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# TRANSIT FACT BOOK

1977 - 1978 Edition

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# Transit Fact Book

1977-1978 Edition

Annual Summary of Trends in Urban Mass Transportation  
for the United States of America

The 1977-1978 edition of the *Transit Fact Book* is the fourth annual edition compiled by the American Public Transit Association (APTA); the 1977-1978 edition is also the thirty-fifth annual edition of this publication formerly issued under the same title by the American Transit Association (ATA) for 31 years. Identified as the '77-'78 *Transit Fact Book*, this edition includes information concerning the U.S. transit industry through the end of calendar year 1977. Data reported for calendar year 1977 are preliminary.

Transit industry trends reported in the *Transit Fact Book* are for organizations, both publicly owned and privately owned, providing urban public transit service in the United States of America including the Commonwealth of Puerto Rico. Summary tables in the *Transit Fact Book* report operating and financial data for all United States transit systems operating motor buses, heavy rail cars, light rail cars, trolley coaches, cable cars, and inclined plane cars. Data for commuter railroad, common-carrier automated guideway transit railways, ferry boats, public paratransit, and dial-a-ride bus services not an integral part of a fixed-route transit system are *not included* in operating and financial data summary tables. Non-transit services such as taxi-cab, school bus, unregulated jitney, sightseeing bus, intercity bus, intercity railroad, and special application mass transportation systems (e.g., amusement parks and airports) are *excluded*. Please note: when comparing statistics in the *Transit Fact Book* with statistics from other publications, care must be exercised in order to ensure that the terms "transit" and "transit system" define identical forms of service.

Changes in figures reported for calendar year 1976 and prior years will be found when comparing the '77-'78 *Transit Fact Book* with information published in the '76-'77 *Transit Fact Book* and earlier editions. These changes are adjustments necessary to account for subsequent refinement of information.

American Public Transit Association

## The Growing Public Support for Transit

by B. R. Stokes  
Executive Vice President  
American Public Transit Association



The early months of 1978 have confirmed that Americans are aware of public transportation's benefits. Three recent public opinion polls have found strong public support for improvement and expansion of mass transportation services. These findings reinforce five years of steady transit ridership growth, reversing a 27-year pattern of decline.

Ridership increases since 1973 have been powerful indications by themselves, but the growing public support for transit suggested by the polls is even more significant: Americans support continued transit expansion to meet their future transportation needs.

More than two-thirds of the American people believe it is "very important" to upgrade mass transit service, according to a recent national poll by Louis A. Harris and Associates, Inc. The poll found that more than 90% of Americans place some importance on better mass transportation. When asked about "providing modern commuter trains and buses between central cities and their suburbs," 69% of the people said this is very important—7% more than did so in 1972.

A second national opinion poll found that nearly two-thirds of all Americans want more government spending on public transportation. According to the poll, conducted by Hart Research Associates, Inc., for the U.S. Department of Transportation in December 1977, four out of every 10 Americans expect they will have to make changes in their transportation habits within the next few years. The Hart report predicts this will lead to a very substantial increase in the use of public transit within the next five years.

A local poll of American Automobile Association members in metropolitan Washington, D.C., found that the majority of members polled favors the use of highway construction funds for urban rail systems. In a survey by *American Motorist*, the bi-monthly publication of the Washington-area AAA, 50.8% of the automobile club's members said funds designated for highway construction should be used to construct rapid rail systems.

These surveys show that the public recognizes the value of transit and supports the expansion and upgrading of transit systems. The American people have put the transit industry on notice that it has a growing responsibility to meet urban transportation needs with expansion and improvements.

Today, the transit operator is being asked to take a leadership role in coordinating all public services providing passenger transportation. This expanding role involves transit system management in nontraditional forms of public transit service. It provides another opportunity to increase the efficiency and the effectiveness of the overall transportation system. In the future, transit systems must be prepared to provide multimodal services and eliminate costly duplication of services.

A brief survey of the transit scene today reveals many programs to increase the quality of urban transportation in America. New rail systems under construction or design in Atlanta, Baltimore, Miami, Buffalo, and several other cities, will greatly increase the speed of travel in the most heavily travelled corridors of those urban areas. New motor buses and new rail vehicles, now being delivered or on order, reduce energy consumption and simplify maintenance to further reduce operating expenditures. As with new transit stations, the design of new vehicles to accommodate elderly and handicapped riders results from continuing efforts to make transit available to a greater portion of urban Americans.

Marketing services by the transit industry are being dramatically improved. Detailed maps and schedules and telephone information services inform the public of transit services best suited to their specific needs. School and public service programs teach people how to use transit. New uniform accounting and record-keeping procedures will help to define areas where improvements in efficiency are needed.

The improvements I have mentioned, however, are only a beginning. The real task of the transit industry is to combine many improvements into a program of effective, coordinated, efficient urban transportation. In order to complete this task, the transit industry needs the support of federal, state, and local governments as well as the American people. The American people have spoken. It is the responsibility of the transit industry to work with government to see that the American people are not disappointed. In an increasingly energy-conscious future, we must be prepared to serve the people—to provide them with the best, the fastest, and the most economical form of transportation.



## Glossary of Transit Industry Terms

### **Adult Cash Fare**

Basic full fare paid by one person for one transit ride; excludes transfer charges and zone charges.

### **Annual Payroll**

Wages and salaries including overtime and allowances paid to transit system employees.

### **Average Annual Earnings per Employee**

"Annual Payroll" divided by "Average Number of Employees."

### **Average Fare per Linked Transit Passenger Trip**

"Passenger Revenue" divided by "Linked Transit Passenger Trips."

### **Average Length of Linked Transit Passenger Trip**

"Passenger Miles" divided by "Linked Transit Passenger Trips."

### **Average Length of Unlinked Transit Passenger Trip**

"Passenger Miles" divided by "Unlinked Transit Passenger Trips."

### **Automated Guideway Transit**

Fixed-guideway rapid transit vehicles operating without vehicle operators or other crewpersons on board the vehicle.

### **Cable Car**

Transit vehicle railway operating in mixed street traffic with unpowered, individually-controlled transit vehicles propelled by moving cables located below the street surface and powered by engines or motors at a central location not on board the vehicle.

### **Commuter Railroad**

That portion of "main-line railroad" (not "electric railway") transportation operations which encompasses urban passenger train service for local short-distance travel between a central city and adjacent suburbs; suburban rail passenger service—using both locomotive-hauled and self-propelled railroad passenger cars—is 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.

### **Employer Payroll Taxes**

Transit system portion(s) only of federal, state, and local payroll tax obligations.

### **Ferry Boat**

Passenger-carrying marine vessel providing frequent "bridge" service over a fixed route and on a published time schedule between two or more points.

### **Fringe Benefit Costs**

Transit system expenditures for employee compensation in addition to wages, salaries, and employer payroll taxes.



### Heavy Rail

Subway-type transit vehicle railway constructed on exclusive private right-of-way with high-level platform stations; formerly known as "subway" or "elevated (railway)."

### Inclined Plane

Transit passenger vehicle railway operating over private right-of-way on steep grades with unpowered vehicles propelled by moving cables attached to the vehicles and powered by engines or motors at a central location not on board the vehicle.

### Light Rail

Streetcar-type transit vehicle railway constructed on city streets, semi-private right-of-way, and exclusive private right-of-way; formerly known as "streetcar" ("trolley car") and "subway-surface" depending upon local usage or preference.

### Linked Transit Passenger Trips

Transit trips taken by initial-board (originating) transit patrons paying a full fare, a reduced rate of fare, or no fare (free fare); excludes all transfer rides and all charter rides. Identical to "Revenue Passenger Rides" except that all originating free-fare passengers are included.

### Miles of Line (One Way)

The total length of transportation right-of-way (streets and highways for motor buses and trolley coaches, track/guideway for railway vehicles) traversed by transit vehicles. In calculating *miles of line*, the transportation right-of-way is measured only once regardless of the number of transit routes which use any portion of that transportation right-of-way in common. Those portions of the transportation right-of-way over which transit vehicles operate in two directions are measured in one direction only.

### Miles of Route (One Way)

The total length of all transit routes. In calculating *miles of route*, the length of every route is included in the total regardless of the number of routes which use any portion of a street, highway, or railway right-of-way in common. Those portions of a route over which transit vehicles operate in two directions are measured in one direction only.

### Motor Bus

Rubber tired, self-propelled, manually steered transit vehicle with fuel supply carried on board the vehicle.



### Passenger Miles

The number of person-miles traveled by all passengers riding transit vehicles; one person traveling one mile aboard a transit vehicle is *one passenger mile*.

### Public Paratransit

Collective passenger transportation for the general public and/or special categories of persons on a regular and predictable basis through demand-responsive scheduling and/or flexible routing of vehicles. The term *public paratransit* includes dial-a-ride, "shared-ride taxi," publicly-sponsored van-pools, subscription bus service, airport limousines, and jitneys (where legal and formally established). Taxicab services which provide "shared-ride" service only at the discretion of the driver and/or the passenger are *not public paratransit*.

### Publicly Owned Transit System

A transit system owned by any municipality, county, regional authority, state, or other governmental agency including a transit system operated or managed by a private management firm under contract to the government agency owner.

### Rapid Transit

Transit vehicles operating over completely grade-separated private right-of-way. The term *rail rapid transit*, also known as "rapid rail transit," applies to both operation of light rail vehicles over exclusive private right-of-way and operation of heavy rail vehicles; the term *bus rapid transit* applies to operation of motor buses over exclusive bus roads ("rapid busways").



### Revenue Passenger Rides (Revenue Passengers)

Single-vehicle transit rides by initial-board (first-ride) transit patrons only; excludes all transfer rides and all non-revenue rides.

### Single-Vehicle Transit Ride

One person traveling aboard one transit vehicle.

### Total Labor Costs

Sum of "Annual Payroll," "Employer Payroll Taxes," and "Fringe Benefit Costs."

### Total Passenger Rides (Total Passengers)

Combined total of all single-vehicle transit rides by (1) initial-board (first-ride) revenue passengers, (2) transfer passengers on second and successive rides, and (3) non-revenue passengers entitled to transportation without charge.

### Total Vehicle Miles Operated

Sum of all passenger vehicle miles operated in line (regular) service, special (charter) service, and non-revenue service. When vehicles are operated in trains, each vehicle is counted separately, e.g., an eight-vehicle train operating for one mile equals eight vehicle-miles.

### Transit Route

A travel path over which a transit vehicle operates; defined by a unique combination of (1) departure terminus, (2) destination terminus, (3) intermediate streets, highways, or railway, and (4) intermediate stops.

### Transit System

An organization providing intraurban common-carrier passenger service over at least one regular fixed route with a published time schedule, not including variable-route service, unscheduled service, or interurban service.

### Trolley Coach

Rubber-tired transit vehicle, manually steered, propelled by electric motors drawing current—normally through overhead wires—from a central power source not on board the vehicle.

### Unlinked Transit Passenger Trips

Transit trips taken by both initial-board (originating) and transfer (continuing) transit patrons; includes charter rides and special rides. Each passenger is counted each time that person boards a transit vehicle regardless of the type of fare paid or transfer presented.



## Glossary of Transit Fact Book

### Financial Terms

No single system of accounts is universal to the transit industry. However, many United States transit systems employ a system of accounts based on one or more of four major accounting systems relatively common nationwide: (1) "Interstate Commerce Commission Accounting System for Common and Contract Motor Carriers of Passengers," (2) "Interstate Commerce Commission Accounting System for Electric Railways," (3) "American Transit Accountants' Association Classification for Accounts for Bus Operating Companies" and (4) "Urban Mass Transportation Act, Section 15, Uniform System of Accounts and Records."

Transit system financial data reported in the '77-'78 *Transit Fact Book* are based on the accrual system of accounting. Unlike the cash system of accounting which records only monies actually received or monies actually paid out, the accrual system of accounting records revenues received as well as anticipated and expenses incurred as well as anticipated during the accounting period.

Please note that a given financial term used within two or more of these accounting systems generally involves varying individual definitions, and various terms can be used to define similar accounts. Financial terms used in the '77-'78 *Transit Fact Book* are an amalgamation of descriptive terminology selected to permit gross aggregation of financial data for the entire U.S. transit industry. The following definitions of financial terms should be used only in reference to the '77-'78 *Transit Fact Book*; these terms





do not identify specific ledger accounts from any accounting system listed above and are not intended to serve as model definitions of financial terms in publications other than the '77-'78 *Transit Fact Book*.

**Passenger Revenue**

Fares, including transfer charges and zone charges, paid by transit passengers traveling aboard transit vehicles operating in regular service; also known as "farebox revenue."

**Other Operating Revenue**

Revenue derived from provision of transit service other than line (regular) service; includes charter service revenues, special service revenues, and sale of advertising space aboard transit vehicles.

**Total Operating Revenue**

Total revenue derived from provision of transit service including reimbursements by third parties for reduced fare rides and for guaranteed costs not covered by "farebox revenue."

**Net Auxiliary Operating Revenue**

Net revenue from affiliated facilities and organizations rendering services other than provision of transit service.

**Non-Operating Income**

Net income from transit system facilities or operations not associated with providing transportation or transit service.

**Local Operating Assistance**

Financial assistance for transit operations (not capital expenditures) which originated at the local government level.

**State Operating Assistance**

Financial assistance for transit operations (not capital expenditures) which originated at the state government level.

**Federal Operating Assistance**

Financial assistance for transit operations (not capital expenditures) which originated at the federal government level.

**Total Operating Assistance**

Sum of "Local Operating Assistance," "State Operating Assistance," and "Federal Operating Assistance."

**Total Revenue**

Total receipts derived from provision of transit service plus additional monies related to provision of transit service but derived from other sources; the sum of "Total Operating Revenue," "Net Auxiliary Operating Revenue," "Non-Operating Income," and "Total Operating Assistance."

**Transportation Expense (Including Station and Fuel Expense)**

Total expense of all labor, materials, equipment, facilities, and fees required for operating transit passenger vehicles and passenger stations.

**Maintenance and Garage Expense**

Total expense of all labor, materials, equipment, and facilities used to repair and to service transit passenger vehicles, service vehicles, and passenger vehicle rights-of-way.

**Traffic, Solicitation, and Advertising Expense**

Total expense of all labor, materials, facilities, equipment, and fees associated with soliciting and promoting patronage including timetables and other publications distributed to the public.

**Administrative and General Expense (Including Insurance and Safety Expense)**

Total expense of all labor, materials, facilities, equipment, and fees associated with general office functions, legal services, safety, and insurance.

**Depreciation and Amortization**

Total decline in value of transit system assets incurred through use of tangible property (depreciation) and intangible property (amortization). Because property is depreciated or amortized on a formula basis over several years, the amount recorded as depreciation or amortization normally does not represent the actual money spent for property in any specific time period.

Many publicly owned transit systems receive financial assistance for the purchase of property (capital assistance). Although the property purchased with capital assistance might be depreciated or amortized and thus reported as an "operating expense" in the *Transit Fact Book*, any financial assistance received for the purchase of property is *not* included in "operating revenue" or "operating assistance" amounts in the *Transit Fact Book*.



**Operating Taxes and Licenses**

Total cost of all taxes and licenses—other than income taxes—associated with transit system operations including employer payroll taxes.

**Net Operating Rents**

Net amount of (a) all expense paid by a transit system for rents associated with transit operations and (b) all revenue received by a transit system from property associated with transit operations rented to other parties.

**Total Operating Expense**

The sum of all transit system operating expenses: "Maintenance and Garage Expense," "Transportation Expense (Including Station and Fuel Expense)," "Traffic, Solicitation, and Advertising Expense," "Administrative and General Expense (Including Insurance and Safety Expense)," "Depreciation and Amortization," "Operating Taxes and Licenses," and "Net Operating Rents."

**Total Income Deductions**

Interest and discount expenses, including interest on long-term obligations, and obligations associated with losses or defaults by parties contracting with the transit system.

**Income Taxes**

Amount of income taxes attributed to transit operations, including income tax reductions (negative adjustments) allowed on income tax obligations resulting from non-transit operations of a privately-owned company operating a transit system in addition to other businesses.

**Total Expense**

Total expenditures related to provision of transit service; the sum of "Operating Expense," "Total Income Deductions," and "Income Taxes."



RED ROSE  
TRANSIT AUTHORITY



**The United States Transit Industry in 1977**

**Number of Operating Transit Systems (December 31, 1977)**

Combined Heavy Rail, Light Rail, Trolley Coach Commuter Railroad, and Motor Bus . . . . .	1
Combined Heavy Rail, Light Rail, Trolley Coach and Motor Bus . . . . .	1
Combined Heavy Rail, Light Rail, and Motor Bus . . . . .	1
Combined Heavy Rail, Trolley Coach, and Motor Bus . . . . .	1
Combined Light Rail, Trolley Coach, Cable Car, and Motor Bus . . . . .	1
Combined Light Rail, Inclined Plane, and Motor Bus . . . . .	1
Combined Heavy Rail and Motor Bus . . . . .	3
Combined Light Rail and Motor Bus . . . . .	3
Combined Trolley Coach and Motor Bus . . . . .	1
Combined Inclined Plane and Motor Bus . . . . .	1
Combined Urban Ferry Boat and Motor Bus . . . . .	1
Heavy Rail Only . . . . .	3
Light Rail Only . . . . .	1
Motor Bus Only . . . . .	989
Automated Guideway Transit (AGT) Only (a) . . . . .	1
Commuter Railroad Only (a) . . . . .	14
Urban Ferry Boat Only (a) . . . . .	11
<b>Total Operating Transit Systems . . . . .</b>	<b>1,034</b>

**Passenger Vehicles Owned and Leased (First Week of September, 1977)**

Heavy Rail Cars . . . . .	9,639
Light Rail Cars . . . . .	992
Trolley Coaches . . . . .	645
Cable Cars . . . . .	39
Inclined Plane Cars . . . . .	4
Motor Buses . . . . .	51,968
Automated Guideway Transit (AGT) Cars (a) . . . . .	45
Commuter Railroad Cars (a) . . . . .	4,340
Urban Ferry Boats (a) . . . . .	55
<b>Total Passenger Vehicles Owned and Leased . . . . .</b>	<b>67,727</b>

**Total Operating Revenue (Millions) — 1977**

Heavy Rail . . . . .	\$ 653.2
Light Rail . . . . .	25.0
Trolley Coach . . . . .	14.8
Motor Bus . . . . .	1,584.4
Commuter Railroad (a) . . . . .	347.0
Urban Ferry Boat (a) . . . . .	30.7
<b>Total Operating Revenue (b) . . . . .</b>	<b>\$ 2,658.0</b>

**Linked Transit Passenger Trips (Millions) — 1977**

Heavy Rail . . . . .	1,334.9
Light Rail . . . . .	79.0
Trolley Coach . . . . .	51.3

Continued next page

The United States Transit Industry in 1977, continued

Motor Bus .....	4,246.5
Commuter Railroad (a) .....	265.0
Urban Ferry Boat (a) .....	54.7
<b>Total Linked Transit Passenger Trips (b) .....</b>	<b>6,043.4</b>

**Unlinked Transit Passenger Trips (Millions) — 1977**

Heavy Rail .....	2,133.0
Light Rail .....	103.0
Trolley Coach .....	70.0
Motor Bus .....	5,295.0
Commuter Railroad (a) .....	265.0
Urban Ferry Boat (a) .....	54.7
<b>Total Unlinked Transit Passenger Trips (b) .....</b>	<b>7,936.7</b>

**Estimated Passenger Miles (Millions) — 1977**

Heavy Rail .....	9,682.2
Light Rail .....	388.7
Trolley Coach .....	191.3
Motor Bus .....	19,729.8
Commuter Railroad (a) .....	5,478.0
Urban Ferry Boat (a) .....	293.6
<b>Total Estimated Passenger Miles (b) .....</b>	<b>35,775.6</b>

**Vehicle Miles Operated (Millions) — 1977**

Heavy Rail .....	361.3
Light Rail .....	20.4
Trolley Coach .....	14.8
Motor Bus .....	1,623.3
Commuter Railroad (a) .....	159.8
Urban Ferry Boat (a) .....	1.5
<b>Total Vehicle Miles Operated (b) .....</b>	<b>2,182.7</b>

**Energy Consumed (Millions) — 1977 (c)**

Diesel Fuel (Gallons) .....	402.8
Gasoline (Gallons) .....	8.1
Propane (Gallons) .....	1.1
Electricity (Kilowatt Hours) .....	2,303.0

- (a) Not included in "Transit Industry" Summary Tables 1 through 17.
- (b) Includes Cable Car, Inclined Plane, and Automated Guideway Transit.
- (c) Excludes Automated Guideway Transit, Commuter Railroad, and Urban Ferry Boat.

TABLE 1

**Transit Systems Classified by Vehicle Type and Population Group**

as of December 31, 1977

POPULATION OF URBANIZED AREA	ALL-RAIL SYSTEMS (a)	MULTI-MODE SYSTEMS (b)	ALL-BUS SYSTEMS	TOTAL SYSTEMS
500,000 and greater	4	14	422 (c)	440 (c)
250,000 to 500,000	0	0	59	59
100,000 to 250,000	0	1	128	129
50,000 to 100,000	0	0	98	98
Less than 50,000 (d)	0	0	282	282
<b>Total U.S. Transit Systems</b>	<b>4</b>	<b>15</b>	<b>989</b>	<b>1,008</b>

- (a) Includes transit systems operating one of the following modes exclusively: either heavy rail or light rail.
  - (b) Includes transit systems operating two or more of the following modes: heavy rail, light rail, trolley coach, motor bus, cable car, inclined plane, and ferry boat.
  - (c) Includes 155 motor bus owners which function collectively as 12 "bus-owners associations" regulated by the State of New Jersey Board of Public Utility Commissioners.
  - (d) Population of urban place with less than 50,000 population outside an urbanized area.
- NOTE: Table excludes automated guideway transit, commuter railroad, and urban ferry boat.

TABLE 2

**Transit Industry Financial Statement for 1977 (P)**

REVENUES	
Passenger Revenue	\$ 2,157,075,000
Other Operating Revenue	122,925,000
<b>Total Operating Revenue</b>	<b>\$ 2,280,000,000</b>
Net Auxiliary Operating Revenue	\$ 2,946,000
Non-Operating Income	70,690,000
<b>Total Non-Operating Revenue</b>	<b>\$ 73,636,000</b>
Local Operating Assistance	\$ 841,147,000
State Operating Assistance	478,434,000
Federal Operating Assistance	584,511,000
<b>Total Operating Assistance</b>	<b>\$ 1,904,092,000</b>
<b>Total Revenue</b>	<b>\$ 4,257,728,000</b>

EXPENSES	
Transportation Expense (Including Station and Fuel Expense)	\$ 2,117,958,000
Maintenance and Garage Expense	928,113,000
Traffic, Solicitation, and Advertising Expense	39,604,000
Administrative and General Expense (Including Insurance and Safety Expense)	846,322,000
Depreciation and Amortization	161,429,000
Operating Taxes and Licenses	188,980,000
Net Operating Rents	22,385,000
<b>Total Operating Expense</b>	<b>\$ 4,304,791,000</b>
Total Income Deductions	\$ 63,031,000
Income Taxes	(1,250,000)
<b>Total Expense</b>	<b>\$4,366,572,000</b>

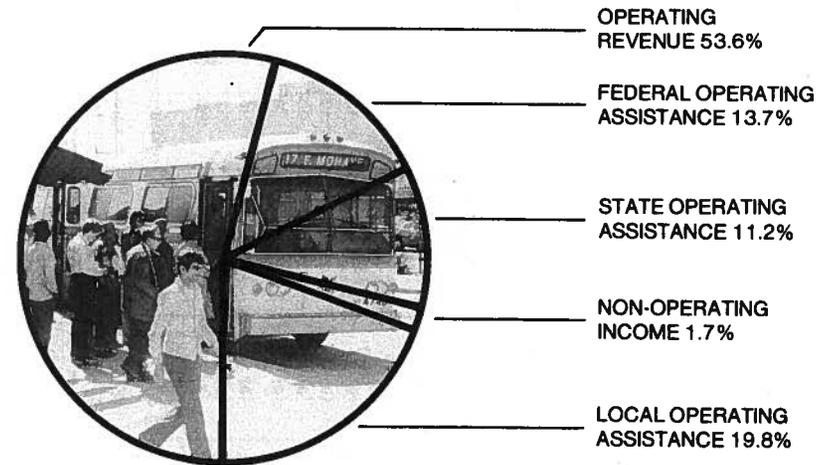
P=Preliminary

NOTE: The difference between "total revenue" and "total expense" is due to several factors including (1) use of the accrual system of accounting rather than the cash system of accounting, (2) amalgamation of accounts of transit systems recording revenue and expense in a variety of fiscal or calendar years, (3) inclusion of depreciation and amortization costs in "total expense" that are met from revenue sources not included in "total revenue," (4) exclusion of "extraordinary revenues" and "extraordinary expenses," (5) actual profit or loss of privately owned transit systems, and (6) actual surplus or deficit of publicly owned transit systems.

Table excludes automated guideway transit, commuter railroad, and urban ferry boat.

FIGURE 1

**Transit Industry Revenue and Expense in 1977**



**TRANSIT REVENUE**

MAINTENANCE AND GARAGE EXPENSE 21.5%

OPERATING TAXES AND LICENSES 4.4%

MISCELLANEOUS EXPENSES 5.2%

ADMINISTRATIVE AND GENERAL EXPENSE (INCLUDING INSURANCE AND SAFETY EXPENSE) 19.7%

TRANSPORTATION EXPENSE (INCLUDING STATION AND FUEL EXPENSE) 49.2%



**TRANSIT EXPENSE**

TABLE 3

## Trend of Transit Revenues

CALENDAR YEAR	PASSENGER REVENUE	TOTAL OPERATING REVENUE	NON-OPERATING AND AUXILIARY REVENUE	OPERATING ASSISTANCE				TOTAL REVENUE
				LOCAL	STATE	FEDERAL	TOTAL	
	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)
1940	\$ 701.5	\$ 737.0	(a)	(a)	(a)	(a)	(a)	(a)
1945	1,313.7	1,380.4	(a)	(a)	(a)	(a)	(a)	(a)
1950	1,386.8	1,452.1	(a)	(a)	(a)	(a)	(a)	(a)
1955	1,358.9	1,426.4	(a)	(a)	(a)	(a)	(a)	(a)
1960	1,334.9	1,407.2	(a)	(a)	(a)	(a)	(a)	(a)
1961	1,320.9	1,389.7	(a)	(a)	(a)	(a)	(a)	(a)
1962	1,330.2	1,403.5	(a)	(a)	(a)	(a)	(a)	(a)
1963	1,316.3	1,390.6	(a)	(a)	(a)	(a)	(a)	(a)
1964	1,326.0	1,408.1	(a)	(a)	(a)	(a)	(a)	(a)
1965	1,340.1	1,443.8	(a)	(a)	(a)	(a)	(a)	(a)
1966	1,385.4	1,478.5	(a)	(a)	(a)	(a)	(a)	(a)
1967	1,457.4	1,556.0	(a)	(a)	(a)	(a)	(a)	(a)
1968	1,470.2	1,562.7	(a)	(a)	(a)	(a)	(a)	(a)
1969	1,554.7	1,625.6	(a)	(a)	(a)	(a)	(a)	(a)
1970	1,639.1	1,707.4	(a)	(a)	(a)	(a)	(a)	(a)
1971	1,661.9	1,740.7	(a)	(a)	(a)	(a)	(a)	(a)
1972	1,650.7	1,728.5	(a)	(a)	(a)	(a)	(a)	(a)
1973	1,683.7	1,797.6	(a)	(a)	(a)	(a)	(a)	(a)
1974	1,805.2	1,939.7	(a)	(a)	(a)	(a)	(a)	(a)
1975	1,860.5	2,002.4	\$ 40.6	\$ 699.4	\$ 406.6	\$ 301.8	\$ 1,407.8	\$ 3,450.8
1976	2,025.6	2,161.1	75.0	857.4	367.1	422.9	1,647.3	3,883.4
P 1977	2,157.1	2,280.0	73.6	841.1	478.4	584.5	1,904.1	4,257.7

P=Preliminary

NOTE: Table excludes automated guideway transit, commuter railroad, and urban ferry boat.

(a) Data not available

TABLE 4

## Trend of Transit Expenses

CALENDAR YEAR	TRANSPORTATION	MAINTENANCE AND GARAGE	TRAFFIC SOLICITATION AND ADVERTISING	ADMINISTRATIVE AND GENERAL	DEPRECIATION AND AMORTIZATION	OPERATING TAXES AND LICENSES	OPERATING RENTS	TOTAL OPERATING EXPENSE
1940	(a)	(a)	(a)	(a)	(a)	(a)	(a)	\$ 660.7
1945	(a)	(a)	(a)	(a)	(a)	(a)	(a)	1,231.7
1950	(a)	(a)	(a)	(a)	(a)	(a)	(a)	1,385.7
1955	(a)	(a)	(a)	(a)	(a)	(a)	(a)	1,370.1
1960	(a)	(a)	(a)	(a)	(a)	(a)	(a)	1,376.5
1961	(a)	(a)	(a)	(a)	(a)	(a)	(a)	1,373.0
1962	(a)	(a)	(a)	(a)	(a)	(a)	(a)	1,383.8
1963	(a)	(a)	(a)	(a)	(a)	(a)	(a)	1,391.5
1964	(a)	(a)	(a)	(a)	(a)	(a)	(a)	1,420.5
1965	(a)	(a)	(a)	(a)	(a)	(a)	(a)	1,454.4
1966	(a)	(a)	(a)	(a)	(a)	(a)	(a)	1,515.6
1967	(a)	(a)	(a)	(a)	(a)	(a)	(a)	1,622.6
1968	(a)	(a)	(a)	(a)	(a)	(a)	(a)	1,723.8
1969	(a)	(a)	(a)	(a)	(a)	(a)	(a)	1,846.1
1970	(a)	(a)	(a)	(a)	(a)	(a)	(a)	1,995.6
1971	(a)	(a)	(a)	(a)	(a)	(a)	(a)	2,152.1
1972	(a)	(a)	(a)	(a)	(a)	(a)	(a)	2,241.6
1973	(a)	(a)	(a)	(a)	(a)	(a)	(a)	2,536.1
1974	(a)	(a)	(a)	(a)	(a)	(a)	(a)	3,239.3
1975	\$ 1,785.8	\$ 775.0	\$ 66.0	\$ 739.5	\$ 121.0	\$ 171.0	\$ 47.6	3,705.9
1976	1,937.7	852.1	60.5	825.6	136.3	181.5	27.2	4,020.9
P 1977	2,118.0	928.1	39.6	846.3	161.4	189.0	22.4	4,304.8

P=Preliminary

NOTE: Table excludes automated guideway transit, commuter railroad, and urban ferry boat.

(a) Data not available

TABLE 5

## Trend of Operating Revenue

CALENDAR YEAR	RAILWAY			TROLLEY COACH	MOTOR BUS	TOTAL OPERATING REVENUE
	LIGHT RAIL	HEAVY RAIL	TOTAL RAIL			
	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)
1940	\$ 327.8	\$ 128.3	\$ 456.1	\$ 25.0	\$ 255.9	\$ 737.0
1945	560.1	149.4	709.5	68.4	602.5	1,380.4
1950	361.7	216.4	578.1	122.0	752.0	1,452.1
1955	175.5	264.3	439.8	130.8	855.8	1,426.4
1960	87.6	281.8	369.4	81.9	955.9	1,407.2
1961	79.9	285.7	365.6	78.7	945.4	1,389.7
1962	73.3	293.0	366.3	76.0	961.2	1,403.5
1963	61.2	287.4	348.6	56.2	985.8	1,390.6
1964	55.6	295.8	351.4	46.4	1,010.3	1,408.1
1965	55.7	310.1	365.8	41.7	1,036.3	1,443.8
1966	58.7	306.5	365.2	39.2	1,074.1	1,478.5
1967	52.5	352.0	404.5	35.6	1,115.9	1,556.0
1968	53.1	358.2	411.3	35.9	1,115.5	1,562.7
1969	54.8	380.4	435.2	32.5	1,157.9	1,625.6
1970	55.2	384.4	439.6	31.5	1,236.3	1,707.4
1971	48.8	379.4	428.2	32.3	1,280.2	1,740.7
1972	48.4	417.2	465.6	32.8	1,230.1	1,728.5
1973	48.5	461.0	509.5	25.2	1,262.9	1,797.6
1974	36.5	505.8	542.3	20.1	1,377.3	1,939.7
1975	28.9	517.1	548.8 (a)	15.9	1,437.7	2,002.4
1976	26.9	630.7	660.2 (a)	15.3	1,485.6	2,161.1
P 1977	25.0	653.2	680.8 (a)	14.8	1,584.4	2,280.0

P=Preliminary

NOTE: Table excludes automated guideway transit, commuter railroad, and urban ferry boat.

(a) Includes cable car and inclined plane.

TABLE 6

## Trend of Passenger Revenue

CALENDAR YEAR	RAILWAY			TROLLEY COACH	MOTOR BUS	TOTAL PASSENGER REVENUE
	LIGHT RAIL	HEAVY RAIL	TOTAL RAIL			
	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)
1940	\$ 304.0	\$ 123.8	\$ 427.8	\$ 24.9	\$ 248.8	\$ 701.5
1945	513.4	142.3	655.7	68.0	590.0	1,313.7
1950	322.4	209.6	532.0	120.6	734.2	1,386.8
1955	146.6	257.5	404.1	128.5	826.3	1,358.9
1960	74.0	296.6	343.6	81.0	910.3	1,334.9
1961	73.1	273.5	346.6	76.5	897.8	1,320.9
1962	66.3	280.1	346.4	73.7	910.1	1,330.2
1963	54.8	274.6	329.4	54.7	932.2	1,316.3
1964	48.3	282.3	330.6	45.0	950.4	1,326.0
1965	48.6	279.0	327.6	40.6	971.9	1,340.1
1966	51.8	297.0	348.8	38.5	998.1	1,385.4
1967	44.8	340.4	385.2	34.9	1,037.3	1,457.4
1968	44.0	341.7	385.7	34.8	1,049.7	1,470.2
1969	45.9	362.5	408.4	31.5	1,114.8	1,554.7
1970	46.6	368.5	415.1	30.4	1,193.6	1,639.1
1971	40.1	363.8	403.9	31.2	1,226.8	1,661.9
1972	39.6	401.9	441.5	31.4	1,177.8	1,650.7
1973	38.7	437.6	476.3	23.6	1,183.8	1,683.7
1974	31.7	486.7	518.4	17.2	1,269.6	1,805.2
1975	28.1	504.3	535.0 (a)	15.4	1,310.1	1,860.5
1976	25.7	616.5	644.7 (a)	15.0	1,366.0	2,025.6
P 1977	23.9	634.2	660.6 (a)	14.5	1,482.0	2,157.1

P=Preliminary

NOTE: Table excludes automated guideway transit, commuter railroad, and urban ferry boat.

(a) Includes cable car and inclined plane.

TABLE 7

Trend of Linked Transit Passenger Trips Classified by Population Groups

CALENDAR YEAR	HEAVY RAIL (MILLIONS)	SURFACE LINES						TOTAL LINKED TRIPS (MILLIONS)
		500,000 AND OVER (MILLIONS)	250,000-500,000 (MILLIONS)	100,000-250,000 (MILLIONS)	50,000-100,000 (MILLIONS)	LESS THAN 50,000 (MILLIONS)	SUBURBAN AND OTHER (MILLIONS)	
1940	2,282	4,305	1,312	1,020	742	291	552	10,504
1945	2,555	6,969	2,920	2,359	1,899	932	1,348	18,982
1950	2,113	5,207	2,007	1,585	1,323	728	882	13,845
1955 (a)	1,741	3,478	1,286	953	786	360	585	9,189
1960 (a)	1,670	2,997	911	691	554	230	468	7,521
1961 (b)	1,680	3,089	701	523	554	217	478	7,242
1962 (b)	1,704	3,029	680	496	533	212	468	7,122
1963 (b)	1,661	2,990	642	462	504	205	451	6,915
1964 (b)	1,698	2,991	612	432	486	194	441	6,854
1965 (b)	1,678	3,000	606	416	474	192	432	6,798
1966 (b)	1,584	3,003	608	413	483	194	386	6,671
1967 (b)	1,632	2,945	597	409	469	190	374	6,616
1968 (b)	1,627	2,886	581	396	455	171	375	6,491
1969 (b)	1,656	2,787	565	365	422	150	365	6,310
1970 (b)	1,574	2,610	529	342	395	140	342	5,932
1971 (c)	1,494	2,399	739	234	196	107	328	5,497
1972 (c)	1,446	2,330	681	220	182	97	297	5,253
1973 (c)	1,424	2,386	682	229	175	104	294	5,294
1974 (d)	1,435	3,544	269	231	49	77	(d)	5,606
1975 (d)	1,388	3,604	286	226	58	81	(d)	5,643
1976 (d)	1,353	3,632	306	230	67	85	(d)	5,673
P 1977 (d)	1,335	3,674	316	239	70	88	(d)	5,723

P=Preliminary

NOTE: Table excludes automated guideway transit, commuter railroad, and urban ferry boat.

- (a) 1950 U.S. Census of Population; transit systems assigned by population of headquarters city.
- (b) 1960 U.S. Census of Population; transit systems assigned by population of headquarters city.
- (c) 1970 U.S. Census of Population; transit systems assigned by population of headquarters city.
- (d) 1970 U.S. Census of Population; transit systems assigned by population of urbanized area excepting urban places of less than 50,000 population outside urbanized areas.

FIGURE II  
Linked Transit Passenger Trips 1926-1977

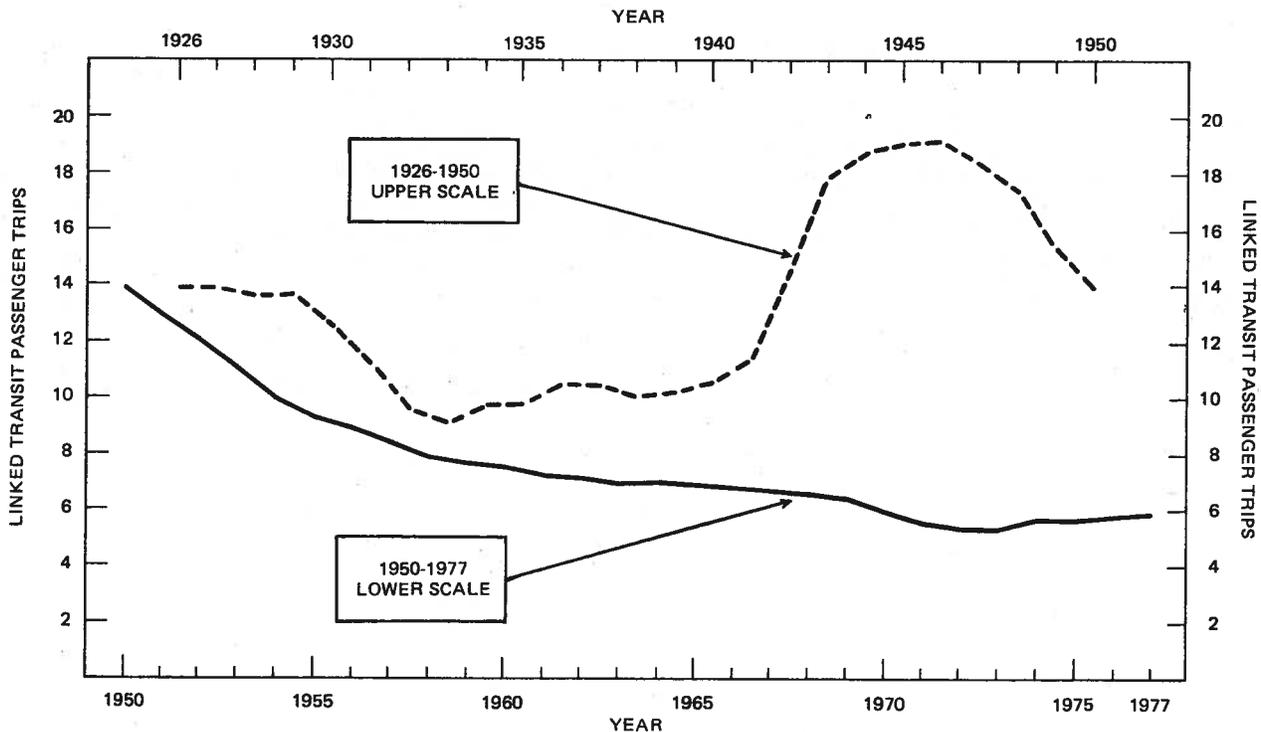


TABLE 8

## Trend of Unlinked Transit Passenger Trips\*

CALENDAR YEAR	RAILWAY			TROLLEY COACH	MOTOR BUS	TOTAL UNLINKED PASSENGER TRIPS
	LIGHT RAIL	HEAVY RAIL	TOTAL RAIL			
	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)
1940	5,943	2,382	8,325	534	4,239	13,098
1945	9,426	2,698	12,124	1,244	9,886	23,254
1950	3,904	2,264	6,168	1,658	9,420	17,246
1955	1,207	1,870	3,077	1,202	7,250	11,529
1960	463	1,850	2,313	657	6,425	9,395
1961	434	1,855	2,289	601	5,993	8,883
1962	393	1,890	2,283	547	5,865	8,695
1963	329	1,836	2,165	413	5,822	8,400
1964	289	1,877	2,166	349	5,813	8,328
1965	276	1,858	2,134	305	5,814	8,253
1966	282	1,753	2,035	284	5,764	8,083
1967	263	1,938	2,201	248	5,723	8,172
1968	253	1,928	2,181	228	5,610	8,019
1969	249	1,980	2,229	199	5,375	7,803
1970	235	1,881	2,116	182	5,034	7,332
1971	222	1,778	2,000	148	4,699	6,847
1972	211	1,731	1,942	130	4,495	6,567
1973	207	1,714	1,921	97	4,642	6,660
1974	150	1,726	1,876	83	4,976	6,935
1975	124	1,673	1,810 (b)	78	5,084	6,972
1976	112	1,632	1,759 (b)	75	5,247	7,081
P 1977	103	2,133 (a)	2,251 (b)	70	5,295	7,616

P=Preliminary

NOTE: Table excludes automated guideway transit, commuter railroad, and urban ferry boat.

\* "Total Passenger Rides" from 1940 through 1976; "Unlinked Transit Passenger Trips" beginning in 1977.

(a) Data for "Heavy Rail" from 1940 through 1976 include only intermodal transfer passengers. Beginning with Calendar Year 1977, passengers transferring from one heavy rail train to another (intramodal transfer) are included.

(b) Includes cable car and inclined plane.

TABLE 9

## Trend of Linked Transit Passenger Trips\*

CALENDAR YEAR	RAILWAY			TROLLEY COACH	MOTOR BUS	TOTAL LINKED PASSENGER TRIPS
	LIGHT RAIL	HEAVY RAIL	TOTAL RAIL			
	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)
1940	4,182.5	2,281.9	5,464.4	419.2	3,620.1	10,503.7
1945	7,080.9	2,555.1	9,636.0	1,001.2	8,334.7	18,981.9
1950	2,790.0	2,113.0	4,903.0	1,261.0	7,681.0	13,845.0
1955	845.0	1,741.0	2,586.0	869.0	5,734.0	9,189.0
1960	335.0	1,670.0	2,005.0	447.0	5,069.0	7,521.0
1961	323.0	1,680.0	2,003.0	405.0	4,834.0	7,242.0
1962	284.0	1,704.0	1,988.0	361.0	4,773.0	7,122.0
1963	238.0	1,661.0	1,899.0	264.0	4,752.0	6,915.0
1964	213.0	1,698.0	1,911.0	214.0	4,729.0	6,854.0
1965	204.0	1,678.0	1,882.0	186.0	4,730.0	6,798.0
1966	211.0	1,584.0	1,795.0	174.0	4,702.0	6,671.0
1967	196.0	1,632.0	1,828.0	155.0	4,663.0	6,616.0
1968	187.3	1,627.0	1,814.3	152.2	4,524.5	6,491.0
1969	183.4	1,656.3	1,839.7	135.3	4,335.3	6,310.3
1970	172.4	1,573.5	1,745.9	127.5	4,058.3	5,931.7
1971	155.1	1,494.0	1,649.1	113.1	3,734.8	5,497.0
1972	147.3	1,445.7	1,593.0	99.5	3,560.8	5,253.3
1973	143.5	1,423.7	1,567.2	73.6	3,652.8	5,293.9
1974	113.7	1,435.1	1,548.8	59.5	3,997.6	5,605.9
1975	94.0	1,387.8	1,492.5 (a)	56.0	4,094.9	5,643.4
1976	86.0	1,353.2	1,450.2 (a)	53.9	4,168.0	5,673.1
P 1977	79.0	1,334.9	1,424.9 (a)	51.3	4,246.5	5,722.7

P=Preliminary

NOTE: Table excludes automated guideway transit, commuter railroad, and urban ferry boat.

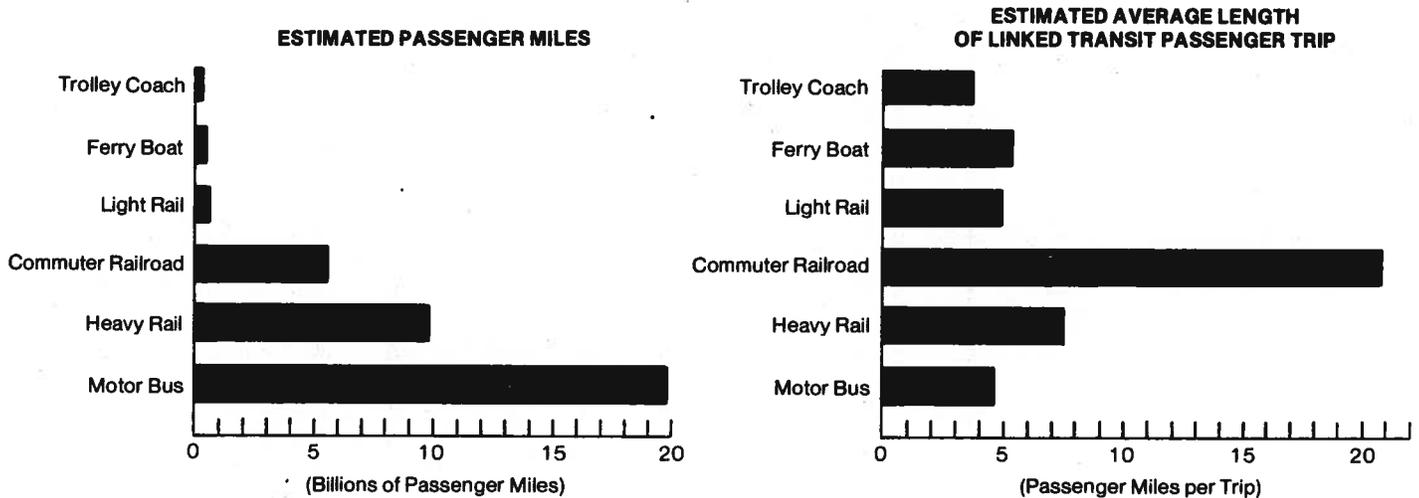
\* "Revenue Passenger Rides" from 1940 through 1976; "Linked Transit Passenger Trips" beginning in 1977.

(a) Includes cable car and inclined plane.

FIGURE III

**Estimated Passenger Miles and Estimated Average Length of Linked Transit Passenger Trip by Vehicle Mode in 1977**

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NOTE: Passenger-mile and average transit passenger trip-length data are not collected by transit systems on a continuing basis. Data presented in Figure III are estimated by APTA from special studies conducted by a limited number of transit systems and metropolitan planning organizations. Average passenger trip-length data from national sources presented in Table 10 depict the variability of such studies. Because of the uncertainty attached to all transit passenger-mile and average trip-length data, Figure III and Table 10 illustrate the relative number of passenger miles and the relative length of passenger trip on each type of transit service rather than the absolute number of passenger miles and the absolute length of passenger trip on each type of transit service.

TABLE 10

**Estimates of Average Length of Linked Transit Passenger Trips**

SOURCE	ESTIMATED AVERAGE LENGTH OF LINKED TRANSIT PASSENGER TRIP IN MILES							
	HEAVY RAIL	MOTOR BUS	LIGHT RAIL	TROLLEY COACH	ALL TRANSIT (Except Commuter Railroad and Urban Ferry Boat)	COMMUTER RAILROAD	URBAN FERRY BOAT	ALL TRANSIT
Nationwide Personal Transportation Study (a) (Home-to-Work Trips Only)	13.7	6.8	6.8	—	—	25.6	—	—
U.S. Census of 21 Metropolitan Areas (b) (Home-to-Work Trips Only)	10.1	7.0	7.0	—	—	24.4	—	8.9
American Public Transit Association Estimate (c)	7.3	4.7	4.9	3.7	5.2	20.7	5.4	5.9
National Transportation Report (d)	6.3	5.4	—	—	—	17.3	—	5.6
Oak Ridge National Laboratory (e)	3.8	3.2	—	—	3.4	—	—	—

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- (a) *Nationwide Personal Transportation Study*, U.S. Department of Transportation/Federal Highway Administration, Washington, DC, 1973; *Home-to-Work Trips Only*.
- (b) *Selected Characteristics of Travel to Work in 21 Metropolitan Areas: 1975*, U.S. Department of Commerce, Bureau of the Census, Washington, DC, 1978; *Home-to-Work Trips Only*.
- (c) *'77-'78 Transit Fact Book*, American Public Transit Association, Washington, DC, 1978; *All Transit Trips*.
- (d) *1974 National Transportation Report, Profiles of Public Transportation Plans and Programs*, U.S. Department of Transportation, Washington, DC, 1975. Data converted from average length of unlinked transit passenger trip to average length of linked passenger trip by APTA; *All Transit Trips*.
- (e) *Energy Intensiveness of Passenger and Freight Transportation Modes*, Oak Ridge National Laboratory, Oak Ridge, TN, 1973; *All Transit Trips*.

TABLE 11

Trend of Passenger Vehicle Miles Operated

CALENDAR YEAR	RAILWAY			TROLLEY COACH	MOTOR BUS	TOTAL VEHICLE MILES OPERATED
	LIGHT RAIL	HEAVY RAIL	TOTAL RAIL			
	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)	(MILLIONS)
1940	844.7	470.8	1,315.5	86.0	1,194.5	2,596.0
1945	939.8	458.4	1,398.2	133.3	1,722.3	3,253.8
1950	463.1	443.4	906.5	205.7	1,895.4	3,007.6
1955	178.3	382.8	561.1	176.5	1,709.9	2,447.5
1960	74.8	390.9	465.7	100.7	1,576.4	2,142.8
1961	69.4	385.1	454.5	92.9	1,529.7	2,077.1
1962	61.5	386.7	448.2	84.0	1,515.2	2,047.4
1963	48.9	387.3	436.2	62.4	1,523.1	2,021.7
1964	42.9	395.8	438.7	49.2	1,527.9	2,015.8
1965	41.6	395.3	436.9	43.0	1,528.3	2,008.2
1966	42.9	378.9	421.8	40.1	1,521.7	1,983.6
1967	37.8	396.5	434.3	36.5	1,526.0	1,996.8
1968	37.5	406.8	444.3	36.2	1,508.2	1,988.7
1969	36.0	416.6	452.6	35.8	1,478.3	1,966.7
1970	33.7	407.1	440.8	33.0	1,409.3	1,883.1
1971	32.7	407.4	440.0	30.8	1,375.5	1,846.3
1972	31.6	386.2	417.8	29.8	1,308.0	1,755.6
1973	31.2	407.3	438.5	25.7	1,370.4	1,834.6
1974	26.9	431.9	458.8	17.6	1,431.0	1,907.4
1975	23.8	423.1	448.4 (a)	15.3	1,526.0	1,989.7
1976	21.1	407.0	429.6 (a)	15.3	1,581.4	2,026.3
P 1977	20.4	361.3	383.2 (a)	14.8	1,623.3	2,021.3

P=Preliminary

NOTE: Table excludes automated guideway transit, commuter railroad, and urban ferry boat.

(a) Includes cable car and inclined plane.

FIGURE IV  
Transit Expense per Passenger Vehicle Mile  
In Actual Dollars and in 1977 Dollars  
1940-1977

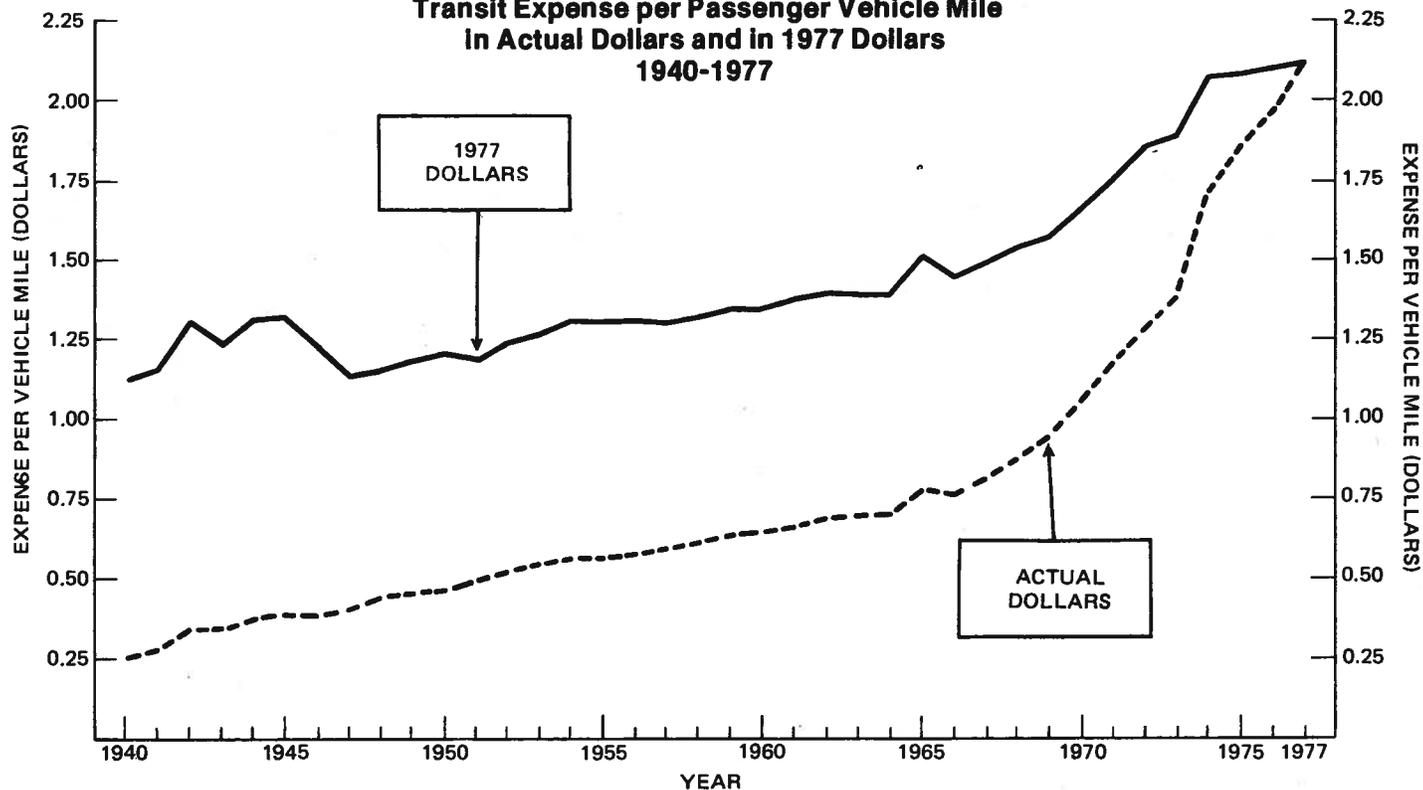


TABLE 12

Trend of Average Fare

CALENDAR YEAR	AVERAGE FARE PER LINKED TRANSIT PASSENGER TRIP (a)					ADULT CASH FARE	
	LIGHT RAIL	HEAVY RAIL	TROLLEY COACH	MOTOR BUS	ALL MODES	HIGH	LOW
1940	7.27¢	5.43¢	5.94¢	6.87¢	6.68¢	10¢	5¢
1945	7.25	5.57	6.79	7.07	6.92	10	5
1950	11.56	9.92	9.56	9.56	10.02	17	5
1955	17.35	14.79	14.79	14.41	14.79	20	5
1960	22.09	16.14	18.12	17.96	17.75	30	7
1961	22.63	16.28	18.89	18.57	18.24	30	10
1962	23.35	16.44	20.42	19.07	18.68	30	10
1963	23.03	16.35	20.72	19.62	19.04	30	10
1964	22.68	16.63	21.03	20.10	19.35	35	10
1965	23.82	16.63	21.83	20.55	19.71	35	10
1966	24.55	18.75	22.13	21.23	20.77	35	10
1967	22.86	20.86	22.52	22.39	22.03	35	10
1968	23.49	21.00	22.86	23.20	22.65	35	10
1969	25.03	21.89	23.28	25.71	24.64	35	10
1970	27.03	23.42	23.84	29.41	27.63	50	10
1971	25.85	24.17	27.59	32.23	29.78	50	15
1972	26.88	27.80	31.55	33.07	31.42	50	15
1973	26.96	30.74	32.06	32.40	31.80	60	Free
1974	27.88	33.91	28.91	31.76	32.20	60	10
1975	29.89	36.34	27.50	31.99	32.97	75	15
1976	29.88	45.56	27.83	32.77	35.71	70	15
P 1977	30.24	47.51	28.16	34.90	37.69	75	15

P=Preliminary

NOTE: Table excludes automated guideway transit, commuter railroad, and ferry boat.

(a) Includes transfer charges and zone charges; includes reduced-fare and free-fare rides.

FIGURE V  
Average Transit Fare per Linked Transit Passenger Trip  
in Actual Fare and in 1977 Dollars  
1940-1977

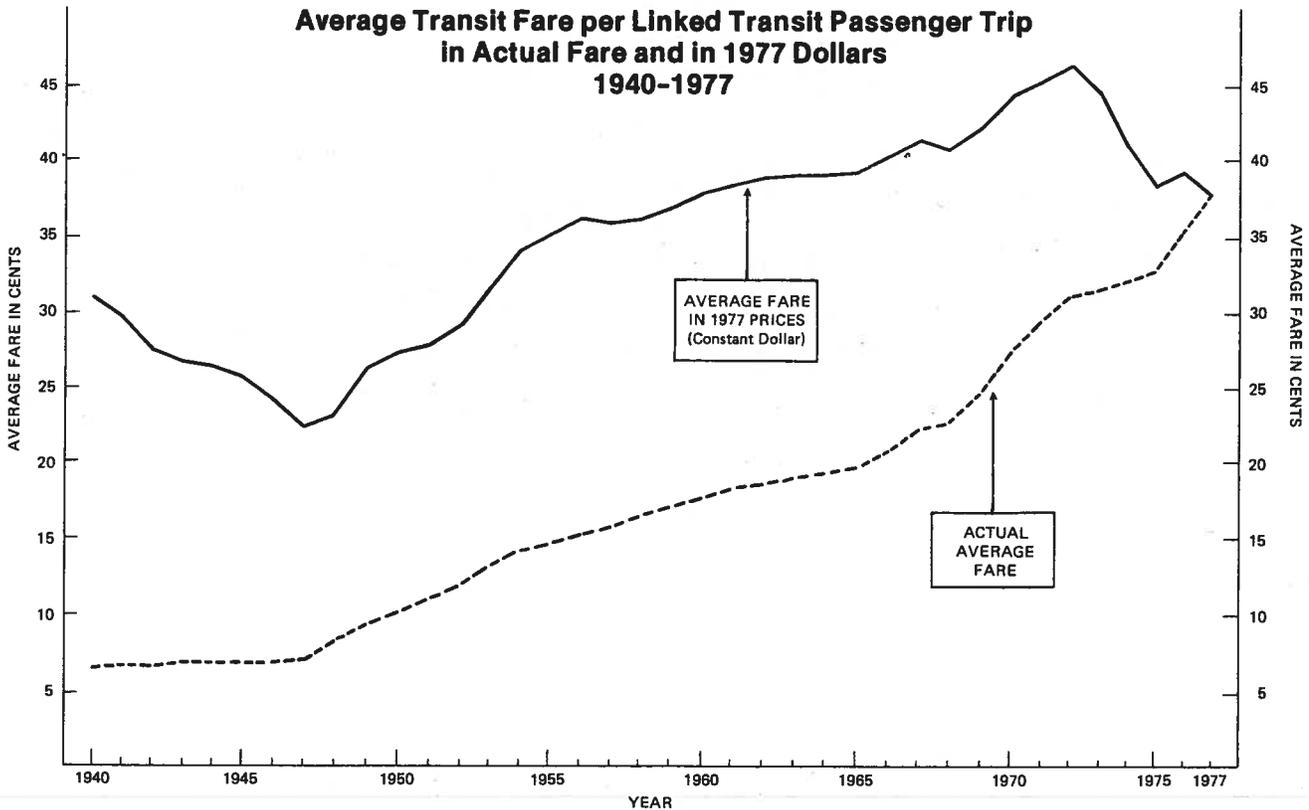


TABLE 13

## Trend of Transit Employment, Compensation, and Labor Costs

CALENDAR YEAR	AVERAGE NUMBER OF EMPLOYEES	ANNUAL PAYROLL (THOUSANDS)	AVERAGE ANNUAL EARNINGS PER EMPLOYEE	EMPLOYER PAYROLL TAXES (THOUSANDS)	FRINGE BENEFIT COSTS (THOUSANDS)	TOTAL LABOR COSTS (THOUSANDS)
1940	203,000	\$ 360,000	\$ 1,773	(a)	(a)	(a)
1945	242,000	632,000	2,612	(a)	(a)	(a)
1950	240,000	835,000	3,479	(a)	(a)	(a)
1955	198,000	864,000	4,364	(a)	(a)	(a)
1960	156,400	857,300	5,481	(a)	(a)	(a)
1965	145,000	963,500	6,645	(a)	(a)	(a)
1966	144,300	994,900	6,895	(a)	(a)	(a)
1967	146,100	1,055,100	7,222	(a)	(a)	(a)
1968	143,590	1,109,500	7,727	(a)	(a)	(a)
1969	140,860	1,183,807	8,404	(a)	(a)	(a)
1970	138,040	1,274,109	9,230	(a)	(a)	(a)
1971	139,120	1,393,148	10,014	(a)	(a)	(a)
1972	138,420	1,455,486	10,515	(a)	(a)	(a)
1973	140,700	1,624,241	11,544	(a)	(a)	(a)
1974	153,100	1,967,100	12,849	(a)	(a)	(a)
1975	159,800	2,236,063	13,993	\$ 146,952	\$ 466,322	\$ 2,849,337
1976	162,950	2,403,683	14,751	162,691	518,993	3,085,367
P 1977	162,510	2,419,000	14,885	170,274	666,446	3,255,720

P=Preliminary

(a) Data not available

NOTE: In the "Interstate Commerce Commission (ICC) System of Accounts" and in the "American Transit Accountants' (ATA) Association Classification of Accounts," employee compensation in the form of paid sick leave, paid vacation time, and paid holidays is classified as *payroll*. In the "Urban Mass Transportation (UMT) Act, Section 15, Uniform System of Accounts and Records," employee compensation in the form of paid sick leave, paid vacation

time, and paid holidays is classified as *fringe benefits*. Beginning with calendar year 1977, as transit systems convert their accounting systems from either ICC accounts or ATA accounts to UMT Act Section 15 accounts, reclassification of these compensation types results in a shift of these labor-related expenses from payroll accounts to fringe benefit accounts.

Table excludes automated guideway transit, commuter railroad, and urban ferry boat.

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TABLE 14

## Transit Passenger Vehicles Owned and Leased

CALENDAR YEAR	RAILWAY CARS			TROLLEY COACHES	MOTOR BUSES	TOTAL REVENUE VEHICLES
	LIGHT RAIL	HEAVY RAIL	TOTAL RAIL			
1940	26,630	11,032	37,662	2,802	35,000	75,464
1945	26,160	10,217	36,377	3,711	49,670	89,758
1950	13,228	9,758	22,986	6,504	56,820	86,310
1955	5,300	9,232	14,532	6,157	52,400	73,089
1960	2,856	9,010	11,866	3,826	49,600	65,292
1961	2,341	9,078	11,419	3,593	49,000	64,012
1962	2,219	8,865	11,084	3,161	48,800	63,045
1963	1,756	8,878	10,634	2,155	49,400	62,189
1964	1,553	9,061	10,614	1,865	49,200	61,679
1965	1,549	9,115	10,664	1,453	49,600	61,717
1966	1,407	9,273	10,680	1,326	50,130	62,136
1967	1,388	9,257	10,645	1,244	50,180	62,069
1968	1,355	9,390	10,745	1,185	50,000	61,930
1969	1,322	9,343	10,665	1,082	49,600	61,347
1970	1,262	9,338	10,600	1,050	49,700	61,350
1971	1,225	9,325	10,550	1,037	49,150	60,737
1972	1,176	9,423	10,599	1,030	49,075	60,704
1973	1,123	9,387	10,510	794	48,286	59,590
1974	1,068	9,403	10,471	718	48,700	59,889
1975	1,061	9,608	10,712(a)	703	50,811	62,226
1976	963	9,714	10,720(a)	685	52,382	63,787
P 1977	992	9,639	10,674(a)	645	51,968	63,287

P=Preliminary

(a) Includes 39 cable cars and 4 inclined plane cars.

NOTE: Table excludes automated guideway transit, commuter railroad, and urban ferry boat.

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TABLE 15

## New Passenger Vehicles Delivered

CALENDAR YEAR	RAILWAY CARS			TROLLEY COACHES	MOTOR BUSES	TOTAL REVENUE VEHICLES
	LIGHT RAIL	HEAVY RAIL	TOTAL RAIL			
1940	463	189	652	618	3,984	5,254
1941	462	0	462	227	5,600	6,289
1942	284	0	284	356	7,200	7,840
1943	32	0	32	116	1,251	1,399
1944	284	0	284	60	3,807	4,151
1945	332	0	332	161	4,441	4,934
1946	421	0	421	266	6,463	7,150
1947	626	2	628	955	12,029	13,612
1948	478	248	726	1,430	7,009	9,165
1949	273	415	688	680	3,358	4,726
1950	4	199	203	179	2,668	3,050
1951	56	140	196	600	4,552	5,348
1952	19	0	19	224	1,749	1,992
1953	0	0	0	0	2,246	2,246
1954	0	260	260	0	2,225	2,485
1955	0	288	288	43	2,098	2,429
1956	0	376	376	0	2,759	3,135
1957	0	469	469	0	1,946	2,415
1958	0	428	428	0	1,698	2,126
1959	0	210	210	0	1,537	1,747
1960	0	416	416	0	2,806	3,222
1961	0	468	468	0	2,415	2,883
1962	0	406	406	0	2,000	2,406
1963	0	658	658	0	3,200	3,858
1964	0	640	640	0	2,500	3,140
1965	0	580	580	0	3,000	3,580
1966	0	179	179	0	3,100	3,279
1967	0	85	85	0	2,500	2,585
1968	0	384	384	0	2,228	2,612
1969	0	650	650	0	2,230	2,880
1970	0	308	308	0	1,424	1,732
1971	0	250	250	1	2,514	2,764
1972	0	360	360	1	2,904	3,265
1973	0	238	238	1	3,200	3,439
1974	0	92	92	0	4,818	4,910
1975	0	127	127	1	5,261	5,389
1976	4	472	476	260	4,745	5,481
P 1977	62	506	568	198	2,437	3,203

P=Preliminary

TABLE 16

## Seating Capacity of New Motor Buses Delivered

CALENDAR YEAR	29 SEATS OR FEWER	30-39 SEATS	40 SEATS OR MORE	TOTAL MOTOR BUSES
1943	847	179	225	1,251
1944	2,423	369	1,015	3,807
1945	1,757	1,183	1,501	4,441
1946	1,849	2,429	2,185	6,463
1947	1,951	3,717	6,361	12,029
1948	523	2,144	4,342	7,009
1949	289	1,344	1,725	3,358
1950	205	852	1,611	2,668
1951	148	1,711	2,693	4,552
1952	36	458	1,165	1,749
1953	30	499	1,717	2,246
1954	22	359	1,844	2,225
1955	8	229	1,861	2,098
1956	8	162	2,589	2,759
1957	0	129	1,817	1,946
1958	2	177	1,419	1,698
1959	1	157	1,379	1,537
1960	0	173	2,633	2,806
1961	0	105	2,310	2,415
1962	4	76	1,920	2,000
1963	18	97	3,085	3,200
1964	0	169	2,331	2,500
1965	6	225	2,769	3,000
1966	36	312	2,752	3,100
1967	32	260	2,208	2,500
1968	63	171	1,994	2,228
1969	65	163	2,002	2,230
1970	77	73	1,274	1,424
1971	95	70	2,349	2,514
1972	124	199	2,581	2,904
1973	182	317	2,701	3,200
1974	345	251	4,222	4,818
1975	419	128	4,714	5,261
1976	395	251	4,099	4,745
P 1977	549	308	1,580	2,437

P=Preliminary

TABLE 17

## Trend of Energy Consumption by Transit Passenger Vehicles

CALENDAR YEAR	ELECTRIC POWER CONSUMED (KILOWATT HOURS IN MILLIONS)	FOSSIL FUELS CONSUMED (GALLONS IN THOUSANDS)		
		GASOLINE	DIESEL	PROPANE
1940	6,334	(a)	(a)	0
1945	7,033	510,000	11,800	0
1950	5,251	430,000(b)	98,600	(b)
1955	3,530	246,000	172,600	30,300
1960	2,908	153,600	208,100	38,300
1961	2,851	125,900	217,500	35,700
1962	2,786	108,400	229,000	36,100
1963	2,642	102,500	235,300	35,900
1964	2,597	95,900	242,200	33,400
1965	2,584	91,500	248,400	32,700
1966	2,467	76,000	256,000	33,600
1967	2,531	57,800	270,300	33,000
1968	2,586	45,700	274,200	32,200
1969	2,618	40,000	273,800	31,600
1970	2,561	37,200	270,600	31,000
1971	2,556	29,400	256,800	26,500
1972	2,428	19,647	253,250	24,400
1973	2,331	12,333	282,620	15,152
1974	2,630	7,457	316,360	3,142
1975	2,646	5,017	365,060	2,559
1976	2,576	5,203	389,187	960
P 1977	2,303	8,077	402,842	1,086

P=Preliminary

NOTE: Table excludes automated guideway transit, commuter railroad, and urban ferry boat.

(a) Data not available

(b) Propane included with gasoline

TABLE 18

## Publicly Owned Transit Systems\*

CALENDAR YEAR	NUMBER OF SYSTEMS	PERCENT OF INDUSTRY TOTAL	OPERATING REVENUE (MILLIONS)	PERCENT OF INDUSTRY TOTAL	VEHICLE MILES OPERATED (MILLIONS)	PERCENT OF INDUSTRY TOTAL	LINKED PASSENGER TRIPS (MILLIONS)	PERCENT OF INDUSTRY TOTAL
1968	(a)	(a)	984	63%	1,120	56%	4,219	65%
1969	(a)	(a)	1,154	71%	1,239	63%	4,606	73%
1970	(a)	(a)	1,298	76%	1,280	68%	4,567	77%
1971	(a)	(a)	1,375	79%	1,292	70%	4,398	80%
1972	(a)	(a)	1,400	81%	1,282	73%	4,308	82%
1973	(a)	(a)	1,528	85%	1,468	80%	4,606	87%
1974	308	33%	1,635	86%	1,621	85%	5,034	90%
1975	333	35%	1,729	86%	1,706	86%	5,090	90%
1976	375	39%	1,902	88%	1,770	87%	5,162	91%
P 1977	455	45%	2,044	90%	1,790	89%	5,221	91%

CALENDAR YEAR	MOTOR BUSES OWNED AND LEASED	PERCENT OF INDUSTRY TOTAL	ELECTRIC TRANSIT VEHICLES OWNED AND LEASED	PERCENT OF INDUSTRY TOTAL	TOTAL TRANSIT VEHICLES OWNED AND LEASED	PERCENT OF INDUSTRY TOTAL
1968	22,700	45%	11,602	97%	34,302	55%
1969	27,110	55%	11,480	98%	38,590	63%
1970	29,346	59%	11,432	98%	40,778	66%
1971	29,982	61%	11,414	98%	41,301	68%
1972	30,917	63%	11,503	99%	42,499	70%
1973	35,732	74%	11,225	99%	47,508	79%
1974	37,368	77%	11,110	99%	48,410	81%
1975	40,583	80%	11,381	99%	51,964	83%
1976	42,802	82%	11,365	99%	54,149	85%
P 1977	43,422	84%	11,240	99%	54,662	86%

P=Preliminary

NOTE: Table excludes automated guideway transit, commuter railroad, and urban ferry boat.

\* Includes all transit systems owned by municipalities, counties, regional authorities, states, or other governmental agencies including transit systems operated or managed by private firms under contract to governmental agency owners.

(a) Data not available

TABLE 19

### United States Government Capital Grant Approvals for Mass Transportation\*

FISCAL YEAR (a)	UMT Act SECTION 3 (b)	UMT Act SECTION 5 (c)	URBAN SYSTEMS (d)	INTERSTATE TRANSFERS (e)	TOTAL APPROVALS (f)
1965	\$ 50.7	\$ 0.0	\$ 0.0	\$ 0.0	\$ 50.7
1966	106.1	0.0	0.0	0.0	106.1
1967	120.9	0.0	0.0	0.0	120.9
1968	121.8	0.0	0.0	0.0	121.8
1969	148.3	0.0	0.0	0.0	148.3
1970	133.4	0.0	0.0	0.0	133.4
1971	284.8	0.0	0.0	0.0	284.8
1972	510.0	0.0	0.0	0.0	510.0
1973	863.7	0.0	0.0	0.0	863.7
1974	870.3	0.0	34.6	51.0	955.9
1975	1,196.6	9.1	15.7	65.7	1,287.1
1976	1,346.1	32.3	23.3	553.0	1,954.8
1977	1,250.0	39.4	42.0	392.3	1,723.7

\* The U.S. Government term *Mass Transportation* means "transportation by bus, or rail or other conveyance, either publicly or privately owned, which provides to the public general or special service (but not including school buses or charter or sightseeing service) on a regular and continuing basis." (49 USC 1608)

(a) Fiscal Years 1965 through 1975 began July 1 and ended June 30;

(b) Fiscal Year 1976 began July 1, 1975 and ended September 30, 1976;

(c) Fiscal Year 1977 began October 1, 1976 and ended September 30, 1977.

(d) Urban Mass Transportation Act of 1964 as amended, Section 3 (49 USC 1602)

(e) Urban Mass Transportation Act of 1964 as amended, Section 5 (49 USC 1604)

(f) Federal-Aid Highway Act of 1973 (23 USC 142)

(g) Federal-Aid Highway Act of 1973 (23 USC 103)

(h) Excludes direct Congressional authorizations.

Source: U.S. Department of Transportation, Urban Mass Transportation Administration.

## Q & A: Transit Issues and Answers

### What is the role of transit in America's transportation system?

Transit is an essential public service in the day-to-day life of metropolitan America. It is the most efficient and economical method of moving large numbers of people in often congested urban areas. In doing so transit uses less energy than other modes of transportation, produces less pollution, and reduces traffic congestion. In addition, transit is often the only means of urban transportation available to many urban residents.

Public service, however, is the essential role of transit. Many benefits of transit accrue to the urban community as a whole as well as to specific individuals. Transit is a public service which returns benefits to the community in proportion to the community support provided.

Transit provides both a personal travel option and transportation security. Transit provides the option of a relaxed trip to work for an automobile driver tired of fighting traffic. Transit provides a secure alternative for the automobile driver whose auto is being repaired or is stuck in a snow drift, and for many urban residents, transit is singularly depended upon for mobility.

Cities which take advantage of these community benefits are able to conserve urban space by building highways for average conditions rather than the peak hour crush. Transit service encourages a more efficient concentration of urban activities in downtowns and satellite areas than would be possible with automobile-oriented transportation alone. This concentrated activity promotes economic development and keeps badly needed tax paying business and commercial establishments in the central city.

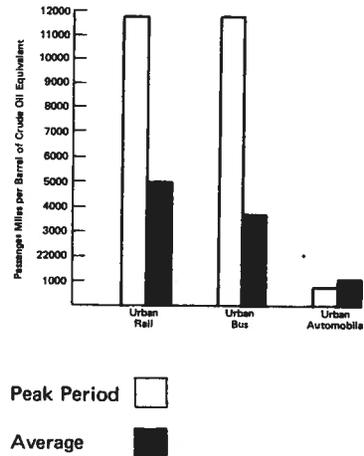
Transit can be used as an effective tool in planning the development of urban areas. By providing improved access to specific locations in an urban area, transit can help concentrate or relocate growth in conformance with areawide development goals.

Transit is a service to urban residents that places emphasis on people. Among the transportation options available to American cities, transit provides a service consistent with visions of what a city should be. America needs cities that offer a variety of services, employment, entertainment, and residential choices. Transit helps make cities in which travel is efficient, inexpensive, and pleasant so that residents may take advantage of all the amenities that distinguish urban living.

#### Benefits of Public Transit

- Reliable Transportation
- Economical Transportation
- Mobility for Nondrivers
- Reduced Air Pollution
- Reduced Energy Consumption
- Reduced Traffic Congestion
- Concentrated Urban Activities
- Conservation of Urban Space
- Stimulated Economic Development

## Energy Intensity of Urban Transportation Modes



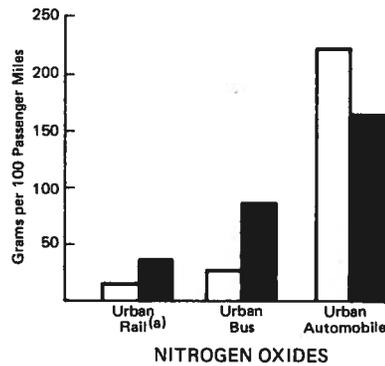
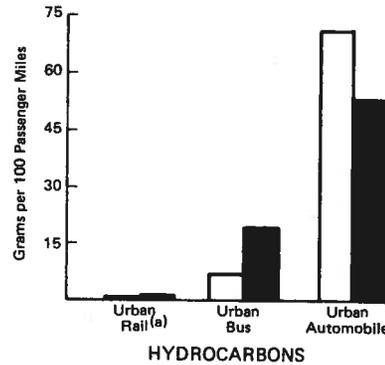
### How much does transit reduce energy use and air pollution?

Transit is the most energy-efficient mode for transporting large numbers of urban dwellers. Transit provides a high level of mobility while consuming relatively low quantities of petroleum; in electrically powered forms, transit does not require petroleum at all. Fuel efficiency is important because of the rising costs of imported petroleum which reached \$45 billion in 1977. The majority of urban passenger travel now takes place in individual gasoline powered automobiles, which are relatively inefficient compared to all transit modes. As U.S. petroleum supplies dwindle, as prices climb, and as dependence on foreign imports increases, the significance of even modest shifts to transit in a national fuel-conserving strategy must be recognized.

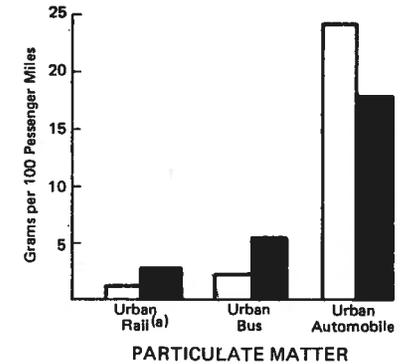
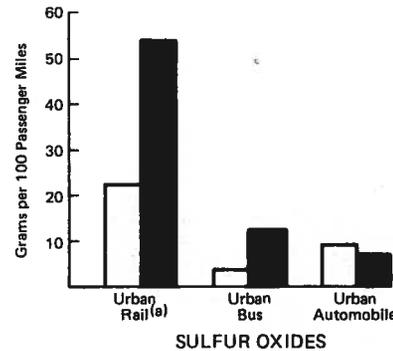
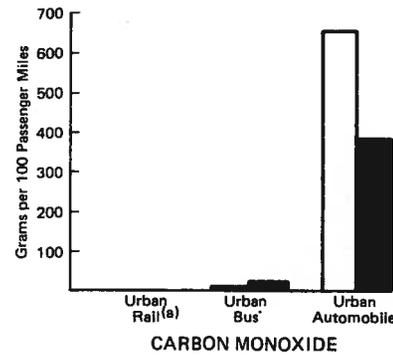
During peak periods when crush loads are experienced, transit buses are up to 15 times more energy efficient than automobiles, achieving 280 passenger miles per gallon of fuel compared to the 19 passenger miles per gallon achieved by the average commuter automobile. A modern heavy rail car, capable of carrying over 250 passengers at a maximum load is the most fuel efficient form of urban transportation. Under these fully loaded conditions a heavy rail car is 53 times more fuel efficient than an average commuter automobile.

Every individual who uses transit accomplishes significant energy savings. W. P. Goss and J. G. McGowan studied the energy use of New York com-

## Air Pollution from Urban



## Transportation Modes



Peak Period   
Average

(a) Emissions from urban rail are at power plant generating electricity. Assumes residual oil is used to generate electricity.

muters in *Energy Requirements for Passenger Ground Transportation Systems*. They found that a commuter going 35 miles from Long Island to Manhattan uses as much energy by driving an automobile in 4 years as a transit rider uses in his entire 40-year working life. With an automobile using 1,233 gallons of fuel per year in this example, a transit user can save almost 45,000 gallons of fuel in his work life.

Because of inherent operating efficiency, transit also generates relatively few pollutants which foul the air of our cities. Air quality continues to be a serious problem in many areas; despite improvement in auto pollution control, the automobile is a major contributor in causing air quality problems. Where transit ridership is high, air pollution is reduced.

Energy intensity and pollutant charts presented above display the environmental benefits of transit service. Both bus and rail transit significantly reduce pollution from hydrocarbons, carbon monoxide, nitrogen oxides, and particulate matter compared to urban automobile transportation. Rail transit also offers the advantage of power generation of plants located away from central city areas, thus diffusing the lower levels of pollutants associated with generation of electricity.

Preparation of these charts involved use of copyrighted material which appeared in "Energy Profile: Auto vs. Transit" by Richard Thomas Sheahan (*Mass Transit*, November, 1976); used with permission.

### How large is the transit industry?

With expenditures of over four billion dollars for operations in 1977, the transit industry is a major employer throughout the United States. In 1977 the transit industry's 162,000 employees transported over six billion passengers to their jobs, to stores, to schools, and to recreational facilities. The 1,035 transit systems in the U.S. operate approximately 68,000 vehicles, ranging in size from small 18-foot long buses used for special handicapped person transit service to 380-foot long ferry boats carrying 2,500 passengers on a single trip.

In addition to being a major public service in large cities, transit services can be found in small urban and rural areas throughout the United States. Over 21 % of counties in the United States with 75% of America's population are served by fixed-route common carrier transit systems. The map on this page shows those counties in the continental United States served by fixed-route transit service. Additional counties not shown on the map are served by demand-responsive and other types of special service transit operations.



**Counties in the Continental United States  
with Fixed-Route Transit Service**

### What types of service are operated by the transit industry?

The transit industry offers a variety of mass transportation services from the familiar fixed-route bus and rail lines to unique special services which meet specialized local requirements.

Special transit services can be adopted to meet unusual urban transportation needs. Chartered buses and rail cars are used to move groups of people

**Downtown loop bus routes such as "El Centro" operated by VIA Metropolitan Transit in San Antonio, Texas, provide frequent service for short trips in congested downtown areas. VIA operates buses on "El Centro" every five minutes, carrying 7,000 riders daily. An eye-catching "winged" paint scheme of purple, gold, and hot pink provides immediate, uniform identification of VIA bus stops and VIA transit vehicles.**



between specific locations in urban areas for school field trips, convention tours, and similar special occasions.

Loop and shuttle buses provide frequent trips for people going short distances in congested downtown areas and other major activity centers.

Many transit systems meet the special transportation needs of handicapped persons with demand-responsive buses which can pick people up at their homes and take them directly to jobs or other destinations. Special demand-responsive service is also provided by some transit systems in low density areas where it more effectively meets community needs than fixed-route transit service.

Fixed-route transit service is offered by several types of transit vehicles. Specific transit services identified by vehicle type are called modes. Motor bus, heavy rail, light rail, and trolley coach are the transit modes familiar to most Americans. Other modes of transit service are commuter railroad, automated guideway transit, urban ferry boat, cable car, and inclined plane. Each of these modes is described in "Profile of Transit Services in 1977" beginning on Page 53 of the *Transit Fact Book*.

### What is the best mode of transit service?

There is not, of course, any best mode of transit service to meet all the requirements of any city. Each transit mode is suited to particular conditions of population density, city size, environmental characteristics, demand for transit service, and economic constraints.

America's largest cities operate several modes of transit service to meet their varied needs. In the New York area, for example, a transit rider can choose from bus, heavy rail, light rail, commuter railroad, and ferry boat service depending upon his destination. Each of the nine largest U.S. urbanized areas is served by at least two transit modes with the seven modes operated

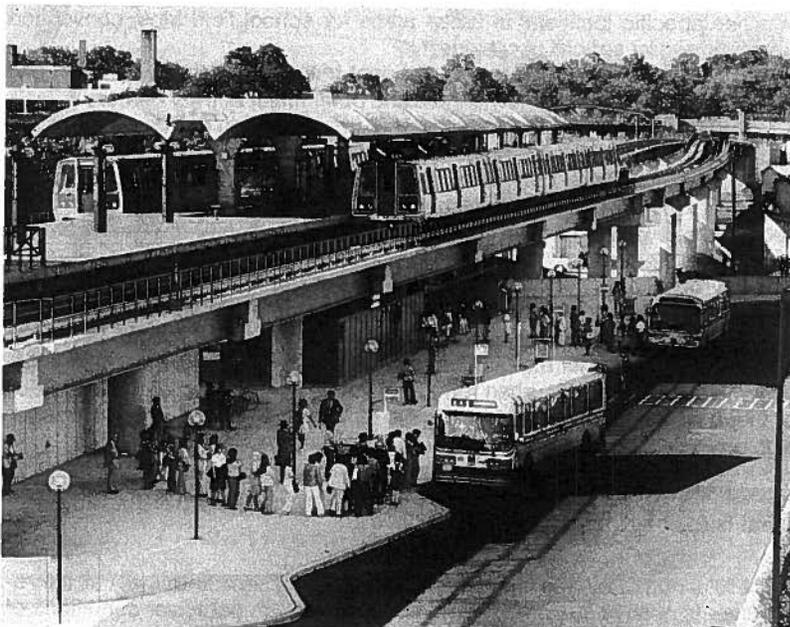
**Transit Mode Suitability Criteria  
Determined by Regional Plan Association**

Transit Vehicle Mode	Minimum Downtown Size, Square Feet of Contiguous Nonresidential Floor Space (Millions)	Minimum Residential Density, Dwelling Units per Acre
Local Bus	2.5	4 to 15 (a)
Express Bus	7	3 to 15 (a)
Light Rail	21	9
Heavy Rail	50	12
Commuter Rail	70	1 to 2 (a)

(a) Varies with type of access and frequency of service.

Source: Regional Plan Association, *Where Transit Works: Urban Densities for Public Transportation*, New York, 1976. Copyrighted material used with permission.

Note: The American Public Transit Association neither advocates nor endorses these criteria for selecting any specific transit vehicle mode.



Each transit vehicle mode is best fitted to its unique operating ability when coordinated with other passenger transportation services. Transfer facilities at the Rhode Island Avenue station of the Washington Metropolitan Area Transit Authority heavy rail system provide convenient train-bus connections for WMATA passengers enroute between destinations in Washington, D.C., and suburban Maryland. Transit passengers riding coordinated buses and trains benefit from reduced travel time through the congested central areas of Washington.

in the San Francisco-Oakland urbanized area representing the greatest variety of transit vehicle types. An additional 14 smaller urbanized areas are served by at least two transit vehicle modes.

Each transit mode is best used when coordinated with other transit services and the non-transit passenger transportation system in an urban area. Rail transit, for example, is used most efficiently when its service is carefully coordinated with a feeder bus network. Buses circulate through the neighborhoods adjoining rapid transit stations, transporting passengers to the train connection and returning them home later in the day. Although the traveler may live miles from the rail station, rail access is as close as the nearest corner bus stop. Today, rail system designers make special efforts to assure the ease and convenience of bus/rail transfers.

**How much energy is used to construct a rail transit system?**

Fixed guideway transit facilities such as heavy rail and light rail use surprisingly small amounts of energy in their construction compared to alternative highway construction.

The San Francisco Bay Area Rapid Transit District (BART) required 38.9 trillion British thermal units (BTUs) of energy for construction of the basic BART system. Construction of a highway system as an alternative to BART would have required 79.6 trillion BTUs of construction energy, over twice the construction energy used by BART.

The amount of energy used in rail transit construction varies with the type of right-of-way (subway, at grade, or elevated) constructed. The BART system is a combination of all three right-of-way types.

National studies of energy use per dollar of investment in rail transit versus highway construction have supported BART's conclusion. B. M. Hannon and R. G. Stein in *Energy Use for Building Construction* determined that new transit construction consumes 62,447 BTUs of energy per dollar compared to 123,745 BTUs per dollar of highway construction (using 1967 dollars). Hannon and Rodger Bezdek reached a similar conclusion in "Energy, Manpower, and the Highway Trust Fund," *Science* magazine, Volume 185, where they reported that "railroad and mass transit construction" required 43,100 BTUs per dollar investment (1963 dollars) compared to 112,200 BTUs per dollar required for "highway construction."

**Will investments in rail transit create more jobs than comparable investment in urban freeways?**

Input-output data analysis in "Energy, Manpower, and the Highway Trust Fund," *Science* magazine, Volume 185, indicates that fixed guideway mass transit construction creates greater employment than an equal investment in highway construction. The study by Roger Bezdek and Bruce Hannon found that a \$100,000 (1975 Dollars) investment in "railroad and mass transit construction" created 8.4 annual jobs while an equal investment in highway construction created only 8.1 annual jobs. Based on national averages, these figures do not show the major differential in job creation between transit and highways that might be expected in some areas nor do they include long-range job impacts following the completion of construction.

**Construction Alternatives and Anticipated Employment:  
Westway Highway Construction versus Rapid Transit  
Construction or Rehabilitation in New York City**

<u>Jobs Resulting from Construction:</u>	<u>Total Person Years of Employment</u>
Alternative A: Westway Interstate Highway Construction	78,272
Alternative B: New Heavy Rail Rapid Transit Construction	96,714
Alternative C: Existing Heavy Rail Rapid Transit Rehabilitation	103,209
<u>Permanent Jobs after Construction:</u>	<u>Annual Person Years of Employment</u>
Alternative A: Westway Interstate Highway Operation	600
Alternative B: New Heavy Rail Rapid Transit Operation	3,100
Alternative C: Rehabilitated Heavy Rail Rapid Transit Operation	1,500

Source: Gerard, Michael, *How Public Works Projects Affect Employment: A Case Study of Westway and Its Transit Alternatives*, Sierra Club/Open Space Institute, New York, November, 1977. Copyrighted material used with permission.

A more detailed study of the employment effects of a specific transportation project was made by Michael Gerrard in *How Public Works Projects Affect Employment: A Case Study of Westway and Its Transit Alternatives*. Gerrard analyzed the employment effect of three alternative investments of \$1.16 billion for (1) a 4.2-mile freeway on the lower west side of Manhattan known as the "Westway" to replace the old West Side Highway, or (2) an arterial road to replace the West Side Highway plus construction of new heavy rail transit, or (3) an arterial to replace the West Side Highway plus rehabilitation of existing heavy rail transit.

The analysis of Westway construction proposals demonstrated the job creation ability of transit construction. While construction of the Westway would create only 78,272 person years of employment, the new heavy rail transit construction alternative would create 96,714 person years of employment, and the heavy rail rehabilitation alternative would create 103,209 person years of employment. Long-term permanent job creation following construction is even more pronounced in favor of transit. New heavy rail reconstruction would create 3,100 permanent jobs and heavy rail rehabilitation would create 1,500 permanent jobs while construction of the Westway would create 600 permanent jobs.

Handicapped persons benefit from convenient door-to-door transportation using special transit service such as "The Lift," operated by Intracity Transit in Topeka, Kansas. The door-to-door subscription service utilizes three buses especially fitted to accommodate wheelchair passengers. In operation since 1976, "The Lift" transports 1,700 riders per month including 800 wheelchair passengers.



**Many groups are advocating the establishment of paratransit service to supplement urban transit. Is there a place for paratransit in urban transportation?**

America's cities with their varied forms require a mixture of conventional transit and paratransit providing a family of services that can be designed or shaped to fit the needs of a particular portion of the community. Paratransit services such as demand-responsive buses, vanpools, and subscription buses must be planned in the context of the total transportation system. They must not be mistakenly identified as substitutes for other established and developing transit modes, but rather, must be considered as complementary and supplementary to fixed-route transit.

In rural America and areas of exurban development, paratransit may be the only form of transit. The wide dispersal of residences, jobs, schools, and other activity locations precludes the use of conventional transit service. Yet the need exists for some form of public transportation. Paratransit may fill this need in many such areas since its characteristics, such as vehicle size and routing flexibility, are better adapted than conventional transit to serving dispersed locations.

In low density developing areas, paratransit might serve as the initial phase in transit development. For example, a van pooling program could be established to serve a medium or large employment center. Experience has shown that successes in such projects encourage new employees to locate their residences in the pool service area and develop the habit of riding rather than driving. When sufficient numbers exist, subscription bus services and fixed-route transit service become practical.

Another important factor in evaluating paratransit service is its capability for serving special travel needs of the elderly and handicapped, many of whom have mobility needs which are not well served by automobiles or conventional transit. Paratransit might provide that mobility. Transportation services now provided by many social service agencies are, in a sense, paratransit. However, these existing services are nearly always uncoordinated and energy inefficient. Wherever unified paratransit services replace these uncoordinated services, the overall level of personal mobility often rises due to central coordination and operation of complementary transit services.

### What is the cost of not providing transit service?

Very simply stated, the cost of not providing transit service is the higher cost of providing alternate means of urban transportation plus the loss of mobility to urban residents who have no other means of transportation.

The most apparent cost of not investing in transit is a total alteration of the urban landscape. Without transit, cities will develop inefficiently with lower intensity land use for all purposes in all parts of the city. While the central business district of a city with a high level of transit use might require 40 percent or less of its area for streets and parking, the land devoted to streets and parking in central business districts in low transit use cities might be as high as 60 percent. The accompanying table shows that a much smaller amount of land is required for transit than for alternative modes of transportation.

Urban Transportation System Resource Use	
<b>Energy Consumption</b>	
<u>Transportation System</u>	<u>Millions of BTU's per 1,000 Passenger Miles</u>
Taxicab	15.0
Automobile	6.0
Light Rail	4.6
Commuter Rail	3.3
Heavy Rail	3.0
Motor Bus	2.7
<b>Material Consumption for Vehicles</b>	
<u>Transportation System</u>	<u>Pounds per 1,000 Passenger Miles</u>
Taxicab	39.8
Automobile	23.1
Motor Bus	6.2
Light Rail	4.9
Heavy Rail	1.9
Commuter Rail	1.5
<b>Space Consumed By Roadway</b>	
<u>Transportation System</u>	<u>Acres of Roadway per 1,000 Passenger Miles per Day</u>
Taxicab	1.70
Automobile	0.95
Light Rail	0.70
Commuter Rail	0.30
Motor Bus	0.14
Heavy Rail	0.04
<p>Source: Based on exhibits from Regional Plan Association, <i>Where Transit Works: Urban Densities for Public Transportation</i>, New York, 1976. Copyrighted material used with permission.</p> <p>Note: For assumptions used by authors, refer to source document. Based on alternative assumptions, other research has resulted in differing amounts and rankings of resources used. See "Energy Intensity of Urban Transportation Modes," page 42.</p>	

Investments for transit in resources other than land show a consistent pattern when compared to other transportation alternatives. Transit requires a smaller investment in materials for vehicles, uses less energy for operation, and uses less energy during construction.

Lack of investment in transit would severely restrict the mobility of millions of urban Americans. The U.S. Department of Transportation found in the 1972 Nationwide Personal Transportation Study that 21% of urban households do not own automobiles. Households among the lowest income groups show the lowest percentage of automobile ownership. Without transit, the employment alternatives and accessibility to amenities of these households would be reduced.

### How much money can I save by taking transit?

Where transit service is available the amount of money a person can save when commuting by transit rather than driving varies with each commuting situation. The greatest savings will be experienced by households owning more than one automobile when they substitute transit service for auto trip-making and subsequently reduce the number of automobiles which they own.

A recent study by the Hertz Corporation Car Leasing Division found the average cost of driving to be 30.1 cents per mile, excluding parking. In areas with high parking fees, the per-mile cost may be as high as 48 cents per mile. For a commuter driving an average round trip of 10 miles per day, the cost of commuting could be as high as \$1,200 per year. In contrast, the average annual cost of 500 one-way commuter trips by transit in 1977 was only \$188. In this situation a commuter could save over \$1,000 per year by taking transit.

Many circumstances affect the exact amount that can be saved by shifting to transit. If the household retains ownership of all its automobiles, the savings will be less. If the commuter trip is longer, the savings will be greater.

In any case, the difference between the cost of commuting by automobile compared to the cost of commuting by transit is increasing. The Hertz Corporation found the expense of driving to be up by 50 percent since 1973. Average transit fare, however, has increased by only 18 percent over the same time period. Thus, the cost of driving has risen 8 percent per year faster than the cost of using transit.

### What efforts in national policy are needed for effective transit service?

The past year has witnessed events which underscore the importance of existing federal programs of financial assistance to the transit industry. President Carter alerted the American people to an energy crisis by asking for a national commitment to energy conservation and a reduction in our dependence on imported petroleum. The Congress enacted the Clean Air Act Amendments of 1977 which include mandates for comprehensive public transportation strategies to meet air quality objectives. President Carter also announced an urban policy with elements to change existing federal programs in order to support the revitalization of American central cities.

Each of these events is interrelated and supports the perception of many Americans that transit services are an essential part of their urban lifestyle.

Demand for public transit will increase quickly as we respond to critical national objectives. Our future urban areas will be less dispersed and will rely on public transit for a larger share of daily travel between activity centers. It is important that we begin to expand our existing system so that services are in place as consumer demand increases and to help shape a transportation-efficient urban environment.

The potential demand for transit is very large. Annual ridership has increased by one-half billion passengers since 1973. Projections of even greater increases in future ridership are confirmed by nationwide opinion surveys. Many communities are finding that transit ridership is limited only by the amount of service that can be financed.

The federal role in these events is vital. Federal funds, provided on a regular, assured basis, provide state, regional, and local officials with a crucial portion of the financial resources needed to continue and improve transit as part of a unified urban transportation system. The federal budget for transit assistance is a clear indication to these officials of the priority which the government places on the transit program.

Today, public transit service exists as a result of public policy and the demands of consumers. At the state and local level, decisions have been made to finance transit costs from a combination of relatively stable user fees—fares—and increasing government assistance. The enactment of legislation providing federal operating assistance for transit was a recognition of the importance of a cooperative intergovernmental effort including a federal role in paying for these services. One result has been a reversal of the 30-year decline in transit ridership. For five years, since 1973, transit ridership has increased. This increase has occurred in spite of the continuation of most of the factors which led to the decline. The change is due to the turnaround in public attitudes and the commitment of local, state, and federal funds.

Federal funding is needed for many purposes. The nation's urban bus fleet should be replaced at an annual rate sufficient to replace buses which reach the end of their economic lives and to expand the bus fleet to meet rising demand and local service objectives.

Modernizing our existing fixed guideway transit systems must be a high priority of the federal transit assistance program. Almost seven million persons use these systems daily in seven urbanized areas. These systems are contributing to important national objectives by focusing travel on efficient activity centers and by lowering areawide per capita gasoline consumption. Preserving these center cities and the travel habits of the commuting population are coequal goals. Modern design and safety standards are required by system users. Obsolete structures must be rehabilitated.

Continuation of the construction of justified additions to our fixed guideway transit capacity should be a high federal priority. No other federal public works program is subject to the scrutiny and level of analysis required of rail extensions and new rail starts. Potential projects receive federal review beginning at the long range planning and overall system design stage. Once rail projects are given a local priority, they are then subject to an exhaustive alternatives analysis to determine the most effective implementation plan and mode. The projects which survive these justification tests have sufficient local and national benefits to warrant our support and federal financial assistance.

More important than funding is the need for coordination of federal transportation policies and urban programs to assure efficient decisions government wide. National energy, environmental, urban, and transportation policies are all interrelated. Public transit's contribution to all of these objectives will depend on sound administration to assure consistent government impact on urban areas.

## Profile of Transit Services in 1977

### Motor Bus Statistics

*Motor Bus:* Rubber tired, self-propelled, manually steered transit vehicle with fuel supply carried on board the vehicle.

Motor Bus Systems (December 31, 1977)	1,004
Miles of Line (One Way)	66,100
Miles of Route (One Way)	107,800
Motor Buses	51,968
Linked Passenger Trips (Millions) — 1977	4,246.5
Unlinked Passenger Trips (Millions) — 1977	5,295.0
Estimated Passenger Miles (Millions) — 1977	19,729.8
Average Length of Linked Passenger Trip (Miles)	4.65
Average Length of Unlinked Passenger Trip (Miles)	3.73
Operating Revenue (Millions) — 1977	\$ 1,584.4
Passenger Revenue (Millions) — 1977	\$ 1,482.0
Average Fare — 1977	\$ 0.349
Passenger Vehicle Miles Operated (Millions) — 1977	1,623.3



These Washington Metropolitan Area Transit Authority buses are preparing to depart their terminal at Lafayette Park across from the White House in the nation's capital. Known locally as "Metrobuses" because their routes are coordinated with the "Metro" subway system, WMATA buses provide transit service within the District of Columbia as well as in adjoining suburban areas of Maryland and Virginia.



Boarding a Mass Transit Administration bus at the Civic Center, these passengers are departing downtown Baltimore. A part of the Maryland Department of Transportation, the MTA operates 970 buses carrying over 400,000 passengers per day throughout the Baltimore area. The Register Avenue line connects North Baltimore residential areas with Memorial Stadium, home of the Baltimore Orioles; the Charles Center redevelopment area; the Civic Center; and other downtown locations.

### Heavy Rail Statistics

*Heavy Rail:* Subway-type transit vehicle railway constructed on exclusive private right-of-way with high-level platform stations; formerly known as "subway" or "elevated (railway)."

Heavy Rail Operations (December 31, 1977)	10
Miles of Line (One Way)	573
Miles of Route (One Way)	1,078
Heavy Rail Cars	9,639
Heavy Rail Stations	803
Linked Passenger Trips (Millions)—1977	1,334.9
Unlinked Passenger Trips (Millions)—1977	2,133.0
Estimated Passenger Miles (Millions)—1977	9,682.2
Average Length of Linked Passenger Trip (Miles)	7.25
Average Length of Unlinked Passenger Trip (Miles)	4.54
Operating Revenue (Millions)—1977	\$ 653.2
Passenger Revenue (Millions)—1977	\$ 634.2
Average Fare—1977	\$ 0.475
Passenger Vehicle Miles Operated (Millions)—1977	361.3

#### Heavy Rail Operations

Chicago Transit Authority  
Greater Cleveland Regional Transit Authority  
Massachusetts Bay Transportation Authority

*Location*  
Chicago, IL  
Cleveland, OH  
Boston, MA

*Continued next page*

#### Heavy Rail Operations, continued

Municipality of Metropolitan Seattle (a)	Seattle, WA
New York City Transit Authority	Brooklyn, NY
Port Authority Trans-Hudson Corporation	New York, NY
Port Authority Transit Corporation of Pennsylvania and New Jersey	Camden, NJ
San Francisco Bay Area Rapid Transit District	Oakland, CA
Southeastern Pennsylvania Transportation Authority	Philadelphia, PA
Washington Metropolitan Area Transit Authority	Washington, D.C.
(a) Monorail	

Port Authority Transit Corporation trains (right) operate over the 14.5-mile "High-Speed Line" from downtown Philadelphia to Lindenwold, New Jersey in 22 minutes—less than half the time required to make the same trip by highway. When opened in 1969, PATCO was the most highly automated heavy rail system in the United States. The Chicago Transit Authority (below) operates the second largest heavy rail system in the United States. This CTA train on the Lake-Dan Ryan route is approaching Harlem terminal in Oak Park at the end of a trip from the Loop and the south side of Chicago. The two lead cars are named "Oak Park, All America City" in recognition of the award presented to that suburban residential village during 1976 for implementing a successful integration program in an upper-middle class community.



## Light Rail Statistics

**Light Rail:** Streetcar-type transit vehicle railway constructed on city streets, semi-private right-of-way, and exclusive private right-of-way; formerly known as "streetcar" ("trolley car") and "subway-surface" depending upon local usage or preference.

Light Rail Operations (December 31, 1977)	9
Miles of Line (One Way)	207
Miles of Route (One Way)	301
Light Rail Cars	992
Linked Passenger Trips (Millions)—1977	79.0
Unlinked Passenger Trips (Millions)—1977	103.0
Estimated Passenger Miles (Millions)—1977	388.7
Average Length of Linked Passenger Trip (Miles)	4.92
Average Length of Unlinked Passenger Trip (Miles)	3.77
Operating Revenue (Millions)—1977	\$ 25.0
Passenger Revenue (Millions)—1977	\$ 23.9
Average Fare—1977	\$ 0.302
Passenger Vehicle Miles Operated (Millions)—1977	20.4

### Light Rail Operations

City of Detroit Department of Transportation  
 Dillard's Department Store  
 Greater Cleveland Regional Transit Authority  
 Massachusetts Bay Transportation Authority  
 New Orleans Public Service, Inc.  
 Port Authority of Allegheny County  
 San Francisco Municipal Railway  
 Southeastern Pennsylvania Transportation Authority  
 Transport of New Jersey

### Location

Detroit, MI  
 Fort Worth, TX  
 Cleveland, OH  
 Boston, MA  
 New Orleans, LA  
 Pittsburgh, PA  
 San Francisco, CA  
 Philadelphia, PA  
 Newark, NJ

The two Standard Light Rail Vehicles in this Massachusetts Bay Transportation Authority train are among the first light rail cars manufactured in the United States since 1952. Each two-section articulated vehicle carries up to 219 passengers, has a maximum speed of 50 mph, and can be coupled into multiple-unit trains (as shown). These SLRVs replace aging Electric Railway Presidents' Conference Committee (PCC) cars on the MBTA private right-of-way Green Line.



Enroute to Volunteer Park along Mt. Rainier Drive, Coach No. 604 is now out of service during a year-long reconstruction of the Seattle Metro trolley coach system. Besides rebuilding existing overhead wire, rehabilitation includes expansion of the trolley coach system from the present 32 route miles to 55 route miles, construction of 26 rectifier stations for electric current distribution, and purchase of 109 new trolley coaches. Built in 1940 by The Twin Coach Company, Coach No. 604 has demonstrated the durability of electric trolley coaches by operating 1.1 million miles and carrying over 8.4 million passengers in its 38 years of service.



## Trolley Coach Statistics

**Trolley Coach:** Rubber-tired transit vehicle, manually steered, propelled by electric motors drawing current—normally through overhead wires—from a central power source not on board the vehicle.

Trolley Coach Operations (December 31, 1977)	5
Miles of Route (One Way)	201
Trolley Coaches	645
Linked Passenger Trips (Millions)—1977	51.3
Unlinked Passenger Trips (Millions)—1977	70.0
Estimated Passenger Miles (Millions)—1977	191.3
Average Length of Linked Passenger Trip (Miles)	3.73
Average Length of Unlinked Passenger Trip (Miles)	2.73
Operating Revenue (Millions)—1977	\$ 14.8
Passenger Revenue (Millions)—1977	\$ 14.5
Average Fare—1977	\$ 0.282
Passenger Vehicle Miles (Millions)—1977	14.8

### Trolley Coach Operations

Massachusetts Bay Transportation Authority  
 Miami Valley Regional Transit Authority  
 Municipality of Metropolitan Seattle  
 San Francisco Municipal Railway  
 Southeastern Pennsylvania Transportation Authority

### Location

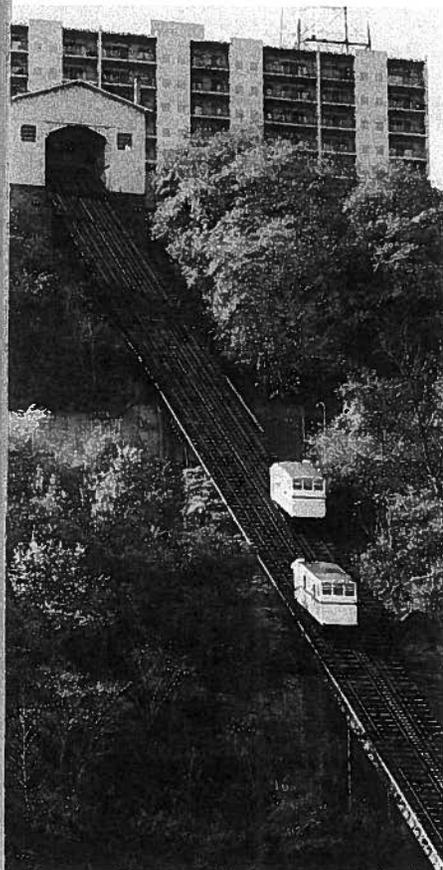
Boston, MA  
 Dayton, OH  
 Seattle, WA  
 San Francisco, CA  
 Philadelphia, PA

## Cable Car Statistics

**Cable Car:** Transit vehicle railway operating in mixed street traffic with unpowered, individually-controlled transit vehicles propelled by moving cables located below the street surface and powered by engines or motors at a central location not on board the vehicle.

Cable Car Operations (December 31, 1977) 1  
Cable Cars 39

**Cable Car Operations** Location  
San Francisco Municipal Railway San Francisco, CA



The Monongahela Incline Plane, operated by the Port Authority of Allegheny County, dates from 1870. Two 3-compartment cars travel the 640 feet of track—set at a 38-degree angle against the side of Mt. Washington—In less than 2 minutes.

## Inclined Plane Statistics

(Only operating results for two inclined planes operated by transit systems—Port Authority of Allegheny County and Chattanooga Area Regional Transportation Authority—are included in summary tables of the *Transit Fact Book*.)

**Inclined Plane:** Transit passenger vehicle railway operating over private right-of-way on steep grades with unpowered vehicles propelled by moving cables attached to the vehicles and powered by engines or motors at a central location not on board the vehicle.

Inclined Planes Operated by Transit Systems (December 31, 1977) 2  
Inclined Plane Cars Operated by Transit Systems 4

**Urban Inclined Planes**  
Chattanooga Area Regional Transportation Authority (Lookout Mountain Incline) (a)  
Chattanooga, TN  
Duquesne Heights Incline  
Pittsburgh, PA  
Fourth Street Elevator  
Dubuque, IA  
The Incline (Johnstown-Westmont)  
Johnstown, PA  
Port Authority of Allegheny County (Monongahela Incline) (a)  
Pittsburgh, PA

(a) Inclined planes operated by transit systems.

## Commuter Railroad Statistics

(Commuter railroad statistics are *not* included in "transit industry" summary tables in the *Transit Fact Book*. All data reported for Commuter Railroad operations are *in addition to* data reported for the "transit industry" elsewhere in the *Transit Fact Book*.)

**Commuter Railroad:** That portion of "main-line railroad" (*not* "electric railway") transportation operations which encompasses urban passenger train service for local short-distance travel between a central city and adjacent suburbs; suburban rail passenger service—using both locomotive-hauled and self-propelled railroad passenger cars—is 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.

Number of Commuter Railroads (December 31, 1977) 15  
Miles of Route (One Way) 2,329  
Self-Propelled Commuter Rail Cars 2,584  
Locomotive-Hauled Commuter Rail Cars 1,756  
Commuter Railroad Stations 1,142  
Linked Passenger Trips (Millions)—1977 265.0  
Estimated Passenger Miles (Millions)—1977 5,478.0  
Average Length of Linked Passenger Trip (Miles) 20.67  
Operating Revenue (Millions)—1977 \$ 347.0  
Operating Expense (Millions)—1977 \$ 671.0  
Average Fare—1977 \$ 1.318  
Commuter Rail Car Miles Operated (Millions)—1977 159.8

<i>Commuter Railroads</i>	<i>Operating Locations</i>
The Baltimore and Ohio Railroad Company (Chessie System)	Pittsburgh, PA (a); Washington, DC
Burlington Northern	Chicago, IL
Chicago and North Western Transportation Company	Chicago, IL
Chicago, Milwaukee, St. Paul & Pacific Railroad Company	Chicago, IL
Chicago, Rock Island & Pacific Railroad Company	Chicago, IL
Chicago South Shore & South Bend Railroad	Boston, MA;
Consolidated Rail Corporation	Chicago, IL;
	Hoboken, NJ;
	Newark, NJ;
	New York, NY;
	Philadelphia, PA (b);
	Washington, DC
Grand Trunk Western Railroad Company	Detroit, MI (c)
Illinois Central Gulf Railroad Company	Chicago, IL
The Long Island Rail Road Company	New York, NY
Massachusetts Bay Transportation Authority	Boston, MA (d)
Norfolk & Western Railway Company	Chicago, IL

Continued page 61



Commuters leaving downtown Detroit (above, left) hurry to their waiting commuter train. Once aboard, they chat with other passengers or read a newspaper on their traffic-free journey home. Operated by the Grand Trunk Western Railroad Company under contract to the Southeastern Michigan Transportation Authority, GTW trains travel over a 26.3-mile route between St. Antoine Street station at Detroit's Renaissance Center (in background) and suburban Pontiac. G. T. *Marin* (below) is one of three Golden Gate Bridge, Highway and Transportation District ferry boats linking San Francisco with Larkspur and Sausalito in neighboring Marin County. Capable of carrying 750 passengers, *Marin* utilizes gas turbine engines coupled to a waterjet propulsion system.



*Commuter Railroads, continued*

*Location*

The Pittsburgh & Lake Erie Railroad Company Pittsburgh, PA  
 Southern Pacific Transportation Company San Francisco, CA  
 Staten Island Rapid Transit Operating Authority New York, NY

- (a) Operated by The Baltimore and Ohio Railroad Company under contract with the Port Authority of Allegheny County using rail cars owned by the Port Authority of Allegheny County.
- (b) Operated by the Consolidated Rail Corporation under contract with the Southeastern Pennsylvania Transportation Authority.
- (c) Operated under a purchase-of-service agreement with the Southeastern Michigan Transportation Authority.
- (d) Operated by the Boston and Maine Corporation for the Massachusetts Bay Transportation Authority.

**Urban Ferry Boat Statistics**

(Ferry boat statistics are *not* included in "transit industry" summary tables in the *Transit Fact Book*. All data reported for Ferry Boat operations are *in addition* to data reported for the "transit industry" elsewhere in the *Transit Fact Book*.)

*Ferry Boat:* Passenger-carrying marine vessel providing frequent "bridge" service over a fixed route and on a published time schedule between two or more points.

Urban Ferry Boat Operations (December 31, 1977)	12
Miles of Route (One Way)	151
Ferry Boats	55
Linked Passenger Trips (Millions)—1977	54.7
Estimated Passenger Miles (Millions)—1977	293.6
Average Length of Linked Passenger Trips (Miles)	5.37
Operating Revenue (Millions)—1977	\$ 30.7
Operating Expense (Millions)—1977	\$ 71.2
Average Fare — 1977 (a)	\$ 0.561
Ferry Boat Miles Operated (Millions)—1977	1.5

*Urban Ferry Boat Operations*

*Location*

Anderson Ferry Cincinnati, OH  
 Balboa Island Ferry, Inc. Los Angeles, CA  
 Casco Bay Lines Portland, ME  
 City of New York Department of Marine and Aviation (Staten Island Ferry) New York, NY  
 Commonwealth of Massachusetts Executive Office of Transportation and Construction Boston, MA  
 Golden Gate Bridge, Highway and Transportation District San Francisco, CA  
 Harbor Carriers, Inc. San Francisco, CA  
 Massachusetts Bay Line, Inc. Boston, MA  
 Mississippi River Bridge Authority New Orleans, LA  
 Puerto Rico Ports Authority San Juan, PR

*Continued next page*

*Urban Ferry Boat Operations, continued*

Texas State Department of Highways  
and Transportation  
Washington State Ferries

*Location*

Corpus Christi, TX;  
Galveston, TX  
Seattle, WA

(a) Includes fees collected for passage of automobile with passenger(s) on ferry boats transporting automobiles.

**Automated Guideway Transit**

(Automated guideway transit (AGT) statistics are *not* included in "transit industry" summary tables in the *Transit Fact Book*. All data reported for Automated Guideway Transit operations are *in addition to* data reported for the "transit industry" elsewhere in the *Transit Fact Book*.)

*Automated Guideway Transit (AGT):* Fixed-guideway rapid transit vehicles operating without vehicle operators or other crewpersons on board the vehicle.

Automated Guideway Transit Operations (December 31, 1977)	1
Automated Guideway Transit Vehicles	45

<i>Automated Guideway Transit Operations</i>	<i>Location</i>
West Virginia University	Morgantown, WV

**Public Paratransit**

(Public paratransit statistics are *not* included in "transit industry" summary tables in the *Transit Fact Book*. All data reported for Public Paratransit operations are *in addition to* data reported for the "transit industry" elsewhere in the *Transit Fact Book*.)

*Public Paratransit:* Collective passenger transportation for the general public and/or special categories of persons on a regular and predictable basis through demand-responsive scheduling and/or flexible routing of vehicles. The term *public paratransit* includes dial-a-ride, "shared-ride taxi," publicly-sponsored vanpools, subscription bus service, airport limousines, and jitneys (where legal and formally established). Taxicab services which provide "shared-ride" service only at the discretion of the driver and/or the passenger are *not public paratransit*.

Public Paratransit Operations (December 31, 1977)	14,000*
Buses Operated in Public Paratransit Service (a)	2,000*
Vans Operated in Public Paratransit Service (a)	19,000*
Automobiles Operated in Public Paratransit Service (a)	8,000*

(a) Excludes all public paratransit vehicles owned and operated by transit systems.

\* Estimated

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