

# Non-Federal Street and Highway Financing

---

A REPORT OF THE  
TRANSPORTATION TASK FORCE  
OF THE

**URBAN**  
**CONSORTIUM**  
FOR TECHNOLOGY INITIATIVES



S.C.R.T.D. LIBRARY

Supported by



U.S. DEPARTMENT OF TRANSPORTATION  
Washington, D.C. 20590

JANUARY 1980

HE  
355  
.P82

## URBAN CONSORTIUM FOR TECHNOLOGY INITIATIVES

---

### Member Jurisdictions

ATLANTA, GEORGIA  
BALTIMORE, MARYLAND  
BOSTON, MASSACHUSETTS  
CHICAGO, ILLINOIS  
CLEVELAND, OHIO  
COLUMBUS, OHIO  
DADE COUNTY, FLORIDA  
DALLAS, TEXAS  
DENVER, COLORADO  
DETROIT, MICHIGAN  
HENNEPIN COUNTY, MINNESOTA  
HILLSBOROUGH COUNTY, FLORIDA  
HOUSTON, TEXAS  
INDIANAPOLIS, INDIANA  
JACKSONVILLE, FLORIDA  
JEFFERSON COUNTY, KENTUCKY  
KANSAS CITY, MISSOURI  
KING COUNTY, WASHINGTON  
LOS ANGELES, CALIFORNIA  
MARICOPA COUNTY, ARIZONA  
MEMPHIS, TENNESSEE  
MILWAUKEE, WISCONSIN  
MONTGOMERY COUNTY, MARYLAND  
NEW ORLEANS, LOUISIANA  
NEW YORK, NEW YORK  
PHILADELPHIA, PENNSYLVANIA  
PHOENIX, ARIZONA  
PITTSBURGH, PENNSYLVANIA  
PRINCE GEORGE'S COUNTY, MARYLAND  
ST. LOUIS, MISSOURI  
SAN ANTONIO, TEXAS  
SAN DIEGO, CALIFORNIA  
SAN DIEGO COUNTY, CALIFORNIA  
SAN FRANCISCO, CALIFORNIA  
SAN JOSE, CALIFORNIA  
SEATTLE, WASHINGTON  
WASHINGTON, D.C.



The Urban Consortium for Technology Initiatives was formed to pursue technological solutions to pressing urban problems. The Urban Consortium is a coalition of 37 major urban governments, 28 cities and 9 counties, with populations over 500,000. These 37 governments represent over 20% of the nation's population and have a combined purchasing power of over \$25 billion.

Formed in 1974, the Urban Consortium represents a unified local government market for new technologies. The Consortium is organized to encourage public and private investment to develop new products or systems which will improve delivery of local public services and provide cost-effective solutions to urban problems. The Consortium also serves as a clearinghouse in the coordination and application of existing technology and information.

To achieve its goal, the Urban Consortium identifies the common needs of its members, establishes priorities, stimulates investment from Federal, private and other sources and then provides on-site technical assistance to assure that solutions will be applied. The work of the Consortium is focused through 10 task forces: Community and Economic Development; Criminal Justice; Environmental Services; Energy; Fire Safety and Disaster Preparedness; Health; Human Resources; Management, Finance and Personnel; Public Works and Public Utilities; and Transportation.

Public Technology, Inc. is a nonprofit, tax-exempt, public interest organization established in December 1971 as an institutional mechanism for applying available technologies to the problems of State and local governments. Sources of such technologies include Federal agencies, private industries, universities, and State and local jurisdictions themselves. PTI works in both the hardware and software fields.

Public Technology, Inc. was organized by several public interest groups representing State and local governments. Its present Board of Directors consists of Alan Beals, Executive Director, National League of Cities; Mark E. Keane, Executive Director, International City Management Association; Robert A. Kipp, City Manager, Kansas City, Missouri; and The Honorable Tom Moody, Mayor, City of Columbus, Ohio.



# Non-Federal Street and Highway Financing

January 1980

Prepared by

**PUBLIC TECHNOLOGY, INC.**  
1140 Connecticut Avenue, N.W.  
Washington, D.C. 20036

Secretariat  
to the

**URBAN CONSORTIUM  
FOR TECHNOLOGY INITIATIVES**



URBAN  
CONSORTIUM  
FOR  
TECHNOLOGY  
INITIATIVES

S.C.R.T.D. LIBRARY

Supported by



**U.S. DEPARTMENT OF TRANSPORTATION**  
Washington, D.C., 20590

00308

HE  
355  
P82



## PREFACE

This is one of nine bulletins in the third series of Information Bulletins produced by the Transportation Task Force of the Urban Consortium for Technology Initiatives. Each bulletin in this series addresses a priority transportation need identified by member jurisdictions of the Urban Consortium. The bulletins are prepared for the Transportation Task Force by the staff of Public Technology, Inc.

Five newly-identified transportation needs are covered in the third series of Information Bulletins:

- Air Quality Regulation and Measurement
- Airport Access
- Mass Transportation Energy Conservation and Contingency Planning
- Non-Federal Street and Highway Financing.
- Pedestrian Movement

Four Information Bulletins covering needs identified in previous years, are being updated:

- Accelerated Implementation Procedures
- Coordination of Paratransit with Conventional Transit
- Neighborhood Traffic Controls
- Urban Goods Movement

The needs highlighted by Information Bulletins are selected in an annual process of needs identification used by the Urban Consortium. By focusing on the priority needs of member jurisdictions, the Consortium assures that resultant research and development efforts are responsive to local government problems.

Each bulletin provides a nontechnical overview, from the local government perspective, of issues and problems associated with each need. Current research efforts and approaches to the problem are identified. The bulletins are not an in-depth review of the state-of-the-art or the state-of-the-practice. Rather, they serve as an information base from which the Transportation Task Force selects topics that require a more substantial research effort.

The Information Bulletins are also useful to those, such as elected officials, for whom transportation is but one of many areas of concern.

The needs selection process used by the Urban Consortium is effective. Priority needs selections have been addressed by subsequent Transportation Task Force projects:

- A Manual for Planning and Implementing Priority Techniques for High Occupancy Vehicles (consisting of a Chief Executive's Report, Program Manager's Report, and Technical Guide) was developed to provide assistance to local governments in planning and implementing Preferential Treatment for buses and other high-occupancy vehicles.
- A National Conference on Transit Performance addressed the need for Transit System Productivity. The conference, held at Norfolk, Virginia, in September 1977, was attended by 200 government, industry, labor, and academic participants. As a follow-up to the Norfolk meeting, 5 Transit Actions regional meetings were held between January 1979 and May 1979. The product of these following meetings is a Transit Actions Workbook that features techniques currently being used to improve transit system performance and productivity.
- To facilitate the provision of Transportation for Elderly and Handicapped Persons, 6 documents were developed: one on local government approaches, a coordination guide, a planning checklist, an information sourcebook, a series of case studies, and a chief executive's summary.
- To help improve Center City Circulation two projects have been completed. A summary report on Center City Environment and Transportation: Local Government Solutions shows how seven cities used transportation and pedestrian improvements to help downtown revitalization. Another project, addressing the coordination of public transportation investments with real estate development, culminated in a national conference--The Joint



Development Marketplace, at Washington, D.C., in June 1978. The Marketplace was attended by over 600 persons, including exhibitors from 36 cities and counties and representatives of over 140 private development and financial organizations.

- Two documents relating to the need for Transportation Planning and Impact Forecasting Tools have been prepared: (1) A paper describing local transportation planning issues and concerns directed to the Urban Mass Transportation Administration and (2) A management-level document for local officials describing the tools available as a result of the Urban Mass Transportation research program and how these tools can be applied by local governments.
- To facilitate the dissemination of information on local experiences in Parking Management, a technical report describing the state-of-the-art is being prepared.
- A National Transit Pricing Forum was held at Virginia Beach, Virginia, in March 1979 to address the need for more information on Innovative Fares. Much of the Forum was directed to technical advances in areas of pricing research and practice. The proceedings of this conference are available.

Task Force information dissemination and technology sharing concerns are currently addressed by a series of SMD Briefs. These one-page reports provide up-to-date information about on-going UMTA Office of Service and Methods Demonstrations projects.

The support of the U.S. Department of Transportation's Technology Sharing Division in the Office of the Secretary, Federal Highway Administration, and Urban Mass Transportation Administration has been invaluable in the work of the Transportation Task Force of the Urban Consortium and the Public Technology, Inc. staff. The guidance offered by the Task Force members will continue to insure that the work of the staff will meet the urgent needs identified by members of the Urban Consortium for Technology Initiatives.

The members of the Transportation Task Force are:

- George Simpson (Chairperson)  
Assistant Director  
Department of Engineering  
and Development  
City of San Diego  
San Diego, California
- Edward M. Hall (Vice Chairperson)  
Street Transportation  
Administrator  
City of Phoenix  
Phoenix, Arizona



Transportation Task Force (continued)

- Ron Borowski  
Head, Transportation Planning  
Denver Planning Office  
City of Denver  
Denver, Colorado
- Gerald R. Cichy  
Director of Transportation  
Montgomery County  
Rockville, Maryland
- James E. Clark III  
Assistant Director  
D.C. Department of Transportation  
Washington, D.C.
- Kent Dewell  
Deputy Director, Public Works  
Department, Transportation  
Division  
City of San Jose  
San Jose, California
- John A. Dyer  
Transportation Coordinator  
Dade County  
Miami, Florida
- Clint Gregory  
Mayor  
City of Pierre  
Pierre, South Dakota
- David Gurin  
Deputy Commissioner  
New York City Department of  
Transportation  
New York, New York
- Bill Hellman  
Chief of Interstate Division  
for Baltimore City  
Baltimore, Maryland
- Robert P. Hicks  
Administrator  
Planning and Traffic Engineering  
Division  
Department of Transportation  
Detroit, Michigan
- Rod Kelly  
Director, Office of  
Transportation  
Dallas, Texas
- Frank Kiolbassa  
Director of Public Works  
City of San Antonio  
San Antonio, Texas
- Gary Kruger  
Transportation Planner  
Office of Policy Planning  
Physical Planning Division  
City of Seattle  
Seattle, Washington
- Emily Lloyd  
Commissioner of Traffic  
and Parking  
City of Boston  
Boston, Massachusetts
- Alan Lubliner  
Center City Circulation  
Project Manager  
Department of City Planning  
City of San Francisco  
San Francisco, California
- Elizabeth McLean  
First Deputy Commissioner  
Department of Public Works  
City of Chicago  
Chicago, Illinois
- Edward A. Mueller  
Executive Director  
Jacksonville Transportation  
Authority  
Jacksonville, Florida
- Ray Remy  
Deputy Mayor  
City of Los Angeles  
Los Angeles, California
- Steven Villavaso  
Chief Planner, Transportation  
Policy Department  
Mayor's Office  
City of New Orleans  
New Orleans, Louisiana

## PROJECT SPONSORS

- Alfonso B. Linhares  
Chief, Technology Sharing  
Division  
Office of Intergovernmental  
Affairs  
Washington, D.C.
- Norm Paulhus  
Technology Sharing Division  
Office of Intergovernmental  
Affairs  
Washington, D.C.
- James Bautz  
Chief, Paratransit & Special  
User Group Division  
Urban Mass Transportation  
Administration  
Washington, D.C.
- Milton Criswell  
Chief, Implementation Division  
Federal Highway Administration  
Washington, D.C.
- Brian Cudahy  
Director, Office of Transit  
Management  
Urban Mass Transportation  
Administration  
Washington, D.C.
- Robert Dial  
Director, Office of Planning  
Methods & Support  
Urban Mass Transportation  
Administration  
Washington, D.C.
- Barry Felrice  
Associate Administrator,  
Office of Plans and Programs  
National Highway Traffic  
Safety Administration  
Washington, D.C.
- Ronald Fisher  
Director, Office of Service  
and Methods Demonstration  
Urban Mass Transportation  
Administration  
Washington, D.C.
- Charles Graves  
Director, Office of Planning  
Assistance  
Urban Mass Transportation  
Administration  
Washington, D.C.
- Philip Hughes  
Director, Office of Policy  
Research  
Urban Mass Transportation  
Administration  
Washington, D.C.
- Henry Nejako  
Executive Assistant to  
Associate Administrator, Office  
of Technology, Development  
and Deployment  
Urban Mass Transportation  
Administration  
Washington, D.C.
- Kenneth Orski  
Vice-President  
German Marshall Fund  
Washington, D.C.
- George Pastor  
Associate Administrator, Office  
of Technology, Development  
and Deployment  
Urban Mass Transportation  
Administration  
Washington, D.C.
- James Yu  
Office of Policy Research  
Urban Mass Transportation  
Administration  
Washington, D.C.

PUBLIC TECHNOLOGY, INC.--SECRETARIAT

Gary Barrett, Acting Project Director  
Doris Ballenger  
Lynn Mitwol  
Helene Overly  
Edith Page  
David Perry  
Kathy Perry  
Ann Rabinowitz  
Michael Replogle  
Barbara Robinson  
Peggy Schwartz  
Carolene Smith  
Leigh Stokes  
Dani Williams  
Judith Zimmerman

PROJECT CONSULTANTS

Fred B. Burke

William B. Hurd

Public Technology, Inc.  
1140 Connecticut Avenue, N.W.  
Washington, D.C. 20036  
(202) 452-7700



## TABLE OF CONTENTS

<u>Chapter</u>		<u>Page</u>
1	ISSUES AND PROBLEMS	1
	Sources of Funds	2
	Local Disbursements for Streets and Highways	7
	The 27 Largest Cities	8
	Local Street and Highway Needs	10
	Impact of Inflation on Local Programs	11
2	CONTACTS AND PROGRAMS OF PARTICULAR INTEREST	13
	Federal Agencies	13
	Programs	13
3	ANNOTATED BIBLIOGRAPHY	15

## LIST OF TABLES

1	Sources of Funds Used by Municipalities for Street and Highway Functions-1976	3
	Disbursements by Municipalities for Street and Highway Functions-1976	4
	27 Largest Cities. Sources of Funds for Highway and Street Purposes (Exclusive of Indirect Street Functions)-1976	8
	27 Largest Cities. Expenditures for Highway and Street Functions (Exclusive of Indirect Street Functions)-1976	9
	27 Largest Cities. Expenditures for Indirect Street Functions	9

LIST OF TABLES

<u>Chapter</u>		<u>Page</u>
1	Regional Differences in Sources of Funds-1976	10
	Regional Differences in Expenditures-1976	10

## Chapter 1

### ISSUES AND PROBLEMS

At its meeting in Boston in November 1978, the Transportation Task Force of the Urban Consortium identified Non-Federal Street and Highway Financing as one of its priority research items. The purpose was to examine the sources of funds for street and highway functions performed by municipal governments in urban areas, with particular reference to funds other than those provided by the Federal government. A secondary purpose was to show the scope of these functions and the magnitude of the street and highway financing issues that face the nation's urban governments.

The work resulting in this Information Bulletin is in the nature of a preliminary reconnaissance, based on data furnished by urban jurisdictions that have representatives on the Transportation Task Force and statistical information compiled by the Federal Highway Administration from State and local government reports.<sup>1</sup>

These data are imprecise, reflecting substantial differences in the classifications and definitions of accounts used by the reporting jurisdictions. In a number of instances, data for a particular functional classification are missing, and it cannot be determined whether the revenue or disbursement item is included under another classification. In five States, revenue sources include highway-user imposts earmarked for mass transit purposes. These funds, totalling \$1.5 million in 1976, are not included in the disbursement data.

A major omission is that the Municipal Government Street Finance series in Highway Statistics does not reflect Federal-aid Urban Systems receipts and disbursements, which are reported on in the State Highway Finance series. According to data reviewed in the Information Bulletin on Accelerated Implementation Procedures (October 1978 revision), only 42% of Federal-Aid Urban Systems funds in the period ending June 30, 1976 were passed through to local jurisdictions. Assuming that Federal-aid Urban Systems authorizations were fully obligated each year, this would add about \$340 million annually to the revenue and disbursements figures given to municipalities for street and highway functions.

---

1. U.S. Department of Transportation, Federal Highway Administration, Highway Statistics. Washington, D.C.: GPO, published annually. The data used in this Information Bulletin are for calendar year 1976.



It should be noted that this Information Bulletin reflects only those funds received and disbursed by municipal governments. It does not include funds for work performed in urban areas by other governments.

## SOURCES OF FUNDS

Municipal governments received \$7,629 million in 1976 for use in carrying out the street and highway functions for which they were responsible. The sources of these funds, exclusive of Federal-aid Urban Systems funds, are shown in Table 1.

The bulk of the street and highway funds used by municipal governments in 1976 came from local sources--particularly from general funds and municipal bond issues. Payments from other governments accounted for only slightly more than one-fifth of the total amount.

### Local Fund Sources

Local funds make up more than three-quarters of the total funds available to municipal government for street and highway disbursements.

General real estate and sales tax funds, assessments, and borrowing provide 84% of the local funds. The remainder come from a variety of sources, such as:

- local fuel taxes
- local vehicle taxes
- privilege taxes on for-hire vehicles
- parking meter collections
- net proceeds from off-street parking facilities
- tolls
- traffic fines and forfeitures

### State Fund Sources (other than Federal aid)

The principal source of State highway funds is the motor-fuel tax, which on gasoline ranges from 5¢ to 11¢ a gallon. In some States a different rate is imposed on diesel fuel--commonly either 1¢ higher or 1¢ lower than on gasoline. Differentials are also found for LPG and aviation fuels. Currently, in 12 States motor fuels containing grain alcohol are taxed at a lower rate than leaded fuel, and in four States (Arkansas, Iowa, Louisiana, and Oklahoma), gasohol is tax exempt. Iowa estimates it will have lost \$11.6 million in highway tax revenues in 1979 due to exempting gasohol from the highway tax.

Table 1

SOURCES OF FUNDS USED BY MUNICIPALITIES FOR  
STREET AND HIGHWAY FUNCTIONS-1976

SOURCE	AMOUNT IN MILLIONS	PERCENT OF TOTAL
<b>LOCAL SOURCES</b>		
General funds and assessments	\$ 4,008	52.6%
Local highway user imposts	135	1.8
Other local imposts	133	1.7
Parking facility proceeds	59	0.8
Road and crossing tolls	207	2.7
Traffic fines	148	1.9
Other	249	3.3
TOTAL LOCAL REVENUES	4,939	64.8
Short- and Long-term borrowing	1,053	13.8
TOTAL LOCAL SOURCES	5,992	78.6
<b>PAYMENTS FROM OTHER GOVERNMENTS</b>		
County and township funds	54	0.7
State funds	1,278	16.7
Federal funds	305	4.0
TOTAL OTHER GOVERNMENTS	1,637	21.4
GRAND TOTAL	\$ 7,629	100.0%

Source: This table is compiled from data appearing in the Highway Statistics series covering municipalities of 5,000 or more population (1970 Census). Related data concerning the disbursement of these municipalities for street, highway, and related functions are presented in Table 2. Both tables exclude Federal-aid Urban System funds.

Table 2

DISBURSEMENTS BY MUNICIPALITIES FOR  
STREET AND HIGHWAY FUNCTIONS-1976

FUNCTION	AMOUNT IN MILLIONS	PERCENT OF TOTAL
CAPITAL OUTLAY	\$ 1,963	25.7%
Streets and highways	(1,640)	(21.4)
Right-of-way (\$56)		
Engineering (\$146)		
Construction (\$1,438)		
Street Lighting	(42)	(0.6)
Sidewalks	(35)	(0.5)
Storm sewers	(246)	(3.2)
MAINTENANCE AND OPERATION	2,931	38.4
Roads and bridges	(1,678)	(21.9)
Snow removal	(172)	(2.3)
Traffic services	(208)	(2.7)
Street lighting	(502)	(6.6)
Sidewalks	(26)	(0.3)
Storm sewers	(111)	(1.5)
Street cleaning	(234)	(3.1)
ADMINISTRATIVE AND OTHER	1,501	19.7
General administration	(415)	(5.4)
Traffic police*	(1,035)	(13.6)
Other	(51)	(0.7)
INTEREST	293	3.8
DEBT RETIREMENT	836	10.9
PAYMENTS TO OTHER GOVERNMENTS	117	1.5
	<u>\$7,641</u>	<u>100.0%</u>

Source: This table is compiled from data appearing in the Highway Statistics series covering municipalities of 5,000 or more population (1970 Census).

\* Costs of traffic police are included only when reported upon separately by State or local authorities.



Other sources of State funds include:

- registration fees
- drivers' license fees
- special vehicle taxes, such as franchise, use, weight, and axle fees (utilized in 31 states)
- mileage fees on out-of-state motor carriers
- gross receipts taxes on motor carriers
- caravan and in-transit fees
- dealers' licenses
- title and transfer fees
- inspection fees
- fines and penalties

#### Use of State Funds

State motor-fuel tax receipts are used by State agencies for a wide variety of purposes. In addition to planning, design, construction, maintenance, operation, and administration of streets and highways and other highway-related activities in rural and urban areas, these purposes include in one or more States:

- support of State highway police
- access roads to industrial sites
- construction and maintenance of bicycle lanes and paths, equestrian and snowmobile trails, and pedestrian facilities
- construction and operation of mass transportation facilities
- construction and maintenance of airport and air navigation facilities, promotion and regulation of aviation<sup>2</sup>

---

2. Usually, but not always, derived from the tax on aviation fuels.

- construction, improvement, and maintenance of boating and water recreational facilities, water navigation aids, harbor facilities, natural lakes, and parks<sup>3</sup>
- fish and game conservation and the promotion of recreational and commercial fishing<sup>3</sup>
- construction of seawalls to protect highways
- aquatic weed control (Florida)
- agricultural research<sup>4</sup>
- detection and eradication of plant and animal pests and diseases<sup>5</sup>
- driver education and safety training in schools
- tourist promotion
- topographic mapping
- improvement of emergency medical services
- general aid to public schools

#### Allocation of the Local Share of State Fuel and Vehicle Taxes

Almost all of the States allocate some part of their fuel-tax receipts to their political subdivisions for use in the construction, maintenance, and administration of streets and highways. The proportion of the total tax transferred to municipalities varies from State-to-State. The proportion is usually expressed in terms of a fixed percentage of the net receipts or in cents per gallon. In some States the amount is determined by regular legislative appropriation.

Formulas for the distribution of these funds among the individual municipalities also vary widely. Those most commonly prescribed in State law provide for distribution on the basis of population. Other factors, used alone or in various combinations, include motor vehicle registrations, motor vehicle fees collected, origin of fuel tax receipts, local street mileage, miles of traffic lanes on local streets, assessed value of real estate, a city's revenue-raising ability, current estimates of local street needs, and allocation by the State Highway and Transportation Commission.

---

3. Usually, but not always, derived from the tax on marine fuels.

4. Withheld from the tax refund on agriculture-use fuels (Virginia).

5. Unclaimed refunds on agricultural use fuels (California).

Municipalities may also share in other State motor-vehicle and motor carrier receipts (fees and special vehicle taxes). In many States these fees and charges go into the State highway fund and are distributed in accordance with the allocation formula applicable to that fund. In other States receipts that are not earmarked for specific agencies go into the general funds of the State or are distributed directly to local political subdivisions on a formula basis for specified purposes or as general revenues.

#### Federal Fund Sources

The Federal funds shown in Table 1, amounting to \$305 million in 1976, include payments in lieu of taxes and grants made under flood relief, urban area development, safety, civil defense, and some other programs. As has previously been noted, this item does not include Federal-aid Urban System funds, which are estimated to account for 4.3% of the total funds available to municipalities for street and highway functions.

Other sources of Federal funds that do not appear to have been included in Table 1 are general revenue sharing, and grants under the economic development, countercyclical, and employment and training programs.

#### LOCAL DISBURSEMENTS FOR STREETS AND HIGHWAYS

According to reports submitted to the Federal Highway Administration by State and local governments, municipalities spent \$7,641 million in 1976 in carrying out the street and highway functions for which they were responsible.<sup>6</sup> The classification of these disbursements is shown in Table 2.

---

6. This total includes items grouped in Highway Statistics under the general categories of Highways and Indirect Street Functions, the latter including street lighting, sidewalks, storm sewers, and street cleaning. Because of missing data, the level of disbursements is almost certainly understated. The available data does not permit a further breakdown into funds expended on major streets (or arterials) and local or collector streets, nor does it include local expenditures of Federal-aid Urban Systems funds.



## THE 27 LARGEST CITIES

The 27 largest cities, with populations of 500,000 and over (1970 Census) received a total of \$1,586 million in 1976 for street and highway purposes, exclusive of indirect street functions.<sup>7</sup> As shown below, these cities received a slightly larger proportion of their funds from other governments than did the smaller cities.

Table 3

### 27 LARGEST CITIES. SOURCES OF FUNDS FOR HIGHWAY AND STREET PURPOSES (EXCLUSIVE OF INDIRECT STREET FUNCTIONS)-1976

	ALL CITIES	CITIES 500,000 AND OVER
Local revenues	61.1%	58.3%
Short- and long-term borrowing	13.0	11.7
Total Local Sources	<u>74.1</u>	<u>70.0</u>
Payments from other governments*	25.9	30.0
	<u>100.0%</u>	<u>100.0%</u>

\* Source not otherwise identified.

These cities spent a total of \$1.616 million, or 26.4% of the total municipal expenditures for streets and highways, exclusive of indirect street functions, in 1976. The largest cities used a large proportion of the funds available to them for capital outlays, and a much smaller proportion for maintenance and operation, than did the average of all cities.

Indirect street functions (street lighting, sidewalks, storm sewers, and street cleaning) cost the 27 largest cities \$172 million, or 9.6% of their total expenditures for all street and highway functions.

7. The data in this section were compiled from the Highway Statistics series. Comparable data on the sources of funds for indirect street functions are not available. The tables in this section do not include Federal-aid Urban Systems funds.

Table 4

## 27 LARGEST CITIES. EXPENDITURES FOR HIGHWAY AND STREET FUNCTIONS (EXCLUSIVE OF INDIRECT STREET FUNCTIONS)-1976

	ALL CITIES	CITIES 500,000 AND OVER
Capital outlay	26.8%	31.2%
Maintenance and operation	33.7	23.3
Administrative and other	22.7	27.1
Interest	3.9	5.1
Debt retirement	11.0	11.9
Payments to other governments	1.9	1.4
	<u>100.0%</u>	<u>100.0%</u>

Table 5

## 27 LARGEST CITIES. EXPENDITURES FOR INDIRECT STREET FUNCTIONS-1976

	ALL CITIES	CITIES 500,000 AND OVER
Capital outlay	21.2%	29.4%
Maintenance and operation	57.2	51.9
Other costs and debt retirement	21.6	18.7
	<u>100.0%</u>	<u>100.0%</u>

Among the 27 largest cities, those located in the North receive a substantially greater proportion of street and highway funds from other governments than do those in the so-called Sun Belt.<sup>8</sup>

8. Tables 6 and 7 do not include expenditures for indirect street functions, for which comparable data are not available.

Table 6  
REGIONAL DIFFERENCES IN SOURCES OF FUNDS-1976

	NORTHERN CITIES	SUN BELT CITIES
Local revenues	55.1%	65.2%
Short- and long-term borrowing	11.2	13.1
Total Local Sources	<u>66.3</u>	<u>78.3</u>
Payments from other governments*	33.7	21.7
	<u>100.0%</u>	<u>100.0%</u>

\* Source not otherwise identified.

Capital outlay takes a larger share of the funds expended for street and highway purposes by the large Sun Belt cities than of the funds expended for these purposes by the large Northern cities.

Table 7  
REGIONAL DIFFERENCES IN EXPENDITURES-1976

	NORTHERN CITIES	SUN BELT CITIES
Capital outlay	29.2%	35.2%
Maintenance and operation (less snow removal)	21.6	23.3
Snow removal	1.8	
Administrative and other	27.5	26.5
Interest	5.1	4.9
Debt retirement	13.3	9.0
Payments to other governments	1.5	1.1
	<u>100.0%</u>	<u>100.0%</u>

#### LOCAL STREET AND HIGHWAY NEEDS

The Federal Highway Administration does not compile city-by-city data on future local financial requirements, nor did the 1975 needs study extend to those street and highway functions for which cities are directly responsible. Earlier national needs studies by the U.S. Department of Transportation assembled data on urban needs on the basis of Standard Metro-



politan Statistical Areas only.

Data received from a number of Urban Consortium jurisdictions on their needs was so diverse, reflecting varying budget practices and accounting classifications, that it defies tabulation. Some generalizations are, however, possible from the available data and discussions with local officials.

- Municipal governments are responsible for a wide variety of functions relating to the streets and highways within their jurisdictional boundaries. These include not only the planning, design, construction, maintenance, operation, and administration of streets and highways themselves, but also similar activities with regard to such indirect functions as street lighting, sidewalks, storm sewers, and street cleaning. The major share of the costs of these functions is borne directly by the local governments performing them.
- The largest cities spend a considerably smaller proportion of their funds for maintenance and operation than do other cities. Local officials suggest that this represents a substantial, and potentially disastrous, degree of deferred maintenance.
- Sun Belt cities, as might be expected, spend a larger proportion of their funds for new construction than do older built-up Northern cities. They also make substantial use of assessments, street improvement districts, and construction by developers.
- Conversely, the older cities spend a relatively greater proportion of their funds for interest payments and debt retirement, reflecting the past construction of streets and related facilities.

#### IMPACT OF INFLATION ON LOCAL PROGRAMS

Regardless of a city's age, size, or geographic location, the effects of inflation have constrained street and highway expenditures. Edward M. Hall, Street Transportation Administrator for the City of Phoenix, portrays graphically the impacts of inflation on local programs in a memorandum for the use of the City Council written in September 1978. He summarizes these impacts:

1. We can now build only .3 mile of major street for what it cost to build one mile in 1967.
2. The cost to build one mile of local street...is nearly 2 1/2 times what it was in 1967.
3. ...the cost of plant mix has increased 193%...

4. The cost of preventive maintenance seal coating by contract has increased 255% on our major streets and 161% on the local streets. It is estimated that \$1.75 million budget for seal coating will accomplish about 100 miles less this year than last.
5. 3.2 traffic signals could be installed in 1967 for the price of one today.
6. The cost of right-of-way acquisition has increased between 115% and 145% in the last 11 1/2 years.

In addition to the impact of inflation on streets and highway costs, Hall points out that the basing of gasoline and diesel taxes on gallons purchased results, as better gasoline mileage is obtained, in a reduction in the tax per mile, and suggests the need for legislative action to compensate for this trend by relating the taxes to fuel prices.

The difficulties posed by inflation and the need to maintain street and highway systems are becoming increasingly agonizing for municipal governments. The diversity of data on sources and use of funds collected for this Information Bulletin does suggest, however, that there are potential untapped revenue sources, primarily alternative taxation methods.

## Chapter 2

### CONTACTS AND PROGRAMS OF PARTICULAR INTEREST

Details of state gasoline tax distribution and local exemptions are available from FHWA.

Contact: W. Johnson Page  
Chief, Vehicles, Drivers,  
and Fuels Branch (HHP-43)  
400 7th Street, S.W.  
Washington, D.C. 20590  
(202) 426-0187

The Research and Special Programs Administration of U.S. DOT is currently studying the tax impacts on highway funds of different tax rates for gasohol and gasoline.

Contact: Paul Fahlstrom  
Chief, Program Analysis  
Branch (DPA-32)  
Research and Special Programs  
Administration  
400 7th Street, S.W.  
Washington, D.C. 20590  
(202) 426-4347

Local funding programs vary widely. One local official particularly interested in this subject is in Arizona.

Contact: Edward M. Hall  
Street Transportation Administrator  
City of Phoenix  
251 West Washington, Room 910  
Phoenix, Arizona 85003  
(602) 262-7956





## Chapter 3

### ANNOTATED BIBLIOGRAPHY

The sources listed in this bibliography are generally available publications. Additional information about financing in specific locations may be obtained from the appropriate public official.

Allen, Gary R. The Desirability and Feasibility of Alternative Means of Financing Transportation in Virginia. Virginia Highway and Transportation Research Council. Charlottesville, Virginia: November 1978.

This gives statistics that apply to revenue forecasts under existing tax structures for gasoline tax revenues and sales and use tax revenues. The publication describes possible changes in existing tax structures and alternative sources of revenue.

"North Carolina Allocates Tax Funds for Local Street Construction". Construction, vol. 45, no. 22 (October 30, 1978).

This brief article describes how much money and why was allocated to major cities in North Carolina.

Smith, Wilbur S. "Future Highway Financing". Traffic Quarterly (January 1980).

This gives a brief review of current highway funding sources and their limitations in meeting future highway and transportation needs. Suggestions for additional tax sources are made with an emphasis on user taxes. Not all the suggested potential tax sources are directly transportation related.

"Toll Financing Works: Shall We Keep It?" Public Works, vol. 108, no. 9 (September 1977).

The introduction to this article states:

"There is no such thing as a free road. There are only tax roads. Since every forecast for the next two decades shows a substantial shortfall of tax funds to meet demonstrated needs, the combined funding potential of coordinated toll and tax financing inevitably will be required to preserve and expand our surface network."

The article describes 5 major U.S. toll roads, discusses toll concept highway finance, compares costs of borrowing money to tolls, and discusses some urban expressways and bridges.

U.S. Department of Transportation, Federal Highway Administration,  
Highway Joint Development and Multiple Use. Washington, D.C.:  
GPO, January 1979.

Summaries are given of a wide variety of highway joint-development projects including recreational, parking, rest area information, and multi-modal facilities. Pictures accompany the project descriptions. Specific funding amounts are not given, but participating local, state, and federal agencies or organizations are indicated for each project.

U.S. Department of Transportation, Federal Highway Administration.  
Highway Statistics, 1977. Washington, D.C.: GPO, (published  
annually).

This book of statistics contains a wealth of information on highway revenue sources and distribution, vehicle registration and use, highways by use and type of surface, etc.

★ U. S. GOVERNMENT PRINTING OFFICE : 1980 311-586/120







## SPECIAL ACKNOWLEDGEMENTS

---

### Public Technology, Inc.



Public Technology acts as Secretariat to the Urban Consortium under the direction of John Parker, President. The UC/PTI Transportation Project consists of the following PTI staff and consultants:

- PTI Project Staff:

Alinda Burke  
Gary Barrett  
Melvin Boffman  
Deborah Brown  
Tom Buckmeyer  
Keith Jones  
Deborah Katz  
Lynn Mitwol

Richard Oram  
Helene Overly  
David Perry  
Katherine Perry  
Michael Replogle  
Jon Schotz  
Leigh Stokes  
Rosetta Swann

- Project Consultants:

Fred B. Burke  
William B. Hurd

Public Technology, Inc.  
1140 Connecticut Ave., N.W.  
Washington, D.C. 20036  
202/452-7700

### Department of Transportation



Special acknowledgement is due the following people and offices of the U.S. Department of Transportation for their invaluable support of this project:

Milton P. Criswell  
Chief, Implementation Division  
Federal Highway Administration

Brian Cudahy  
Director, Office of Transportation Management  
Urban Mass Transportation Administration

Robert B. Dial  
Director, Office of Planning Methods and Support  
Urban Mass Transportation Administration

Ronald J. Fisher  
Director, Office of Service and Methods  
Demonstrations  
Urban Mass Transportation Administration

Al Linhares, Chief  
Norm Paulhus, Technical Coordinator  
Technology Sharing Division  
Office of the Assistant Secretary  
for Governmental Affairs

U.S. Department of Transportation  
400 7th Street, S.W.  
Washington, D.C. 20590



