

The information in this publication provides a condensed overview of facts and figures about our Nation's highways. It is considered to be of interest to the average citizen. Except where noted, the Federal Highway Administration is the source of the data provided by the States. For more detailed data on many of the subjects covered, refer to the publication, *Highway Statistics*, published annually by the Office of Highway Information Management, Federal Highway Administration.

#### Cover Photo

The I-295 Varina-Enon Bridge spans the James River near Richmond, Virginia. The final closure of the main span was made on May 16, 1989.

Photo courtesy of Figg and Muller Engineers, Inc., Tallahassee, Florida.

The highway system is vital to the	Our Nation's	
Nation's economy. Twenty-nine percent of total revenue ton-miles of freight moves by highways.	Highways	
The United States has 3.9 million miles of roadway, of which 3.1 million miles are rural roads. The Interstate System accounts for only 1.2 percent of total mileage but carries 21.7 percent of total travel.	The Highway System	
Pavement conditions on approximately 71 percent of the 44,629-mile Interstate System are rated good or better.	Constition and Petormance	
There are 188.7 million motor vehicles: 144.4 million automobiles and 44.3 million trucks and buses.		
There are 165 million licensed drivers: 52 percent are men and 48 percent are women.		
131.1 billion gallons of fuel per year are consumed for highway use, averaging about 704 gallons per motor vehicle.	Motor-Fuel Use	
Annual travel by motor vehicles has reached 2 trillion vehicle-miles, an increase of 32.6 percent since 1980. Automobiles are responsible for 70.5 percent of this travel.	Travel	
Although expenditures for highways now exceed \$68 billion a year, this amounts to less than 3.4 cents per vehicle-mile traveled.	Financing Our Highways	
	Selected Statistics by State	

# Transportation Expenditures at the Household Level

After housing (31.0 percent), transportation (18.9 percent) accounts for the largest single household expenditure, and 63.8 percent of transportation expenditures at the household level are for personal vehicles, gas, and oil.

**Our Nation's Highways** 

Source: U. S. Bureau of Labor Statistics, *Consumer Expenditures Survey: Results from 1987.* 



# Personal Travel by Mode of Transportation

The personal motor vehicle (automobile, light truck, van, and motorcycle) is the predominant form of personal transportation. Privately owned vehicles are used for 86 percent of all personal travel. Air transportation (commercial and general aviation) accounts for 8.5 percent of personal travel, and public transportation accounts for 2.8 percent.

Source: Federal Highway Administration, Nationwide Personal Transportation Survey, 1983-1984.

# Freight Transportation by Mode

The Nation's highway system carries 29 percent of the total revenue ton-miles of freight.

Source: U. S. Department of Transportation, National Transportation Statistics, Annual Report, August 1989.





# **Gross National Product and Travel Relationship**

There is a strong relationship between the Vation's economy and travel on the Vation's highway system. Since the 1930's, growth in the Gross National Product (GNP) and vehicle-miles of travel (VMT) reflect strikingly similar patterns (with the exception of the World War II period), including the periods of energy disruptions during the 1970's. Since the early 1980's, VMT has grown at a slightly higher rate than the GNP.



## Vehicle-Miles of Travel per Capita

Highway travel by Americans, expressed as vehicle-miles of travel per capita, far exceeds highway travel by citizens of other major countries. In 1988, VMT per capita in the United States reached 8,241, a 22 percent increase compared to 1980.





# Percent of Household-Based Motor-Vehicle Travel by Purpose and Trip Length

Earning a living is the primary purpose of household-based motor-vehicle travel; but family and personal business, and social

and recreational purposes also account for major shares of household-based travel.



Source: Federal Highway Administration, Nationwide Personal Transportation Study, 1983 – 1984.

### State Gasoline Tax Rates

Despite significant increases in State motor-fuel tax rates during the 1980's, the weighted average gasoline tax rate expressed in constant 1972 cents has actually decreased by 35 percent from 7.33 cents per gallon to 4.75 cents per gallon.

#### Weighted Average Gasoline Tax





# **Highway Indicators**

Annual vehicle-miles of travel and motorvehicle registrations have nearly doubled since 1968, but highway capital outlay expressed in constant 1968 dollars has actually decreased by 17.6 percent.



# Highway Expenditures per Vehicle-Mile of Travel

In 1988, capital outlay, expressed in cents per vehicle-mile of travel (VMT), was 1.62 compared to 1.02 in 1968 — a 59.5 percent increase. Accounting for inflation, however, capital outlay per VMT was 0.42 — a 58.7 percent decrease. In 1988, total highway expenditures, expressed in cents per VMT, were 3.38 compared to 1.77 in 1968 — a 91 percent increase. Again, when inflation is taken into account, total highway expenditures per VMT were 0.89 — a 49.7 percent decrease. In effect, expenditures by all units of government in relation to travel are about one-half what they were 20 years ago.





6

## Jurisdictional Control of U.S. Roads and Streets

The vast majority (95.2 percent) of all roads and streets in the United States are under the jurisdiction of the State and local governments. Only 184,336 miles (4.8 percent) are under the jurisdiction of the Federal Government and include roads in national forests and parks and roads on military and Indian reservations.

Jurisdiction	Rural Mileage	Percent	Urban Mileage	Percent	Total Mileage	Percent
State Local Federal	704,151 2,244,155 <u>183,363</u>	22.5 71.7 5.8	96,008 642,493 973	13.0 86.9 0.1	800,159 2,886,648 184,336	20.7 74.5 4.8
Total	3,131,669	100.0	739,474	100.0	3,871,143	100.0

# Total Road and Street Mileage by Surface Type

Currently, about 57 percent of all roads and streets are paved, compared with about 23 percent in 1949. Total road and street mileage has increased only 16.7 percent since 1949; however, paved mileage has increased 198 percent.





# Federal-Aid Systems Mileage and Travel

The Federal-aid systems are segments of State and local mileage eligible for funding hrough the Federal-aid highway program. The Federal-aid systems include 22 percent of total road and street mileage but carry 81 percent of total travel.

Mileage					
Federal Aid Systems	Rural	Urban	Total	Percent of Total Mileage	Percent Change 1980 to 1988
Interstate (Arterials)	33.303	11.326	44.629	1.2	+ 8.3
Primary (Arterials)	225,724	33,345	259,069	6.7	-0.1
Urban (Arterials & Collectors)		147.035	147,035	3.8	+ 18.5
Secondary (Collectors)	400,081		400,081	10.3	+ 0.5
Total Federal- Aid Systems	659,108	191,706	850,814	22.0	+ 3.4
Not On Federal- Aid Systems	2,472,561	547,768	3,020,329	78.0	-0.5
Total All Roads and Streets	3,131,669	739,474	3,871,143	100.0	+ 0.4

Travel on the Federal-aid systems has increased 35.1 percent since 1980. The greatest growth (60.4 percent) occurred on segments of the Interstate System in urban areas. Travel on all roads and streets has increased 32.6 percent since 1980.

Annual Vehicle-Miles of Travel (Millions)							
Federal Aid Systems	Rural	Percent Change 1980 to 1988	Urban	Percent Change 1980 to 1988	Total	Percent of Total Travel	Percent Change 1980 to 1988
Interstate (Arterials) Primary (Arterials) Urban (Arterials &	181,284 308,413	34.2 19.0	258,662 272,160	60.4 41.2	439,946 580,573	21.7% 28.7%	48.5 28.5
Collectors) Secondary			444,492	35.5	444,492	21,9%	35.5
(Collectors) Total Federal-	175,429	27.4			175,429	8.7%	27.4
Aid Systems Not On Federal-	665,126	25.0	975,314	43.0	1,640,440	81.0%	35.1
Aid Systems	152,431	8.8	232,715	34.2	385,146	19.0%	22.9
Total All Roads and Streets	817,557	21.7	1,208,029	41.2	2,025,586	100.0%	32.6



Roads and streets are grouped into functional classes according to the type of service they provide. The arterial system (including the Interstate System) accounts for about 10.5 percent of the Nation's total roads and streets but carries 70.1 percent of total travel.

The Highway System

The Interstate System accounts for only 1.2 percent of the Nation's total miles of roadway; however, 21.7 percent of total travel occurs on this system. Conversely, local roads account for 68.6 percent of the Nation's total road and street mileage but only 13.6 percent of total travel.







# **Functional Classification**

*Arterial* (including Interstate and other freeways) — The highest classification of roads and streets. Arterials provide the highest level of mobility, at the highest speed, for a long uninterrupted distance.

*Collector* — Provides a lower level of mobility than arterials at lower speeds and for a shorter distance. Collectors connect local roads with arterials and provide some access to abutting land.

*Local* — The lowest classification of roads and streets. Local roads provide a high level of access to abutting land, but limited mobility.



# Pavement Conditions of Interstate and Other Arterial Highways<sup>1</sup>

The physical condition of the Nation's highways is a priority at all levels of government. The percentage of pavements in poor condition (in need of capital improvements) declined steadily across all functional systems in the years immediately following the passage of the Surface Transportation Act of 1982. For the period 1985 through 1988, pavement conditions on the Interstate System have remained somewhat stable with a slight decline in conditions on rural Interstate segments. For the same period, pavement conditions on the arterial and collector systems continue to show some improvements.



### Interstate (Rural and Urban)



<sup>1</sup> More complete information on condition and performance may be obtained from the report of the Secretary of Transportation to the United States Congress. *The Status of the Nation's Highways: Condition and Performance and Highway Bridge Replacement and Rehabilitation Program.* 



# Travel Congestion on Urban Interstates<sup>1</sup>

Travel congestion on urban segments of the Interstate System is increasing dramatically. In 1988, 68 percent of peak hour travel on the urban Interstate occurred under congested conditions compared to 47 percent in 1978.



## Bridge Conditions<sup>1</sup>

Forty percent of the Nation's estimated 578,218 bridges are structurally deficient or functionally obsolete. Twenty-seven percent of the 276,243 bridges on the Federal-aid systems are structurally deficient or functionally obsolete.

A *structurally deficient* bridge is closed or restricted to light vehicles only because of deteriorated structural components. Structurally deficient bridges are not necessarily unsafe. Strict observance of signs limiting traffic or speed on bridges will generally provide adequate safeguards for those using the bridges.

A *functionally obsolete* bridge is one that cannot safely service the volume or type of traffic using it. These bridges are not unsafe for all vehicles, but have older design features that prevent them from accommodating current traffic volumes and modern vehicle sizes and weights.

	<u>Federa</u>	<u>II-Aid</u>	<u>Off Fede</u>	<u>ral-Aid</u>	<u>Total Fec</u>	leral-Aid
	Syste	Ims	<u>Syste</u>	ms	Syste	ems
	Number	Percent	Number	Percent	Number	Percent
Structurally Deficient	36,796	13.3	93,594	31.0	130,390	22.5
Functionally Obsolete	39,081	14.2	61,918	20.5	100,999	17.5
All Other Bridges	<u>200,366</u>	<u>72.5</u>	<u>146,463</u>	<u>48.5</u>	<u>346,829</u>	<u>60.0</u>
Total Bridges in Inventory	276,243	100.0	301,975	100.0	578,218	100.0

See footnote 1, page 10.



## **Motor-Vehicle Fatalities**

After a series of declines from 1979 to 1983, highway fatalities increased in four of the last five years. In 1988, there were 47,093 highway fatalities in 42,119 fatal accidents. Of the 47,093 fatalities, 5,110 or 11 percent occurred on the Interstate System. An estimated 50 percent of highway fatalities in 1988 were alcohol related.

The reported use of seat belts continues to rise dramatically. Seat belt use in States that have use laws now averages about 50 percent.

#### Fatalities (Thousands)

**Travel (Trillion Vehicle Miles)** 



## **Fatality Rates**

The fatality rate — fatalities per 100 million vehicle-miles of travel (VMT) — on all highway systems continues to decline. In 1988 the fatality rate reached 2.3 — a 56.6 percent decrease compared to 1968. The decrease in the fatality rate occurred despite a 99 percent increase in highway travel and an 88 percent increase in motorvehicle registrations during the period 1968 to 1988. The fatality rate on the Interstate System is about one-half the rate on all highway systems.



#### (Fatalities per 100 Million VMT)



# Fatality Rate by Age Group

Younger and older drivers have the highest fatality rates among drivers of all age groups. The fatality rate among drivers 80 years of age and older (12.2) is 1,255 percent greater than the rate for drivers 40-59 years of age (0.9). The fatality rate for drivers 16-19 years of age (5.6) is 522 percent greater than the rate for drivers 40-59 years of age.

#### (Fatalities Per 100 Million VMT)



Source: National Highway Traffic Safety Administration, Older Drivers: The Age Factor in Traffic Safety, February 1989.

## **Fatalities Involving Heavy Trucks**

There were 4,960 fatalities in accidents involving heavy trucks in 1988. Occupants

in other vehicles accounted for 3,737 or 75 percent of the fatalities involving heavy trucks.



Source: National Highway Traffic Safety Administration, Fatal Accident Reporting System, 1988.



# **Motor-Vehicle Registrations**

The number of registered motor vehicles continues to increase steadily. Automobile registrations have increased 16.2 percent (22,8 million) since 1980 while truck registrations have increased 26.3 percent

(8.9 million). Light single-unit trucks have seen a phenomenal growth in popularity since 1980 and now account for 19.1 percent of total registered motor vehicles.





# **Motor-Vehicle Retail Sales**

Total motor-vehicle retail sales averaged 15,500,000 units for the period 1984 through 1988 and reached an all-time peak of 16,323,000 units in 1986. Retail sales of automobiles accounted for 67.4 percent of total sales in 1988 compared to

78.3 percent in 1980. This decrease reflects the growing popularity of light trucks as personal vehicles. Retail sales of trucks reached a record 5,149,000 units in 1988, an increase of 107 percent compared to 1980.







# Average New-Car Selling Price

The average price of a new car reached \$14,485 in 1988, an increase of 6.4 percent over the 1987 average price of \$13,613 and a 127 percent increase compared to the 1978 average price of \$6,379.



Source: U.S. Department of Commerce, Bureau of Economic Analysis, Average Transaction Price Per New Car.

## Passenger Cars in Use by Age (as of July 1)

The average age of passenger cars in use in 1988 was 7.6 years compared to

6.6 years in 1980, 6.0 years in 1975, and 5.6 years in 1970.





# **Cost of Ownership and Operation**

(4-year, 60,000-mile cycle)

Size	<b>Large</b> 8-Cylinder 4-door Model	Cost (Cents per Mile) <sup>1</sup> 34.9
	<b>Medium</b> 6-Cylinder 4-Door Model	31.5
	<b>Small</b> 4-Cylinder 4-Door Hatchback	25.7
	Average	30.6

Source: American Automobile Association, Your Driving Costs, 1988. Primary source of the data is Runzheimer International, Rochester, Wisconsin.

<sup>1</sup>Includes fuel, oil, tires, maintenance, insurance, depreciation, finance charges, and taxes.

# **Ownership and Operating Costs** by Category (Based on Average Cost of 30.6 Cents per Mile)

The Federal Highway Administration estimates that combined Federal and State motor-fuel taxes currently account for only about 3.4 percent of the cost per mile of owning and operating an automobile compared to 6.4 percent in 1968.



# Licensed Drivers by Age

There were an estimated 164,912,000 licensed drivers in the United States in 1989. Although the 20-39 age groups contain the largest percentage of licensed drivers, the average age of licensed drivers is shifting upward as older drivers continue to hold licenses. Drivers age 60 and older now represent 18.4 percent of total licensed drivers compared with 16.3 percent in 1980.



# Licensed Drivers by Sex

Forty-eight percent (79,697,000) of the estimated 165 million licensed drivers in 1989 were women. The number of female

drivers has increased 17 percent since 1980 compared with a 10.4 percent increase in male drivers.



#### (Millions)



# Licensed Drivers, Population, and Motor Vehicles

In 1950, 57 percent of the driving age population was licensed to drive a motor vehicle. By 1988, 86 percent of the driving age population was licensed drivers. There were 1.26 licensed drivers for every registered motor vehicle in 1950. In 1972 the ratio was about one to one, and by 1989 it had fallen to 0.87 or 1.1 vehicles per licensed driver.



# **Total Highway-Fuel Consumption**

Total highway motor-fuel use reached an all-time peak of 131.1 billion gallons in 1989, an increase of 15.6 percent compared to 1982 — the lowest point in highway motor-fuel use since 1975. Highway use of gasoline increased 12.1 percent during the period 1982 to 1989, but leveled off at 110 billion gallons in 1988 and 1989.

On the other hand, private and commercial highway use of special fuel (diesel)

increased 38.9 percent during the period 1982 to 1989, an annual increase of 4.8 percent.

Gasohol sales increased dramatically from 500 million gallons in 1980 to 7.807 billion gallons in 1985. Since 1985, gasohol sales have remained relatively constant at the 8 billion gallon level.



#### (Billions of Gallons)



# Vehicle-Miles of Travel, Motor-Fuel Consumption, and Miles-per-Gallon of Fuel for All Vehicles

Indices for vehicle-miles of travel, motorfuel consumption, and average vehicle fuel efficiency (miles-per-gallon) reflect significant increases during the 1980's. Annual vehicle-miles of travel have increased by 60.8 percent since 1972 and by 32.6 percent since 1980. Motor-fuel consumption has increased 23.6 percent since 1972 and by 13 percent since 1980. The average miles-per-gallon for all motor vehicles has increased by 30.1 percent from 11.99 in 1972 to 15.6 in 1988 and by 17.4 percent since 1980.



# Vehicle-Miles of Travel

Annual travel on the Nation's highways reached an estimated 2.026 trillion vehiclemiles in 1988, an increase of 5.4 percent over 1987 and an increase of 32.6 percent compared to 1980. Total travel for 1988 equates to an average of approximately 10,985 miles-per-vehicle annually. Annual travel on roads and streets in urban areas accounted for 1.208 trillion vehiclemiles or 59.6 percent of total travel — an increase of 41.2 percent compared to 1980. Annual travel on roads and streets in rural areas increased by a more modest 21.7 percent compared to 1980.





# Rural Interstate Travel by Vehicle Type

On rural Interstate routes in 1988, combination trucks with 5 or more axles accounted for 15 percent of average daily traffic volumes but 92 percent of equivalent axle loads<sup>1</sup>. All other vehicles accounted for 85 percent of traffic volumes but only 8 percent of axle loads. Traffic volumes on rural Interstate routes by combination trucks with 5 or more axles increased by approximately 26.2 percent and equivalent axle loads increased by approximately 35.3 percent compared to 1980.





<sup>1</sup> Equivalent axle loads provide a means of measuring vehicle wear on pavements based on a common denominator for all vehicles.

<sup>2</sup> All 2-axle, 4-tire trucks. Includes pick-up trucks, panel trucks, vans, and other vehicles (such as campers, motor homes, etc.).

<sup>3</sup> All vehicles on a single frame have either 2 axles and 6 tires or 3 or more axles (including camping and recreational vehicles and motor homes).

Source: Highway Statistics 1988 (from data collected at truck weight sites).

# 24 Travel

# Travel by Vehicle Type

Travel by 2-axle, 4-tire trucks has increased over 250 percent compared to 1970 and now represents 21.4 percent of total annual vehicle-miles of travel versus 11.1 percent in 1970. Travel by combination trucks has increased over 150 percent compared to 1970 and now accounts for 4.5 percent of total annual travel versus

3.2 percent in 1970. Although travel by passenger cars has increased 55.9 percent compared to 1970, the percentage of annual travel by passenger cars in relation to travel by all vehicles has decreased from 82.6 percent in 1970 to 70.6 percent in 1988.

#### Travel Index (1970 = 100)



.....





Source: Federal Highway Administration, Nationwide Personal Transportation Study, 1983 - 1984.



# **Federal Highway Trust Fund Receipts**

Federal Highway Trust Fund (HTF) receipts, including interest and receipts credited to the Mass Transit Account, reached \$16.873 billion in fiscal year 1989. Motor-fuel tax receipts, the largest source of income for the HTF, accounted for

86.1 percent or \$13.460 billion. Receipts from other taxes accounted for
\$2.167 billion. Interest on investments accounted for \$1.245 billion, or 7.4 percent of total HTF receipts.

#### (Billions of Dollars)



Note: Includes Mass Transit Account. Transition quarter included with FY 1976.

27

## Federal Highway Trust Fund Balance and Commitments

The balance in the Highway Trust Fund has grown from \$9.581 billion at the end of fiscal year (FY) 1983 to \$16.608 billion at the end of FY 1989. During this period, the balance in the Mass Transit Account has increased from \$519 million to \$6.057 billion while the balance in the Highway Trust Fund for highway programs has increased from \$9.062 billion to \$10.551 billion. Unpaid commitments for highway programs were \$31.685 billion at the end of FY 1989, or \$21.134 billion greater than the balance available. (Unpaid commitments which exceed the balance available will be paid by future highway user fees accruing to the Highway Trust Fund.) Unpaid commitments for the Mass Transit Account were \$4.144 billion at the end of FY 1989, or \$1.913 billion less than the balance available.





Note: The Highway Trust Fund was established July 1, 1956; the Mass Transit Account was established April 1, 1983.

# Federal-Aid Highway Obligations by the Type of Improvement (1984 - 1988)

Obligations of Federal-aid highway funds totaled \$71.4 billion for the 5-year period 1984 through 1988 — an average of

\$14.3 billion per year. Resurfacing and rehabilitation work represented the largest portion of obligations during the period.



### Highway Receipts by Category Highway Expenditures by Function

Total receipts for highways by all units of government reached \$69 billion in 1988 a 270-percent increase compared to 1968. Highway-user fees, which make up the largest share of receipts, account for 60.3 percent compared to 69.3 percent in 1968. General fund appropriations make up a growing share of highway receipts and now account for 16.5 percent of the total compared to 9.7 percent in 1968. Capital outlay currently accounts for 48.1 percent of highway expenditures compared to 57.5 percent in 1968; maintenance accounts for 27.6 percent compared to 22.3 percent in 1968. Expenditures for administration, highway patrol, and bond interest also account for an increasing share of total expenditures — 20.5 percent in 1988 versus 14.3 percent in 1968.



29

# Highway Receipts and Expenditures by Governmental Unit

State governments account for the largest shares of highway receipts and expenditures, but the shares attributed to local units of government have increased significantly compared to 1968. Municipalities and counties now account for 27.9 percent of total receipts and 38 percent of total expenditures compared to 19.0 percent and 29.5 percent, respectively, in 1968. Receipts collected by the Federal Government for highways have increased over 200 percent compared to 1968; however, the relative share of total receipts has decreased from 27.2 percent in 1968 to 22.4 percent in 1988.



# 30 Financing Our Highways

## Highway Capital Outlay and Maintenance Expenditures by All Units of Government<sup>1</sup>

Highway capital outlay in 1988 increased 218 percent compared to 1968; however, due to inflation, capital outlay in 1988 (expressed in constant 1968 dollars) was actually 17.7 percent below the 1968 level. Maintenance expenditures in 1988 increased 374 percent compared to 1968. Again, however, accounting for inflation, maintenance expenditures in 1988 were only 13.9 percent above the 1968 level.





# **Highway Price Trends**



	_	
	_	

# Federal Highway-User Fees<sup>1</sup>

User Fee Type	Rate on January 1, 1990
Gasoline	\$.09/gallon <sup>2</sup>
Gasohol	\$.03/gallon²
Diesel Fuel	\$.15/gallon <sup>2</sup>
Other Special Fuels	\$.09/gallon <sup>2</sup>
Tires	0 - 40 lbs.: No tax. 40 - 70 lbs.: \$.15 for every lb. over 40 lbs. 70 - 90 lbs.: \$4.50 + \$.30 for every lb. over 70 lbs. Over 90 lbs.: \$10.50 + \$.50 for every lb. over 90 lbs.
Truck and Trailer Sales	12% of retailer's sales price for trucks over 33,000 lbs. gross vehicle weight (gvw) and trailers over 26,000 lbs. gvw.
Heavy Vehicle Use (annual tax)	<i>Trucks 55,000 lbs. gvw to</i> <i>75,000 lbs. gvw:</i> \$100.00 plus \$22.00 for each 1,000 lbs. (or fraction thereof) in excess of 55,000 lbs.
	Trucks over 75,000 lbs. gvw: \$550.00

See Table FE 101, Highway Statistics, for a more complete description of Federal highway user fees.
\*Excludes the 0.1 cent per gallon tax on motor fuel dedicated to the Leaking Underground StorageTank Fund.

# **Highway Trust Fund Authorizations**<sup>1</sup> for FY 1990 and 1991<sup>2</sup> (in Millions of Dollars)

Selected Programs	FY 1990	FY 1991
Interstate Construction <sup>3</sup>	\$3,150	\$3,150
Interstate 4R <sup>3.4</sup>	2,815	2,815
Interstate Substitute (Highway)	740	740
Primary⁵	2,375	2,375
Secondary	600	600
Urban	750	750
Bridge Replacement and Rehabilitation	1,630	1,630
Hazard Elimination	170	170
Rail Highway Crossings	160	160
Minimum Allocation	1,198	6
Highway Safety (FHWA and NHTSA)	172	177
Motor Carrier Safety Assistance	59	60
Emergency Relief	1,1007	100
Demonstration Projects	220	178
Other Programs, Projects, and Studies	283	235
Total\$	15,422	\$13,140 <sup>8</sup>

<sup>1</sup>Authorized by Surface Transportation and Uniform Relocation Assistance Act (STURAA) of 1987 and by the 1990 Appropriations Act Authorized by sinate fransportation, become mercellation assistance Act (3) of AA) of 1967 and by the 1997 Applicit and a polytical state for the Department of Transportation, Does not reflect amounts sequestered from funds authorized by the STURAA of 1987. Excludes authorizations for mass transportation programs. "Fiscal year starts October 1 and ends September 30. "Interstate and Interstate 4R funds are made available 1 year in advance of the year for which they are authorized. "Resurtacing, rehabilitation, restoration, and reconstruction.

<sup>5</sup>Includes primary minimum (S50 million).
 <sup>6</sup>Amounts are determined each year.
 <sup>7</sup>Authorization increased by FY 1990 Appropriations Act to repair damages to roads and streets resulting from Hurricane Hugo and the

earthquake in California. 9 Excludes minimum allocation funds.

# 32 Selected Statistics by State -- 1988

State	Total	Total	Motor Fuel	Total	Annual
	Megistered	Licensed	Consumption	Hoad and	Vehicle-Miles
	venicies	Drivers	of Gallons)	Mileage	of Travel (Millions)
Alabama	3.880.981	2.097.596	2,464,567	90.418	39 684
Alaska	361,883	300,000	253,121	12,189	3,841
Arizona	2.704,872	2.351,903	1,969,299	70,282	34.247
Arkansas	1,427,050	1,676,863	1,600,639	77,094	19,219
Calorada	21,336,964	18 925,973	14,338,454	162,562	241,575
Connecticut	2,651,927	2,369,966	1,566,958	19,798	27,665
Delaware	511,940	468,844	390,366	5,387	6,404
<ul> <li>District of Columbia</li> </ul>	264 023	391,775	203 603	1,102	3,405
Florida	10,983,654	8,789,843	6,530,151	104,589	105,319
Hawaii	704 711	634 880	271.004	4 091	7 410
Idaro	940 178	707 561	537 504	4,001	7,419 P 107
Illinois	7,864,935	7,262,508	5,586,497	135.506	78,483
Indiana	4,169,240	3,773,008	3.282.454	91,588	61124
lowa	2,567,746	1,886,950	1,627,774	112,488	21,907
Kansas	2,209,913	1,705,869	1,556,681	132,965	21.161
Kentucky	2,795,077	2,367,574	2,319,607	69,848	31,614
Louisiana	041 072	2,597,965	2 344 226	58,422	34,682
Manland	941,275 • 3469.247	000,720	C10,657	21,965	11,401
Massachusetts	3.818.312	4,249,814	2 742 165	33 809	43 334
Michigan	7 141 491	6.388.518	4,729,456	117 895	77 899
Minnesota	3,210,357	2,478,925	2,279,037	129,644	36,447
Mississippi	1,786,859	1.813,559	1.519,425	72,169	22.043
Missouri	3,794,442	3,511,676	3,217,961	119,888	45,570
Montana	722,554	534,457	529,515	71.471	8,138
Nebraska	1,328,232	1,088,104	936,289	92,495	13,407
New Hampshire	928 114	798 336	570.068	14 711	0.507
New Jersey	5,737,852	5 451 556	3 868 771	34 197	58.671
New Mexico	1,266,560	1,047,261	1.003.016	53.938	15.283
New York	9,837,608	10,143,464	6,189,059	110 613	103.692
North Carolina	5,022,628	4,421,934	3,859,046	93,813	57.943
North Dakota	655,084	431,806	412,784	86,311	5,765
Onio	8,612,018	7,378,737	5,622,167	113,340	81,990
Oregon	2,315,691	2 170 124	1 622 537	93 595	32.388 25.204
Pennsylvania	1,706 029	2:731.880	3,526,146	116 084	81 238
Rhode Island	670,813	666,248	424,359	5,846	5.853
South Carolina	2,413,912	2'305.583	1.1.817,172	63,702 -	31,759
South Dakota	692,632	482,575	453,307	73,420	6,634
	4,225,490	9,198,978	3 023 399	83 638	44,193
Texas	12,400,213	11,080,702	9,826,195	300,444	156,458
Vermont	452.846	406 194	324 340	14 089	5 552
Virginia	4,670,337	4,129,510	3,509,683	66.892	57 453
Washington	3,887,314	3,198,023	2,431,110	81,546	41,813
West Virginia	1,286,634	1,308,212	996,834	94,573	13,884
Wisconsin	3,901,106	3,268,207	2,436,538	109,629	42,458
	481,986	348,946	443,846	40.502	6,658
U.S. IUTAL	164,396,732	102,853,255	129,885,880	3,871,143	2,025,586

<sup>1</sup>All units of government. 1987 data. <sup>2</sup> Fiscal year (October 1 — September 30).

Selected Statistics by State -- 1988 33

Total Highway Fatalities	Fatalities per 100 Million VMT	Total Highway Capital Outlay	Total Dis- bursements for Highways	Payments into the Federal HTF	Apportion- ments from the HTF <sup>3</sup>
		(Thousands)	(Thousands)	(Thousands)	(Thousands)
1,023	2.58	\$ 390,253	\$ 880,586	\$ 232,864	<b>\$</b> 414,180
97 017	2.53	267,055	539,416	22,295	172,143
610	≤ / <b>9</b> 3.17	314,906	582.993	196305	218,487 142,581
5,390	2.23	2.234,058	5,049,534	1,374,187	1,376,210
497 497	1.80	452,541	930,467	163,983	208,926
160	2.50	114.678	277.771	40.363	463,559
60	1.76	85.673	143 133	19,354	89,874
3,078	2.92	1,616,987	2,933,232	623,441	467,303
148	1.99	104.527	235.886	32.092	145.774
257		137.261		56,222	165.724
1,837	2.34	1,402,458	2,758,720	467,284	504,861
557	2.54	470.124	1.022.192	155.178	295,017 214,016
483	2,28	361,742	828,976	163.793	148,364
838	2.65	578,334	1,211,317	183,436	172,167
255	2.24	115.139	351 390	225 623 81 543	2/5.5/h 74 107
782	2.09	892:288	1,670,772	236.645	418,552
725	1.67	470,652	1,441,158	259,550	561,967
612	2.19 1.68	411.663 982.647	2 008 7 /9	423,069 214 D64	380,719 311 732
722 \	3.28	336.492	701.642	169,250	152,803
1,103	2.42	470,003	1,117,480	329,941	262,891
261	2 - 2 1 95	183,076 . 224,318	497 183	91 949	113 239
286	3.18	137,719	270.651	68,967	94,5/9
166	1.75	104,064	325,406	52,962	75,473
487	1./9 3.19	1.012,273 262 718	2 184,348 495,690	404,516	523,750 113,456
2 255	2117	1,913,801	4,668,167	327,776	757,130
1,573	2.71	549,911	1,259,152	395,886	309,191
1.763	2.15	972 924	2 168 263	44.785 531.419	79,699 460,873
634	1.96	430,009	883,358	220 911	212 817
677	2.69	399,738	773,551	167,349	152,191
125	2.30 2.14	155,584	3,463,169 246,144	570.009 43.765	528,598 106,965
1.034	3.26	308.242	636,632	194,184	211,049
147	2.22	142,341	285,486	47,182	89,349
3,393	2.17	2,758,989	5,209,745	985 541	205,813 909,948
297	2.24	220,295	394.815	93,388	201.671
129	2.32	79,889	189,574	32,241	54,779
778	1.86	731,309	1,457.836	343,128 241,335	393.550 371.452
460	331	365.102	710,309	100,222	127,893
807 195	1.90	572,989	1,599,833	248,973	203,046
47,093	2.32	\$30,656,323	\$64,873,503	\$12,836,427	\$14,912,415
		· · · · · · ·			···,•·-,··

<sup>3</sup> Includes allocations.

.

# 34 Selected Statistics by State - 1988

State	Resident Population (Thou- sands)	Licensed Drivers per 1000 Population	Registered Motor Vehicles per 1000 Population	Licensed Drivers per Motor Vehicle	Persons per Registered Motor Vehicle
Alabama	4,102	511	946	0.54	1.06
Alaska	524	573	691	0.83	1.45
Arizona	3,489	674	775	0.87	1.29
Arkansas	2,395	700	596	1.18	1.68
Galifornia	28,314	668	/54	0,89	1.33
Colorado	3,301	674	886 906	U.76	1.13
	55255 660	733	620 776	0.03	1.22
District of Columbia	617	710	428	148	1.23 2.34
Florida	12,335	713	890	0.80	1.12
Georgia	6.342	684	819	0.83	f.22
Hawaii	1,098	578	642	0.90	1.56
Idaho	1,003	705	937	0.75	1.07
Illinois	11,614	625	677	0.92	1.48
Indiana	5,556	679	750	0.90	ing a state of 1.23
lowa	2,834	686	906	0.73	1.10
Kansas	2,495	684	880 760	0.47	113
Кепциску	3,727	035 500	750 666	0.85 0.88	1.33
Maine	4 400 1 205	009 710	000 781	0.92	1.28
Marvione	4 622	679	701 780	0.90	1.20 1.00
Massachusetts	5.889	722	648	1.11	1 54
Michigan	9.240	691	773	0.89	1,29
Minnesota	4,307	576	745	0.77	1.34
Mississippi	2,620	692	682	1.01	1.47
Missouri	5,141	683	738	0.93	1.35
Montana	806	664	898	0.74	
Nebraska	1,602	679	829	0.82	1.21
Neveda	1.054	/11	701 0FF	0.93	1 30
New Hampshire	1,085	736	000 740	0.80 0.65	1.17 + 07
New Mexico	1 507	605	749 840	0.95	1 10
New York	17,909	566	549	1.03	1.82
North Carolina	6,489	681	774	0.88	1.29
North Dakota	667	647	982	0.66	1.02
Ohio	10,855	680	793	0.86	1.26
Oklahoma	3.242	685	788	0.87	1 27
Oregan	2,767	784	837	0.94	1.19
Pennsylvania	12,001	644	044	1.00	1.55
Rhode Island	993	0/I	0/0 COC	0.99	1.48 • • • •
South Dakota	713	677	030 071	0.90	1.03
Tennessee	4,995	654	863	0.70	1.00
Texas	16,841	658	737	0.89	1.36
Utah	1.600	578	686	0,84	1,46
Vermont	557	729	813	0.90	1.23
Virginia	6 015	687	176	0.88	1,29
Washington	4,648	688	836	0.82	1.20
west virginia	1,876	697	586	1.02	1.46
Mucroine	- 4,855 #70	6/3 	804 1 მიმ	0.84 0.79	1.24 A DA
U.S. TOTAL	245,807	663	750	0.88	1.33

# 1988 Relationships — Populatic

Vehicle relationships exclude motorcycles.

# ivers, Vehicles, Fuel, and Travel<sup>1</sup>

Gallons of Fuel per	Miles per	Annual Miles per	Vehicle Miles per	Vehicle Miles per Licensed Driver 18.919	
Vehicle	Gallon	Vehicle	Capita		
635	16.10	10,225	9,674		
699	15.17	10,614	7,330	12,803	
728	17.39	12,661	9,816	14,561	
1,122	12.01	13,468	8,025	11,461	
672	16.85	11.322	8,532	12,764	
581	16.29	9,463	8,381	12,427	
091 700	10.00	9,828	8,001 0,702	10,997	
703	10.41	12,509	9,703 E.E.10	13,009	
595	16.13	9 589	8 538	11 982	
803	14.56	11 090	0,000 0,917	14,302	
528	19.95	10.528	6.757	11.686	
572	15.12	R 544	8:103	1 486	
710	14.05	9.979	6.758	10,807	
787	15 57	12.262	9,202	13,650	
634	13.46	8,532	7,730	11,610	
704	13.59	9,575	8,481	12.405	
830	13.63	11,311	8,482	13,353	
798	14,79	11,806	7,868	13,350	
786	15.41	12,112	9,461	13,154	
876	16.00	10,812	8,113	11,954	
718	15.80	11,349	7,358	10,197	
662	16.47	10,908	8,431	12,194	
/10	15.99	11,353	8,462	14,703	
850	14.51	12,336	8,413	12 155	
040	4. 0 +£ 07	12,010	0,004 10,100	12,977	
705	14.32	10.004	0,100 8,360	10,627	
986	19 RA	10,034	8,528	12,021	
614	16.68	10 243	8 762	11 909	
674	15.17	10 225	7 599	10,762	
792	15.24	12.067	10.141	14,593	
629	16.75	10 540	5,790	10,223	
768	15.01	11,536	8,929	13,104	
630	13,97	8,800	8,643	13,365	
653	14.58	9,520	7,553	11,112	
770	16.46	12,681	9,990	14,594	
701	15.53	10,884	9,109	11,614	
712	14.70	10,461	6,769	10,507	
633	13.79	8,725	5,894	8,785	
/58	17,48	19,157	9,152	13.775	
054 7+2	14.63	9,578 10,150	9,304	13,747	
/10 700	15 02	12 611	0.30.5 0.20	12,015 17,120	
13L 778	10.52	11.420	5,230 7 RAR	14, 120 12 560	
716	17 12	12.262	9369	13 671	
751	16 37	12.302	9.552	13,913	
625	17.20	10,756	8.996	13,075	
775	13.93	10,791	7.401	10,613	
625	17.43	10,884	8,745	12,991	
921	12.75	11.739	11,812	16,215	

# Areas With Por

Prime State         Other Other         Population (1,000)         Area (Sq. Miles)         Square Mile Mileage           NEW YORK_NORTHEASTERN NJ         NY         NJ         15.724         1.126         4.935         35.111           LOS ANG FICE FICH POM ONT         CA         11.059         2.100         5.956         24.564	
NEW YORK NORTHEASTERNING INV NJ 15724 2186 4936 35.011	
CA CACO NORTH CITE CITE CITE CALL IN 17,035 2,100 3,200 24,504 CALL IN 17,035 2,100 24,504 CALL IN 17,035 2,100 CALL IN 17,055 2,100 CALL IN 1	
DETROLOGICO OAKLAND CA 3,564 816 4,367 8,926	
SALINGTON         DO         MD         VA         3.04         82.0         3.708         8.849           DALLAS ECDET WORTH         TY         3.020         1.404         2.158         17.08         17.99	
POISTON 16425 BOSTON MA 2750 1033 2671 9208	
SANDIFGO 2,01 2,00 SANDIFGO 2,101 2,01 ST LOUIS MO II 1944 664 2,801 7,225	
MANNAAPOLIS ST PALL MN 1928 996 1835 8852 BALTIMORE MD 1906 523 3644 5.851	
PHOENIX 971 1886 203 MIAMI EI 1819 442 4.115 5.607	
PATTSEURCH PA 510 713 2338 7437 ATLANTA GA 1.769 1.538 1.150 8.577	
CLEVELAGO 2782 029 2.785 5.515 SFATTLE-EVERETT WA 1.634 644 2.537 6.637	
DENVER         CO         135         633         2.579         5.661           SAN JOSE         CA         1.373         326         4.211         3.723	
FORTLAUDE BLACE HOLLYWOOD         1.203         303         3.269         1.207           KANSAS CITY         MO         KS         1.197         608         1.968         7,075	
WI WI 198 050 2,141 1,263 SAN ANTONIO TX 1,165 442 2,635 5,658	# <b>E</b> I
CINCINNATI         OH         KY         1.143         564         2.026         .2761           PORTLAND         OR         WA         1.099         416         2.641         4.873	
NOW OFFICENS LA 1054 361 2,919 2,983 BUFFALO NY 1,054 405 2,602 3,542	
SAN BERNAHDING TAVE 1510         CA         036         160         2.162         037           SACRAMENTO         CA         1.023         340         3.008         3.207	
OT PETERSBURG FL B3 554 1770 1243 NORFOLK-PORTSMOUTH VA 894 809 1.105 3.358	
MEMPHIS TN ABIMS 871 400 2.77 3.083 INDIANAPOLIS IN 863 422 2.045 3.775	
PROVIDENCE PAW FUCKET WARWICK         FI         VA         362         530         1.608         3.168           COLUMBUS         OH         834         305         2,734         3,169	
COLISY/LLF         KY         IN         804         399         2/233         2/0/9           SALT LAKE CITY         UT         787         460         1,710         2,679	
UTELANUU 1822 3149 JACKSONVILLE FL 718 534 1,344 3,605	
TAMPA FL 664 392 1.693 3.244	
BIRMINGHAM AL 638 518 1.231 4.251	
NY         613         311         1.971         2.355           NACLUAL TYAL BOOM         TN         200         200         200	
HARTFORD CT 601 357 1.683 2.364 DAVION 0F 595 248 2.993 2.625	t zak
OMAHA NE IA 584 213 2,741 2,304 AUSTIN 543 121 4467 2,489	
EL PASO TX 536 185 2.897 2.536 SPRINCHEDICHICOPEE HOLYOKE MAC DT 532 339 1.575 2.500	
RICHMOND VA 533 281 1,896 2.274 AKRON 516 210 2,598 2,538	1141

\* Annual average daily traffic.

NA – Data not available.

Source: All data, except rail, reported by States through the Highway Performance Monitoring Study. Rail data is from Urban Mass Transportation Administration 1987 Annual Report, Section 15, Table 3.16, and is the sum of Rail Rapid and Commuter Rail data

# Federal-Aid Urbanized Area Data - 1988

# n Above 500,000

Total Freeway/ Expressway Mileage	Total Daily Highway Vehicle-miles (1,000)	Total Daily Freeway Vehicle-miles (1,000)	Daily Rail Passenger Miles (1,000)	Daily Vehicle- Miles per Capita	Average AADT* Total	% of Travel Served by Freeways	Average AADT on Freeways
1036	221.433	78,005	29,617	14.0	6,307	35.2%	/5 294
594 393	234,414	102,138 31,964	3,665	21.1 15.6	9,543 5,004	43.5% 28.2%	171,949 81,540
272 2/1	64,247 76,623	16,675 25,414	2,243	15.5 19.6	5,910 5,972	25.9% 38.1%	61,305 93,778
342 287	74,792 61,477	40,367 23,969	1,907 2,388	20.9 20.2	8,379 7,363	53.9% 38.9%	118,032 83,515
432 306	75,995 69,174	32,771 27,291		25.0 24,7	4,237 4,212	43.1% 39.4%	75,858 89,088
257 229	49,262 47,478	22,715 25,035	N/A	17.8 22.0	5,350 8,612	46.1% 52.7%	88,385 109,323
269 291-	40,784 41,426	17,383 16,420	471.47	20.9 21.4	5,645 4,680	42.6% -33.6%	64,620 56,420
230 94	33,333 38,059	13,919 5,551	116	17.4	5,697 5 284	41.7%	60,517 59,053
103 208	33,538 30,494	9,886 6 858	219 10	18.4 8.8	5.981 4.100	29.4% 22.4%	95,980 32,971
264 216	57,210 29,728	22.968	781 106	32.3 16.9	6.670 5.300	40.1% 42.6%	87.000 58.662
173 176	39,030 29,870	15,280 10,489	842.8 M.	23.8 18 6	5,881 4,926	39.1% 36.3%	88,323 63,186
163 - 91	31,092 24,347	14,954 5,856	C. M. C. A	22.6 20.2	8,351 5,787	48.0% 24.0%	91 742 64 35
303 105	25.272 27.809	12,222 7,134		21.1 23.6	3,572 5,839	48,3%	40,336 67,942
151 158	22,913 22,433 -	8,856 9,752		19.6 19.6	4,050 5,965	38.6%	58.649 61.721
127	21,202 17,088	8,157 4,760		19.2 16.2 f	4,351 5,728	38.4% 27.8%	64,228 75,555
145 115	16,819 121,536	5,083 10,552		15.9 20.7	4,748	30.2% 49.9%	35,055
96 40	21,964	8,421 1,412	en Saetta	21.4 172	6,849 4 046	38,3%	87,718 35,300
95	18,209 14,967	5,729 8,950	1.4*1.*	20.3	5,423 4 855	31.4% 28.3%	60,305
134 114	18,548 14,114	7,743		21.4 16.3	4,913	41.7%	57,783 44 484
137 129	14,818 17,445	7,846 6,041		17.7	4,676	52.9%	57,270
87 1157	14,142	4,742		17.9 21 S	5.279 5.420	33.5% 19.2*	54,505 87,631
115 67	16,547	5.154 4.958	1. 24 <sup>63</sup> 22 8	23.0	4.590 5.501	31.1%	44,817
60 65	14,689 10,775	3,442 4 942		22.1 18-4	4,528	23.4%	57,366
112	16,072 17,097	5,170 6 6 19	41.4 M.S.	25.1 25.2	3,781	32.1%	46.160
94 192 - 192 - 1	11.530 15.054	3,688 5,644		18.8 24 8	4,896 5,403	31.9% 97.4%	39,234
100	13,566 12,051	6,062 3 116		22.5 20.2	5,739 4.591	44.6% 23.32	60,620 42,637
48 69	8,645 11,662	1,961 4,554		14.8 21.4	3.752 2.723	22.6%	40,854
48 80	8,899 10,207	2,605 3,425		16.6 19.1	3,509 4 083	29.2%	54,270 22,812
86 87	13,669 10,259	4,443 3,815		25.6 19.8	6,011 4 042	32.5%	51,662 43,850

37

.





Federal Highway

Office of Highway Information Management

Publication No. FHWA-PL-90-024 HPM-10/4-90(50M)E