226.3	3,986.0	11,212.3	41,095
1991	276,145	7,394.5	3,998.4	11,392.9	41,257
1992	278,995	7,670.5	4,318.6	11,989.1	42,972
1993	299,184	7,932.1	4,400.3	12,332.4	41,220
1994	304,294	8,223.8	4,451.7	12,675.5	41,655
1995	311,186	8,213.1	4,484.0	12,697.1	40,802
1996	326,626	8,437.6	4,401.4	12,839.0	39,308
1997	333,840	8,771.7	4,503.7	13,275.4	39,766
1998	338,715	9,211.2	4,843.6	14,054.8	41,494
1999	349,823	9,495.1	5,052.3	14,547.4	40,177
2000	359,594	10,400.2	5,412.9	15,813.1	43,975
2001 P	370,756	10,626.9	5,705.6	16,332.5	44,052

P = Preliminary

(a) Based on employee equivalents of 2,080 labor hours equals one employee; beginning 1993 equals actual employees. Employee data not continuous between 1992 and 1993.

(b) Excludes an estimated 10,000-20,000 individuals not employed by transit agencies and whose compensation is classified as "services."

Energy and Environment

Highlights.....

- About 857 million gallons of fossil fuels and 5,6 billion kilowatt-hours of electricity were used to move transit vehicles in 2001.
- 86.9% of all fossil fuels used was diesel, of which 78.8% was by buses, 9.7% by commuter rail, 7.4% by demand response, and 4.1% by ferryboats.
- 59.1% of the non-diesel fuel used was compressed natural gas, 23.7% gasoline, 12.3% liquefied natural gas, and 4.2% propane.
- 65.0% of the electric power was used by heavy rail, 24.1% by commuter rail, and 8.7% by light rail.
- All diesel buses average 7.0 miles per gallon, though heavily-loaded 40-60-foot buses might average considerably less. Compressed natural gas buses average 2.8 m.p.g., while liquefied natural gas buses average 2.2.
- On a passenger mile basis, buses use only 84% as much fuel as automobiles, vans, and sports utility vehicles. Commuter rail uses only 31% as much, heavy rail 17%, and light rail 22%.
- A daily transit user making a 5-mile trip each way instead of driving a 25-mile per gallon vehicle would save 94.4 gallons of gasoline costing about $165 (assuming $1.75 per gallon). Savings could range up to 1,888 gallons costing over $3,300 for a 15 m.p.g. vehicle traveling 60 miles each way.

Public transportation, while a large user of energy, is a major contributor to energy conservation since multiple-occupancy vehicles use less energy than automobiles on a per-user basis.

Most rail transit vehicles and trolleybuses emit little or no pollution since they are electrically propelled. Most buses, ferryboats, commuter rail locomotives, and many demand response vans use diesel, which technology is making less-polluting all the time. Vanpools, many demand response vans, and a few buses use gasoline.

Many newer buses are being fueled by alternate fuels such as compressed natural gas, liquefied natural gas, and propane to improve air quality and comply with federal and state pollution-reduction requirements. In fact, many transit agencies are only buying alternate-fuel vehicles now.

In addition, transit agencies are also subject to diesel-electric locomotive emissions, scrap tires, vehicle air-conditioning system refrigerants, stormwater runoff from transit facilities, hazardous waste management, underground storage tanks, asbestos and lead-based paint removal, and hazardous wastes in rights-of-way regulations.

TABLE 33: Fossil Fuel Consumption by Mode, Thousands of Gallons (a)

YEAR	DIESEL						NON-DIESEL (c)
	BUS	COMMUTER RAIL	DEMAND RESPONSE	FERRY BOAT (b)	OTHER	TOTAL	
1990	563,151	52,681	15,497	19,627	74	651,030	33,906
1991	572,861	54,315	17,422	20,465	95	665,158	34,467
1992	592,049	54,951	16,896	20,926	122	684,944	38,188
1993	575,740	59,766	22,890	19,968	147	678,511	47,251
1994	565,064	61,900	29,949	21,146	167	678,226	64,838
1995	563,767	63,064	28,958	22,307	190	678,286	71,470
1996	577,680	61,888	30,923	21,991	232	692,714	76,305
1997	597,636	63,195	32,020	23,881	220	716,952	83,369
1998	606,631	69,200	38,275	25,269	246	739,621	89,883
1999	618,204	73,005	43,202	28,721	237	763,369	93,092
2000	635,160	70,818	48,088	31,780	179	786,025	103,078
2001 P	587,184	72,204	54,898	30,266	111	744,663	112,088
2001 % of Total	78.8%	9.7%	7.4%	4.1%	0.0%	100.0%	

P = Preliminary
(a) Data includes passenger vehicles and locomotives; excludes non-passenger-vehicle and non-vehicle consumption.
(b) Excludes international, rural, rural interstate, island, and urban park ferries.
(c) Prior to 1992, includes gasoline only. Series not continuous between 1991 and 1992.

TABLE 34: Non-Diesel Fossil Fuel Consumption by Fuel, Thousands of Gallons (a)

YEAR	COMPRESSED NATURAL GAS	GASOLINE	LIQUIFIED NATURAL GAS	METHANOL	PROPANE (LIQUID PETROLEUM GAS)	OTHER	TOTAL
1992	1,009	32,906	191	1,583	2,487	12	38,188
1993	1,579	37,928	474	4,975	2,098	197	47,251
1994	4,835	43,921	1,450	12,269	1,871	492	64,838
1995	10,740	42,769	2,236	11,174	3,686	865	71,470
1996	15,092	41,495	2,862	7,268	5,235	4,353	76,305
1997	23,906	41,547	4,030	965	5,150	7,771	83,369
1998	37,268	35,645	5,331	958	6,631	4,050	89,883
1999	44,398	32,699	7,672	1,433	5,604	1,286	93,092
2000	54,794	29,908	12,567	131	4,988	690	103,078
2001 P	66,215	26,606	13,765	34	4,702	766	112,088
2001 % of Total	59.1%	23.7%	12.3%	0.0%	4.2%	0.7%	100.0%

P = Preliminary
(a) Data includes passenger vehicles; excludes non-passenger-vehicle and non-vehicle consumption.

TABLE 35: Electric Power Consumption by Mode, Millions of Kilowatt Hours (a)

YEAR	COMMUTER RAIL	HEAVY RAIL	LIGHT RAIL	TROLLEYBUS	OTHER	TOTAL
1990	1,226	3,284	239	69	19	4,837
1991	1,239	3,248	274	72	20	4,853
1992	1,124	3,193	297	80	22	4,716
1993	1,196	3,287	281	79	22	4,865
1994	1,244	3,431	282	103	21	5,081
1995	1,253	3,401	288	100	26	5,068
1996	1,255	3,332	321	69	30	5,007
1997	1,270	3,253	361	78	26	4,988
1998	1,299	3,280	381	74	39	5,073
1999	1,322	3,385	416	75	39	5,237
2000	1,370	3,549	463	77	51	5,510
2001 P	1,354	3,646	487	74	49	5,610
2001 % of Total	24.1%	65.0%	8.7%	1.3%	0.9%	100.0%

P = Preliminary
(a) Data includes passenger vehicles and locomotives; excludes non-passenger-vehicle and non-vehicle consumption.

TABLE 36: Major Power Source Efficiency, Miles per Gallon

MODE	ELECTRIC POWER (a)	DIESEL	COMPRESSED NATURAL GAS	GASOLINE	LIQUIFIED NATURAL GAS	PROPANE (LIQUID PETROLEUM GAS)
Automated Guideway	0.13	NA	NA	NA	NA	NA
Bus	0.59	7.05	2.77	4.72	2.19	1.41
Cable Car	0.14	NA	NA	NA	NA	NA
Commuter Rail	0.10	0.30	NA	NA	NA	NA
Demand Response	NA	12.62	6.73	22.10	2.21	4.85
Ferryboat	NA	4.29	0.89	NA	NA	NA
Heavy Rail	0.17	NA	NA	NA	NA	NA
Inclined Plane	0.09	NA	NA	NA	NA	NA
Light Rail	0.11	NA	NA	NA	NA	NA
Monorail	0.32	NA	NA	NA	NA	NA
Trolleybus	0.18	NA	NA	NA	NA	NA
Vanpool	NA	14.41	9.72	13.29	NA	14.67

Source: Federal Transit Administration, 2000 National Transit Database.
Minor bus power sources: ethanol--2.23, kerosene--3.78, methanol--0.96.
(a) Miles per kilowatt hour.

TABLE 37: Energy Efficiency of Public Transportation and Personal Vehicles, 1998

MODE	BRITISH THERMAL UNIT/ VEHICLE MILE	BRITISH THERMAL UNIT/ PASSENGER MILE
Bus	41,338	4,415
Commuter Rail	54,071	1,612
Heavy Rail	19,789	911
Light Rail	29,688	1,152
AVERAGE	38,251	2,741
Automobiles, Sport Utility Vehicles, & Light Trucks	6,348	5,255

Source: *Conserving Energy and Preserving the Environment: The Role of Public Transportation*, Robert J. Shapiro, Kevin A. Hassett, and Frank S. Arnold, 2002.

TABLE 38: Examples of Fuel Savings to a Person Commuting to Work on Public Transportation

LENGTH OF TRIP	MILES TRAVELED PER YEAR (a)	ANNUAL FUEL SAVINGS, GALLONS BASED ON FOLLOWING PERSONAL VEHICLE FUEL EFFICIENCIES					
		15 MILES PER GALLON	20 MILES PER GALLON	25 MILES PER GALLON	30 MILES PER GALLON	35 MILES PER GALLON	40 MILES PER GALLON
2 miles	944	62.9	47.2	37.8	31.5	27.0	23.6
5 miles	2,360	157.3	118.0	94.4	78.7	67.4	59.0
10 miles	4,720	314.7	236.0	188.8	157.3	134.9	118.0
20 miles	9,440	629.3	472.0	377.6	314.7	269.7	236.0
30 miles	14,160	944.0	708.0	566.4	472.0	404.6	354.0
40 miles	18,880	1,258.7	944.0	755.2	629.3	539.4	472.0
50 miles	23,600	1,573.3	1,180.0	944.0	786.7	674.3	590.0
60 miles	28,320	1,888.0	1,416.0	1,132.8	944.0	809.1	708.0

(a) Based on 472 trips per year: 365 days minus 52 Saturdays minus 52 Sundays minus 7 holidays minus 10 days vacation minus 8 days sick leave times 2 trips per day.

TABLE 39: Emissions by Public Transportation and Personal Vehicles, 1999

VEHICLE TYPE	CARBON DIOXIDE	CARBON MONOXIDE	NITROGEN OXIDES	VOLATILE ORGANIC COMPOUNDS
	Grams/Vehicle Mile			
Bus	2,386.9	11.6	11.9	2.3
Diesel Rail	9,771.0	47.6	48.8	9.2
Automobile	415.5	19.4	1.4	1.9
Sport Utility Vehicles & Light Trucks	521.6	25.3	1.8	2.5
All Personal Vehicles	452.9	21.5	1.6	2.1
	Grams/Million Kilowatt Hours			
Electric Rail	618,499,055	1,772,125	17,365	137,987

Source: *Conserving Energy and Preserving the Environment: The Role of Public Transportation*, Robert J. Shapiro, Kevin A. Hassett, and Frank S. Arnold, 2002.

Safety and Security

SAFETY

Highlights.....

- Safety incidents involving transit vehicles of the 450 agencies reporting data in 2001included about 28,300 collisions, 21,100 other on-vehicle incidents, 3,100 fires, and 15,500 incidents in stations, parking lots, and other areas.
- There were only 37 passenger deaths while riding, boarding, or alighting from the vehicle. Automobile occupants were about 15 times more likely to die.
- 59.5% of the fatalities were on heavy rail, 27.0% on buses, and 10.8% on demand response.
- The comparable injury toll was about 30,200. 83.2% were on buses, 5.8% on demand response, and 5.6% on heavy rail.
- There were only 12 homicides against patrons in vehicles, stations, and bus stops.
- 54.2% of violent security incidents (felonies) occurred on heavy rail, 24.2% on buses, 12.7% on commuter rail, and 7.0% on light rail.
- 58.1% of non-violent security incidents (misdemeanors) occurred on heavy rail, 24.7% on light rail, 13.3% on buses, and 3.4% on commuter rail.
- 36.8% of all security incidents involved fare evasion, 25.3% disorderly conduct, 12.1% for larceny/theft and motor vehicle theft, 6.2% for drunkenness, and 4.4% for robbery, aggravated assault, and rape.

Public transportation safety data, collected by the Federal Transit Administration since 1979, include incidents, fatalities, and injuries that do NOT involve criminal activity. However, these data for many transit agencies were incomplete or inaccurate because those systems were not in full compliance with the FTA reporting requirements. In addition, it has been impossible to separate out patron-only data for the various types of safety incidents because data reported combined patrons, employees, and other persons (e.g., automobile and other vehicle occupants, pedestrians, bicyclists). Only total patron fatalities data (which are zero 98% of the time) have been reasonably reliable.

In 1995, the FTA improved its efforts to ensure compliance and revised its reporting form to report patron, employee, and other data separately for each type of incident. By 1996 most of the reporting problems had been eliminated.

One must be cautious when attempting to compare public transportation safety data to airlines, automobiles, intercity buses and trains, and other modes of transportation. Public transportation's operating environment is unique due to the unique nature of public transportation vehicles, stations, and methods of operation and the huge numbers of people involved. Among the unique factors are:

- No other mode of transportation operates in an environment so fraught with the potential for injury--twice a day for three or four hours a continuing flow of thousands of people bump into and jostle one another in the constricted spaces of public transportation vehicles and on the platforms, ramps, stairways, escalators, and elevators of public transportation stations and transfer centers.

- Most public transportation buses and vans have built-in lifts or ramps to accommodate those using wheelchairs, walkers, and other mobility aids, while most rail, bus, and ferry stations have stairways, escalators, or elevators. All these have a significant risk factor resulting in a disproportionate number of safety incidents. No other mode of travel depends on such equipment to any significant extent.

- Minor incidents with less than $1,000 in transit agency property damage are **not** counted as safety incidents unless a fatality, injury, or fire occurs. Such incidents (e.g., a 2-mile-an-hour collision with a post or another vehicle resulting in a dented bumper or broken taillight) are so common that they are considered "wear-and-tear" incidents that have no safety implications.

- A fatality is defined as a death confirmed within 30 days of an incident. Lingering injuries resulting in death months later are counted as injuries due to the impracticality of attempting to keep track of such injuries over long periods of time.
- All fires are counted even if they involve something as minor as a cigarette burning in a trash can.

- Heavy and commuter rail stations act as magnets for those contemplating suicide, with about one-third of all deaths reported to the FTA for these two modes being suicides. In addition, there are numerous injuries to persons failing in suicide attempts as well as to public transportation vehicle occupants (due to sudden braking) and to others in the wrong place at the wrong time. These casualties inflate the public transportation total, but are obviously beyond the transit agency's control.

- Unlike other transportation modes, the vast majority (over 80%) of safety incidents occur in urbanized areas with over 1,000,000 population.

SECURITY

1995 was the first year security (crime) data relating to incidents, fatalities, and injuries resulting from criminal or illegal activities were collected by the Federal Transit Administration. On the assumption that almost no crime exists in small communities, only data for transit agencies in or serving urbanized areas over 200,000 population are collected. Data are derived from the FBI Uniform Crime Reporting Program.

The data for 1995 were quite incomplete since many transit agencies had not complied with the prescribed definitions and procedures. Some larger transit agencies still have not solved these problems. Even when they do, there will be several inherent problems with the data that will make much of it non-comparable:

- Some acts (such as drunkenness and loitering) are crimes in some states, counties, and cities, but not in others.

- Arrests may be handled by police forces in any of the dozens or hundreds of cities, towns, villages, and counties that the agency serves. A few of the largest agencies also have their own police forces. Accurate totals will require accumulation of data from each of these police forces, most of which probably cannot readily separate public transportation crimes from all other crimes in their jurisdiction. Failure of even one jurisdiction with numerous crime incidents to provide data will make the agency's data grossly inaccurate.

- Minor offenses such as trespassing and drunkenness are only counted if an arrest is made. When a citation or warning is issued, it is as if the incident never occurred. There will probably be considerable variances among police forces regarding the proportion of arrests vs. citations.

- Some crimes such as homicides have a high enforcement priority. Crimes low on the priority list such as drunkenness tend to be under-reported since scarce police resources have to be allocated to the most serious crimes, and the public, understanding that, does not report many less-serious crimes.

TABLE 40: Safety Summary by Mode, 2001 (NOT National Totals)

CATEGORY	BUS (a)	COMMUTER RAIL	DEMAND RESPONSE (a)	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER (a)	TOTAL (a)
INCIDENTS (excluding suicides)								
Collisions	24,161	208	2,893	304	304	119	265	28,254
On-Vehicle (b)	15,888	899	1,310	1,719	511	215	534	21,076
Other (c)	2,903	1,211	122	10,332	498	37	353	15,456
Fires (d)	393	182	36	2,339	134	3	0	3,087
FATALITIES (excluding suicides)								
Patron Vehicle (e)	10	0	4	22	1	0	0	37
Patron Other (c)	1	1	0	3	0	0	0	5
Employees	4	0	3	3	0	0	0	10
Other Persons	85	77	3	6	15	0	0	184
INJURIES (excluding suicide attempts)								
Patron Vehicle (e)	25,096	482	1,760	1,682	599	216	336	30,171
Patron Other (c)	846	318	65	6,072	276	13	111	7,701
Employees	8,016	1,061	675	2,816	234	93	496	13,391
Other Persons	5,731	120	365	45	108	31	36	6.436

Source: Federal Transit Administration, National Transit Database. Data reported include about 450 of the largest transit agencies.
(a) Data may significantly understate total since data for agencies not reported by the FTA comprises a significant portion of these modes.
(b) Includes derailments/vehicles going off road, and non-collision inside-vehicle, boarding/alighting, and in-vehicle fires.
(c) Includes non-collision parking facility, right-of-way, station/bus stop, and in-station and right-of-way fires.
(d) Excludes arson fires. Many fires are double-counted in the other three categories.
(e) Includes collision, derailments/vehicles going off road, and non-collision inside-vehicle, boarding/alighting, and in-vehicle fires.

TABLE 41: Non-Suicide Vehicle-Related Safety Incidents by Mode

YEAR	BUS (a)	COMMUTER RAIL	DEMAND RESPONSE (a)	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER (a)	TOTAL (a)
1997	38,683	1,338	3,253	2,494	823	537	425	47,553
1998	39,330	1,125	3,739	2,569	780	498	414	48,455
1999	40,286	1,075	4,180	2,228	809	390	1,053	50,021
2000	40,797	1,142	4,386	2,044	889	333	705	50,296
2001	40,049	1,107	4,203	2,023	815	334	799	49,330
2001 % of Total	81.2%	2.2%	8.5%	4.1%	1.7%	0.7%	1.6%	100.0%

Source: Federal Transit Administration, National Transit Database. Data reported include about 450 of the largest transit agencies.
(a) Data may significantly understate total since purchased service not reported by the FTA comprises a significant portion of these modes.

TABLE 42: Patron Non-Suicide Vehicle-Related Safety Fatalities by Mode

YEAR	BUS (a)	COMMUTER RAIL	DEMAND RESPONSE (a)	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER (a)	TOTAL (a)
1997	15	1	4	22	0	0	0	42
1998	27	12	6	19	1	0	0	65
1999	13	2	5	22	2	0	0	44
2000	19	1	13	19	5	0	1	58
2001	10	0	4	22	1	0	0	37
2001 % of Total	27.0%	0.0%	10.8%	59.5%	2.7%	0.0%	0.0%	100.0%

Source: Federal Transit Administration, National Transit Database. Data reported include about 450 of the largest transit agencies.
(a) Data may significantly understate total since purchased service not reported by the FTA comprises a significant portion of these modes.

TABLE 43: Patron Non-Suicide Vehicle-Related Safety Injuries by Mode

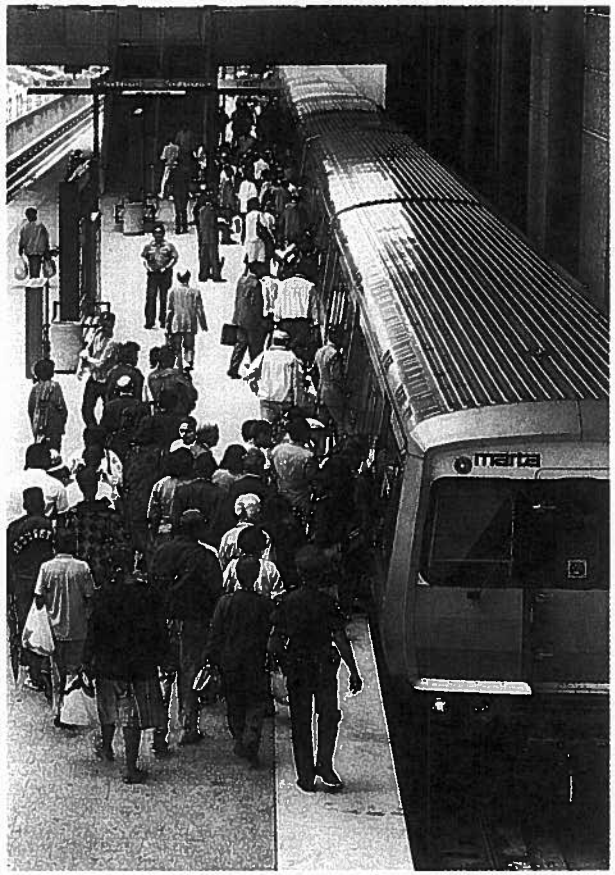
YEAR	BUS (a)	COMMUTER RAIL	DEMAND RESPONSE (a)	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER (a)	TOTAL (a)
1997	27,420	761	1,287	1,728	650	435	182	32,463
1998	28,518	520	1,517	1,668	622	400	236	33,481
1999	28,727	497	1,747	1,235	736	239	683	33,864
2000	26,910	572	1,709	1,375	665	232	254	31,717
2001	25,096	482	1,760	1,682	599	216	336	30,171
2001 % of Total	83.2%	1.6%	5.8%	5.6%	2.0%	0.7%	1.1%	100.0%

Source: Federal Transit Administration, National Transit Database. Data reported include about 450 of the largest transit agencies.
(b) Data may significantly understate total since purchased service not reported by the FTA comprises a significant portion of these modes.

TABLE 44: Fatality Rates by Mode of Travel, 1998-2000
Average Deaths per 100 Million Passenger Miles

TYPE OF VEHICLE	DEATH RATE
Airlines	0.04
Automobiles	0.87
Heavy, light, & other rail vehicles	Not reported
Intercity & commuter railroads	0.06
Intercity buses	0.04
Transit buses	0.05

Source: *Injury Facts*, National Safety Council, 2001.

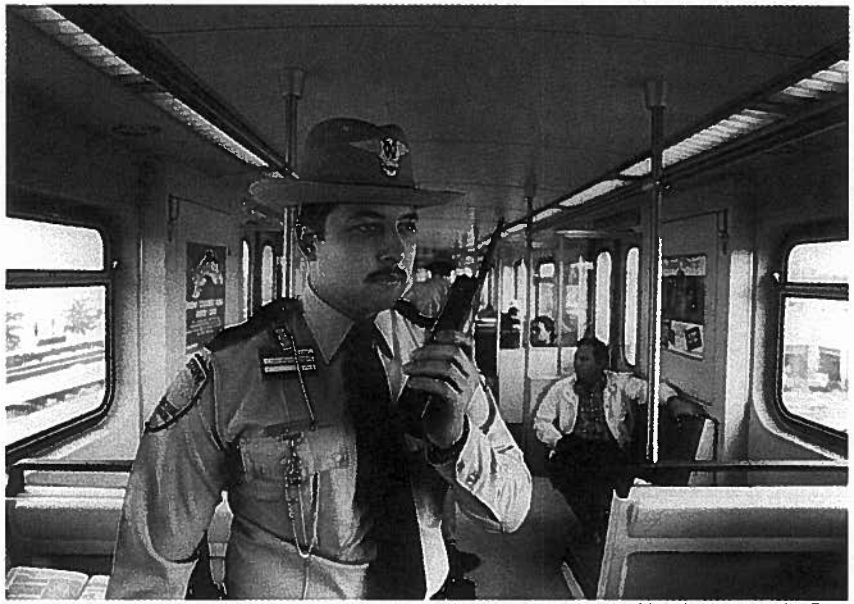


The Metropolitan Atlanta Rapid Transit Authority heavy rail system, one of the numerous new rail systems built since 1973, illustrates several factors affecting safety--station design, a security presence, and crowded platforms.

TABLE 45: Security Incidents by Mode, 2001

TYPE OF CRIME	BUS (a)	COMMUTER RAIL	DEMAND RESPONSE (a)	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER (a)	TOTAL (a)
VIOLENT CRIMES AGAINST PATRONS								
Homicide	7	0	0	3	2	0	0	12
Personal (c)	1,364	138	4	2,678	345	46	24	4,599
Property (d)	2,310	1,297	1	7,625	799	219	51	12,302
VIOLENT CRIMES AGAINST NON-PATRONS (EMPLOYEES AND OTHER PERSONS)								
Homicide	1	2	0	1	0	0	0	4
Personal (c)	742	120	9	83	61	16	1	1,032
Property (d)	729	1,014	10	1,325	133	16	16	3,243
OTHER CRIMES (b)								
Burglary & Arson	132	197	2	134	188	0	16	669
Disorderly Conduct (e)	3,253	607	2	27,626	1,046	21	14	32,569
Drunkenness (e)	4,693	108	4	1,308	1,598	300	22	8,033
Fare Evasion (e)	847	566	5	24,852	20,945	31	12	47,258
Vandalism (e)	1,410	295	9	984	246	5	22	2,971
Other (e)	3,980	2,022	12	7,169	2,554	35	78	15,850
TOTAL	19,468	6,366	58	73,788	27,917	689	256	128,542

Source: Federal Transit Administration, National Transit Database. Data reported include about 450 of the largest transit agencies.
(a) Data may significantly understate total since data for agencies not reported and data for urbanized areas under 200,000 population not reported by the FTA comprises a significant portion of these modes.
(b) Data include patrons and non-patrons. Patron-only data not collected.
(c) Includes forcible rape, robbery, aggravated assault.
(d) Includes larceny/theft and motor vehicle theft.
(e) Only includes incidents where arrests were made; when a citation is issued, the incident is not reported.



Most large transit agencies have their own police forces, or contract with private security firms. Most smaller agencies depend on local police and sheriff's departments for security. This officer is at the Miami-Dade Transit Agency in Miami, Florida.

Modern rail station design minimizes crime by eliminating columns, dark corners, and other areas where criminals can lurk. This Washington Metropolitan Area Transit Authority heavy rail station illustrates such design.

TABLE 46: Violent Security Incidents by Mode (b)

YEAR	BUS (a)	COMMUTER RAIL	DEMAND RESPONSE (a)	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER (a)	TOTAL (a)
1997	5,425	3,178	62	15,771	1,081	858	134	26,509
1998	4,478	2,933	45	11,731	1,237	145	133	20,702
1999	4,839	2,612	51	12,613	1,069	166	175	21,525
2000	4,886	2,909	51	12,276	1,563	94	85	21,864
2001	5,285	2,768	26	11,849	1,528	297	108	21,861
2001 % of Total	24.2%	12.7%	0.1%	54.2%	7.0%	1.3%	0.5%	100.0%

Source: Federal Transit Administration, National Transit Database. Data reported include bout 450 of the largest transit agencies.
(a) Data may significantly understate total since data for agencies not reported and data for urbanized areas under 200,000 population not reported by the FTA comprises a significant portion of these modes.
(a) Includes homicide, forcible rape, robbery, aggravated assault, larceny/theft, motor vehicle theft, burglary, and arson.

TABLE 47: Non-Violent Security Incidents by Mode (b)

YEAR	BUS (a)	COMMUTER RAIL	DEMAND RESPONSE (a)	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER (a)	TOTAL (a)
1997	25,615	7,688	148	69,022	6,615	958	4,564	114,610
1998	17,664	6,314	86	61,928	18,188	571	4,143	108,894
1999	20,581	3,399	41	55,826	23,702	222	453	104,224
2000	16,939	2,823	22	59,567	30,840	96	142	110,429
2001	14,183	3,598	32	61,939	26,389	392	148	106,681
2001 % of Total	13.3%	3.4%	0.0%	58.1%	24.7%	0.4%	0.1%	100.0%

Source: Federal Transit Administration, National Transit Database. Data reported include about 450 of the largest transit agencies.

(a) Data may significantly understate total since data for agencies not reported and data for urbanized areas under 200,000 population not reported by the FTA comprises a significant portion of these modes.

(b) Only includes incidents where arrests were made; when a citation is issued, the incident is not reported.

NATIONAL FINANCIAL DATA

Capital Expenses

Highlights.....

- $11.4 billion was spent in 2001.
- 35.3% was spent for rolling stock, 55.2% for facilities, and 9.5% for other capital expenses.
- 32.7% was used for bus projects, 20.1% for commuter rail, 30.7% for heavy rail, 12.6% for light rail.

Capital Expenses are expenses related to the purchase of equipment. Equipment means an article of non-expendable tangible property having a useful life of more than one year and an acquisition cost which equals the lesser of a) the capitalization level established by the government unit for financial statement purposes or b) $5,000. Capital expenses do not include operating expenses that are eligible to use capital funds. There are three types:

Rolling Stock is the revenue vehicles used in providing transit service for passengers. The term revenue vehicles includes the body and chassis and all fixtures and appliances inside or attached to the body or chassis, except fare collection equipment and revenue vehicle movement control equipment (radios). For rubber tired vehicles, it includes the cost of one set of tires and tubes to make the vehicle operational, if the tires and tubes are owned by the transit agency.

Facilities and facility-related projects include purchase, construction, rehabilitation or installation of maintenance facilities (including design and engineering, demolition, land acquisition, and relocation); crime prevention and security equipment; service and support equipment; operational support (computer hardware and software, bus diagnostic equipment and other activities that enhance system operations and efficiency while reducing operating costs); transit malls, transfer facilities, intermodal terminals, shelters, passenger stations, depots, terminals, high occupancy vehicle (HOV) facilities, transit ways, and park and ride facilities; track, line equipment and structures; signals and communications; and power equipment and substations.

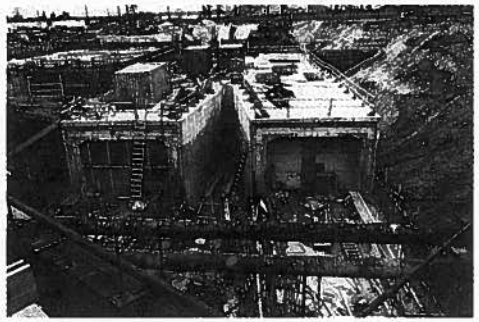
Other includes any other item not described above, such as service vehicles, construction of general administration facilities, furniture, equipment that is not an integral part of buildings and structures, data processing equipment (including computers and peripheral devices whose sole use is in data processing operations), fare collection equipment, and revenue vehicle movement control equipment.

Notes on Capital Costs

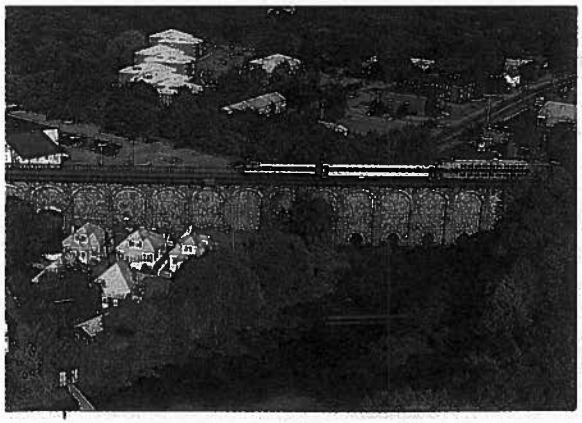
Capital expense costs reported to the Federal Transit Administration exclude expenses of purchased transportation contractors. Data in the following tables include APTA estimates for such expenses.

Because most capital projects take several years to complete, and data are reported each year as spent, it is not possible to correlate data to particular projects. Yearly totals rise and fall based on construction schedules, so comparison of data for various years has little value because of the differing projects included in each year.

Bond Expenses are not considered capital expenses by the FTA. Interest payments are considered a reconciling item for operating expenses. Principal repayments are not reported since the funds from bond issues have already been spent on rolling stock, facilities, and other equipment.



Tunnel construction for a Washington Metropolitan Area Transit Authority heavy rail line. Some tunnels are bored deep underground by special machines. This one employs the cut-and-cover method--digging a trench, building the tunnel, and then covering it up.



The rehabilitated Canton Viaduct built in the mid-1800s and still in use today by the Massachusetts Bay Transportation Authority commuter rail trains to Boston. A proportion of capital funds are spent to modernize old infrastructure such as this.

Construction Costs

Although data for public transportation infrastructure construction costs (e.g., new rail lines, high-occupancy-vehicle lanes, and busways) are reported to the Federal Transit Administration National Transit Database, data are not reported by complete project--only by year by mode, which could cover several projects being constructed simultaneously. Also, most projects are constructed over a period of several years, and only broad category data (vehicles, facilities, and other) are reported. Details on mileage, number of stations, size of parking lots, and other variables are not reported. Dozens of variables impact the cost of a project, and some costs, such as the quality of construction and the artistic beauty of a project, cannot be accurately measured. A few of those variables include:

1) land acquisition,
2) land clearance and demolition,
3) relocation of existing businesses and residences,
4) availability of "free" or low-cost right-of-way such as abandoned railroads,
5) utility relocation,
6) number, size, and length of stations,
7) number of tracks or lanes,
8) length of trackage or roadway,
9) number and size of maintenance yards and facilities,
10) proportion in deep tunnel, shallow tunnel, on the surface, and elevated,
11) number and size of parking lots or garages,
12) number and size of bridges,
13) station and right of way enhancements such as landscaping, works of art, information kiosks, benches, telephones, concession booths, fountains, etc.,
14) type and number of fare vending and collection machines,
15) inflation over the several-year time period needed for most projects,
16) the going labor costs for and number of construction workers,
17) type and number of propulsion, signal, communication, and other operating systems,
18) when the project was constructed,
19) the number of vehicles required,
20) interest and other financing charges.

For these reasons, it is not possible to develop accurate comparative construction cost data on a per-mile or any other basis since the detailed data on the above (and other) variables are not reported to allow identification of comparable projects.

TABLE 48: Capital Expense by Mode, Millions of Dollars

YEAR	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
1992	1,301.9	1,310.5	67.6	2,054.1	494.9	34.8	171.9	5,435.7
1993	1,567.3	1,645.1	91.8	1,901.5	488.3	18.8	126.8	5,839.6
1994	1,470.3	1,436.4	99.3	2,070.1	544.1	57.4	155.1	5,832.7
1995	2,050.8	1,689.2	86.2	2,560.5	688.4	15.5	139.7	7,230.3
1996	2,035.6	1,690.1	105.2	2,228.0	849.9	19.2	155.8	7,083.8
1997	2,423.5	1,817.5	118.5	2,346.1	876.5	54.1	213.3	7,849.5
1998	2,804.9	1,402.2	131.5	2,350.8	967.2	67.0	169.2	7,892.8
1999	3,249.0	1,622.0	122.0	2,706.7	1,004.8	89.8	180.4	8,974.7
2000	3,248.8	1,783.5	134.2	2,852.2	1,244.8	148.9	174.6	9,587.0
2001 P	3,737.9	2,291.2	154.0	3,506.5	1,444.2	157.8	127.1	11,418.7
2001 % of Total	32.7%	20.1%	1.4%	30.7%	12.6%	1.4%	1.1%	100.0%

P=Prelimianry

TABLE 49: Capital Expense by Type, Millions of Dollars

YEAR	ROLLING STOCK	FACILITIES	OTHER	TOTAL
1992	1,347.7	2,986.9	1,101.1	5,435.7
1993	1,616.2	2,826.3	1,397.1	5,839.6
1994	1,340.6	3,159.2	1,332.9	5,832.7
1995	1,834.5	3,836.9	1,558.9	7,230.3
1996	1,834.4	3,810.7	1,438.7	7,083.8
1997	2,355.7	4,468.1	1,025.7	7,849.5
1998	2,721.8	4,267.9	903.1	7,892.8
1999	3,239.4	4,697.8	1,037.5	8,974.7
2000	3,138.6	5,405.2	1,043.2	9,587.0
2001 P	4,027.4	6,301.8	1,089.5	11,418.7
2001 % of Total	35.3%	55.2%	9.5%	100.0%

P = Preliminary

TABLE 50: Capital Expense by Mode and Type, 2001, Millions of Dollars

TYPE	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
Rolling Stock	2,048.7	484.2	120.1	984.6	244.0	60.1	85.7	4,027.4
Facilities	1,225.3	1,705.7	21.3	2,254.8	968.4	90.3	36.0	6,301.8
Other	463.9	101.3	12.6	267.1	231.8	7.4	5.4	1,089.5
TOTAL	3,737.9	2,291.2	154.0	3,506.5	1,444.2	157.8	127.1	11,418.7
% of Total	32.7%	20.1%	1.4%	30.7%	12.6%	1.4%	1.1%	100.0%

All data are preliminary

IMPACTS OF PUBLIC TRANSPORTATION ON THE U.S. ECONOMY

BUSINESS SALES:

- **CAPITAL INVESTMENT:** $30 million in increased sales per each $10 million investment.
- **OPERATING INVESTMENT:** $32 million in increased sales per each $10 million investment.

HIGHWAY & PUBLIC TRANSPORTATION USER COSTS: $15 million in operating, fuel, and congestion costs per each $10 million investment.

BUSINESS OUTPUT: $2 million per each $10 million investment in first year, increasing to $31 million per each $10 million in the 20th year.

PERSONAL INCOME: $0.8 million per each $10 million investment in first year, increasing to $18 million per each $10 million in the 20th year.

STATE & LOCAL GOVERNMENT REVENUE: 4%-16% increase due to income and employment increases resulting from public transportation investments.

Source: *Public Transportation and the Nation's Economy*, Cambridge Systematics, 1999.

Large construction projects, such as this escalator site for a Dallas Area Rapid Transit light rail line, pump millions of dollars into local economies.

Capital Funding

Highlights.....

- $11.4 billion was received from all sources in 2001.
- 50.5% came from the federal government, 9.4% from state governments, 11.4% from local governments, and 28.7% was raised by transit agencies from directly-levied taxes, advertising, interest income, and other sources.
- Federal capital and operating appropriations totaled $7.2 billion for 2003.
- Federal capital and planning grant approvals for 2001 totaled $6.8 billion.
- 44.0% went for bus-related projects, 35.1% for fixed-guideway modernization, 18.2% for new start transit projects, and 2.7% for planning.

A **Capital Funding Source** is a source of funds used to pay for capital expenses. There are two types:

Government Funds are funds provided by federal, state, and/or local governments. For some purposes, also includes directly generated taxes, tolls, fees, and other imposed funding sources.

Federal Funds are financial assistance from the federal government to assist in paying the operating costs of providing transit service.

State Government Funds are financial assistance obtained from a state government(s) to assist with paying the costs of providing transit services.

Local Government Funds are financial assistance from local governments (below the state level) to help cover the operating costs of providing transit service.

Directly Generated Funds are any funds where revenues are generated by or donated directly to the transit agency, including passenger fare revenues, advertising revenues, donations, bond proceeds and taxes imposed by the transit agency. Almost all such funds for capital purposes are bonds and directly imposed taxes: fares and advertising revenues are normally used only for operating expenses.

TABLE 51: Capital Funding Sources, Millions of Dollars

YEAR	FEDERAL ASSISTANCE	STATE ASSISTANCE	LOCAL ASSISTANCE	DIRECTLY GENERATED (a)	LOCAL PLUS DIRECTLY GENERATED	TOTAL
1990	2,872.5	696.8	1,176.9	189.3	1,366.2	4,935.5
1991	2,773.5	695.4	1,012.3	1,074.5	2,086.8	5,555.7
1992	2,673.0	801.0	830.0	1,131.7	1,961.8	5,435.7
1993	2,432.4	1,325.5	1,079.6	1,002.1	2,081.7	5,839.6
1994	2,622.8	1,047.8	997.9	1,164.2	2,162.1	5,832.7
1995	3,422.2	1,020.3	888.2	1,899.6	2,787.8	7,230.3
1996	3,592.8	915.9	926.0	1,649.1	2,575.1	7,083.8
1997	4,275.6	1,037.0	898.8	1,638.1	2,536.9	7,849.5
1998	3,919.0	932.2	1,032.2	2,009.4	3,041.6	7,892.8
1999	3,960.4	911.5	1,128.2	2,974.6	4,102.8	8,974.7
2000	4,525.6	1,030.5	1,469.2	2,561.7	4,030.9	9,587.0
2001 P	5,768.5	1,066.6	1,304.4	3,279.2	4,583.6	11,418.7
2001 % of Total	50.5%	9.4%	11.4%	28.7%	40.1%	100.0%

P = Preliminary
(a) Includes non-governmental funding, subsidies from non-transit sectors of a transit agency's operations, and, beginning in 1991, taxes levied directly by a transit agency and bridge and tunnel tolls.

TABLE 52: Federal Public Transportation Appropriations, Fiscal Years 1997-2003, Millions of Dollars

PROGRAM	1997	1998	1999	2000	2001	2002	2003
MAJOR CAPITAL INVESTMENT:	1,900.0	2,000.0	2,307.0	2,490.1	2,694.6	2,891.0	3,131.0
New Starts/Extensions	760.0	800.0	902.8	969.1	1,060.1	1,136.4	1,259.4
Fixed-Guideway Modernization	760.0	800.0	902.8	980.4	1,056.1	1,136.4	1,214.4
Bus/Bus Facility (a)	380.0	400.0	501.4	540.6	578.4	618.2	657.2
FORMULA:	2,149.2	2,500.0	2,800.0	3,048.0	3,286.7	3,542.0	3,789.0
Urbanized Area	1,978.0	2,303.7	2,548.2	2,772.9	2,935.1	3,200.0	3,428.7
Nonurbanized Areas	115.1	134.1	177.9	193.6	205.0	223.4	239.4
Elderly & Disabled	56.0	62.2	67.0	72.9	77.2	84.6	90.7
Rural Transportation Access	—	—	2.0	3.7	4.7	7.0	7.0
Alaska Railroad	—	—	4.8	4.8	4.8	4.8	4.8
Other	—	—	—	—	59.9	22.2	18.4
PLANNING & RESEARCH:	85.5	92.0	98.0	106.7	109.8	116.0	122.0
Metropolitan Planning	39.5	39.5	43.8	49.6	52.0	55.4	60.4
Rural Transit Assistance Program	4.5	4.5	5.3	5.3	5.2	5.2	5.2
All Other Research & Training	41.5	48.0	48.9	51.8	52.6	55.4	56.4
University Research Centers	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Access to Jobs/Reverse Commute	—	—	75.0	75.0	99.8	125.0	105.0
Washington DC Metro	200.0	200.0	50.0	—	—	—	—
FTA Administration	41.0	45.7	54.0	60.0	63.9	67.0	73.0
TOTAL	4,381.7	4,843.7	5,390.0	5,785.7	6,260.7	6,747.0	7,226.0

Source: U.S. Department of Transportation, Federal Transit Administration
(a) Includes Clean Fuels Funds beginning Fiscal Year 1999.

TABLE 53: Federal Capital and Planning Grant Approvals by Use, Millions of Dollars

FEDERAL FISCAL YEAR	BUS (a)	FIXED-GUIDEWAY MODERNIZATION (a)	NEW STARTS (a)	PLANNING (b)	TOTAL
1990	760.9	998.9	603.7	64.4	2,427.9
1991	826.0	1,029.2	515.2	80.5	2,450.9
1992	941.7	1,153.8	492.5	80.8	2,668.8
1993	1,295.2	1,146.0	996.5	77.9	3,515.6
1994	1,401.6	1,474.3	657.2	97.2	3,630.3
1995	1,988.7	1,767.2	1,677.7	100.2	5,533.8
1996	1,465.7	1,482.3	1,109.3	122.8	4,180.1
1997	1,582.6	1,501.1	922.4	118.6	4,124.7
1998	1,640.9	1,598.2	898.0	88.2	4,225.3
1999	2,300.7	1,994.7	996.2	103.4	5,395.0
2000	3,622.0	2,232.8	1,343.4	167.8	7,366.0
2001	2,986.1	2,383.5	1,239.4	185.5	6,794.5
2001 % of Total	44.0%	35.1%	18.2%	2.7%	100.0%

Source: U.S. Department of Transportation, Federal Transit Administration.
(a) Includes total funding for listed usage from capital, formula, and other funding programs.
(b) Includes funds used for planning from all funding programs.

TABLE 54: Federal Capital and Planning Grant Approvals by Source Program, Millions of Dollars

FEDERAL FISCAL YEAR	CAPITAL INVESTMENT (a)	FORMULA (b)	PLANNING (c)	OTHER (d)	TOTAL
1990	1,134.6	997.4	47.9	248.0	2,427.9
1991	1,073.6	1,069.8	54.5	253.0	2,450.9
1992	973.7	1,261.3	55.9	377.9	2,668.8
1993	1,745.9	1,473.3	50.5	245.9	3,515.6
1994	1,547.1	1,706.3	53.0	323.9	3,630.3
1995	2,608.5	2,520.1	52.5	352.7	5,533.8
1996	1,690.5	2,123.9	50.7	315.0	4,180.1
1997	1,716.3	2,130.0	76.0	202.4	4,124.7
1998	1,648.3	2,311.8	53.9	211.3	4,225.3
1999	2,064.7	3,270.0	57.4	2.9	5,395.0
2000	2,708.6	4,490.4	114.0	53.0	7,366.0
2001	2,522.2	4,122.0	128.0	22.3	6,794.5
2001 % of Total	37.1%	60.7%	1.9%	0.3%	100.0%

(a) Bus and Bus Facilities, Fixed-Guideway Modernization, and New Start programs.
(b) Urbanized Area, Rural, and Elderly Individuals and Individuals with Disabilities, Over-the-Road Bus, Job Access/Reverse Commute formula programs.
(c) Metropolitan Planning, State Planning, Rural Transportation Assistance Program, and Consolidated Planning Grants.
(d) Federal Aid Urban Systems, Interstate Transfer, and National Capital Transportation Act.

TABLE 55: Flexible Highway Funds Transferred to Public Transportation, Millions of Dollars

FEDERAL FISCAL YEAR	CONGESTION MITIGATION & AIR QUALITY IMPROVEMENT PROGRAM	SURFACE TRANSPORTATION PROGRAM	INTERSTATE SUBSTITUTE & EARMARKED FEDERAL HIGHWAY ADMINISTRATION FUNDS	TOTAL
1992	177.0	25.2	101.6	303.8
1993	298.4	146.9	23.9	469.2
1994	317.0	183.2	109.5	609.7
1995	484.1	200.3	117.4	801.8
1996	344.6	324.2	111.3	780.1
1997	257.9	207.9	48.3	514.1
1998	223.3	243.9	0.1	467.3
1999	573.0	384.4	11.8	969.2
2000	864.0	708.4	26.7	1,599.1
2001	633.1	532.1	68.2	1,233.4
2002 % of Total	51.3%	43.1%	5.5%	100.0%

Source: U.S. Department of Transportation, Federal Transit Administration.

TABLE 56: Federal Obligations by State, 2001, Millions of Dollars

Alabama	33.1
Alaska	67.2
Arizona	42.0
Arkansas	23.3
California	1,513.2
Colorado	87.5
Connecticut	150.3
Delaware	13.5
District of Columbia	145.5
Florida	259.3
Georgia	118.3
Hawaii	22.7
Idaho	9.2
Illinois	372.7
Indiana	70.8
Iowa	32.4
Kansas	23.8
Kentucky	30.4
Louisiana	39.9
Maine	11.4
Maryland	128.3
Massachusetts	204.5
Michigan	132.4
Minnesota	173.7
Mississippi	27.5
Missouri	138.7
Montana	10.0
Nebraska	12.0
Nevada	23.3
New Hampshire	11.0
New Jersey	422.3
New Mexico	35.3
New York	1,077.1
North Carolina	95.0
North Dakota	6.4
Ohio	139.4
Oklahoma	19.5
Oregon	91.5
Pennsylvania	381.3
Rhode Island	29.3
South Carolina	19.0
South Dakota	6.9
Tennessee	55.0
Texas	317.3
Utah	100.9
Vermont	18.1
Virginia	133.0
Washington	206.0
West Virginia	12.1
Wisconsin	93.5
Wyoming	2.4
Puerto Rico & Territories	70.9
TOTAL	7,261.2

Source: Federal Transit Administration.

TABLE 57: Average Annual Capital Cost to Improve Public Transportation Physical Conditions and Service Performance, 2001-2020, Billions of 2000 Dollars

NEEDS COMPONENT	Cost to Maintain Conditions & Maintain Performance	Cost to Improve Conditions & Maintain Performance	Cost to Maintain Conditions & Improve Performance	Cost to Improve Conditions & Improve Performance
VEHICLE FLEET				
Replacement and Rehabilitation	3.8	5.6	3.8	5.6
OTHER TRANSIT ASSETS				
Replacement and Rehabilitation	4.8	5.1	4.8	5.1
EXPANSION TO ACCOMMODATE RIDERSHIP GROWTH (a)	9.7-23.7	9.8-23.7	17.1-32.1	17.2-32.2
RURAL/SMALL URBAN	0.5	0.5	1.0	1.0
TOTAL (a)	18.9-32.8	21.0-34.9	26.7-41.7	28.9-43.9

Source: Cambridge Systematics, *Expanded State and National Transit Investment Analysis*, 2002.
(a) Lower number assumes 1.6% annual growth, higher number 3.5% annual growth.

Operating Expenses

Highlights.....

- $23.5 billion was spent in 2001.
- 44.5% was for vehicle operations, 18.5% for vehicle maintenance, 9.7% for non-vehicle maintenance, 14.7% for general administration, and 12.6% for purchased transportation.
- Over 80% of all costs were labor-related. 45.2% was for salaries and wages, 24.3% for fringe benefits, 5.9% for services, and 12.6% for purchased transportation (about 75% of which is labor-related).
- 10.0% was for materials and supplies, 3.3% for utilities, 2.1% for casualty and liability costs, and -3.4% (due to negative accounting costs) for other expenses.
- 56.7% was for buses, 7.4% for demand response, 12.2% for commuter rail, 17.8% for heavy rail, 2.9% for light rail, and 3.0% for all other modes.

Operating Expenses are the expenses associated with the operation of the transit agency, and classified by function or activity and the goods and services purchased. It is the sum of either the functions or the object classes listed below.

A **Function** is an activity performed or cost center of a transit agency. The four basic functions are:

Vehicle Operations includes all activities associated with the subcategories of the vehicle operations function: transportation administration and support; revenue vehicle operation; ticketing and fare collection; and system security.

Vehicle Maintenance includes all activities associated with revenue and non-revenue (service) vehicle maintenance, including administration, inspection and maintenance, and servicing (cleaning, fueling, etc.) vehicles. In addition, vehicle maintenance includes repairs due to vandalism and accident repairs of revenue vehicles.

Non-Vehicle Maintenance includes all activities associated with facility maintenance, including: administration; repair of buildings, grounds and equipment as a result of accidents or vandalism; operation of electric power facilities; and maintenance of vehicle movement control systems; fare collection and counting equipment; structures, tunnels and subways; roadway and track; passenger stations, operating station buildings, grounds and equipment; communication systems; general administration buildings, grounds and equipment; and electric power facilities.

General Administration includes all activities associated with the genera administration of the transit agency, including transit service development, injuries and damages, safety, personnel administration, legal services, insurance, data processing, finance and accounting, purchasing and stores, engineering, real estate management, office management and services, customer services, promotion, market research and planning.

An **Object Class** is a grouping of expenses on the basis of goods and services purchased. Object Classes are as follows:

Salaries and Wages are the pay and allowances due employees in exchange for the labor services they render in behalf of the transit agency. The allowances include payments direct to the employee arising from the performance of a piece of work. Also called "Labor."

Fringe Benefits are the payments or accruals to others (insurance companies, governments, etc.) on behalf of an employee and payments and accruals direct to an employee arising from something other than a piece of work. These payments are transit agency costs over and above labor costs, but still arising from the employment relationship.

Employee Compensation is the sum of "Salaries and Wages" and "Fringe Benefits."

Services include the labor and other work provided by outside organizations for fees and related expenses. In most instances, services from an outside organization are procured as a substitute for in-house employee labor, except in the case of independent audits which could not be performed by employees in the first place. The substitution is usually made because the skills offered by the outside organization are needed for only a short period of time or are better than internally available skills. The charge for these services is usually based on the labor hours invested in performing the service. Services include management service fees, advertising fees, professional and technical services, temporary help, contract maintenance services, custodial services and security services.

Materials and Supplies are the tangible products obtained from outside suppliers or manufactured internally. Freight, purchase discounts, cash discounts, sales and excise taxes (except on fuel and lubricants) are included in the cost of the material or supply. Charges to these expense are for the materials and supplies issued from inventory for use and for the materials and supplies purchased for immediate use, i.e., without going through inventory. Three types are:

Fuel and Lubricants include the costs of gasoline, diesel fuel, propane, lubricating oil, transmission fluid, grease, etc., for use in vehicles.

Tires and Tubes include the lease payments for tires and tubes rented on a time period or mileage basis, or the cost of tires and tubes for replacement of tires and tubes on vehicles.

Other Materials and Supplies include the costs of materials and supplies not specifically identified issued from inventory or purchased for immediate consumption.

Utilities include the payments made to various utilities for utilization of their resources (e.g., electric, gas, water, telephone, etc.). Utilities include propulsion power purchased from an outside utility company and used for propelling electrically driven vehicles, and other utilities such as electrical power for purposes other than for electrically driven vehicles, water and sewer, gas, garbage collection, and telephone.

Casualty and Liability Costs are the cost elements covering protection of the transit agency from loss through insurance programs, compensation of others for their losses due to acts for which the transit agency is liable, and recognition of the cost of a miscellaneous category of corporate losses.

Purchased Transportation is transportation service provided to a public transit agency or governmental unit from a public or private transportation provider based on a written contract. The provider is obligated in advance to operate public transportation services for a public transit agency or governmental unit for a specific monetary consideration. Purchased transportation does not include franchising, licensing operation, management services, cooperative agreements or private conventional bus service.

Other Expenses is the sum of taxes, miscellaneous expenses, and expense transfers:

Taxes include the taxes levied against the transit agency by Federal, State and Local governments.

Miscellaneous Expenses include the expenses which cannot be attributed to any of the other major expense categories.

Expense Transfers are accounts used for reporting adjustments and reclassifications of expenses previously reported. Expense transfers include reclassifications of expenses from one function to another; a composite category of expense encompassing labor; fringe benefits; materials and services used in the transit agency's internal information system to reclassify costs between cost centers and work orders, and a credit account to be used for adjusting entries transferring expenses to receivables, property, or work in process for capital projects.

Depreciation and Amortization are charges that reflect the loss in service value of the transit agency's assets. Depreciated items have a high initial cost and a useful life of more than one accounting period. In order to account for the reduction in value (usefulness) of this type of asset, a portion of the cost is expensed each year of the asset's life. Depreciation and amortization include the depreciation of the physical facilities such as guideways, tracks and roadbeds, elevated structures, passenger stations and parking facilities, revenue vehicles, operating stations, facilities (including buildings, equipment

and furnishings) for power generation and distribution, revenue vehicle movement control, data processing, revenue collection and processing, and other general administration.

Other Reconciling Items include any other costs that cannot be captured in the depreciation and amortization categories.

Total Expense is the sum of all the object classes or functions, plus "Depreciation and Amortization" and "Other Reconciling Items."

The largest operating expense for any transit agency is its employee salaries and fringe benefits, which normally represent at least two-thirds of all operating expenses. Estimating $25 per hour for the labor cost of each operator of the approximately 50 Metropolitan Transit Authority of Harris County buses lined up at this Houston sports venue would yield an estimated cost of about $1,250 per hour to operate those 50 buses, plus overhead maintenance and administrative costs.

TABLE 58: Operating Expense for 2001 By Function and Object Class, Millions of Dollars

FUNCTION AND OBJECT CLASS	VEHICLE OPERATIONS	VEHICLE MAINTENANCE	NON-VEHICLE MAINTENANCE	GENERAL ADMINISTRATION	PURCHASED TRANSPORTATION	TOTAL
Salaries & Wages	5,706.4	2,067.0	1,519.8	1,333.7	0.0	10,626.9
Fringe Benefits	3,110.6	1,048.7	782.4	763.9	0.0	5,705.6
Services	115.6	220.4	161.6	891.7	0.0	1,389.3
Fuels & Lubricants	618.2	93.3	5.3	0.0	0.0	716.8
Materials & Supplies	112.7	925.4	261.4	346.2	0.0	1,645.7
Utilities	132.4	44.9	385.1	210.1	0.0	772.5
Casualty & Liability	32.2	7.3	11.3	442.0	0.0	492.8
Purchased Transp.	0.0	0.0	0.0	0.0	2,976.5	2,976.5
Other	610.7	-58.6	-836.8	-524.5	0.0	-809.2
Total	10,438.8	4,348.4	2,290.1	3,463.1	2,976.5	23,516.9
			PER CENT			
Salaries & Wages	24.27%	8.78%	6.46%	5.67%	0.00%	45.18%
Fringe Benefits	13.22%	4.46%	3.33%	3.25%	0.00%	24.26%
Services	0.49%	0.94%	0.69%	3.79%	0.00%	5.91%
Fuels & Lubricants	2.63%	0.40%	0.02%	0.00%	0.00%	3.05%
Materials & Supplies	0.48%	3.94%	1.11%	1.47%	0.00%	7.00%
Utilities	0.56%	0.19%	1.64%	0.89%	0.00%	3.28%
Casualty & Liability	0.14%	0.03%	0.05%	1.88%	0.00%	2.10%
Purchased Transp.	0.00%	0.00%	0.00%	0.00%	12.66%	12.66%
Other	2.60%	-0.25%	-3.56%	-2.23%	0.00%	-3.44%
Total	44.39%	18.49%	9.74%	14.72%	12.66%	100.00%

TABLE 59: Operating Expense by Function Class, Millions of Dollars

YEAR	VEHICLE OPERATIONS	VEHICLE MAINTENANCE	NON-VEHICLE MAINTENANCE	GENERAL ADMINISTRATION	PURCHASED TRANSPORTATION	OPERATING EXPENSE	DEPRECIATION & AMORTIZATION	OTHER RECONCILING ITEMS	TOTAL EXPENSE
1990	6,653.3	3,038.8	1,592.0	3,449.9	1,008.1	15,742.1	1,593.1	643.9	17,979.1
1991	6,726.6	2,992.4	1,604.7	3,584.5	1,633.2	16,541.4	1,763.3	1,027.2	19,331.9
1992 (a)	7,659.7	3,047.5	1,783.9	2,674.2	1,616.1	16,781.4	2,033.9	1,218.3	20,033.6
1993	7,941.4	3,049.3	1,845.0	2,714.0	1,800.1	17,349.8	2,479.3	850.1	20,679.2
1994	8,211.9	3,184.5	1,819.4	2,752.0	1,952.1	17,919.9	2,768.6	964.1	21,652.6
1995	8,281.9	3,218.2	1,829.0	2,589.5	1,930.1	17,848.7	2,600.6	1,090.6	21,539.9
1996	8,331.9	3,295.1	1,802.2	2,744.3	2,167.2	18,340.7	2,885.0	1,034.4	22,260.1
1997	8,602.1	3,372.6	1,838.8	2,919.9	2,202.7	18,936.1	3,105.5	1,117.2	23,158.8
1998	9,176.7	3,579.2	1,783.9	3,065.8	2,132.9	19,738.5	3,434.5	1,144.8	24,317.8
1999	9,333.0	3,742.1	1,906.8	3,164.4	2,365.8	20,512.1	3,692.2	1,333.3	25,537.6
2000	10,110.9	4,267.1	2,177.7	3,328.8	2,761.0	22,645.5	4,076.2	1,472.0	28,193.7
2001 P	10,438.8	4,348.4	2,290.1	3,463.1	2,976.5	23,516.9	4,233.0	1,528.6	29,278.5
2001 % of Total	44.5%	18.5%	9.7%	14.7%	12.6%	100.0%	18.0%	6.5%	124.5%

P = Preliminary
(a) Beginning 1992, operating expense declined about $400 million due to change in accounting procedures at New York City Transit Authority.

TABLE 60: Operating Expense by Object Class, Millions of Dollars

YEAR	SALARIES & WAGES	FRINGE BENE-FITS	SERV-ICES	MATER-IALS & SUPPLIES	UTILITIES	CASUALTY & LIABILITY	PURCHASED TRANSPORT-ATION	OTHER	TOTAL
1990	7,226.3	3,986.0	794.3	1,608.4	552.9	640.5	1,008.1	-74.4	15,742.1
1991	7,394.5	3,998.4	818.0	1,559.7	575.9	625.6	1,633.2	-63.9	16,541.4
1992 (a)	7,670.5	4,318.6	907.8	1,529.1	608.5	557.8	1,616.1	-427.0	16,781.4
1993	7,932.1	4,400.3	914.0	1,536.1	624.0	587.8	1,800.1	-444.6	17,349.8
1994	8,223.8	4,451.7	849.3	1,593.9	644.0	614.2	1,952.1	-409.1	17,919.9
1995	8,213.1	4,484.0	849.3	1,613.4	628.9	512.8	1,930.1	-382.9	17,848.7
1996	8,437.6	4,401.4	923.9	1,677.0	667.2	502.7	2,167.2	-436.3	18,340.7
1997	8,771.7	4,503.7	1,055.2	1,734.1	685.0	502.5	2,202.7	-518.8	18,936.1
1998	9,211.2	4,843.6	1,170.7	1,851.5	660.8	473.9	2,132.9	-606.1	19,738.5
1999	9,495.1	5,052.3	1,213.9	1,883.7	675.5	449.7	2,365.8	-623.9	20,512.1
2000	10,400.2	5,412.9	1,289.6	2,259.6	719.8	506.5	2,761.0	-704.1	22,645.5
2001 P	10,626.9	5,705.6	1,389.3	2,362.5	772.5	492.8	2,976.5	-809.2	23,516.9
2001 % of Total	45.2%	24.3%	5.9 %	10.0%	3.3%	2.1%	12.6%	-3.4%	100.0%

P = Preliminary
(a) Beginning 1992, operating expense declined about $400 million due to change in accounting procedures at New York City Transit Authority.

TABLE 61: Operating Expense by Mode, Millions of Dollars

YEAR	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
1990	8,903.1	1,938.5	517.8	3,825.0	237.1	108.6	212.0	15,742.1
1991	9,501.4	1,942.4	608.5	3,858.6	291.1	113.5	225.9	16,541.4
1992 (a)	9,881.2	2,012.6	667.3	3,555.1	308.9	124.4	231.9	16,781.4
1993	10,109.6	2,088.4	793.0	3,668.6	315.9	131.9	242.5	17,349.8
1994	10,144.1	2,227.8	942.7	3,786.2	412.8	132.9	273.4	17,919.9
1995	10,320.5	2,211.2	1,000.4	3,522.9	376.1	138.9	278.7	17,848.7
1996	10,574.9	2,294.1	1,186.6	3,401.9	441.6	134.6	307.0	18,340.7
1997	10,944.0	2,278.1	1,284.5	3,473.7	472.5	140.2	343.1	18,936.1
1998	11,428.9	2,360.6	1,405.4	3,529.6	500.2	146.5	367.3	19,738.5
1999	11,713.8	2,574.9	1,419.3	3,693.4	545.6	166.9	398.2	20,512.1
2000	12,966.2	2,685.3	1,804.9	3,930.8	606.4	177.6	474.3	22,645.5
2001 P	13,335.2	2,860.8	1,754.0	4,180.1	682.2	172.4	532.2	23,516.9
2001 % of Total	56.7%	12.2%	7.4%	17.8%	2.9%	0.7%	2.3%	100.0%

P = Preliminary
(a) Beginning 1992 operating expense declined about $400 million due to change in accounting procedures at New York City Transit Authority.

Operating Funding

Highlights.....

- $25.3 billion was received from all sources in 2001.
- 35.2% came from passengers, 23.7% from local governments, 22.5% from state governments, 4.5% from federal governments, and 14.1% was raised by transit agencies from directly-levied taxes, advertising, interest income, and other sources.
- Average adult base cash fare was $1.19.
- Average fare paid per unlinked trip was $0.92. For bus, it was $0.74, commuter rail $3.44, demand response $1.73, heavy rail $0.93, and light rail $0.61.

Operating Funding Source is a source of funds used to pay for operating expenses. Under federal regulations, some capital funds may be used to fund a portion of operating expenses, and would therefore be considered operating funds.

Government Funds are funds provided by federal, state, and/or local governments. For some purposes, also includes directly generated taxes, tolls, fees, and other imposed funding sources.

Federal Funds are financial assistance from the federal government to assist in paying the operating costs of providing transit service.

State Government Funds are financial assistance obtained from a state government(s) to assist with paying the costs of providing transit services.

Local Government Funds are financial assistance from local governments (below the state level) to help cover the operating costs of providing transit service.

Directly Generated Funds are any funds where revenues are generated by or donated directly to the transit agency, including passenger fare revenues, advertising revenues, donations, bond proceeds and taxes imposed by the transit agency. All the following are types of directly generated funds:

Passenger Fares are revenue earned from carrying passengers in regularly scheduled and demand response service. Passenger fares include: the base fare; zone premiums; express service premiums; extra cost transfers; and quantity purchase discounts applicable to the passenger's ride.

Adult Base Cash Fare is the minimum cash fare paid by an adult for one transit ride; excludes transfer charges, zone or distance charges, express service charges, peak period surcharges, and reduced fares.

Passenger Fares Received per Unlinked Passenger Trip is "Passenger Fares" divided by "Unlinked Passenger Trips."

Peak Period Surcharge is an extra fee required during peak periods (rush hours).

Transfer Surcharge is an extra fee charged for a transfer to use when boarding another transit vehicle to continue a trip.

Zone or Distance Surcharge is an extra fee charged for crossing a predetermined boundary.

Other Operating Funds is the sum of school bus service revenues, freight tariffs, charter service revenues, auxiliary transportation revenues, non-transportation revenues, revenue accrued through a purchased transportation agreement, and subsidy from other sectors of operations:

School Bus Service Revenues are the revenues earned from operating vehicles under school bus contracts.

Freight Tariffs are the revenue earned from carrying all types of freight on runs whose primary purpose is passenger operations.

Charter Service Revenues are the revenue earned from operating vehicles under charter contracts.

Auxiliary Transportation Revenues are the revenue earned from operations closely associated with transportation operations. Revenue includes station concessions; vehicle concessions; advertising revenues; ID card fees; fare evasion and park and ride lot fines; automotive vehicle ferriage; and other.

Non-Transportation Revenues are the revenue earned from activities not associated with the provision of transit service. Non-transportation revenues include investment earnings and other non-transportation sources including revenues earned from sales of maintenance services on property not owned or used by the transit agency; rentals of revenue vehicles to other operators; rentals of transit agency buildings and property to other organizations; parking fees generated from parking lots not normally used as park and ride locations; donations; grants from private foundations; development fees; rental car fees; and other.

Revenue Accrued through a Purchased Transportation Agreement is revenue accrued by a seller of transportation services through purchased transportation agreements, not including passenger fares for purchased transportation services from service provided under the purchased transportation agreement.

Subsidy from Other Sectors of Operations is the funds obtained from other sectors of a transit agency's operations to help cover the cost of providing transit services. Subsidies from other sectors of transit operations include subsidies from utility rates where the transit agency is a utility company; subsidies from bridge and tunnel tolls owned and operated by transit agency; and subsidies from other sources provided the same entity that operates the transit agency.

TABLE 62: Federal Operating Grant Approvals for Urbanized Areas, Millions of Dollars

FISCAL YEAR	GRANT APPROVALS UNDER FEDERAL TRANSIT ACT
1990	765.4
1991	779.4
1992	768.4
1993	795.7
1994	757.4
1995	763.9
1996	416.7
1997	450.2
1998	214.8
1999	122.1
2000	195.9
2001	276.6

Source: U.S. Department of Transportation, Federal Transit Administration.

Almost all transit agencies depend on fares paid by passengers to fund a major part of their expenses. These ticket vending machines are used by New York's Metro-North Railroad.

TABLE 63: Operating Funding Sources, Millions of Dollars

YEAR	DIRECTLY GENERATED FUNDS (b)			GOVERNMENT FUNDS				TOTAL PUBLIC FUNDS (d)	TOTAL
	PASSENGER FARES (a)	OTHER	TOTAL	LOCAL (b)	STATE	FEDERAL	TOTAL		
1990	5,890.8	895.0	6,785.8	5,326.8	2,970.6	970.0	9,267.4	9,267.4	16,053.2
1991	6,037.2	766.8	6,804.0	5,573.4	3,199.5	955.9	9,728.8	9,728.8	16,532.8
1992 (c)	6,152.5	645.9	6,798.4	5,268.1	3,879.5	969.1	10,116.7	10,116.7	16,915.1
1993	6,350.9	764.0	7,114.9	5,490.6	3,704.2	966.5	10,161.3	10,161.3	17,276.2
1994	6,756.0	2,270.6	9,026.6	4,171.2	3,854.4	915.6	8,941.2	10,570.3	17,967.8
1995	6,800.9	2,812.2	9,613.1	3,980.9	3,829.6	817.0	8,627.5	10,171.7	18,240.6
1996	7,416.3	2,928.2	10,344.5	4,128.5	4,081.8	596.4	8,806.7	10,502.1	19,151.2
1997	7,545.7	3,308.4	10,854.1	4,095.1	3,918.7	647.0	8,660.8	10,524.4	19,514.9
1998	7,969.6	3,684.7	11,654.3	4,376.9	4,279.4	751.2	9,407.5	11,360.9	21,061.8
1999	8,282.4	3,647.6	11,930.0	4,539.8	4,878.6	871.8	10,290.2	12,574.7	22,220.2
2000	8,745.8	4,216.7	12,962.5	5,318.8	4,967.1	994.2	11,280.1	13,239.0	24,242.6
2001 P	8,891.1	3,579.5	12,470.6	5,986.6	5,700.9	1,129.9	12,817.4	14,762.1	25,288.0
2001 % of Total	35.2%	14.1%	49.3%	23.7%	22.5%	4.5%	50.7%	58.4%	100.0%

P = Preliminary
(a) Includes fares retained by contractors; beginning 1991 includes fare subsidies formerly included in "other".
(b) "Local" includes taxes levied directly by transit agency and other subsidies from local government such as bridge and tunnel tolls and non-transit parking lot funds. Beginning 1994, such funds reclassified from "local" to "other".
(c) Beginning 1992, "local" and "other" declined by about $500 million due to change in accounting procedures at New York City Transit Authority.
(d) Includes "Total Government Funds" plus that portion of "Other Directly Generated Funds" included in "Local Government Funds" beginning in 1994 consisting of transit agency-raised taxes, tolls, and other dedicated funds.

TABLE 64: Passenger Fares by Mode, Millions of Dollars (a)

YEAR	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
1990	2,966.8	952.2	40.9	1,740.8	82.6	45.8	61.7	5,890.8
1991 (b)	3,098.4	958.0	68.9	1,700.6	97.8	51.6	61.9	6,037.2
1992	3,058.8	970.1	75.8	1,830.3	97.8	48.7	71.0	6,152.5
1993	3,116.7	995.5	93.9	1,913.3	102.5	52.4	76.6	6,350.9
1994	3,249.5	1,083.1	170.7	1,975.7	135.1	54.5	87.4	6,756.0
1995	3,287.2	1,077.5	146.3	2,018.2	126.5	54.0	91.2	6,800.9
1996	3,515.0	1,145.6	156.9	2,321.5	144.2	54.7	78.4	7,416.3
1997	3,557.8	1,177.6	170.4	2,350.9	138.6	56.9	93.5	7,545.7
1998	3,991.2	1,255.2	141.5	2,297.4	149.7	55.3	79.3	7,969.6
1999	4,175.0	1,308.7	158.6	2,323.3	163.5	59.5	93.8	8,282.4
2000	4,375.5	1,374.6	171.6	2,482.7	181.2	59.5	100.7	8,745.8
2001 P	4,356.7	1,438.7	181.5	2,532.6	203.8	59.5	118.3	8,891.1
2001 % of Total	49.0%	16.2%	2.0%	28.5%	2.3%	0.7%	1.3%	100.0%

P = Preliminary
(a) These data are not available from the Federal Transit Administration National Transit Database reports. Estimates made by APTA from transit agency estimates, which are made according to each agency's procedures.
(b) Beginning in 1991 includes fare subsidies formerly classified as "Other" Operating Funding.

TABLE 65: Average Passenger Fare Per Unlinked Passenger Trip by Mode, 2001, Dollars

MODE	FARE PER UNLINKED PASSENGER TRIP
Bus	0.74
Commuter Rail	3.44
Demand Response	1.73
Ferryboat (b)	1.32
Heavy Rail	0.93
Light Rail	0.61
Trolleybus	0.50
Vanpool	1.74
Other (a)	0.75
TOTAL	0.92

All data are preliminary
(a) Includes aerial tramway, automated guideway transit, cable car, inclined plane, and monorail.
(b) Excludes international, rural, rural interstate, island, and urban park ferries.

Effects of Fare Increases on Ridership

There is a direct relationship between public transportation fares and ridership. A 1991 APTA study, "Effects of Fare Changes on Bus Ridership," found that on average, a 10 percent increase in bus fares would result in a 4 percent decrease in ridership.

The study also found that bus riders in small cities are more responsive to fare increases than those in large cities are, and peak-hour commuters are much less responsive to fare changes than other passengers.

TABLE 66: Passenger Fares Summary

YEAR	PASSENGER FARES RECEIVED PER UNLINKED TRIP	ADULT BASE CASH FARE (a)		PER CENT OF SYSTEMS WITH (c)		
		HIGHEST	AVERAGE (b)	PEAK PERIOD SURCHARGES	TRANSFER SURCHARGES	ZONE OR DISTANCE SURCHARGES
1990	0.669	2.75	0.730	6.5	28.8	38.9
1991	0.704	6.00	0.823	5.5	24.2	39.4
1992	0.724	6.00	0.860	5.6	26.6	39.0
1993	0.773	6.00	0.860	5.6	26.6	39.0
1994	0.850	6.00	0.955	6.4	25.2	37.7
1995	0.876	7.00	0.992	6.5	23.8	36.9
1996	0.933	7.00	1.047	7.0	22.9	32.6
1997	0.888	7.00	1.058	7.0	22.9	32.6
1998	0.871	7.00	1.065	6.1	21.9	32.9
1999	0.903	4.00	1.087	6.5	26.8	35.0
2000	0.934	5.00	1,128	7.5	21.6	33.2
2001	0.921	7.00	1.194	7.0	20.1	32.4
2002 P	NA	9.00	1.238	4.5	21.3	28.5

P = Preliminary
(a) Lowest base fare is $0.00 (free).
(b) Unweighted average of adult base cash fares; excludes surcharges; each transit agency counted equally.
(c) Per cents represent an approximately 300-transit-agency sample, not estimated for all transit agencies.

TABLE 67: Examples of Cost of Riding Public Transportation

COST	$0.50 BASE FARE	$0.75 BASE FARE	$1.00 BASE FARE	$1.25 BASE FARE	$1.50 BASE FARE
BASE ANNUAL COST (472 TRIPS)					
No discounted fare media used	236.00	354.00	472.00	590.00	708.00
Monthly passes with 20% discount used	188.80	283.20	377.60	472.00	566.40
ADDITIONAL ANNUAL COSTS (including 20% discount)					
$.25 surcharge to transfer to another vehicle	94.40	94.40	94.40	94.40	94.40
$2.00 zone or distance surcharge ($.50 each for 4 zones)	755.20	755.20	755.20	755.20	755.20
$.50 peak-hour surcharge	188.80	188.80	188.80	188.80	188.80
$.25 surcharge for express service	94.40	94.40	94.40	94.40	94.40
$2.00 per day parking surcharge	755.20	755.20	755.20	755.20	755.20
TOTAL ANNUAL COST (including 20% discount)					
Including transfer surcharge only	283.20	377.60	472.00	566.40	660.80
Including distance surcharge only	944.00	1,038.40	1,132.80	1,227.20	1,321.60
Including distance and peak-hour surcharges	1,132.80	1,227.20	1,321.60	1,416.00	1,510.40
Including distance and express surcharges	1,038.40	1,132.80	1,227.20	1,321.60	1,416.00
Including distance and parking surcharges	1,699.20	1,793.60	1,888.00	1,982.40	2,076.80

Annual number of trips estimate based on 365 days minus 52 Saturdays minus 52 Sundays minus 7 holidays minus 10 days vacation minus 8 days sick leave times 2 trips per day.

TABLE 68: Automobile Driving Costs, 2001

CATEGORY	SMALL CAR	MIDSIZE CAR	LARGE CAR	SPORT UTILITY VEHICLE	VAN
OPERATING COSTS (cents per mile)					
Gasoline & Oil	6.9	7.8	9.1	8.5	7.6
Maintenance	3.7	3.9	4.1	4.0	4.0
Tires	1.5	1.7	2.2	1.7	1.5
SUBTOTAL	12.1	13.4	15.4	14.2	13.1
OWNERSHIP COSTS (cost per year)					
Insurance	1,055	907	1,012	1,064	922
License, registration, taxes	166	207	251	300	269
Depreciation	2,980	3,470	4,194	3,829	3,611
Finance charge	632	861	1,104	1,045	914
SUBTOTAL	4,833	5,446	6,561	6,238	5,716
DEPRECIATION FOR EXCESS MILEAGE (per 1000 miles over 15,000 miles annually)	155	165	173	151	161
TOTAL ANNUAL COST					
10,000 miles per year	5,510	6,169	7,679	6,521	5,991
15,000 miles per year	6,648	7,456	8,873	8,368	7,681
20,000 miles per year	8,028	8,951	10,508	9,833	9,141

Source: American Automobile Association and Runzheimer International, *Your Driving Costs, 2001 Edition*. Data for a popular model of each type listed with ownership costs based on 60,000 miles before replacement.

MODE DATA

Bus and Trolleybus

Highlights.....

See National Totals on page 112.

The vast majority of scheduled fixed-route transit service operates in bus and trolleybus modes on streets and highways using rubber-tired vehicles. In all but about 50 or 60 metropolitan areas and small cities, bus service is the only fixed-route transit service available.

A **mode** is a system for carrying transit passengers described by specific right-of-way, technology and operational features. Major fixed-route roadway modes are:

Bus mode uses vehicles powered by diesel, gasoline, battery or alternative fuel engines contained within the vehicle.

Trolleybus mode uses vehicles propelled by a motor drawing current from overhead wires via a connecting pole called a trolley from a central power source not on board the vehicle.

Only 6 transit agencies in the Boston, MA, Dayton, OH, Philadelphia, PA, San Francisco, CA, and Seattle, WA (2 agencies) areas use trolleybus service.

Jitney is a transit mode comprised of passenger cars or vans operating on fixed routes (sometimes with minor deviations) as demand warrants without fixed schedules or fixed stops. There are currently no jitneys reported to the Federal Transit Administration's National Transit Database, though a number of unofficial and often illegal jitneys are known to exist.

In Puerto Rico, there is a mode similar to jitney called a **publico**, which is comprised of passenger vans or small buses operating with fixed routes but no fixed schedules. Publicos are a privately owned and operated mass transit service which is market oriented and unsubsidized, but regulated through a public service commission, state, or local government. Publicos are operated under franchise agreements, fares are regulated by route, and there are special insurance requirements. Vehicle capacity varies from 8 to 24, and the vehicles may be owned or leased by the operator.

TABLE 69: Bus and Trolleybus National Totals, Fiscal Year 2001

	BUS	TROLLEYBUS
Agencies, Number of	2,264	5
Fares Collected, Passenger	$4,356,757,000	$59,492,000
Fare per Unlinked Trip, Average	$0.74	$0.50
Expense, Operating Total (a)	13,335,332,000	$172,235,000
Salaries and Wages (b)	$6,076,597,000	$90,526,000
Fringe Benefits (b)	$3,166,819,000	$53,510,000
Services (b)	$783,723,000	$13,364,000
Fuel and Lubricants (b)	$589,351,000	$78,000
Materials and Supplies, Other (b)	$942,723,000	$11,376,000
Utilities (b)	$176,048,000	$4,582,000
Casualty and Liability (b)	$307,578,000	$3,441,000
Purchased Transportation (b) (c)	$1,389,410,000	$138,000
Other (b)	($96,917,000)	($4,642,000)
Vehicle Operations (c)	$6,745,100,000	$98,612,000
Vehicle Maintenance (c)	$2,555,911,000	$31,492,000
Non-vehicle Maintenance (c)	$546,205,000	$13,119,000
General Administration (c)	$2,098,706,000	$29,012,000
Expense, Capital Total	$3,737,976,000	$157,747,000
Rolling Stock	$2,048,740,000	$60,051,000
Facilities	$1,225,287,000	$90,281,000
Other	$463,949,000	$7,415,000
Trips, Unlinked Passenger, Average Weekday	20,384,000	378,000
Trips, Unlinked Passenger, Annual	5,849,043,000	119,084,000
Miles, Passenger	22,022,175,000	186,998,000
Trip Length, Average (miles)	3.8	1.6
Miles, Vehicle Total	2,376,533,000	12,849,000
Miles, Vehicle Revenue	2,058,290,000	12,319,000
Hours, Vehicle Total	179,393,000	1,790,000
Hours, Vehicle Revenue	161,055,000	1,729,000
Speed, Vehicle in Revenue Service, Average (m.p.h.)	12.8	7.1
Vehicles, Total	80,759	729
Active	76,075	600
Age, Average (years)	7.5	14.7
Air-conditioned	88.6%	11.3%
Lifts, Wheelchair	72.3%	65.1%
Ramps, Wheelchair	18.4%	0.0%
Accessible Only via Stations	0.0%	0.0%
Power Source, Diesel or Gasoline	88.2%	0.0%
Power Source, Alternative	11.8%	100.0%
Rehabilitated	5.3%	0.0%
Employees, Operating	214,674	2,008
Vehicle Operations	144,953	1,435
Vehicle Maintenance	39,137	287
Non-vehicle Maintenance	7,612	132
General Administration	22,972	154
Employees, Capital	3,950	54
Diesel Fuel Consumed (gallons)	587,184,000	0
Other Fuel Consumed (gallons)	75,993,000	0
Electricity Consumed (kwh)	1,184,000	73,924,000

(a) Sum of (b) lines OR sum of (c) lines.

Types of Service

Local service, where vehicles may stop every block or two along a route several miles long, is by far the most common type of bus service. Trolleybuses, unless bypass overhead wiring is available, cannot pass the trolleybus in front of them, and thus generally operate in local service only.

When limited to a small geographic area or to short-distance trips, local service is often called **circulator, feeder, neighborhood, trolley, or shuttle service**. Such routes, which often have a lower fare than regular local service, may operate in a loop and connect, often at a transfer center or rail station, to major routes for travel to more far-flung destinations. Examples are office park circulators, historic district routes, transit mall shuttles, rail feeder routes, and university campus loops.

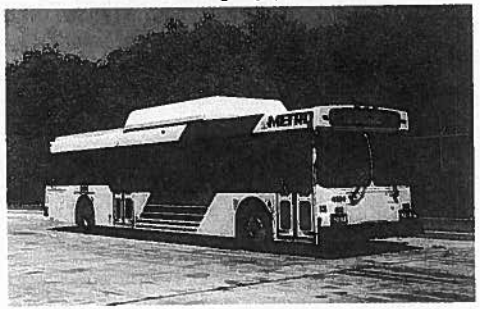
Express service speeds up longer trips, especially in major metropolitan areas during heavily-patronized peak commuting hours, by operating long distances without stopping. Examples include park-and-ride routes between suburban parking lots and the central business district that operate on freeways, and express buses on major streets that operate local service on the outlying portions of a route until a certain point and then operate non-stop to the central business district.

Limited-stop service is a hybrid between local and express service, where the stops may be several blocks to a mile or more apart to speed up the trip.

Bus rapid transit (BRT) is a type of limited-stop service developed in the 1990s that relies on technology to help speed up the service. It combines the quality of rail transit and the flexibility of buses. It can operate on exclusive transitways, high-occupancy-vehicle lanes, expressways, or ordinary streets. A BRT line combines intelligent transportation systems technology, priority for transit, rapid and convenient fare collection, and integration with land use policy in order to substantially upgrade bus system performance.

Types of Vehicles

A **transit bus** has front and center doors, normally with a rear-mounted engine, low-back seating, and without luggage compartments or restroom facilities for use in frequent-stop service. (By far the most common bus used for local service, these buses are mostly 40 feet long, but 35-foot and 30-foot versions are also common in smaller cities and on lightly-patronized routes.)



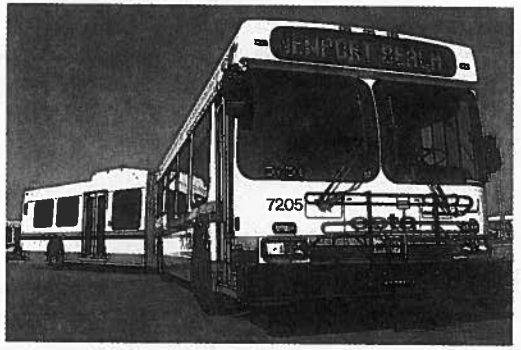
Houston's Metropolitan Transit Authority of Harris County operates this 40-foot-long bus, the most common. Most are high-floor models having two or three steps, but this is a low-floor model without steps.

A **trolleybus (trolley coach, trackless trolley)** is a rubber-tired electrically powered passenger vehicle operating on city streets drawing power from overhead lines with trolleys.

This trolleybus is a rubber-tired Vehicle without an engine that is powered from two electric wires. Only five cities have them; this Dayton, Ohio version is operated by the Greater Dayton Regional Transit Authority.

A **dual-mode trolleybus** is a trolleybus that also has an on-board power source that can be used in emergencies or to extend the route beyond the end of the overhead wires. Only one city (Seattle) operates such vehicles.

An **articulated bus** or **articulated trolleybus** is an extra-long (54 to 60 feet) vehicle with two connected passenger compartments. The rear body section is connected to the main body by a joint mechanism that allows the vehicle to bend when in operation for sharp turns and curves and yet have a continuous interior. (Such vehicles are normally operated in local service in the very largest metropolitan areas on extremely heavily-patronized routes.)



In the largest cities, some routes require even larger buses. This articulated bus is 60 feet long and bends in the middle; it is operated by the Orange County Transportation Authority in Orange County, California.

An **intercity bus** has a front door only, separate luggage compartments, and usually restroom facilities and high-backed seats for use in high-speed long-distance service. (Such buses are 40 or 45 feet in length and are used by the largest transit agencies and private companies on express and limited-stop routes.)

A **suburban bus** has front doors only, normally high-backed seats, but no luggage compartments or restroom facilities for use in longer-distance service with relatively few stops. (Such 40 and 45-foot buses are used in the same manner as intercity buses.)

A **trolley replica bus (trolley)** has an exterior (and usually an interior) designed to look like a streetcar from the early 1900s. (These specialized buses are generally shorter--22 to 32 feet--and are used mostly on historic district and tourist-oriented circulator or shuttle services.)

Often called a trolley, this vehicle that imitates an old streetcar is called a "trolley replica bus." Its data are included with bus statistics, since it is rubber-tired and has an on-board power source. This is a Central Oklahoma Transportation and Parking Authority vehicle in Oklahoma City.

A **double decked bus** is a high-capacity bus having two levels of seating, one over the other, connected by one or more stairways. Total bus height is usually 13 to 14.5 feet, and typical passenger seating capacity ranges from 40 to 80 people. Although common in older cities of Europe and Asia where street capacity is very limited, only a handful of such buses are used in U.S. transit service.

A **van** is a vehicle having a typical seating capacity of 5 to 15 passengers and classified as a van by vehicle manufacturers. A **modified van (body-on-chassis van)** is a standard van that has undergone some structural changes, usually made to increase its size and particularly its height. The seating capacity of modified vans is approximately 9 to 18 passengers.

A typical body-on-chassis van operated by Arizona's City of Phoenix Transit System.

Automobiles such as station wagons and **sports utility vehicles** may also be used on extremely lightly-patronized routes in remote rural areas.

Although most service is operated with new vehicles, a small proportion is operated by rehabilitated vehicles.

Rehabilitation is the rebuilding of revenue vehicles to original specifications of the manufacturer. **Rebuilding** may include some new components but has less emphasis on structural restoration than would be the case in a **remanufacturing** operation, focusing on mechanical systems and vehicle interiors.

TABLE 70: New Bus and Trolleybus Market By Type, 2001-2006 (a)

	BUILT IN 2001		ON ORDER JANUARY 2002		POTENTIAL ORDERS (b)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	6,489	100.0%	6,066	100.0%	10,928	100.0%
Type						
Articulated (55'-60')	151	2.3%	803	13.2%	666	6.1%
Intercity (35'-45')	793	12.2%	790	13.0%	118	1.1%
45' Transit (45')	223	3.5%	170	2.8%	70	0.6%
40' Transit (37'6"-42'5")	4,101	63.2%	3,490	57.5%	8,022	73.4%
35' Transit (32'6"-37'5")	319	4.9%	424	7.0%	510	4.7%
30' Transit (27'6"-32'5")	561	8.7%	240	4.0%	580	5.3%
Suburban (35'-45')	80	1.2%	25	0.4%	452	4.2%
Trolley replica (all lengths)	78	1.2%	6	0.1%	124	1.1%
Small vehicle (<27'6")	183	2.8%	118	2.0%	386	3.5%

(a) Data from APTA survey including about 75% of buses and trolleybuses.
(b) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 71: New Bus and Trolleybus Market By Length and Seating Capacity, 2001-2006 (a)

	BUILT IN 2001		ON ORDER JANUARY 2002		POTENTIAL ORDERS (b)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	6,489	100.0%	6,066	100.0%	10,928	100.0%
Length						
55-60 feet	151	2.3%	803	13.2%	666	6.1%
45-51 feet	344	5.3%	539	8.9%	153	1.4%
38-41 feet	4,836	74.5%	3,933	64.8%	8,519	78.0%
33-37 feet	355	5.5%	427	7.1%	524	4.8%
28-32 feet	613	9.5%	242	4.0%	647	5.9%
18-27 feet	190	2.9%	122	2.0%	419	3.8%
Seating Capacity						
60 or more seats	20	0.3%	640	10.5%	259	2.4%
50-59 seats	463	7.1%	606	10.0%	660	6.0%
41-49 seats	1,610	24.8%	1,454	24.0%	4,442	40.7%
36-40 seats	3,257	50.2%	2,429	40.0%	4,204	38.5%
25-35 seats	842	13.0%	835	13.8%	758	6.9%
Below 25 seats	297	4.6%	102	1.7%	605	5.5%

(a) Data from APTA survey including about 75% of buses and trolleybuses.
(b) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

Accessibility

A **station** is a public transportation passenger facility.

An **accessible station** is a station which provides ready access, and does not have physical barriers that prohibit and/or restrict access by individuals with disabilities, including individuals who use wheelchairs.

An **accessible vehicle** is a public transportation revenue vehicle that does not restrict access, is usable, and provides allocated space and/or priority seating for individuals who use wheelchairs.

High-floor vehicles require riders to climb 2 or 3 steps from street level. Such vehicles accommodate wheelchair-bound and other riders who cannot climb steps by using a retractable lift (usually formed from the vehicle's steps) that raises and lowers persons and equipment between street and floor levels.

Low-floor vehicles eliminate the steps at the front entrance and have a level floor in the front part of the vehicle. Only a short retractable ramp is necessary to accommodate wheelchairs and those who cannot bridge the gap between vehicle and street level. Some models have a level floor the entire length of the vehicle and no steps at the rear door.

Savannah, Georgia's Chatham Area Transit Authority operates this high-floor bus.

The wheelchair ramp is clearly visible on this Transit Authority of River City low-floor bus in Louisville, Kentucky.

Both types may have a "kneeling" feature that lowers the entire front end of the vehicle several inches to aid in boarding.

Prior to the implementation of the Americans with Disabilities Act in 1990, almost all vehicles were high-floor. Now the majority of new vehicles are low-floor.

Some **bus rapid transit services** implemented during the next few years may utilize stations with high-level platforms, which would require high-floor buses with no steps and a level floor. Hybrid buses that also have a lift would be necessary when BRT buses serve both stations with high-floor platforms and regular bus stops.

TABLE 72: Bus and Trolleybus Accessibility, 2002

	BUS	PER CENT	TROLLEYBUS	PER CENT
Total	57,815	NA	1,086	NA
Via on-board lift	41,791	72.3%	707	65.1%
Via on-board ramp	10,632	18.4%	0	0.0%
Non-accessible	5,392	9.3%	379	34.9%

Source: APTA survey. Bus data are about 67% and trolleybus data 100% of national totals.

TABLE 73: New Bus and Trolleybus Market by Accessibility, 2001-2006

	BUILT IN 2001		ON ORDER JANUARY 2002		POTENTIAL ORDERS (a)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	6,489	100.0%	6,066	100.0%	10,928	100.0%
Via on-board lift	2,530	39.0%	2,577	42.5%	3,762	34.4%
Via on-board ramp	3,940	60.7%	3,489	57.5%	7,166	65.6%
Non-accessible	19	0.3%	0	0.0%	0	0.0%

Source: APTA survey. Bus data are about 67% and trolleybus data 100% of national totals.
(a) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 74: Bus and Trolleybus Power Sources, 2002

	BUS	PER CENT	TROLLEYBUS	PER CENT
Total	57,815	NA	1,086	NA
Compressed natural gas & blends	5,497	9.5%	0	0.0%
Diesel	50,894	88.0%	0	0.0%
Diesel/electric catenary	0	0.0%	216	19.9%
Electric battery/hybrid	113	0.2%	0	0.0%
Electric catenary	0	0.0%	870	80.1%
Ethanol & blends	0	0.0%	0	0.0%
Gasoline	203	0.4%	0	0.0%
Liquefied natural gas & blends	879	1.5%	0	0.0%
Methanol	12	0.0%	0	0.0%
Propane	87	0.2%	0	0.0%
Other (a)	130	0.2%	0	0.0%

Source: APTA survey. Bus data are about 67% and trolleybus data 100% of national totals.
(a) Includes bio or soy diesel blends, hydrogen, jet fuel, and propane blends.

TABLE 75: Bus Power Sources

YEAR	CNG & BLENDS	DIESEL	ELECTRIC BATTERY/ HYBRID	ETHANOL & BLENDS	GASO-LINE	LNG & BLENDS	METH-ANOL	PRO-PANE	OTHER (a)	TOTAL
1993	225	50,595	18	86	257	80	160	28	176	51,625
1994	353	49,716	31	86	283	287	351	28	203	51,338
1995	678	50,158	37	82	243	357	399	31	202	52,187
1996	1,074	48,050	41	82	234	347	396	29	91	50,344
1997	1,562	47,177	24	347	230	347	63	25	66	49,841
1998	2,148	47,174	33	395	250	346	19	12	70	50,447
1999	2,494	47,745	41	375	194	707	17	9	26	51,608
2000	3,072	49,249	68	57	197	772	12	25	12	53,464
2001	4,137	49,743	80	15	204	842	12	57	100	55,190
2002	5,497	50,894	113	0	203	879	12	87	130	57,815
2002 % of Total	9.5%	88.0%	0.2%	0.0%	0.4%	1.5%	0.0%	0.2%	0.2%	100.0%

Source: APTA surveys of about 300 transit agencies including about 67% of all buses.
(a) Includes bio or soy diesel blends, hydrogen, jet fuel, and propane blends.

TABLE 76: New Bus and Trolleybus Market by Power Source, 2001-2006

	BUILT IN 2001		ON ORDER JANUARY 2002		POTENTIAL ORDERS (a)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	6,489	100.0%	6,066	100.0%	10,928	100.0%
Compressed natural gas	1,321	20.3%	910	15.0%	2,518	23.1%
Diesel (inc particulate trap)	4,639	71.5%	4,495	74.1%	6,143	56.2%
Dual-power	39	0.6%	359	5.9%	361	3.3%
Electric catenary	220	3.4%	130	2.2%	48	0.4%
Gasoline	10	0.2%	8	0.1%	7	0.1%
Liquefied natural gas	228	3.5%	162	2.7%	233	2.1%
Propane	0	0.0%	0	0.0%	37	0.3%
All others	32	0.5%	2	0.0%	68	0.6%
Undecided	NA	NA	NA	NA	1,513	13.9%

Source: APTA survey. Bus data are about 67% and trolleybus data 100% of national totals.
(a) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 77: Bus and Trolleybus Fuel and Power Consumption, Thousands of Gallons (a)

YEAR	DIESEL	COMPRESSED NATURAL GAS	GASOLINE	LIQUIFIED NATURAL GAS	PROPANE	OTHER	TOTAL NON-DIESEL	ELECTRICITY (KWH) (000)
1994	565,064	3,109	2,103	1,138	249	12,470	19,339	102,945
1995	563,767	10,011	2,297	1,737	269	11,967	26,281	100,659
1996	577,680	11,527	1,844	2,278	591	11,600	27,840	69,130
1997	597,636	20,050	2,722	3,276	1,033	8,705	35,807	78,561
1998	606,631	32,620	1,959	3,075	879	4,976	43,509	74,352
1999	618,024	39,861	1,402	5,251	659	2,711	49,884	75,920
2000	635,160	50,449	1,315	10,464	723	821	63,772	78,062
2001 P	587,184	60,917	1,472	11,670	1,171	763	75,993	75,108

P = Preliminary
(a) Data includes passenger vehicles; excludes non-passenger-vehicle and non-vehicle consumption.

TABLE 78: Power Source Efficiency, Miles per Gallon

	ELECTRIC POWER (a)	DIESEL	ETHANOL	COM-PRESSED NATURAL GAS	GASO-LINE	KERO-SENE	LIQUI-FIED NATURAL GAS	METH-ANOL	PRO-PANE
Bus	0.59	7.05	2.23	2.77	4.72	3.78	2.19	0.96	1.41
Trolleybus	0.18	NA	NA	NA	NA	NA	NA	NA	NA

Source: Federal Transit Administration, 2000 National Transit Database.
(a) Miles per kilowatt hour.

TABLE 79: New Bus Engine Emission Standards, 1998 Grams per Brake Horsepower-Hour

EMISSION	STANDARD
POLLUTANTS	
Hydrocarbons	1.30
Carbon Monoxide	15.50
Nitrogen Oxides	4.00
Particulate Matter	0.05
SMOKE (a)	
Acceleration Mode	20%
Lug Mode	15%
Peak during either mode	50%

Source: Federal Transit Administration, *Sourcebook on Transit-Related Environmental Regulations*, 1994.
(a) Emissions measured in percent opacity during different operating modes.

2004 Model Year Diesel Engine Emission Standards

At the manufacturer's option:

2.4 grams emitted per brake horsepower-hour for all non-methane hydrocarbons plus nitrogen oxide, with no limit on non-methane hydrocarbons, OR

2.5 grams if non-methane hydrocarbons are limited to 0.5 grams.

Source: Environmental Protection Agency

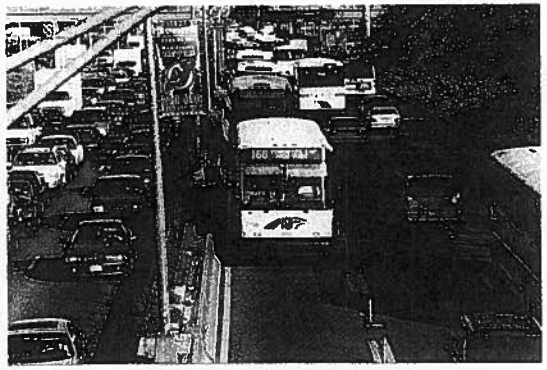
Fixed Guideways

A **Fixed Guideway** is a mass transit facility using and occupying a separate right-of-way or rail for the exclusive use of mass transportation and other high-occupancy vehicles; or using a fixed catenary system useable by other forms of transportation.

Fixed guideways are generally located only in large metropolitan areas where traffic congestion is worst. These rights of way may be restricted solely to buses and trolleybuses, or may be shared with vanpools, carpools, motorcycles, alternate-fuel vehicles, toll-paying vehicles, and emergency vehicles based on state law and local ordinance. They may also be reversible, operating toward the central business district in the morning and away from it in the afternoon.

Although almost exclusively located on the surface, short stretches of some of these roadways are in tunnels or elevated. In addition, as bus rapid transit lines are implemented, more surface streets are being converted to fixed guideways through restricted access and technology that allows buses to preempt or expedite traffic light cycles.

New Jersey Transit operates many buses on the contraflow lane approaching the Lincoln Tunnel to New York City.



There are three types:

A **Busway (Bus Lane)** is a roadway reserved for buses only. It may be a grade separated or controlled access roadway.

A **Contraflow Lane** is a reserved lane for buses on which the direction of bus traffic is opposite to the flow of traffic on the other lanes.

A **High-Occupancy Vehicle (HOV) Facility (Commuter Lane** or **Transitway)** Exclusive or controlled access right-of-way that is restricted to high occupancy vehicles (buses, passenger vans and cars carrying one or more passengers) for a portion or all of a day.

Fixed guideways are also classified by the time they are in effect.

Controlled Access Right-of-Way--Lanes restricted for at least a portion of the day for use by transit vehicles and/or other high occupancy vehicles. Use of controlled access lanes may also be permitted for vehicles preparing to turn. The restriction must be sufficiently enforced so that 95 percent of vehicles using the lanes during the restricted period are authorized to use them.
Exclusive Right-of-Way--Roadway or other right-of-way reserved at all times for transit use and/or other high occupancy vehicles. The restriction must be sufficiently enforced so that 95 percent of vehicles using the right-of-way are authorized to use it.

Transit Centers

Many transit agencies utilize transit centers, where riders can easily transfer from one vehicle to another.

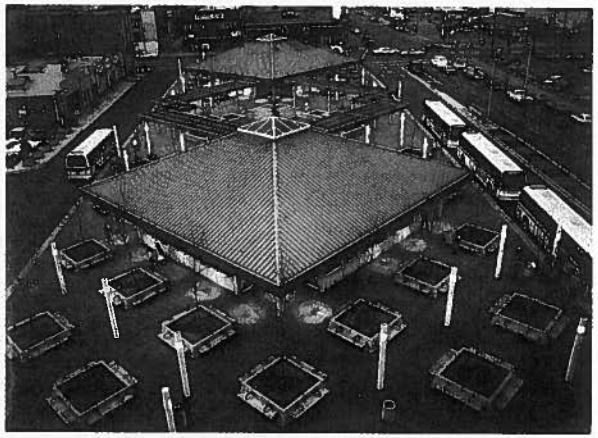
A **transit center** is a fixed location where passengers interchange from one route or vehicle to another that has significant infrastructure such as a waiting room, benches, restrooms, sales outlet, ticket or pass vending machines, and/or other services.

A **bus station** is a type of transit center. A location that has very little infrastructure--such as shelters and/or benches at a street corner where two routes intersect--would be a **transfer point.**

A **park and ride facility** is a parking garage and/or lot used for parking passengers' automobiles, either free or for a fee, while they use transit agency facilities. Park-and-ride facilities are generally established as collector sites for rail or bus service. Park-and-ride facilities may also serve as collector sites for vanpools and carpools, and as transit centers.

A **kiss and ride facility** is a part of a park and ride facility where commuters who are passengers in non-transit vehicles are dropped off to board a mass transportation vehicle.

Such centers may be located at rail stations, intercity bus terminals, or ferry terminals, and may be shared with other transit agencies. Small and medium-sized agencies might have one center in the central business district; larger agencies might have several additional centers scattered throughout the suburbs at major shopping malls or park-and-ride lots. In some instances, a timed-transfer system is used, in which all buses converge on the transit center at a specific time to exchange passengers.



Many cities have built special transfer centers in their central business districts to make transferring between buses as easy as possible. Many also operate timed-transfer service, in which all routes converge on the center at the same time and depart simultaneously to minimize waiting time. This Regional Transportation Commission of Washoe County center is in Reno, Nevada.

Operating Practices

Schedules are determined by a combination of factors. Normally they are a function of demand, which is why 2-3 times as many buses are operated during peak commuting hours than at other times. Many routes in larger cities, in fact only operate during the peak hours.

The type of vehicle used on a route is determined by the maximum number of riders expected at any point on the route, with the result that at other points along the route--especially the beginning and ending points--the bus may be largely empty. Also, because of the peak-directional flow nature of commuting, where 90% of traffic may go towards the central business district in the morning and away from it in the afternoon, buses operating in the opposite direction necessarily carry few people, but must be operated to get back out to the end of the line for the next peak-direction trip.

TABLE 80: Average New Bus and Trolleybus Costs, 2001-2002, Thousands of Dollars

TYPE OF VEHICLE	BUS	TROLLEYBUS
Articulated (55'-60')	438	813
Intercity (35'-45')	364	NA
45' Transit (45')	386	NA
40' Transit (37'6"-42'5")	289	500
35' Transit (32'6"-37'5")	274	NA
30' Transit (27'6"-32'5")	233	NA
Suburban (35'-45')	299	NA
Trolley replica (all lengths)	261	NA
Small Vehicle (<27'6")	135	NA

Source: APTA survey of 10% of non-rail transit agencies. Cost includes amount paid to manufacturer or agent. Not all orders were reported. Each year of a multi-year order is counted as a separate order.

TABLE 81: New Bus and Trolleybus Market by Manufacturer, 2001-2006

	BUILT IN 2001		ON ORDER JANUARY 2002		POTENTIAL ORDERS (a)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	6,489	100.0%	6,066	100.0%	10,928	100.0%
El Dorado-National	202	3.1%	20	0.3%	NA	NA
Electric Transit	220	3.4%	30	0.5%	NA	NA
Gillig	1,076	16.6%	1,109	18.3%	NA	NA
Motor Coach Industries	911	14.0%	902	14.9%	NA	NA
Neoplan	231	3.6%	173	2.9%	NA	NA
New Flyer	1,548	23.9%	828	13.6%	NA	NA
North American Bus	1,061	16.3%	1,131	18.6%	NA	NA
Nova BUS	583	9.0%	355	5.9%	NA	NA
Orion	123	1.9%	1,128	18.6%	NA	NA
Van Hool	0	0.0%	159	2.6%	NA	NA
All others	534	8.2%	231	3.8%	NA	NA

Source: APTA survey. Bus data are about 67% and trolleybus data 100% of national totals.
(a) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 82: 75 Largest Bus and Trolleybus Agencies Ranked by Passenger Miles Traveled, Fiscal Year 2001 (Thousands)

	TRANSIT AGENCY	CITY	MILES
1	Metropolitan Transportation Authority	New York, NY	1,937,353.0
	MTA Long Island Bus	Garden City, NY	156,858.5
	MTA Metro-North Railroad	New York, NY	182.9
	MTA New York City Transit	New York, NY	1,780,311.6
2	Los Angeles County Metropolitan Trp Auth	Los Angeles, CA	1,316,461.9
3	Regional Transportation Authority	Chicago, IL	950,464.9
	Chicago Transit Authority	Chicago, IL	749,617.1
	PACE Suburban Bus	Arlington Heights, IL	200,847.8
4	New Jersey Transit Corporation	Newark, NJ	883,996.9
5	Metropolitan Transit Authority of Harris County	Houston, TX	587,491.9
6	King County Department of Transportation	Seattle, WA	488,608.9
	Bus		446,716.8
	Trolleybus		41,892.1
7	Southeastern Pennsylvania Trp Authority	Philadelphia, PA	480,578.2
	Bus		462,381.4
	Trolleybus		18,196.8
8	Washington Metropolitan Area Transit Authority	Washington, DC	457,028.2
9	New York City Department of Transportation	New York, NY	402,489.5
10	City & County of Honolulu Dept of Trp Svces	Honolulu, HI	351,624.0
11	Metropolitan Council	Saint Paul, MN	341,547.3
	Metro Transit	Minneapolis, MN	312,516.4
	Metropolitan Council	Saint Paul, MN	29,030.9
12	Port Authority of Allegheny County	Pittsburgh, PA	324,030.8
13	Regional Transportation District	Denver, CO	321,402.4
14	Massachusetts Bay Transportation Authority	Boston, MA	321,342.8
	Bus		313,484.9
	Trolleybus		7,857.9
15	Dallas Area Rapid Transit Authority	Dallas, TX	317,209.2
16	Maryland Transit Administration	Baltimore, MD	315,516.3
17	San Francisco Municipal Railway	San Francisco, CA	315,162.0
	Bus		196,788.9
	Trolleybus		118,373.1
18	Metropolitan Atlanta Rapid Transit Authority	Atlanta, GA	284,492.1
19	Miami-Dade Transit Agency	Miami, FL	283,461.5
20	Orange County Transportation Authority	Orange, CA	237,025.4
21	Academy Lines	Asbury Park, NJ	235,652.4
22	Alameda-Contra Costa Transit District	Oakland, CA	218,660.1
23	Tri-County Metropolitan Transportation District	Portland, OR	216,054.7
24	San Diego Metropolitan Transit System	San Diego, CA	204,679.7
	Metropolitan Transit Development Board	San Diego, CA	41,931.6
	San Diego Transit Corporation	San Diego, CA	162,748.1
25	Milwaukee County Transit System	Milwaukee, WI	198,470.8
26	Suburban Transit Corporation	New Brunswick, NJ	193,849.3
27	Santa Clara Valley Transportation Authority	San Jose, CA	184,306.7
28	Greater Cleveland Regional Transit Authority	Cleveland, OH	179,985.8
29	VIA Metropolitan Transit	San Antonio, TX	175,049.5
30	Regional Trp Comm of Southern Nevada	Las Vegas, NV	172,458.5
31	City of Detroit Department of Transportation	Detroit, MI	164,795.3
32	Hudson Transit Lines	Mahwah, NJ	160,476.0

TABLE 82: 75 Largest Bus and Trolleybus Agencies Ranked by Passenger Miles Traveled, Fiscal Year 2001 (Thousands)

	TRANSIT AGENCY	CITY	MILES
33	Southwest Ohio Regional Transit Authority	Cincinnati, OH	148,412.6
34	Westchester County Department of Trp	Mount Vernon, NY	142,584.8
35	Regional Transit Authority	New Orleans, LA	141,926.6
36	Broward County Division of Mass Transit	Pompano Beach, FL	137,200.4
37	Bi-State Development Agency	Saint Louis, MO	132,878.7
38	Golden Gate Bridge, Highway and Trp Dist	San Francisco, CA	124,020.9
39	City of Phoenix Public Transit Department	Phoenix, AZ	123,695.3
40	Connecticut Transit	Hartford, CT	119,005.7
41	Metropolitan Bus Authority	San Juan, PR	117,210.1
	Metropolitan Bus Authority	San Juan, PR	108,282.8
	Puerto Rico Highway & Transportation Auth	San Juan, PR	8,927.3
42	Central Florida Regional Transportation Auth	Orlando, FL	113,317.7
43	Capital Metropolitan Transportation Authority	Austin, TX	106,167.2
44	San Mateo County Transit District	San Carlos, CA	105,616.4
45	Snohomish County Public Trp Benefit Area Corp	Everett, WA	104,460.4
46	Foothill Transit	West Covina, CA	97,520.5
47	Suburban Mobility Authority for Regional Trp	Detroit, MI	91,277.9
48	Pierce Transit	Tacoma, WA	89,343.3
49	Utah Transit Authority	Salt Lake City, UT	85,251.4
50	Santa Monica's Big Blue Bus	Santa Monica, CA	83,095.7
51	Trp District Comm of Hampton Roads	Hampton, VA	82,383.7
52	Sacramento Regional Transit District	Sacramento, CA	79,275.0
53	Rockland Coaches	Paramus, NJ	78,440.2
54	Central Ohio Transit Authority	Columbus, OH	73,620.8
55	Trans-Bridge Lines	Bethlehem, PA	72,043.2
56	Omnitrans	San Bernardino, CA	70,517.9
57	Long Beach Transit	Long Beach, CA	69,045.1
58	Montgomery County Ride-On	Rockville, MD	67,896.4
59	Charlotte Area Transit System	Charlotte, NC	67,149.5
60	El Paso Mass Transit Department	El Paso, TX	66,125.8
61	City of Tucson Transit System	Tucson, AZ	65,471.1
62	North County Transit Develop Board	Oceanside, CA	65,435.5
63	Memphis Area Transit Authority	Memphis, TN	62,926.9
64	Niagara Frontier Transit Metro System	Buffalo, NY	61,401.0
65	City of Los Angeles Department of Trp	Los Angeles, CA	56,081.0
66	Kansas City Area Transportation Authority	Kansas City, MO	55,804.2
67	Transit Authority of River City	Louisville, KY	54,119.1
68	Santa Clarita Transit	Santa Clarita, CA	53,260.1
69	Jacksonville Transportation Authority	Jacksonville, FL	52,200.0
70	Greater Dayton Regional Transit Authority	Dayton, OH	50,584.2
	Bus		49,906.1
	Trolleybus		678.1
71	Indianapolis Public Transportation Corporation	Indianapolis, IN	48,469.7
72	Fresno Area Express	Fresno, CA	46,208.1
73	Lakeland Bus Lines	Dover, NJ	44,927.1
74	Riverside Transit Agency	Riverside, CA	43,320.0
75	GRTC Transit System	Richmond, VA	42,792.5

Source: Federal Transit Administration National Transit Database

TABLE 83: Major Bus and Trolleybus Agency Service and Usage Data, Fiscal Year 2001 (Thousands)

PRIMARY CITY SERVED	TRANSIT AGENCY	ANNUAL VEHICLE REVENUE MILES	ANNUAL VEHICLE REVENUE HOURS	AVERAGE WEEKDAY UNLINKED TRIPS	ANNUAL UNLINKED TRIPS	ANNUAL PASSENGER MILES
Atlanta, GA	Metropolitan Atlanta Rapid Transit Auth	27,261.8	2,182.6	264.7	81,497.1	284,492.1
Austin, TX	Capital Metropolitan Transportation Auth	13,392.3	1,040.8	114.9	33,360.0	106,167.2
Baltimore, MD	Maryland Transit Administration	21,393.0	1,771.2	284.4	83,150.7	315,516.3
Boston, MA	Massachusetts Bay Transportation Auth	26,799.6	2,414.1	NA	112,342.5	321,342.8
	Bus	26,113.0	2,341.8	360.5	108,882.6	313,484.9
	Trolleybus	686.6	72.3	NA	3,459.9	7,857.9
Buffalo, NY	Niagara Frontier Transit Metro System	8,114.5	807.2	70.9	19,822.4	61,401.0
Charlotte, NC	Charlotte Area Transit System	8,406.0	585.1	49.9	14,900.9	67,149.5
Chicago, IL	Regional Transportation Authority	84,118.8	7,844.2	1,086.5	336,012.3	950,464.9
	Chicago Transit Authority	63,758.2	6,406.4	967.3	301,690.7	749,617.1
	PACE Suburban Bus	20,360.6	1,437.8	119.2	34,321.6	200,847.8
Cincinnati, OH	Southwest Ohio Regional Transit Auth	11,663.6	874.4	82.4	24,813.4	148,412.6
Cleveland, OH	Greater Cleveland Reg Transit Auth	23,000.0	1,831.5	156.4	47,100.6	179,985.8
Columbus, OH	Central Ohio Transit Authority	9,613.6	754.9	62.7	18,388.4	73,620.8
Dallas, TX	Dallas Area Rapid Transit Authority	30,057.7	2,106.0	213.5	61,608.6	317,209.2
Dayton, OH	Greater Dayton Regional Transit Auth	8,026.1	583.9	49.6	14,750.0	50,584.2
	Bus	7,919.1	573.8	48.6	14,460.6	49,906.1
	Trolleybus	107.0	10.1	1.0	289.4	678.1
Denver, CO	Regional Transportation District	36,698.7	2,474.3	237.6	70,466.7	321,402.4
Detroit, MI	City of Detroit Dept of Transportation	17,803.0	1,514.3	138.9	41,238.0	164,795.3
Detroit, MI	Suburban Mobility Auth for Reg Trp	11,950.7	670.6	42.0	11,930.8	91,277.9
El Paso, TX	El Paso Mass Transit Department	6,295.7	501.5	42.1	13,260.4	66,125.8
Ft. Lauderdale, FL	Broward County Div of Mass Transit	13,245.4	965.4	104.3	31,520.5	137,200.5
Ft. Worth, TX	Fort Worth Transportation Authority	4,868.1	392.8	23.9	6,969.7	30,617.6
Hartford, CT	Connecticut Transit	11,102.1	878.1	116.0	33,719.6	119,005.6
Honolulu, HI	City & County of Honolulu DOT Svces	18,568.7	1,339.6	230.5	70,384.0	351,624.0
Houston, TX	Metropolitan Tr Auth of Harris County	43,762.4	3,060.3	336.8	99,182.9	587,491.9

TABLE 83: Major Bus and Trolleybus Agency Service and Usage Data, Fiscal Year 2001 (Thousands)

PRIMARY CITY SERVED	TRANSIT AGENCY	ANNUAL VEHICLE REVENUE MILES	ANNUAL VEHICLE REVENUE HOURS	AVERAGE WEEKDAY UNLINKED TRIPS	ANNUAL UNLINKED TRIPS	ANNUAL PASSENGER MILES
Philadelphia, PA	Southeastern Pennsylvania Trp Auth	38,198.6	3,724.0	NA	174,111.1	480,578.2
	Bus	37,176.5	3,597.9	534.6	164,391.7	462,381.4
	Trolleybus	1,022.1	126.1	NA	9,719.4	18,196.8
Phoenix, AZ	City of Phoenix Public Transit Dept	12,610.6	817.3	93.7	31,157.4	123,695.3
Pittsburgh, PA	Port Authority of Allegheny County	29,579.1	2,260.3	223.1	66,022.1	324,030.8
Portland, OR	Tri-County Metropolitan Trp District	22,957.6	1,856.2	214.1	65,427.9	216,054.7
Providence, RI	Rhode Island Public Transit Authority	6,708.3	417.3	47.6	14,220.8	41,480.6
Riverside, CA	Riverside Transit Authority	5,450.9	345.6	21.8	6,602.0	43,320.0
Rockville, MD	Montgomery County Ride-On	9,567.6	668.2	70.0	22,095.6	67,896.4
Sacramento, CA	Sacramento Regional Transit District	7,580.5	584.8	66.4	19,115.3	79,275.0
St. Louis, MO	Bi-State Development Agency	19,371.8	1,249.0	121.1	36,202.2	132,878.7
St. Petersburg, FL	Pinellas Suncoast Transit Authority	7,198.4	491.5	31.3	9,372.8	39,636.7
Salt Lake City, UT	Utah Transit Authority (b)	16,629.6	912.6	68.9	19,018.6	85,251.4
San Antonio, TX	VIA Metropolitan Transit	19,923.4	1,387.4	148.9	45,952.7	175,049.5
San Bernardino, CA	Omnitrans	7,575.8	570.8	51.1	15,468.1	70,517.9
San Diego, CA	San Diego Metropolitan Transit System	16,697.3	1,394.1	169.6	53,475.8	204,679.7
	Metropolitan Transit Devel Board	4,149.8	333.0	35.3	11,643.7	41,931.6
	San Diego Transit Corporation	12,547.5	1,061.1	134.3	41,832.1	162,748.1
San Francisco, CA	Golden Gate Bridge, Hwy & Trp Dist	7,958.0	423.1	33.0	9,653.6	124,020.8
San Francisco, CA	San Francisco Municipal Railway	19,472.8	2,421.2	563.8	176,900.5	315,162.0
	Bus	12,448.0	1,405.6	310.8	96,032.0	196,788.9
	Trolleybus	7,024.8	1,015.6	253.0	80,868.5	118,373.1
San Francisco, CA	San Mateo County Transit District	7,706.8	619.9	59.7	17,923.9	105,616.4
San Jose, CA	Santa Clara Valley Transportation Auth	19,299.2	1,507.1	155.9	48,063.3	184,306.7
San Juan, PR	Metropolitan Bus Authority	7,958.7	733.6	101.9	33,517.6	117,210.1
Santa Ana, CA	Orange County Transportation Auth	21,695.6	1,571.2	184.3	58,291.4	237,025.4
Santa Monica, CA	Santa Monica's Big Blue Bus	5,019.4	436.8	76.1	22,941.4	83,095.7

TABLE 83: Major Bus and Trolleybus Agency Service and Usage Data, Fiscal Year 2001 (Thousands)

PRIMARY CITY SERVED	TRANSIT AGENCY	ANNUAL VEHICLE REVENUE MILES	ANNUAL VEHICLE REVENUE HOURS	AVERAGE WEEKDAY UNLINKED TRIPS	ANNUAL UNLINKED TRIPS	ANNUAL PASSENGER MILES
Indianapolis, IN	Indianapolis Public Trp Corp	6,306.6	438.2	34.7	10,407.8	48,469.7
Jacksonville, FL	Jacksonville Transportation Authority	7,495.4	544.0	27.8	8,011.4	52,200.0
Kansas City, MO	Kansas City Area Transportation Auth	8,885.6	582.0	51.3	15,134.6	55,804.2
Las Vegas, NV	Regional Trp Comm of Southern NV	16,213.1	1,206.6	141.0	49,559.8	172,458.5
Long Beach, CA	Long Beach Transit	7,047.1	640.7	79.7	25,838.4	69,045.1
Los Angeles, CA	City of Los Angeles Dept of Trp	6,570.0	522.7	72.4	21,220.9	56,081.0
Los Angeles, CA	Foothill Transit	9,886.2	600.1	50.5	15,388.9	97,520.5
Los Angeles, CA	Los Angeles County Metro Trp Auth	83,112.2	6,797.9	1,181.4	343,577.9	1,316,461.9
Louisville, KY	Transit Authority of River City	7,631.5	599.2	54.8	16,162.7	54,119.1
Memphis, TN	Memphis Area Transit Authority	6,607.1	421.9	37.9	10,668.5	62,926.9
Miami, FL	Miami-Dade Transit Agency	25,175.8	1,968.7	211.9	65,413.7	283,461.5
Milwaukee, WI	Milwaukee County Transit System	19,841.4	1,531.2	239.2	70,137.7	198,470.8
Minneapolis, MN	Metropolitan Council	29,456.7	2,089.4	256.8	76,750.5	341,547.3
	Metro Transit	25,147.0	1,839.7	244.0	73,347.9	312,516.4
	Metropolitan Council	4,309.7	249.7	12.8	3,402.6	29,030.9
New Orleans, LA	New Orleans Regional Transit Authority	11,746.1	849.5	163.5	49,060.1	141,926.6
New York, NY	Metropolitan Transportation Authority	111,081.5	13,600.3	3,057.1	957,003.2	1,937353.0
	MTA New York City Transit	101,025.7	12,780.6	2,952.5	926,017.7	1,780,311.6
	MTA Long Island Bus	9,968.5	802.7	103.6	30,731.6	156,858.5
	MTA Metro-North Railroad	87.3	17.0	1.0	253.9	182.9
New York, NY	New York City Dept of Transportation	23,830.7	2,487.5	391.6	116,772.9	402,489.5
Newark, NJ	New Jersey Transit Corporation	71,953.9	4,882.8	526.9	152,949.3	883,996.9
Norfolk, VA	Trp District Comm of Hampton Roads	10,401.8	821.5	58.2	15,649.8	82,383.7
Oakland, CA	Alameda-Contra Costa Transit District	22,799.5	1,952.9	237.2	70,808.7	218,660.1
Oceanside, CA	North San Diego County Tr Devel Bd	8,194.4	477.5	33.9	10,905.9	65,435.5
Orlando, FL	Central Florida Regional Trp Auth	11,576.9	828.1	69.4	21,290.0	113,317.7

TABLE 83: Major Bus and Trolleybus Agency Service and Usage Data, Fiscal Year 2001 (Thousands)

PRIMARY CITY SERVED	TRANSIT AGENCY	ANNUAL VEHICLE REVENUE MILES	ANNUAL VEHICLE REVENUE HOURS	AVERAGE WEEKDAY UNLINKED TRIPS	ANNUAL UNLINKED TRIPS	ANNUAL PASSENGER MILES
Seattle, WA	King County Dept of Transportation	36,565.6	2,974.6	325.3	97003.9	488,608.9
	Bus	33,086.9	2,469.9	243.8	72,257.2	446,716.8
	Trolleybus	3,478.7	504.7	81.5	24,746.7	41,892.1
Seattle, WA	Snohomish County Pub Trp Benefit Area	7,416.5	398.5	31.1	8,293.7	104,460.4
Springfield, MA	Pioneer Valley Transit Authority	4,976.9	377.5	37.5	10,781.1	29,801.7
Tacoma, WA	Pierce Transit	8,708.2	552.7	44.9	13,483.7	89,343.3
Tampa, FL	Hillsborough Area Regional Trp Auth	6,583.6	521.5	33.7	9,761.0	42,113.1
Tucson, AZ	City of Tucson Transit System	6,811.5	515.5	54.2	15,570.1	65,471.1
Washington, DC	Washington Metropolitan Area Tr Auth	36,447.6	3,247.0	489.6	142,647.6	457,028.2
White Plains, NY	Westchester County Dept of Trp	8,398.6	709.0	91.5	27,857.5	142,584.7
Wilmington, DE	Delaware Transit Corporation	5,492.3	391.1	29.2	8,001.8	36,186.8

Source: Federal Transit Administration National Transit Database
(a) All data are bus data only except for the 5 agencies with trolleybus data.
(b) Serves 3 urbanized areas totaling over 1,000,000.

TABLE 84: Major Bus and Trolleybus Agency Vehicle and Financial Data, Fiscal Year 2001 (a)

PRIMARY CITY SERVED	TRANSIT AGENCY	TOTAL VEHICLES	CAPITAL EXPENSE (000) (b)	FARE REVENUE (000)	OPERATING EXPENSES (000)
Atlanta, GA	Metropolitan Atlanta Rapid Tr Auth	712	67,660.0	52,274.2	176,808.7
Austin, TX	Capital Metropolitan Trp Auth	435	34,217.0	3,921.3	69,270.3
Baltimore, MD	Maryland Transit Administration	935	36,821.1	58,547.6	178,594.1
Boston, MA	Massachusetts Bay Trp Authority	1,086	110,402.3	60,348.8	230,504.7
	Bus	1,046	15,387.0	58,649.8	221,923.4
	Trolleybus	40	95,015.3	1,699.0	8,581.3
Buffalo, NY	Niagara Frontier Transit Metro Sys	332	4,655.7	17,893.0	55,424.4
Charlotte, NC	Charlotte Area Transit System	240	11,274.4	7,775.4	36,579.0
Chicago, IL	Regional Transportation Authority	2,607	154,656.0	254,106.5	624,724.8
	Chicago Transit Authority	1,919	114,481.8	221,715.0	523,013.7
	PACE Suburban Bus	688	40,174.2	32,391.6	101,711.1
Cincinnati, OH	Southwest Ohio Regional Tr Auth	481	15,479.3	18,817.1	63,036.6
Cleveland, OH	Greater Cleveland Reg Transit Auth	758	32,394.1	32,206.1	170,415.7
Columbus, OH	Central Ohio Transit Authority	346	32,368.2	12,995.5	67,299.6
Dallas, TX	Dallas Area Rapid Transit Authority	858	40,943.6	25,690.0	180,482.0
Dayton, OH	Greater Dayton Regional Tr Auth	229	15,956.6	6,565.2	44,024.6
	Bus	224	15,606.7	6,436.4	43,159.5
	Trolleybus	5	349.9	128.8	865.1
Denver, CO	Regional Transportation District	1,163	93,883.2	40,064.5	206,124.7
Detroit, MI	City of Detroit Department of Trp	585	37,457.1	24,044.3	169,617.3
Detroit, MI	Suburban Mobility Auth for Reg Trp	332	2,820.1	8,840.3	68,413.5
El Paso, TX	El Paso Mass Transit Department	113	9,771.5	6,601.8	25,233.1
Ft. Lauderdale, FL	Broward County Div of Mass Transit	328	10,480.5	15,875.0	61,853.9
Ft. Worth, TX	Fort Worth Transportation Authority	187	9,640.3	2,987.9	26,874.6
Hartford, CT	Connecticut Transit	382	8,015.5	19,889.0	61,178.8
Honolulu, HI	City & County Honolulu DOT Svces	529	23,470.1	26,963.5	112,701.5
Houston, TX	Metropolitan Tr Auth of Harris County	1,417	211,368.3	51,956.2	185,312.1

TABLE 84: Major Bus and Trolleybus Agency Vehicle and Financial Data, Fiscal Year 2001 (a)

PRIMARY CITY SERVED	TRANSIT AGENCY	TOTAL VEHICLES	CAPITAL EXPENSE (000) (b)	FARE REVENUE (000)	OPERATING EXPENSES (000)
Indianapolis, IN	Indianapolis Public Trp Corp	152	7,271.5	6,175.1	28,208.5
Jacksonville, FL	Jacksonville Transportation Authority	178	7,566.9	5,742.5	32,413.8
Kansas City, MO	Kansas City Area Trp Auth	308	5,447.4	NA	49,546.3
Las Vegas, NV	Regional Trp Comm of Southern NV	292	12,941.6	35,743.1	59,017.6
Long Beach, CA	Long Beach Transit	219	16,043.4	12,472.4	45,538.8
Los Angeles, CA	City of Los Angeles Dept of Trp	256	0.0	5,550.7	30,216.9
Los Angeles, CA	Foothill Transit	287	29,824.2	14,000.7	28,623.3
Los Angeles, CA	Los Angeles County Metro Trp Auth	2,677	195,133.1	187,970.1	633,709.2
Louisville, KY	Transit Authority of River City	268	9,040.5	5,780.2	40,460.1
Memphis, TN	Memphis Area Transit Authority	221	3,100.2	849.8	31,272.9
Miami, FL	Miami-Dade Transit Agency	732	42,300.0	54,322.6	161,919.9
Milwaukee, WI	Milwaukee County Transit System	516	20,714.9	38,456.4	114,309.2
Minneapolis, MN	Metropolitan Council	1,185	77,040.7	70,897.7	205,650.1
	Metro Transit	953	61,164.1	64,976.6	185,396.2
	Metropolitan Council	232	15,876.6	5,921.1	20,253.9
New Orleans, LA	New Orleans Regional Transit Auth	380	18,386.3	32,904.3	84,024.4
New York, NY	Metropolitan Transportation Authority	4,790	185,332.8	633,294.5	1,491,896.4
	MTA New York City Transit	4,457	180,586.3	602,022.2	1,410,982.0
	MTA Long Island Bus	325	4,746.5	31,166.8	79,978.0
	MTA Metro-North Railroad	8	0.0	105.5	936.4
New York, NY	New York City Department of Trp	1,279	0.0	128,715.8	290,266.2
Newark, NJ	New Jersey Transit Corporation	2,197	29,304.3	221,060.7	495,405.7
Norfolk, VA	Trp Dist Comm of Hampton Roads	296	14,605.4	NA	42,917.8
Oakland, CA	Alameda-Contra Costa Transit Dist	779	24,601.4	47,619.3	197,249.7
Oceanside, CA	North San Diego County Tr Devel Bd	154	22,944.0	8,360.6	35,516.4
Orlando, FL	Central Florida Regional Trp Auth	234	6,698.0	12,975.4	50,405.9

TABLE 84: Major Bus and Trolleybus Agency Vehicle and Financial Data, Fiscal Year 2001 (a)

PRIMARY CITY SERVED	TRANSIT AGENCY	TOTAL VEHICLES	CAPITAL EXPENSE (000) (b)	FARE REVENUE (000)	OPERATING EXPENSES (000)
Philadelphia, PA	Southeastern Pennsylvania Trp Auth	1,407	81,550.4	137,540.1	365,213.4
	Bus	1,341	81,472.4	130,459.7	352,785.9
	Trolleybus	66	78.0	7,080.4	12,427.5
Phoenix, AZ	City of Phoenix Public Transit Dept	409	9,737.9	22,471.8	78,890.4
Pittsburgh, PA	Port Authority of Allegheny County	1,032	60,901.2	47,314.7	198,535.8
Portland, OR	Tri-County Metropolitan Trp District	695	30,226.1	38,309.7	153,860.7
Providence, RI	Rhode Island Public Transit Authority	233	33,848.9	9,804.0	48,496.7
Riverside, CA	Riverside Transit Authority	119	3,053.7	5,216.0	24,766.6
Rockville, MD	Montgomery County Ride-On	308	6,032.7	9,434.7	53,721.7
Sacramento, CA	Sacramento Regional Transit District	225	8,552.8	14,850.6	59,389.2
St. Louis, MO	Bi-State Development Agency	575	37,923.4	22,820.1	114,052.0
St. Petersburg, FL	Pinellas Suncoast Transit Authority	171	16,071.3	7,808.9	28,696.1
Salt Lake City, UT	Utah Transit Authority (c)	676	21,463.9	11,822.0	83,827.8
San Antonio, TX	VIA Metropolitan Transit	498	56,913.3	14,398.0	76,221.1
San Bernardino, CA	Omnitrans	167	19,274.9	8,641.5	39,102.4
San Diego, CA	San Diego Metropolitan Transit Sys	425	10,395.5	32,278.1	86,996.8
	Metropolitan Transit Devel Board	107	622.0	7,706.0	15,600.2
	San Diego Transit Corporation	318	9,773.5	24,572.1	71,396.6
San Francisco, CA	Golden Gate Bridge, Hwy & Trp Dist	278	4,754.9	16,635.5	54,530.8
San Francisco, CA	San Francisco Municipal Railway	907	118,089.5	70,982.9	261,921.9
	Bus	577	65,463.0	38,533.7	155,529.8
	Trolleybus	330	52,626.5	32,449.2	106,392.1
San Francisco, CA	San Mateo County Transit District	326	16,868.4	15,625.0	65,172.2
San Jose, CA	Santa Clara Valley Trp Auth	536	249,897.8	28,761.8	197,325.1
San Juan, PR	Metropolitan Bus Authority	323	2,394.9	8,006.5	53,476.3
Santa Ana, CA	Orange County Transportation Auth	563	38,027.3	39,286.0	119,812.5
Santa Monica, CA	Santa Monica's Big Blue Bus	177	11,066.7	8,360.6	29,356.8

TABLE 84: Major Bus and Trolleybus Agency Vehicle and Financial Data, Fiscal Year 2001 (a)

PRIMARY CITY SERVED	TRANSIT AGENCY	TOTAL VEHICLES	CAPITAL EXPENSE (000) (b)	FARE REVENUE (000)	OPERATING EXPENSES (000)
Seattle, WA	King County Department of Trp	1,187	34,306.6	72,333.4	297,492.1
	Bus	1,028	24,629.3	54,288.0	253,523.1
	Trolleybus	159	9,677.3	18,045.4	43,969.0
Seattle, WA	Snohomish County Pub Trp BA	308	747.3	NA	47,075.7
Springfield, MA	Pioneer Valley Transit Authority	190	8,535.3	4,965.7	18,432.0
Tacoma, WA	Pierce Transit	247	5,484.9	6,225.5	43,950.8
Tampa, FL	Hillsborough Area Regional Trp Auth	207	17,433.6	6,230.7	30,950.4
Tucson, AZ	City of Tucson Transit System	199	6,770.7	6,710.0	31,099.4
Washington, DC	Washington Metro Area Tr Auth	1,430	44,219.8	91,086.5	328,999.8
White Plains, NY	Westchester County Dept of Trp	356	3,998.1	35,907.8	67,920.5
Wilmington, DE	Delaware Transit Corporation	203	15,543.2	5,511.4	26,800.5

Source: Federal Transit Administration National Transit Database
(a) All data are bus data only except for the 5 agencies with trolleybus data.
(b) Excludes expenses by non-transit agencies, contractors, and transit agencies not yet in operation.
(c) Serves 3 urbanized areas totaling over 1,000,000.

TABLE 85: Bus Fixed Guideway Directional Route Miles, Fiscal Year 2001 (a)

URBANIZED AREA	TRANSIT AGENCY	EXCLUSIVE ROW	CONTROLLED ROW
Atlanta, GA	Metropolitan Atlanta Rapid Transit Authority	0.2	13.6
Boston, MA	Massachusetts Bay Transportation Authority	1.1	12.4
Charlotte, NC	Charlotte Area Transit System	5.6	0.0
Chicago, IL	Chicago Transit Authority	3.7	0.0
Cincinnati, OH	Southwest Ohio Regional Transit Authority	0.1	0.0
Dallas, TX	Dallas Area Rapid Transit-First Transit	36.1	0.0
Dallas, TX	Dallas Area Rapid Transit	47.1	9.3
Denver, CO	Regional Transportation District	39.1	9.8
Hartford, CT	Connecticut Department of Transportation	23.6	0.0
Hartford, CT	Connecticut Transit	27.5	0.0
Honolulu, HI	Honolulu Department of Transportation Services	1.2	34.7
Houston, TX	Metropolitan Transit Authority of Harris County	178.8	23.8
Kansas City, MO	Kansas City Area Transportation Authority	0.0	1.1
Los Angeles, CA	City of Los Angeles Department of Transportation	33.9	0.0
Los Angeles, CA	Foothill Transit-Laidlaw Transit	23.6	0.0
Los Angeles, CA	Foothill Transit-Ryder/ATE	23.6	0.0
Los Angeles, CA	Long Beach Transit	0.5	0.0
Los Angeles, CA	Los Angeles County Metropolitan Transportation Authority	48.4	0.0
Los Angeles, CA	Torrance Transit	9.0	0.0
Madison, WI	Madison Metro	12.5	0.0
Miami, FL	Miami-Dade Transit Agency	16.7	24.6
Milwaukee, WI	Waukesha County Transit System	5.6	0.0
Milwaukee, WI	Waukesha Transit Commission	5.1	0.0
Minneapolis, MN	Metro Transit	200.0	30.6
Minneapolis, MN	Metropolitan Council	136.7	29.7
New Orleans, LA	Jefferson Transit	5.5	0.0
New Orleans, LA	New Orleans Regional Transit Authority	11.4	0.0
New York, NY	MTA New York City Transit	3.5	49.2

TABLE 85: Bus Fixed Guideway Directional Route Miles, Fiscal Year 2001 (a)

URBANIZED AREA	TRANSIT AGENCY	EXCLUSIVE ROW	CONTROLLED ROW
New York, NY	New York City Dept of Transportation-GTJC	0.3	13.8
New York, NY	New York City Dept of Transportation-Liberty Lines Express	0.0	8.2
New York, NY	New York City Dept of Transportation-New York Bus Tours	0.0	3.5
New York, NY	New York City Dept of Transportation-Queens Surface Corp	0.0	5.5
New York, NY	New Jersey Transit Corporation	0.0	29.6
New York, NY	Academy Lines	0.0	3.1
New York, NY	Hudson Transit Lines	0.0	2.9
New York, NY	Lakeland Bus Lines	0.0	2.9
New York, NY	Rockland Coaches	0.0	3.4
New York, NY	Suburban Transit Corporation	0.0	3.1
New York, NY	Suffolk Transit	0.0	46.9
New York, NY	Westchester County Dept of Transportation-Liberty Lines	0.0	4.2
Orlando, FL	Central Florida Regional Transportation Authority	2.5	0.0
Philadelphia, PA	Southeastern Pennsylvania Transportation Authority	2.5	0.0
Pittsburgh, PA	Port Authority of Allegheny County	51.3	0.0
Phoenix, AZ	City of Phoenix Public Transit Department	0.0	87.6
Phoenix, AZ	Regional Public Transportation Authority	0.0	21.0
Pittsburgh, PA	Mid Mon Valley Transit Authority	8.6	0.0
Portland, OR	Clark County Public Transportation Benefit Area	0.0	7.7
Portland, OR	Tri-County Metropolitan Transportation District of Oregon	2.3	0.6
Providence, RI	Rhode Island Public Transit Authority	1.6	0.0
Saint Louis, MO	Bi-State Development Agency	6.4	2.7
San Diego, CA	San Diego County Transit System	15.4	0.0
San Diego, CA	San Diego Transit Corporation	0.6	0.4
San Francisco, CA	Alameda-Contra Costa Transit District	0.3	44.5
San Francisco, CA	Golden Gate Bridge, Highway & Transportation District	0.0	20.5
San Francisco, CA	San Francisco Municipal Railway	0.0	8.5
San Jose, CA	Santa Clara Valley Transportation Authority	0.0	159.8
San Juan, PR	Metropolitan Bus Authority	17.1	0.0
San Juan, PR	Puerto Rico Highway and Transportation Authority	6.2	0.0

TABLE 85: Bus Fixed Guideway Directional Route Miles, Fiscal Year 2001 (a)

URBANIZED AREA	TRANSIT AGENCY	EXCLUSIVE ROW	CONTROLLED ROW
Seattle, WA	King County Department of Transportation	218.5	2.0
Seattle, WA	Pierce Transit	19.8	0.0
Seattle, WA	Snohomish County Public Transportation Benefit Area Corp	118.1	7.6
Springfield, MO	Missouri State University	0.3	0.0
Tampa, FL	Hillsborough Area Regional Transit Authority	0.0	1.1
Toledo, OH	Toledo Area Regional Transit Authority	0.0	1.0
Virginia Beach, VA	Transportation District Commission of Hampton Roads	0.0	39.9
Washington, DC	Alexandria Transit Company	0.0	7.4
Washington, DC	Fairfax Connector	0.0	63.4
Washington, DC	Loudoun County Commuter Service	0.0	19.0
Washington, DC	Maryland Transit Administration	0.0	17.0
Washington, DC	Potomac and Rappahannock Transportation Commission	0.0	110.0
Washington, DC	Washington Metropolitan Area Transit Authority	0.0	92.7
Williamsport, PA	Williamsport Bureau of Transportation	0.2	0.0
	TOTAL	1,372.1	1,080.3

Source: Federal Transit Administration, National Transit Database.
(a) Directional route miles count the round trip mileage from one end of the guideway to the other, regardless of how many routes or trips share use of the guideway. Exclusive ROW (right-of-way) is reserved at all times; controlled ROW only part of the time--usually just during peak hours. Some double-counting occurs when more than one transit agency or contractor uses the same fixed guideway.

TABLE 86: Trolleybus Fixed Guideway Directional Route Miles, Fiscal Year 2001 (a)

URBANIZED AREA	TRANSIT AGENCY	EXCLUSIVE ROW	CONTROLLED ROW
Boston, MA	Massachusetts Bay Transportation Authority	0.6	21.0
Dayton, OH	Greater Dayton Regional Transit Authority	0.0	124.0
Philadelphia, PA	Southeastern Pennsylvania Transportation Authority	0.0	42.5
San Francisco, CA	San Francisco Municipal Railway	0.0	164.0
Seattle, WA	King County Department of Transportation	3.4	115.7
	TOTAL	4.0	467.2

Source: Federal Transit Administration, National Transit Database.
(a) Directional route miles count the round trip mileage from one end of the guideway to the other, regardless of how many routes or trips share use of the guideway. Exclusive ROW (right-of-way) is reserved at all times; controlled ROW only part of the time--usually just during peak hours. Some double-counting occurs when more than one transit agency uses the same fixed guideway.

Demand Response

Highlights.....

See National Totals on page 145.

Demand response is the most widely available transit service, with over 5,000 transit agencies providing it. However, most of those agencies limit the service to disabled persons, their attendants and companions, and seniors.

Demand Response (also called **paratransit** or **dial-a-ride**) is comprised of passenger cars, vans or small buses operating in response to calls from passengers or their agents to the transit operator, who then dispatches a vehicle to pick up the passengers and transport them to their destinations. A demand response operation is characterized by the following: (a) The vehicles do not operate over a fixed route or on a fixed schedule except, perhaps, on a temporary basis to satisfy a special need; and (b) typically, the vehicle may be dispatched to pick up several passengers at different pick-up points before taking them to their respective destinations and may even be interrupted en route to these destinations to pick up other passengers. The following types of operations fall under the above definitions provided they are not on a scheduled fixed route basis: many origins-many destinations, many origins-one destination, one origin-many destinations, and one origin-one destination.

TABLE 87: Average New Demand Response Vehicle Costs, 2001-2002, Thousands of Dollars

TYPE OF VEHICLE	COST
35' Transit (32'6"-37'5")	90
30' Transit (27'6"-32'5")	118
Small Vehicle (<27'6")	54

Source: APTA survey. Data includes about 22% of demand response vehicles. CAUTION: The small sample represents primarily larger urban areas; inclusion of rural and small urban areas might produce significantly different results.
Cost includes amount paid to manufacturer or agent. Not all orders were reported. Each year of a multi-year order is counted as a separate order.

TABLE 88: Demand Response National Totals, Fiscal Year 2001

Agencies, Number of	5,251
Fares Collected, Passenger	$181,465,000
Fare per Unlinked Trip, Average	$1.73
Expense, Operating Total (a)	$1,753,998,000
Salaries and Wages (b)	$261,296,000
Fringe Benefits (b)	$109,849,000
Services (b)	$33,415,000
Fuel and Lubricants (b)	$24,469,000
Materials and Supplies, Other (b)	$25,109,000
Utilities (b)	$7,732,000
Casualty and Liability (b)	$16,755,000
Purchased Transportation (b) (c)	$1,264,167,000
Other (b)	$11,206,000
Vehicle Operations (c)	$315,818,000
Vehicle Maintenance (c)	$72,047,000
Non-vehicle Maintenance (c)	$14,385,000
General Administration (c)	$87,581,000
Expense, Capital Total	$153,962,000
Rolling Stock	$120,053,000
Facilities	$21,322,000
Other	$12,587,000
Trips, Unlinked Passenger, Average Weekday	372,000
Trips, Unlinked Passenger, Annual	104,820,000
Miles, Passenger	855,312,000
Trip Length, Average (miles)	8.2
Miles, Vehicle Total	789,302,000
Miles, Vehicle Revenue	670,097,000
Hours, Vehicle Total	53,851,000
Hours, Vehicle Revenue	46,325,000
Speed, Vehicle in Revenue Service, Average (m.p.h.)	14.5
Vehicles, Total	35,993
Active	34,661
Age, Average (years)	3.3
Air-conditioned	94.9%
Lifts, Wheelchair	72.3%
Ramps, Wheelchair	18.4%
Accessible Only via Stations	0.0%
Power Source, Diesel or Gasoline	94.9%
Power Source, Alternative	5.1%
Rehabilitated	1.3%
Employees, Operating	55,846
Vehicle Operations	46,102
Vehicle Maintenance	4,757
Non-vehicle Maintenance	733
General Administration	4,254
Employees, Capital	14
Diesel Fuel Consumed (gallons)	54,898,000
Other Fuel Consumed (gallons)	31,215,000
Electricity Consumed (kwh)	0

(a) Sum of (b) lines OR sum of (c) lines.

Types of Service

Complementary paratransit service is required by law for those disabled persons and others not able to use fixed-route service. Generally it must operate in the same areas and during the same hours. The fare is limited to twice the fixed-route fare. Service may be the fixed-route bus agency or by a completely separate agency.

General demand response service is not required by law and is not subject to the restrictions imposed on complementary paratransit service. The transit agency may limit the service to certain people, such as disabled and seniors only, or it may be available to anyone. Some such services operate during late-night and weekend hours in place of fixed-route services.

User-side subsidy service is a transportation arrangement where the rider's cost of transportation is partially subsidized by the transit agency. The user is the rider who pays a reduced fare. A typical user-side subsidy program is operated through taxicab operators or a brokerage system who may charge a per-ride fee for handling the rider's transportation arrangements.

Types of Vehicles

Almost all demand response service is operated with vehicles less than 30 feet in length since generally only a few people are on board the vehicle at any time. Despite their small size, most such vehicles have two doors similar to transit buses, though the rear door (used for wheelchairs) may actually open behind the vehicle instead of towards the side.

A **van** has a typical seating capacity of 5 to 15 passengers and is classified as a van by vehicle manufacturers--typically Dodge, Ford, and General Motors. A **modified van (body-on-chassis van)** is a standard van that has undergone some structural changes by another company, usually made to increase its size and particularly its height. The seating capacity of modified vans is approximately 9 to 18 passengers.

Small transit buses (see the Bus section for definitions) are also used by a small number of transit agencies.

Demand response service uses vans and minibuses because very few people are on board at one time. Indianapolis Public Transportation Corporation uses this van.

TABLE 89: New Demand Response Vehicle Market by Type, Length, and Seating Capacity, 2001-2006 (a)

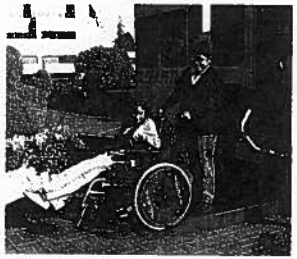
CATEGORY	BUILT IN 2001		ON ORDER JANUARY 2002		POTENTIAL ORDERS (b)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	2,500	100.0%	910	100.0%	5,311	100.0%
Type						
Transit (27'6"-33'0")	35	1.4%	0	0.0%	23	0.4%
Small vehicle (<27'6")	2,465	98.6%	910	100.0%	5,288	99.6%
Length						
26-33 feet	226	9.0%	42	4.6%	276	5.2%
24-25 feet	568	22.7%	319	35.0%	1,318	24.8%
21-23 feet	796	31.9%	241	26.5%	1,336	25.2%
20 feet	441	17.6%	119	13.1%	2,030	38.2%
12-19 feet	469	18.8%	189	20.8%	351	6.6%
Seating Capacity						
21 or more seats	91	3.6%	2	0.2%	29	0.5%
16-20 seats	281	11.2%	232	25.5%	1,007	19.0%
11-15 seats	1,007	40.3%	335	36.8%	1,299	24.5%
6-10 seats	670	26.8%	153	16.8%	1,088	20.5%
Below 6 seats	451	18.1%	188	20.7%	1,888	35.5%

(a) Source: APTA survey. Data includes about 22% of demand response vehicles. CAUTION: The small sample represents primarily larger urban areas; inclusion of rural and small urban areas might produce significantly different results.
(b) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

Accessibility

An **accessible vehicle** is a public transportation revenue vehicle that does not restrict access, is usable, and provides allocated space and/or priority seating for individuals who use wheelchairs.

High-floor vans require the rider to climb 2 or 3 steps from street level. Such vans accommodate wheelchair-bound and other riders who cannot climb steps by using a retractable lift that raises and lowers persons and equipment between street and van floor levels.



Wheelchair lift operating on a Pierce Transit van in Tacoma, Washington.

Low-floor vans have a level floor in the entire passenger-seating area. Only a short retractable ramp is necessary to accommodate wheelchairs and those who cannot bridge the gap between van and street level.

Minnesota's St. Cloud Metropolitan Transit Commission is one of many agencies operating low-floor demand response vans.

TABLE 90: Demand Response Accessibility, 2002

	VEHICLES	PER CENT
Total	10,287	NA
Via on-board lift	8,736	72.3%
Via on-board ramp	972	18.4%
Non-accessible	579	9.3%

Source: APTA survey. Data includes about 22% of demand response vehicles. CAUTION: The small sample represents primarily larger urban areas; inclusion of rural and small urban areas might produce significantly different results. Most non-accessible vehicles are automobiles or unmodified vans.

TABLE 91: New Demand Response Vehicle Market by Accessibility, 2001-2006

	BUILT IN 2001		ON ORDER JANUARY 2002		POTENTIAL ORDERS (a)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	2,500	100.0%	910	100.0%	5,311	100.0%
Via on-board lift	2,249	89.9%	774	85.0%	5,013	94.4%
Via on-board ramp	89	3.6%	128	14.1%	152	2.9%
Non-accessible	162	6.5%	8	0.9%	146	2.7%

Source: APTA survey. Data includes about 22% of demand response vehicles. CAUTION: The small sample represents primarily larger urban areas; inclusion of rural and small urban areas might produce significantly different results.
(a) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 92: Demand Response Vehicle Power Sources, 2002

	VEHICLES	PER CENT
Total	10,287	NA
Compressed natural gas & blends	341	3.3%
Diesel	6,528	63.5%
Gasoline	3,244	31.5%
Liquefied natural gas & blends	39	0.4%
Propane & blends	135	1.3%

Source: APTA survey. Data includes about 22% of demand response vehicles.
CAUTION: The small sample represents primarily larger urban areas; inclusion of rural and small urban areas might produce significantly different results.

TABLE 93: New Demand Response Vehicle Market by Power Source, 2001-2006

	BUILT IN 2001		ON ORDER JANUARY 2002		POTENTIAL ORDERS (a)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	2,500	100.0%	910	100.0%	5,311	100.0%
Compressed natural gas	116	4.6%	37	4.1%	64	1.2%
Diesel (inc particulate trap)	1,823	72.9%	661	72.6%	4,168	78.5%
Gasoline	561	22.5%	192	21.1%	683	12.9%
Propane	0	0.0%	0	0.0%	121	2.3%
Undecided	NA	NA	20	2.2%	275	5.2%

Source: APTA survey. Data includes about 22% of demand response vehicles. CAUTION: The small sample represents primarily larger urban areas; inclusion of rural and small urban areas might produce significantly different results.
(a) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 94: Demand Response Power Source Efficiency, Miles per Gallon

DIESEL	COMPRESSED NATURAL GAS	GASOLINE	LIQUIFIED NATURAL GAS	PROPANE
12.62	2.77	22.10	2.21	4.85

Source: Federal Transit Administration, 2000 National Transit Database.

TABLE 95: Demand Response Fuel Consumption, Thousands of Gallons (a)

YEAR	DIESEL	COMPRESSED NATURAL GAS	GASOLINE	LIQUIFIED NATURAL GAS	PROPANE	OTHER	TOTAL NON-DIESEL
1994	29,949	1,726	39,868	311	1,599	21	43,525
1995	28,958	729	38,190	499	3,360	19	42,797
1996	30,923	3,565	37,202	584	4,640	6	45,997
1997	32,020	3,854	35,684	754	4,112	11	44,415
1998	38,725	4,647	29,508	2,256	5,749	32	42,192
1999	43,202	4,502	26,750	2,421	4,941	9	38,623
2000	48,088	4,311	23,911	2,103	4,261	0	34,586
2001 P	54,898	5,267	20,286	2,095	3,529	38	31,215

P = Preliminary
(a) Data includes passenger vehicles; excludes non-passenger-vehicle and non-vehicle consumption.

TABLE 96: New Demand Response Market by Manufacturer, 2001-2006

	BUILT IN 2001		ON ORDER JANUARY 2002		POTENTIAL ORDERS (a)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	2,500	100.0%	910	100.0%	5,311	100.0%
Braun	139	5.6%	29	3.2%	NA	NA
Champion	146	5.8%	0	0.0%	NA	NA
Coach & Equipment	261	10.4%	114	12.5%	NA	NA
Collins	0	0.0%	22	2.4%	NA	NA
El Dorado-National	889	35.6%	403	44.3%	NA	NA
Ford	248	9.9%	33	3.6%	NA	NA
Goshen	350	14.0%	138	15.2%	NA	NA
Ricon	43	1.7%	119	13.1%	NA	NA
Starcraft	135	5.4%	0	0.0%	NA	NA
Supreme	125	5.0%	15	1.6%	NA	NA
All others	164	6.6%	37	4.1%	NA	NA

Source: APTA survey. Data includes about 22% of demand response vehicles. CAUTION: The small sample represents primarily larger urban areas; inclusion of rural and small urban areas might produce significantly different results.
(a) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 97: 75 Largest Demand Response Transit Agencies Ranked by Passenger Miles Traveled, Fiscal Year 2001 (Thousands)(a)

	TRANSIT AGENCY	CITY	MILES
1	Metropolitan Transportation Authority	New York, NY	23,524.6
	MTA Long Island Bus	Garden City, NY	2,319.6
	MTA New York City Transit	New York, NY	21,205.0
2	Regional Transportation Authority	Chicago, IL	20,993.6
	Chicago Transit Authority	Chicago, IL	11,922.8
	PACE Suburban Bus	Arlington Heights, IL	9,070.8
3	Access Services	Los Angeles, CA	18,623.2
4	Metro Mobility	Minneapolis, MN	16,643.7
	Metro Mobility	Minneapolis, MN	11,489.5
	Metropolitan Council	Saint Paul, MN	5,154.2
5	Pee Dee Regional Transportation Authority	Florence, SC	16,136.1
6	Massachusetts Bay Transportation Authority	Boston, MA	14,061.8
7	Metropolitan Transit Authority of Harris County	Houston, TX	13,341.0
8	Port Authority of Allegheny County	Pittsburgh, PA	13,139.6
9	VIA Metropolitan Transit	San Antonio, TX	12,124.6
10	King County Department of Transportation	Seattle, WA	11,112.7
11	Southeastern Pennsylvania Transportation Auth	Philadelphia, PA	11,007.6
12	Miami-Dade Transit Agency	Miami, FL	10,770.9
13	Space Coast Area Transit	Cocoa, FL	10,028.1
14	City & County of Honolulu Dept of Trp Services	Honolulu, HI	9,766.4
15	Broward County Division of Mass Transit	Pompano Beach, FL	9,418.8
16	Santa Clara Valley Transportation Authority	San Jose, CA	8,780.4
17	Central Florida Regional Transportation Authority	Orlando, FL	8,477.5
18	Dallas Area Rapid Transit Authority	Dallas, TX	8,157.9
19	Jacksonville Transportation Authority	Jacksonville, FL	7,387.0
20	Milwaukee County Transit System	Milwaukee, WI	6,987.0
21	Tri-County Metropolitan Transportation District	Portland, OR	6,830.8
22	Orange County Transportation Authority	Orange, CA	6,561.7
23	Regional Transportation District	Denver, CO	6,221.7
24	San Francisco Municipal Railway	San Francisco, CA	6,143.5
25	Regional Trp Comm of Southern Nevada	Las Vegas, NV	6,108.6
26	Maryland Transit Administration	Baltimore, MD	5,953.4
27	Delaware Transit Corporation	Dover, DE	5,681.7
28	Alameda-Contra Transit District (b)	Oakland, CA	5,624.1
29	Washington Metropolitan Area Transit Authority	Washington, DC	5,419.6
30	Rhode Island Public Transit Authority	Providence, RI	5,190.3
31	Suburban Mobility Authority for Regional Trp	Detroit, MI	5,021.3
32	Utah Transit Authority	Salt Lake City, UT	5,014.8
33	Montgomery County Ride-On	Rockville, MD	4,940.8
34	City of Los Angeles Department of Transportation	Los Angeles, CA	4,915.0
35	Mass Transportation Authority	Flint, MI	4,676.8
36	Omnitrans	San Bernardino, CA	4,161.4
37	Montachusett Regional Transit Authority	Fitchburg, MA	4,035.7
38	Bi-State Development Agency	Saint Louis, MO	3,957.8
39	Laketran	Grand River, OH	3,920.1
40	Fort Worth Transportation Authority	Fort Worth, TX	3,793.9
41	Pierce Transit	Tacoma, WA	3,625.7
42	Palm Beach County Surface Transportation Dept	West Palm Beach, FL	3,574.0
43	Interurban Transit Partnership	Grand Rapids, MI	3,549.5
44	Transit Authority of River City	Louisville, KY	3,485.6
45	Los Angeles County Metropolitan Trp Auth	Los Angeles, CA	3,408.8

TABLE 97: 75 Largest Demand Response Transit Agencies Ranked by Passenger Miles Traveled, Fiscal Year 2001 (Thousands)(a)

	TRANSIT AGENCY	CITY	MILES
46	City of Phoenix Public Transit Department	Phoenix, AZ	3,376.3
47	Memphis Area Transit Authority	Memphis, TN	3,369.2
48	Volusia County Transportation Authority	South Daytona, FL	3,368.7
49	Lehigh and Northampton Transportation Authority	Allentown, PA	3,304.7
50	Spokane Transit Authority	Spokane, WA	3,285.9
51	Santee Wateree Regional Transit Authority	Sumter, SC	3,248.1
52	Pioneer Valley Transit Authority	Springfield, MA	3,214.4
53	Capital Area Transportation Authority	Lansing, MI	3,075.7
54	Metropolitan Transit Development Board	San Diego, CA	3,051.4
55	Capital Metropolitan Transportation Authority	Austin, TX	3,015.9
56	New Jersey Transit Corporation	Newark, NJ	2,986.5
57	Transportation District Comm of Hampton Roads	Hampton, VA	2,882.9
58	Indianapolis Public Transportation Corporation	Indianapolis, IN	2,852.9
59	Greater Hartford Transit District	Hartford, CT	2,847.2
60	San Diego County Transit System	San Diego, CA	2,785.3
61	Southwest Ohio Regional Transit Authority	Cincinnati, OH	2,662.8
62	El Paso Mass Transit Department	El Paso, TX	2,652.9
63	City of Tucson Transit System	Tucson, AZ	2,606.1
64	Red Rose Transit Authority	Lancaster, PA	2,550.8
65	Cumberland-Dauphin-Harrisburg Transit Authority	Harrisburg, PA	2,451.8
66	Coastal Rapid Public Transit Authority	Conway, SC	2,439.8
67	Regional Transportation Program	Portland, ME	2,392.4
68	San Joaquin Regional Transit District	Stockton, CA	2,359.2
69	Ben Franklin Transit	Richland, WA	2,254.2
70	Kansas City Area Transportation Authority	Kansas City, MO	2,254.1
71	Spartanburg County Transportation	Spartanburg, SC	2,163.8
72	Kitsap Transit	Bremerton, WA	2,111.6
73	Sacramento Regional Transit District	Sacramento, CA	2,092.1
74	Pinellas Suncoast Transit Authority	Clearwater, FL	2,031.7
75	Worcester Regional Transit Authority	Worcester, MA	1,973.0

Source: Federal Transit Administration National Transit Database
(a) Some large rural transit agencies not eligible to participate in the NTD may be larger than some of the agencies listed.
(b) Contractor also provides service for San Francisco Bay Area Rapid Transit District.

TABLE 98: Major Demand Response Agency Service and Usage Data, Fiscal Year 2001 (Thousands)

PRIMARY CITY SERVED	TRANSIT AGENCY	ANNUAL VEHICLE REVENUE MILES	ANNUAL VEHICLE REVENUE HOURS	AVERAGE WEEKDAY UNLINKED TRIPS	ANNUAL UNLINKED TRIPS	ANNUAL PASSENGER MILES
Atlanta, GA	Metropolitan Atlanta Rapid Transit Auth	2,392.7	138.2	0.7	191.8	1,998.9
Austin, TX	Capital Metropolitan Transportation Auth	2,448.8	196.9	1.2	358.7	3,015.9
Baltimore, MD	Maryland Transit Administration	5,545.0	348.4	NA	678.5	5,953.4
Boston, MA	Massachusetts Bay Transportation Auth	8,324.1	621.9	NA	1,050.6	14,061.8
Buffalo, NY	Niagara Frontier Transit Metro System	532.2	35.6	0.2	55.2	532.2
Charlotte, NC	Charlotte Area Transit System	1,382.0	111.9	0.7	192.8	1,505.1
Chicago, IL	Regional Transportation Authority	15,625.8	1,408.1	10.1	2,955.7	20,993.6
	Chicago Transit Authority	8,524.5	891.9	4.4	1,437.9	11,922.8
	PACE Suburban Bus	7,101.3	516.2	5.7	1,517.8	9,070.8
Cincinnati, OH	Southwest Ohio Regional Transit Authority	2,382.7	138.3	0.9	253.1	2,662.8
Cleveland, OH	Greater Cleveland Reg Transit Auth	2,361.5	170.0	1.1	316.6	1,686.5
Columbus, OH	Central Ohio Transit Authority	1,910.2	108.9	0.5	145.5	1,210.9
Dallas, TX	Dallas Area Rapid Transit Authority	6,635.8	553.1	NA	1,318.2	8,157.9
Dayton, OH	Greater Dayton Regional Transit Auth	1,313.7	106.5	0.5	151.9	1,263.8
Denver, CO	Regional Transportation District	5,180.8	405.8	2.0	572.9	6,221.7
Detroit, MI	City of Detroit Department of Transportation	826.1	47.3	0.5	159.0	1,519.9
Detroit, MI	Suburban Mobility Authority for Reg Trp	3,271.2	244.8	3.1	800.2	5,021.3
El Paso, TX	El Paso Mass Transit Department	1,749.7	115.1	1.0	275.6	2,652.9
Ft. Lauderdale, FL	Broward County Division of Mass Transit	7,837.1	571.0	3.2	922.1	9,418.8
Ft. Worth, TX	Fort Worth Transportation Authority	3,725.4	176.3	1.2	371.7	3,793.9
Hartford, CT	Greater Hartford Transit District	2,216.1	176.4	1.6	454.4	2,847.2
Honolulu, HI	City & County of Honolulu DOT Svces	4,406.5	286.4	2.6	730.8	9,766.4
Houston, TX	Metropolitan Transit Auth of Harris County	11,187.4	587.3	4.1	1,222.2	13,341.0
Indianapolis, IN	Indianapolis Public Transportation Corp	2,500.0	126.7	1.0	295.6	2,852.8
Jacksonville, FL	Jacksonville Transportation Authority	6,792.4	370.6	1.8	496.8	7,387.0
Kansas City, MO	Kansas City Area Transportation Authority	1,870.6	110.7	1.4	389.8	2,254.1
Las Vegas, NV	Regional Trp Comm of Southern Nevada	5,217.9	337.9	2.3	674.1	6,108.6
Long Beach, CA	Long Beach Transit	362.9	18.2	0.3	87.3	404.0

TABLE 98: Major Demand Response Agency Service and Usage Data, Fiscal Year 2001 (Thousands)

PRIMARY CITY SERVED	TRANSIT AGENCY	ANNUAL VEHICLE REVENUE MILES	ANNUAL VEHICLE REVENUE HOURS	AVERAGE WEEKDAY UNLINKED TRIPS	ANNUAL UNLINKED TRIPS	ANNUAL PASSENGER MILES
Los Angeles, CA	Access Services	15,239.2	665.7	5.4	1,697.3	18,623.2
Los Angeles, CA	City of Los Angeles Dept of Transportation	4,284.7	294.5	3.4	1,073.0	4,915.0
Los Angeles, CA	Los Angeles County Metropolitan Trp Auth	2,531.0	195.3	2.7	825.3	3,408.8
Louisville, KY	Transit Authority of River City	3,440.4	199.7	1.3	389.1	3,485.5
Memphis, TN	Memphis Area Transit Authority	2,318.5	122.5	0.9	211.1	3,369.2
Miami, FL	Miami-Dade Transit Agency	9,597.7	645.1	3.8	1,062.0	10,770.9
Milwaukee, WI	Milwaukee County Transit System	5,007.1	383.8	3.8	1,043.2	6,987.0
Minneapolis, MN	Metropolitan Council	10,937.1	753.1	6.3	1,726.2	16,643.7
	Metro Mobility	7,647.4	514.3	3.6	1,010.5	11,489.5
	Metropolitan Council	3,289.7	238.8	2.7	715.7	5,154.2
New Orleans, LA	New Orleans Regional Transit Authority	1,514.5	136.4	0.9	257.9	1,773.8
New York, NY	Metropolitan Transportation Authority	21,398.5	1,882.5	7.1	2,162.0	23,524.6
	MTA New York City Transit	19,182.5	1,721.0	6.3	1,921.3	21,205.0
	MTA Long Island Bus	2,216.0	161.5	0.8	240.7	2,319.6
Newark, NJ	New Jersey Transit Corporation	5,187.2	305.8	1.3	380.0	2,986.5
Norfolk, VA	Trp District Comm of Hampton Roads	2,444.6	193.1	1.2	412.2	2,882.9
Oakland, CA	Intelitran (a)	5,643.1	404.3	2.4	711.6	5,624.1
Oceanside, CA	North San Diego County Tr Devel Bd	892.7	53.6	0.6	162.6	1,241.9
Orlando, FL	Central Florida Regional Trp Auth	6,800.4	422.7	2.6	724.4	8,477.5
Philadelphia, PA	Southeastern Pennsylvania Trp Auth	10,220.9	885.9	NA	1,627.9	11,007.6
Phoenix, AZ	City of Phoenix Public Transit Department	3,528.6	242.4	1.6	442.1	3,376.3
Pittsburgh, PA	Port Authority of Allegheny County	12,798.9	864.9	7.1	2,058.6	13,139.6
Portland, OR	Tri-County Metropolitan Transportation Dist	5,024.9	344.8	2.7	781.9	6,830.8
Providence, RI	Rhode Island Public Transit Authority	3,159.4	214.3	2.4	633.8	5,190.3
Riverside, CA	Riverside Transit Agency	1,618.5	101.8	0.8	225.6	1,549.8
Rockville, MD	Montgomery County Ride-On	4,940.8	307.2	1.2	352.0	4,940.8
Sacramento, CA	Sacramento Regional Transit District	2,314.2	135.1	0.8	237.5	2,092.1
St. Louis, MO	Bi-State Development Agency	3,488.4	195.9	1.5	444.5	3,957.8

TABLE 98: Major Demand Response Agency Service and Usage Data, Fiscal Year 2001 (Thousands)

PRIMARY CITY SERVED	TRANSIT AGENCY	ANNUAL VEHICLE REVENUE MILES	ANNUAL VEHICLE REVENUE HOURS	AVERAGE WEEKDAY UNLINKED TRIPS	ANNUAL UNLINKED TRIPS	ANNUAL PASSENGER MILES
St. Petersburg, FL	Pinellas Suncoast Transit Authority	1,828.6	85.8	0.8	242.4	2,031.7
Salt Lake City, UT	Utah Transit Authority (b)	4,743.6	290.6	2.0	538.3	5,014.8
San Antonio, TX	VIA Metropolitan Transit	9,259.6	441.7	3.7	1,028.7	12,124.6
San Bernardino, CA	Omnitrans	2,304.0	166.1	1.8	481.5	4,161.4
San Diego, CA	San Diego Metropolitan Transit Develop Bd	2,520.4	174.0	2.6	679.8	3,051.4
San Francisco, CA	Golden Gate Bridge, Hwy & Trp Dist	828.5	48.0	0.3	78.2	616.9
San Francisco, CA	San Francisco Municipal Railway	3,231.2	264.3	3.5	1,127.3	6,143.5
San Francisco, CA	San Mateo County Transit District	1,878.8	155.1	0.8	211.8	1,779.2
San Jose, CA	Santa Clara Valley Transportation Authority	13,785.1	903.1	4.4	1,331.3	12,001.3
San Juan, PR	Metropolitan Bus Authority	631.8	54.7	0.4	105.1	726.1
Santa Ana, CA	Orange County Transportation Authority	4,851.8	393.4	2.6	713.2	6,561.7
Santa Monica, CA	Santa Monica's Big Blue Bus	69.5	8.6	0.1	22.6	53.0
Seattle, WA	King County Department of Transportation	8,666.0	619.0	5.9	1,685.8	11,112.7
Seattle, WA	Snohomish County Pub Trp Benefit Area	1,262.9	72.3	0.6	162.0	1,449.7
Springfield, MA	Pioneer Valley Transit Authority	3,350.2	238.0	1.3	462.7	3,214.4
Tacoma, WA	Pierce Transit	2,402.2	149.7	1.3	396.1	3,625.7
Tampa, FL	Hillsborough Area Regional Trp Auth	500.6	36.2	0.1	40.2	291.8
Tucson, AZ	City of Tucson Transit System	1,823.5	151.0	1.0	294.7	2,606.1
Washington, DC	Washington Metropolitan Area Transit Auth	5,569.6	357.0	1.8	557.0	5,419.6
White Plains, NY	Westchester County Dept of Trp	1,913.5	120.0	0.7	176.5	1,729.1
Wilmington, DE	Delaware Transit Corporation	6,072.5	323.2	2.0	541.1	5,681.7

Source: Federal Transit Administration National Transit Database
(a) Contractor for both Alameda-Contra Transit District and San Francisco Bay Area Rapid Transit District.
(b) Serves 3 urbanized areas totaling over 1,000,000.

TABLE 99: Major Demand Response Agency Vehicle and Financial Data, Fiscal Year 2001

PRIMARY CITY SERVED	TRANSIT AGENCY	TOTAL VEHICLES	CAPITAL EXPENSES (000)(a)	FARE REVENUE (000)	OPERATING EXPENSES (000)
Atlanta, GA	Metropolitan Atlanta Rapid Tr Auth	90	0.0	309.2	8,337.3
Austin, TX	Capital Metropolitan Trp Auth	421	845.6	5,017.5	14,867.4
Baltimore, MD	Maryland Transit Administration	118	0.0	763.0	13,703.5
Boston, MA	Massachusetts Bay Trp Auth	361	0.0	1,108.9	25,896.7
Buffalo, NY	Niagara Frontier Transit Metro Sys	29	0.0	129.4	1,416.6
Charlotte, NC	Charlotte Area Transit System	62	0.0	18.4	4,027.1
Chicago, IL	Regional Transportation Authority	1,118	9,955.9	3,536.8	56,894.4
	Chicago Transit Authority	775	0.0	1,535.9	33,428.2
	PACE Suburban Bus	343	9,955.9	2,000.9	23,466.2
Cincinnati, OH	Southwest Ohio Regional Tr Auth	94	2,288.3	248.1	5,939.4
Cleveland, OH	Greater Cleveland Reg Transit Auth	110	5,093.5	250.4	14,887.2
Columbus, OH	Central Ohio Transit Authority	43	70.7	199.5	4,077.4
Dallas, TX	Dallas Area Rapid Transit Authority	273	10,000.1	911.4	17,498.3
Dayton, OH	Greater Dayton Regional Tr Auth	69	4,829.0	280.1	7,723.2
Denver, CO	Regional Transportation District	251	2,834.6	599.9	15,494.4
Detroit, MI	City of Detroit Dept of Transportation	43	0.0	291.8	3,925.4
Detroit, MI	Suburban Mobility Auth for Reg Trp	165	2,312.2	1,455.3	16,592.5
El Paso, TX	El Paso Mass Transit Department	81	0.0	327.1	6,695.8
Ft. Lauderdale, FL	Broward County Div of Mass Transit	244	1,164.2	1,509.7	15,201.7
Ft. Worth, TX	Fort Worth Transportation Authority	127	0.0	568.1	8,358.1
Hartford, CT	Greater Hartford Transit District	123	1,818.3	26.4	5,846.7
Honolulu, HI	City & County Honolulu DOT Svces	135	2.8	1,023.9	13,119.2
Houston, TX	Metro Tr Auth of Harris County	1,154	165.5	659.7	20,023.6
Indianapolis, IN	Indianapolis Public Trp Corp	67	1,730.8	565.8	7,927.1
Jacksonville, FL	Jacksonville Transportation Auth	145	708.2	7,463.6	12,464.3
Kansas City, MO	Kansas City Area Trp Auth	112	0.0	NA	5,364.8
Las Vegas, NV	Regional Trp Comm of Southern NV	172	0.0	377.7	15,917.6
Long Beach, CA	Long Beach Transit	23	0.0	79.6	998.7

TABLE 99: Major Demand Response Agency Vehicle and Financial Data, Fiscal Year 2001

PRIMARY CITY SERVED	TRANSIT AGENCY	TOTAL VEHICLES	CAPITAL EXPENSES (000)(a)	FARE REVENUE (000)	OPERATING EXPENSES (000)
Los Angeles, CA	Access Services	518	3,873.5	3,170.3	47,227.5
Los Angeles, CA	City of Los Angeles Dept of Trp	168	0.0	857.2	12,477.4
Los Angeles, CA	Los Angeles County Metro Trp Auth	170	195.3	681.5	10,137.7
Louisville, KY	Transit Authority of River City	83	0.0	589.1	7,563.3
Memphis, TN	Memphis Area Transit Authority	51	1,441.6	179.2	3,061.2
Miami, FL	Miami-Dade Transit Agency	261	0.0	2,265.6	16,195.9
Milwaukee, WI	Milwaukee County Transit System	463	0.0	2,520.9	16,583.8
Minneapolis, MN	Metropolitan Council	517	7,102.5	3,508.2	32,340.7
	Metro Mobility	258	7,102.5	2,465.8	21,390.6
	Metropolitan Council	259	0.0	1,042.4	10,950.1
New Orleans, LA	New Orleans Regional Transit Auth	64	0.0	206.0	8,194.0
New York, NY	Metropolitan Transportation Auth	894	1,370.8	3,620.1	84,930.1
	MTA New York City Transit	820	0.0	2,977.7	78,051.1
	MTA Long Island Bus	74	1,370.8	642.4	6,879.0
Newark, NJ	New Jersey Transit Corporation	97	0.0	930.2	15,132.3
Norfolk, VA	Trp Dist Comm of Hampton Roads	230	0.0	NA	6,009.7
Oakland, CA	Intelitran (b)	186	0.0	1,512.0	19,943.3
Oceanside, CA	North San Diego County Tr Dev Bd	32	64.3	222.6	3,142.8
Orlando, FL	Central Florida Regional Trp Auth	173	119.1	8,229.1	12,692.2
Philadelphia, PA	Southeastern Pennsylvania Trp Auth	487	185.1	3,864.6	47,716.6
Phoenix, AZ	City of Phoenix Public Transit Dept	136	0.0	514.8	10,531.7
Pittsburgh, PA	Port Authority of Allegheny County	476	0.0	6,125.5	29,527.9
Portland, OR	Tri-County Metropolitan Trp Dist	190	2,291.7	93.7	15,559.0
Providence, RI	Rhode Island Public Transit Auth	117	0.0	105.9	7,161.2
Riverside, CA	Riverside Transit Agency	55	1,941.0	167.4	3,482.0
Rockville, MD	Montgomery County Ride-On	104	0.0	0.0	2,881.7
Sacramento, CA	Sacramento Regional Transit District	138	0.0	531.3	8,576.3
St. Louis, MO	Bi-State Development Agency	80	1,662.0	514.6	11,340.5
St. Petersburg, FL	Pinellas Suncoast Transit Authority	65	0.0	449.5	4,113.6

TABLE 99: Major Demand Response Agency Vehicle and Financial Data, Fiscal Year 2001

PRIMARY CITY SERVED	TRANSIT AGENCY	TOTAL VEHICLES	CAPITAL EXPENSES (000)(a)	FARE REVENUE (000)	OPERATING EXPENSES (000)
Salt Lake City, UT	Utah Transit Authority (c)	178	0.0	482.8	11,384.6
San Antonio, TX	VIA Metropolitan Transit	204	1,778.6	1,003.1	19,165.2
San Bernardino, CA	Omnitrans	100	0.0	849.8	5,289.5
San Diego, CA	San Diego Metro Transit Devel Bd	97	0.0	998.5	6,182.7
San Francisco, CA	Golden Gate Bridge, Hwy & Trp Dist	43	0.0	130.2	2,121.2
San Francisco, CA	San Francisco Municipal Railway	1,352	0.0	865.7	16,623.6
San Francisco, CA	San Mateo County Transit District	89	0.0	293.9	7,011.9
San Jose, CA	Santa Clara Valley Trp Auth	511	0.0	1,930.2	34,734.3
San Juan, PR	Metropolitan Bus Authority	36	48.9	104.8	2,934.3
Santa Ana, CA	Orange County Transportation Auth	209	3,332.2	424.3	16,110.2
Santa Monica, CA	Santa Monica's Big Blue Bus	5	0.0	0.9	427.5
Seattle, WA	King County Dept of Transportation	548	3,264.6	701.4	41,709.8
Seattle, WA	Snohomish County Pub Trp BA	49	598.9	132.6	4,062.3
Springfield, MA	Pioneer Valley Transit Authority	127	148.2	271.7	7,119.4
Tacoma, WA	Pierce Transit	157	0.0	240.6	10,646.1
Tampa, FL	Hillsborough Area Regional Trp Auth	29	0.0	40.5	1,444.8
Tucson, AZ	City of Tucson Transit System	64	2,187.2	795.2	6,431.1
Washington, DC	Washington Metro Area Tr Auth	138	0.0	1,202.5	20,590.7
White Plains, NY	Westchester County Dept of Trp	57	-0.1	494.2	4,913.3
Wilmington, DE	Delaware Transit Corporation	258	0.0	881.5	18,901.7

Source: Federal Transit Administration National Transit Database
(a) Excludes expenses by non-transit agencies, contractors, and transit agencies not yet in operation.
(b) Contractor for both Alameda-Contra Transit District and San Francisco Bay Area Rapid Transit District.
(b) Serves 3 urbanized areas totaling over 1,000,000.

Ferryboat

Highlights.....

See National Totals on page 163.

Ferryboat is a transit mode comprised of vessels carrying passengers and/or vehicles over a body of water, and that are generally steam or diesel-powered.

When at least one terminal is within an urbanized area, it is **urban ferryboat** service. Such service excludes international, rural, rural interstate, island, and urban park ferries.

Transit ferryboat service is confined to about 30 metropolitan areas and small cities, where offshore islands, bays, and wide rivers preclude any other type of service at a reasonable cost. In a few places, service may operate between two points on the same shore.

In a few far-northern areas service does not operate in winter when rivers ice up. Service may occasionally be curtailed during periods of heavy fog or severe storms for safety reasons. Ferry service is unique in that it is subject to U.S. Coast Guard operating and safety regulations.

Vehicle Manufacturers

Only 1-2 ferryboats are built in a 5-year period, so no company can survive just by building them. Most manufacturers build cargo and military ships, and ferries fill in the gaps. The smallest ferries, however, are built by companies that build cabin cruisers and other motorized small boats.

Vehicle Costs

Since ferries vary widely in size, costs also vary dramatically. Small water taxis might cost about $250,000, while the largest vehicle and passenger-only ferries cost tens of millions of dollars.

TABLE 100: Ferryboat National Totals, Fiscal Year 2001

Agencies, Number of	42
Fares Collected, Passenger	$71,097,000
Fare per Unlinked Trip, Average	$1.32
Expense, Operating Total (a)	$324,330,000
Salaries and Wages (b)	$150,971,000
Fringe Benefits (b)	$46,856,000
Services (b)	$12,493,000
Fuel and Lubricants (b)	$31,394,000
Materials and Supplies, Other(b)	$24,342,000
Utilities (b)	$4,544,000
Casualty and Liability (b)	$7,422,000
Purchased Transportation (b) (c)	$42,628,000
Other (b)	$3,680,000
Vehicle Operations (c)	$196,530,000
Vehicle Maintenance (c)	$34,530,000
Non-vehicle Maintenance (c)	$26,297,000
General Administration (c)	$24,345,000
Expense, Capital Total	$107,541,000
Rolling Stock	$75,731,000
Facilities	$30,379,000
Other	$1,431,000
Trips, Unlinked Passenger, Average Weekday	167,000
Trips, Unlinked Passenger, Annual	53,943,000
Miles, Passenger	324,622,000
Trip Length, Average (miles)	6.0
Miles, Vehicle Total	2,945,000
Miles, Vehicle Revenue	2,896,000
Hours, Vehicle Total	365,000
Hours, Vehicle Revenue	361,000
Speed, Vehicle in Revenue Service, Average (m.p.h.)	8.0
Vehicles, Total	125
Active	125
Age, Average (years)	25.1
Air-conditioned	0.0%
Lifts, Wheelchair	0.0%
Ramps, Wheelchair	9.6%
Accessible Only via Stations	25.0%
Power Source, Diesel or Gasoline	63.5%
Power Source, Alternative	36.5%
Rehabilitated	0.0%
Employees, Operating	4,731
Vehicle Operations	3,498
Vehicle Maintenance	361
Non-vehicle Maintenance	628
General Administration	244
Employees, Capital	89
Diesel Fuel Consumed (gallons)	30,266,000
Other Fuel Consumed (gallons)	2,000
Electricity Consumed (kwh)	0

(a) Sum of (b) lines OR sum of (c) lines.

Types of Service

Most ferryboats operate non-stop over short distances in **local service**, but in a few cases, a stop may be made at an intervening island. A number of routes in the Boston, MA, New York, NY, Providence, RI, San Francisco, CA, and Seattle, WA areas are several miles long.

Express service may operate in peak-hours bypassing intervening islands. Alternatively, some trips may be operated by high-speed or passenger-only ferries compared to the regular ferry, which could be considered as express service of a sort.

Types of Vehicles

A **ferryboat** is a vessel for carrying passengers and/or vehicles over a body of water. The vessel is generally a steam or diesel-powered conventional ferry vessel. It may also be a hovercraft, hydrofoil or other high speed vessel.

A wide range of boats are used in ferry service, but there are two basic types.

Vehicle ferries have at least one deck for vehicles, with additional decks for passengers. The largest are in the Seattle, WA area, and are over 460 feet long, accommodating 2,500 passengers and 218 vehicles. Such ferries are normally square-ended to allow vehicle access and egress.

Washington State Ferries operates the nation's largest fleet of passenger-auto ferries on Puget Sound in the Seattle and Tacoma, Washington areas.

Passenger-only ferries have only passenger decks, though they may also have space for bicycles. They can range from small boats about 50 feet long holding about 50 people up to the 310-foot long Staten Island ferries in New York, which can accommodate 6,000 people. Because they don't have vehicle decks, they need not be square-ended and may have pointed bows and side-loading. Catamaran (double hull) and hydrofoil (where the vehicle skims the surface of the water) styles may be used for high-speed services.

This passenger-only ferry is operated by Golden Gate Bridge, Highway and Transportation District of San Francisco.

Water taxis are very small passenger-only ferries (about 50 feet or less) that may operate in both fixed-route and on-demand service, depending on the time of day and patronage levels. They can load and unload very quickly and operate very frequently, sometimes to several different points around a harbor or along a river.

Accessibility

A **station** is a public transportation passenger facility.

An **accessible station** is a station which provides ready access, and does not have physical barriers that prohibit and/or restrict access by individuals with disabilities, including individuals who use wheelchairs.

An **accessible vehicle** is a public transportation revenue vehicle that does not restrict access, is usable, and provides allocated space and/or priority seating for individuals who use wheelchairs.

Because water levels fluctuate due to tides in coastal areas or drought and high-water conditions on interior rivers, different methods of access have evolved.

Some ferries use floating docks that rise and fall with changing water levels. Where water levels are more stable, the dock may be a permanent structure on land. In either case a gangway and a vehicle ramp must be deployed either from the boat or from the dock. On the busiest ferry routes, a terminal building may have multiple boarding levels, with gangways deployed for passengers from the building's upper levels in the same manner as is done at airports.

Wheelchair accessibility depends on the width and railings on the gangways, on the steepness of the slope on the gangways resulting from very high or low water levels, and on any small gaps in vehicle access ramps (if that is the only means of access). Special assistance may be necessary in some cases. When access is directly from a terminal building, elevators within that building would also be necessary. Some ferries are not accessible due to steps at the ends of gangways.

Power Sources and Fuel Consumption

Almost all ferries are powered by diesel, and because of their massive bulk, have relatively low fuel efficiency--about 4.29 miles per gallon in the year 2000. However, this is an average of widely varying sizes of boats, trips aided by the currents and tides, and trips hindered by opposing currents and tides.

The one non-diesel ferry is a compressed natural gas ferry in Norfolk, VA, which gets 0.89 miles per gallon.

TABLE 101: Ferryboat Fuel Consumption, Thousands of Gallons

YEAR	DIESEL	COMPRESSED NATURAL GAS
1994	21,146	NA
1995	22,307	NA
1996	21,991	NA
1997	23,881	NA
1998	25,269	NA
1999	28,721	NA
2000	31,780	2
2001 P	30,266	2

P = Preliminary

Fixed Guideways

By law, ferryboat services are considered fixed guideways. Though each trip may take a slightly different course due to water conditions, the beginning and ending points are fixed.

Operating Practices

Because of the time it takes to load and unload dozens of vehicles and thousands of people, vehicle ferries and the largest passenger-only ferries usually operate on 30-60 minute headways.

Smaller passenger-only ferries can operate more frequently. Multiple docks at the largest terminals allow frequencies as low as 10-15 minutes.

However, routes many miles long require a 30-60 minute trip, since average ferry speed is only 8.0 miles per hour. Such routes would require a minimum of two boats for anything less than a 60-minute frequency.

Water taxis, because of their very small size, may be able to operate every 5 minutes or so.

TABLE 102: Urban Ferryboat Transit Agencies (a)

PRIMARY CITY SERVED	TRANSIT AGENCY
Balboa, CA	Balboa Island Ferry
Baytown, TX	Harris County Lynchburg Ferry
Boston, MA	Airport Water Shuttle
Boston, MA	Harbor Express
Boston, MA	Massachusetts Bay Transportation Authority
Bremerton, WA	Kitsap Transit
Chicago, IL	Wendella RiverBus
Cincinnati, OH	Anderson Ferry Boat
Corpus Christi, TX	Corpus Christi Regional Transportation Authority
Fort Lauderdale, FL	Water Bus
Galveston, TX	Texas Department of Transportation
Glastonbury, CT	Connecticut Department of Transportation
Jersey City, NJ	Liberty Park Water Taxi
Long Beach, CA	Long Beach Transit
Mayport, FL	St. John's River Ferry
New Orleans, LA	Louisiana Department of Transportation Crescent City Connection
New York, NY	MTA Metro-North Railroad
New York, NY	New York City Department of Transportation Staten Island Ferry
New York, NY	New York Fast Ferry
New York, NY	New York Water Taxi
New York, NY	New York Waterway
New York, NY	Port Authority of New York and New Jersey
New York, NY	Seastreak Fast Passenger Ferries
Norfolk, VA	Transportation District Commission of Hampton Roads
Philadelphia, PA	Delaware River Port Authority RiverLink Ferry
Port Huron, MI	Champion's Auto Ferry
Portland, ME	Casco Bay Island Transit District
Portland, ME	Chebeague Transportation Company
Providence, RI	Rhode Island Public Transit Authority
Rock Island, IL	Rock Island County Metropolitan Mass Transit District
San Diego, CA	Coronado Ferry
San Francisco, CA	Angel Island-Tiburon Ferry Company
San Francisco, CA	Blue and Gold Fleet
San Francisco, CA	City of Alameda Ferry Services Alameda/Oakland Ferry
San Francisco, CA	City of Vallejo Baylink Ferry
San Francisco, CA	Golden Gate Bridge, Highway and Transportation District
San Francisco, CA	Harbor Bay Ferry
San Juan, PR	Puerto Rico Ports Authority
Seattle, WA	King County Department of Transportation
Seattle, WA	Washington State Ferries
Tacoma, WA	Pierce County Ferry

(a) Excludes international, rural, island, and urban park ferries.

TABLE 103: Ferryboat Transit Agencies Service and Usage Data, Fiscal Year 2001 (Thousands)

PRIMARY CITY SERVED	TRANSIT AGENCY	ANNUAL VEHICLE REVENUE MILES	ANNUAL VEHICLE REVENUE HOURS	AVERAGE WEEKDAY UNLINKED TRIPS	ANNUAL UNLINKED TRIPS	ANNUAL PASSENGER MILES
Boston, MA	Massachusetts Bay Transportation Auth	189.2	22.3	NA	1,459.7	10,752.6
Bremerton, WA	Kitsap Transit	31.4	4.9	1.1	284.7	461.0
Corpus Christi, TX	Corpus Christi Regional Trp Auth	1.3	0.8	0.3	33.6	16.8
Long Beach, CA	Long Beach Transit	1.2	2.3	0.1	24.6	6.2
New Orleans, LA	Louisiana DOT Crescent City Connection	44.1	22.0	8.9	3,128.5	1,564.3
New York, NY	MTA Metro-North Railroad	22.3	2.5	0.2	39.3	215.8
New York, NY	New York City Dept of Transportation	172.5	16.6	57.4	18,039.5	93,805.5
New York, NY	Port Authority of New York & New Jersey	123.5	13.0	11.8	3,136.8	6,744.1
Norfolk, VA	Trp District Comm of Hampton Roads	44.8	9.4	1.1	402.7	666.5
Portland, ME	Casco Bay Island Transit District	73.2	15.2	2.6	931.1	3,072.6
San Francisco, CA	City of Alameda Ferry Services	65.6	7.1	2.1	668.8	4,194.2
San Francisco, CA	City of Vallejo San Francisco Ferry	211.7	7.7	2.4	767.4	19,884.2
San Francisco, CA	Golden Gate Bridge, Highway & Trp Dist	181.1	15.0	6.2	1,885.6	21,813.9
San Juan, PR	Puerto Rico Ports Authority	159.7	22.2	5.2	1,912.8	3,063.8
Seattle, WA	Washington State Ferries	1,075.4	135.5	44.3	15,140.3	127,662.4
Tacoma, WA	Pierce County Ferry	31.1	5.3	0.5	191.6	1,407.4

Source: Federal Transit Administration National Transit Database; excludes transit agencies not reporting data to the NTD.

TABLE 104: Ferryboat Transit Agencies Vehicle and Financial Data, Fiscal Year 2001

PRIMARY CITY SERVED	TRANSIT AGENCY	TOTAL VEHICLES	CAPITAL EXPENSES (000)(a)	FARE REVENUE (000)	OPERATING EXPENSES (000)
Boston, MA	Massachusetts Bay Trp Auth	14	0.0	4,622.9	6,429.5
Bremerton, WA	Kitsap Transit	4	0.0	0	615.5
Corpus Christi, TX	Corpus Christi Regional Trp Auth	1	0.0	26.5	161.8
Long Beach, CA	Long Beach Transit	2	0.0	49.2	102.5
New Orleans, LA	LA DOT Crescent City Connection	6	3,516.1	0	5,645.7
New York, NY	MTA Metro-North Railroad	1	0.0	79.1	1,090.3
New York, NY	New York City Dept of Trp	7	22,524.2	0	43,247.8
New York, NY	Port Authority of NY & NJ	6	2,722.0	8,544.0	9,539.0
Norfolk, VA	Trp Dist Comm of Hampton Roads	4	525.0	371.1	973.2
Portland, ME	Casco Bay Island Transit District	5	72.9	1,631.3	2,962.7
San Francisco, CA	City of Alameda Ferry Services	3	0.0	2,419.6	4,068.1
San Francisco, CA	City of Vallejo San Francisco Ferry	3	2,181.9	4,760.0	6,093.0
San Francisco, CA	Golden Gate Bridge, Hwy & Trp Dist	5	8,119.2	5,620.3	16,807.9
San Juan, PR	Puerto Rico Ports Authority	15	6,416.8	3,455.1	31,755.7
Seattle, WA	Washington State Ferries	29	51,881.5	23,121.6	158,610.6
Tacoma, WA	Pierce County Ferry	2	172.7	1,116.4	1,450.5

Source: Federal Transit Administration National Transit Database; excludes transit agencies not reporting data to the NTD.
(a) Excludes expenses by non-transit agencies, contractors, and transit agencies not yet in operation.

Rail

Highlights.....

See National Totals on pages 172-175.

Rail transit services exist in over 50 metropolitan areas and small cities, and the number grows almost yearly.

A **mode** is the system for carrying transit passengers described by specific right-of-way, technology and operational features. The most common rail modes are:

Commuter rail (also called **metropolitan rail, regional rail,** or **suburban rail**) is an electric or diesel propelled railway for urban passenger train service consisting of local short distance travel operating between a central city and adjacent suburbs. Service must be operated on a regular basis by or under contract with a transit operator for the purpose of transporting passengers within urbanized areas, or between urbanized areas and outlying areas. Such rail service, using either locomotive hauled or self propelled railroad passenger cars, is generally characterized by multi-trip tickets, specific station to station fares, railroad employment practices and usually only one or two stations in the central business district. Intercity rail service is excluded, except for that portion of such service that is operated by or under contract with a public transit agency for predominantly commuter services, which means that for any given trip segment (i.e., distance between any two stations), more than 50% of the average daily ridership travels on the train at least three times a week.

Heavy rail (**metro, subway, rapid transit,** or **rapid rail**) is an electric railway with the capacity for a heavy volume of traffic. It is characterized by high speed and rapid acceleration passenger rail cars operating singly or in multi-car trains on fixed rails; separate rights-of-way from which all other vehicular and foot traffic are excluded; sophisticated signaling, and high platform loading. If the service were converted to full automation with no onboard personnel, the service would be considered an automated guideway.

Light rail (**streetcar, tramway,** or **trolley**) is lightweight passenger rail cars operating singly (or in short, usually two-car, trains) on fixed rails in right-of-way that is not separated from other traffic for much of the way. Light rail vehicles are driven electrically with power being drawn from an overhead electric line via a trolley or a pantograph. A number of transit agencies are developing what they call diesel light rail service; such systems may be considered commuter rail by the Federal Transit Administration since they are not electric.

Other modes are:

Aerial tramway is an electric system of aerial cables with suspended powerless passenger vehicles. The vehicles are propelled by separate cables attached to the vehicle suspension system and powered by engines or motors at a central location not on board the vehicle. Only two such transit operations exist in New York City and at Mountain Village, CO. All other aerial tramways are at ski areas or at tourist sites.

Automated guideway transit (**personal rapid transit, group rapid transit, people mover**) is an electric railway (single or multi-car trains) of guided transit vehicles operating without an onboard crew. Service may be on a fixed schedule or in response to a passenger activated call button. The places with automated guideways are Detroit, MI, Jacksonville, FL, Las Colinas, TX, Miami, FL, and Morgantown, WV. Automated guideways in non-transit settings such as airports and hospital campuses are more common.

Cable car is an electric railway with individually controlled transit vehicles attached to a moving cable located below the street surface and powered by engines or motors at a central location not on board the vehicle. Only one cable car operation exists in San Francisco, CA.

Inclined plane is a railway operating over exclusive right-of-way on steep grades (slopes) with powerless vehicles propelled by moving cables attached to the vehicles and powered by engines or motors at a central location not on board the vehicle. The special tramway type of vehicles have passenger seats that remain horizontal while the undercarriage (truck) is angled parallel to the slope. Chattanooga, TN, Dubuque, IA, Johnstown, PA, Los Angeles, CA, and Pittsburgh, PA (2 inclines) are the only places with inclines.

Monorail is an electric railway of guided transit vehicles operating singly or in multi-car trains. The vehicles are suspended from or straddle a guideway formed by a single beam, rail, or tube. Only two transit monorails exist in Las Vegas, NV and Seattle, WA. Their most common use is in the non-transit settings of amusement parks. If the trains do not have an onboard crew, they are considered automated guideways.

TABLE 105: Commuter Rail National Totals, Fiscal Year 2001

Agencies, Number of	21
Fares Collected, Passenger	$1,438,700,000
Fare per Unlinked Trip, Average	$3.44
Expense, Operating Total (a)	$2,860,773,000
Salaries and Wages (b)	$1,189,630,000
Fringe Benefits (b)	$800,941,000
Services (b)	$189,478,000
Fuel and Lubricants (b)	$59,674,000
Materials and Supplies, Other (b)	$212,604,000
Utilities (b)	$174,924,000
Casualty and Liability (b)	$61,357,000
Purchased Transportation (b) (c)	$231,286,000
Other (b)	($59,121,000)
Vehicle Operations (c)	$1,002,376,000
Vehicle Maintenance (c)	$655,735,000
Non-vehicle Maintenance (c)	$512,891,000
General Administration (c)	$458,485,000
Expense, Capital Total	$2,291,198,000
Rolling Stock	$484,206,000
Facilities	$1,705,690,000
Other	$101,302,000
Trips, Unlinked Passenger, Average Weekday	1,466,000
Trips, Unlinked Passenger, Annual	418,310,000
Miles, Passenger	9,547,650,000
Trip Length, Average (miles)	22.8
Miles, Vehicle Total (d)	277,270,000
Miles, Vehicle Revenue (d)	253,243,000
Hours, Vehicle Total (d)	8,763,000
Hours, Vehicle Revenue (d)	8,025,000
Speed, Vehicle, Revenue Service, Average (mph)	31.6
Vehicles, Total (d)	5,197
Active (d)	5,124
Age, Average (years)(d)	22.0
Air-conditioned (d)	99.6%
Lifts, Wheelchair (d)	4.2%
Ramps, Wheelchair (d)	25.8%
Accessible Only via Stations (d)	36.7%
Power Source, Diesel or Gasoline (d)	0.3%
Power Source, Alternative (d)	47.6%
Rehabilitated (d)	35.2%
Employees, Operating	23,851
Vehicle Operations	8,778
Vehicle Maintenance	6,712
Non-vehicle Maintenance	5,557
General Administration	2,804
Employees, Capital	2,738
Diesel Fuel Consumed (gallons)	72,204,000
Other Fuel Consumed (gallons)	0
Electricity Consumed (kwh)	1,353,800,000

(a) Sum of (b) lines OR sum of (c) lines.
(d) Commuter rail data includes passenger cars only.

TABLE 106: Heavy Rail National Totals, Fiscal Year 2001

Agencies, Number of	14
Fares Collected, Passenger	$2,532,568,000
Fare per Unlinked Trip, Average	$0.93
Expense, Operating Total (a)	$4,180,105,000
Salaries and Wages (b)	$2,472,376,000
Fringe Benefits (b)	$1,312,442,000
Services (b)	$262,023,000
Fuel and Lubricants (b)	$4,190,000
Materials and Supplies, Other (b)	$368,786,000
Utilities (b)	$345,007,000
Casualty and Liability (b)	$75,111,000
Purchased Transportation (b) (c)	$0
Other (b)	($659,830,000)
Vehicle Operations (c)	$1,731,683,000
Vehicle Maintenance (c)	$804,311,000
Non-vehicle Maintenance (c)	$1,032,282,000
General Administration (c)	$611,829,000
Expense, Capital Total	$3,506,435,000
Rolling Stock	$984,549,000
Facilities	$2,254,809,000
Other	$267,077,000
Trips, Unlinked Passenger, Average Weekday	9,002,000
Trips, Unlinked Passenger, Annual	2,728,288,000
Miles, Passenger	14,178,092,000
Trip Length, Average (miles)	5.2
Miles, Vehicle Total	608,090,000
Miles, Vehicle Revenue	591,148,000
Hours, Vehicle Total	31,607,000
Hours, Vehicle Revenue	28,943,000
Speed, Vehicle, Revenue Service, Average (mph)	20.4
Vehicles, Total	11,061
Active	10,718
Age, Average (years)	21.8
Air-conditioned	98.9%
Lifts, Wheelchair	0.0%
Ramps, Wheelchair	0.0%
Accessible Only via Stations	98.7%
Power Source, Diesel or Gasoline	0.0%
Power Source, Alternative	100.0%
Rehabilitated	49.6%
Employees, Operating	47,865
Vehicle Operations	19,664
Vehicle Maintenance	9,193
Non-vehicle Maintenance	13,679
General Administration	5,329
Employees, Capital	6,147
Diesel Fuel Consumed (gallons)	0
Other Fuel Consumed (gallons)	0
Electricity Consumed (kwh)	3,645,943,000

(a) Sum of (b) lines OR sum of (c) lines.

TABLE 107: Light Rail National Totals, Fiscal Year 2001

Agencies, Number of	26
Fares Collected, Passenger	$203,801,000
Fare per Unlinked Trip, Average	$0.61
Expense, Operating Total (a)	$682,173,000
Salaries and Wages (b)	$296,580,000
Fringe Benefits (b)	$166,043,000
Services (b)	$73,179,000
Fuel and Lubricants (b)	$2,647,000
Materials and Supplies, Other (b)	$50,346,000
Utilities (b)	$54,386,000
Casualty and Liability (b)	$14,931,000
Purchased Transportation (b) (c)	$29,398,000
Other (b)	($5,337,000)
Vehicle Operations (c)	$276,028,000
Vehicle Maintenance (c)	$154,981,000
Non-vehicle Maintenance (c)	$110,413,000
General Administration (c)	$111,353,000
Expense, Capital Total	$1,444,188,000
Rolling Stock	$244,023,000
Facilities	$968,432,000
Other	$231,733,000
Trips, Unlinked Passenger, Average Weekday	1,086,000
Trips, Unlinked Passenger, Annual	336,147,000
Miles, Passenger	1,436,810,000
Trip Length, Average (miles)	4.3
Miles, Vehicle Total	54,251,000
Miles, Vehicle Revenue	53,515,000
Hours, Vehicle Total	3,656,000
Hours, Vehicle Revenue	3,542,000
Speed, Vehicle Revenue Service, Average (mph)	15.1
Vehicles, Total	1,538
Active	1,366
Age, Average (years)	18.4
Air-conditioned	79.1%
Lifts, Wheelchair	8.0%
Ramps, Wheelchair	20.0%
Accessible Only via Stations	50.5%
Power Source, Diesel or Gasoline	0.0%
Power Source, Alternative	100.0%
Rehabilitated	19.0%
Employees, Operating	7,021
Vehicle Operations	3,171
Vehicle Maintenance	1,706
Non-vehicle Maintenance	1,388
General Administration	756
Employees, Capital	493
Diesel Fuel Consumed (gallons)	14,000
Other Fuel Consumed (gallons)	0
Electricity Consumed (kwh)	487,138,000

(a) Sum of (b) lines OR sum of (c) lines.

TABLE 108: Other Rail National Totals, Fiscal Year 2001

Agencies, Number of	17
Fares Collected, Passenger	$21,260,000
Fare per Unlinked Trip, Average	$0.75
Expense, Operating Total (a)	$168,374,000
Salaries and Wages (b)	$82,035,000
Fringe Benefits (b)	$45,634,000
Services (b)	$15,449,000
Fuel and Lubricants (b)	$40,000
Materials and Supplies, Other (b)	$9,201,000
Utilities (b)	$4,928,000
Casualty and Liability (b)	$3,704,000
Purchased Transportation (b) (c)	$6,817,000
Other (b)	$566,000
Vehicle Operations (c)	$64,734,000
Vehicle Maintenance (c)	$33,742,000
Non-vehicle Maintenance (c)	$34,164,000
General Administration (c)	$28,917,000
Expense, Capital Total	$8,087,000
Rolling Stock	$591,000
Facilities	$5,275,000
Other	$2,221,000
Trips, Unlinked Passenger, Average Weekday	81,000
Trips, Unlinked Passenger, Annual	28,275,000
Miles, Passenger	28,754,000
Trip Length, Average (miles)	1.0
Miles, Vehicle Total	3,567,000
Miles, Vehicle Revenue	3,510,000
Hours, Vehicle Total	455,000
Hours, Vehicle Revenue	448,000
Speed, Vehicle Revenue Service, Average (mph)	7.8
Vehicles, Total	227
Active	214
Age, Average (years)	52.8
Air-conditioned	54.2%
Lifts, Wheelchair	0.9%
Ramps, Wheelchair	0.0%
Accessible Only via Stations	56.1%
Power Source, Diesel or Gasoline	0.0%
Power Source, Alternative	100.0%
Rehabilitated	8.4%
Employees, Operating	1,007
Vehicle Operations	447
Vehicle Maintenance	214
Non-vehicle Maintenance	229
General Administration	117
Employees, Capital	2
Diesel Fuel Consumed (gallons)	0
Other Fuel Consumed (gallons)	0
Electricity Consumed (kwh)	47,857,000

(a) Sum of (b) lines OR sum of (c) lines.

Types of Service

Local service, in the rail context, means trains stop at every station on a route. For light rail and cable cars operating on city streets, local service would be analagous to local bus service, where stops are every block or two apart.

Most aerial tramway, automated guideway, inclined plane, and monorail routes are one mile or less long. New York City Transit also has a few very short heavy rail shuttle lines, and most heritage trolley lines are also only a few miles long. Some of these operations may operate in a loop and connect, often at a transfer center or rail station, to major routes for travel to more far-flung destinations

Express service speeds up longer trips, especially in major metropolitan areas during heavily-patronized peak commuting hours, by operating long distances without stopping. In New York, Chicago, and other areas, express trains even have separate tracks for at least part of their routes.

Limited-stop service is a hybrid between local and express service, where not all stations and stops are served. An example is a pair of closely-spaced trains that both stop at the most heavily-patronized stations on a line. For the other stations, the first train stops at every other station, while the following train stops at the stations missed by the first train.

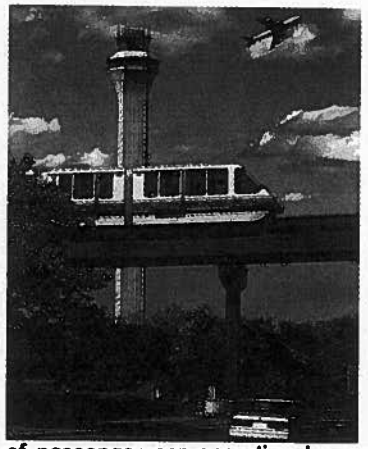
Types of Vehicles

Although most service is operated with vehicles purchased new, a small proportion is operated by vehicles rehabilitated or rebuilt when they are 10 to 20 years old.

Rehabilitation is the rebuilding of revenue vehicles to original specifications of the manufacturer. **Rebuilding** may include some new components but has less emphasis on structural restoration than would be the case in a **remanufacturing** operation, focusing on mechanical systems and vehicle interiors.

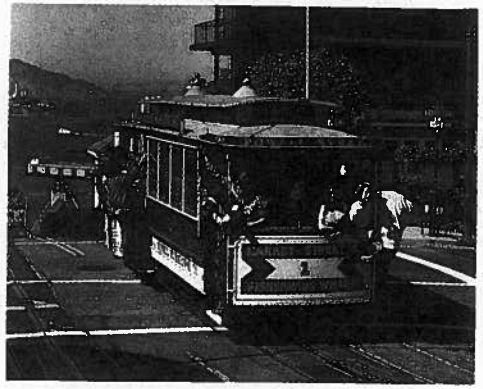
An **aerial tramway car** is an unpowered passenger cabin suspended from a system of aerial cables and propelled by separate cables attached to the vehicle suspension system. Engines or motors at a central location, not on board the vehicle, power the cable system.

An **automated guideway car** is a guided passenger car operating under a fully automated system without an onboard crew. One type is a **downtown people mover**, which operates on a loop or shuttle route within the central business district of a city.



The Newark Airport AirTrain in New Jersey uses monorail technology, but is an automated guideway since the trains do not have operators.

A **cable car** is a streetcar type of passenger car operating by means of an attachment to a moving cable located below the street surface and powered by engines or motors at a central location not on board the vehicle.

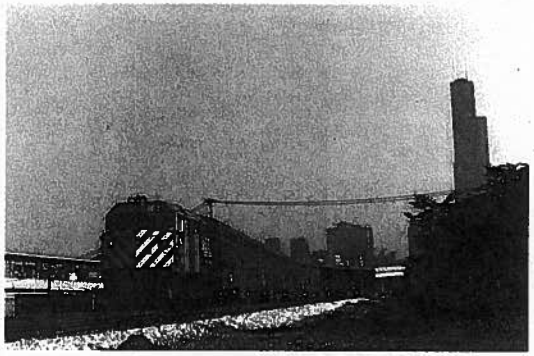


Only San Francisco Municipal Railway operates cable cars.

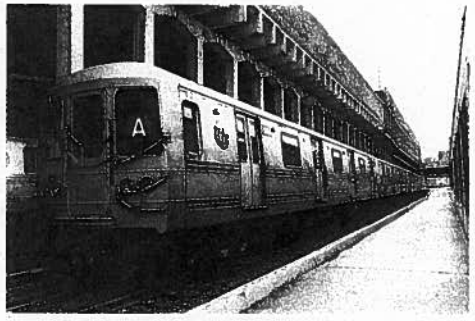
A **commuter rail car** is a commuter rail mode passenger car--either an unpowered **passenger coach** that is pulled or pushed by one or more locomotives, or a **self-propelled passenger car** that has an onboard power source or that draws power from overhead electric wires. A large proportion of commuter rail cars are double-decked with upper and lower seating levels.

A **locomotive** is a power unit vehicle that does not carry passengers that is used to pull or push commuter rail passenger coaches. Most locomotives use diesel fuel or are powered by overhead electric wires or an electrified third rail. A small number are dual-mode and can operate either as a diesel or electric vehicle.

This locomotive-hauled METRA commuter rail train in Chicago uses double-deck cars, as do all commuter rail agencies in western and southern states. Clearances on old tunnels and bridges in northeastern states, however, generally allow only single-deck cars.



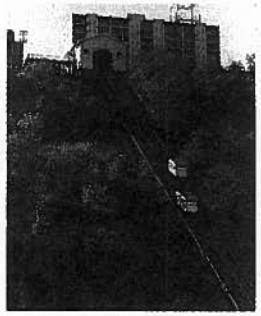
A **heavy rail car** has motive capability, is driven by electric power taken from a third rail or (rarely, overhead wires), and is usually operated on exclusive right-of-way.



This MTA New York City Transit heavy rail train typifies this mode with very frequent service carrying very "heavy" numbers of people.

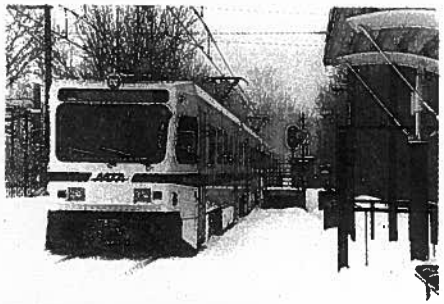
An **inclined plane car** is a special type of passenger car operating up and down slopes on rails via a cable mechanism.

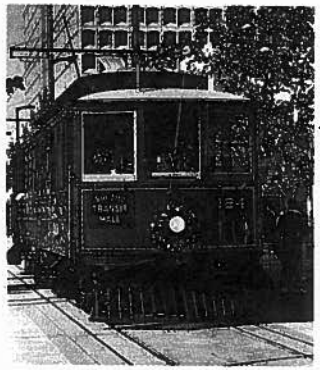
The Monongahela Incline is operated by the Port Authority of Allegheny County in Pittsburgh, Pennsylvania.



A **light rail car** (or **streetcar, tram,** or **trolley car**) has motive capability, is usually driven by electric power taken from overhead lines, and usually operates much or all of its route on non-exclusive right-of-way. If built before 1960 or a modern replica of such cars, it is called a **heritage trolley car** (or **vintage trolley car**).

Light rail trains carry "light" loads of people compared to heavy rail. This train is operated by Baltimore's Maryland Transit Administration.





A heritage or vintage trolley at the Santa Clara Valley Transportation Authority in San Jose, California.

A **monorail car** is a guided passenger car operating on or suspended from a single rail, beam or tube.

Las Vegas, Nevada is constructing a monorail system similar to this artist's conception.

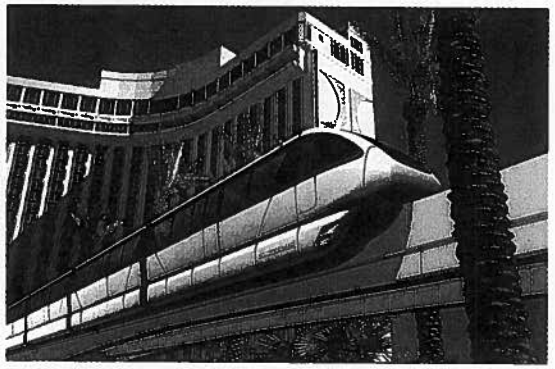


TABLE 109: New Rail Car Market By Type, Length, and Seating Capacity, 2001-2006 (a)

	BUILT IN 2001		ON ORDER JANUARY 2002		POTENTIAL ORDERS (b)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	919	100.0%	2,670	100.0%	2,207	100.0%
Type						
1-level articulated	106	11.5%	341	12.8%	80	3.6%
1-level non-articulated	775	84.4%	1,955	73.2%	1,810	82.0%
2-level	38	4.1%	374	14.0%	317	14.4%
Length						
86-105 feet	38	4.1%	411	15.4%	66	3.0%
80-85 feet	56	6.1%	914	34.2%	957	43.4%
70-79 feet	158	17.2%	297	11.1%	0	0.0%
60-69 feet	12	1.3%	235	8.8%	660	29.9%
40-59 feet	655	71.3%	813	30.5%	524	23.7%
Seating Capacity						
130 or more seats	38	4.1%	374	14.0%	315	14.3%
100-129 seats	0	0.0%	455	17.0%	465	21.1%
75-99 seats	14	1.5%	229	8.6%	182	8.2%
50-74 seats	200	21.8%	454	17.0%	61	2.8%
40-49 seats	405	44.1%	757	28.4%	660	29.9%
Below 40 seats	262	28.5%	401	15.0%	524	23.7%

(a) APTA survey including about 99% of commuter, heavy, light, and other rail cars.
(b) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

Accessibility

A **station** is a public transportation passenger facility.

An **accessible station** is a station which provides ready access, and does not have physical barriers that prohibit and/or restrict access by individuals with disabilities, including individuals who use wheelchairs.

An **accessible vehicle** is a public transportation revenue vehicle that does not restrict access, is usable, and provides allocated space and/or priority seating for individuals who use wheelchairs.

Historically-protected vehicles, such as the San Francisco cable cars, have been exempted from accessibility regulations.

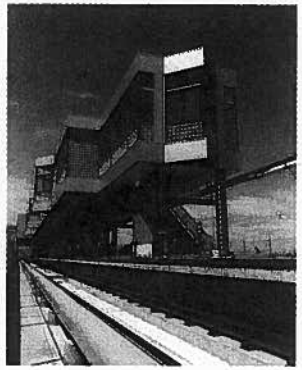
Rail cars accommodate wheelchair-bound and other riders who cannot climb steps in several different manners:

Street-level boarding is used primarily by light rail and cable car lines that stop on the street rather than at stations. Either a low-floor car with a retractable ramp or a high-floor car with a retractable lift would be required.

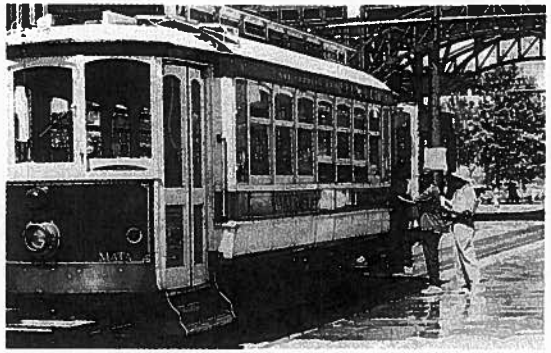
Portland's Tri-County Metropolitan Transportation District of Oregon is one of several light rail agencies to operate low-floor light rail cars.

Low-level platforms are generally about 12-18 inches above track level and are used primarily by some commuter rail and light rail lines. Either a low-floor car with a retractable ramp or a high-floor car with a retractable lift can be used. Alternatively, the platform can be level with the car floor or the platform may have a lift, ramp, or elevated mini-platform.

High-level platforms are generally 18-36 inches above track level and are used primarily by heavy rail, automated guideway, and some commuter rail lines. Only high-floor cars can be used. Platforms can be level with car floors, the cars could have a lift or a ramp, or the platform could have a lift, ramp, or mini-platform.



The San Francisco Bay Area Rapid Transit District Pittsburg/ Bay Point Station shows not Only high-platform design but Also unique station architecture.



This Memphis Area Transit Authority historic light rail car in Tennessee is a high-floor car with steps at both ends.

Some commuter rail and light rail lines use a mixture of high-level and low-level platforms on the same line. Typically, all platforms were originally low-level, but the most heavily-used stations have been upgraded to high-level to speed loading and unloading. In such cases, the cars must have two accessibility options--one for high-level platforms and one for low-level platforms.

Other rail modes may use any of the accessibility arrangements.

TABLE 110: Commuter and Heavy Rail Cars by Type of Wheelchair Accessibility

YEAR	COMMUTER RAIL					HEAVY RAIL				
	LIFT	RAMP	STATION	NONE	TOTAL	LIFT	RAMP	STATION	NONE	TOTAL
1993	10	63	1,359	3,117	4,549	0	0	8,614	1,779	10,393
1994	58	136	1,349	3,090	4,633	4	0	9,664	701	10,365
1995	58	234	1,717	2,643	4,652	4	0	9,655	698	10,357
1996	63	312	2,767	1,545	4,687	0	0	9,779	654	10,433
1997	87	660	2,662	1,429	4,838	0	0	9,740	651	10,391
1998	155	693	2,790	1,428	5,066	0	0	9,764	604	10,368
1999	197	664	2,332	1,917	5,110	0	0	10,240	180	10,420
2000	201	798	2,304	1,861	5,164	0	0	10,264	155	10,419
2001	211	1,294	1,842	1,725	5,072	0	0	10,442	149	10,591
2002	213	1,299	1,846	1,677	5,035	0	0	11,011	149	11,160
2002 % of Total	4.2%	25.8%	36.7%	33.3%	100.0%	0.0%	0.0%	98.7%	1.3%	100.0%

Source: APTA survey. Commuter rail data represent 99% of rail cars; heavy rail data are national totals. "Lift" and "ramp" columns refer to on-vehicle lifts and ramps; "station" column includes car-floor-level platform boarding and platform lifts.

TABLE 111: Light and Other Rail Cars by Type of Wheelchair Accessibility

YEAR	LIGHT RAIL					OTHER RAIL (a)				
	LIFT	RAMP	STATION	NONE	TOTAL	LIFT	RAMP	STATION	NONE	TOTAL
1993	71	0	435	738	1,244	0	0	37	46	83
1994	75	2	480	666	1,223	0	0	26	48	74
1995	96	11	498	624	1,229	0	0	35	48	83
1996	171	12	510	582	1,275	1	0	34	48	83
1997	123	65	549	575	1,312	1	0	42	45	88
1998	123	65	828	373	1,389	1	0	53	45	99
1999	123	17	914	369	1,423	1	0	52	46	99
2000	123	143	950	370	1,568	1	0	52	46	99
2001	131	200	874	357	1,562	1	0	58	46	105
2002	131	326	825	351	1,633	1	0	60	46	107
2002% of Total	8.0%	20.0%	50.5%	21.5%	100.0%	0.9%	0.0%	56.1%	43.0%	100.0%

Source: APTA survey. Light rail data represent 98% and other rail data represent 60% of national totals. "Lift" and "ramp" columns refer to on-vehicle lifts and ramps; "station" column includes level-platform boarding and platform lifts.
(a) Includes aerial tramway, automated guideway, cable car, inclined plane, and monorail.

TABLE 112: New Rail Car Market by Accessibility, 2001-2006 (a)

	BUILT IN 2001		ON ORDER JANUARY 2002		POTENTIAL ORDERS (b)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	919	100.0%	2,670	100.0%	2,207	100.0%
Via on-board lift	2	0.2%	323	12.1%	0	0.0%
Via on-board ramp	39	4.2%	583	21.8%	357	16.2%
Via stations	868	94.5%	1,764	66.1%	1,850	83.8%
Non-accessible	10	1.1%	0	0.0%	0	0.0%

(a) Source: APTA survey including about 99% of commuter, heavy, light, and other rail cars.
(b) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 113: Commuter and Heavy Rail Power Sources, 2002

	COMMUTER RAIL CAR	PER CENT	LOCOMO-TIVE	PER CENT	HEAVY RAIL	PER CENT
Total	5,035	NA	637	NA	11,160	NA
Diesel	13	0.3%	454	71.3%	0	0.0%
Diesel/electric catenary/third rail	0	0.0%	113	17.7%	0	0.0%
Electric catenary/third rail	2,395	47.6%	69	10.8%	11,157	99.9%
Unpowered	2,627	52.2%	1	0.2%	3	0.1%

Source: APTA survey including about 99% of commuter, heavy, light, and other rail cars.

TABLE 114: Light and Other Rail Power Sources, 2002

	LIGHT RAIL	PER CENT	OTHER RAIL	PER CENT
Total	1,633	NA	107	NA
Diesel	0	0.0%	0	0.0%
Diesel/electric catenary/third rail	4	0.2%	0	0.0%
Electric catenary/third rail	1,629	99.8%	58	54.2%
Unpowered	0	0.0%	49	45.8%

Source: APTA survey including about 99% of commuter, heavy, light, and other rail cars.

TABLE 115: New Rail Car Market by Power Source, 2001-2006 (a)

	BUILT IN 2001		ON ORDER JANUARY 2002		POTENTIAL ORDERS (b)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	919	100.0%	2,670	100.0%	2,207	100.0%
Diesel	0	0.0%	20	0.7%	0	0.0%
Diesel & electric	0	0.0%	0	0.0%	0	0.0%
Electric	881	95.9%	2,026	75.9%	1,890	85.6%
Unpowered	38	4.1%	624	23.4%	317	14.4%

(a) Source: APTA survey including about 99% of commuter, heavy, light, and other rail cars.
(b) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 116: Rail Vehicle Fuel and Power Consumption, Thousands of Gallons (a)

YEAR	DIESEL		ELECTRICITY (KWH) (000)				
	COMMUTER RAIL	LIGHT RAIL	COMMUTER RAIL	HEAVY RAIL	LIGHT RAIL	OTHER RAIL	TOTAL
1994	61,900	8	1,243,754	3,431,441	281,954	21,338	4,978,487
1995	63,064	8	1,253,112	3,401,499	288,027	24,418	4,967,056
1996	61,888	14	1,255,171	3,332,286	321,364	28,561	4,937,382
1997	63,195	18	1,270,259	3,252,510	361,312	24,876	4,908,957
1998	69,200	18	1,297,578	3,279,706	381,484	38,635	4,997,403
1999	73,005	17	1,321,828	3,384,494	415,626	38,859	5,160,807
2000	70,818	16	1,370,452	3,548,942	463,241	48,870	5,431,505
2001 P	72,204	14	1,353,800	3,645,943	487,138	47,857	5,534,738

P = Preliminary
(a) Data includes passenger vehicles and locomotives only.

TABLE 117: Locomotive Exhaust Emission Standards

YEAR BUILT	GASEOUS & PARTICULATE EMISSIONS (Grams/Brake Horsepower-hour)					SMOKE STANDARDS (Per cent Opacity--Normalized)		
	DUTY CYCLE	HYDRO-CARBONS	CARBON MONOXIDE	NITROGEN OXIDES	PARTICULATE MATTER	STEADY STATE	30-SECOND PEAK	3-SECOND PEAK
1973-2001	Line-haul	1.00	5.0	9.5	0.60	30	40	50
	Switch	2.10	8.0	14.0	0.72			
2002-2004	Line-haul	0.55	2.2	7.4	0.45	25	40	50
	Switch	1.20	2.5	11.0	0.54			
2005+	Line-haul	0.30	1.5	5.5	0.20	20	40	50
	Switch	0.60	2.4	8.1	0.24			

Source: United States Environmental Protection Agency.

TABLE 118: Power Source Efficiency

MODE	ELECTRIC POWER (miles/kwh)	DIESEL (miles/gallon)
Automated Guideway	0.13	NA
Cable Car	0.14	NA
Commuter Rail	0.10	0.30
Heavy Rail	0.17	NA
Inclined Plane	0.09	NA
Light Rail	0.11	NA
Monorail	0.32	NA

Source: Federal Transit Administration, 2000 National Transit Database.

Fixed Guideways

All rail services are classified as fixed guideways.

A **Fixed Guideway** is a mass transit faciliity using and occupying a separate right-of-way or rail for the exclusive use of mass transportation and other high-occupancy vehicles; or using a fixed catenary system useable by other forms of transportation.

Fixed guideways are generally on the surface, but about half of heavy rail mileage and short distances of other types of rail are in tunnel or elevated.

The Chicago Transit Authority operates all three types of rail fixed guideway--surface and elevated, shown here, and tunnel.

TABLE 119: Rail Route Mileage and Status of Future Projects (a)

STATUS	MILES (b)
AUTOMATED GUIDEWAY	
Construction	8.4
Open	51.4
Planning	4.7
Proposed	0.7
TOTAL	**65.2**
CABLE CAR	
Open	3.5
TOTAL	**3.5**
COMMUTER RAIL	
Construction	6.4
Design	360.7
Open	3,941.3
Planning	2,448.1
Proposed	975.3
TOTAL	**7,731.8**
HEAVY RAIL	
Construction	23.7
Design	1.0
Open	1,295.7
Planning	45.0
Proposed	90.2
TOTAL	**1,455.6**
INCLINED PLANE	
Open	1.5
TOTAL	**1.5**
LIGHT RAIL	
Construction	154.3
Design	154.1
Open	458.5
Planning	524.3
Proposed	355.0
TOTAL	**1,646.2**
MONORAIL	
Construction	3.6
Design	4.7
Open	2.7
Planning	0.0
Proposed	14.0
TOTAL	**25.0**

Source: APTA survey
? = Uncertain, unknown, or not reported
(a) Data as of July 2002, plus updated information where known.
(b) Segments used by more than one route counted for each route using those segments. Mileage listed is end-to-end mileage. Excludes data for a few routes for which mileage was not reported

TABLE 120: Rail Routes Under Construction (a)

LOCATION	MILES
AUTOMATED GUIDEWAY	
New York, NY	8.4
TOTAL	**8.4**
COMMUTER RAIL	
Los Angeles, CA	6.4
TOTAL	**6.4**
HEAVY RAIL	
Miami, FL	1.4
San Francisco, CA	8.5
San Juan, PR	10.7
Washington, DC	3.1
TOTAL	**23.7**
LIGHT RAIL	
Dallas, TX	11.4
Houston, TX	7.5
Little Rock, AR	2.1
Los Angeles, CA	13.6
Memphis, TN	2.0
Minneapolis, MN	12.0
New Orleans, LA	3.7
New York, NY	47.2
Philadelphia, PA	8.3
Pittsburgh, PA	5.3
Portland, OR	5.8
Sacramento, CA	9.1
Salt Lake City, UT	1.5
San Diego, CA	5.9
San Francisco, CA	5.4
San Jose, CA	11.9
Tacoma, WA	1.6
TOTAL	**154.3**
MONORAIL	
Las Vegas, NV	3.6
TOTAL	**3.6**

Source: APTA survey
(a) Data as of July 2001, plus updated information where known.

TABLE 121: Rail Directional Route Miles by Type

MODE	ELEV-ATED	SURF-ACE	TUN-NEL	TOTAL
Automated Guideway	16.8	0.0	0.0	16.8
Cable Car	0.0	8.8	0.0	8.8
Commuter Rail	402.4	6,639.6	34.4	7,076.4
Heavy Rail	471.5	491.7	608.8	1,572.0
Inclined Plane	0.0	2.8	0.0	2.8
Light Rail	97.2	757.9	58.6	913.7
Monorail	1.8	0.0	0.0	1.8
TOTAL	989.7	7,900.8	701.8	9,592.3

Source: Federal Transit Administration, 2001 National Transit Database.
Elevated mileage can be either on a structure or on fill dirt.

This elevated section of the St. Louis Metro light rail line terminates at the Lambert-St. Louis airport terminal.

A Port Authority of Allegheny County light rail tunnel in Pittsburgh with walls left in a natural state. Some tunnels have finished walls and several tracks.

TABLE 122: New Rail Car Market by Manufacturer, 2001-2006 (a)

	BUILT IN 2001		ON ORDER JANUARY 2002		POTENTIAL ORDERS (b)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	919	100.0%	2,670	100.0%	2,207	100.0%
AAI Corp-CAF	84	9.1%	82	3.1%	NA	NA
ABB Daimler-Benz	0	0.0%	30	1.1%	NA	NA
Adtranz-Stadler	0	0.0%	20	0.7%	NA	NA
Alstom	0	0.0%	230	8.6%	NA	NA
Bombardier	403	43.8%	985	36.9%	NA	NA
Breda	64	7.0%	147	5.5%	NA	NA
CAF	0	0.0%	68	2.6%	NA	NA
Gomaco	0	0.0%	1	0.0%	NA	NA
Kawasaki	302	32.9%	544	20.4%	NA	NA
Kinki Sharyo	0	0.0%	100	3.8%	NA	NA
New Orleans RTA	0	0.0%	23	0.9%	NA	NA
Nippon Sharyo	0	0.0%	300	11.2%	NA	NA
Siemens	66	7.2%	137	5.1%	NA	NA
Skoda	0	0.0%	3	0.1%	NA	NA
Sumitomo	0	0.0%	0	0.0%	NA	NA

(a) Source: APTA survey including about 99% of commuter, heavy, light, and other rail cars.
(b) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 123: Average New Rail Vehicle Costs, 2001-2002, Thousands of Dollars (a)

TYPE OF VEHICLE	LIGHT RAIL	HEAVY RAIL	COMMUTER RAIL CAR	COMMUTER RAIL LOCOMOTIVE	OTHER
1-level cab	564	1,395	1,049	NA	NA
1-level non-cab	NA	1,264	1,207	NA	NA
2-level cab	NA	NA	2,846	NA	NA
2-level non-cab	NA	NA	1,910	NA	NA
Diesel	NA	NA	NA	NA	NA
Diesel-electric	NA	NA	NA	4,047	NA
Electric	NA	NA	NA	5,000	NA
Articulated cab	2,517	NA	NA	NA	NA

(a) Source: APTA survey of 90% of rail transit agencies. Cost includes amount paid to manufacturer or agent. Not all orders were reported. Each year of a multi-year order is counted as a separate order.

TABLE 124: Airports With Direct Rail Public Transportation Access (a)

CITY	AIRPORT	RAIL TYPE	STATUS
Atlanta, GA	Hartsfield-Atlanta	HR	Open
Baltimore, MD	Baltimore-Washington	LR	Open
Chicago, IL	Midway	HR	Open
Chicago, IL	O'Hare	HR	Open
Cleveland, OH	Cleveland-Hopkins	HR	Open
Minneapolis, MN	Minneapolis-St. Paul	LR	Construction
New York, NY	Kennedy	AG	Construction
Newark, NJ	Newark	AG	Open
Philadelphia, PA	Philadelphia	CR	Open
Portland, OR	Portland	LR	Open
Saint Louis, MO	Lambert-St. Louis	LR	Open
San Francisco, CA	San Francisco	HR	Construction
South Bend, IN	Michiana	CR	Open
Washington, DC	Reagan National	HR	Open

AG = automated guideway, HR = heavy rail, LR = light rail, CR = commuter rail

(a) Excludes airports that require a bus or van ride between the station and terminal and airports that only have internal rail circulation systems.

TABLE 125: Commuter Rail Transit Agencies Service and Usage Data, Fiscal Year 2001 (Thousands)(a)

PRIMARY CITY SERVED	TRANSIT AGENCY	ANNUAL VEHICLE REVENUE MILES	ANNUAL VEHICLE REVENUE HOURS	AVERAGE WEEKDAY UNLINKED TRIPS	ANNUAL UNLINKED TRIPS	ANNUAL PASSENGER MILES
Anchorage, AK	Alaska Railroad Corporation	99.5	4.9	0.6	84.6	1,943.1
Baltimore, MD	Maryland Transit Administration	4,438.0	110.8	22.9	5,817.0	175,191.9
Boston, MA	Massachusetts Bay Trp Auth	22,177.2	667.6	132.8	36,992.6	784,413.0
Burlington, VT	Vermont Transportation Authority	NA	NA	NA	NA	NA
Chicago, IL	Northeast IL Reg Commuter Rail Corp	36,939.8	1,186.1	267.3	72,121.8	1,577,183.7
Chicago, IL	Northern Indiana Commuter Trp Dist	2,962.9	84.7	13.4	3,771.6	105,584.9
Dallas, TX	Trinity Railway Express	910.5	35.7	10.5	2,781.6	32,269.3
Los Angeles, CA	Southern CA Regional Rail Authority	6,776.1	165.0	28.1	7,398.0	274,625.4
Miami, FL	Tri-County Commuter Rail Authority	2,022.2	56.2	8.3	2,543.5	77,380.4
New Haven, CT	Connecticut Dept of Transportation	552.5	13.6	1.1	288.8	6,547.7
New York, NY	MTA Long Island Rail Road	57,410.1	2,206.5	348.0	101,923.0	2,126,874.9
New York, NY	MTA Metro-North Railroad	49,423.8	1,381.6	251.6	72,919.6	2,185,376.0
New York, NY	New Jersey Transit Corporation	45,040.5	1,289.2	220.4	65,611.2	1,418,041.0
Philadelphia, PA	Pennsylvania Dept of Transportation	759.3	14.6	0.7	207.3	16,246.8
Philadelphia, PA	Southeastern Pennsylvania Trp Auth	15,092.3	549.0	108.6	30,781.9	388,882.7
San Diego, CA	North San Diego County Tr Devel Bd	1,087.6	26.1	4.6	1,206.8	34,394.9
San Francisco, CA	Peninsula Corridor Joint Powers Board	4,911.3	156.9	33.3	9,925.2	211,276.8
San Jose, CA	Altamont Commuter Express Authority	594.5	16.5	3.6	918.8	39,742.0
Seattle, WA	Central Puget Sound Regional Tr Auth	268.2	6.8	1.9	494.6	14,837.6
Syracuse, NY	ON TRACK	NA	NA	NA	NA	NA
Washington, DC	Virginia Railway Express	1,720.1	52.0	9.8	2,428.5	74,695.1
TOTAL REPORTED (excludes "NA" entries)		253,186.4	8,023.8	1,467.5	418,216.4	9,545,507.2

Source: Federal Transit Administration National Transit Database. Agencies that do not participate in the NTD have "NA" entries.
(a) Excludes commuter-type services operated independently by AMTRAK.

TABLE 126: Commuter Rail Transit Agencies Vehicle and Financial Data, Fiscal Year 2001 (a)

PRIMARY CITY SERVED	TRANSIT AGENCY	TOTAL VEHICLES	CAPITAL EXPENSE (000)	FARE REVENUE (000)	OPERATING EXPENSES (000)
Anchorage, AK	Alaska Railroad Corporation	43	6,185.7	701.3	1,701.8
Baltimore, MD	Maryland Transit Administration	140	41,544.9	20,421.6	49,158.5
Boston, MA	Massachusetts Bay Trp Auth	439	124,837.3	88,212.0	180,278.9
Burlington, VT	Vermont Transportation Authority	NA	NA	NA	NA
Chicago, IL	Northeast IL Reg Commuter Rail Corp	1,079	314,698.3	189,380.9	407,415.7
Chicago, IL	Northern Indiana Commuter Trp Dist	62	22,500.7	14,036.2	26,688.9
Dallas, TX	Trinity Railway Express	23	97,500.7	635.5	17,406.8
Los Angeles, CA	Southern CA Regional Rail Authority	152	38,172.9	35,802.7	75,287.0
Miami, FL	Tri-County Commuter Rail Authority	30	22,561.3	5,915.1	21,482.8
New Haven, CT	Connecticut Dept of Transportation	29	0.0	913.1	7,653.6
New York, NY	MTA Long Island Rail Road	1,093	472,771.2	360,215.3	763,866.4
New York, NY	MTA Metro-North Railroad	959	219,023.8	338,584.4	576,780.8
New York, NY	New Jersey Transit Corporation	888	647,109.0	257,167.0	440,214.9
Philadelphia, PA	Pennsylvania Dept of Transportation	12	0.0	2,757.6	6,353.6
Philadelphia, PA	Southeastern Pennsylvania Trp Auth	356	60,969.4	79,060.6	163,164.8
San Diego, CA	North San Diego County Tr Devel Bd	28	4,936.2	3,426.9	12,020.6
San Francisco, CA	Peninsula Corridor Joint Powers Board	107	72,260.9	22,788.3	61,105.6
San Jose, CA	Altamont Commuter Express Authority	25	18,963.2	4,492.6	8,323.4
Seattle, WA	Central Puget Sound Regional Tr Auth	18	95,415.6	1,377.3	10,498.0
Syracuse, NY	ON TRACK	NA	NA	NA	NA
Washington, DC	Virginia Railway Express	65	22,212.2	10,358.3	21,339.8
TOTAL REPORTED (excludes "NA" entries)		5,548	2,281,663.3 (b)	1,436,246.7	2,850,741.9

Source: Federal Transit Administration National Transit Database. Agencies that do not participate in the NTD have "NA" entries.
(a) Excludes commuter-type services operated independently by AMTRAK.
(b) Excludes expenses by non-transit agencies, contractors, and the following transit agency not yet in operation: Charlotte, NC--9,514.7.

TABLE 127: Commuter Rail Transit Agencies Mileage and Station Data (a)

PRIMARY CITY SERVED	TRANSIT AGENCY	DIRECT-IONAL ROUTE MILES	TRACK MILES	CROSS-INGS	STA-TIONS	ACCESS-IBLE STATIONS (b)
Anchorage, AK	Alaska Railroad Corporation	275.0	46.2	27	3	3
Baltimore, MD	Maryland Transit Administration	373.4	455.1	40	40	19
Boston, MA	Massachusetts Bay Trp Auth	710.0	583.8	0	121	75
Burlington, VT	Vermont Transportation Authority	25.0	12.5	NA	3	3
Chicago, IL	Northeast IL Reg Commuter Rail Corp	940.4	1,144.0	512	227	125
Chicago, IL	Northern Indiana Commuter Trp Dist	179.8	130.4	117	18	7
Dallas, TX	Trinity Railway Express	51.6	34.6	24	7	7
Los Angeles, CA	Southern CA Regional Rail Authority	770.0	635.1	442	49	49
Miami, FL	Tri-County Commuter Rail Authority	142.2	104.2	72	18	18
New Haven, CT	Connecticut Dept of Transportation	101.2	103.9	3	8	8
New York, NY	MTA Long Island Rail Road	638.2	701.1	402	124	97
New York, NY	MTA Metro-North Railroad	545.7	799.6	162	108	28
New York, NY	New Jersey Transit Corporation	975.2	988.4	329	162	46
Philadelphia, PA	Pennsylvania Dept of Transportation	144.4	144.4	7	14	4
Philadelphia, PA	Southeastern Pennsylvania Trp Auth	449.2	695.4	116	177	30
San Diego, CA	North San Diego County Tr Devel Bd	82.2	108.0	34	8	8
San Francisco, CA	Peninsula Corridor Joint Powers Board	153.6	129.5	49	34	22
San Jose, CA	Altamont Commuter Express Authority	172.0	179.4	127	10	10
Seattle, WA	Central Puget Sound Regional Tr Auth	78.6	107.5	39	7	7
Syracuse, NY	ON TRACK	3.5	3.5	NA	3	3
Washington, DC	Virginia Railway Express	177.5	190.0	23	18	18
TOTAL REPORTED (excludes "NA" entries)		6,988.7	7,296.6	2,525	1,159	587

Source: Federal Transit Administration National Transit Database plus other sources.
(a) Excludes commuter-type services operated independently by AMTRAK.
(b) Additional stations may be wheelchair accessible, but not comply with other provisions of the Americans with Disabilities Act.

TABLE 128: Heavy Rail Transit Agencies Service and Usage Data, Fiscal Year 2001 (Thousands)

PRIMARY CITY SERVED	TRANSIT AGENCY	ANNUAL VEHICLE REVENUE MILES	ANNUAL VEHICLE REVENUE HOURS	AVERAGE WEEKDAY UNLINKED TRIPS	ANNUAL UNLINKED TRIPS	ANNUAL PASSENGER MILES
Atlanta, GA	Metropolitan Atlanta Rapid Tr Auth	22,665.2	861.2	265.1	82,388.6	563,016.8
Baltimore, MD	Maryland Transit Administration	4,140.1	162.6	48.5	13,585.2	62,457.4
Boston, MA	Massachusetts Bay Trp Auth	20,821.5	946.4	445.1	137,234.0	502,501.9
Chicago, IL	Chicago Transit Authority	57,653.2	2,819.5	604.6	181,692.2	1,009,234.0
Cleveland, OH	Greater Cleveland Regional Tr Auth	1,989.3	91.0	28.5	8,232.2	61,606.8
Los Angeles, CA	Los Angeles County Metro Trp Auth	5,539.8	243.6	105.6	31,191.5	126,460.7
Miami, FL	Miami-Dade Transit Agency	7,162.3	311.2	46.3	13,735.3	107,648.8
New York, NY	MTA New York City Transit	325,923.7	17,852.1	5,664.5	1,740,326.1	8,273,784.3
New York, NY	MTA Staten Island Railway	2,147.9	101.9	14.8	3,968.0	24,985.1
New York, NY	Port Authority Trans Hudson Corp	12,754.6	627.6	266.8	78,901.3	338,386.7
Philadelphia, PA	Port Authority Transit Corp	4,049.7	139.6	36.0	10,038.4	88,781.5
Philadelphia, PA	Southeastern Pennsylvania Trp Auth	15,975.8	873.8	293.2	87,344.1	392,693.4
San Francisco, CA	San Francisco Bay Area Rapid Tr Dist	58,771.2	1,596.6	353.4	103,919.4	1,263,667.8
Washington, DC	Washington Metropolitan Area Tr Auth	51,553.4	2,316.0	808.2	235,731.7	1,362,866.3
TOTAL		591,147.7	28,943.1	8,980.6	2,728,288.0	14,178,091.5

Source: Federal Transit Administration National Transit Database.

TABLE 129: Heavy Rail Transit Agencies Vehicle and Financial Data, Fiscal Year 2001

PRIMARY CITY SERVED	TRANSIT AGENCY	TOTAL VEHICLES	CAPITAL EXPENSE (000)	FARE REVENUE (000)	OPERATING EXPENSE (000)
Atlanta, GA	Metropolitan Atlanta Rapid Tr Auth	252	194,917.1	48,695.0	149,556.1
Baltimore, MD	Maryland Transit Administration	100	34,862.5	10,297.8	36,352.8
Boston, MA	Massachusetts Bay Trp Auth	408	76,998.3	100,095.8	206,010.3
Chicago, IL	Chicago Transit Authority	1,190	237,875.4	153,225.0	339,360.1
Cleveland, OH	Greater Cleveland Regional Tr Auth	60	8,547.8	5,628.9	26,798.9
Los Angeles, CA	Los Angeles County Metro Trp Auth	102	2,089.0	9,944.5	45,501.3
Miami, FL	Miami-Dade Transit Agency	136	23,632.5	10,792.0	57,849.6
New York, NY	MTA New York City Transit	6,195	1,882,604.8	1,523,531.2	2,211,556.8
New York, NY	MTA Staten Island Railway	64	1,096.9	4,143.3	26,249.4
New York, NY	Port Authority Trans Hudson Corp	335	63,446.0	88,924.0	148,550.0
Philadelphia, PA	Port Authority Transit Corp	121	5,690.8	19,963.3	29,634.1
Philadelphia, PA	Southeastern Pennsylvania Trp Auth	365	126,947.2	61,640.5	112,923.4
San Francisco, CA	San Francisco Bay Area Rapid Tr Dist	632	485,222.1	212,791.1	327,744.5
Washington, DC	Washington Metropolitan Area Tr Auth	758	362,505.5	282,895.2	453,017.5
TOTAL		10,718	3,506,435.9 (a)	2,532,567.6	4,171,104.8

Source: Federal Transit Administration National Transit Database.
(a) Excludes expenses by non-transit agencies, contractors, and transit agencies not yet in operation.

TABLE 130: Heavy Rail Transit Agencies Mileage and Station Data

PRIMARY CITY SERVED	TRANSIT AGENCY	DIRECT-IONAL ROUTE MILES	TRACK MILES	CROSS-INGS	STA-TIONS	ACCESS-IBLE STATIONS (a)
Atlanta, GA	Metropolitan Atlanta Rapid Transit Auth	96.0	103.7	0	38	38
Baltimore, MD	Maryland Transit Administration	29.4	34.4	0	14	14
Boston, MA	Massachusetts Bay Trp Auth	76.3	107.7	0	53	38
Chicago, IL	Chicago Transit Authority	206.3	287.8	25	144	64
Cleveland, OH	Greater Cleveland Reg Transit Auth	38.2	41.9	0	18	8
Los Angeles, CA	Los Angeles County Metro Trp Auth	31.9	34.1	0	16	16
Miami, FL	Miami-Dade Transit Agency	42.2	53.2	0	21	0
New York, NY	MTA New York City Transit	493.8	835.0	0	468	41
New York, NY	MTA Staten Island Railway	28.6	32.7	0	23	3
New York, NY	Port Authority Trans Hudson Corp	25.0	39.5	2	13	6
Philadelphia, PA	Port Authority Transit Corporation	31.5	38.4	0	13	5
Philadelphia, PA	Southeastern Pennsylvania Trp Auth	76.1	102.3	0	76	4
San Francisco, CA	San Francisco Bay Area Rapid Tr Dist	190.1	246.3	0	39	39
Washington, DC	Washington Metropolitan Area Tr Auth	206.6	220.4	0	83	83
TOTAL		1,572.0	2,177.4	27	1,019	359

Source: Federal Transit Administration National Transit Database plus other sources.
(a) Additional stations may be wheelchair accessible, but not comply with other provisions of the Americans with Disabilities Act.

TABLE 131: Light Rail Transit Agencies Service and Usage Data, Fiscal Year 2001 (Thousands)

PRIMARY CITY SERVED	TRANSIT AGENCY	ANNUAL VEHICLE REVENUE MILES	ANNUAL VEHICLE REVENUE HOURS	AVERAGE WEEKDAY UNLINKED TRIPS	ANNUAL UNLINKED TRIPS	ANNUAL PASSENGER MILES
Baltimore, MD	Maryland Transit Administration	2,780.4	176.2	24.7	7,816.7	52,496.0
Boston, MA	Massachusetts Bay Trp Auth	5,735.8	382.4	230.8	75,257.8	185,068.1
Buffalo, NY	Niagara Frontier Transit Metro Sys	877.1	72.0	22.6	6,356.0	15,180.5
Cleveland, OH	Greater Cleveland Regional Tr Auth	1,144.2	73.4	15.1	4,444.5	25,525.9
Dallas, TX	Dallas Area Rapid Transit Authority	2,561.5	155.4	39.0	11,571.1	61,071.8
Dallas, TX	McKinney Avenue Transit Authority	NA	NA	NA	NA	NA
Denver, CO	Regional Transportation District	2,319.7	132.6	31.4	9,080.6	63,519.7
Detroit, MI	City of Detroit Dept of Transportation	8.5	1.3	0.1	38.9	38.1
Galveston, TX	Island Transit	44.1	9.0	0.2	54.3	170.3
Kenosha, WI	Kenosha Transit	18.6	2.7	0.1	46.4	NA
Los Angeles, CA	Los Angeles County Metro Trp Auth	4,366.8	185.6	105.6	30,610.1	213,339.2
Memphis, TN	Memphis Area Transit Authority	311.8	38.9	6.4	2,179.3	1,613.1
New Orleans, LA	Regional Transit Authority	668.7	77.1	14.1	5,173.7	11,172.7
Newark, NJ	New Jersey Transit Corporation	1,204.4	108.8	25.5	6,787.9	17,036.6
Philadelphia, PA	Southeastern Pennsylvania Trp Auth	3,067.8	318.2	84.1	24,837.9	59,762.5
Pittsburgh, PA	Port Authority of Allegheny County	1,649.3	125.7	24.7	7,513.7	32,837.1
Portland, OR	Portland Streetcar (opened FY 2002)	NA	NA	NA	NA	NA
Portland, OR	Tri-County Metropolitan Trp Dist	5,051.4	286.1	77.4	24,976.6	144,023.6
Sacramento, CA	Sacramento Regional Transit District	2,143.6	104.8	29.4	8,618.4	44,456.5
Saint Louis, MO	Bi-State Development Agency	2,861.2	110.4	42.4	14,289.0	95,560.9
Salt Lake City, UT	Utah Transit Authority	1,703.3	104.0	21.0	6,084.3	44,555.9
San Diego, CA	San Diego Trolley	7,070.0	334.6	84.5	28,885.6	189,200.4
San Francisco, CA	San Francisco Municipal Railway	4,738.1	518.1	164.2	49,698.9	127,848.3
San Jose, CA	Santa Clara Valley Trp Auth	2,796.5	189.4	30.3	9,237.1	42,461.9
Seattle, WA	King County Dept of Transportation	40.1	11.7	NA	374.3	365.9
Tampa, FL	Hillsborough Area RTA (opened 2002)	NA	NA	NA	NA	NA
TOTAL REPORTED (excludes "NA" entries)		53,162.9	3,518.4	1,073.6	333,933.1	1,427,305.0

Source: Federal Transit Administration National Transit Database. Agencies that do not participate in the NTD have "NA" entries.

TABLE 132: Light Rail Transit Agencies Vehicle and Financial Data, Fiscal Year 2001

PRIMARY CITY SERVED	TRANSIT AGENCY	TOTAL VEHICLES	CAPITAL EXPENSE (000)	FARE REVENUE (000)	OPERATING EXPENSES (000)
Baltimore, MD	Maryland Transit Administration	53	20,090.6	6,440.4	32,460.2
Boston, MA	Massachusetts Bay Trp Auth	198	31,964.2	49,723.1	94,022.8
Buffalo, NY	Niagara Frontier Transit Metro Sys	27	7,223.9	3,284.7	14,533.6
Cleveland, OH	Greater Cleveland Regional Tr Auth	48	4,770.3	3,039.1	16,848.9
Dallas, TX	Dallas Area Rapid Transit Authority	95	180,676.2	4,733.9	40,532.2
Dallas, TX	McKinney Avenue Transit Authority	NA	NA	NA	NA
Denver, CO	Regional Transportation District	31	230,062.4	6,479.5	15,134.9
Detroit, MI	City of Detroit Dept of Transportation	4	0.0	19.4	349.3
Galveston, TX	Island Transit	4	26.7	24.5	340.2
Kenosha, WI	Kenosha Transit	5	1,705.8	NA	224.2
Los Angeles, CA	Los Angeles County Metro Trp Auth	81	4,332.1	16,838.9	68,646.3
Memphis, TN	Memphis Area Transit Authority	15	1,970.1	515.0	2,575.6
New Orleans, LA	Regional Transit Authority	48	0.0	4,709.9	8,821.6
Newark, NJ	New Jersey Transit Corporation	45	45,690.2	5,176.9	39,780.8
Philadelphia, PA	Southeastern Pennsylvania Trp Auth	141	18,755.5	13,894.5	41,315.5
Pittsburgh, PA	Port Authority of Allegheny County	55	53,225.3	5,086.2	29,212.6
Portland, OR	Portland Streetcar (opened FY 2002)	NA	NA	NA	NA
Portland, OR	Tri-County Metropolitan Trp Dist	72	85,558.9	15,713.6	40,035.5
Sacramento, CA	Sacramento Regional Transit District	36	53,566.7	6,996.0	25,237.9
Saint Louis, MO	Bi-State Development Agency	60	96,983.4	8,561.9	22,658.3
Salt Lake City, UT	Utah Transit Authority	33	89,618.7	3,348.8	11,207.7
San Diego, CA	San Diego Trolley	86	50,399.1	22,244.5	37,279.3
San Francisco, CA	San Francisco Municipal Railway	163	171,094.5	19,942.1	97,243.9
San Jose, CA	Santa Clara Valley Trp Auth	54	0.0	5,075.6	36,650.5
Seattle, WA	King County Dept of Transportation	5	0.0	190.4	1,340.6
Tampa, FL	Hillsborough Area RTA (opened 2002)	NA	NA	NA	NA
TOTAL REPORTED (excludes "NA" entries)		1,359	1,147,714.6 (a)	197,305.0	676,452.4

Source: Federal Transit Administration National Transit Database. Agencies that do not participate in the NTD have "NA" entries.

(a) Excludes expenses by non-transit agencies, contractors, and the following transit agencies not yet in operation: Little Rock, AR--272.9, Phoenix, AZ--12,208.5, Tempe, AZ--1,106.0, Sioux City, IA--192.1, Minneapolis, MN--121,234.6, Raleigh, NC--1,668.3, Houston, TX--81,607.7, Seattle, WA--73,794.3, Spokane, WA--1,851.7.

TABLE 133: Light Rail Transit Agencies Mileage and Station Data

PRIMARY CITY SERVED	TRANSIT AGENCY	DIRECTIONAL ROUTE MILES	TRACK MILES	CROSS-INGS	STA-TIONS (a)	ACCESSIBLE STATIONS (a) (b)
Baltimore, MD	Maryland Transit Administration	57.6	50.9	52	32	32
Boston, MA	Massachusetts Bay Trp Auth	51.0	77.5	56	78	16
Buffalo, NY	Niagara Frontier Transit Metro Sys	12.4	14.1	8	14	7
Cleveland, OH	Greater Cleveland Reg Transit Auth	30.8	33.0	22	34	7
Dallas, TX	Dallas Area Rapid Transit Authority	47.1	53.0	68	22	22
Dallas, TX	McKinney Avenue Transit Authority	2.8	2.8	NA	0	0
Denver, CO	Regional Transportation District	28.0	28.5	34	20	20
Detroit, MI	City of Detroit Dept of Transportation	1.3	1.6	8	8	0
Galveston, TX	Island Transit	9.8	4.9	57	3	0
Kenosha, WI	Kenosha Transit	1.9	1.9	26	1	0
Los Angeles, CA	Los Angeles County Metro Trp Auth	82.4	85.7	77	36	36
Memphis, TN	Memphis Area Transit Authority	5.8	6.1	40	28	28
New Orleans, LA	Regional Transit Authority	16.0	13.7	124	9	9
Newark, NJ	New Jersey Transit Corporation	24.3	28.5	27	26	15
Philadelphia, PA	Southeastern Pennsylvania Trp Auth	69.3	171.0	1,702	64	0
Pittsburgh, PA	Port Authority of Allegheny County	34.8	44.8	39	13	13
Portland, OR	Portland Streetcar	4.8	5.0	87	0	0
Portland, OR	Tri-County Metropolitan Trp Dist	64.9	71.9	111	47	46
Sacramento, CA	Sacramento Regional Transit District	40.7	39.4	90	29	29
Saint Louis, MO	Bi-State Development Agency	68.8	73.5	23	26	26
Salt Lake City, UT	Utah Transit Authority	34.2	34.2	59	20	20
San Diego, CA	San Diego Trolley	96.6	96.6	96	49	49
San Francisco, CA	San Francisco Municipal Railway	73.3	73.3	351	11	0
San Jose, CA	Santa Clara Valley Trp Auth	58.4	58.9	97	49	23
Seattle, WA	King County Dept of Transportation	3.7	2.1	14	9	9
Tampa, FL	Hillsborough Area Regional Tr Auth	4.6	4.6	NA	10	10
TOTAL REPORTED (excludes "NA" entries)		925.3	1,077.5	3,268	638	417

Source: Federal Transit Administration National Transit Database plus other sources.
(a) Many light rail lines have numerous stops in the street that do not meet the definition of station.
(b) Additional stations may be wheelchair accessible, but not comply with other provisions of the Americans with Disabilities Act.

TABLE 134: Other Rail Transit Agencies Service and Usage Data, Fiscal Year 2001 (Thousands)

MODE (a)	PRIMARY CITY SERVED	TRANSIT AGENCY	ANNUAL VEHICLE REVENUE MILES	ANNUAL VEHICLE REVENUE HOURS	AVERAGE WEEKDAY UNLINKED TRIPS	ANNUAL UNLINKED TRIPS	ANNUAL PASSENGER MILES
AG	Detroit, MI	Detroit Transportation Corp	500.1	43.2	6.1	2,197.2	3,122.0
AG	Jacksonville, FL	Jacksonville Trp Auth	263.7	20.0	2.6	708.9	285.8
AG	Las Colinas, TX	Las Colinas Area Rapid Tr	NA	NA	NA	NA	NA
AG	Miami, FL	Miami-Dade Transit Agency	973.7	89.4	16.2	4,856.2	5,095.8
AG	Morgantown, WV	West Virginia University	NA	NA	NA	NA	NA
CC	San Francisco, CA	San Francisco Municipal Rwy	494.7	128.9	22.8	8,478.0	9,516.7
IP	Chattanooga, TN	Chattanooga Area Reg TA	13.8	4.8	1.1	388.6	388.6
IP	Dubuque, IA	Fenelon Place Elevator	NA	NA	NA	NA	NA
IP	Johnstown, PA	Cambria County Transit Auth	1.2	0.5	0.3	66.6	11.4
IP	Los Angeles, CA	Angels Flight Railway	NA	NA	NA	NA	NA
IP	Pittsburgh, PA	Port Auth of Allegheny County	47.5	10.4	3.2	1,291.3	167.3
MO	Las Vegas, NV	Las Vegas Monorail	NA	NA	NA	NA	NA
MO	Seattle, WA	City of Seattle Monorail	251.6	27.6	5.8	2,524.8	2,272.0
TR	Mountain Village, CO	Mountain Village Metro Dist	NA	NA	NA	NA	NA
TR	New York, NY	Roosevelt Island Oper Corp	NA	NA	NA	NA	NA

Source: Federal Transit Administration National Transit Database. Agencies that do not participate in the NTD have "NA" entries.
(a) AG = automated guideway transit, CC = cable car, IP = inclined plane, MO = monorail, TR = aerial tramway

TABLE 135: Other Rail Transit Agencies Vehicle and Financial Data, Fiscal Year 2001

MODE (a)	PRIMARY CITY SERVED	TRANSIT AGENCY	TOTAL VEHICLES	CAPITAL EXPENSE (000) (b)	FARE REVENUE (000)	OPERATING EXPENSES (000)
AG	Detroit, MI	Detroit Transportation Corp	8	694.9	722.2	9,456.5
AG	Jacksonville, FL	Jacksonville Trp Auth	8	3,409.2	460.4	3,256.5
AG	Las Colinas, TX	Las Colinas Area Rapid Tr	NA	NA	NA	NA
AG	Miami, FL	Miami-Dade Transit Agency	29	1,194.1	492.4	16,375.6
AG	Morgantown, WV	West Virginia University	NA	NA	NA	NA
CC	San Francisco, CA	San Francisco Municipal Rwy	40	1,892.0	12,385.5	33,658.3
IP	Chattanooga, TN	Chattanooga Area Reg TA	2	757.1	1,374.5	739.3
IP	Dubuque, IA	Fenelon Place Elevator	NA	NA	NA	NA
IP	Johnstown, PA	Cambria County Transit Auth	2	83.6	66.4	303.0
IP	Los Angeles, CA	Angels Flight Railway	NA	NA	NA	NA
IP	Pittsburgh, PA	Port Auth of Allegheny County	4	56.3	596.3	821.4
MO	Las Vegas, NV	Las Vegas Monorail	NA	NA	NA	NA
MO	Seattle, WA	City of Seattle Monorail	8	0.0	2,366.9	2,366.9
TR	Mountain Village, CO	Mountain Village Metro Dist	NA	NA	NA	NA
TR	New York, NY	Roosevelt Island Oper Corp	NA	NA	NA	NA

Source: Federal Transit Administration National Transit Database. Agencies that do not participate in the NTD have "NA" entries.
(a) AG = automated guideway transit, CC = cable car, IP = inclined plane, MO = monorail, TR = aerial tramway
(b) Excludes expenses by non-transit agencies, contractors, and transit agencies not yet in operation.

TABLE 136: Other Rail Transit Agencies Mileage and Station Data

MODE (a)	PRIMARY CITY SERVED	TRANSIT AGENCY	DIRECT-IONAL ROUTE MILES	TRACK MILES	CROSS-INGS	STA-TIONS	ACCESS-IBLE STATIONS (b)
AG	Detroit, MI	Detroit Transportation Corp	2.9	2.9	0	13	13
AG	Jacksonville, FL	Jacksonville Trp Auth	5.4	5.4	0	8	8
AG	Las Colinas, TX	Las Colinas Area Rapid Tr	2.8	1.4	0	4	4
AG	Miami, FL	Miami-Dade Transit Agency	8.5	9.4	0	21	0
AG	Morgantown, WV	West Virginia University	7.2	8.7	0	5	0
CC	San Francisco, CA	San Francisco Municipal Rwy	8.8	8.8	77	0 (c)	0 (c)
IP	Chattanooga, TN	Chattanooga Area Reg TA	2.0	1.0	0	2	2
IP	Dubuque, IA	Fenelon Place Elevator	0.1	0.1	0	2	0
IP	Johnstown, PA	Cambria County Transit Auth	0.3	0.3	0	2	0
IP	Los Angeles, CA	Angels Flight Railway	0.1	0.1	0	2	2
IP	Pittsburgh, PA	Port Auth of Allegheny County	0.5	0.5	0	4	3
MO	Las Vegas, NV	Las Vegas Monorail	1.6	1.6	0	2	2
MO	Seattle, WA	City of Seattle Monorail	1.1	1.1	0	2	0
TR	Mountain Village, CO	Mountain Village Metro Dist	5.0	2.5	0	4	0
TR	New York, NY	Roosevelt Island Oper Corp	1.2	0.6	0	2	0
TOTAL			47.5	44.4	77	73	34

Source: Federal Transit Administration National Transit Database plus other sources.
(a) AG = automated guideway transit, CC = cable car, IP = inclined plane, MO = monorail, TR = aerial tramway
(b) Additional stations may be wheelchair accessible, but not comply with other provisions of the Americans with Disabilities Act.
(c) Cable cars stop in the middle of the street and do not have stations.

Vanpool

Highlights.....

See National Totals on page 209.

Vanpool service operates primarily from rural and outer suburban areas into urban area central business districts or suburban employment centers. Most vanpools serve large urban areas, though a few states have statewide programs.

The vast majority of vanpools are privately-operated, are not available to the public, and are not considered public transportation, which is limited to the several dozen transit agencies that do fund and operate public vanpools.

Vanpool mode is comprised of vans (and very rarely, small buses and other vehicles) operating as a ridesharing arrangement, providing transportation to a group of individuals traveling directly between their homes and a regular destination within the same geographical area. The vehicles have a minimum seating capacity of seven persons, including the driver. It is considered mass transit service if it is operated by a public entity or is one in which a public entity owns, purchases, or leases the vehicle(s). Vanpool(s) must also be in compliance with mass transit rules including Americans with Disabilities Act (ADA) provisions, and be open to the public and that availability must be made known. Other forms of public participation to encourage ridesharing arrangements such as the provision of parking spaces, use of high occupancy vehicle (HOV) lanes, coordination or clearing house service, do not qualify as public vanpools.

TABLE 137: Vanpool National Totals, Fiscal Year 2001

Agencies, Number of	67
Fares Collected, Passenger	$25,923,000
Fare per Unlinked Trip, Average	$1.74
Expense, Operating Total (a)	$39,458,000
Salaries and Wages (b)	$6,927,000
Fringe Benefits (b)	$3,492,000
Services (b)	$6,225,000
Fuel and Lubricants (b)	$4,933,000
Materials and Supplies, Other (b)	$1,270,000
Utilities (b)	$297,000
Casualty and Liability (b)	$2,502,000
Purchased Transportation (b) (c)	$12,665,000
Other (b)	$1,147,000
Vehicle Operations (c)	$7,868,000
Vehicle Maintenance (c)	$5,672,000
Non-vehicle Maintenance (c)	$367,000
General Administration (c)	$12,886,000
Expense, Capital Total	$11,528,000
Rolling Stock	$9,401,000
Facilities	$354,000
Other	$1,773,000
Trips, Unlinked Passenger, Average Weekday	58,000
Trips, Unlinked Passenger, Annual	14,906,000
Miles, Passenger	489,972,000
Trip Length, Average (miles)	32.9
Miles, Vehicle Total	71,437,000
Miles, Vehicle Revenue	70,192,000
Hours, Vehicle Total	1,844,000
Hours, Vehicle Revenue	1,808,000
Speed, Vehicle in Revenue Service, Average (m.p.h.)	38.8
Vehicles, Total	5,763
Active	5,388
Age, Average (years)	3.7
Air-conditioned	89.9%
Lifts, Wheelchair	2.2%
Ramps, Wheelchair	1.2%
Accessible Only via Stations	0.0%
Power Source, Diesel or Gasoline	99.5%
Power Source, Alternative	0.5%
Rehabilitated	0.0%
Employees, Operating	262
Vehicle Operations	43
Vehicle Maintenance	37
Non-vehicle Maintenance	4
General Administration	178
Employees, Capital	3
Diesel Fuel Consumed (gallons)	97,000
Other Fuel Consumed (gallons)	4,883,000
Electricity Consumed (kwh)	0

(a) Sum of (b) lines OR sum of (c) lines.

Types of Service

Vanpool service is operated in two ways. Either transit agency vehicles are leased to companies or directly to volunteer drivers, or the service is contracted to a vanpool management company that has its own vehicles and administers the service. Under either arrangement, many vanpools serve large private corporations or government agencies and consist solely of their employees.

Vanpool service generally serves areas far outside the normal bus service area, or intra-suburban trips where bus service cannot be justified. The average trip length is nearly 35 miles, and trips well over 50 miles are not uncommon.

Vanpool fares often vary depending on the number of people in the vanpool, the size of van used, and the distance traveled. The driver collects fares (unless there is a pay-by-mail program), operates the van, and arranges for maintenance. In return, the driver rides free, may keep the van at home overnight, and may often use it for personal use within prescribed limits.

The transit agency, or sometimes another local governmental unit, runs a vanpool matching service to recruit new riders and usually pays insurance, fuel, and maintenance costs. If the number of vans involved is large enough, the transit agency may perform the maintenance itself, though the usual procedure is for the driver to take the van to a local automobile dealer.

Types of Vehicles

Almost all vanpool service is operated with vans less than 21 feet in length.

Vans cost about $23,000, according to a 2002 APTA survey including about 64% of vanpool vehicles.

A **van** has a typical seating capacity of 5 to 15 passengers and is classified as a van by vehicle manufacturers--typically Dodge, Ford, and General Motors. Very rarely, a **modified van (body-on-chassis van)**--a standard van that has undergone some structural changes by another company, usually made to increase its size and particularly its height--may be used. The seating capacity of modified vans is approximately 9 to 18 passengers.

TABLE 138: New Vanpool Vehicle Market by Length and Seating Capacity, 2001-2006 (a)

CATEGORY	BUILT IN 2001		ON ORDER JANUARY 2002		POTENTIAL ORDERS (b)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	466	100.0%	31	100.0%	2,288	100.0%
Length						
20-24 feet	38	8.1%	4	12.9%	0	0.0%
17-19 feet	163	35.0%	13	41.9%	1,252	54.7%
11-16 feet	265	56.9%	14	45.2%	1,036	45.3%
Seating Capacity						
14-15 seats	163	35.0%	6	19.4%	799	34.9%
10-13 seats	16	3.4%	15	48.4%	997	43.5%
6-9 seats	287	61.6%	10	32.2%	492	21.6%

Source: APTA survey. Data includes about 64% of vanpool vehicles.
(a) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

Accessibility

Vanpool service is not required to be accessible by law, as are other modes, since the passengers are voluntary participants. Rather, a vanpool would be assigned an accessible van if a person in need of such a van became a vanpool participant.

An **accessible vehicle** is a public transportation revenue vehicle that does not restrict access, is usable, and provides allocated space and/or priority seating for individuals who use wheelchairs.

High-floor vans require all riders except the person next to the driver to climb into the van from street level through a sliding door on the side of the van. A few such vans accommodate wheelchair-bound and other riders who cannot climb steps by using a retractable lift that raises and lowers persons and equipment between street and van floor levels.

Low-floor vans generally use a side sliding door for passengers and have a level floor in the entire passenger-seating area. Only a short retractable ramp is necessary to accommodate wheelchairs and those who cannot bridge the gap between van and street level.

This vanpool van is operated by the Capital Metropolitan Transportation Authority in Austin, Texas. Many vanpools use even larger vans.

TABLE 139: Vanpool Accessibility, 2002

	VEHICLES	PER CENT
Total	3,371	NA
Via on-board lift	73	2.2%
Via on-board ramp	40	1.2%
Non-accessible	3,258	96.6%

Source: APTA survey. Data includes about 64% of vanpool vehicles.

TABLE 140: Vanpool Vehicle Power Sources, 2002

	VEHICLES	PER CENT
Total	3,371	NA
Compressed natural gas	17	0.5%
Diesel	252	7.5%
Gasoline	3,102	92.0%

Source: APTA survey. Data includes about 64% of vanpool vehicles.

TABLE 141: Vanpool Power Source Efficiency, Miles per Gallon

DIESEL	COMPRESSED NATURAL GAS	GASOLINE	PROPANE
14.41	9.72	13.29	14.67

Source: Federal Transit Administration, 2000 National Transit Database.

TABLE 142: New Vanpool Vehicle Market by Accessibility, 2001-2006

	BUILT IN 2001		ON ORDER JANUARY 2002		POTENTIAL ORDERS (a)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	466	100.0%	31	100.0%	2,288	100.0%
Via on-board lift	25	5.4%	0	0.0%	45	2.0%
Via on-board ramp	25	5.4%	0	0.0%	24	1.0%
Non-accessible	416	89.2%	31	100.0%	2,219	97.0%

Source: APTA survey. Data includes about 64% of vanpool vehicles.
(a) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 143: New Vanpool Vehicle Market by Power Source, 2001-2006

	BUILT IN 2001		ON ORDER JANUARY 2002		POTENTIAL ORDERS (a)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	466	100.0%	31	100.0%	2,288	100.0%
Diesel	41	8.8%	0	0.0%	120	5.2%
Gasoline	425	91.2%	31	100.0%	2,168	94.8%

Source: APTA survey. Data includes about 64% of vanpool vehicles.
(a) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 144: Vanpool Fuel Consumption, Thousands of Gallons

YEAR	DIESEL	COMPRESSED NATURAL GAS	GASOLINE	PROPANE	OTHER	TOTAL NON-DIESEL
1994	160	0	1,950	24	0	1,974
1995	182	0	2,282	57	0	2,339
1996	219	0	2,449	5	15	2,469
1997	202	2	3,141	4	0	3,147
1998	227	2	4,178	3	0	4,183
1999	238	35	4,547	4	0	4,586
2000	179	34	4,681	4	0	4,719
2001 P	97	31	4,849	3	0	4,883

P = Preliminary

TABLE 145: New Vanpool Vehicle Market by Manufacturer, 2001-2006

	BUILT IN 2001		ON ORDER JANUARY 2002		POTENTIAL ORDERS (a)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	466	100.0%	31	100.0%	2,288	100.0%
DaimlerChrysler	200	42.9%	4	12.9%	NA	NA
Ford	108	23.2%	11	35.5%	NA	NA
General Motors	155	33.3%	16	51.6%	NA	NA
All others	3	0.6%	0	0.0%	NA	NA

Source: APTA survey. Data includes about 64% of vanpool vehicles
(a) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 146: Vanpool Transit Agencies Service and Usage Data, Fiscal Year 2001 (Thousands)

PRIMARY CITY SERVED	TRANSIT AGENCY	ANNUAL VEHICLE REVENUE MILES	ANNUAL VEHICLE REVENUE HOURS	AVERAGE WEEKDAY UNLINKED TRIPS	ANNUAL UNLINKED TRIPS	ANNUAL PASSENGER MILES
Anchorage, AK	Anchorage Public Transportation Dept	469.4	9.9	0.3	73.3	3,366.5
Arlington Heights, IL	Pace Suburban Bus	6,462.7	207.5	4.4	1,132.2	37,718.1
Atlanta, GA	Douglas County Rideshare	266.3	6.9	0.2	56.3	1,467.0
Austin, TX	Capital Metropolitan Trp Auth	1,351.8	47.4	1.0	267.8	5,060.8
Bremerton, WA	Kitsap Transit	412.4	13.0	0.6	132.2	3,250.4
Charlotte, NC	Charlotte Area Transit System	1,914.9	39.8	1.5	366.7	17,426.6
Cocoa, FL	Space Coast Area Transit	1,056.3	18.3	0.6	138.2	7,233.0
Corpus Christi, TX	Corpus Christi Regional Trp Auth	92.1	1.8	0.1	11.1	238.9
Daytona Beach, FL	Volusia County Transportation Auth	267.0	5.3	0.1	30.5	1,518.8
Des Moines, IA	Des Moines Metropolitan Transit Auth	1,297.4	27.9	0.8	206.2	8,630.7
Fort Worth, TX	Fort Worth Transportation Authority	2,389.5	56.3	1.4	368.3	12,155.6
Granite City, IL	Madison County Transit District	691.4	18.6	0.5	118.4	5,167.3
Hartford, CT	Greater Hartford Ridesharing Corp	5,805.9	NA	NA	NA	69,670.7
Honolulu, HI	VPSI	2,117.0	78.9	1.6	404.5	9,181.0
Houston, TX	VPSI	2,644.3	65.9	3.0	767.3	20,817.4
Kansas City, MO	Kansas City Area Transportation Auth	429.3	8.2	0.2	62.9	2,198.2
Milwaukee, WI	Milwaukee County Transit System	249.4	6.5	0.3	68.7	2,368.9
Mobile, AL	Metro Transit	58.1	2.8	0.1	8.2	153.5
Newark, NJ	New Jersey Transit Corporation	2,529.6	66.2	1.8	439.9	17,588.4
Norfolk, VA	Trp District Comm of Hampton Roads	737.0	25.3	0.6	151.4	7,380.3
Olympia, WA	Intercity Transit	1,104.7	30.7	1.0	252.7	8,003.8
Orlando, FL	Central Florida Regional Trp Auth	1,668.8	33.5	1.1	290.3	9,299.1
Phoenix, AZ	Regional Public Transportation Auth	3,262.1	81.9	2.9	743.0	19,852.5
Pittsburgh, PA	Southwestern Pennsylvania Comm	645.9	21.3	0.8	198.6	5,778.0
Pittsburgh, PA	University of Pittsburgh	208.8	8.9	0.3	88.1	1,867.9
Research Triangle, NC	Research Triangle Reg Public Trp Auth	815.0	20.3	1.1	279.0	10,112.8
Richland, WA	Ben Franklin Transit	1,875.3	71.4	2.1	539.6	20,628.2
Richmond, VA	GRTC Transit System	657.4	14.1	0.4	98.2	5,232.7

TABLE 146: Vanpool Transit Agencies Service and Usage Data, Fiscal Year 2001 (Thousands)

PRIMARY CITY SERVED	TRANSIT AGENCY	ANNUAL VEHICLE REVENUE MILES	ANNUAL VEHICLE REVENUE HOURS	AVERAGE WEEKDAY UNLINKED TRIPS	ANNUAL UNLINKED TRIPS	ANNUAL PASSENGER MILES
Rock Island, IL	Rock Island County Metro Mass Tr Dist	50.5	1.8	0.1	8.6	250.0
Salt Lake City, UT	Utah Transit Authority	1,602.9	40.8	1.1	304.9	12,650.0
San Diego, CA	San Diego Association of Governments	3,954.9	82.2	2.3	574.6	28,147.8
Seattle, WA	King County Dept of Transportation	9,619.0	281.1	7.9	1,936.4	47,598.5
Seattle, WA	Snohomish County Pub Trp Benefit Area	3,788.8	70.1	3.1	776.9	20,707.5
Spokane, WA	Spokane Transit Authority	299.7	8.2	0.3	85.5	1,853.7
Stockton, CA	San Joaquin Regional Transit District	150.9	3.3	0.1	15.6	955.3
Tacoma, WA	Pierce Transit	3,060.0	69.0	2.5	631.8	20,699.3
Tampa, FL	Hillsborough Area Regional Tr Auth	115.7	2.7	0.1	13.8	459.4
Vancouver, WA	Clark County Pub Trp Benefit Area	158.0	5.0	0.2	51.3	1,129.9

Source: Federal Transit Administration National Transit Database; excludes agencies that do not participate in the NTD.

TABLE 147: Vanpool Transit Agencies Vehicle and Financial Data, Fiscal Year 2001

PRIMARY CITY SERVED	TRANSIT AGENCY	TOTAL VEHICLES	CAPITAL EXPENSES (000)(a)	FARE REVENUE (000)	OPERATING EXPENSES (000)
Anchorage, AK	Anchorage Public Transportation Dept	22	0.0	180.7	265.6
Arlington Heights, IL	Pace Suburban Bus	490	2,224.5	2,041.7	3,943.4
Atlanta, GA	Douglas County Rideshare	24	0.2	64.3	161.5
Austin, TX	Capital Metropolitan Trp Auth	143	0.0	212.2	603.3
Bremerton, WA	Kitsap Transit	51	0.0	140.2	492.2
Charlotte, NC	Charlotte Area Transit System	81	753.5	494.2	476.4
Cocoa, FL	Space Coast Area Transit	42	1,192.9	753.2	308.2
Corpus Christi, TX	Corpus Christi Regional Trp Auth	4	0.0	NA	59.6
Daytona Beach, FL	Volusia County Transportation Auth	12	0.0	NA	76.6
Des Moines, IA	Des Moines Metropolitan Transit Auth	83	344.9	478.6	476.9
Fort Worth, TX	Fort Worth Transportation Authority	126	0.0	221.2	766.0
Granite City, IL	Madison County Transit District	58	253.1	170.1	488.4
Hartford, CT	Greater Hartford Ridesharing Corp	361	1,665.9	1,916.0	2,070.6
Honolulu, HI	VPSI	186	0.0	899.4	1,613.2
Houston, TX	Metro Transit Auth of Harris County	194	0.0	910.0	1,087.8
Kansas City, MO	Kansas City Area Transportation Auth	30	0.0	NA	180.1
Milwaukee, WI	Milwaukee County Transit System	21	0.0	97.2	92.8
Mobile, AL	Metro Transit	5	0.0	NA	65.1
Newark, NJ	New Jersey Transit Corporation	121	0.0	436.6	740.2
Norfolk, VA	Trp District Comm of Hampton Roads	41	0.0	NA	118.4
Olympia, WA	Intercity Transit	75	184.7	307.8	311.1
Orlando, FL	Central Florida Regional Trp Auth	89	28.3	377.3	567.5
Phoenix, AZ	Regional Public Transportation Auth	369	1,514.2	1,143.8	1,022.4
Pittsburgh, PA	Southwestern Pennsylvania Comm	38	0.0	378.0	486.2
Pittsburgh, PA	University of Pittsburgh	21	0.0	182.3	180.5
Research Triangle, NC	Research Triangle Reg Pub Trp Auth	72	0.0	360.3	654.2
Richland, WA	Ben Franklin Transit	153	0.0	806.6	1,011.5
Richmond, VA	GRTC Transit System	27	0.0	NA	340.5

TABLE 147: Vanpool Transit Agencies Vehicle and Financial Data, Fiscal Year 2001

PRIMARY CITY SERVED	TRANSIT AGENCY	TOTAL VEHICLES	CAPITAL EXPENSES (000)(a)	FARE REVENUE (000)	OPERATING EXPENSES (000)
Rock Island, IL	Rock Island County Metro Mass TD	10	0.0	23.5	73.9
Salt Lake City, UT	Utah Transit Authority	98	179.8	530.7	614.2
San Diego, CA	San Diego Regional Trp Services	294	572.8	1,702.5	2,676.8
Seattle, WA	King County Dept of Transportation	962	1,742.6	5,217.5	7,389.3
Seattle, WA	Snohomish County Pub Trp BA	356	0.0	NA	2,059.2
Spokane, WA	Spokane Transit Authority	34	0.4	139.5	148.7
Stockton, CA	San Joaquin Regional Transit District	6	0.0	51.6	64.1
Tacoma, WA	Pierce Transit	249	0.0	1,371.8	1,794.1
Tampa, FL	Hillsborough Area Regional Tr Auth	8	0.0	20.4	56.8
Vancouver, WA	Clark County Pub Trp Benefit Area	10	0.0	67.4	81.4

Source: Federal Transit Administration National Transit Database; excludes agencies that do not participate in the NTD.
(a) Excludes expenses by non-transit agencies, contractors, & transit agencies not yet in operation: Bradenton, FL--53.6, Ft. Myers, FL--44.7

CANADIAN DATA

The Societe de Transport de Montreal operates the only rubber-tired rail system in Canada.

Data in this section are extracted from the **Summary of Canadian Transit Statistics** and predecessor documents published each year by APTA's Canadian counterpart, the Canadian Urban Transit Association (CUTA). Although definitions of terms are generally similar to U.S. terms, many are somewhat different, and comparison of Canadian and U.S. data can be misleading.

Public transportation use in Canada (as well as in the rest of the world) has historically been much greater than the U.S. because it has a less automobile-dependent culture. Consequently, measures of public transportation use will be considerably higher than the U.S.

For more Canadian statistical information, see CUTA's web site, www.cutaactu.on.ca.

TABLE 148: Canadian Fixed-Route Summary Statistics, Millions

YEAR	NUMBER OF AGENCIES (a)	REVENUE PASSENGER TRIPS	VEHICLE MILES	NON-GOVT OPERATING FUNDING (b)	OPERATING EXPENSE (b)
1990	77	1,532.4	487.1	1,312.9	2,451.4
1991	92	1,450.0	484.0	1,401.0	2,518.6
1992	92	1,398.7	479.8	1,404.8	2,644.0
1993	91	1,370.1	483.4	1,457.8	2,719.7
1994	88	1,353.2	482.2	1,465.0	2,707.4
1995	88	1,354.2	486.9	1,496.5	2,716.4
1996	86	1,348.6	479.3	1,576.2	2,754.3
1997	66	1,377.7	481.1	1,713.8	2,749.9
1998	68	1,387.2	474.9	1,743.8	2,755.5
1999	89	1,437.5	501.9	1,854.6	2,922.2
2000	90	1,486.9	513.8	2,000.0	3,107.8
2001	90	1,474.4	506.5	2,053.4	3,209.6

Source: Canadian Urban Transit Association.
(a) Number of agencies reporting.
(b) Monetary data are Canadian Dollars.

4.85 million

TABLE 149: Canadian Fixed-Route Active Passenger Vehicles by Mode

YEAR	LIGHT RAIL	HEAVY RAIL	COMMUTER RAIL	TROLLEY BUS	BUS	OTHER	TOTAL
1990	532	1,381 (a)	(a)	472	10,626	446	13,457
1991	527	1,379 (a)	(a)	272	10,992	372	13,542
1992	500	1,724 (a)	(a)	358	10,507	119	13,208
1993	547	1,679 (a)	(a)	308	10,776	255	13,565
1994	547	1,381	331	345	10,560	179	13,343
1995	548	1,381	359	305	10,542	85	13,220
1996	520	1,373	359	320	10,506	102	13,180
1997	520	1,381	336	322	10,481	36	13,076
1998	520	1,395	346	315	10,888	35	13,499
1999	520	1,419	505	304	11,244	37	14,029
2000	521	1,431	531	303	11,502	47	14,335
2001	530	1,451	539	304	11,695	54	14,573

Source: Canadian Urban Transit Association.
(a) Prior to 1994, heavy rail and commuter rail combined.

TABLE 150: Canadian Fixed-Route New Passenger Vehicle Purchases by Mode

YEAR	LIGHT RAIL	HEAVY RAIL	COMMUTER RAIL	TROLLEY BUS	BUS	OTHER	TOTAL
1990	0	0	0	0	487	67	554
1991	0	0	0	0	528	8	536
1992	16	0	0	0	549	60	625
1993	0	0	0	0	163	45	208
1994	0	0	0	0	250	37	287
1995	20	0	0	0	348	61	429
1996	0	18	0	0	517	64	599
1997	0	80	0	9	283	19	391
1998	0	80	0	0	651	58	789
1999	0	56	0	0	706	43	805
2000	0	82	7	0	358	54	501
2001	14	54	2	0	446	134	650

Source: Canadian Urban Transit Association.

TABLE 151: Canadian Fixed-Route Passenger Fares (a)

YEAR	AVERAGE OPERATING REVENUE PER REVENUE PASSENGER TRIP	ADULT BASE CASH FARE		
		HIGH	LOW	AVERAGE
1990	0.86	1.75	0.50	1.07
1991	0.97	2.00	0.75	1.18
1992	1.00	2.50	0.75	1.22
1993	1.06	2.60	0.75	1.31
1994	1.08	2.60	0.05	1.35
1995	1.11	2.60	0.05	1.45
1996	1.17	3.00	0.05	1.57
1997	1.21	2.60	1.20	1.69
1998	1.22	2.60	1.25	1.78
1999	1.26	2.60	1.00	1.68
2000	1.31	2.75	1.00	1.70
2001	1.35	2.70	1.00	1.73

Source: Canadian Urban Transit Association.
(a) Data reported in Canadian dollars.

TABLE 152: Canadian Fixed-Route Employees by Type

YEAR	VEHICLE OPERATORS	OTHER VEHICLE OPERATIONS	VEHICLE MAINTENANCE	NON-VEHICLE MAINTENANCE	GENERAL ADMINISTRATION	TOTAL
1990	21,040	3,223	7,336	3,569	4,560	39,728
1991	21,502	3,135	7,936	2,641	4,364	39,578
1992	21,316	2,621	7,195	2,820	5,378	39,330
1993	21,240	2,619	6,657	3,272	4,283	38,071
1994	21,475	2,806	6,845	3,282	4,747	39,218
1995	21,495	2,835	6,964	3,227	4,477	38,976
1996	20,878	2,786	6,982	3,324	4,564	38,531
1997	20,158	3,099	6,651	3,714	4,459	38,078
1998	20,521	2,976	6,621	3,608	3,589	38,357
1999	21,310	2,826	6,836	3,725	4,145	39,548
2000	21,784	2,890	6,908	3,803	4,133	40,373
2001	22,383	3,135	7,023	3,821	5,060	41,422

Source: Canadian Urban Transit Association.

TABLE 153: Canadian Specialized Transit Services Summary Statistics, Millions

YEAR	NUMBER OF AGENCIES (a)	PASSENGER TRIPS	VEHICLE MILES	NON-GOVT OPERATING FUNDING (b)	OPERATING EXPENSE (b)
1991	47	4.6	17.0	15.9	64.4
1992	47	5.2	18.7	17.9	75.6
1993	50	7.2	29.3	19.2	118.3
1994	46	8.0	26.8	11.0	141.9
1995	49	8.6	28.8	12.9	144.9
1996	49	8.6	28.6	13.1	145.6
1997	51	8.8	29.1	14.5	146.2
1998	52	9.1	28.2	14.9	152.2
1999	59	10.4	31.5	33.0	170.8
2000	58	10.9	33.7	18.7	185.7
2001	60	11.1	32.6	18.8	197.2

Source: Canadian Urban Transit Association.
(a) Number of agencies reporting.
(b) Monetary data are Canadian Dollars.

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