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**FEASIBILITY OF FEDERAL ASSISTANCE
FOR URBAN MASS TRANSPORTATION
OPERATING COSTS**



U.S. DEPARTMENT OF TRANSPORTATION

NOVEMBER 1971



DEPARTMENT OF TRANSPORTATION
URBAN MASS TRANSPORTATION ADMINISTRATION
WASHINGTON, D.C. 20590

November 15, 1972

TO: Industry Control Board Members:

Re: FARE Project
IT-06-0034
(DOT-UT-20008)

During the last Industry Control Board meeting (Oct. 16-20, 1972), the members present requested that the Board be provided with the reports on two studies -- "Feasibility of Federal Assistance for Urban Mass Transportation Operating Costs" and "Economic Characteristics of the Urban Public Transportation Industry", both provided by the U.S. Department of Transportation. Enclosed is the "Feasibility of Federal Assistance for Urban Mass Transportation Operating Costs" report.

The report on the economic characteristics is out of print and an order has been placed with the Government Printing Office for additional copies. It is anticipated that these reports will be distributed before December 1, 1972.

Sincerely,

A handwritten signature in dark ink, appearing to read "T. E. Hoadley", is written over a diagonal line that extends from the top left towards the center.

T. E. Hoadley
Director of Financial
Management

Enclosure



THE SECRETARY OF TRANSPORTATION

WASHINGTON, D.C. 20590

November 22, 1971

Dear Mr. President:

Dear Mr. Speaker:

I am pleased to submit herewith a report on the "Feasibility of Federal Assistance for Urban Mass Transportation Operating Costs." It has been prepared by the Department pursuant to Section 9 of the Urban Mass Transportation Assistance Act of 1970 (P.L. 91-453).

Urban mass transportation problems are receiving increased attention in most metropolitan areas. Planning and implementation of transit improvements and expansion have been stimulated by the significantly expanded Federal capital assistance program enacted last year. At the same time communities are faced with the necessity of determining how and to what extent mass transit operating costs should be recovered from transit users, other beneficiaries or general public revenues.

I believe this report will be a useful contribution to Congressional consideration of significant issues that are also under active consideration in many States and localities.

Sincerely,

A handwritten signature in black ink, appearing to read "John Volpe". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Honorable Spiro T. Agnew
President of the Senate
Washington, D. C. 20510

Honorable Carl Albert
Speaker of the House of Representatives
Washington, D. C. 20515

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PREFACE

During congressional deliberations in 1969 and 1970 leading to enactment of the Urban Mass Transportation Assistance Act of 1970 (P.L. 91-453) representatives of the transit industry and many State and local government officials, citing the industry's declining financial and patronage trends, called for a program of Federal operating subsidies for urban mass transportation. Although the new mass transit legislation did not provide for operating subsidies, it did include a provision for a study and report on the feasibility of operating subsidies.

This report is the product of the study conducted by the Department of Transportation pursuant to Section 9 of the Urban Mass Transportation Assistance Act of 1970 which provides that:

The Secretary of Transportation shall conduct a study of the feasibility of providing Federal assistance to help defray the operating costs of mass transportation companies in urban areas and of any changes in the Urban Mass Transportation Act of 1964 which would be necessary in order to provide such assistance, and shall report his findings and recommendations to the Congress within one year after the date of the enactment of this Act.

Although this report responds to a specific question concerning the feasibility of Federal assistance for mass transit operating costs, the Department of Transportation believes that mass transportation should be viewed as only one part of the urban transportation system, and that Federal policy concerning urban transportation must reflect and support Federal policy concerning the total urban community, its balance with rural areas and open space, the welfare of its inhabitants, and the quality of its environment. All of these issues are presently before the Congress in fairly explicit terms; the way they are resolved affects the response that might be made to the problems of urban mass transportation.

The report is organized as follows:

CHAPTER I presents conclusions and recommendations concerning the question of Federal assistance for urban mass transportation operating costs.

CHAPTER II summarizes data and information concerning the present financial and operating condition of urban mass transportation and identifies a number of trends and other influences that may account for these conditions.

CHAPTER III inventories and summarizes the existing Federal, State and local programs of assistance for urban mass transportation.

CHAPTER IV identifies, analyzes and evaluates a range of possible mechanisms for Federal operating subsidies and a number of other alternatives for assisting urban mass transportation.

CHAPTER V discusses a number of service and policy innovations aimed at developing answers to the urban transportation problem.

APPENDICES I-IV present detailed information supplementing the text of the report.

CHAPTER I

CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

There can be no doubt that urban mass transportation service faces severe problems which affect both the transit operator and the community. Under present conditions both local officials and private operators feel obliged to choose between

- cutting back on service or raising fares, or both, resulting in further loss in ridership, or
- providing public subsidies out of scarce local resources to preserve service or stabilize fares at levels considered to be reasonable.

These alternatives focus attention on symptoms rather than on underlying causes. If public mass transportation is to serve the public effectively and efficiently, public policy must find additional alternatives that deal directly with root causes. The question is, how can the Federal Government best contribute to making urban transit an effective transportation system?

The financial result of any transit operation -- i.e., whether it experiences a deficit or not -- represents to a large degree the results of the policy choices made by an operator or community concerning the level of service provided and the fare charged. In a number of communities low fares are charged as a matter of policy and the necessity of subsidy is accepted. Furthermore, with the recent inflationary spiral of wages and other operating costs, there has been an increasing reluctance on the part of many authorities to raise fares concomitantly. In some measure, this reluctance to increase fares involves sensitivity to the impact of fare increases on the transit disadvantaged -- the poor, elderly, handicapped and young. At the other extreme, some communities still require their transit systems to operate entirely on fare revenues. It is also important to bear in mind that accounting practices vary widely among transit operations and this can greatly affect reported deficits.

Fundamentally, the revenue/expense squeeze in which transit is caught results from its lack of success in adapting to new patterns of urban development, responding to changes in public preferences and expectations, and competing effectively with the private automobile. Faced with

increasing dispersal of residential, employment and shopping centers in metropolitan areas and the personalized conveniences of the automobile, transit has held to its concept of fixed, line haul service into dense central core areas -- even though the financial viability of that type of service seems to be rapidly diminishing.

Little has been done to determine whether transit can compete with the automobile under present conditions. The few attempts to innovate and experiment with high-quality and competitive transit service -- e.g., express routes, exclusive rights-of-way, demand responsive service -- suggest that there is a substantial market that might respond to increased reliability, convenience, accessibility and amenity and would be willing and able to pay the cost.

Responsibility for the present condition of urban mass transportation certainly cannot be placed solely on transit management. The Federal Government has been a major contributor through a wide range of policies, programs, and funding mechanisms, direct and indirect, which have affected the ability of State and local governments to respond to the needs of public transit. Local public officials and administrators, planners, regulatory and zoning authorities, police and traffic officials, and State governments also share responsibility. They have acquiesced in or promoted auto-oriented urban development patterns. They have reinforced such patterns through the provision of under-priced parking at public expense. They have managed access to, and traffic flow on streets and highways on the basis of vehicle, rather than people, throughput; refused to consider regulation or restriction of automobile use; endured a fragmented structure of local governments within metropolitan areas, each unit of which is competing for certain types of development, resisting others and holding effective veto power over implementation of comprehensive plans. They have perpetuated an urban transportation system that is fragmented between modes and geographic areas, fragmented in regulation and coordination, and fragmented in funding policies and sources. Ultimately, of course, responsibility for all these policies and actions is shared by the citizens who condone or support them or are simply indifferent.

Local and State governments have responded to the transit dilemma in a variety of ways; responses range from none at all to any of a surprising number of mechanisms for delivering financial assistance to cover operating deficits. Unfortunately, these State and local operating subsidies have not reversed the decline in ridership or prevented increased operating deficits, although the decline in riders is substantially less than the national average. (Currently, riderships and deficits are affected adversely by inflation and the current rate of unemployment which disproportionately hits mass transit riders.)

On the positive side, State and local subsidies have undoubtedly helped to save transit systems that would otherwise have been forced out of business, thus depriving many riders of continued mobility. Of course absence of an operating deficit is not necessarily a criterion for successful and effective transit service. Moreover, the Department of Transportation does not believe that transit riders must, as a matter of principle, be expected to pay the entire cost of transit.

On the negative side, it is a debatable question whether State and local subsidies have, in fact:

- resulted in improved service for those dependent on public transportation,
- obviated the need to raise fares,
- stimulated innovation or experimentation, or
- resulted in greater awareness or commitment on the part of those involved in the problem.

The Federal Government does not presently have an operating subsidy program for mass transit as such. A number of existing Federal support mechanisms do seek to strengthen mass transit in our Nation's cities. Principal among these devices has been assistance for capital investment in right-of-way, structures and vehicles, provided through both the current UMTA capital grant program and, with respect to rights-of-way, through the Federal-Aid Highway Program. Additionally, transit operators have been exempted from certain fuel and vehicle excise taxes which are imposed on other highway users. Available experience and analysis suggests that further extension of Federal support in the form of operating subsidies in and of itself would not contribute to the significant alleviation of the underlying difficulties of which the transit deficit is symptomatic.

Operating subsidies are probably not the best means of meeting such objectives as increasing the mobility of those dependent on transit and helping those with low incomes. Even if a subsidy does make it possible to avoid higher fares, additional controls would be necessary to induce presently inadequate service to be improved. Lower fares would, of course, result in greater aggregate benefits for all riders -- the affluent as well as the poor -- but low fares, per se, will be no help to the poor if the transit service is inaccessible or unresponsive. In this connection, in-kind assistance to the poor could be provided relatively simply through a "transportation stamp" program. If such stamps were also redeemable for taxis, jitneys, and gas and parking for automobiles, conventional mass transit might be stimulated to compete for the additional revenues.

A categorical grant program for direct Federal support of transit operating costs, if it were deemed desirable, could be designed in a number of different ways ranging from very strict supervision of criteria to a simple performance standard approach which would evaluate results from time to time. Such a program might also be used to induce changes needed in the organization and operation of urban mass transportation and in related community policies. If such changes were desired and were required as a condition of assistance, means of auditing and appraising such result could be designed accordingly.

It would be difficult to judge legitimate differences in local conditions. Some local preferences might have to be countermanded, but consistent with the Revenue Sharing bills every effort should be made to encourage local innovation.

This represents a basic dilemma in considering a Federal program of operating subsidies; on the one hand extensive standards and controls would be extremely difficult to administer and could generate a great deal of friction and conflict with local officials, while on the other hand granting funds without any performance standards would provide no assurance that they were being used effectively or even distributed equitably.

Certainly, some form of general revenue sharing would undoubtedly be a more effective way of providing financial assistance to hard-pressed State and local governments since the funds could be used to meet any local need, including transit, without having to favor transit activities in order to qualify. Furthermore, a relaxation of restrictions on the rigid categories of Federal funds currently allocated for transportation purposes would also increase State and local ability to respond flexibly to their own concepts of need and priority. In the meantime, public transit needs must be met in one form or another if it is to survive this transition period.

SUMMARY CONCLUSION

In sum, there is not enough reliable or behaviorally validated information available at present for anyone to advocate with confidence a definitive solution to the problem of urban transit or to gauge accurately the long-range effect of a Federal subsidy program.

Uncertainties extend to such fundamental questions as whether or how consumers will respond to changes in transit service, fares, convenience or amenity; what might induce sufficiently large numbers of commuters to leave their cars; what cost savings or service improvements would be possible through management improvements, marketing techniques, new uses of off-peak capacity, and regulatory or other policy changes; and how transit operators would respond to different operating subsidy mechanisms.

What is required is further exploration that will develop answers to a number of these questions and provide a better general information base for urban transportation policy decisions at all levels of government.

B. Recommendations

In accordance with the above conclusions, we make the following recommendations:

1. The Congress enact the President's recommended Transportation Special Revenue Sharing proposal. This proposal is premised on a commitment to local autonomy and flexibility in the use of Federal assistance being provided for transportation purposes. It would eliminate the separate categorical assistance programs (with their differing terms and conditions, matching ratios, and funding variations) and allocate the funds to States and metropolitan areas for use in accordance with local concepts of need and priority. Enactment of this proposal would allow Federal funds to be used for transit operating subsidies where States and local communities find this a pressing need. Enactment of the President's proposed General Revenue Sharing, as well, would provide additional Federal funds for States and local governments to use for transit operating subsidies or any other purpose unconditionally.

2. The Department will continue to evaluate the desirability and practicality of service and policy innovations such as the ones described in Chapter V and also to study the important questions relating to operating subsidies discussed in Chapter IV. If the results of these evaluations indicate the desirability and feasibility of further initiatives -- with or without required changes in legislation -- the Department will submit appropriate recommendations to the Congress. Meanwhile, the Department will continue to implement its recently expanded capital assistance and research, development, and demonstration programs.

CHAPTER II

PRESENT FINANCIAL AND OPERATING CONDITION OF URBAN MASS TRANSPORTATION

In order to provide a basis for analyzing and assessing the feasibility of providing Federal assistance to help defray the operating costs of mass transit companies, it is necessary to understand the operating and financial status of the industry as it exists today and to identify the trends or conditions that have produced or influenced this status. General awareness and concern with urban mass transportation seems to be increasing and is reflected in more frequent public discussions of its condition and its role in the urban transportation system. Most of this attention focuses on the two most obvious and visible facts about urban mass transportation -- the growing operating deficits and the increasing number of transit operations going out of business or being acquired for operation under public ownership in order to prevent cessation of service. But it is necessary to look beyond these symptoms at the longer run causes and effects in order to assess the possible effectiveness of proposed remedies or changes in public policies.

A. Profile of the Transit Industry

"Urban mass transportation" is that part of the public transportation system in an urban area that provides general or special service to the public on a regular and continuing basis; this includes publicly and privately owned bus, rail or other conveyances, but not exclusively school bus or charter/sightseeing services. Taxicabs, both licensed and unlicensed, provide public transportation services basically similar to those of many bus operations, but are frequently not considered as part of the industry.

The American Transit Association (ATA), the trade association of the transit industry, identified 1,079 operating entities that provided bus and rail rapid transit services on December 31, 1970. The distribution of these systems by type of service and population served is shown in Table II-1.

In addition, there are sixteen Class I railroads which provide commuter service in six metropolitan areas and are also part of the transit industry although not reflected in the ATA statistics. The structure of the taxi industry does not allow easy or meaningful identification of the number of independent operating entities because of the large number of small owner/operators.

One significant characteristic of the transit industry that does not show up in aggregated information is the fragmented provision of mass transit service in a metropolitan area. This is especially true in

TABLE II-1

DISTRIBUTION OF TRANSIT FIRMS BY TYPE OF SERVICE AND POPULATION OF LARGEST CITY SERVED (1960 CENSUS)

Population Group	Rail Transit (Incl. Joint Trolley Coach and/or Motor Bus)	Trolley Coach and Motor Bus Operations Combined	Motor Bus (Exclusively)	Grand Total
500,000 & over	10	1	20	31
250,000-500,000	2	1	40	43
100,000-250,000	0	0	80	80
50,000-100,000	0	0	122	122
Less than 50,000	0	0	406	406
Suburban and Other	3	0	394	397
Total	15	2	1,062	1,079

Source: American Transit Association, 1970-1971 Transit Fact Book.

the largest SMSA's where there may be a publicly owned bus company providing service within the central city and railroads and numerous private bus companies providing commuter service from suburban areas into the central city. Chart II-1 illustrates this fragmentation in one area, San Francisco.

Another characteristic of today's transit industry is the degree of concentration in a few systems and metropolitan areas. According to the ATA, about 87 percent of the transit firms are privately owned, but these account for only 32 percent of the vehicle miles operated, 20 percent of operating revenues, and 19 percent of revenue passengers carried. This disparity reflects the fact that the industry is comprised of a small number of very large publicly owned systems and a large number of very small privately owned systems. Consider the following:

-- Although there is some transit service in most of the 233 SMSA's and in some places smaller than 50,000 population, 64 percent of total transit ridership is concentrated in eight metropolitan areas. The New York/New Jersey standard consolidated area accounts for 38 percent of the total -- five times as much as Chicago's 7 percent, the next largest (see Table II-2).

CHART II-1
TRANSIT OPERATORS IN THE SAN FRANCISCO BAY AREA AS OF
DECEMBER 31, 1970

The San Francisco Bay Area consists of nine counties with an estimated 1970 population of 4,628,000, covering an area of 4.5 million acres. In this area, mass transportation service is provided by:

-- San Francisco Municipal Railroad (MUNI), a publicly owned system of buses, street cars, trolley coaches and cable cars, operating entirely within the city and county of San Francisco;

-- Alameda-Contra Costa Transit District (AC Transit), a publicly owned bus system operating within those two counties and across the Bay into a terminal in San Francisco;

-- Bay Area Rapid Transit District (BARTD), currently constructing a publicly owned rail rapid transit system within San Francisco, Alameda, and Contra Costa counties;

-- Southern Pacific Railroad, providing commuter service into San Francisco from south of the city;

-- Greyhound lines, providing service to San Francisco from Marin and Contra Costa counties and from the south;

-- San Jose City Lines, a private bus operation in and around San Jose;

-- publicly owned suburban bus lines in Santa Rosa, Redwood City and Vallejo; providing local service and connections to commuter services;

-- privately owned suburban bus lines in Palo Alto, Daly City, South San Francisco, and Mountain View, providing local service and connections to commuter services;

-- jitney service within San Francisco along Mission Street, provided by individual jitney owners licensed by the city;

-- charter commuter bus service arranged by groups of individuals on a subscription basis operating a reverse commute between San Francisco or Berkeley and Palo Alto/Sunnyvale;

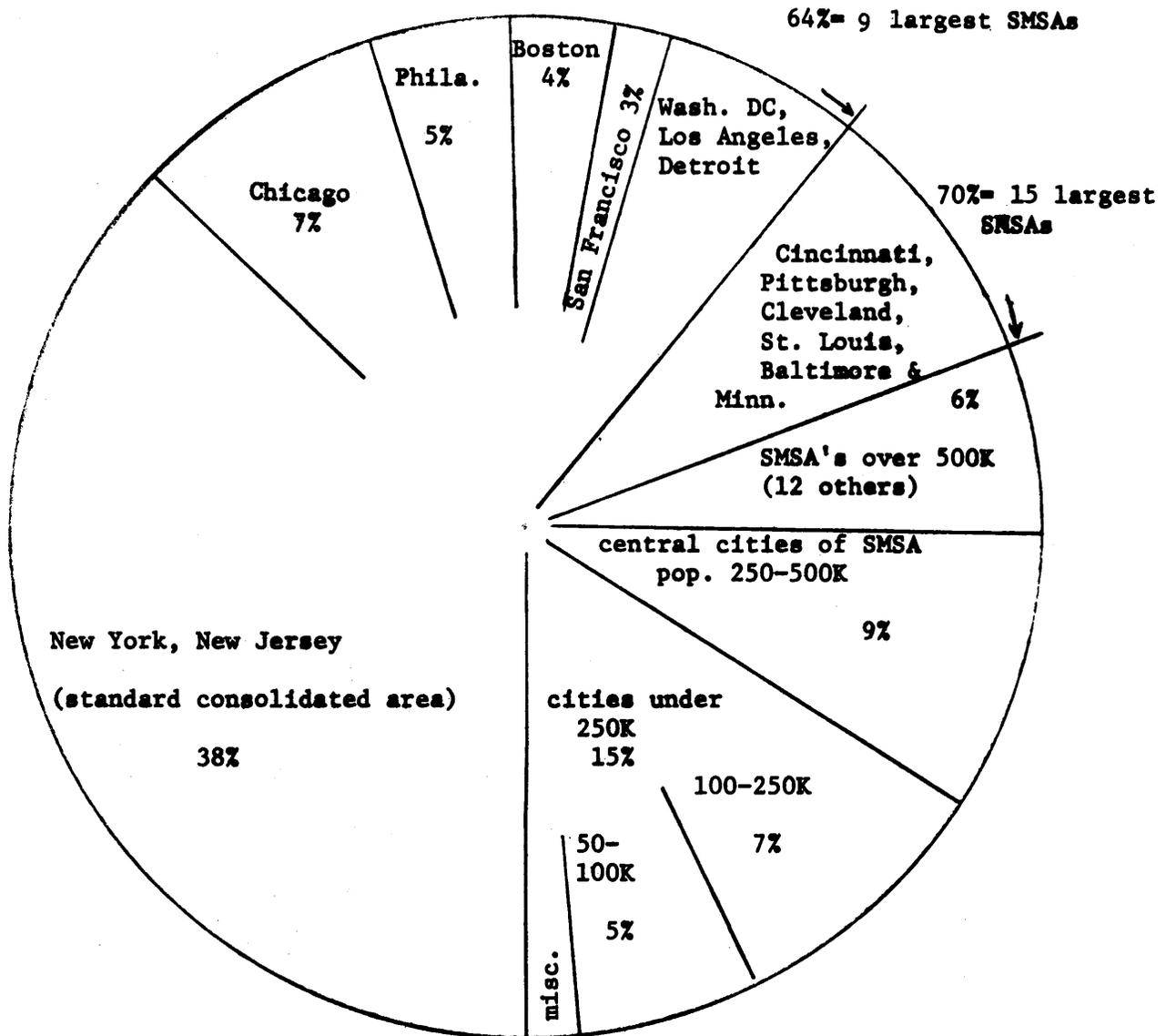
-- two private airport limousine services;

-- ferry service between Sausalito and San Francisco operated by the publicly owned Golden Gate Bridge, Highway and Transportation District, with feeder buses in Sausalito.

-- privately owned taxi services.

Source: R.L. Banks & Associates, unpublished report, January 1971.

TABLE II-2
PERCENTAGE BREAKDOWN OF REVENUE TRANSIT PASSENGERS IN THE U.S.
BY STANDARD METROPOLITAN STATISTICAL AREA (SMSA) INCLUDING
BUS, RAIL RAPID TRANSIT, AND RAILROAD COMMUTATION



Source: Richard G. Lam and Richard Solomon, "Public Transportation and Urban Growth", Papers Submitted to Subcommittee on Housing Panels on Housing Production, Housing Demand, and Developing a Suitable Living Environment, Part 2, Committee on Banking and Currency, House of Representatives, 92nd Congress, First session, June 1971.

-- One transit system, New York's MTA, accounts for 44 percent of the 1969 net deficit reported by the ATA; one railroad accounts for more than a third of the 1970 commuter railroad deficit.

Such concentrations make it especially difficult and risky to make generalizations or draw conclusions about the transit industry as a whole.

B. Transit Financial and Operating Data

1. Nature of Available Data

A body of comprehensive and consistent financial and operating statistics for the transit industry does not exist. The ATA does gather data from every firm it can identify (except for the commuter railroads), but these data are not based on uniform accounting definitions or standardized sampling methods; they do not go into sufficient detail to permit rigorous analysis. A number of factors that distort the results reported by individual firms will be discussed later in this chapter; they make it difficult to compare the results of different transit systems and cast a shadow over the reliability of aggregations based on them. Some data are available concerning commuter railroads, but they are especially sensitive to the problem of allocating costs between different kinds of services. The information presented in this report has had to be based on the available data -- it should therefore be interpreted as showing orders of magnitude rather than precise relationships or measures of performance.

2. Critical State of the Industry

No one can dispute that there has been a serious decline in urban mass transit over the past decade or that the industry is currently in a critical financial state, a state approaching crisis in many localities. The industry's decline is manifest by a number of measures -- reduced ridership, curtailment of services, increased costs, growing deficits, failures of firms, and the increased public acquisition of systems to prevent the abandonment of service.

From a 1945 volume of 23 billion revenue passengers, the U.S. transit industry (excluding the commuter railroads) recorded a sharp decline to 11 billion riders in 1955, and thereafter a more gradual but persistent decline to 7.3 billion riders in 1970; the commuter railroads carried 245 million passengers in 1970. Profits, where they exist, are modest; the net deficit including commuter rail reached \$380 million in 1970. Many transit firms, predominantly in smaller cities, have gone out of business; since 1954, 114 firms have been liquidated in cities of less than 100,000 population (41 of these since 1965). Many others have been taken over by their community in order to assure continuance of some mass transportation service. Tables II-3 and II-4 summarize the experience of 1,079 firms reported by ATA and the sixteen commuter railroad operations; Table 11-5 provides more detailed data on fifteen of the largest transit operations.

TABLE II-3
OPERATING DATA FOR 1,079 MASS TRANSIT OPERATIONS
(EXCLUDING COMMUTER RAILROADS)
(millions)

	1965	1966	1967	1968	1969	1970*
Ridership:						
Railway	2,134	2,035	2,201	2,181	2,229	2,116
Bus & Trolley Coach	6,119	6,048	5,971	5,838	5,574	5,216
Total	<u>8,253</u>	<u>8,083</u>	<u>8,172</u>	<u>8,019</u>	<u>7,803</u>	<u>7,332</u>
Operating Revenue	\$1,444	\$1,479	\$1,556	\$1,563	\$1,626	\$1,707
Operating Expenses (including depreciation)	1,404	1,468	1,579	1,677	1,798	1,946
Taxes (other than Federal income)	33	33	33	36	37	38
Net Revenue	7	(22)	(56)	(150)	(209)	(276)
Federal Income Tax	18	15	10	11	11	12
Net Income	(11)	(37)	(66)	(161)	(220)	(288)

Source: ATA, 1970-1971 Transit Fact Book

*Preliminary projection based on 9 month results

TABLE II-4
1970 OPERATING DATA FOR SIXTEEN COMMUTER RAILROADS
(figures in millions)

Passengers	244.7
Passenger miles	5,316.8
Passenger revenue and other income (excluding payments from State & local govt)	\$255.4
Operating costs (including depreciation)	\$332.0
Taxes (other than income)	\$15.2
Net income	\$(91.8)

Source: Association of American Railroads

TABLE II-5
1969 OPERATING DATA FOR 15 TRANSIT SYSTEMS

	Operating Revenue (millions)	Operating Expenses (less depreciation) (millions)		Depreciation (millions)	Net Income Before Federal Income Taxes (millions)	Ridership (millions)	Base Fare	Fleet Size
		Employee Compensa- tion	Other					
New York-MTA	\$375.8	\$473.0		\$-0-	\$(97.2)	1,783.0	\$.30	9,728
Boston-MBTA	65.4	\$ 72.9	\$32.9	2.5	(42.9)	179.1	.25	1,540
San Francisco-MUNI	21.2	32.0	6.1	0.5	(17.4)	146.3	.25	1,188
Pittsburgh-PAT	30.7	28.7	8.0	2.4	(8.4)	103.4	.35	1,035
New Orleans	8.9	11.8	4.1	1.4	(8.4)	84.4	.15	515
Oakland-ACT	15.7	14.4	3.9	1.9	(4.5)	52.3	.25	700
Seattle	10.2	\$12.4		0.3	(2.5)	35.3	.25	403
Chicago-CTA	175.5	132.0	31.1	14.4	(2.0)	457.8	.40	4,428
Kansas City Transit	7.8	5.4	2.6	0.6	(0.8)	20.8	.35	405
Detroit-DSR	37.0	30.8	4.8	2.0	(0.6)	121.0	.30	1,180
Los Angeles-SCRTD	50.2	\$48.3		2.4	(0.5)	142.0	.30	1,511
Atlanta	14.2	\$12.8		1.2	0.2	64.8	.30	502
Cleveland-CTS	31.3	22.1	6.1	2.2	0.9	95.0	.35	1,065
Baltimore-MTA	25.5	12.9	11.0	0.5	1.1	111.5	.30	797
Philadelphia-SEPTA	81.1	\$74.2		4.3	2.6	353.3	.35	2,446

a. The Deficit. Table II-3 documents the increase in the reported ATA aggregate deficit from \$11 million in 1965 to \$288 million in 1970. Since this is the net deficit -- i.e., the algebraic difference between the profits of all those firms making profits and the deficits of all those firms having losses -- it does not reveal the actual gross deficit in the transit industry or the number of firms operating at either a profit or a loss. Such a breakdown is not available for the entire industry, but Table II-6 helps put the net deficit in perspective; this sample is based on those firms that submit detailed financial reports to the ATA and consists of the country's largest transit properties. It points out that there are more profitable operations than unprofitable, that gross profits declined about 10 percent between 1967 and 1969 while gross deficits increased more than 50 percent, and that most of the deficit occurs in systems operating rail rapid transit. Bus systems operated at a net profit in 1965-1967, but this turned into a net deficit in 1969.

A common basis for evaluating the operating results of a firm that does not have large fixed investments relative to total operating costs is the operating ratio: total operating expenses as a percent of total revenue. Table II-7 shows the distribution of 52 bus-only transit firms by their operating ratio and size. The data suggest that a majority of large bus firms (revenues over \$1 million per year) are operating at a profit, while most smaller firms are operating at a loss; yet in this latter group the range is the most extreme: 82.6 percent to 174.0 percent.

For the purposes of this study, however, it is necessary to look beyond the deficit itself to those factors that determine it. These determinants, in both an accounting sense and a causative sense, are: revenues (i.e., fare structures, level of service, and ridership) and costs (i.e., wage rates and level of service). These in turn are affected by how they are computed and reported and how they are treated as matters of public policy by the community. This should become clear in the following discussion of transit revenues and costs.

b. Transit Revenues. Table II-8 summarizes the industry's trend in the level of service, fares, operating revenues, and revenue passengers. Operating revenues have increased slightly in each year since 1965 to a total of \$1.7 billion in 1970; further examination shows that this has been the result of increasing fares which have offset the effect of declining ridership.

Table II-9 distributes transit ridership by population groups and shows that the decline has not been uniform. Total passengers decreased 1.2 billion (16 percent) from 1960 to 1969 of which 82 percent represented bus riders in cities of less than 500,000. This 16 percent

TABLE II-6
DISTRIBUTION OF BUS AND RAIL RAPID DEFICIT*
SELECTED YEARS
(\$ in thousands)

	1965		1967		1969		1970	
	\$\$	#	\$\$	#	\$\$	#	\$\$	#
Firms with a Profit:								
Bus	10,663	68	11,322	61	9,138	50	12,723	44
Rail Rapid	41	1	17	1	4,761	5	0	0
Gross Profit	10,704	69	11,339	62	13,899	55	12,723	44
Firms with a Loss:								
Bus	4,306	31	8,274	45	28,915	48	41,874	67
Rail Rapid	26,772	4	33,457	5	87,785	4	198,000	11
Gross Deficit	31,078	35	41,731	50	116,700	52	239,874	78
Net Income:								
Bus	+ 6,357	99	+ 3,048	106	-19,777	98	- 29,151	111
Rail Rapid	-26,731	5	-33,440	6	-83,024	9	-198,000	11
Net Deficit	-20,374	104	-30,392	112	-102,801	107	-227,151	122

*Sample differs each year according to availability of data; each year does include largest systems.

Source: ATA, Transit Operating Reports, Annual

TABLE II-7
TOTAL OPERATING EXPENSES AS A PERCENT OF TOTAL REVENUE
FOR 52 BUS OPERATORS BY REVENUE SIZE GROUP-1969

Operating ratio = $\frac{\text{expenses}}{\text{revenue}} \times 100\%$	No. of Bus Firms				
	Annual Revenue of Firm				
	Under \$1 million	\$1-\$5 million	\$5-\$10 million	Over \$10 million	Total All Firms
<u>Profit</u>					
80 and under 85	1				1
85 " " 90		1			1
90 " " 95	1	3	2		6
95 " " 100	5	7	2	2	16
<u>Loss</u>					
100 " " 105	6	5	1	1	13
105 " " 110	1		1		2
110 " " 115	2				2
115 " " 120	1	1	1		3
120 " " 125	1			1	2
125 and over	5	1			6
Total Firms	23	18	7	4	52
Mean	114.4	100.3	100.9	103.5	102.9
Median	103.7	99.1	100.0	101.4	100.1
Range	83-174	89-163	92-120	99-123	83-174

Source: Institute for Defense Analyses, Economic Characteristics of the Urban Bus Industry: 1960 and 1969, June 1971. Sample includes the largest bus-only transit operations.

TABLE II-8
TREND OF OPERATING REVENUES, REVENUE PASSENGERS, & AVERAGE FARE
BY TYPES OF SERVICE, SELECTED YEARS
(millions)

Calendar Year	Railway			Motor Bus & Trolley Coach			Total			Average Fare
	Vehicle Miles Operated	Operating Revenue	Ridership	Vehicle Miles Operated	Operating Revenue	Ridership	Vehicle Miles Operated	Operating Revenue	Ridership	
1945	1398	\$709.5	9636	1856	\$670.9	9346	3254	\$1380.4	18,982	7.3¢
1955	561	439.8	2586	1886	986.6	6603	2447	1426.4	9189	15.5
1958	476	365.6	2050	1725	983.9	5728	2201	1349.5	7778	21.2
1960	466	369.4	2005	1677	1037.8	5516	2143	1407.2	7521	18.7
1965	437	365.8	1882	1571	1078.0	4916	2008	1443.8	6798	21.2
1966	422	365.2	1795	1562	1113.3	4876	1984	1478.5	6671	22.2
1967	434	404.2	1828	1563	1151.0	4788	1997	1556.0	6616	23.5
1968	444	411.3	1814	1544	1151.4	4677	1988	1562.7	6491	24.1
1969	453	435.2	1840	1514	1190.4	4471	1967	1625.6	6310	25.8
1970 (P)	441	439.6	1746	1442	1267.8	4186	1883	1707.4	5932	28.8

Source: ATA, 1970-1971 Transit Fact Book

decline in total ridership represents a decline of 33 percent in cities under 250,000, 38 percent in cities between 250,000 and 500,000, and about 8 percent in cities over 500,000.

TABLE II-9
TREND OF REVENUE PASSENGERS BY POPULATION GROUPS
BY TYPE OF SERVICE, SELECTED YEARS
(millions)

Year	Rail Rapid (Subway and Elevated Only)	Surface Lines			Total
		500,000 & over	250,000 to 500,000	Under 250,000	
1960	1670	2997	911	1943	7521
1965	1678	3000	606	1514	6798
1966	1584	3003	608	1476	6671
1967	1632	2945	597	1442	6616
1968	1627	2886	581	1397	6491
1969	1656	2787	565	1302	6310
1970 (p)	1574	2610	529	1219	5932

Source: ATA, 1970-1971 Transit Fact Book

In contrast to the variability in ridership trends, increases in fare levels have been almost universal; Table II-10 shows that some fares have doubled from 1965 to 1970. While the overall fare structure picture is complicated by factors that cannot be illustrated by a chart, one significant characteristic of the American transit industry is the prevalence of the single fare. With the exception of the commuter railroads and a few systems (e.g., Los Angeles' SCRTD), there is little attempt to relate transit fares to the length of the trip except through such crude mechanisms as transfer charges and suburban zones. The absence of transfer privileges in New York City has the effect of requiring two or three fares for some riders, but this may not be related to total trip length. While some systems offer reduced fares for senior citizens or school children, these are still flat fares (distinguished, in some cases, by time of day or day of the week). Empirical evidence is not available to determine the degree to which fares that do not discriminate between time of day and distance travelled -- i.e., the costs of service -- result in overpricing or underpricing of various transit services and thereby distort ridership patterns, perhaps to the overall detriment of system revenues.

TABLE II-10
BASE FARE LEVELS
15 SELECTED CITIES, 1965 and 1970

City	1965	1970	City	1965	1970
Boston	\$.20	\$.25	Philadelphia	\$.25	\$.35
Chicago	.25	.45	Salt Lake City	.25	.30
Cincinnati	.25	.40	San Diego	.30	.40
Cleveland	.25	.50	SF Muni	.15	.25
Houston	.30	.40	Santa Monica	.20	.25
Kansas City	.30	.50	Tacoma	.25	.25
New Orleans	.10	.15	Twin Cities	.25	.30
New York City	.15	.30			

Source: Institute of Public Administration, unpublished working paper, August, 1971

c. Transit Operating Expenses. This section will attempt to place the major elements of transit operating costs in perspective. Three major elements of cost will be discussed -- employment costs, operating taxes, and depreciation charges.

(1) Employment Costs. These represent the largest percentage of mass transit's total operating costs (including depreciation). Table II-11 shows that payroll costs comprise approximately two-thirds of the industry's expenses.

TABLE II-11
TRANSIT INDUSTRY PAYROLL COSTS

Year	Total Operating Expenses (including depreciation & taxes) (000,000)	Payroll (000,000)	Payroll as % of Total Expenses	Average No. of Employees (000)
1945	\$1232	\$632.0	51%	242.0
1955	1371	864.0	63	198.0
1960	1377	857.3	62	156.4
1965	1454	963.5	66	145.0
1966	1516	994.9	66	144.3
1967	1623	1055.1	65	146.1
1968	1724	1109.5	64	143.6
1969	1846	1183.8	64	140.9
1970 (P)	1996	1274.1	64	138.0

Source: ATA, 1970-71 Transit Fact Book

But these figures do not tell the complete story; it must be noted:

- While payroll costs represent 64 percent of the total expenses for the industry, an examination of this relationship on an operator by operator basis reveals that the range is as great as 45 to 75 percent.
- Payroll costs understate total labor costs. Pension and other employee benefit costs must also be included in the calculation. Table II-12 shows that in 1969 total employee compensation for five major operators ranged from 67 to 82 percent of total expenses.

TABLE II-12
TOTAL EMPLOYEE COMPENSATION AS A PERCENTAGE
OF TOTAL OPERATING EXPENSES
FIVE SELECTED OPERATORS (1969)

(\$ in thousands)

	Boston MBTA		Pittsburgh		Chicago CTA		AC Transit (Oakland)		Detroit	
	\$\$	%	\$\$	%	\$\$	%	\$\$	%	\$\$	%
Total Operating Expenses	108,332	100	39,124	100	177,409	100	19,407	100	37,573	100
Wages & Salaries	59,735	55	23,976	61	112,738	64	13,325	69	23,508	63
Pension & Employee Benefits	13,206	12	4,764	12	19,301	11	1,733	9	7,270	19
Total Employee Costs	72,941	67	28,740	73	132,039	75	15,058	78	30,778	82

Source: Main Lafrentz & Co., Port Authority of Allegheny County Seven City Report, November 1970

About 65 percent of the industry's labor force is comprised of operators (Motormen, drivers, guards, and platform men); another 20 percent are maintenance workers; the remaining 15 percent are salaried workers and executives. These percentages, of course, vary from system to system depending in large measure on the size and mode of operation.

Operators and maintenance workers are fully unionized and the salaried workers are partially organized. Bargaining in the industry is carried on by the Amalgamated Transit Union which represents about 80 percent of the organized workers and the Transport Workers Union which represents about 10 percent; most of the remaining workers are represented by small local unions.

Collective bargaining between management and the unions is on a system-by-system basis. At times an operator may have to negotiate with numerous bargaining units -- for example, in Boston the MBTA must deal with twenty-seven. Local bargaining has created wide variations in the average wage rates and benefits paid transit employees across the Nation (see Table II-13).

(2) Operating Taxes. These represent only 5 to 10 percent of total operating expenses, but are worthy of mention because of their variability. According to the American Transit Association transit firms paid \$37.7 million in State, county, and local taxes in 1970; this is in addition to the \$54.5 million paid in Federal operating taxes -- mainly social security and fuel taxes.

At the State, county and local level, however, the taxes paid by transit operators cannot be categorized as simply. They vary greatly -- examples include taxes on fuel, real estate, sales, personal property, gross receipts, plus franchise fees, vehicle registration fees, motor vehicle use taxes, public utility taxes, seat taxes, etc. A number of State and local governments have exempted transit operators from certain tax liabilities (these are detailed in Chapter III).

(3) Depreciation Charges. These are a non-cash operating expense entered on the accounts to reflect the utilization or consumption of capital. For a private operator this charge represents the return of capital invested in the business (although that capital may have been generated out of operating surplus rather than investment from outside). Since depreciation is a non-cash expense, a transit operation could operate at a deficit up to the amount of depreciation charged and still meet its cash expenses. Although a firm could continue to live for some period on its capital stock, it would sooner or later find itself without the stock of capital necessary to do business and would have to dissolve. For some analytical purposes it is appropriate to consider capital as a sunk cost and exclude depreciation from cost figures; available data do not allow the separate identification of depreciation in the compilation of aggregate transit industry costs. The data that are available for individual transit operations reveal wide variations in the way depreciation is handled. Many public systems include no depreciation (e.g., New York) or charge only the arbitrary amount required to liquidate debts (e.g., Chicago) or make payments into required reserve accounts (e.g., Cleveland). The effect these differences can have on a system's operating deficit can be seen in Table II-5; however, their effect on the overall industry deficit is impossible to measure precisely.

TABLE II-13
 WAGE-RATE DISTRIBUTION: UNITED STATES, JULY 1, 1970
 (Percent distribution of local-transit operating employees
 by union hourly wage rates, July 1, 1970)

Hourly wage rates	Percent of		
	All workers	Operators of surface cars and buses	Elevated and subway operators
Under \$3.00	4.3	4.8	-
\$3.00 and under \$3.50	18.0	20.2	-
\$3.50 and under \$4.00	16.1	15.5	20.2
\$4.00 and under \$4.40	23.4	23.5	22.9
\$4.40 and under \$4.50	17.6	19.3	3.7
\$4.50 and under \$4.60	10.1	8.5	23.9
\$4.60 and over	10.5	8.2	29.3
Total	100.0	100.0	100.0
Average hourly wage rate	\$4.03	\$3.99	\$4.39

Workers were distributed as follows: 1.3 percent at \$4.60 to \$4.70 and 28.0 percent at \$4.80 to \$4.90

NOTE: Because of rounding, sums of individual items may not equal 100.

AVERAGE WAGE RATES: SELECTED CITIES, JULY 1, 1970
 (Average union hourly wage rates of local transit operating employees by city and population group, July 1, 1970)

City and population group	Average hourly rate	City and population group	Average hourly rate
Population group I (1,000,000 or more):		Population group III (250,000 to 500,000)-Continued	
Chicago, Ill	\$ 4.57	Louisville, Ky	\$ 3.32
New York, N.Y	4.45	Memphis, Tenn	3.32
Average for group I	4.37	Toledo, Ohio	3.22
Detroit, Mich	4.30	Omaha, Nebr	3.21
Los Angeles, Calif	4.00	Norfolk, Va	3.10
Philadelphia, Pa	3.81	Tampa, Fla	3.00
Population group II (500,000 to 1,000,000):		Phoenix, Ariz	2.68
Boston, Mass	4.60	Tulsa, Okla	2.50
San Diego, Calif	4.54	Oklahoma City, Okla	2.48
San Francisco-Oakland, Calif	4.49	Population group IV (100,000 to 250,000):	
Washington, D.C	4.37	Sacramento, Calif	4.13
Seattle, Wash	4.25	Fresno, Calif	4.08
Pittsburgh, Pa	4.23	Madison, Wis	3.78
Baltimore, Md	4.16	New Haven, Conn	3.60
Average for group II	4.06	Des Moines, Iowa	3.48
Milwaukee, Wis	4.02	Spokane, Wash	3.44
St. Louis, Mo	3.90	Trenton, N.J.	3.43
Cleveland, Ohio	3.74	Albuquerque, N. Mex	3.42
Buffalo, N.Y	3.52	Syracuse, N.Y.	3.30
New Orleans, La	3.43	Providence, R.I	3.27
Cincinnati, Ohio	3.40	Average for group IV	3.26
Houston, Tex	3.25	Springfield, Mass	3.26
San Antonio, Tex	2.94	Peoria, Ill	3.20
Population group III (250,000 to 500,000):		South Bend, Ind	3.15
Newark, N.J	4.33	Jacksonville, Fla	3.10
Portland, Oreg	4.00	Richmond, Va	3.10
Minneapolis-St. Paul, Minn	3.89	Erie, Pa	3.05
Kansas City, Mo	3.81	Grand Rapids, Mich	3.00
Average for group III	3.77	Little Rock, Ark	2.82
Denver, Colo	3.57	Shreveport, La	2.80
Rochester, N.Y	3.49	Salt Lake City, Utah	2.71
Atlanta, Ga	3.40	Evansville, Ind	2.70
Columbus, Ohio	3.40	Jackson, Miss	2.70
Indianapolis, Ind	3.40	Charlotte, N.C	2.63
Birmingham, Ala	3.33	Scranton, Pa	2.49
Dayton, Ohio	3.33	Knoxville, Tenn	2.43
		Topeka, Kans	2.26

Source: Union Wages and Hours: Local Transit Operating Employees, July 1, 1970, Bulletin 1706, U.S. Department of Labor (BLS)

3. Limitations of Available Data

As stated at the beginning of this Chapter, this study has had to use the data available from the American Transit Association. Their diligence in identifying the universe of transit operators and obtaining statistical reports from outside its membership is commendable. In addition the ATA has underway substantial efforts to develop uniform accounting classifications for adoption by the industry to ensure meaningful aggregations, consistency and comparability among operators; these efforts should proceed as rapidly as possible.

To provide the reader with some basis to evaluate the data presented in this report it is necessary to identify a number of specific and crucial limitations and problems.

a. Lack of Uniform Accounting. Every transit property keeps its books and records in accordance with its own policies, corporate structure, or regulatory requirements -- often multiple sets for different purposes. The reports submitted to ATA therefore follow no uniform classification of accounts. As a result:

-- Expense Figures are Not Consistent

Some real costs are not reflected in the deficit. For example, the City of New York pays the \$57 million cost of transit police and some public systems receive administrative and support services from other departments of the city government. These are real costs of transit which would increase the deficit.

Some real costs are deferred. Some systems may defer necessary maintenance in order to save cash. Sometimes a contractual obligation to make payments to a pension or welfare fund may be deferred for some period. Transit industry pension systems are typically funded on a current basis rather than as accruals or on an actuarially sound basis. These have the effect of reducing the paper deficit, but may represent the accrual of unavoidable expenses to some future period.

Some charges are not related to transit. For example, the Chicago Transit Authority must pay the city for shoveling snow on streets used by buses.

-- Depreciation Is Treated In Widely Different Ways

Many public systems enter no depreciation charges on their books -- New York MTA for example. Although it would be difficult to put a value on the New York system and compute a depreciation charge, the absence of any charge understates the economic cost of the service and results in a lower deficit than would otherwise be the case.

Some systems make an arbitrary depreciation charge, such as the amount required to retire outstanding debts (e.g., Chicago Transit Authority) or a fixed percentage of revenues (e.g., Cleveland Transit System).

-- Some Subsidy Effects are Hidden In The Figures

Tax relief has been granted to many public and some privately owned systems. Where there is such relief, the tax payments merely disappear from the books; where there is no such relief, the taxes continue to be reflected as expenses.

Many transit systems have reduced fares for school children and/or senior citizens. Some systems get reimbursed for the estimated cost of these reductions (e.g., New York MTA received \$41 million from New York City; Chicago Transit Authority received \$4.5 million from State education funds); other systems get no reimbursement and, therefore, have higher deficits than would otherwise be the case (e.g., Cleveland, Detroit, Kansas City). Such subsidy payments are not uniformly reported.

-- Traffic Reporting Is Not Consistent

Ridership is generally estimated on the basis of fare collections. Exact fare policies with locked fare boxes hinder the making of estimates for different routes or different times. The samples used to develop formulae for converting revenues into ridership are not taken according to any uniform guidelines and are often out of date.

-- Reporting Periods Are Not Consistent

Many systems operate on a fiscal year basis different from the calendar year ATA reporting cycle. These systems must often base their reports on pro-rata adjustments or other estimating procedures to fit the calendar year basis.

b. Comparability of Transit Operations. Significant differences in the characteristics of transit systems produce widely varying operating results and make them difficult to compare. For example:

-- Widely Varying Fare Policies Distort Financial Results

The level of deficit for a particular transit system is largely determined by the system's fare policy: some cities (e.g., New Orleans) deliberately maintain low fares as a matter of local policy. Since the revenues do not meet expenses, the deficit is paid as the price of this policy choice. Other cities set fares so that the system will cover its costs without a deficit.

-- Widely Varying Service Levels Distort Financial Results

Some systems operate 24 hours per day providing some high-deficit services. Other operate only 12 hours per day or only during peak hours. A deficit can be extremely sensitive to such differences.

c. Predicting Consumer Response. In analyzing transit ridership data, it is important to recognize that each recorded trip is the product of conditions and alternatives existing at the time the choice is made. Therefore, in evaluating the impacts of new policies or of changes in the characteristics of the transit service offered to consumers, the analyst cannot assume that historical data will provide accurate predictions of what the market response -- ridership -- will be to the change being considered.

The ability to predict is extremely limited until consumers have been given an opportunity to face and react to a change. Consumers frequently contradict predicted reactions when confronted with altered circumstances. For example, recent experimentation with express bus services in New York, Seattle, and Washington, DC, has resulted in a consumer response far greater than had been predicted. A number of these experiments are detailed in Appendix I. Extensions of existing rapid transit lines have also produced similar results, as well as casting doubt on tenets of the prevailing wisdom (e.g., that air passengers, especially those with luggage, would never ride mass transit to or from the airport). Results have also begun to accrue from UMTA-sponsored demonstrations of such innovations as demand-responsive transit service.

What is required then, is a behavior oriented approach to demand analysis; we need to analyze and understand the forces that lead consumers to react as they do. Consumers tend to make their travel decisions based on their needs and available income and the

characteristics of the transportation alternatives available to them. These characteristics include cost, trip time, comfort or privacy, and convenience of access; the alternatives can be different modes of transportation, different times of day for travel, and/or competing destinations.

Basically a traveller must decide whether to make a trip, where to go, when to make a trip, which mode and route to select; under the simplest conditions this can involve a large number of options. These decisions are obviously highly interrelated and the extent of this interrelationship depends upon, among other things, the purpose of the trip. However, economists and transportation planners have not been able to explain why consumers make the choices they do. Many studies and research projects have been undertaken in an attempt to isolate those characteristics to which the consumer reacts and make possible predictions of when and where trips will be made or what mode or route will be chosen. But these efforts have produced no conclusions on which public officials can rely for policy and planning purposes. Much more systematic, long-term collection and analysis of behavioral information is required.

d. Measuring Quality of Service. The available data on the transit service offered by transit operators permit some conclusions about the aggregate level of service provided, but do not allow evaluation of the overall quality of transit service or how well specific target areas or populations are being served. For example, it would be desirable to assess the degree to which mass transit is actually serving the mobility needs of those who are dependent on the public transportation system -- the young, aged, handicapped, the poor and anyone else who does not have access to an automobile. Available information does not allow evaluation of transit use by these "transportation disadvantaged" or objective judgements concerning the quality or usefulness of the transit services available to them.

The transportation disadvantaged represent a sizeable market for transit services; Table II-14 identifies its possible scope as approximately one-third of the population. The Department's Urban Mass Transportation Administration has been conducting demonstrations of new transit services aimed at the mobility needs of these people such as providing reverse-commuter services for inner city residents to suburban jobs and eliminating service and physical barriers for the aged and handicapped. These demonstrations have found that the services available to meet the needs of the transportation disadvantaged before the intensive efforts to plan and implement the demonstrations were generally inadequate.

TABLE II-14
POSSIBLE SCOPE OF TRANSPORTATION DISADVANTAGED

	Number	% of Total 1970 U.S. Population
Persons 10-16 years of age (1970)	28,634,000	13.9%
Persons 65 and over (1970)	19,799,000	9.6
Persons 16 to 64 in poverty status (1969)	10,440,000	5.1
Handicapped aged 17 to 64 (July '65 - June '67)	12,530,000	6.4
	71,403,000	35.0%

SELECTIVE BREAKDOWNS OF HOUSEHOLDS WITH NO AUTOMOBILE, 1970
(millions)

	Total Households in Category	Households w/o Automobiles	
		Number	% of Households in each Category
Total, U.S.	64.4	13.2	20.5%
In Central Cities	20.5	7.0	34.1
In Non-Central Cities	21.7	2.5	11.5
Households with Income under \$3,000	10.2	5.8	56.9
Head of Household over 65	12.6	5.7	45.2

Source: Bureau of the Census, Current Population Reports and U. S. DHEW, Vital Health Statistics, Series 10, No. 61, January 1971

C. The Operating Context - Trends in Urban Development and Public Policy That Have Affected Transit

The financial data presented above illustrate the interrelationship between the deficit experienced by a transit system and its policies concerning fare and level of service. While these relationships account for the transit deficit in an immediate sense, the present condition of transit has also been significantly affected over the longer run by trends in urban development and related public policies. The trends and a number of other conditions that form the context within which urban mass transportation has operated are examined below.

1. Competition with the Automobile

With the ending of World War II a combination of public policies and private aspirations resulted in forces which significantly changed the character of most American cities. The tremendous growth in income brought with it the acquisition of the private automobile and the single family house in the suburbs. The explosion of American population into suburbia was accelerated and reinforced by Federal housing policies that made mortgage money relatively more available, by Federal income tax deductability of mortgage interest, by increasing auto ownership, and by the development of extensive systems of express highways. This system of highways accelerated the dispersal of residences, business and industry. As these changes occurred, the role of the central business district became less significant.

The decline in public transportation is associated with these trends and with the development of the auto as a competitive mode of transportation. The utility, comfort, convenience and flexibility of the auto have easily captured a large segment of urban transportation demand. Current cost characteristics of the automobile tend to place it in price competition with transit, since the perceived cost is largely the out-of-pocket cost of daily operation plus parking fees (the original capital cost, insurance, and major occasional repairs and replacements tend to be ignored in choosing between the auto and transit for local trips).

Beyond this, moreover, there are substantial costs associated with auto usage, especially for peak period commutation, that are not borne by the user at all. The consequence of the existence of these external costs is a substantial under-pricing of the auto mode relative to transit. Prominent among these external effects are both the direct and indirect costs of urban expressway construction, particularly when an effort is made to design such expressways with

sufficient capacity to meet peak-hour demands. There is widespread agreement among economists who have studied urban transportation that the user charges (primarily gas taxes) incurred by peak period users of such facilities do not, in fact, cover the increase in costs associated with providing the extra lanes needed for peak loads. But land acquisition and construction costs for urban freeways are not the only auto commutation costs not fully paid for by users. Even if residential relocation costs are fully reimbursed (and frequently they have not been, although the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and the Federal-Aid Highway Act of 1970 have now brought much-needed relief), the intangible costs of disrupting established communities and living patterns can be enormous, not to mention the impact of noise on residents and activities that are not relocated. In addition, air pollution (largely from automobiles) has become a problem of endemic proportions in our major urban areas and represents an incalculable cost generated, but only partially borne, by automobile users.

The increased ownership and utilization of the automobile have reshaped communities so as to greatly reduce the usefulness of conventional mass transit (fixed routes on fixed schedules, typically oriented to the CBD). While public transit once had a major influence on the distribution of population, jobs, and commercial activity, this is no longer so. Cities and their suburbs have sprawled in such a way as to preclude the relatively high densities required for the economic operation of conventional transit, and new forms of public transit compatible with these changed circumstances have not yet emerged. Restated, transit has failed to serve the changing needs of many people and no longer serves their mobility requirements.

Table II-15 illustrates the respective roles of public transit and the private automobile in serving different trip purposes in a number of different sized Standard Metropolitan Statistical Areas (SMSA's). The chart shows that the percentage of total person trips by auto ranges from about 70 percent in the larger cities to 99 percent in the smallest SMSA's; however, transit does somewhat better for some trip purposes (e.g., work trips vs. shopping trips) and for some geographic destinations (i.e., the CBD).

2. Extreme Peaking in Transit Demand

Table II-15 also indicates that about 20 to 50 percent of total transit trips are made during the one peak hour in both morning and evening rush periods. This translates into the fact that about one-half of total transit traffic occurs in both the two-hour morning and two-hour evening

TABLE II-15

Urbanized Area	1970 SMSA Population (millions)	Study Year	(thousands) Total Weekday Person Trip				(thousands) Total Weekday Person Transit		Percent of Trips by Transit, by Trip Purpose		
			by Auto		by Transit		Trips to & from CBD		Work	Shop	Recreation
			Number	%	Number	%	Daily	One Peak Hour			
New York	11.53	1963	18624	68%	8618	32%	4702	1427	38.2%	13.3%	14.1%
Chicago	6.98	1956	7517	76	2415	24	643	322	33.8	17.6	12.7
Phila.	4.82	1960	4309	77	1283	23	297	236	22.2	10.1	12.6
S.Francisco	3.11	1965	8953	91	933	9	219	NR	10.2	4.4	2.6
Pittsburgh	2.40	1958	1698	78	474	22	155	54	22.6	14.4	5.2
Baltimore	2.07	1962	2113	86	332	14	165	25	17.5	7.2	5.8
Minneapolis-St. Paul	1.81	1958	2950	88	416	12	165	60	12.4	6.4	3.7
Dallas	1.56	1964	5043	97	157	3	NR	NR	4.8	1.1	0.7
Seattle	1.42	1961	2835	96	121	4	80	19	7.7	4.6	2.3
Atlanta	1.39	1961	1221	90	135	10	53	13	16.2	5.3	2.4
Kansas City	1.26	1957	1882	92	161	8	127	34	12.4	5.3	2.6
New Orleans	1.05	1960	1101	73	402	27	178	37	27.3	23.2	14.9
Louisville	.83	1964	1242	94	79	6	NR	NR	7.3	2.7	2.3
Salt Lake City	.56	1960	930	94	54	6	17	NR	4.6	2.5	1.5
New Haven	.36	1960	722	84	142	16	105	16	21.2	9.1	7.0
Columbia, SC	.32	1965	501	97	14	3	6	2	4.6	1.6	0.6
Madison	.29	1962	418	94	28	6	15	4	6.8	2.1	27.9
Eugene	.21	1964	298	92	25	8	2	0.3	1.0	0.9	0.8
Fargo	.12	1963	282	99	3	1	3	0.4	1.2	1.9	0.3
Billings	.01	1961	190	99	2	1	2	0.8	1.9	0.4	0.3

NR-Not Reported

Source: Federal Highway Administration, DOT, Urban Transportation Planning Data, August 1969

rush periods -- i.e., about 20 hours of the week. The level of this peak demand determines the number of vehicle-driver units a system must operate, even though this capacity may be under-utilized or even stand idle during off-peak periods. This pressure to increase transit's capacity to meet peak hour demands greatly increases transit costs. For example, under prevailing labor contracts and work rules, it may be necessary for the transit system to pay full salary for two drivers to cover the two peak periods because of the time spread between them and the prohibition against or restriction of split shifts for drivers.

While city transit has always had peak hour ridership, the off-peak traffic has been much greater in years past. The private auto is easier to use in the less congested off-peak periods and offers a multi-stop flexibility that transit cannot provide. Moreover, the flat fare pricing of transit on the basis of average (and therefore peak hour) cost has the effect of over-pricing off-peak transit service and further discouraging its use.

These cost characteristics make it desirable for the transit industry to attempt to level out the peak in demand and to develop additional revenues from the under-utilized off-peak capacity. 1/ Staggered work hours are used in a number of places to reduce the peaks. Most examples are oriented toward surface congestion around plant entrances or parking lots, but in New York City, the Port of New York Authority's joint experiment with the Downtown-Lower Manhattan Association has proven effective in reducing the extreme concentration in subway stations during the busiest 15 minute period.

3. Public Acquisition of Transit Systems

A gradual shift to public ownership in mass transit has long been discernible. From the turn of the century until the mid-fifties it averaged about one firm per year; since 1955 there has been an

1/ A potentially powerful means of stimulating off-peak traffic (and to some extent reducing peak demand) might be differential pricing. Aside from the overpricing of short-hauls vs. long-hauls under flat fare systems, the existence of off-peak capacity with extremely low marginal costs could provide an opportunity to increase revenues by reducing fares for off-peak use (such reductions may also attract present rush hour users who can choose their travel time). Off-peak transit capacity might also be usable for a variety of freight or mail movements within the metropolitan area if regulatory and labor constraints were eliminated. Utilizing transit equipment for charter services during the off-peak hours could also help to increase revenues.

acceleration. Between 1955 and 1959, 15 firms became publicly owned; in the five years which followed, 1960-1964, 26 firms changed; in the five years ended in 1969, 53 firms went into public ownership. Economic crises in privately owned firms have provided the impetus for this shift -- communities have been faced with a choice of accepting curtailed services, losing the transit system, subsidizing it in private ownership, or acquiring it. Each of these choices has been selected in varying degrees, with the latter the most predominant.

Generally, the motive for public acquisition has been the same as the motive for local subsidization -- i.e., transit is a needed public service and should be maintained and publicly supported. In some instances efforts have been made to prolong or preserve a private operator but the reluctance of local officials to spend local revenues in support of private transit operators has meant that typically no action is taken until an abandonment crisis occurs and a hasty action to take over the operation by the community seems the only expedient course.

But public ownership does not in itself change the basic economics of rising costs and declining ridership; it may provide some financial relief due to reduced tax liabilities, but these reliefs could also be offered to private carriers. Often local politics makes a public takeover the sine qua non before providing public funds to accomplish community transit objectives. Public ownership also provides a more direct opportunity to employ mass transit as a positive tool in pursuit of other community objectives -- an opportunity that is still largely neglected.

4. Public Regulation of Transit

Public transportation in urban areas was caught up in the reform movement that brought public service and public utility industries under direct governmental regulation. These industries were considered to be natural monopolies from which the public needed protection against watered securities and the extraction of monopoly profits.

This traditional form of regulation has jurisdiction only over private transit operators and basically deals only with market entry, routes, fares and service levels. It is basically passive, only reacting to cases placed before it. These regulatory concepts have shaped the organization of the transit industry and have generated the prevailing attitudes of both the public and the industry -- even though the conditions under which those forms

and attitudes are appropriate have disappeared. Consequently, the formal regulatory process is concerned with a fare proposal, but not with exploring the possibilities of differential pricing techniques; it is called on to approve or disapprove a particular route change, but not to ensure the adequacy of service for all users and areas; it must judge financial viability, but has no control over the factors that determine that viability and has no resources to compensate for unprofitable services desired by users. Under traditional regulation the initiative for determining the character of transit service is left with the operator; if his business incentives disappear his initiative goes with them and the regulator is powerless to provide substitute motivations.

During the past twenty-five years traditional regulation has been superseded by the accelerated public takeover of private transit systems, supplemented by other forms of direct control, and has been overshadowed by other governmental entities whose policies have substantially affected transit. The growth of government intervention in many areas of public concern -- safety standards and regulations; insurance requirements; pollution standards; labor practices and wages -- has affected transit along with the rest of the economy. New regulatory authority which affects transit as directly and as significantly as traditional regulation has been vested in a variety of public agencies. Even more significantly, the broad role and ultimate effectiveness of public transportation is substantially affected by agencies and authorities who seldom have any responsibility to even consider the impact of their policies on mass transportation -- for example, parking authorities, traffic engineers, zoning appeals boards, and highway planners.

5. Need for Transportation Policy Coordination

As was discussed above, a wide variety of controls and policies besides those of the traditional regulatory apparatus now impinge on the effectiveness of mass transit and influence its role in the urban transportation system. Yet in no metropolitan area are all of these factors under the control of a single agency or authority responsible for ensuring their coordination and consistent action toward agreed upon objectives. For example, Chart II-1 listed 15 different operators of transit service in the San Francisco metropolitan area (including a number of publicly owned systems operating in exclusive jurisdictions and one public authority covering most of the region), yet there is no agency responsible for setting objectives for the total transportation system and ensuring that they are carried out by all operators -- public and private. A new planning agency has recently been established in the Bay Area, but its responsibilities cover only the public investment sector and do not get into such

day-to-day problems as coordinating schedules, routes and transfer privileges. Fragmented local government, each jurisdiction holding its own franchise authority, and overlapping public authorities compound the problem.

The absence of a single control agency in many areas has led to a number of policy inconsistencies and other adverse effects on public transportation. Representative examples are:

-- In spite of the flexibility of buses, many transit routes still follow the old fixed routes of the street cars even though public needs and the distribution of land uses may have changed.

-- In order to protect the franchised city operator, suburban operators are forced to operate with "closed doors" when carrying passengers into or out of the central city. Such restrictions may prevent the service from becoming viable.

-- Rigid distinctions have developed between transit and taxi services; taxis are generally forbidden to use large vehicles or to operate on fixed routes or schedules. Unlicensed taxi services are put under severe restrictions or are outlawed, as are jitneys. These demarcations prevent consideration of possible trade-offs between taxis and conventional transit for some low density services (e.g., specific routes or nighttime "owl service"). The objective of protecting transit from the fare robbing tactics of jitneys may be less valid today than in the 1920's since jitneys may prove to be a more economical way to meet certain demands.

-- On and off-street parking policies have an effect on the attractiveness of transit vis-à-vis the automobile. Parking charges are a significant out-of-pocket cost of commuting by auto -- a cost that is borne either by the motorist, by his employer, by local businessmen or by local government through subsidized parking rates. Further, building codes and zoning requirements for off-street parking spaces have often led to the provision of more parking space than would have been provided by the market in the absence of the regulatory intervention. In large metropolitan areas the market price of downtown parking is frequently high enough to be a potential deterrent to auto commutation, but public policies may vitiate this deterrent if they are established without explicit consideration of their implications for transit usage. Public parking and taxing authorities have no responsibility to consider these broader impacts.

-- Land use planning has ignored the possibilities of using transportation facilities -- either highway or mass transit -- as positive tools to shape development in desired patterns and directions. Nor are there means to implement a policy -- were planners

so inclined -- of ensuring that large suburban developments have public transportation service available even before they reach their full density, or more significantly, that developments are planned to contain densities, mixtures of uses, and varieties of income levels sufficient to support viable transit service.

D. Summary: What is the Problem?

While existing data are inaccurate, incomplete and subject to varying interpretations, no one can dispute the fact that the transit industry today is in critical financial condition. The gravity of this condition has been caused by a multiplicity of factors -- factors that are both external and internal to the industry itself. The former include the rise in the use of the automobile, changes in the nature and structure of the urban community, restrictions and regulatory controls imposed by the government, public indifference, the general feeling that mass transit should pay its own way, etc. The internal factors run the gamut of management, labor and operating problems and deficiencies that beset a number of industries today.

Any cure for the transit industry's problem cannot be effected by a single remedy. Rather, the cure, if there is to be one, must be multi-faceted in nature. A simple formulation of the problem in terms of the deficit alone is unproductive. The cure for the problems of urban mass transportation will have to deal with more than the operating deficit. It will have to find ways:

- to redress the effects of changes in life style, consumer preferences, and technological progress in other modes.
- to organize and deliver transit service where and when it is demanded.
- to encourage adaptation, innovation, and experimentation with new forms of mass transportation.
- to produce coordinated community policy concerning the desired role of public transportation and ensure operation of the total urban transportation system in accordance with that role.
- to ensure the consideration of transportation as a positive force for implementing urban growth and development objectives.

Finding and implementing solutions of this magnitude will require a working partnership of transit operators with local, State and Federal officials and a continuous process of experimentation and reassessment.

CHAPTER III

PRESENT FINANCIAL ASSISTANCE PROGRAMS FOR URBAN MASS TRANSPORTATION

This Chapter will examine and inventory the Federal, State and local financial efforts to respond to the transit problems detailed in Chapter II.

As seen above, local government has had to carry the immediate brunt of transit's financial deterioration. Initially this occurs when it chooses between acquiescence in the reduced transit service or increased fares (or both) needed to ensure breakeven operations, or the provision of subsidy funds from local government sources. Communities have been confronted by this choice regardless of whether the transit property is privately or publicly owned. It has often generated periods of acute pressure on local-officials faced with the threat of cessation of service by a private operator fed up with deficits aggravated by regulatory restrictions on fare increases.

In addition to the outright assumption of transit ownership and management responsibility by local government (discussed in the previous chapter) and the provision of State and local funds to match Federal capital grants, governmental responses to the transit crisis have taken the form of providing financial assistance to sustain operations. These subsidy programs which provide cash to "shore up", "preserve", or "stabilize" local transit operations are generally initiated in an atmosphere of crisis and growing political tension. (Perhaps in such an atmosphere it is impossible, or at least futile, to prove underlying causes or to attend more searchingly to longer-run substantive goals.) Yet between different communities and States the particular mechanisms for delivering assistance show a great deal of variation. In addition, a substantial number of States and communities have chosen -- either implicitly or deliberately -- to provide no assistance. As will be seen below, seventeen States have assistance programs; thirty-three have none. In twelve of these latter States, moreover, there are no local operating assistance programs. The picture that emerges is one of diversity and unevenness in the State/local response to the urban mass transportation problem.

A. Federal Assistance Programs

Existing Federal policy concerning urban mass transportation is relatively clear. Its three major components are:

- The Urban Mass Transportation Act of 1964, as amended, establishing a program of financial assistance for capital investments in transit equipment and facilities,
- exemption and rebate provisions in the Internal Revenue Code concerning the application of fuel and vehicle excise taxes to urban mass transportation, and

-- the Federal-Aid Highway Program, including since 1956 the Interstate and Defense Highway System, providing financial assistance for investment in urban highways.

1. Capital Assistance

In 1961 the Congress included mass transportation capital improvements in the Public Facilities Loan Program and authorized a mass transit demonstration program. In three years under this authority only one loan was made (\$3.0 million) and \$24.2 million was obligated for demonstrations. Not until the 1964 Act did outright Federal grants for capital facilities and research gain congressional approval. Authority for planning grants, managerial training grants and support for university research was added in 1966. By FY 1971 appropriations under the 1964 Act totalled \$917 million, of which \$800 million was committed to capital grants.

The Act specifies that

Where facilities and equipment are to be acquired which are already being used in mass transportation service in the urban area, the program must provide that they shall be so improved (through modernization, extension, addition, or otherwise) that they will better serve the transportation needs of the area.

Although the Act also requires a rigorous planning finding, a one-third local share over and above any "reasonable" revenue financing and gives the Secretary of Labor broad authority to require "fair and equitable arrangements . . . to protect the interests of employees affected," it nevertheless specifically prohibits regulation of "the mode of operation" or the "rates, fares, tolls, rentals, or other charges" of any mass transportation system assisted except to enforce contractual undertakings of the applicant. These provisions reflect a somewhat ambivalent attitude. The Congress apparently felt a need to impose standards and controls in order to ensure the accomplishment of its policies; at the same time it was aware of the risks of Federal intrusion into day-to-day transit operations and into local political decision-making.

In 1970 the capital assistance program was modified to put it on a financial basis similar to the highway program (i.e., contract authority that becomes available for obligation without the necessity for prior congressional appropriations) and to greatly increase the funds available (\$3.1 billion was made available immediately as the initial increment of an intended \$10 billion, 12-year program). Federal assistance continues to be limited, however, to assisting public agencies in "financing the acquisition, construction, reconstruction, and improvement of facilities and equipment for use . . .

in mass transportation service in urban areas and in coordinating such service with highway and other transportation" This recently expanded capital assistance program has already resulted in substantial upgrading of existing transit equipment and stimulated more meaningful consideration of transit alternatives in local transportation planning. Appendix II contains a detailed survey of legislative considerations since 1958 concerning urban mass transportation.

2. Tax Relief

The Federal Internal Revenue Code has for some time incorporated a policy of exempting State and local government bodies from various types of excise taxes. Under this policy publicly owned transit operators are exempt (26 U.S.C. 4221(a)(4) and 26 U.S.C. 4055) from the 4¢, per gallon Federal tax on gasoline and diesel fuel for use in highway vehicles and from the Federal excise taxes on buses (10% tax) and parts (8% tax).

When the Federal gas tax was increased in 1956 and subsequently to finance the expanded Federal-aid highway program, the privately owned urban mass transit operators maintained that they were financially unable to bear the burden of additional fuel taxes and were granted relief from the additional taxes through a rebate provision that maintains the pre-1956 tax level of 2¢ per gallon for fuel used in providing urban mass transportation service.

3. Federal-Aid-Highway Program

The fact that the Federal-Aid Highway Program provides assistance to urban mass transportation through the provision of a portion of the rights-of-way used by public transportation in urban areas is often neglected. Awareness of this close connection is growing, however, as opportunities are identified to promote and facilitate transit use by modifying the control of access to or flow of traffic on existing or planned streets and highways. Recent amendments to the highway program have explicitly recognized this relationship; e.g., the fringe parking program, TOPICS, designation of a new "urban system" as a separate functional classification, and the broadening of eligible costs to include some solely related to transit.

Involvement in the provision of highways and post roads has been a long accepted Federal function. In contrast, Federal involvement in the public transportation element of the urban transportation system is recent, and its scope is still at issue.

B. State Assistance Programs

Seventeen States currently provide programs to help meet urban mass transportation costs. All have been designed to aid transit operators to maintain existing transit service; few have attempted to achieve

any additional policy objectives through financial assistance. In general these measures have been enacted as "emergency relief" programs after one or more private transit systems have gone out of business, with a resulting clamor from municipalities for State funds to help restore services.

Only two States -- New Jersey and Pennsylvania -- have significant programs designed specifically to provide funds for urban mass transit operating costs. Other States make funds available in varying ways: for example, the Emergency Transit Maintenance Program in New York, reimbursement for discount fares for school children in several States, and various forms of tax relief or rebate in many States.

In the interest of simplicity and clarity, State assistance programs for mass transit will be discussed according to the type of assistance provided.

1. Operating Cost Subsidies

Major financial assistance programs of this type exist in New Jersey and Pennsylvania. More limited operating subsidy programs have been approved in Rhode Island, New York, and Massachusetts. The California and Michigan legislatures are considering transit operating assistance programs that are expected to be enacted during 1971.

a. The State of New Jersey. New Jersey administers aid programs for commuter rail service (currently at an annual cost of \$10.3 million) and bus transit service (at a cost of \$0.9 million in 1971).

Assistance for commuter rail carriers is available to those railroads which maintain intercity service in New Jersey, plus New York City and other interstate services (excluding Philadelphia). Subsidy payments for an upcoming fiscal year are not to exceed the loss for the preceding calendar year. These losses are computed on an "avoidable cost" basis -- that is, what the financial result would be if the railroad did not have to provide the commuter service. Payments cover station, track, maintenance, and plant and equipment costs related to commuter service. In administering this program the State closely monitors the operation of those commuter railroads receiving assistance and approves substantive changes in fares or levels of service.

In 1968 New Jersey also began to address itself to a perceived crisis in bus transit. As a result of a study in 1969, the State Department of Transportation recommended "authorization of an interim subsidy program to support bus service which would otherwise be terminated between now and July 1, 1970." The Department recommended that

75 percent of the cost of providing such local bus service be provided from State sources and 25 percent from local sources. This recommendation was adopted, became law, and an appropriation was made for FY 1970 in the amount of \$750,000; this program was renewed for FY 1971 at a level of \$935,000, and for FY 1972 the cost will be \$1 million. To obtain assistance each operator enters into a contract with the State in accordance with very detailed program guidelines. The State explicitly defines allowable costs and must agree to any substantive changes in service standards and fares charged.

A detailed description of these programs and applicable criteria and guidelines is contained in Appendix III.

b. The Commonwealth of Pennsylvania. Pennsylvania has a continuing program of operating assistance for urban mass transportation; this is coupled with a State program of grants for capital projects.

Established in 1967, the operating assistance program is aimed at continuing and improving mass transit services in those areas where operating losses threaten to lead to a substantial reduction or elimination of service. This program made available nearly \$8 million the first year, and is budgeted at \$35 million for FY 1972. In FY 1971 Philadelphia and Pittsburgh received \$10.3 million of the \$10.5 million appropriated. The program is administered on a State-local matching share basis with the State reviewing a submission to determine eligible costs. The resulting State "purchase of service agreement" also imposes service standards under which any undue deviation leads to a reduction in payment. This program and its applicable criteria and guidelines are also detailed in Appendix III.

c. The State of Rhode Island. Rhode Island has recently approved a \$700,000 subsidy for operation of the Rhode Island Transit Authority, the major supplier of public transit in the State. The bill authorizes use of the money "for the purpose of defraying expenses of the authority incurred during fiscal year 1971, and to assist in financing transit operations during fiscal year 1972." The program is financed from the State's general fund.

d. California and Michigan. Proposals for establishing operating cost type subsidies are pending in the legislatures of these States.

(1) The California proposal would establish the nation's largest State aid program for transit. The bill, which has passed the Assembly and is pending in the Senate, would remove gasoline from its sales tax exempt status, i.e., impose a 5 percent sales tax on gasoline and thereby provide approximately \$150 million annually for mass transit in the State. The key features of the legislation are:

- Returns local sales tax (1 percent -- approximately \$30 million) to the cities and counties of origin.
- Appropriates State sales tax (4 percent -- approximately \$120 million) to the State Public Transportation Fund.
- Authorizes operating transit districts and any city or county operating public transit service to file a claim against the Fund for operating expenses, capital requirements and debt service. These claims are subject to approval by the State.
- Permits cities and counties not providing public transportation services to use their State gasoline sales tax revenues to contract for such services with other public transportation operators.
- Stipulates that allocations to transit systems may not exceed the State sales tax on gasoline revenues generated from their area of operation.
- Sets aside a specified amount of the State gasoline sales tax revenues for Statewide transportation purposes, e.g., developing a balanced transportation plan for the State, funding special demonstration projects, etc.

The only specific requirements for applicants are that (1) they supply detailed justification if their aid request increases by more than 15 percent over the previous year, and (2) the assistance cannot represent more than 50 percent of a system's annual budget.

(2) In 1970 the Michigan State legislature passed a bill providing \$2.15 million for assistance to public transportation. This program provides State funds (on a 75-25 percent State-local match) for research and demonstration projects. The total program expenditures were \$12.0 million -- \$1.9 million in State funds, \$2.6 million in local matching, and \$7.5 million in Federal funds.

A new and enlarged State program of assistance to public transportation is now pending in the State legislature. It would provide \$20 million annually to pay for debt service on bonds to finance construction or acquisition of public transportation facilities, capital and operating costs of State aid transit corridor systems, and demonstration projects

designed to improve efficiency of public transportation systems or concepts. The program would be financed by an additional 5¢ on the State gasoline tax (now at 7¢ per gallon).

Although the proposed aid would be distributed on a complex formula involving transit vehicle miles in designated transit corridors, the net result will be to pay for about 25 percent of the operating costs of transit systems in the State's major metropolitan areas.

Monies will be provided through regional transportation authorities, which will be responsible for developing the State aid transit corridors for their urban area as well as service, route and fare structures for their transit systems. All proposals will be reviewed by the Agency having overall responsibility for land use and urban planning in the urban area and will be submitted to the State for final approval.

e. New York. In 1967 the State legislature approved a \$2.5 billion transportation bond issue which specifically earmarked \$1 billion for mass transit capital grants. This year voters will be asked to approve another \$2.5 billion transportation bond issue, including \$1.5 billion for transit.

In 1971 the State legislature approved utilizing approximately \$31 million of the \$1 billion authority for transit bonds (1967 issue) for an Emergency Maintenance Program. These funds, on a one-time only basis, provided \$24.6 million to the Metropolitan Transit Authority (MTA) for maintenance and improvement of New York City's existing subway and commuter rail lines, \$1 million to MTA for the bus systems in the New York City suburbs, and \$6 million to upstate operators for maintenance and improvement of their bus systems.

f. Massachusetts. This State assists transportation areas (Metropolitan Boston Transit Authority is presently the only one) by paying 90 percent of the annual debt service on bonds authorized to finance mass transportation equipment or facilities acquired by the authority. In 1970 this amounted to \$4.4 million utilizing funds received from a Statewide 2¢ cigarette tax.

2. Reduced Fare Subsidies

At the State level this category of financial assistance takes the form of reimbursement for reduced school fares for school children.

a. Illinois. This program was initiated in 1965 and its expanding scope and magnitude are shown in Table III-1 below. Assistance is given only to publicly owned systems and is based on a formula that pays the difference between the reduced fare and the regular fare, but cannot exceed 50 percent of the regular fare. The proposed program for FY 1972 totals \$6.7 million.

TABLE III-1
STATE OF ILLINOIS: SCHOOL PUPIL PUBLIC TRANSPORTATION
REIMBURSEMENT PROGRAM

	By Fiscal Year (\$ in thousands)					
	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>
CTA Chicago	\$3,650	\$3,650	\$3,650	\$3,650	\$6,085	\$6,100
Pekin			46	46	32	24
Peoria					10	124
Rockford						110
Bi-State					250	250
Elgin					12	16
Springfield						72
	<u>\$3,650</u>	<u>\$3,650</u>	<u>\$3,696</u>	<u>\$3,696</u>	<u>\$6,389</u>	<u>\$6,696</u>
	Cumulative Total FY 65-71					\$27,776

b. New York and Massachusetts. These States reimburse local transit systems from education funds for fare differentials for school children who live more than 1-1/2 miles from school and who must use public transportation. The New York program amounted to approximately \$32.1 million in FY 1970 of which \$27.9 went to New York City. The Massachusetts program amounted to \$1.9 million in 1970 and was financed by the 2¢ cigarette tax.

c. Pennsylvania. This State has a limited program under its Department of Education which reimburses transit systems regulated by public utilities commissions for reduced fares for school children; it did not apply to the transit systems in Philadelphia and Pittsburgh. The exact cost of this program is unknown but indications are that it amounts to no more than \$250,000 per year.

3. Tax Relief or Rebate

A number of States have policies which either offer some form of tax relief, or rebate some portion of taxes, to transit operators. According to a 1968 survey of the American Transit Association, some form of tax relief is given in the States of California, Florida, Georgia, Illinois, Iowa, Maryland, Massachusetts, Michigan, Missouri, New York, Ohio, Pennsylvania, Tennessee, Texas and Washington. These devices are applied to a wide range of taxes and, in all States except Massachusetts and Washington, are available only to public operators. The Ohio legislature is, however, considering a rebate of fuel taxes for all operators in the State. These programs can be of substantial value to operators. For example, the exemption from the 9¢ gasoline tax in Washington is worth about \$50,000 annually to the Tacoma Transit System; the rebate of fuel and excise taxes in Massachusetts makes available annually about \$1 million to transit systems. Table III-2 summarizes the scope of exemption or rebate in each of the State providing them.

4. State Authority for Local Taxation

Some States -- among them Illinois, Washington, and Oregon -- have provided authority for local government to impose taxes to assist in paying transit operating costs.

a. Illinois. Since 1945 cities in Illinois have been authorized, subject to a public referendum, to tax up to .03 percent of the full cash value of all property to provide income to operate, maintain, and improve any local transportation system owned and operated by the city. In 1959 the "Local Mass Transit District Act" authorized the creation of districts to acquire, own, operate and maintain mass transit facilities or subsidize their operation. Each district may issue revenue bonds at an interest rate not to exceed 6 percent and may, after a referendum, levy a tax on property within the district at a rate not to exceed .05 percent. As of 1971 such districts have been formed in Springfield, Peoria, and Champaign-Urbana.

b. Washington. This State authorized a "transit tax" in 1965. Upon local adoption, usually by referendum, this tax can be assessed on housing units at a fixed monthly rate and on businesses based on the number of full time employees. This tax is utilized in varying amounts in eight cities.

TABLE III-2
STATEWIDE TAX RELIEF OR REBATE POLICIES

California	- Public operators are exempt from corporation franchise tax, vehicle registration fees, and a 1-1/2% gross revenue transportation tax.
Florida	- Public operators exempt from all taxes except two cents of fuel tax and vehicle registration fees.
Georgia	- Public operators are exempt from all taxes and fees except fuel tax.
Illinois	- Public operators are exempt from all taxes and fees except a utility tax and vehicle registration fees.
Iowa	- Public systems exempt from all taxes and fees except \$25 vehicle registration fee.
Maryland	- Baltimore MTA exempt from all State taxes and fees.
Massachusetts	- All operators receive a rebate of fuel and excise taxes.
Michigan	- Public operators exempt from all taxes and fees except vehicle registration fee.
Missouri	- Public operators exempt from all taxes and fees except fuel tax and unemployment insurance taxes.
New York	- Publicly owned systems are exempt from all taxes and fees.
Ohio	- Publicly owned systems from all taxes except fuel and property taxes.
Pennsylvania	- Public operators exempt from all taxes and fees except fuel tax and vehicle registration fees.
Tennessee	- Publicly owned systems are exempt from all taxes and fees except for \$1.50 annual license fee per bus and unemployment insurance taxes.
Texas	- Public operators exempt from all taxes and fees except fuel tax.
Utah	- Public operators exempt from all taxes.
Washington	- (1) All operators are exempt from 9¢ State gasoline tax. (2) All operators are eligible for rebate of one-half of 2% excise tax on motor vehicles; localities must match this on a dollar-for-dollar basis.

SOURCE: American Transit Association, Taxes, Bulletin 917, 1968

c. Oregon. In 1969 the State legislature authorized the creation of transit districts in any of its three Standard Metropolitan Statistical areas. These districts would have the power to finance operations by any of seven means: (1) a 1 percent income tax on wages or a 1 percent sales or personal property tax; (2) a license fee on any business, trade, occupation, and profession in the district; (3) an employee payroll tax of up to six-tenths of one percent on wages paid; (4) a retail sales tax; (5) property tax; (6) a special purpose property tax of not more than \$1.50 per \$1,000; (7) general obligational and/or revenue bonds. The last three options must receive specific voter approval.

C. Local Assistance Programs

During the decade from 1961 to 1971, the number of municipalities that provide operating assistance to transit systems has increased nearly 300 percent (from 21 to 81). Most of these programs are similar to the State programs in that they are relief measures designed to preserve existing transit service, with little or no attempt to achieve any additional substantive policy objectives through financial assistance. A majority of these measures provide funds on an annual basis to cover operating deficits. This generally requires submission of an annual budget justification for all transit costs and places the provision of transit service into competition with other municipal services for local funds. This does not apply, however, to transit districts or authorities which have been provided dedicated revenues on a multi-year basis.

The major differences among existing programs can be found both in their eligibility requirement and in their source of revenue for funding the deficit. Private operators are rarely given the same tax exemptions granted to public properties. Funding sources include such actions as dedicated parking meter revenues in Baton Rouge, Louisiana; a payroll tax in Portland, Oregon; and gas and electric revenues in New Orleans. Table III-3 provides a summary for a sample of transit properties of local financial assistance programs. The properties listed experienced known deficits of \$185 million in 1969 and \$205 million in 1970.

To illustrate the workings of the major local assistance programs, those in New York City, Boston, Philadelphia, and Hamilton, Ontario are outlined below.

TABLE III-3

LOCAL TRANSIT OPERATING SUBSIDY PROGRAMS

TRANSIT PROPERTY (by State)	Ownership			Operating Deficit (thousand \$)		Operator Receives State Assistance	Year Began	General Revenue Gas/Electric Rate	Property Tax	SOURCE OF LOCAL ASSISTANCE	
	Public	Private	Fleet Size	1969	1970					Other	
* Alabama (asterisk indicates absence of any State or local assistance)											
* Alaska											
Arizona											
Phoenix Transit Corporation	x	95	None	60	1970	x					private operator under city control; guaranteed profit of \$15,000
Tucson Transit Corporation	x	25	86	74	1969	x					
* Arkansas											
California											
Bakersfield Municipal Transit System	x	21	90	94		x					
Chula Vista (Aztec Bus Lines)	x	5	None	80	1970	x					private operator under city contract; subsidy is \$50/day/bus
Fresno Transit	x	44	291	363	1961	x					
Gardena Municipal Bus Lines	x	28	30	57	1969	x					
Long Beach Public Transportation Company	x	135	56	306	1963		3.75c/\$100				subsidy produces \$400,000/year for operating and capital costs
Los Angeles-S. California Rapid Transit District	x	1,482	2,972	5,103	1970						subsidy from six months sales tax levied in 1969 will cover losses through 1971; relief from property tax
Oakland A. C. Transit	x	699	4,485	4,790	1960		29.1c/\$100				transit district has no ceiling on designated tax rate
Oxnard Municipal Transit System	x	13	52	72	1959		5c/\$100				
Palo Alto (Peninsula Transit Lines, Inc.)	x	11	114	126	1963						private operator under contract to city; per mile basis is used to calculate subsidy
Sacramento Transit Authority	x	118	574	735	1962	x					
San Bernadino Municipal Transit System	x	34	100	180	1963	x					
San Buena Ventura Citizens Transit Lines	x	8	41	46	1958	x					
San Diego	x	210	441	Unknown	1967		10c/\$100				
San Francisco Municipal Railway	x	1,121	16,906	15,374	1911	x					
San Jose City Lines	x	54	25	162	1970	x					
Santa Barbara Metropolitan Transit District	x	12	157	162	1965		5c/\$100				
Santa Rosa Municipal Transit	x	6	16	23	1958	x					receives 50% of revenues from fare box; city pays all costs except driver wages and benefits
Stockton Metropolitan Transit District	x	46	130	251	1963		10c/100				
Torrance Municipal Bus Lines	x	22	135	116	1952	x					
Vallejo Citizens Transit Lines	x	10	26	27	1966	x					subsidy covers part of wages and cost of special route operation
Colorado											
Denver Metro Transit	x	211	None	Unknown	1971						private operator under contract to city; \$2 head tax on employers and employees
Pueblo Transportation Company	x	22	120	106	1969	x					
Connecticut											
Connecticut Railway Corporation	x	132	2	201	1969	x					
* Delaware											
Florida (Tallahassee) Cities Transit, Inc.	x	19	39	50	x 1971	x					
* Georgia											
* Idaho											

(Table III-3 Continued)

TRANSIT PROPERTY (by State)	Ownership			Operating Deficit (thousand \$)		Operator Receives State Assistance	Year Began	SOURCE OF LOCAL ASSISTANCE			
	Public	Private	Fleet Size	1969	1970			General Revenue	Gas/Electric Rate	Property Tax	Other
Illinois											
Champaign-Urbana City Lines	x		40	None	170	x	1970		x		
Chicago Transit Authority	x		4,313	2,781	Unknown	x	1965				
Greater Peoria Mass Transit District	x		61	Unknown	Unknown	x	1970		x	\$250,000 earmarked property tax	
Rockford Transit Corporation	x	x	56	Unknown	Unknown	x	1970				
Springfield	x			129	155	x	1968		1/2c/\$100		
Indiana											
Fort Wayne Public Transportation	x		60	127	761		1968		x		
Greater Lafayette Bus Company	x		15	15	Unknown		1970	x			
Michigan City Municipal Coach Service		x	10	76	91		1945	x		private operator under contract; small contribution from 4 surrounding communities	
Muncie City Lines		x	31	19	15		1969	x		private operator under contract; guaranteed operating ratio of 94%; maximum payment of \$30,000	
South Bend Public Transportation		x	52	524	492		1968		x		
Terre Haute		x	12	40	69		1965	x			
Iowa											
Burlington Transit Lines		x	9	15	30		1970	x		city pays \$1,000 month; owns garage and leases for \$1/year	
Cedar Rapids Regional Transit Corporation, Inc.		x	26	30	175		1969		x		
Sioux City Lines		x	28	159	78		1969		x		
Waterloo-Cedar Falls Transit Company		x	30	46	58		1969	x		city owns buses; private operator is non-profit corporation	
Kansas											
Wichita Metropolitan Transit Authority		x	49	150	165		1967		x		
* Kentucky											
Louisiana											
Baton Rouge Bus Company		x	40	None	78		1970			subsidy from dedicated parking meter revenues in excess of \$300,000	
Lafayette Municipal Transit System		x	15	23	50		1965	x			
Monroe		x	20	76	80		1961	x			
New Orleans Public		x	494	5,727	3,844			x		Owned by public utility	
Maine											
Portland-Union Street Railway		x	52	23	52		1969			Reduced rent for city owned garage; no taxes paid; 5c per school ride	
Massachusetts											
Boston MBTA		x	1,983	31,325	51,659		1969			detailed in text	
Brockton-Union Street Railway		x	18				1970			city guarantees \$.92 per mile up to \$102,000; reimburses 1/2 of senior citizen fares	
Lowell		x	14	None	167		1970	x			
New Bedford-Union Street Railway		x	56	None	34		1970			reimburses 1/2 school fare	
Springfield Street Railway		x	171	32	30		1968			reimburses for reduced school fares	
Michigan											
Ann Arbor Transportation Authority		x	22	280	205		1969	x			
Detroit Street Railways		x	1,171	606	5,865		1970	x		General revenue meets about \$1.5 million; remainder comes from deferring payments to pension fund (as of 6/30/70 DSR owed \$9.4 million with additional \$7 million in FY 71)	
Flint Transportation Authority		x	91	666	637		1966	x			
Grand Rapids Transit		x	55	200	409		1965	x			
Kalamazoo-Metro Transit		x	60	200	240		1967	x			
Muskegon City Transit		x	10	41	59		1968	x			

(Table III-3 Continued)

TRANSIT PROPERTY (by State)	Ownership			Operating Deficit (thousand \$)		Operator Receives State Assistance	Year Began	General Revenue	Gas/Electric Rate	Property Tax	SOURCE OF LOCAL ASSISTANCE	
	Public	Private	Fleet Size	1969	1970						Other	
Pennsylvania												
Altoona and Logan Twp. Bus Authority	x			55	75	x	1969	x				State provides 2/3; local 1/3 from general revenue
Erie Metropolitan Authority	x		58	150	220	x	1967	x				State provides 2/3; local 1/3 from general revenue
New Castle Transit Authority	x		21	70	124	x	1968	x				State provides 2/3; local 1/3 from general revenue
Pittsburgh-Port Authority of Allegheny County	x		1,050	6,080	7,865	x		x				State provides 2/3; local 1/3 from general revenue; county also has senior citizen reduced fare reimbursement
SEPTA	x		2,706	278	8,188	x						
Rhode Island												
Rhode Island Transit Authority	x		170	317	423	x	1971					program financed from State general fund
South Carolina												
(Columbia) S. Carolina Electric and Gas Company	x		86	389	570			x				
South Dakota												
Sioux Transit, Inc.	x		54	3	15		1969	x				
Tennessee												
Chattanooga-Southern Coach Lines	x		81	None	29		1969	x				
Memphis Transit Authority	x		300	591	518	x	1961					subsidy from loan of \$3.5 million (bond issue); \$155,000 remaining
Texas												
Abilene Transit	x		16	35	55		1967		x			
Amarillo Bus Company	x		25	100	100		1967	x				
Austin Transit	x		62	Unknown	Unknown		1970	x				city guarantees operating ratio of 92; paying approximately \$20,000 month
(Corpus Christi) City Transit System	x		46	176	204		1968	x				
Lubbock Transit Corporation	x		33	3	11		1971	x				
San Angelo Transit System	x		18	70	74			x				
Utah												
Salt Lake City-Utah Transit	x		67	None	92	x	1970	x				surrounding communities contribute based on # of route miles; exempt from all city taxes except payroll taxes
* Vermont												
* Virginia												
Washington												
Seattle Transit System	x			2,547	3,988	x	1968	x				State authorized "transit tax."
Spokane Transit	x		66	491	565	x						private operator under contract; "transit tax."
Tacoma Transit	x		110	824	919	x						"transit tax"
* West Virginia												
Wisconsin												
(Appleton) Fox River Bus Lines	x		41	13	Unknown		1969	x				temporary subsidy only
(Green Bay, Wisconsin) Public Service Corporation	x		18	169	200		1951		x			
(Kenosha) Pathfinder City Transit	x			27	Unknown		1969					city parking commission subsidizes at \$2,500/month rate
Madison Bus Company	x		86	252	400		1970	x				
Oshkosh City Transit Lines	x		25	6	12		1970	x				limit to \$12,000/year
* Wyoming												
SOURCE: National League of Cities/U.S. Conference of Mayors, Profiles of Existing Programs to Assist Urban Mass Transit, Unpublished Working Paper prepared for Department of Transportation (June 1971)												

(Table III-3 Continued)

TRANSIT PROPERTY (by State)	Ownership			Operating Deficit (thousand \$)		Operator Receives State Assistance	SOURCE OF LOCAL ASSISTANCE				
	Public	Private	Fleet Size	1969	1970		Year Began	General Revenue	Gas/Electric Rate	Property Tax	Other
Minnesota											
Duluth Transit Authority	x	78	None		183	1971				x	
Twin City Area Metropolitan Transit Commission	x	635	None		None	1971				x	seven county property tax
Mississippi											
(Biloxi-Gulfport) Municipal Transit Lines		x	25	16	20	1971					deficit covered by Mississippi Coast Transit Authority
Missouri											
(Columbia) Municipal Lines	x	12		87	100	x 1967	x				
Kansas City Area Transit Authority	x	349		725	749	x					1/2% sales tax earmarked for transit
Springfield City Utilities	x	66		311	395	x 1951		x			
Montana											
Bus Lines of Billings	x		3	12	12	1970	x				leased to private operator
* Nebraska											
* Nevada											
New Hampshire											
Manchester Transit Union Street Railway		x	UNK	None	59	1970					subsidy through school contracts and reimbursements
New Jersey											
Atlantic City Transportation Company	x	66		185	232	x 1970	x				State subsidizes 75% of loss and local match 25% is met from general revenues
Clifton-Community Bus Lines	x	36		109	120	x 1970	x				
Coast City Coaches	x	37		None	112	x 1970	x				
Newark-Public Service Coordinated Transport	x	2,508		1,003	3,823	x 1970	x				
Paterson-Inter City Transportation Company	x	214		304	549	x 1970	x				
Trenton-Mercer-Metro	x	100		None	327	x 1970	x				
New Mexico											
Albuquerque Transit System	x		58	377	428	1966	x				
New York											
(Albany) Capital Area Transportation	x		250	370	500	x 1971					subsidy from 25¢ override in State mortgage transfer tax
(Binghamton) Broome County Transit	x		31	225	300	x 1968	x				
Utica Transit	x		46	None	120	x 1970	x				
Metropolitan Transit Authority and subsidiaries	x		9728	97,228	61,200	x					see Appendix
North Carolina											
Duke Power Company		x	44	80	119			x			
North Dakota											
Holiday Transportation (Fargo)		x	3	None	26	1970	x				city subsidizes up to \$1,600/month
Ohio											
Akron Metropolitan Regional Transit Authority	x		60		167	1970	x				Akron pays 80% and five surrounding communities pay residual based on route mile formula
Springfield Bus Lines		x	10	51 34	1	1970	x				City subsidizes up to \$2,200/month for 9 months, \$2,600/month for 3 months
(Toledo) Regional Transit Authority	x		155	115	500	1971			1 mil/\$100		
Oklahoma											
Central Oklahoma Transportation & Parking Authority	x		60	119	149	1967	x				
Tulsa Transit Company	x		45	60	65	1968	x				
Oregon											
(Eugene) Lane County Mass Transit District	x		20	Unknown	593	1971					.3% payroll tax; will produce \$700,000 first year
Portland-Tri County Metropolitan District Authority	x		234	210	2,495	1969					.5% payroll tax; produced \$82 million for 1970
Salem Transit	x		17	100	97	1966				x	limited to \$100,000 annually

1. New York City. The FY 1971 executive budget of the City of New York describes the city's subsidies for mass transit as a "hodge podge" of financial arrangements which have developed over the past two decades. This "hodge podge" is a direct result of the fact that until the Metropolitan Transportation Authority (MTA) was created by the State in March 1968, State law required the New York City Transit Authority (TA) to operate on a self-sustaining basis. To accomplish this, the following arrangements were devised to assist TA in meeting its operating costs with funds from general revenues.

- NYC pays 100 percent of the cost of New York Transit Police; this amounted to \$51.9 million in FY 1970, \$57.1 million in FY 1971, and is projected at \$70 million in FY 1972.
- NYC pays \$2 million annually as a reimbursement for free transit provided for New York City police and firemen.
- At a cost of \$57.5 million and \$77.6 million in fiscal years 1970 and 1971, respectively, NYC reimbursed operators for reduced fares for school children.
- NYC pays reimbursement for reduced fares for the elderly (persons over 65 ride at half-fare). This cost \$7.2 million in FY 1970 and \$12.5 million in FY 1971.
- The city itself formally owns the subway system and the major city-wide bus system and is required to pay principal and interest on their debts. In 1970-1971, \$14.4 million was paid by the city from a special real estate assessment for this purpose.

These programs are explained in more detail in Appendix III.

2. Boston. The transit system in the Boston metropolitan area has been given two substantial sources of non-farebox income: revenues from a Statewide 2¢ cigarette tax and the authority to assess the 79 member towns of the Massachusetts Bay Transportation Authority for a share of its deficit.

MBTA uses the revenues from the cigarette tax as follows: reimbursement of reduced student fares, at a current annual cost of \$1.9 million; subsidization of commuter rail operations at an annual cost not to exceed \$5 million; up to \$3 million annually for service on debt MBTA acquired from its predecessor; payment of interest and principal on new MBTA debt; refunding fuel and excise taxes.

The income derived from this tax, absent the student fare reimbursement, is added to operating revenue. The expenses that this revenue cannot meet are then assessed to the 79 member towns of MBTA. Access to these funds has enabled MBTA to retain moderate fares and meet rapidly rising costs, as illustrated by Table III-4 below:

TABLE III-4			
SUBSIDY SUPPORT FOR METROPOLITAN BOSTON TRANSPORTATION AUTHORITY			
	10/ 1/67 to <u>10/31/68</u>	11/ 1/68 to <u>11/30/69</u>	12/ 1/69 to <u>12/31/70</u>
Fare	\$.20	\$.25	\$.25
Total Cost (millions) . . .	97.5	115.2	133.0
Deficit	42.2	44.4	66.2
Assessments	28.3	30.8	51.2
Cigarette Tax	11.2	13.1	14.5

Source: National League of Cities/U.S. Conference of Mayors, unpublished working paper, June 1971.

3. Philadelphia. The City of Philadelphia provides operating subsidies for the three divisions of the South Eastern Pennsylvania Transportation Authority (SEPTA). While substantive in a dollar sense, the program is mainly an effort to produce the local one-third share to match the State aid given through its "purchase of service" program outlined above. The Philadelphia area subsidy contributions for mass transit operating losses in 1971 from governments which SEPTA serves were \$3.6 million for commuter rail services and \$9.4 million for other transit operations.

4. Hamilton, Ontario. This subsidy program is noteworthy both because it is a user subsidy and because it has a unique delivery mechanism. The city reimburses the Hamilton Transit Commission for reduced fares for pensioners, students, the disabled, and welfare recipients. These riders purchase reduced fare tickets which are color coded by user groups. Each ticket color has a different reimbursement value for which the city reimburses the Transit Commission at the established value per pound of tickets collected.

CHAPTER IV

ANALYSIS OF ALTERNATIVE FEDERAL ASSISTANCE PROGRAMS

Consideration of proposals for a program of Federal assistance to help defray mass transit operating costs involves a number of issues or questions. The answer one gives to any of these substantially affects one's ultimate judgment about the desirability of operating subsidies at one level of government, the particular mechanism chosen for an operating subsidy, and the feasibility of the subsidy's meeting its objective.

This Chapter begins with a discussion of these issues in general terms. Then a range of possible programs that could be utilized to provide Federal assistance for urban mass transportation is identified and analyzed.

A. Major Issues

1. Defining a Range of Objectives

In evaluating the desirability of policy alternatives, the first major issue is that of definition of purpose. What are the objectives of a certain policy? Consideration of objectives is essential to the entire question of financial assistance for transit operations since the objectives become the criteria against which alternative programs must be evaluated and found relevant.

Transportation is seldom viewed as an end in itself. Rather, transportation is a service function that should facilitate participation in diverse and geographically dispersed human activities. The increasing dispersal of these activities in metropolitan areas has placed serious burdens on transportation and, more important, on human beings -- in terms of time, energy, and resources. The cardinal relationship between transportation and city size, structure, growth rates, and the quality of urban living must be emphasized. In short, transportation must be planned and developed consistently with the primary goals of the community and as an integral part of the process of comprehensive development planning directed toward implementation of those goals.

Beyond this, however, an examination of the objectives frequently cited for government intervention in transit operations yields a long list:

- mobility for urban populations
- mobility for non-drivers
- help for the poor

- maintenance and improvement of transit services
- stabilization or reduction of existing fares
- stimulation of ridership
- reduction of congestion
- preservation and improvement of the environment
- improvement of the quality of urban development
- help for financially burdened cities and states
- offsetting subsidies for the automobile
- reduction of the deficit
- achievement of income redistributions

This list includes objectives that cover a variety of social values as well as purely economic arguments and some that duplicate or are subsumed under others.

2. The Problems of Government Intervention

It should be apparent from the above discussion that policy makers are faced with a multiplicity of choices when considering public transportation. Subject to legal limitations, governments can decide that they will intervene to protect or promote any public interest. In fact, as seen in Chapters II and III, governments have been intervening almost since the beginning of public transportation initially through regulatory practices, and more recently through local acquisition of private transit systems and financial assistance programs.

Basically a transit operator is faced with the decision: how much service is to be provided and how is that service to be paid for? When the decision is to rely on the market mechanism, only those services are provided that users are willing to pay for. When it is decided to disregard the market mechanism as the determinant of transit service and fare, government must face the question of how to determine what service is "needed" and what is a "reasonable" fare. It must also consider the priority of these "needs" vis-à-vis other claims being made against the limited resources available.

Evaluation of the feasibility of government intervention in transit operations through the provision of operating subsidies requires explicit discussion of two related problems. The first of these

has to do with preserving or creating incentives for management and labor to maintain efficient and responsive service. The second has to do with the degree of control of transit operations which the subsidizer decides may be necessary to ensure effective use of the funds provided.

a. The Problem of Preserving Incentives to Maintain Efficient Service. A major issue in any intervention is that of preserving or creating incentives for management and labor to provide efficient and responsive service. Once a precedent is established that the subsidizer is responsible for some or all of the results of transit operations, there could arise a presumption on the part of management that subsidized elements would be covered in the future, and it may be difficult to ensure that transit managers would operate henceforth in a prudent and reasonable manner. As will be discussed below the type of mechanism used to provide the subsidy can have a major impact on the preservation of management incentives.

b. The Problem of Operating Surveillance and Control by the Subsidizer. Depending on the objective of, and the mechanism chosen for, any program of operating subsidies, the subsidizer might find it desirable to impose close surveillance of the operations assisted in order to ensure efficient use of resources and equitable treatment of competing claims for assistance. In addition, he might go so far as to try to effect actual reductions in the costs of operations and/or improvements in service or to bring about substantial changes in the structure and attitudes of management and the method of operations. Restated, the factors determining the financial and operating results of a transit operation -- and, therefore, its potential claim on scarce government assistance funds -- include every aspect of day-to-day management as well as such matters of general public policy as fares and service levels. Although, of course, the most rigid surveillance need not encompass all of the factors listed, the following should be considered:

- unless service levels and routes were controlled there would be no assurance that sufficient service was being provided at the proper time and place to attract and serve the available market without providing unneeded or excessive service;

- unless all fare levels and a fare structure were specified and controlled, there would be no assurance that each transit rider was paying an equal price for an equal service;

- unless the results of collective bargaining were subject to close scrutiny and approval there would be no assurance that a bargain had been reached which is reasonable, prudent and in the interest of the public as well as labor and management; this might imply guidelines and standards related to changes in wage rates, cost of living increases, work rules and practices, plus retirement eligibility and pension levels;
- unless maintenance standards were set and enforced there would be no assurance that equipment was being maintained adequately (but not to excess) to preserve reliability, safety, and amenity;
- unless all other costs and expenses were monitored there would be no assurance that the assistance was not being drained away or diverted through State or local taxes, fees, or support for other governmental functions, or that depreciation, interest, or amortization charges were reasonably related to the value of the equipment being used (if they should be allowed as expenses at all);
- unless the coordination of fixed-route mass transit operations with other elements of the public transportation system were controlled, there would be no assurance that the total system was an efficient unified operation unconstrained by artificial or arbitrary geographical, technological or modal boundaries; this implies guidelines and standards for the coordination or unification of transit services by different operators with one another and with other forms of public transportation (e.g., taxis);
- unless some attention were paid to other community policies and regulations affecting transit there would be a risk of these policies acting contradictorily to the objective of assisting transit; this might imply standards or guidelines covering local parking policy and rates, traffic control patterns and practices, insurance and safety regulations, highway or bridge toll policies, and for devising ways to give transit vehicles preferential access over autos proportionate to their people-moving capacity.

In sum, the above listing clearly indicates that the subsidizer might intrude into every aspect of the operation of a mass transit system. Indeed, such a possibility is not greatly overstated if

one takes as an example the criteria currently in use for subsidy programs in New Jersey and Pennsylvania (outlined in Appendix III). However, it should also be clear that the degree of such involvement will depend largely on the fundamental policy decision of how many, if any, "safeguards" the subsidizer deems necessary. They will also depend on the type of mechanism utilized and on who provides the subsidy. In this last connection, it may be argued that each issue becomes more sensitive as the subsidizer changes from the local level to the State level and finally to the Federal Government. If the local government and the transit operator are virtually the same, then the intervention and dictation by local government of local transit policy and objectives is inevitable. The community selects its transportation objectives and takes those actions necessary to achieve them.

c. Other Issues. Introducing the possibility of State and/or Federal intervention, however, raises a number of additional problems and questions:

(1) Whose objectives should be considered?

Is it desirable for a State or the Federal Government to dictate local transit objectives and policy? If either is prepared to impose a specific objective on each locality within their respective jurisdictions, it would be possible to devise a mechanism that could entice or force a local community or operator to conform to that objective. This, of course, requires the subsidizer to know exactly what is required in each locality to achieve the objective, as well as be willing to impose his judgment on the local community. However, considering the wide variety of local conditions and circumstances, it would be difficult to ensure uniformity and consistency in the application of any administrative standards developed to carry out this intent; and without this uniformity, serious questions about the equity of the program may be raised.

(2) What would be the cost of the program?

While a definite concern at the local level, the budgeting for funds becomes more difficult as its application broadens to either a State or national scope. Even if a financial assistance program were not deliberately designed to induce certain industry responses, changes designed to maximize eligibility for assistance would occur. If there are fixed formulae for computing a subsidy, such changes in response would make it difficult to forecast the dollars needed for a particular time period. If the subsidy elements associated with a particular mechanism were left unspecified until after funds were appropriated, no operator would be able to count on the funds in his planning; if less funds than required were appropriated, how would funds be allocated? Such uncertainties could be blamed for any

failure of a program to achieve what was expected. Further, unless an assistance mechanism were specifically premised on an expectation that the industry would become self-sustaining (and there is not sufficient evidence available to predict whether this is possible), assistance funds would become an expected and necessary part of the industry's financial structure.

(3) Should there be a requirement for a matching contribution to the cost of the project or activity being assisted?

In many programs such a requirement is designed to provide the subsidizer with some assurance that his funds are being spent on legitimate needs and without waste and inefficiency, since those responsible for the project have a financial stake in it. While the requirement for a local share might provide assurance against outright waste, it would probably not bring about significant positive changes in the structure and attitude of transit management or in the nature of the operations and service provided. If the subsidizer wishes to encourage such changes, or to require them as a condition for assistance, more positive controls would probably be required.

(4) The degree of intervention and control required to administer any given assistance program will determine the costs of administering that program. If a high level of involvement is deemed necessary, then administrative costs could be substantial.

B. Forms of Government Assistance

The preceding discussion permits analysis of the problems incident to implementing alternative assistance programs at the Federal level. The major alternatives to be considered are operating subsidies, variations in the existing capital assistance program, and revenue sharing. As previously stated, the feasibility or desirability of a particular mechanism may be sensitive to the level of government that provides the funds; a mechanism that is not feasible at the Federal level, therefore, may be entirely satisfactory for local or State implementation.

1. Operating Subsidy Mechanisms

For discussing and analyzing a range of possible operating subsidy mechanisms it is convenient to identify four broad classes: deficit subsidies, input (cost) subsidies, output subsidies, and fare subsidies. Within these classifications, a number of additional factors must be considered which will vary in importance with each mechanism; these include:

- Who should get the subsidy? The transit operator, the transit user, or some level of government?

- Should the subsidy be universal or should it be selective? All operators, all types of service, all users, or some subset of these? Profitable as well as deficit operations? Bus as well as rail operators? Peak as well as off-peak services? Private as well as public operators? All users or only selected user groups?

In the analysis that follows the specific results outlined should not be taken as precise -- rather they should merely serve to give orders of magnitude and to illustrate the differences between alternative mechanisms.

Some of the mechanisms discussed herein (for example, contributions toward debt service, or assistance for maintenance of way and structures) have been incorporated in proposed legislation.

The National League of Cities/U. S. Conference of Mayors, as an adjunct to field work done for the Department as part of this study, has drafted proposed guidelines for a Federal operating subsidy program that represent their position, and that of the American Transit Association, on the issues discussed in this Chapter. These guidelines are reproduced as Appendix IV to this report.

a. Deficit Subsidies. Whenever operating subsidies are mentioned, the concept that immediately comes to mind is "the deficit" -- the difference between a system's total costs and total revenues. As seen in Chapter III paying the deficit has been the approach taken in the majority of existing local subsidy programs.

Consideration of such a subsidy raises the issue of how to define the deficit: What combination of costs and revenues should be considered? Operating costs alone or should interest expenses or depreciation charges also be included? Should a return on capital be allowed? At what rate? Should State and local taxes be included? Should revenue include non-operating revenues from transit operations, other corporate activities? One might also consider a range of variations such as the deficit resulting from specific services -- e.g., off-peak services, owl service, certain routes, certain neighborhoods.

The number of possible variations is much larger, but the results shown in Table IV-1 are typical. This table summarizes the impact of a deficit subsidy mechanism on a sample of 97 bus-only firms, 12 multi-modal operations, and 16 commuter rail operations.

TABLE IV-1
 SUBSIDY COST UNDER ALTERNATIVE DEFICIT CONCEPTS
 1969 Data
 (\$ in millions)

Deficit Concept	Subsidize Operating Cost Minus Total Revenue			Subsidize Operating Cost Minus Operating Revenue			Subsidize Total Cost Minus Total Revenue			Subsidize Total Cost Minus Operating Revenue		
	Bus	Multi	Commuter*	Bus	Multi	Commuter*	Bus	Multi	Commuter*	Bus	Multi	Commuter*
Total Cost	\$227.7			\$227.0			\$276.0			\$288.0		
Cost of Subsidy	\$6.7	\$139	\$82	\$8	\$146	\$73	\$15	\$167	\$94	\$19	\$176	\$93
# Firms Assisted	25	5	13	28	6	13	47	8	15	57	10	15
%Reduction Deficit	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Subsidy per firm	\$.27	\$28	\$6.3	\$.27	\$24	\$5.6	\$.32	\$21	\$6.3	\$.33	\$18	\$6.2
* 1970 data												

What can deficit subsidy mechanisms accomplish? On the positive side, they will pay the deficit and, at a minimum, finance the status quo. On the negative side, it may be argued that they treat a symptom of more basic problems without treating the disease itself. Furthermore, and most important, the deficit subsidies inventoried in Chapter III have not curtailed ever-increasing deficits.

Deficit subsidies have the following additional characteristics:

- They do not, per se, create an incentive for improving service or achieving any more fundamental objective of public transportation. Furthermore, the availability of cash to cover any amount of deficit can remove any incentive to control costs, maintain efficiency, provide adequate service, or respond to changing demands of the consumer. (It is questionable whether any standards or program of policing could keep control of the forces generated by such a mechanism.) However, if one does not wish to control such forces and merely wishes to pay the deficit, this type of subsidy has the advantage of relatively low administrative costs.

- Any deficit is highly sensitive to every element or component of cost and revenue -- in an immediate sense the deficit is largely a result of the fare charged and the level of service provided. A deficit subsidy would be indifferent to the wide range of fares, service levels, costs, and present subsidies that prevail across the country (see Chapter II). If these components were not subject to control (e.g., uniform standards or frozen at the status quo), substantial changes leading to higher deficits could occur rapidly.

- Deficit subsidies provide funds only for unprofitable operations. Can it be assumed that systems without deficits are providing adequate service and therefore not in need of assistance? Furthermore, the largest percentage of the money would go to cities with fixed rail services. Would such wide variations in benefits be equitable?

b. Input Subsidies. Under these mechanisms, funds would be provided to cover an absolute amount or percentage of total costs or some particular element of cost; tax relief measures are examples of input subsidies. Table IV-2 illustrates a range of input mechanisms and the impact they would have on the financial results of a sample of transit operations.

The use of input measures or costs as the mechanism for an operating subsidy involves a number of problems:

- If a primary objective of any subsidy is to reduce the deficit, input subsidies are ineffective since, as Table IV-2 indicates, the greatest percentage of the subsidy funds would go to those operators already in a profit condition. Explicit standards would be required if these additional funds were to be used to implement policies that improve service rather than result in a mere windfall.

- A subsidy related to inputs is not likely to have a predictable effect on the transit service provided. An almost infinite variety of transit services are possible with a given set of inputs. Many combinations of routes and headways, for example, are possible with the same inputs of capital and labor. Therefore, even if factor inputs were controlled, there would not necessarily be any control over the level or quality of service provided. Thus, it may be argued, there would be no assurance that the subsidy was helping to achieve any of the more fundamental objectives of public transportation.

- If the subsidy is restricted to a particular element of cost, operators can be encouraged to increase the use of the subsidized factor relative to other factors.

TABLE IV-2
 FINANCIAL IMPACT OF ALTERNATIVE INPUT SUBSIDY MECHANISMS
 DEFICIT CONCEPT: TOTAL REVENUE MINUS TOTAL COST*
 (\$ in million)

	Subsidize 5% of Total Cost			Subsidize 20% of Total Costs			Subsidize 5% of Maintenance, Operating and Administrative Expenses			Subsidize Operating Taxes			Subsidize Depreciation Expense			Subsidize Depreciation and Interest Expense			Subsidize Maintenance of Way and Structure Expense		
	Bus	Multi Modal	Commuter Rail	Bus	Multi Modal	Commuter Rail	Bus	Multi Modal	Commuter Rail	Bus	Multi Modal	Commuter Rail	Bus	Multi Modal	Commuter Rail	Bus	Multi Modal	Commuter Rail	Bus	Multi Modal	Commuter Rail
TOTAL COST	\$88.9			\$354.6			\$79.9			\$73.3			\$68.8			\$109.1			\$103.9		
Cost of Subsidy	\$20.9	\$50.6	\$17.4	\$87.2	\$197.9	\$69.5	\$18.1	\$ 46.0	\$15.8	\$24.1	\$ 34.0	\$15.2	\$26.3	\$ 29.5	\$13.04	\$35.1	\$ 57.5	\$16.5	\$ 0	\$ 80.0	\$23.9
Initial Deficit	\$15.2	\$166.5	\$94.8	\$15.2	\$158.1	\$94.8	\$15.2	\$166.5	\$94.8	\$15.2	\$166.5	\$59.5	\$15.2	\$166.5	\$59.5	\$15.2	\$166.5	\$59.5	\$15.2	\$158.0	\$59.5
Deficit after Subsidy	\$ 8.4	\$151.5	\$77.7	\$ 1.4	\$ 31.5	\$32.2	\$ 9.0	\$133.2	\$80.7	\$10.9	\$143.2	\$46.4	\$ 7.9	\$159.8	\$49.4	\$ 6.7	\$139.9	\$47.6	\$15.2	\$ 84.5	\$35.4
Percentage Change in Deficit	-45%	-21%	-18%	-91%	-71%	-66%	-41%	-20%	-15%	-28%	-14%	22%	48%	-4%	17%	-56%	-16%	-20%	0%	-47%	-41%
Percentage of Subsidy for:																					
Reducing Deficit	32%	69%	89%	18%	64%	85%	34%	71%	92%	18%	67%	83%	28%	25%	76%	24%	48%	72%	-	92%	87%
Increasing Profit	68%	31%	11%	82%	36%	15%	66%	29%	8%	82%	33%	17%	72%	75%	24%	76%	52%	28%	-	8%	13%
Number of Firms:																					
In Sample	97	12	16	97	9	16	97	12	16	97	12	15	97	12	15	97	12	15	97	9	15
Receiving Subsidy	97	12	16	97	9	16	97	12	16	92	11	13	91	10	13	93	11	13	0	9	13
Originally with Deficit	47	8	15	47	7	15	47	8	15	47	8	14	47	8	14	47	8	14	47	7	14
Moved out of Deficit after Subsidy	19	3	1	35	3	3	19	3	1	18	3	1	19	3	2	22	3	2	0	2	2

* Based on 1969 data for bus and multi-modal operations and 1970 data for commuter railroad operations.

-- As with the deficit subsidy if the subsidy automatically pays for a significant portion of a cost item, there is little or no incentive for management or labor to control that cost. Detailed administrative standards and rigorous policing could compensate for this. (Thus, given a labor intensive industry like mass transit, standards involving labor costs could become a critical element in any effort to control expenses.)

c. Output Subsidies. Output subsidies base their subsidy payments on system outputs such as ridership or transit service offered. They are difficult to discuss since many variations are possible -- e.g., whether to subsidize the user or the operator or some sub-group of either; whether to subsidize on the basis of system characteristics or service levels or on the consumer response to the service. Chart IV-1 illustrates a range of possibilities for output subsidies. Additional variations arise from the possibility of distinguishing between existing outputs of the transit system and a level of output that might be desired -- or only the change in output over time.

CHART IV-1
POSSIBLE FACTORS FOR OUTPUT SUBSIDIES

TYPE I: TRANSIT OPERATOR AS RECIPIENT

A. Based on System and/or Service Characteristics

1. Measures of capacity
2. Measures of operating efficiency
3. Quality and quantity of service provided

B. Based on Consumer Response to Transit System and/or Service Characteristics

1. Operating revenue of transit system
2. Total ridership
3. A subset of total ridership

TYPE II: CONSUMER AS RECIPIENT

A. All Consumers

1. All trips
2. Selected trip purposes or trip times

B. A Subset of Consumers

1. All trips
 2. Selected trip purposes or trip times
-

On the positive side, output subsidies have a primary advantage over input or deficit subsidies in that they do not necessarily destroy any existing incentives to control costs and operate efficiently.

Unfortunately, however, output subsidies are not really an effective means of eliminating deficits -- for the same reasons as was true of input subsidies. (Table IV-3 shows the impact on the deficit of two output mechanisms on a sample of firms.) The following discussion will examine in some detail the output subsidy mechanisms outlined in Chart IV-1.

TABLE IV-3
 SUBSIDY COST AND FINANCIAL IMPACT OF TWO OUTPUT MECHANISMS
 1969
 (\$ in millions)

Mechanism	Subsidize @ 5¢ per Vehicle Mile			Subsidize @ 5¢ per Passenger		
	Bus	Multi-Modal	Commuter	Bus	Multi-Modal	Commuter*
Cost of Subsidy . . .	\$24.5	\$ 40.5		\$80.9	\$140.9	\$12.5
Initial Deficit . . .	\$15.2	\$166.5		\$14.5	\$163.7	\$91.8
Deficit after Subsidy	\$ 7.4	\$138.6		\$ 2.6	\$ 52.4	\$81.3
% Change in Deficit .	-51%	-17%		-82%	-68%	-12%
% of Subsidy for:						
Reducing Deficit .	32%	31%		15%	80%	82%
Increasing Profit .	68%	69%		85%	20%	18%
Number of Firms:						
In Sample	96	11		92	9	16
Receiving Subsidy	96	11		92	9	16
Original Deficit .	47	8		44	7	15
Moved out of . . .	21	3		31	2	1
Deficit After Subsidy						

NOT AVAILABLE

* 1970 data

(1) Transit Operator as Recipient

(a) Subsidy based on transit system and/or service characteristics. Subsidy payments could readily be geared to measures of transit capacity such as the number of vehicle miles traveled, vehicles in service, seat miles, route miles, bus miles, or bus hours. It should be noted, however, that these mechanisms all lack positive incentive to discover or respond to consumer demand. In fact they generate a possibility for inefficiency, since they operate independently of whether the service offered is really needed; they might even create a perverse incentive for offering excess supply on untravelled routes. Explicit standards would be necessary to avoid such possibilities and to ensure that service patterns made maximum use of existing capacity and were in consonance with consumers' demands.

Subsidy payments could also be attached to some level of or to changes in some measure of efficiency, such as costs, revenues or passengers per bus, bus mile, bus hour, route mile or seat mile. Unless controlled, however, these mechanisms could encourage an operator to serve only dense patronage areas and to eliminate service in light and dispersed areas, since this would improve his unit cost efficiency and increase his subsidy. (The problem is that a low unit cost per se is not really anyone's objective -- its ultimate fulfillment would be no service.)

Within this group the alternative to either of the above measures is to specify a particular service and have the subsidy mechanism pay its cost, some portion of its cost or some amount per unit of the specified service performed. This approach could have a powerful effect on the amount of the specified service performed; it would have little or no effect, however, on any other services that might be of concern. Thus, the major problem would be selecting the specific service to be subsidized. Whose preferences would be served -- the public's, the operator's, the government's? Within what limits? Regardless of market response to the service? Finally while such a mechanism could provide the services desired by the subsidizer it might also involve the Federal Government's imposing its objectives on the localities. This form of subsidy would also be cumbersome to administer.

(b) Subsidies based on consumer response. An operating subsidy could be geared to transit operating revenues, total ridership, a subset of ridership, or some relative measures of ridership (e.g., percent of total trips by transit).

A subsidy based on operating revenues would be relatively simple to administer. In addition, it could motivate transit operators to revise their fare structure and to develop patronage. On the negative side, since revenues are a direct function of fare, a subsidy mechanism based on revenues might push toward higher fares. This could, of course, be controlled, but only at the price of the administrative apparatus and Federal dictation that would be required. Standards would be needed to ensure that additional profits were prudently used. Nor does a subsidy geared to revenues ensure that service will be provided on routes where revenues are so low that the subsidy would not offset the operating loss. This could be overcome, but only at the price of administrative standards.

An operating subsidy based on ridership could provide an incentive to increase ridership, especially if the subsidy were based on a sliding scale that paid added money for increases in ridership. Relatively little policing would be required by this mechanism, but the incentive to drop service for which the subsidy does not cover the deficit could lead to cutbacks if no effort were made to control service and to ensure that existing riders were adequately served.

Variations on ridership are also possible such as different amounts of subsidy for different trip purposes, for different transit users, or related to changes in the percent of total (or commuter) trips carried by transit. These would all be relatively complicated to administer and would involve some of the difficulties discussed above. Trip purpose would be hard to identify and differentiate; ticket sellers might have to be able to judge whether a rider fell into some special category. The city and State government programs (discussed in Chapter III) to reimburse operators for reduced fares for school children or for reduced fares for senior citizens during off-peak hours are examples of this mechanism.

(2) Consumer as Recipient

(a) Subsidies to consumers. While a logical possibility, a direct subsidy to all consumers would be an inefficient and cumbersome way of delivering assistance to operators -- if that were the objective of the program. It might result in some increase in ridership, but would be no more effective in this, and much more elaborate, than would a ridership subsidy given directly to operators.

(b) Subsidies to selected user groups. Subsidies of this type would be most relevant to an objective of providing "income-in-kind" for specified user groups -- possibly those who are dependent on transit for mobility, or those for whom transit costs are a significant burden out of limited income (these groups have a large degree of overlapping). Recipients could receive "transportation stamps" which could be used for transit services. Stamps could be distributed to qualified users through some authorized agency, with transit firms being paid for the stamps they collect.

From a mobility point of view, in-kind services would be helpful to the extent they correspond to the needs of the target group -- but if the services are presently inadequate or non-existent, it does little good to offer them free or at a reduced price. In other words, merely providing the wherewithal for selected user groups to demand transit services in no way assures that operators will provide the services.

Modifications within this category of subsidy mechanisms can also be discussed. A subsidizer could choose to support certain purpose trips (e.g., work or shopping) or trips made at certain times of day (e.g., off peak). Information presently available does not permit the evaluation of such schemes in terms of their impact on meeting consumer demand or on defraying mass transit operating costs. Such schemes, however, probably would require close scrutiny by the subsidizer and could involve high administrative costs.

d. Fare Subsidies. These involve paying the deficit that results from operating a service at a fare level prescribed by the subsidizer. The extreme example of this form of subsidy is "no-fare" transit, under which the entire cost of providing transit services would be subsidized, i.e., paid from sources other than user fares. On the basis of industry data, such a program would have cost \$2.3 billion (including commuter rail) in 1970. But this figure is only a floor, since the existence of "no fare" service would probably generate demands for more capacity and increase costs substantially. Any attempt to improve service would also increase costs.

A fare subsidy is basically the same as each of the subsidies discussed above and is subject to the same problems. In addition, the Federal Government would become explicitly involved in establishing local fares.

2. Modifications to the Capital Assistance Program

As an alternative to operating subsidy programs, other Federal actions to provide financial assistance for urban mass transportation could include changes in the terms of the present capital assistance program.

By legislation enacted in 1970 this program was provided with substantially increased funding and was put on a long-term financial footing through the provision of contract authority. Although the level of funding was greatly increased -- from commitments of \$133 million in FY 1970 to \$510 million in FY 1972 -- the local matching requirements and other criteria remained the same. It might be desirable to increase the Federal share of mass transit capital assistance projects along either of the following lines (or permutations thereof):

- Increase the maximum Federal share to 90 percent from 66-2/3 percent, thereby freeing funds that would have gone into the local share, and increasing the attractiveness and use of the program by communities that are unable to raise a 1/3 local share; or
- Authorize 100 percent Federal capital grants but require the recipient to make a contribution equal to 50 percent of the Federal grant to be used to subsidize operation of the facilities over their lifetime.

3. Revenue Sharing

It is generally agreed that when the Federal Government attempts to devise new programs to respond to every variation of every social or economic problem imaginable, the result inevitably tends to be

programs that duplicate or contradict or compete with each other and that become self-perpetuating even if the nature of the problem or relevance of a particular remedy changes. The different program guidelines and application procedures (often under the jurisdiction of different Departments) encourage shopping around for assistance and the distortion or misrepresentation of local project activities in order to qualify for assistance. Funding and budget vagaries also distort local decisions or generate cycles of precipitate and indiscriminate approvals ("to get the money spent before it gets transferred to someone else") alternating with restriction and cutback ("because priorities have changed" or "we haven't received our full budget request").

There is no general agreement, however, on what should be done to improve the responsiveness of Federal programs. At a minimum it would be desirable to allow local officials flexibility in the use of funds from all programs aimed at the same basic objective. This would allow local officials to take the initiative -- and bear the responsibility -- for developing and implementing solutions without artificial constraints. This is the primary rationale for President Nixon's Transportation Special Revenue Sharing (TSRS) proposal, which would combine the Federal funds presently earmarked under separate categorical programs for airport development, urban mass transportation, and highways into a single transportation program with funds allocated among States and to urban areas to reflect population and land area.

In addition to the TSRS recommendation, the President has proposed a General Revenue Sharing program, reflecting a belief that the ability of State and local governments to respond to urgent needs in accordance with their own concepts of priority will be increased by providing them with funds collected through the Federal tax structure.

If the Congress accepts the philosophy underlying these proposals -- especially TSRS -- it would be inconsistent to consider a new categorical program for assisting urban mass transportation. The relevant issue would be whether the total funds committed to transportation were adequate considering both the "needs" and the priority of other claims on Federal resources.

CHAPTER V

SERVICE AND POLICY INNOVATIONS TO IMPROVE MASS TRANSIT

Certain aspects of the analysis contained in this Report have necessarily been conjectural due to lack of sufficient reliable information. This is inescapable because of the uncertainties surrounding a number of basic questions; for example:

- What will it take to make transit a viable transportation alternative for consumers? How can this be achieved?
- What factors or characteristics most significantly affect transit ridership -- fares, service, travel time, convenience, amenity, or combinations of all of these?
- Can transit be made self-sufficient without resorting to unreasonable fares or minimal service levels?
- What operational changes, management improvements, marketing techniques, or other innovations would pay off in reduced costs or increased revenues?
- What are the best overall financing mechanisms to make public transit a viable community service?
- Under what conditions could a Federal operating subsidy be an effective tool for delivering improved transit service to the urban public?

The immediacy of the problem and the desirability of determining precisely how transit can ultimately play a more significant role in urban life might make it appropriate for governments at all levels to develop programs to find the answers to these questions.

In order to answer these questions, it will be necessary to bring about changes which may be so fundamental and so comprehensive as to involve the operations of an entire system rather than modifying service in only part of a system. This will require the participation of all levels of government and resources of sufficient scale and magnitude. Further, the number of variables that should be probed is large, and the range of possibilities great. In structuring such a program, sufficient time would have to be allowed for permanent effects to show up. Sufficient scope would be needed to ensure inclusion of potential variables, to obtain reliable information, and to induce transit managers and local officials to experiment with innovative changes.

The regulatory, pricing, tax and other measures and incentives that would be employed in the programs to test their impact on service and utilization, transit/revenues, and operating costs would include:

-- Preferential treatment for buses; premium services; demand responsive services; improved and more broadly conceived off-peak utilization of transit labor and equipment; routes revised in consonance with consumer demands (especially reverse commutes); coordinated transfer policies; differential pricing by zone or by time of day or by user characteristics (such as the aged and handicapped); reliable schedules; marketing and information programs; provision of fringe parking; cooperation rather than competition among operators in a metropolitan area (such as unified operation of separately owned transit systems through an organization similar to that in Hamburg, Germany.) (1)

-- Increased parking rates for automobiles in the Central Business District (CBD); increasing or introducing tolls for autos entering CBD; banning autos in the CBD either at all times or at least selected times of the day such as what appears to have been a success in Florence, Italy; metering autos onto freeways and streets, integration of bus and rail operations with taxi and limousine services, preferential treatment for car pools.

-- Staggering work hours; changes in the contractual arrangements of labor in the transit industry; special services for the "transportation disadvantaged," and greater integration of transportation and land use planning.

-- In certain cases, public funds might be offered as subsidies. Subsidies could be tested alone and in conjunction with the regulatory, pricing, tax and other measures mentioned above. Examples which might be considered are:

An operating subsidy that would be based on ridership, possibly with premium payment to motivate ridership increases.

An operating subsidy based on miles traveled and/or services provided, that would also contain measures to ensure proper motivation of managers and personnel for operating efficiencies.

Footnote (1) -- Existing Department demonstrations that can provide useful data here include: the Shirley Highway, I-95, and Blue Streak express bus service on dedicated lanes; the Urban Corridor program; various demand-responsive projects; TOMS and TRANSMAN that will impact on operating costs; and certain aspects of the TOPICS Program.

A transportation stamp program that would allow the "transportation disadvantaged" -- the elderly, the poor, the handicapped -- to ride transit at a discount fare with public funds paying the difference.

A per capita grant for operating subsidy for public transit. A desired funding level might be established and funds distributed on a per capita basis.

The Department of Transportation will continue to evaluate the desirability and practicality of programs such as those outlined above and if warranted will make appropriate recommendations to the Congress.

APPENDIX I

EXAMPLES OF INNOVATIVE TRANSIT SERVICE DEMONSTRATIONS

Express Bus Services

Seattle "Blue Streak" Express Bus Service

This UMTA-sponsored demonstration affirmed the merits of reserved lanes for transit buses on urban freeways. In order to accomplish this, the Seattle Transit System rerouted and rescheduled eight major transit lines which served the northern portion of the city in order to utilize the unused capacity which existed on a separate, direction-reversible, dual lane roadway on the newly-opened Interstate 5 freeway. In the Central Business District (CBD) these buses enter and leave the freeway via an exclusive on-off ramp which is the sole access and egress for one of the two reversible lanes. While there is mixed bus and auto traffic on the reversible roadway, the auto volumes are limited by the design of the total access-egress system in a manner which is calculated to stimulate a rate of flow for buses equal to exclusive use of one lane. These "Blue Streak" buses operate around a small collector loop on city streets in the CBD, enter and leave the freeway via the exclusive bus ramp, operate nonstop for distances up to eight miles on the reversible lanes of the freeway, and then operate as local services on the outermost ends of the presently-operated routes. Service on the existing routes between the points where "Blue Streak" buses diverge to reach the freeway and the CBD are operated by local buses in the present manner with coordination of the local and "Blue Streak" services at the diverging point. A "Park Ride" lot for 550 autos has been established at the northerly end of the reversible roadway adjacent to the freeway and served by "Blue Streak" buses.

The demonstration includes collection and analysis of data to document the various impacts of "Blue Streak" services and to yield guidelines for stimulating the results of operating buses on freeways in a similar manner.

The park-ride approach to attracting people out of their cars has previously been primarily oriented to rail line haul service. This is the first major express bus park-ride service (500 parking spaces) between a suburban location (seven miles out) and the downtown area. There are also other features to the project; e.g., exclusive bus ramp connecting the downtown area, express lines paralleling local routes.

Although Seattle transit has experienced a steady average downward trend in patronage during the period 1969 to present, statistical analysis of the effect of Blue Streak on this trend has not yet been accomplished. Following Blue Streak service initiation an immediate increase of about 2,800 riders was noticed. There has been a generally increasing trend in ridership from that time.

The park/ride lot user statistics identifies 70 percent as former auto users, although a total Blue Streak service analysis shows 22 percent of users are former auto users. 10 percent are new travelers. Together this represents 2,220 new daily bus passengers.

About half of the transit system patronage increase following Blue Streak Service initiation was associated with the park/ride lot users. The 500 space capacity of the park/ride lot was exceeded shortly after inception of service. This capacity constraint puts an artificial ceiling on experimental results of this service innovation--as well as restricting development of off-peak travel via Blue Streak.

Initial results show that the exclusive ramp is servicing between 10,700 and 12,100 bus passengers daily; whereas, previous to Blue Streak Service initiation the ramp serviced approximately 7,250 auto-users-plus-bus passengers. This isolated comparison does not, of course, reflect the total effect in the entire service area.

Baltimore, Maryland, "Jet Express Transportation Service"

The Baltimore Metropolitan Transit Authority (MTA) in July 1968, with the assistance of an UMTA demonstration grant, began to develop ten bus routes, covering about 485 route miles daily. By January 1969, about 305 persons rode the new services daily. No significant increase was recorded between January and July 1969.

In May 1969, the project was transferred to the Baltimore City Department of Transit and Traffic. An additional grant was made by UMTA to experiment with these routes, both in the bus operation and in marketing. Two of the problem areas during the first year were a lack of information about the service, both in the business section and in the inner/city, and a lack of marketing research and flexibility in route planning. The city named the project: Job Express Transportation (JET).

To remedy the public information problem, six summer employees were hired as "JET Reps", four in the inner/city and two in the business sector. Six neighborhood youth corps workers assisted the JET Reps. The JET Reps' work included organizing inner/city neighborhoods for the dissemination of JET information, informing community organizations (churches, schools, recreation centers, etc.) of the JET concept, contacting employment

agencies, collecting lists of suburban employers for contacting about job opportunities, getting input from the passengers and obtaining information which could be used for improvements in the JET system.

The routes were completely reorganized. They consisted of nine routes with a total of ten outbound (A.M.) and ten inbound (P.M.) trips per day. During the two-year course of the project, the routes were revised several times to serve the needs of the riders and the communities. Later, two additional routes were established and four of the original routes were dropped due to a lack of ridership potential. One of the additional routes served Goodwill Industries, a local employer of physically handicapped persons.

In June 1971, the MTA, the Baltimore bus transit operator, took over complete operation of the JET service with minor modifications. The buses are now operated without any Federal or city subsidy.

The JET system is an obvious aid to inner/city residents in Baltimore. It is used exclusively for home-to-work travel by poverty area residents who are completely dependent on public transportation. It also provides inexpensive access to jobs for handicapped persons.

Chicago O'Hare Express Bus Transit

The City of Chicago, the Chicago Transit Authority, and 31 employers at Chicago O'Hare International Airport, with the assistance of an UMTA demonstration grant, sponsored the "O'Harexpress" Bus Service Development Project.

The project supports the development of 24-hour express service between the Jefferson Park Rapid Transit Station and the airport. The primary purpose is to provide the residents of Chicago's low-income neighborhoods with a transit link to job opportunities at the airport.

Patronage, although lower than originally anticipated, has grown steadily to over 1,400 daily riders. Air travelers have found the service convenient and comprise nearly half of the passengers.

A survey conducted in June 1970 noted that, of the commuters at that time, 40 percent obtained their jobs after the service began; of these, two-thirds would not be able to hold their present jobs without this transportation service.

The survey also reported:

"Of those employed since inception of the project bus service, three-fourths are male, more than half are heads of household, and one-fourth are members of families who were below the poverty line before this new employment. 80 percent of these people now have improved employment with real upward mobility potential as judged by their job conditions and aspirations."

"More than 50 percent of all O'Harexpress riders live in the 25 census tracts that had the highest male unemployment in 1960. Average salary of the surveyed commuters was given as \$3.15 an hour, a yearly equivalent of \$6,552. This amount is well above the poverty level for the average sized family and is often additional income for large sized families. Thus, there is strong evidence to indicate that the O'Harexpress is serving the purpose of providing needed transportation to allow persons from the inner/city to reach otherwise inaccessible job opportunities.

"Finally, 90 percent of the commuters and 60 percent of the air travelers who traveled to the airport before operation of the O'Harexpress did so by automobile. Thus, the diversion from automobile to transit tends to reduce highway congestion to the benefit of all Chicagoans."

Atlanta Town Flyer

The project involves the case of two park-ride lots at the Atlanta Stadium and the Municipal Center on the fringe of the CBD. Automobiles can be parked for 75 cents per day. This cost also includes transportation by bus into the CBD for everyone in the car. Therefore, there is an advantage for carpools and the system is competitive with CBD parking rates.

This service appeals to the person who doesn't like to drive in heavy traffic and would rather transfer to a bus than drive in CBD congestion.

There are approximately 400 riders per day using the service. This number has been slowly growing, but the service presently still operates at a deficit. Probably more than 100 automobiles are diverted from the CBD.

This UMTA-sponsored demonstration project was started in December of 1969; operation has been intermittent during the intervening period, but is currently on-going and well accepted by its users. The Federal subsidy for the service expired on August 31, 1971. At that time, the subsidy was taken up by downtown business interests. They will cover the service until the November 9 MARTA referendum. If this succeeds, then MARTA will continue to operate the service. If it fails, the subsidy and the service will be discontinued.

Reserved Bus LanesShirley Highway Bus-on-Reserved-Lane

On April 5, 1971, the last section of the exclusive express bus lane on the Shirley Highway in Northern Virginia was opened: buses sped past creeping automobiles across the Potomac River and continued into the center of the Nation's Capital on bus priority curb lanes. The completion of the exclusive bus roadway is a major step in a four-year combined transit and roadway demonstration project of national significance. The principal objective of this U.S. Department of Transportation demonstration project is to test the hypothesis that the provision of rapid and improved bus service over an exclusive busway between residential areas and concentrated employment locations will attract significant numbers of passengers formerly commuting by automobile. Such a diversion from autos to buses will increase the people-moving capacity of the presently congested Northern Virginia and District of Columbia highway system, and should enable all rush hour commuters to travel more quickly and conveniently.

With the opening of the busway, over 5,000 morning bus commuters and more than 4,000 evening riders are saving 10-25 minutes compared with automobiles for the Shirley portion of the trip. Thousands more non-Shirley bus riders receive smaller time savings over the exclusive bridge lane and the bus priority lanes within the District of Columbia.

On June 14, thirty new buses with special features were put into service between the Virginia suburbs and downtown Washington, and a free fringe parking lot at a shopping center was opened. Bus ridership on Shirley Highway buses has increased continuously since the first section of the busway was opened in September 1969; with the entire busway and the new bus service and fringe parking operating, commuters are expected to continue "taking the bus". 60 additional new buses are planned for service in 1972 as warranted by increased patronage. The new buses will also be used to increase the base day (non-rush hour) bus service in Northern Virginia in an effort to provide improved base day transit service.

Early in 1971, the Steering Committee established a task force to investigate possibilities for reducing bus travel times between the end of the bus lane and the bus terminal areas in the District of Columbia. When the busway opened in April 1971, the curb lanes along twelve blocks on 14th Street were designated "Curb Lane: Buses and Right Turns Only" for the two peak travel periods of 7-9A.M. and 4-6 P.M. The bus lane also continued on H and I Streets, and right turn restrictions at four locations were implemented.

As each stage of the busway was opened in 1969 and 1970, the AB&W Transit Company gradually placed more buses into service to meet the increased passenger demands. A feasibility study estimated that 90 buses in addition to the existing peak period bus service would be required to handle the 5,000 new daily riders expected by the end of the project in 1975.

Since the Shirley Highway busway was opened incrementally as construction proceeded, "before" results are therefore not available since busway portions were opened before evaluation was begun. However, a pilot survey was conducted one week after the temporary busway was opened in the spring of 1971. A sample of 1,211 responded, representing a universe of 4,900 Shirley bus travelers during the 6-9:30 a.m. peak period. This has been tabulated as follows:

	Previous Form of Transportation	
	Sample	<u>Estimated Universe</u>
Total travelers	1,211	4,900
Drove automobile	23 percent	1,128
Car pool or passenger	12 "	588
Another bus	17 "	833
Did not make trip	48 "	2,355

Of the 4,900 A.M. peak period passengers, approximately 1,716 previously made their trip by the automobile mode. Approximately 2,355 did not make the trip, which is plausible for a transient area like the Shirley Corridor; there is no present estimate of how many would have used automobiles if the Shirley Express was not available. On Shirley Highway, which is undergoing major reconstruction, the auto volumes have decreased substantially from about 8,000 to 6,200 cars for the 2-1/2 hour period. The bus ridership has increased from about 4,400 to over 5,500 during this same period. From a spring survey we know at least one of each four new bus riders previously drove alone so at a minimum about 300 vehicles have been removed from the Shirley corridor auto travel during the extremely congested peak period. In addition, the arrival times are much more reliable for Shirley Express Bus users than previous bus systems.

Lincoln Tunnel Reserved Bus Lane

A Lincoln Tunnel lane and tunnel approach lane have been reserved for exclusive buses.

Approximately 35,000 riders use bus service through Lincoln Tunnel during the morning peak period. This figure has not changed appreciably since the project was started in December. However, bus ridership already accounts for over 80 percent of the total number of people passing through

the Lincoln Tunnel during the peak period. The main objective of the project is not to attract large numbers of new riders, but rather to provide time savings to the maximum number of people through low cost highway modifications, thus improving the efficiency of existing roadway facilities.

Charter Subscription Service

Reston Cooperative Bus System

The Reston, Virginia, experience seems to violate all the rules of a successful transit operation. Reston, as is well-known, is a "new town" some 20 miles west of Washington, D.C. Its population is fairly homogeneous -- upper middle class, well-educated, and pre-selected by their choice of living in Reston.

A recent study by Henry Bain of the Washington Center for Metropolitan Studies has traced the history of the project and brought out several salient points. The bus began in February 1968, under the auspices of a volunteer citizens' organization in Reston.

Twenty-nine bus trips per day currently run from Reston, making several stops along the main arteries in the town, then "closed-door" to either Washington or the Pentagon where stops are made at marked locations. (Bus-stops can be revised upon demand.) A "happy hour" is provided on Friday afternoon. The "bus monitor" (who rides free) watches out for such problems as missing passengers, makes micro-routing changes because of traffic congestion, sells tickets (for fare collection), etc. Door-to-door travel compares favorably with auto times, primarily because of parking delays in D.C. and few stops enroute for the bus.

Its success can be measured in two ways: the bus company which provides the bus under a contract refused to start the service on its own after an earlier disastrous experience, yet the Reston buses pay their way now after a tiny initial loss. All indications -- modal split analysis based on standard procedures -- showed that transit could only carry 1 or 2 percent of the commuters from Reston to Washington, yet the buses now carry 6.5 percent of all Reston workers, and ridership is continuing to climb. Ridership in September 1969, was close to 300 per week, an almost 100 percent load factor with no standees permitted. It has since risen to more than 900 per day.

Bain states the "formulas based on past behavior may not produce accurate predictions of the travel patterns that will result when the public is presented with a new and different situation such as a high-quality express bus service in a new town setting." He further concludes that it was citizen initiative which brought about the success of the Reston Express Bus -- their bus.

National Geographic Society Employee-Subsidize Bus Service

One of the most startling examples of excellent pre-planning of a transit system is the successful transfer of employees from National Geographic's bindery plant in Northeast Washington, D.C., to suburban Gaithersburg, Maryland, some 20 miles from the District line.

When the Society moved its operation from 3rd and R Streets, N.E., in 1968, it canvassed its 1,150 employees to determine how many would use a subsidized bus operation; 450 stated they would take advantage of such a service at 50¢ per day. Rather than petition for a new bus route to serve their plant, as other employers in the area had done -- only to find the route almost unused (and employees hard to obtain at low wages) -- NGS worked out a network of ten routes with the local transit operator, D.C. Transit, Inc., on a contract basis.

Bus stops were established so that almost all riders have no more than 1-1/2 to 2 blocks to walk. Ridership exceeded estimates on the first day and is now up to about 580. Therefore, roughly half the plant's employees come to work by transit (although these buses are run under a contract). The fare was raised to 60¢ per day in October 1968 deducted from the employee's salary. Subsidy by the Society amounts to about \$170 per rider per year -- a rate which, taking into consideration the extreme difficulty of getting low-skill, low-income workers to the suburbs, and the savings in parking space, is not much of a burden to the employer.

Demand Responsive Services

Peoria, Illinois, Premium Special Service

The University of Illinois, Office of Community Development, staff was responsible for the planning, administration, and most day-to-day supervision of this federally-funded experiment in Peoria, a city of 126,000 in north-central Illinois. Operations under the demonstration project lasted from December 1964 to February 1966.

The Peoria Premium Special provided essentially door-to-door service for the work trip on a subscription basis. This was a "many-to-one" service using large renovated buses that picked up workers at home at a predetermined time and carried them to their plant gate and, at the termination of their shift, picked them up at the plant gate and took them home. Routes were modified weekly to accommodate new subscribers.

Subscribers bought monthly flash passes for a fare that varied with the distance from their home to their place of work. Thus, the average Premium Special rider paid 23¢ per one-way trip. The regular Peoria transit fare at this time was 25¢ per one-way trip.

Ridership on the Premium Special buses was recruited through advertising and other promotional efforts. Considerable attention was given to "personalizing" the service. Service representatives conducted much of the organizational work, including promotion and on-bus surveys. A "club car" kind of spirit is reported to have developed among riders. The same drivers were used daily on the runs. In Peoria, 21 routes were gradually introduced over a one-year period. Most served the Caterpillar Tractor Plant in East Peoria.

Prior to initiating service, home interview surveys and bus passenger surveys were conducted. These provided data on attitudes toward bus and auto travel and on the travel and social characteristics of bus passengers. Employment at the Caterpillar plant was analyzed by work shift and home location in order to determine clusters of workers who might be served by Premium Special Service.

The Premium Special Service in Peoria attracted a steadily increasing ridership (to 500 per month) that allowed the majority of the routes tested to become self-supporting. Following the one-year experiment period, the city bus companies assumed responsibility for the service, continuing 17 of the initial 21 lines.

Some 72 percent of the passengers on the Premium Special had been diverted from autos; 43 percent previously traveled in their own cars; 20 percent had been passengers in a car; 9 percent had travelled to work in a car pool.

A new market was being tapped by the Premium Special. The typical Peoria mass transit rider was female, from a lower income household without having access to a car and older than the average population. The Premium Special rider was more typically male (average age 38), owned a car, and was middle income.

University of Illinois staff planned and administered the project, including most day-to-day supervision of the Premium Special Service. Upon completion of the demonstration, the regular Peoria transit management took over. It immediately took steps to cut costs by reducing the quality of Premium

Special Service. Five weeks later, it implemented a fare increase, ranging from 31 percent for the shortest trips to 14 percent for the longest. 18 weeks after takeover by the transit operator, patronage declined by 21 percent. It was estimated by the University that had the demonstration continued, without modification, patronage should have risen by 15 percent. Although the concept demonstrated was promising, subsequent financing proved untenable and the service was discontinued.

Mansfield, Ohio, Conventional and Dial-a-Bus Service

The operation of Mansfield Bus Lines, Inc., in Mansfield, Ohio, a city of 47,000 people, is an example of a financially successful, privately-owned business which has grown since its initiation in 1962 while most transit services have experienced declines.

Mansfield Bus Lines provides conventional fixed-route service with dense route coverage of the city, resulting in maximum walks of one-quarter mile or less to the bus line. There are 13 routes. Drivers will pick up or discharge passengers at mid-block along the fixed route, if requested, thereby reducing walking time for many customers. There are no fixed stops.

The small buses (12 and 19 passengers) operate with 30-minute headways, six days per week. The 19-passenger vehicles are only slightly longer than luxury automobiles and operate without protest from residents on residential streets. All runs depart simultaneously from City Square and reconverge there 25 minutes later. Interline transfer is accomplished at this single point.

Courteous service and attention to details are reported to permeate the system as a result of the philosophy of the company. Comfort and convenience are stressed in the actual operation of the system. Drivers are friendly and courteous; buses are low in noise level and are kept clean; and special consideration is given to elderly passengers. Usually the same driver and vehicle operate a route.

Mansfield used no advertising outside of messages painted on the buses themselves. The service sold itself. There are no printed schedules or route maps. Information about the system has been transmitted informally by word of mouth.

Bus ridership in Mansfield has grown from 600 passengers daily in 1962 to 5,000 passengers daily in March 1969, a growth rate of about 10 percent per year. At the start, service routes were served on one-hour headways. There were 12 routes with 30-minute headways by December 1965, and in March 1969, 13 routes with 30-minute headways.

Mansfield, it should be noted, is an industrial town of less than 50,000 people. For such a community, the current level of transit patronage -- one trip per day for every ten people -- is unusually high.

Mansfield demonstrates that small, low cost vehicles can be used to give effective service to an area. Efficient utilization of small vehicles reportedly helps the Mansfield Bus Lines to make a profit.

Imaginative, resourceful management with the freedom to innovate apparently has been critical to the successful implementation of this transportation system. The owner-manager wanted to provide an attractive system that met the needs of potential customers. Routing and timing of service were developed to fit customers' need.

Beginning in January 1970, Mansfield Bus Lines introduced a "Dial-a-Ride" service on one route. This experiment is being tested by the Ford Motor Company Transportation Research and Planning Department, which assisted in setting up the service. The bus is equipped with a radio telephone; patrons request doorstep pickup by calling the bus driver, or they can request doorstep delivery as they board the bus. The bus deviates from the fixed route to service the request and returns to the point where it left the route.

For this service, the customer pays a 15-cent premium over the 35-cent regular fare. Revenues on the line were reported to have increased by 30 percent within three months, indicating an approximate 15 percent increase in patronage. The revenue increase is said to approach the variable costs of the new service.

The area served by the bus is the high-income neighborhood of Mansfield. Patrons who use the service include elderly and teenage residents of the neighborhood and a substantial number of daytime domestic employees.

Trips from the fixed route to accommodate doorstep service requests may extend up to four blocks but are typically 2-1/2 blocks. Some customers who live along the fixed route telephone for doorstep service, paying the 15-cent premium, apparently to ensure that they will not miss the bus or have to wait outside for it.

Management had been the key to success in the Mansfield operation. The owners and managers of the system know every aspect of the operation intimately; they even drive buses when necessary and can greet many regular patrons by name. They have operated under conditions of minimal regulation. Upon sale of the system to a local operation, however, financial difficulty caused the service to be discontinued.

APPENDIX II

A LEGISLATIVE HISTORY

Public subsidies in support of transportation are not new in the United States. By whatever name they may be called, public actions benefitting transportation beyond the treatment that would have been accorded in the market place have a long history. Gifts of land and money, the right to exercise powers of eminent domain and other special privileges have been accorded post roads, canals, railroads, aviation, merchant shipping, trucking, and most recently public mass transportation in urban areas.

These programs have without exception been subjects of exhaustive and sometimes painful deliberation. They represent explicit policy choices by the Congress and the Executive Branch and in some instances by the States and local governments. Transportation, of course, has not been the sole recipient of public aids. Tariffs support manufacturing; price supports and production controls aid agriculture; much social welfare legislation has subsidy aspects. The test of merit, therefore, is not whether a public expenditure is a subsidy, but rather how well the program achieves its intended purpose as compared to alternative actions or no action and the nature of any indirect consequences it may have.

Federal subsidies for urban mass transportation have thus far been limited to grants for capital improvements and a government sponsored program of research, development and demonstrations. The problems involved in developing the existing assistance programs for urban mass transportation are numerous and complex, and this helps to explain the cautious approach taken by both the Congress and the Executive Branch. The following legislative history begins with the railroad revenue crisis that developed in the recession of 1957. It continues through the enactment of the Urban Mass Transportation Assistance Act of 1970 which took an order of magnitude jump in Federal financing for new capital investment in urban mass transportation systems but reaffirmed the policies of the Urban Mass Transportation Act of 1964 which rejected Federal financial aid in support of mass transit operating expenses.

The Transportation Act of 1958

The resurgence of railroad passenger traffic and revenue that had occurred during World War II subsided rapidly thereafter. Passenger service deficits became widespread and burdensome. This was particularly true for the carriers in the northeast whose commutation service in the metropolitan areas of Boston, New York and Philadelphia incurred mounting losses as automobile production was resumed and people turned away from public transportation, particularly for the journey to and from work.

For the eastern railroads, and others as well, profits from freight operations that could be used to offset passenger service deficits greatly diminished during the economic recession that began in the summer of 1957. In January of 1958 the Senate Commerce Committee began hearings on the problems of the railroads. Four volumes of hearings totalling more than 2,300 pages accumulated during the next four months.

Spokesmen for the railroads and other interests dealt at length with the problem of unprofitable railroad passenger service. The Congress was told that the working capital of Class I railroads had declined from \$880 million in September 1955 to \$396 million in January 1958. The general passenger service deficit had reached \$700 million in 1956 and remained at about that level. Witnesses differed sharply as to both causes and remedies. Railroad officials differed even among themselves as to appropriate remedies. Mr. James M. Symes, President of the Pennsylvania Railroad stated that:

Users will not pay fares sufficient to cover the cost of providing the service, and regulation will not permit its discontinuance. Certainly the handling of thousands of persons via mass transportation during the morning and evening peak periods is in the public interest. Public authority should contract to buy mass-rapid-transit service from the railroads where necessary. The Authority would prescribe the service required and establish such fares as it deems necessary. It would pay the railroads full cost plus a reasonable profit for services rendered.

Additional consideration should be given to providing Federal funds, similar to Federal-aid highway funds, for mass transportation facilities in metropolitan areas-- 1/

The southern and western railroad executives had a different position. Mr. Ernest Marsh, President of the Atchison, Topeka and Santa Fe Railroad said that:

1/ U.S. Congress, Senate, Committee on Interstate and Foreign Commerce, Problems of the Railroads, 85th Cong., 2d sess, Part I, p. 85.

Transportation is a business in this country and I don't think the general taxpayer should be required to pay a part of the cost of any transportation business. 2/

Upon being questioned by Senator Lausche, Mr. Marsh added:

I think my answer is that I don't believe in subsidies for anyone. I think everybody should be on an equal basis for competitive opportunity. They should all pay their own way. 3/

Mr. H. E. Simpson, President of the Baltimore and Ohio Railroad, indicated that his solution was to withdraw from the passenger service as rapidly as possible.

Mayor Richardson Dilworth of Philadelphia took a broader view. He said that:

In dealing with urban transportation it is fruitless to keep the railroad and highway phases of the problem in airtight compartments Public assistance to improve highways must be accompanied by equivalent action to improve public transit. The necessary capital investments in rapid transit cannot be made by private industry while competition from the automobile persists in its present form If the public desires to avoid the greater future highway outlays which would be required to accommodate those now riding on rails it would have to assume in some way a part of the cost involved. 4/

In the summer of 1958 a delegation of eastern railroad officials and the mayors of principal eastern cities led by Mayor Dilworth of Philadelphia came to Washington to plead with the Executive Branch as well as with the Congress for Federal assistance to meet the deepening financial crises of the railroads.

In its report on the Transportation Act of 1958, the Senate Commerce Committee noted that:

2/ Ibid., p. 395

3/ Ibid., p. 396

4/ Ibid., pp. 724, 730 and 734

Eastern railroads are in worse financial straits than the southern and western railroads because they operate in a densely populated area of high costs and severe competition from other modes of transportation. The presence of the large volume of commuter traffic, carried at a loss, also contributes to the poor financial condition of the eastern railroads. 5/

The Committee continued:

It was clear from the testimony that the railroads were operating these [passenger commuter] services at enormous losses It may be said that basically the commuter service problem is a local one having both social and economic implications. However, it is also a matter of deep concern to the Federal Government because of the impact that losing commuter service can have on the ability of an interstate rail carrier to render its interstate service It is evident that fares which would theoretically return a profit to the railroads would generally result in charges substantially greater than commuters are accustomed to paying Accordingly, the solution is not readily apparent. Because the solutions are essentially local, the subcommittee deems it desirable to leave to the local government agencies involved the job of seeking specifically tailored solutions. 6/

What emerged in S. 3778, the Senate version of the 1958 Act, were (1) federally guaranteed loans "to finance or refinance the acquisition or construction of equipment and other additions or betterments for use in transportation service; or to provide funds for operating expenses, working capital and interest on existing obligations,"7/ and (2) provision for simplified and expedited discontinuance of little-used passenger trains that were contributing to operating losses. As finally enacted, however, the loan provision of the 1958 Act was narrowed to exclude all but maintenance from the initial broad coverage of "operating expenses".

The loan provision which was to run for approximately 18 months was subsequently twice extended but only slightly more than half the principal amount authorized to be guaranteed was taken down. In part, this may have been because the loan term was limited to 15 years and because dividends were prohibited as long as guaranteed loans for maintenance were outstanding. Perhaps more important, as some railroad officials suggested during the course of the program, guaranteed loans simply did not meet the needs

5/ U.S., Congress, Senate, Committee on Interstate and Foreign Commerce, Report on the Transportation Act of 1958, S.3778, S. Rep. 1647, 85th Cong. 2d sess., p. 9.

6/ Ibid., pp.10-11.

7/ Ibid., p. 16

of the carriers. They could obtain money from the private market at reasonable rates for all investment needs deemed prudent by the bankers and by the carriers themselves, e.g., for modernization of yards, automatic signal systems and new freight locomotives. Neither the investors nor the railroads thought that financing new passenger equipment or facilities in an environment of static rates and declining traffic was prudent. Accordingly, the railroads chose the route of service discontinuance as had been foreseen by many of those who testified in 1958.

The position taken implicitly by the Congress in the Transportation Act of 1958 was very much like that suggested by Mr. G. E. Leighty, Chairman of the Railway Labor Executive's Association, in his testimony when he said of deficit commuter services that "the community should pay the full cost; if it does not choose to authorize fares which will meet the full cost, the community should furnish some other supplementary program that will do so It is, therefore, appropriate that they undertake this overall financial responsibility -- assuming all phases of the decision as to the part of the costs that will be met from fare and rate revenues and from other sources available to the community." 8/

Although the term "mass transit" was used occasionally during the hearings on the Transportation Act of 1958, the urban bus and rail rapid transit industries were not represented at the hearings nor were these kinds of urban mass transportation the subject of any particular attention. Perhaps this was because their financial position in 1958 was not as precarious as that of the railroads. Though their overall operating income fell by more than 80 percent between 1957 and 1958, according to the American Transit Association, bus and rail rapid operations in 1958 still yielded operating income of \$6.6 million. Moreover, by mid-1958 a temporary recovery was underway and operating income rebounded to \$25.6 million in 1959. 9/

Long run traffic and revenue trends were nevertheless unfavorable. More than 200 intra-urban bus operations had ceased to function since the end of World War II and the elimination of marginal and submarginal firms artificially improved the industry's apparent financial results. Like railroad commuter service, the transit industry in the cities of the northeast was in very much worse condition than the overall figures cited above revealed.

1960 Legislative Activity

In an effort to bring Federal assistance to bear for urban bus and rail rapid operations, Senator Williams of New Jersey introduced a bill in 1960

8/ U.S., Congress, Senate, Committee on Interstate and Foreign Commerce, Problems of the Railroads, 85th Cong., 2d sess., Part IV, pp.2006 & 2026
 9/ '70-'71 Transit Fact Book, American Transit Association, p.4

"to authorize financial assistance to the States and local governments . . . to provide facilities and equipment for use in mass transit or commuter service in urban areas." 10/

Experience under the loan guarantee provision of the Transportation Act of 1958 obviously influenced the form of S.3278. In its report on the bill, the Senate Banking and Currency Committee concluded that "the most appropriate form of assistance at this time would be low cost loans." 11/ Taking account of the experience under the 1958 Act -- "none of the loan guarantee applications has been for the purpose of directly improving rail commuter service . . ."--12/ the Committee recommended direct Federal loans with a term limit of 40 years and a subsidized interest rate tied to the rate on outstanding U.S. obligations.

The bill was passed by the Senate but not by the House. The major thrust of the hearings, however, was that mass transportation needed large amounts of new capital, that this capital could not be obtained from private sources upon reasonable terms, that the cities and States were doing their utmost to preserve urban mass transportation and that the Federal Government must come to their assistance on the basis of substantial national interest in the well-being and efficient functioning of large cities in which an increasing proportion of our citizens lived and worked.

Senator Williams reintroduced his 1960 bill at the first session of the 87th Congress and it was reported by the Senate Banking and Currency Committee without hearings as part of the Housing Act of 1961 (S.1922). 13/

In addition to loan authority (\$100 million), the bill reserved \$50 million of urban renewal capital grant funds for mass transportation demonstration projects and confirmed the availability of the urban planning grant program (section 701) to cover planning for mass transportation facilities in urban areas. 14/ Subsequently the Administration submitted a similar bill to the House but pointed out that "the Secretary of Commerce and the Housing and Home Finance Administrator are undertaking an extensive study . . . on methods and the extent of Federal financial assistance for the actual development and improvement of mass transportation systems . . . Non-Federal Government financing",

10/ U.S. Congress, Senate, Committee on Banking and Currency, Report to Accompany S. 3278, Mass Transportation Act of 1960, S. Rept. 1591, 86th Cong., 2d sess., pp 17-18.

11/ Ibid., p. 11.

12/ Ibid., p. 10.

13/ U.S. Congress, Senate, Committee on Banking and Currency, Report to Accompany S. 1922, Housing Act of 1961, S.Rept 281, 87th Cong, 1st sess.

14/ Ibid., p. 37

the President said, "will have to provide the preponderant share of the new capital funds needed for mass transportation" Cautious endorsement of the loan provision followed: ". . . the Congress may wish to enact, as a part of the bill, a temporary 1-year authority for emergency loans." 15/

In retrospect, it seems astonishing that opinion solidified so quickly on loans as the primary Federal contribution to the solution of urban mass transportation problems. Only Mayor Dilworth, testifying before the House Banking and Currency Committee at brief hearings in June 1961 suggested the possibility of outright Federal grants toward meeting the need for new investment in facilities and equipment, though by general agreement, existing equipment was in disreputable condition, hopelessly obsolete and to some extent even unsafe. Old facilities needed modernization or replacement and expansion of several systems was desperately needed. Operating income from bus and rail rapid operations which had recovered from a low of \$6.6 million in 1958 to \$30.7 million in 1960, dropped again by nearly 50 percent to \$16.7 million in 1961. 16/ The consensus, nevertheless was that loans for new equipment and facilities, supplemented by planning grants and grants to finance a modest program of demonstrations, would meet the need. When Mayor Dilworth testified before the Senate Banking and Currency Committee on April 5, 1961 on housing bills including the 1961 version of Senator Williams' transit proposal, he said "We can, with your bill, really solve our mass transportation problems." 17/ In June, however, when he appeared before the House Banking and Currency Committee, Mayor Dilworth recommended both capital grants and operating subsidies at least "as an interim measure until longer range solutions can be evolved." 18/

The Housing Act of 1961 (P.L. 87-70) incorporated the emergency mass transportation legislation whose essentials have already been described: loans for capital equipment and facilities, planning grants, and grants for demonstrations.

The joint Commerce-HHFA study, referred to by the President, was completed by the end of 1961. It concluded that "mass transportation must be viewed as a public service and often cannot be a profit making enterprise . . . it is generally not possible to support a large-scale investment program from the fare box." But, the report went on to say that "Every urban community that seeks Federal aid must want good transportation enough to make a substantial contribution of its own." 19/

15/ U.S. Congress, House, Committee on Banking and Currency, Urban Mass Transportation--1961, Hearings on H.R. 7787, 87th Cong, 1st sess, pp. 3-4

16/ '70-'71 Transit Fact Book, American Transit Association, p. 4

17/ U.S. Congress, Senate, A Subcommittee of the Committee on Banking and Currency, Hearings on various bills to amend the Federal housing laws, 87th Cong, 1st sess, p. 357.

18/ U.S. Congress, House, Committee on Banking and Currency, Hearings on H.R. 7787, Urban Mass Transportation-1961, 87th Cong, 1st sess, p. 166.

19/ U.S. Congress, House, Committee on Banking and Currency, Hearings on H.R. 11158, Urban Mass Transportation Act of 1962, 87th Cong, 2d sess, pp. 38-39.

In April 1962 in a special message to the Congress on transportation, the President again referred to the joint study and cited findings which "support the need for substantial expansion and important changes in the urban mass transportation program authorized in the Housing Act of 1961 . . ." but also " . . . give dramatic emphasis . . . to the need for greater local initiative and to the responsibility of the States and municipalities to provide financial support . . . for strengthening and improving urban transportation." 20/ The President recommended that the loan program be continued but that Federal capital grants up to two-thirds of cost be authorized and urged that planning requirements be strengthened.

In July 1962 after further hearings, the House Banking and Currency Committee reported favorably on H. R. 11158 noting its belief that "the requirement that the community pay one-third of net cost in cash will give it a strong motive to hold costs to a minimum and establish fares which will yield adequate revenues." 21/

The House Committee also noted that under the terms of the bill "Assistance . . . could not be used for operating subsidies." 22/

The Senate Banking & Currency Committee also held hearings and reported a bill, S. 3615 in August of 1962. The supposition that current operating costs could not or should not be met from revenues never surfaced. On the contrary, the Senate Committee assumed that all operating costs would be met from revenues and stated explicitly its belief that "A large part of . . . capital cost can be expected to be met from the fare box." 23/ Nothing more happened in 1962.

Hearings were repeated in both Houses of the Congress in 1963 and both reported mass transportation assistance legislation favorably. In the Senate both the Committee on Commerce and the Committee on Banking and Currency issued reports favoring enactment of mass transportation assistance legislation. The Commerce Committee recommended a provision requiring an applicant for capital assistance "to include in its justification a proposed schedule of fares, under which the transit system would be able to continue to operate on a sound economic basis." Should the schedule be altered after the grant so as to jeopardize operation on a sound economic basis, the Administrator would be required by the

20/ The Transportation System of our Nation, Message from the President of the United States, H. Doc. 384, 87th Cong, 2d sess, p. 10

21/ U.S. Congress, House, Committee on Banking and Currency, Report on H.R. 11158, Urban Mass Transportation Act of 1962, H. Rept. 1961, 87th Cong, 2d session, p. 9.

22/ Ibid., p. 11.

23/ U.S. Congress, Senate, Committee on Banking and Currency, Report to Accompany S. 3615, Urban Mass Transportation Act of 1962, S. Rept 1852, 87th Cong, 2d sess, p. 6.

Commerce Committee's amendment to notify the grant recipient and in the absence of corrective action, "to cut off all future assistance . . . for projects in the area involved." 24/ This proposal was adopted in the bill as passed by the Senate. 25/

The Senate report goes on to say emphatically:

Federal assistance could not be used for operating subsidies. A project assisted under this bill would be an undertaking to provide new, or the improvement of existing, transit facilities and equipment. Ordinary repairs and maintenance would not be considered as an 'improvement' under this bill. 26/

The Senate passed the bill, S. 6, on April 4, 1963 but the House took no action on its Committee's favorable report. Negotiations continued during the entire following year primarily over labor protective provisions. Finally, in the second session of the 88th Congress, the House passed a bill different in important respects from that passed the year before by the Senate. With efforts to adjourn increasing in tempo, the Senate accepted the House-passed bill and there was no conference.

The Urban Mass Transportation Act was signed into law on July 9, 1964 and thus after continuous struggle, beginning virtually in 1957, the first long-range Federal program for the assistance of urban mass transportation systems was under way. Federal participation in operating costs is not authorized by the law as enacted. Section 9(f) of the Act also prohibited the Administrator from regulating (1) "in any manner the mode of operation of any mass transportation system with respect to which a grant is made . . ." or after a grant is made, (2) "the rates, fares, tolls, rentals or other charges fixed or prescribed for such systems for any local public or private agency" It barred

24/ U.S. Congress, Senate, Committee on Commerce, Report on S. 6, the Urban Mass Transportation Act of 1963, S. Rept 83, 88th Cong., 1st sess., p. 10

25/ U.S. Congress, Senate, Committee on Banking and Currency, Section-by-Section, Summary of the Provisions of S.6, the Urban Mass Transportation Act of 1963, 88th Cong., 1st sess., p. 4. The bill also provided, however, that the authority given the Administrator to make rules and regulations to carry out the Act "shall not be construed to permit the Administrator to regulate the mode of operation, the fares, or rates of the transit system."

26/ U.S. Congress, Senate, Committee on Banking and Currency, Report to Accompany S.6, Urban Mass Transportation Act of 1963, S. Rept 82, 88th Cong, 1st sess, p. 18.

comprehensive Federal surveillance and powers of intervention to protect national resources -- in disputes between (a) management and clientele over fares, and (b) management and labor over wages and working conditions, in either of which the Federal Government could have been easily victimized.

As the first five years of operation under the Urban Mass Transportation Act of 1964 drew to a close, a growing body of opinion supported the need for a much larger long-term commitment by the Federal Government to the support of urban mass transportation programs.

1969 Legislative Activity

On August 7, 1969 the President sent a special message 27/ to the Congress recommending greatly increased funding and a long term program building on the 1964 Act. Hearings 28/ on mass transportation problems before the Senate Banking and Currency Committee, which had begun in July, generated somewhat greater interest in operating subsidies than had developed at any previous hearings on urban public transportation, but opinion was mixed and not generally emphatic. For example, while Mr. David Goldberg, Commissioner, New Jersey Department of Transportation held that

higher priority should be given to capital grants rather than to subsidies of operating programs. If Federal funds were available in sufficient quantity to cover both, then both could be considered. If funds remain limited, as presumably they will, first consideration should be given to carrying out an adequate capital improvement program. 29/

Mr. Leo Cusick, former Administrator of the Federal Mass Transportation Assistance Program and then General Manager of the Massachusetts Bay Transportation Authority felt differently: "While I am not positive that capital investments alone would turn the tide immediately, I am certain that assistance in defraying the operating deficit will." 30/

The bill finally reported by the Senate Banking and Currency Committee made no provision for operating subsidies and was thus in accord with the legislative proposal made by the Administration. When the bill came to floor, however, Senator Percy announced that he would offer an amendment "to provide immediate financial relief for communities facing dire financial problems . . ." and that he would "urge the Banking and Currency

27/ U.S. Congress, House, Message from the President of the United States Transmitting a Public Transportation Program, 91st Cong., 1st sess, H. Doc 91-145.

28/ U.S. Congress, Senate, Committee on Banking and Currency, Mass Transportation 1969, Hearings, 91st Cong, 1st sess.

29/ Ibid., p. 146.

30/ Ibid., p. 162.

Committee to examine . . . the necessity for Congress to authorize subsidies for urban transportation systems." 31/ His amendment was limited to authorizing grants to "pay the interest on or to discharge the financial obligations . . . if the transportation system in question faces imminent threat of bankruptcy, or, if in consequence of the need to increase fares . . . the welfare of . . . lower income persons who are dependent upon the transportation system will be seriously adversely affected." Senator Percy expressed the view that "We may soon be forced to provide [general] operating subsidies to keep public transportation going," but he acknowledged that "considerable further study" would be required. 32/ He offered to withdraw his amendment upon receipt of assurances from the managers of the bill that early hearings would be scheduled on his proposal. 33/

True to this commitment, the Senate Banking and Currency Committee held hearings in April 1970 on Senator Percy's proposal to provide Federal grants toward "interest charges or to discharge obligations . . . incurred previously by the mass transit system to improve facilities . . ." Senator Williams also introduced a bill to "provide Federal subsidies to defray operating deficits on an interim [15-year] basis . . ." 34/

The Administration opposed both bills. Mr. C. C. Villarreal, Administrator of the Urban Mass Transportation Administration, testifying for the DOT said,

These bills raise two fundamental issues: 1. To what extent is Federal involvement in the problem of increasing operating deficits -- with the attendant prospect of increased fares to avoid operating deficits -- desirable? 2. To what extent do the bills represent appropriate mechanisms for any such Federal involvement?

The first of these issues has been raised before. The limitation of Federal involvement to capital assistance has been deliberate and premised on the belief that the solution of our mass transit problems can come only through joint Federal, State and local efforts. Operating subsidies involve many factors that are matters of local choice, influenced by local interest and support. For this reason, the most appropriate Federal role was believed to be one providing the maximum freedom for the local decision-making process. The bills before the committee would dramatically change the nature of the Federal involvement in assistance to urban mass transit and raise a whole host of questions as to the proper relationship between the Federal Government and our cities, for example, the degree of control and responsibility for efficient transit operations that the Federal Government might necessarily assume under an operating subsidy program.

31/ Congressional Record, Vol. 116, February 2, 1970, p. S 1016

32/ Ibid., S 1017

33/ Congressional Record, Vol 116, February 3, 1970, p. S 1126

34/ U.S. Congress, Senate, Banking and Currency Committee, Mass Transportation-1970, Hearings on S.676 and S.3499, 91st Cong, 2d sess, pp. 1-2.

With respect to the second issue, it would seem that the assistance provided for by both bills would deal only with a small portion of the overall problem of the squeeze on fares and service created by rising costs and static or declining ridership. They would also raise serious questions of fairness since each would gear assistance to conditions that do not directly relate to the question of the need for Federal aid. 35/

Mr. John Paul Jones, President of the American Transit Association, in supporting both proposals, reported that ATA had queried the top 50 transit companies (by population served) and established aggregate indebtedness of \$1.5 billion (not counting general obligation bonds used by some cities to support capital expenditures for transit). Using a 6 percent interest rate and 10-year amortization period, Mr. Jones' estimated annual debt service charge of \$278 million and urged a fourfold increase in funding proposed by Senator Percy to \$1 billion -- "enough to cover about one half of the industry's outstanding capital debt." 36/

Speaking of his own bill, Senator Williams acknowledges that "The one drawback of the operating subsidy is that it will only pay for existing inefficiency and poor service. It certainly does not build new facilities, nor does it buy desperately needed new equipment. However, a blood transfusion is needed before curative surgery can be performed." 37/

Meanwhile, hearings had been conducted by the Housing Subcommittee of the House Banking and Currency Committee in March. Secretary Volpe was spokesman for the Administration. He was asked by Representative Halpern to explain "why we have not contemplated including operating subsidies under the proposed Urban Mass Transportation Act?" 38/ The Secretary replied by saying

With respect to contributing to operating deficits, I am sure you will remember that this was rejected by the Congress in the 1964 act for reasons which I believe are still valid. We would be getting the Federal Government into the area of labor disputes. We would be getting the Federal Government involved in the area of fare controversies. We would, it seems to me, not be preserving local autonomy. And perhaps the most important reason is the one of my own personal experience in Massachusetts. In Greater Boston we started with a subsidy program in which the 14 cities and towns around the city of Boston would pay for the operation of our metropolitan transit authority.

35/ Ibid., p. 22

36/ Ibid., pp. 26-27

37/ Ibid., p. 34

38/ U.S. Congress, House, Committee on Banking and Currency, Urban Mass Transportation, Hearings before the Subcommittee on Housing, 91st Cong, 2d sess, on H.R. 6663, S. 3154, H.R. 7006, H.R. 13463, H.R. 16261, p. 126

That deficit started at about a million dollars. It is now up over \$40 million. There is just no bottom to the barrel. And that is why I personally feel that it would be a mistake for the Federal Government to get involved in this. We would never be able to know the amount of money that would ultimately be required.

Much stronger support for Federal assistance to meet operating costs developed before the House Committee. The spokesmen of the largest metropolitan cities were most emphatic:

Mayor Lindsay of New York: "We must make rapid strides to provide operational subsidies." (He noted that the City of New York contributed about \$230 million annually to subsidize transit operations.)

Mayor Daley of Chicago: "Routine maintenance -- such as painting, cleaning, and general sprucing up -- is essential for an attractive service. To provide these services requires financing that can only come from the Federal Government." 39/

"To insure transportation systems which will meet the needs of our citizens, especially the poor, the aged, the handicapped, and the young, requires Federal assistance for operating expenses." 40/

James R. McIntyre, State Senator, Massachusetts: "The answer, I believe, lies in federal funds to aid our mass transportation systems, both for capital improvements and operating deficits." 41/

Nevertheless, the House Banking and Currency Committee reported new legislation to the House with no provision for operating subsidies. 42/ The Committee addressed itself quite specifically to the problem and its statement is quoted here in full:

OPERATING EXPENSES

The committee received a great deal of testimony concerning the need for a new program of Federal grants to assist States and local public bodies to defray operating deficits incurred by public or private mass transportation companies in providing commuter service. The Urban Mass Transportation Act of 1964 does not now provide any direct assistance for operating deficits experienced by transit operations. It seeks to improve transit

39/ Ibid., pp. 157, 183, 223

40/ Ibid., 223

41/ Ibid., 249

42/ U.S. Congress, House, Committee on Banking and Currency, Urban Mass Transportation Assistance Act of 1970, Report to Accompany H.R. 18185, H. Rept 91-1264, 91st Cong, 2d sess.

services through Federal assistance for new or improved capital facilities and equipment. Many communities, however, are faced with the need to provide public subsidies to cover operating deficits in order to preserve adequate transit service at reasonable fares. This must often be done while they attempt to develop a capital improvement program designed to increase ridership and produce more economic and efficient operations. This problem of maintaining commuter transit service while embarking on major capital improvements is becoming increasingly common in many urban areas, especially with respect to railroad commuter operations in large eastern metropolitan centers.

There are considerable dangers involved in moving toward a program of Federal subsidies to defray operating deficits: First, there is a danger that such subsidies would reduce the incentive of cities to make capital improvements in their systems, and, second, there is little doubt that such subsidies would require close Federal scrutiny of operating details and practices of transportation companies.

Section 8 of the committee bill authorizes the Secretary of Transportation to conduct a study of the feasibility of providing Federal assistance to help defray the operating costs of mass transportation companies in urban areas, and report his findings to the Congress within 1 year after the date of the enactment of the bill. It is understood that the Department has already initiated such a study. However, the committee believes that the study should be broadened to provide for full consideration of the advantages and disadvantages to local public bodies of the increased Federal presence in their transit operations which would inevitably result from the provision of subsidies to cover operating deficits. 43/

Mr. Barrett's statement on the floor of the House during debate on the bill provides interesting insight into the views of the Committee:

The existing Act [UMT Act of 1964] . . . reflects a conscious congressional choice not to become involved in the actual operations of local transit systems. However, primarily as a result of the deepening financial crisis facing local transportation systems, there has been increasing pressure for greater Federal involvement in local transit operations

43/ Ibid., pp. 9-10

through the provision of cash subsidies to defray operating deficits or operating costs generally. Such assistance could have the dual effect of keeping marginal but essential transit operations running while at the same time freeing funds for use in improving the capital position of such systems. However, in addition to a widely felt aversion to greater Federal involvement in, and scrutiny of, the day-to-day affairs of local transit operations, there is a fear that any subsidies based on operating costs may produce inefficiency in operations. An operating subsidy may simply be a treatment of the symptoms without trying to treat the cause and working for its cure.

This bill contains a provision offered by the gentleman from New York (Mr. Halpern) directing the Secretary to conduct a study of the feasibility of a Federal program of assistance to defray operating costs and report to Congress with his findings and recommendations within a year. Such an effort will provide us with a comprehensive and factual study of the issues involved which will enable us to more intelligently evaluate the possible benefits and disadvantages of such a new program. 44/

When he appeared before the Senate Banking and Currency Committee in April, Mr. Villarreal had drawn attention to the provision for a study of operating subsidies contained in the House version of the Urban Mass Transportation Assistance Act of 1970. 45/ While Senators Williams and Percy revised and consolidated their subsidy bills (S.676 and S.3499) and the Committee included them as Section VIII of the Housing Act of 1970 (S. 4308), Senator Percy styled his proposal as an "emergency program". The pending bill, he said, "would help keep the transit wheels of our buses, street cars, and commuter trains rolling. It would prevent the reduction of critically needed transportation services in the cities by providing emergency help." 46/ A total of \$750 million was authorized for the first five years.

In reporting the bill, the Senate Committee called for "the prompt study and development of a comprehensive program." 47/ The bill passed the Senate with the emergency program of operating and debt service subsidies

44/ Congressional Record, Vol. 116, No. 170, September 29, 1970 p. H.9352

45/ U.S. Congress, Senate, Banking and Currency Committee, Mass Transportation-1970, Hearings on S. 676 and S. 3499, 91st Cong, 2d sess.

46/ Congressional Record, Vol 116, No. 166, September 23, 1970, p. S 16388

47/ U.S. Congress, Senate, Committee on Banking and Currency Report to Accompany S. 4368, Housing and Urban Development Act of 1970, S. Rept 91-1216, 91st Cong, 2d sess, p. 35.

intact, but the provision was not included in the House bill and the House conferees insisted that the provision be stricken. It did this on the ground that the study should first be completed and its conclusions and recommendations evaluated.

The Department of Transportation, reporting to the Subcommittee on Housing of the House Banking and Currency Committee had strongly objected to Section VIII of the Housing Act of 1970. After referring to the capital grant program, major enlargement and lengthening of which had just been authorized by the Congress, the Secretary of Transportation said:

While this approach may not offer a complete solution to local transit problems, there are possible dangers involved in a Federal program of operating subsidies which require great caution before such a program is actually undertaken. A subsidy program which is based upon the level of earnings or losses of a transit system could have a serious adverse impact on incentives for efficient operations. Alternatively, an operating subsidy program which either rewards some standard of efficiency or simply provides block grants to all systems would probably not adequately serve to allocate the available funds to those systems where they were most needed. Presumably, any Federal program of operating subsidies other than block grants would require a highly detailed scrutiny of, and possibly even involvement in, the actual operations of local systems on the part of the Federal Government. The Department believes that decisions involving the operation of urban mass transportation systems is a matter of paramount local concern in which Federal involvement should be minimized to the greatest extent possible consistent with the provision of financial assistance in a responsible manner. Finally, any program of operating subsidies which attempts to aid a great number of totally independent systems would be confronted by the tremendous problem of imposing a rational ceiling on the amount of aid any particular system or all systems could receive unless rather detailed, uniform Federal requirements were imposed on their operating policies and methods of accounting.

Until this study is completed, the Department will oppose all legislative proposals dealing with the provision of Federal funds to subsidize the cost of operating urban mass transportation systems. 48/

Senators Percy and Williams introduced their combined proposals again in the opening days of the 92nd Congress. 49/

48/ Letter dated December 16, 1970 from Secretary of Transportation Volpe to Congressman William Barrett, Chairman of Subcommittee on Housing, House Committee on Banking and Currency.

49/ Congressional Record. Vol. 117, No. 18, February 18, 1971, p. S 1520

APPENDIX III

EXAMPLES OF STATE AND LOCAL OPERATING SUBSIDY PROGRAMS

A. NEW JERSEY

The State of New Jersey, through its Department of Transportation, administers aid programs for commuter rail and bus transit services.

Commuter Rail. State aid for commuter rail carriers maintaining intercity service in New Jersey, plus New York City and other interstate services (excluding service to Philadelphia) began in the early 1960's. Based upon a rigid car-mile formula and authorizing the State to specify fares and service levels, the program initially amounted to about \$6 million annually. This program was financed by annual appropriations from the State's general fund. However, by a 1961 Act, there was provided an emergency transportation tax which was part of the income tax paid by New Yorkers working in New Jersey; it represented no additional tax to the individual but was paid by the State of New York to New Jersey for "the improvement of New York - New Jersey interstate transportation facilities."

When the State Department of Transportation was created in 1966, the subsidy program was broadened. Subsidy payments for the upcoming fiscal year are not to exceed the loss for the preceding calendar year, and losses are to be computed on an "avoidable cost" basis -- i.e., what the financial result would be if the railroad did not have to maintain its commuter service. Payments cover station, track, maintenance, and plant and equipment costs related to commuter service; in those instances of State ownership of facilities, the State reimburses the locality for any lost property taxes. The commuter rail subsidy program is currently at a level of \$10.3 million annually.

In 1968, realizing that an operating subsidy was not the total answer, the State proposed and the voters accepted (61%) a \$200 million bond issue for rail system rehabilitation. This was tied to a \$440 million highway bond issue and was for capital grants for commuter rail equipment. The debt service on these bonds (\$50 million sold to date) is paid out of State general revenues and is in addition to the operating subsidy program.

Examination of a 1967 contract reveals the following subsidy criteria and guidelines for those railroads agreeing to operate trains that carry commuter and suburban passengers between points in New Jersey as set forth in their public timetables:

1. The railroad has the right to petition for changes in contracted service and applicable fares. If such a petition includes an application to decrease the number of trains, a substantial change in schedules, or an increase in fares, the State prior to making any decision will hold a public hearing. Minor changes in the schedules of contracted service are permissible. The railroad agreed to maintain and operate the contracted service, and the equipment and all necessary facilities in a safe, sanitary and proper manner and condition, and maintain arrival and departure times for all stations and station stops with a minimum of delays or cancellations.

2. The railroad agreed to operate not less than the number of cars (or their equivalent in seating capacity) on each train included in the contracted service. Any adjustment in the number of cars in any of the trains included in the contracted service could be made only by mutual agreement.

3. The railroad charged fares at the rates set forth in their tariffs applicable to travel between New Jersey points.

4. The railroad could not, without written approval from the State, initiate, take or prosecute, and had to actively resist, any proceedings before any State or Federal agency or court for any order, approval, judgment, decree or other action impairing or limiting its rights, powers and capacity to operate the contracted service and carry out and perform its obligations to render the contracted service.

5. Payments are made in equal monthly installments within twenty days after the end of each calendar month of each respective fiscal year.

If payment of a computed amount (or part thereof) is not made because legislative appropriations are insufficient to permit such payment, or for any other reason, the railroad can terminate the agreement with the State upon a thirty day's written notice.

6. The operations of all trains included in the contracted service is reviewed on a periodic basis. Any change in service is reflected in monthly payments.

7. The State determines on a quarterly basis whether or not a railroad has satisfactorily furnished the contracted service during the quarterly period. "In the determination of service satisfactorily furnished, the arrival of any train . . . at its terminal or other mutually agreeable checkpoint more than four minutes later than the time due shall be considered as unsatisfactory service, except that such delays as may have been unavoidable because of strikes, riots, disasters, Acts of God, weather conditions, temporary speed restrictions covered by general orders, or other circumstances clearly beyond the control of the respective railroads, shall not be included in these computations. Highway construction or major maintenance projects where the extent of the delays is agreed upon in advance by the parties shall also be considered

as a reason for unavoidable delays. Also, in the determination of service satisfactorily furnished, the failure to operate the number of cars shown for any train shall be considered to be unsatisfactory service, except for such equipment shortages as may have been unavoidable because of strikes, riots, disasters, Acts of God, weather conditions or other circumstances clearly beyond the control of the respective railroads, or as may have resulted from the failure of the agency to make rolling stock available for use by the railroads.

For every day of unsatisfactory service by a train because of late operation exceeding twenty-five percent of the days of operation during any fiscal year covered by this agreement there will be deducted from the payment for the last calendar month of such fiscal year an amount computed by multiplying the number of cars specified for that train by thirty cents (\$0.30) for each mile of scheduled operation of such train. Also, for every day of unsatisfactory service by a train because of equipment shortage exceeding twenty-five percent of the days of operation during any fiscal year covered by this agreement there will be deducted from the payment for the last calendar month of such fiscal year an amount computed by multiplying the number of cars specified . . . for that train by thirty cents (\$0.30) for each mile of scheduled operation of such train.

If the railroads fail to comply with any provisions of this agreement relating to the operation of contracted service other than the provisions contained in sections . . . and such failure is not excused by the agency as one unavoidable in the exercise of good faith, due diligence and good operating practice, the payment for the last calendar month of the fiscal year in which such failure occurs may be reduced in such amount as the agency reasonably deems just in consideration of (a) the detriment thereby sustained by the public interest in the preservation of mass transportation facilities, and (b) the expense thereby incurred by the agency.

. . . should the railroads voluntarily permit or cause a train in contracted service not to operate where such action has the effect of denying a service to the public otherwise required to be operated by virtue of this agreement, the agency may reduce the payment . . . by any amount to be computed by multiplying by \$3.00 the number of car miles thus not operated. Non-performance on account of strikes, riots, disasters, weather conditions or conditions not caused or permitted by the respective railroads or which may have resulted from the failure of the agency to make rolling stock available for use by the railroads . . . shall not be regarded as a breach for the purpose of this paragraph.

8. The railroad agrees that, as required by the provisions of Chapter 301, L. 1966, if during any calendar year within the period of the contract they realize a profit from operating the contracted service, that exceeds a return on investment of 6%, one-half (1/2) of the excess shall be paid to the State; the accounting procedures to be employed to determine the extent of any profit is negotiated between the State and the railroad.

9. The State and the railroad agree on a list of capital improvements which represents a desirable minimum program to improve service for passengers and reduce operating costs. Within the constraints of future legislative appropriations, the State assists in carrying out this program, and also applies for additional funds from the Federal Government. The State specifies the portion of the capital program to be carried out during each fiscal year.

The railroad participates in the capital improvement program by paying the State any monies received from the retirement of the rolling stock used in the contracted commuter service.

Bus Transit. In 1968, the State also began to address itself to the coming crisis in bus transit; this was triggered largely by the proposed sale of the State's largest bus system, Public Service Transport. What was feared was an entrepreneur buying the property with the possibility of putting off capital improvements, raising fares, cutting service, draining off assets and then letting the State either solve or take over an extremely expensive situation.

After a 1969 study, the State DOT recommended "authorization of an interim subsidy program to support bus service which would otherwise be terminated between now and July 1, 1970. It is recommended that 75% of the cost of providing such local bus services be provided from State sources and 25% from local sources. A \$750,000 appropriation should cover the State's share. The recommendation for modest local participation will help insure the reasonableness of local requests for maintenance of service." The need for a local share was prompted by the fact that there are 237 bus operators in the State, many of which are one or two bus operations, and the fear was that the offer of 100% State aid would generate unwarranted aid to too many operators.

The recommendation was adopted, became law, and an appropriation was made for FY 1970 in the amount of \$750,000. This program was renewed for FY 1971 at a level of \$935,000 and for FY 1972 the cost will be \$1 million. This program was operated in tandem with the aforementioned transportation bond issue (\$1.7 million) which is utilized for capital improvements for bus companies; this capital equipment is owned by the State and leased to the operator.

The subsidy program assists twelve bus systems in the State; the six major recipients received approximately \$675 thousand during FY 1971, as follows: Atlantic City \$174,000; Trenton-Mercer County \$100,000; Inter City Lines \$150,000; Community Bus Lines \$90,000; Coast City Coaches \$84,000; Newark Subway \$75,000. The remaining funds (\$260,000) were distributed to a number of smaller operations, with a small residual not expended.

When this program began the levels of service and fares were frozen and could be changed only with State approval. To obtain assistance each operator enters into a contract with the State in accordance with the following program guidelines.

NEW JERSEY OPERATING SUBSIDY GUIDELINES

1. Eligible Participants

a. Privately Owned and Operated Bus Company. Whenever a privately owned and operated bus company shall lawfully petition the State Board of Public Utility Commissioners for permission to discontinue all franchised services, or whenever a bus company which is operating under Chapter 10 of the Federal Bankruptcy Act shall find itself in imminent danger of terminating all service, the carrier may apply for a contract with the Department of Transportation to continue such service or part thereof, provided that the operator agrees to provide the service in accord with terms and conditions as set forth below.

b. Private Operator of Publicly Owned Transit Facilities. Whenever a privately operated company, which has been operating bus or rail transit service using facilities owned by a public body and leased to said operator, shall fail to renew the lease for operation of such facilities due to alleged operating losses, the operator may apply for a contract with the Department of Transportation to continue such service, or part thereof, provided that the operator agrees to provide the service in accord with terms and conditions as set forth below.

c. County Improvement Authority. Whenever a county improvement authority in the State of New Jersey shall certify to the Department of Transportation that it is actively engaged in the process of acquiring ownership in fee of a public transportation enterprise,

New Jersey guidelines (continued)

and deposits with the Commissioner of Transportation documents indicating intent and legal steps taken toward the consummation of such acquisition, either the county improvement authority or the company shall be eligible to apply for an interim emergency subsidy to assist in the preservation of service pending public acquisition of the operation.

Any county improvement authority which has acquired a privately owned transportation enterprise for the purpose of maintaining and improving the system shall be eligible to apply for a contract with the Department of Transportation to obtain financial assistance for the continuation of such service, or part thereof, provided that the authority agrees to provide the service in accord with terms and conditions as set forth below.

d. Contractors for Service Restoration After Abandonment. If a privately owned and operated bus company, within the six months prior to July 1, 1969, or at any time thereafter, discontinued all regular franchised common carrier intrastate bus service, either through unauthorized cessation of service or under orders by the New Jersey Board of Public Utility Commissioners, another operator, franchised to operate intrastate service in the State of New Jersey, may apply for a contract with the Department of Transportation to reinstate such service, or part thereof, provided that the applicant agrees to provide the service in accord with terms and conditions as set forth below. In the event that several companies apply for a contract to operate the same route, the Department shall require that competitive bids be submitted by qualified applicants. Qualifications of applicants to provide the service will be determined by the Department. The Department may request qualified operators to submit competitive bids.

2. Public Convenience and Necessity

Any application for subsidy under this program will be analyzed from the point of view of public necessity for the service rendered. No operation will be eligible for subsidy if alternative service is provided by a non-subsidized carrier over the same route, nor will any service be subsidized if there would be no appreciable hardship on the public if it were discontinued.

Public hardship will be defined for each applicant on the basis of detailed studies of the service under consideration for subsidy.

New Jersey guidelines (continued)

3. Contract Payments

a. Allowable Costs. Subsidy or other contract payments for service shall be made on the basis of a determination of actual cost to the operator less all revenues from the operation including all other income. Actual cost is defined to include the following accounts, as prescribed by the Uniform System of Accounts adopted by the New Jersey Board of Public Utility Commissioners:

- (1) Equipment maintenance and garage expense
- (2) Transportation expense
- (3) Station expense
- (4) Traffic, solicitation and advertising
- (5) Insurance and safety
- (6) Administrative and general (subject to allowable limitations by the Department)
- (7) Operating taxes and licenses
- (8) Operating rents (where applicable and justifiable)
- (9) Interest expense (where applicable)

No allowance will be made for such items as return on investment or for depreciation expense and other non-cash charges.

b. Test Period. The test period for determining the allowable costs shall consist of actual experience in the most recent 12-month period for which operating and financial data are available. These data shall be trended upward to reflect recent increases in labor and material expenses. The upward trending shall include actual cost increases but not anticipated cost increases.

c. Terms of Contracts. No contract will be made for a period beyond the termination of this program on June 30, 1971, and will provide for cancellation if the carrier fails to comply with conditions of the contract or if the affected county (or counties) does not participate within 30 days.

New Jersey guidelines (continued)

d. Payments-Procedures. Payments will be made by the State every month after receipt of an invoice on forms prescribed by the Department of Transportation in accordance with the contract. For contract restorations under Section 1c., invoices must show the gross allowable cost of service for the preceding month and the credits for operating revenue and all other income. The net amounts will be eligible for certification for payment by the Bureau of Motor Bus Transportation.

e. Local Share. Within 30 days of the effective date of a contract for service, the county (or counties) through which the service operates must reach agreement with the Department of Transportation to assume not less than 25 percent of the net contract service costs. County payments must be made to the Department of Transportation to reimburse its account for the appropriate share of payments certified by the Department to the carrier, upon submission by the Department of an invoice on forms prescribed by the county. Payments by the county must be received by the State within 30 days of the mailing of bills by the State.

4. Standards of Service

a. Schedules. The carrier must agree to operate such schedules as are incorporated into the service contract with maximum reasonable regularity and on-time performance.

Failure to operate a scheduled trip or failure to meet all scheduled runs within five minutes of designated times for schedule time points must be explained in a written report to the Bureau of Motor Bus Transportation no later than the next business day following the occurrence. The schedule time points for purposes of compliance with service standards will be the departure times for the beginning of each one-way trip.

Failure to maintain 95 percent of all scheduled runs and 90 percent on-time performance (as defined above) and/or failure to file accurate written reports as required during any monthly period are causes for reduction of contract payments. The schedule of such payment reductions will be incorporated in the service contract. Exceptions will be allowed for certain causes clearly beyond the carriers' control, such as riots,

New Jersey guidelines (continued)

strikes, severe storms and other Acts of God. No exceptions will be allowed for equipment failure or malfeasance on the part of drivers.

b. Equipment. The carrier must agree to operate equipment designated by model, serial number and company roster number (or equivalent) in the contract. Equipment substitutions other than normal cycling for repairs require written explanations to the Bureau of Motor Bus Transportation no later than the next business day following the substitution.

Equipment operated in contract service must be properly signed for each direction of a trip, as specified in the contract. All other rules and requirements of the New Jersey Board of Public Utility Commissioners with respect to safety and adequacy of equipment must be met by the carrier.

c. Insurance. The carrier must meet all rules and requirements of the New Jersey Board of Public Utility Commissioners with respect to adequate insurance for the service under contract.

d. Fares. The carrier must charge such rates of fare as are specified in the contract and certify to the Department of Transportation the correct amount of such collections.

The Department may specify the type of registering devices and the fare collection procedures where more than one fare zone is involved.

e. Data Collection. In addition to daily revenue statistics the carrier must report weekly to the Bureau of Motor Bus Transportation, the daily number of trips operated, the daily number of passengers carried and the daily number of vehicle miles operated. The Department may assign State employees to undertake other surveys or data collection and the carrier must agree to cooperate with these State employees and to provide transportation for them while they are conducting official surveys.

f. Compliance with Regulations. The carrier must agree to comply with all State and local laws and regulations of the Board of Public Utility Commissioners and the Bureau of Motor Bus Transportation. Carrier must also agree to cooperate in every reasonable manner with efforts of State and local officials to enforce these laws and regulations.

5. Advertising and Promotion

The carrier must agree to cooperate with any advertising and promotion activities of the Department to inform the public of the availability and

New Jersey guidelines (continued)

usefulness of the service. This may include posting and disseminating maps, timetables and other promotional material, as well as answering telephone inquiries.

6. Affiliated Interests

In applying for a subsidy or service contract, an operator must identify each individual owner of 5 percent or more of its common stock. For each such owner, carrier must furnish a statement identifying their employment, if any, by other carriers, and all other equity interest in bus companies, both operating and non-operating, whether franchised, contract, charter or school bus. Activities and ownership interests of all such owners in businesses engaged in bus tours and limousine operations and bus, garage leasing and/or financing activities must be similarly identified.

Carrier must also furnish a statement listing all contracts in effect for bus service with other public and private agencies. Copies of such contracts must be available for examination by the Department upon request.

B. PENNSYLVANIA

The Commonwealth of Pennsylvania has a continuing program of operating assistance for mass transit. This is coupled with a State program for grants for capital projects, working in tandem with the Federal capital grants program.

Pennsylvania's program dates back to mid-1965 when the Urban Mass Transit Assistance Law was passed and signed by Governor Scranton. This law was basically an emergency program first for the City of Philadelphia, and later, Pittsburgh. It authorized State grants on a two-thirds basis, matched locally, to cover the

cost of continuing such necessary [transit) service to the public, so long as the Secretary of Commerce finds that: (1) there is an imminent danger of a substantial reduction of necessary service to the public as a direct result of losses attributable solely to the continuation of such service, and (2) the mass transportation carrier incurring such losses is taking or will take continuing action which the Secretary of Commerce finds is designed to continue or improve the service and hold losses to a minimum.

This program, which granted nearly \$5 million to Philadelphia, was temporary in that the law called for a long range program to be designed by FY 1968. In that year State aid for mass transit was greatly expanded by the passage of two major pieces of legislation.

First, the Pennsylvania Transportation Assistance Authority was established with power to issue \$30 million in bonds which, in effect, set up the State's capital grant program; this now provides one half of the local share for a two-thirds Federal capital grant. Secondly, the Pennsylvania Urban Mass Transit Assistance Law of 1967, set up the operating assistance program which is aimed at continuing and improving mass transit service in those areas where operating losses were threatening to lead to a substantial reduction or elimination of service . . . "projects designed to continue necessary service to the public, to permit needed improvements in services which are not self-supporting and to permit services which may be socially desirable but economically unjustified."

This program made available nearly \$8 million the first year, and has budgeted \$35 million for FY 1972. Whereas the earlier program mainly benefitted Philadelphia, the current program also makes grants to Pittsburgh, Erie, New Castle, Washington, Butler, Williamsport and Altoona; such cities as Harrisburg, York, Scranton, Wilkes-Barre and Hazelton may be added in the near future.

While the program authorizes funds for research, planning, and demonstration projects as well as marketing and promotion programs, the bulk of the funds are for "purchase of service" projects.

In FY 1971 Philadelphia and Pittsburgh received \$10.3 million of the \$10.5 million appropriated. For FY 1972, the Mass Transit Division of the State Department of Transportation has requested nearly \$40 million for the program which for the first time includes debt service as an allowable cost (about \$27 million in Philadelphia and Pittsburgh). This request has been reduced to \$35 million -- not through the application of any substantive criteria but because it was thought to be the limit for legislature approval.

The budget process largely determines the level of the operating subsidy programs. Eligible localities submit monthly financial statements and future year budget needs. After review Pennsylvania DOT totals the eligible costs and after taking two-thirds of the total has the dollar value for the program request.

PENNSYLVANIA DEPARTMENT OF COMMUNITY AFFAIRS
CHAPTER VIII, REGULATION 805
URBAN MASS TRANSPORTATION ASSISTANCE LAW OF 1967

PURCHASE OF SERVICE

This program provides State funds for the purchase of service necessary to the public. The Department may make grants to municipalities, counties, or their instrumentalities, to agencies and instrumentalities of the Commonwealth and to transportation companies to supplement Federal, private, or local funds or Federal and private or local funds. The amount of State funds for a particular project grant shall not exceed two-thirds of the costs, as defined by the Department, which cannot, as determined by the Department, reasonably be financed from revenues. Each project and project grant will be subject to an annual review and renewal. Each purchase of service project grant shall be based on a program or plan approved by the Department and determined to be in the public interest, to be in furtherance of a coordinated mass transportation plan for the area, and not to involve unnecessary or unfair competition.

The public agency which receives a grant is expected to work closely with the public or private urban common carrier mass transportation organizations or companies in its area. A State grant shall be made for a purchase of service project only so long as and after the Secretary finds that (1) There is an imminent danger of a substantial reduction of necessary service to the public as a direct result of losses attributable solely to the continuation of such services, and (2) The mass transportation carrier incurring such losses is taking or will take continuing action which the Secretary finds is designed to continue or improve the service and hold losses to a minimum.

The Department is authorized to make project grants to any transportation company or companies to supplement Federal, private or local funds for use in financing purchase of service projects designed to continue necessary service to the public, to permit needed improvements in services which are not self-supporting, and to permit services which may be socially desirable but economically unjustified. In view of the particular sensitivity of special instrumentalities and agencies of the Commonwealth created to serve or coordinate the local transportation needs of substantial metropolitan areas, no project for use exclusively or principally in the local service area of any such agency or instrumentality in which a city or county of the first or second class has membership, shall receive a project grant except in accordance with a system of priorities agreed upon by the Department and such agency or instrumentality.

In the case of a project grant for a project to be operated exclusively or principally within the local areas of such agency or instrumentality no project grant shall be made except in accordance with agreements by

Regulation 805 (continued)

the Department and such agency or instrumentality with respect to such use. In the case of a project not falling within the scope of the preceding sentence but covering use both within and without the local service area of such agency or instrumentality, the project grant shall require that the routes, schedules, fares applicable only within such service areas shall be those mutually agreed upon by the Department and such agency or instrumentality.

1. Applicant

An applicant shall be a county, city, borough, township, or town, a group thereof, or an instrumentality thereof, or an agency and instrumentality of the Commonwealth or a transportation company.

2. Allocation Basis

Funds will be allocated by the Department on a project by project basis as grant proposal applications are received. However, the Department shall give preference to any grant proposal which will assist in carrying out a plan, meeting criteria established by the Department for a unified or officially coordinated urban transportation system as part of the comprehensively planned development of the urban area, which is necessary for the sound, economic, and desirable development of such area, and which shall encourage to the maximum extent feasible the participation of private enterprise.

3. Grant Proposal

A grant proposal will be prepared and submitted in two steps:

- Preliminary grant proposal to be received by August 15 of the preceding fiscal year, so that the Department can ascertain the eligibility of the applicant and of the project, and to include the State funds in the budget for the fiscal year desired.
- Formal grant proposal, in which sufficient details are provided to permit the Department to make a final decision as to the project's eligibility under the Act and the desirability of the project as part of the State's Mass Transportation Program.

Each applicant shall submit to the Department a preliminary project proposal by August 15 of the fiscal year preceding that in which the project is to commence. This proposal will consist of a letter to the Department signed by an authorized representative of the applicant and shall include the following information:

Regulation 805 (continued)

- Legal name of the applicant.
- General description of the project and its objectives and shall include:
 - Existing conditions;
 - Geographic area served, perhaps a map;
 - Why necessary;
 - Objectives;
 - Conclusions as to how the project objectives will satisfy the need for the project.
- Total cost of the project and the amount of the State grant requested and sources of all other funds.

After approval by the Department of the preliminary grant proposal each applicant shall submit to the Department a formal grant proposal using forms furnished by the Department. The formal grant proposal shall include a description of the project and the proposed project budget.

The applicant must submit with the formal grant proposal the following information:

- Evidence that it is legally organized and empowered to undertake the project.
- A certified copy of the resolution authorizing the filing of the application for a State grant.
- Evidence that it is capable to administer and supervise the project and the work to be done by consultants and transportation companies, as evidenced by an attached schedule of personnel, and their qualifications, who are assigned, or are to be assigned to do such work.
- Federal funds will be requested for all projects for which Federal grants are authorized, and the applicant shall submit a copy of its application to the U.S. Department of Transportation and/or the U.S. Department of Housing and Urban Development for a Federal grant, with its formal State application and indicate the date this application was approved or disapproved by DOT, HUD, or other Federal Agency, in the space provided on the appropriate line of the application.

Regulation 805 (continued)

- The applicant shall attach cooperation agreements with the public body or private organization that will provide the local contribution, or a certification of the allocation of its own funds for this purpose. These funds shall total the applicant's grant.
- The applicant shall agree to the Department's representation on any planning coordinating committee established for this program.
- The applicant shall furnish, and attach thereto, the names and addresses of the officers and members of the applicant and indicate therein the name and address of the person to whom all official correspondence should be addressed.
- If the grant will adversely affect a competing company or companies in the area, conditions that would be created by the grant, if approved, for competing companies, if any, shall be described. If none, it will be so stated.
- The applicant, unions, and third party interests shall comply with an anti-discriminatory contract clause which will be included in all contracts.
- The applicant shall attach a statement of the purposes of the grant and the objectives to be accomplished.
- The applicant shall attach a total proposed budget for the project.
- Each required condition as shown on pages 4 and 5 of Form DCA-223 will be attached as an exhibit by the same number (that is, Condition 1 will be Exhibit 1; Condition 2, Exhibit 2, etc.). Additional exhibits are attached as shown on pages 6, 7, and 8 of Form DCA-223PS and as required.
- Certified copy of the operating statement for the last calendar year filed with the Public Utilities Commission or a certified copy of the financial report prepared by a certified public accountant, showing losses incurred for the last calendar year.
- Section 5(c) establishes criteria for preference to participate in any project provided for under the Urban Mass Transportation Assistance Act of 1967 to an urban

Regulation 805 (continued)

area which has established a unified or officially coordinated urban transportation system, as a part of the comprehensive plan shall be given preference for approval of projects. If available, data concerning comprehensively planned development of the urban area, which is necessary for the sound, economic, and desirable development of such area, and which shall encourage to the maximum extent feasible the participation of private enterprise shall be included.

- Each applicant submitting a project proposal will be notified in writing of the Department's action in approving or disapproving the project proposal and project budget.

4. Findings

Each applicant shall submit with the formal grant project the documentation which the Secretary needs to make his findings, as required by law following the format prescribed by the Department.

The documentation for the findings shall include the following information and shall provide complete detailed answers to the following questions:

- Amount of grant request and financing program.
- What service would be reduced or eliminated by the carrier in the absence of payments by the public agencies.
- Is the reduction in service substantial?
- Is the reduction or elimination in service imminent?
- Is the service which would be reduced or eliminated necessary or socially desirable?
- Is the reduction in service the direct result of losses?
- Are the losses attributable solely to the continuation of the service?

Depreciation allowances may be considered as a part of operating losses for urban mass transportation carriers to the extent that such a carrier has purchased equipment or facilities, or equipment and facilities with funds for which the carrier is liable for repayment and may be considered as a factor in determining losses of carriers for purposes of participating in a Purchase of Service Project.

Regulation 805 (continued)

Interest and principal as a part of a short term note, bond issue or other incurred debt of a local transportation organization or transportation company to purchase (1) directly or indirectly the acquisition of any interest in, or purchase of any facilities, or other property of, a private urban common carrier mass transportation company as defined in Section 4, (b) of the Urban Mass Transportation Assistance Act of 1967, and will not be considered as a factor in determining losses incurred for purposes of participating in a purchase of service project.

Necessary funds provided as a local share to participate in any project under the Urban Mass Transportation Assistance Act of 1967 cannot be used as a local share of funds to participate in a Purchase of Service Project. (Example - Promotion Project 50% matching funds, Local share \$10,000-State share \$10,000-Purchase of Service Project: operating losses \$50,000 of which \$10,000 local matching funds Promotion Project is a part.)

Operating Losses	\$50,000
Local Promotion Funds.....	10,000
Operating Losses.....	40,000

Local funds provided for any project, provided by the Local Transportation Organization, or company from other than operating funds are acceptable.

- Is the transportation organization or company taking or will it take continuing action designed to continue or improve the service and hold losses to a minimum?

Each applicant that submitted documentation for the findings will be notified in writing of the Secretary's action concerning the findings.

5. Grant Agreement

After the Secretary has made the findings required by law, and after the Department has approved the grant proposal and project budget, it will prepare and submit to the applicant a grant agreement. The grant agreement will provide for a State grant. The grant agreement will include other provisions pertinent to the project and to the program.

After the grant agreement has been executed by the applicant, it will be executed by the Commonwealth and be approved by the Governor.

6. Payment Procedure

The applicant shall submit to the Department a quarterly statement which shows actual project costs in accordance with the approved budget.

Regulation 805 (continued)

The Department will reimburse the applicant an amount not to exceed two-thirds of the avoidable costs of providing service as shown on line D3 of the application.

Final payment will be made upon receipt of a certified audit for the period of the contract of the carrier receiving the aid.

C. NEW YORK CITY

Public transportation in New York City and the surrounding area is provided by the Metropolitan Transportation Authority (MTA), the Port of New York Authority Trans-Hudson Corporation (PATH), and seven privately owned bus companies operating in Manhattan and Queens.

MTA is a public benefit corporation created in 1968 by the State of New York, and serves as policy coordinating organization for the other operating public benefit corporations:

- The New York City Transit Authority (TA) which operates the 240-mile subway system throughout New York City and 128 miles of bus routes in Brooklyn, Manhattan and the Queens. TA is the major deficit operation of the MTA, but by far the largest carrier. Since the City of New York owns the entire subway system and its equipment, TA leases all property from the City.
- The Manhattan and Bronx Surface Transit Operating Authority (MABSTOA), a TA subsidiary, operates (under a lease arrangement with the City) 72 miles of bus routes in the Bronx, Manhattan, and Queens.
- The Long Island Railroad, another deficit operation of the MTA, was purchased from the State of New York in 1966. Originally in the form of a loan, the purchase price has been converted to a capital contribution by the State.
- Staten Island Rapid Transit Operating Authority (14-mile commuter railroad on Staten Island) was purchased in 1969 from the C&O Railroad, and has been a deficit operation from the beginning.
- The Triborough Bridge and Tunnel Authority (TBTA) was placed under MTA in 1968. Beginning in FY 1971 surplus revenues from TBTA tolls have been made available to finance deficits of other MTA components.

MTA also operates two airports and, in partnership with the State of Connecticut, the New Haven Railroad commuter lines. The Port of New York Authority Trans-Hudson Corporation (PATH), which provides rapid transit commuter service between Manhattan and New Jersey, is not part of MTA.

New York City Assistance Programs. The City subsidies for mass transit are a direct result of the fact that until the MTA was created by the State in March 1968, State law required the TA to operate on a self-sustaining basis. To accomplish this a number of arrangements were devised to assist TA in meeting its operating costs with funds from general revenues:

- The City pays 100% of the cost of the 3,172 man New York City Transit Police Force. This cost \$51.9 million and \$57.1 million in fiscal years 1970 and 1971 respectively. The estimated cost for FY 1972 approximates \$70 million. The funding level is determined by negotiation between the MTA and the City. Wage scales are related to the regular New York City Police. Though formal negotiation between the police association and the MTA take place, the settlement between the City and association for city police has set wage patterns for the transit police.
- Reimbursement for free rides that New York City Police and firemen receive. Prior to 1966, police and firemen had been allowed to ride free on the subway system, with no reimbursement to the TA. In 1966, in anticipation of a TA deficit of \$12 million, the City decided to reimburse the TA for carrying police and firemen retroactively for the prior six years at a rate of \$2 million a year. This reimbursement continues at the same rate.
- Reimbursement for free and/or reduced fares for school children. The City and State reimbursed TA, MABSTOA and private bus companies \$57.5 million in FY 1970 and \$77.6 million in FY 1971 -- the increased cost resulted from a January 1970 fare increase. The State of New York pays 90% of the cost for free transportation for all handicapped pupils and for all pupils living more than 1-1/2 miles from school; the City pays only 10% of the cost of transporting these students. However, New York City has chosen to provide an additional program providing free service for (1) all handicapped pupils, (2) kindergarten to second grade students living more than 1/2 mile from school, and (3) third to eighth grade students living more than one mile from school. In addition, reduced fares are provided for (1) kindergarten to second grade pupils living under 1/2 mile from school, (2) third to eighth grade pupils living under one mile from school, and (3) ninth to twelfth grade pupils living over one mile from school. The amount of reduced fare varies considerably by carrier.
- Reimbursement for reduced fares for the elderly. Persons over 65 ride at half price at a cost to the City of \$7.2 million in FY 1970 and \$12.5 million in FY 1971 (the increase was a result of the fare increase). When the program was initiated in 1968, persons over 65 were asked to register; each registrant received an identification card that must be presented when receiving the reduced fare. It was arbitrarily determined that the elderly would make 1.7 trips

a week; thus the total dollars to be allocated to all MTA and private carriers is determined by the product of 1.7 times the number of registered persons over 65, times 1/2 the existing fare. This amount is allocated among the carriers based on a percentage that represents their share of the total estimated passengers carried by all systems.

- The City owns TA and MABSTOA and pays the principal and interest on the debt of these properties. In 1970-1971 \$14.4 million was paid by the City out of a special real estate assessment for this purpose.

During the past four or five years MTA has shifted funds among its components to stay afloat financially. MABSTOA has been earning cash surpluses that are used to finance TA's deficits. In 1970-1971 authority was received from the State and the bondholders to use Triborough Bridge Authority tolls to finance TA's deficits. In addition loans from the City and from the pension fund have provided means to meet other immediate cash requirements. The following table from "Financing Transit in New York City", prepared by the Citizen Budget Commission, Inc. explains these transactions:

N.Y.C. Transit Authority
Financing of Budgetary Deficits
Fiscal Years 1966-67 to 1970-71

(in millions of dollars)

<u>Sources of Financing</u>	<u>1966-67</u>	<u>1967-68</u>	<u>1968-69</u>	<u>1969-70</u>	<u>Est</u> <u>1970-71</u>
TA BUDGET DEFICIT(a)	<u>\$ 2</u>	<u>\$44</u>	<u>\$79</u>	<u>\$79</u>	<u>\$80</u>
MABSTOA Surpluses(b)	\$ 4	\$22	\$27	--	\$20
Borrowing from N.Y.C.					
Rev. Antic. Notes-Net(c)	--	--	25	(1)	12
Promissory Note(d)	--	--	--	45	(47)
TBTA Surpluses(e)	--	--	--	--	74
Accrued Pension Liability (f) . .	10	2	12	29	20
Decrease in Operating Cash (g) .	--	12	(1)	3	--
Other Decreases in Net Assets(h)	<u>(12)</u>	<u>8</u>	<u>16</u>	<u>3</u>	<u>1</u>
 Total Funds to Finance Budget Deficit	 <u>\$ 2</u>	 <u>\$44</u>	 <u>\$79</u>	 <u>\$79</u>	 <u>\$80</u>

Notes:

- (a) Net operating budget deficits.
- (b) Will be exhausted as of 6/30/71. No further transfers anticipated.
- (c) Up to \$36 million were made available for borrowing from New York City, as needed. These revenue anticipation notes are usually repaid early the next fiscal year, out of advances by the City on account of its reimbursements to the TA for public services and reduced fares. In 1969-70, a total of \$35 million were borrowed and \$36 million repaid. In 1970-71, estimated borrowings are \$36 million, repayments \$24 million. In effect, the \$36 million is a revolving fund which is repaid and renewed each year.
- (d) Payable upon receipt of the accumulated surpluses of TBTA, received in 1970-71. The \$47 million repayment includes interest.
- (e) Transfer of TBTA accumulated surpluses for three years. Of this sum, \$47 million were used to repay the 1969-70 promissory note, plus interest. The TBTA surplus available after June 30, 1970 is estimated at about \$25 million annually.
- (f) TA pension liabilities are accrued on a current basis but are payable as are New York City's two years afterwards. It is anticipated that the difference, or accrued liability, will be greatly reduced over the next few years.
- (g) Operating cash as of 6/30/70 was down to \$12.5 million, close to the minimum required working funds.
- (h) Decreases in other assets or increases in other accrued liabilities.

Source: Compiled from data supplied by the NYC TA.

APPENDIX IV

GUIDELINES FOR FEDERAL OPERATING SUBSIDIES FOR URBAN MASS TRANSPORTATION,
PROPOSED BY THE NATIONAL LEAGUE OF CITIES/U.S. CONFERENCE OF MAYORS IN
CONSULTATION WITH THE AMERICAN TRANSIT ASSOCIATION - JUNE 1971

In creating the new executive Departments of Transportation and Housing and Urban Development, the Federal government committed itself to a long range strategy to aid the nation's cities and to produce a balanced transportation system within and between them which would be their life's blood.

In the past, the Federal government has contributed mightily to the development of the first national road system, which bound our emerging nation together, to the construction of the transcontinental railroads, to the building of roads and highways to accommodate the automobile, to the growth of the maritime and aviation industries, and, most recently, to the near-completion of our magnificent system of interstate highways.

Among the needs of our modern urbanized society, mobility is certainly one of the most important. The problem of getting to and from, as well as in and around, our cities has focused public attention as never before on the relative roles of the automobile and public mass transportation.

There is a great national stake in increasing and improving the mobility of all of our citizens. It is clear that in urban areas this can best be achieved at lowest economic and social cost through improving the operations of public transportation systems.

This was well recognized by the President and the Congress in the passage of the Urban Mass Transportation Assistance Act of 1970. As was supposed at the time, a program of capital grants could not by itself alleviate the financial woes of the transit industry and, more importantly, the increasing number of municipalities which own and operate transit systems.

It is ironic that one of the products of the prosperity of the 1960's was the proliferation of automobiles and their usage and the resulting decline in ridership of public transit systems ... thus producing a shrinking of service to those people who depended on transit the most and who could afford the automobile the least.

This can be seen statistically in the fact that in the decade from 1961-1971 the number of municipalities which were forced to initiate programs of operating assistance to transit systems increased by nearly 300%. This is all the more incredible when it is realized that such programs are being supported at a time when the financial resources of States and local areas are strained to the utmost.

An analysis of the operations of the nation's mass transit properties reveals the fact that, increasingly, passenger revenues cannot meet operating expenses. Indeed, costs due to inflation, conversions to new technology, the need to attract new users, and postponed capital improvements are projected to be unreachable without massive public assistance. More and more States and cities have faced this financial situation head-on by voting favorably for and enacting subsidy programs that range from direct financial support to exemption from differing forms of taxation.

In spite of these actions, the general picture of the transit industry is one of rising fares, increasing operating expenses and declining ridership. This has led to increased use of the private automobile for commutation with the resulting outcry about air pollution and traffic congestion and extremely vocal debate around the issue of dislocation caused by massive urban freeways.

Economic Realities. Thus the major question on the subject of operating assistance for mass urban transit is not whether to grant aid but how to do it and to what extent. The reasons for this are peculiar to the financial structure of the transit industry.

It has become painfully obvious to both taxpayers and public officials that metropolitan mass transit cannot be self-supporting -- that user charges -- fares -- cannot hope to cover mounting costs of operations. Mass transit is a needed public service and as such depends on public financial support by whatever combination of revenues best suits the public interest. Nationwide, operating deficits are now running at the rate of \$360 million a year.

Sources of transit operating aid in the nation today range from a cigarette tax in Massachusetts; higher gas and electric rates in New Orleans; a sales tax on gasoline in California; a portion of the property tax in Toledo; dedicated parking meter revenues in Baton Rouge, a payroll tax in Portland, Oregon; general taxation in several cities; tax relief for private operators in many areas; and reimbursement programs for discounted fares for school children and senior citizens in a few States.

Public and private transit operators are granted assistance for both capital expenditures and operations by a variety of States, district authorities, and municipalities.

To the public, the financial assistance story is told in two chapters-- fares and wage rates: wage rates, because the industry is more labor intensive than most, and fares, because that is the direct and immediate cost to the public. Behind these two ingredients lie a host of other financial problems -- costs of maintenance, questions of service, problems of service, problems of public takeover, needs for new equipment, discussions of bus versus rail, bond issues and many more.

In order to adequately approach a solution to transit subsidization, it is first necessary to examine not only these problems but public attitudes and issues generated by them.

Urban transit in the U. S. today is increasingly being looked upon, by both government and the public at large, as not only a needed public service, but one worthy of broad based public financial support. Justifications for this point of view in the nation's urban areas range from viewing transit as:

- a method of insuring the vitality of central business districts.
- a viable alternative to merely increasing automobile congestion on urban and suburban highways during peak hours.
- guaranteeing mobility for transit dependent riders -- the old, the young, the poor and the infirm.
- a development factor in the location of prudently dispersed industrial sites.
- the only feasible, technical and economic means for increasing the capacity and use of facilities for suburban commuters to reach center city jobs, and for center city inhabitants to reach suburban jobs.
- an environmental consideration in that a properly designed, operated and maintained transit system can take the place of over half of the central city automobile trips, thus greatly relieving the air pollution in these areas, as well as relieving pressure for the condemnation of valuable land for traffic.
- a source of civic pride in preventing the deterioration and demise of a needed public service.

On the basis of our survey of all transit systems in the nation which operate with a program of public assistance, it is possible to identify a number of trends which have increased public demand for maintenance of transit service and at a reasonable cost:

- the growing numbers of transit dependent riders -- particularly senior citizens. Not only has this age group increased overall, as indicated by the 1970 census, but the enactment and enforcement of stricter driver qualification and motor vehicle inspection

standards by most States have meant growing numbers of those dependent on public transportation. Senior citizens' organizations have also become more active.

- environmentalist organizations have developed a sophisticated understanding of the efficacy of mass transit vis-à-vis the private automobile. In this connection it is interesting to note the increasing utilization of high speed transit and express bus service by commuter groups or suburban subdivisions.
- downtown businessmen's groups have focused on public transit as a prime factor in center city revitalization.
- fares generally have risen to the level where any further increases will result in increasingly drastic reductions in ridership.
- minority groups, due to their economic circumstances, increasingly link their advancement hopes with the maintenance of low cost transit service. These groups suffer from abnormally high unemployment levels due, in part, to their inability to live near job opportunities or to travel readily to them. As decentralization of the employment market continues, this problem becomes more serious.
- increased operating expenses have meant, in many years, reductions in routes and increases in headways, deteriorating capital equipment and a general lowering of the quality of service.
- an acceleration of public takeover of private transit properties which cannot meet costs, pay taxes or make payments to pension programs. As a result, at the point of takeover, the public agency is faced with enormous initial expenses in addition to picking up the operating losses. This has meant that more and more funds from the capital grants program have gone to finance public takeovers of private transit properties.
- the consideration, by an increasing number of State legislatures, of measures which would exempt transit properties from payment of State fuel and other State taxes. These discussions as well as the accelerating economic plight of private systems have stimulated demands by private companies that they be treated tax-wise in the same manner as publicly owned systems. . . .

What must be dealt with as a matter of public policy in giving Federal operating assistance to transit systems, is a paradox: the major justification for such a program must be increased ridership during peak hours, to increase revenues, reduce traffic congestion and air pollution and strengthen the economic viability of both central city and suburb ... and yet to do this, transit systems would have to expand equipment and service leading to greatly increased costs due to maintenance of a larger work force during the not-so-remunerative and not-so-utilized off-peak hours. Given the present economics of the nation's transit systems and the extent of present public financial support, a Federal aid program appears to be the only alternative.

Survival Not The Only Goal. However, merely maintaining present service levels, stabilizing present State, local and user support, and, in effect, refinancing present deficits is no long range answer. A larger percentage of commuters must be induced to forego the automobile for mass transit; transit dependent riders must be assured adequate mobility; and transit systems must be given an opportunity to be a functional asset to the urban environment. These goals cannot be afforded now by the nation's transit systems or by local government.

At present rates, all vestiges of private enterprise will disappear, thus greatly increasing the public cost due to takeovers and depleting the funds of the capital grants program. Costs, fares and deficits will continue to rise and, as the pattern goes, ridership and service will continue to shrink. The 81 systems which are presently subsidized (in 1961 the figure was 21) will almost certainly increase to the point where every large city transit system will be publicly owned and heavily subsidized.

Indeed, the recently promulgated air pollution standards of the Environmental Protection Agency may compel public mass transit to be the only alternative. As that agency's Administrator said in issuing the standards, "If we are to meet the legal deadlines for carbon monoxide, then some cities may have to require drastic changes in their commuting habits."

Objectives. The first objective of any program of Federal assistance for transit operations should be the maintenance of service to the public. Because of financial difficulties, a surprisingly large number of transit properties have gone out of business. An equally large number have attempted to meet costs by either cutting service (routes and headways) or raising fares. Both approaches are self-defeating in that they inevitably lead to drastically reduced ridership, meaning less revenue. Therefore, any program must first and foremost assure riders of continued service at a reasonable cost.

The second objective must be to stimulate ridership -- most importantly in the commuter-peak hour category. Service to transit dependent riders is important, as is downtown circulation, but the automobile commuter must be convinced transit is an attractive, feasible and economic alternative.

A third objective should be to enable transit systems to respond to the specific developmental needs and goals of municipalities. This would imply a degree of flexibility in a transit system so it could function as a part of an area's policies of community development. For instance, if a city constructs housing for the elderly, it should be able to insure transit service at the door. Similarly, redesign of routes and expansion of services should be considered in the light of changing patterns of development and other actions taken as a result of local public policy.

Therefore not only must transit service be maintained, it also must be expanded and improved to serve all segments of the riding public. To do this any program of assistance for operations must go well beyond re-financing the status quo through the simple funding of deficits. The program must be based on reinvigoration and not just relief. This will mean the provision of the type of service that auto owners will patronize -- innovation in new technologies, planning, management or new systems of service.

Program Formula. With the foregoing objectives in mind, a Federal program must be aimed at granting assistance to a system both as it is and as it should be. To accomplish this, the amount of Federal aid should be based upon standard measurement of a transit system's size and its use to reflect both its capacity and its present service to the locality. Additional payments might be based on a system's efforts to increase its percentage of commutation trips.

Given the present financial trends in the industry, it is impossible to determine nationally which systems should be eligible for Federal aid -- to aid only systems presently operating with a given deficit could result in the unwarranted penalization of some other systems. Also, some systems not currently operating at a deficit may be rapidly approaching that situation and a program whereby a deficit is a prerequisite may result in unwise financial decisions being made.

Therefore, Federal operating assistance should be made available to all transit systems whether or not they are receiving nonfare produced income from State and local sources.

There are three possible categories of measurement which should be considered to determine a system's size and use:

1. Revenue passengers. The number of riders using a transit system would be the most appropriate measure of activity of that system. Because stimulation of ridership, especially among commuters, is a primary objective of the program, additional riders will produce additional Federal assistance. The main problem with this is that transit systems do not have precise statistics on riders -- exact fare policies, reduced fare programs, fare differential by zones, and transfers all contribute to the difficulty of determining passengers by revenue analysis. There is no uniform system whereby the precise number of passengers is determined -- some systems count a transferred passenger once, others count him twice, etc.

2. Seat miles. The statistical measure of seat miles is one of the best overall criteria on which to assess a system's activity. Seat miles are determined by the capacity of equipment operated, multiplied by the length of the route traveled and the frequency of the service run. However, the problem again is that such statistics are not uniformly available. While the ideal solution to measure a system's use and capacity would be a formula weighted to reflect passengers and seat miles, the lack of uniform statistics and the complexity of arriving at a fair and accurate data base precludes the consideration of such a formula.

3. Equipment. The number of buses, subway cars and commuter rail vehicles would be a reasonable measure of a system's capacity. Exact figures of vehicles in service are certainly uniformly available. However, because such counts would fail to measure the degree of use of the equipment, the existing and uniform measure of vehicle miles (in revenue service) adjusted for varying vehicle capacities, would undoubtedly be the fairest, most accurate and simplest solution. This is what the pending State aid program in Illinois will be based on -- after consideration of all the various alternatives.

Given the complexity of other aid programs (and their distribution formulas), both State, local and Federal, the argument for simplicity is overwhelming. This will result in assistance being speedily delivered with a minimum of statistical justification and investigatory analysis by the Federal government.

The amount of assistance per vehicle mile (in revenue service) should be based upon several considerations:

- The cost of the development of increased ridership or improved service to prevent decline of present ridership.
- The amount of State and local taxes dedicated or used for support of local transit systems.
- Differential of cost of operation (on a per passenger basis) between bus and trolley systems, rapid transit and commuter rail carriers.

Analysis of the present financial status of the nation's transit systems, in particular those either in or facing a deficit situation, shows that it would take a minimum of \$300 million annually to initiate a meaningful Federal program of operating assistance. Such a program level would serve both to maintain service and enable systems to begin programs for expanding ridership, especially in the peak hour period.

At this annual level, given the industry's overall figures on vehicle miles in revenue service, the unit of aid would be about 10¢ to 12¢ per vehicle mile for vehicles with a capacity of under 75; and about 15¢ per vehicle mile for vehicles with a capacity of over 75 (i.e., most commuter rail and larger rapid transit cars).

With this in mind, it appears that Federal operating assistance would probably amount to no more than 10% or 15% of a system's total operating costs (not including depreciation).

The major point to be made is that the primary determining factor in Federal aid for operations is transit equipment and its use.

Level of Service. A Federal program of operating assistance for transit systems poses two important questions: first, should the Federal government, as a prerequisite for aid, attempt to set standards defining what constitutes proper transit service and what is a reasonable fare? and second, how can transit service be measured objectively to judge different systems?

Mr. Robert T. Pollock, General Manager of the Cleveland Transit System, and a member of the A.T.A. Advisory Committee, has prepared a paper on the question of measuring levels of service. . . . His conclusion is that uniform criteria are useful to transit operators to guide decision making, but cannot effectively be used to compare one system to another.

More important still is the question of how Federal policy can reflect the different traditions, attitudes and circumstances of the many cities in the country. Levels of service, fares, and reduced fare programs as well as special promotional efforts reflect income levels, population density and mix, development patterns and other factors that differ from city to city and county to county. There is no reason to assume that local public officials are not fully capable of reflecting such local interests in a responsible manner.

Federal assistance will mean either increased or improved service, lower fares, the freeing for other necessary local purposes of present tax monies now required, or reduction in local tax support now for transit purposes. There is nothing in these effects that is inconsistent with the stated objectives of such a Federal program.

The two most often stated reservations about the prospect of Federal aid for operations involve the questions of "disincentives" as they relate to: a.) unwarranted or uneconomic service experiments; and b.) less than defensible labor and wage contracts.

On the first point it should be noted that if Federal aid is based on actual numbers of passengers in combination with capacity or seat miles, then extended service which is not used by riders will produce less Federal assistance. As for wage settlements, in the light of additional public funds (Federal) for transit, there is no reason to suppose that local officials will be any less responsible than they are with other municipal public employees. Mayors and city managers tend to look at this problem as part of the whole recent history of wage and benefit demands by public employees. Similarly, there is no reason to believe that the owners of a private system would have any incentive to make their job more difficult by increasing labor costs beyond the minimum necessary in order to obtain a labor settlement. Limitations on local revenues available for wage increases for all municipal employees will tend to normalize pressures from transit workers, notwithstanding any Federal operating subsidy program. Knowing that subsidies will tend to increase wage demands, city officials will have added incentive to resist demands from the transit area that they simply cannot manage for other categorical employees.

A Federal program for operating assistance should not be designed or even allowed to involve the Federal government in day to day operations or fare and wage decisions of local transit systems. It is certainly possible to utilize successful technology, systems or equipment developed by transit companies or by the U.M.T.A.'s research and demonstration programs without involving the Federal government in judgments of service areas, headways, routes, fares, wage rates and other decisions best left to local officials.

With a Federal operating assistance program contributing approximately 15% of the funds needed to meet a transit system's operating costs -- this is hardly sufficient to justify any very extensive Federal guidelines, standards and regulations. But most importantly, there is no way of assuring that preemptive Federal action through such management oriented guidelines would not penalize or work to the detriment of those local transit systems that are efficient or are committed to management improvement within the limits of their financial resources.

Planning Requirements. A Federal program of operating subsidies, in concert with the capital grants program, implies a high degree of planning to achieve the goals mentioned earlier and to avoid unnecessary cost escalations. Planning procedures, however, should be tied not to the operating subsidy program, but remain as part of the capital grants program.

The present capital grants program provides for up to a 2/3 Federal share. (In effect, however, about 3/4 of the approved projects have been on only a 50-50 basis.) Congress has indicated its interest in adjusting the grant ratio to be identical to the post-interstate highway grant ratio. This is expected to be at about a 75% level. A program with such heavy involvement of Federal aid would appear to be a more proper framework for realistic and practical planning requirements than an operating subsidy program.

Thus, a Federal program for operating subsidies, while it should not dictate standards for levels of services, should stimulate in the States, districts, and municipalities concern about service -- e.g., what constitutes adequate and economic transit service to the public. This will undoubtedly mean the application of more advanced planning techniques to routes, patterns of development, service to captive riders, marketing programs, downtown circulation systems, express service and the like.

Fares. The proposed Federal aid program should produce the stabilization of fares. In all too many transit systems the next fare increase awaits only the issuance of the current balance sheet. It has already been pointed out that the belief that farebox revenue can or should meet operating costs is obsolete. Further, it is obvious that in many areas of the nation, fares have been raised to the level which have resulted in a disastrous decline in ridership. This would apply as well to hidden fare increases, such as elimination of transfers, charges for transfers and zone charges.

Although it will never be possible to set a national optimal fare, due to differing economic, geographic and other conditions, it is possible to generalize on the basis of examples that when short haul fares exceed 25¢, ridership declines are accelerated.

In some areas it may be feasible as well as advisable to have a decrease in fares concurrent with the introduction of operating subsidies. This was done recently in Denver and is being planned in Atlanta and San Diego if proposed subsidy programs pass.

It should, however, be left to local determination as to whether the funds provided by the proposed program are to be used for a general fare reduction, reduction of fares to certain groups such as the elderly or school children, or for other improvements in the transit system, as for example, improved or extended service.

Consideration for Transit Dependent Riders. Any new Federal program for operating expenses must recognize that in many areas the backbone of transit ridership is the transit dependent rider -- the older, the school young, the poor and the infirm. Many transit systems have varying

programs of special discounted fares for senior citizens and children going to or from school (some, but not all include high school and vocational students as well).

While a new Federal program for operating assistance should not make reduced fares for transit dependent riders a prerequisite for aid, it is within the realm of proper advocacy that transit systems give special consideration to senior citizens, school children and the handicapped. Where such special consideration amounts to discounted fares, it should not impose a financial burden upon the transit system -- public or private. A fairer way would be to institute a local or State reimbursement program for such reduced fares, so that transit revenues are not diminished. This is now the practice for school fares in Massachusetts, Illinois, New York and to a lesser extent, Pennsylvania. Also New York City has a reimbursement program involving senior citizen fares.

There is no uniformity now in the nation on this matter and there are many cogent arguments for not instituting a national solution to the problem -- senior citizen concentrations vary among geographic areas as do income levels of such concentration; many localities depend totally on private contract carriers for school children and might not want to add school ridership to their system, given the impact on routes and schedules. While a narrowly constituted aid program aimed at special fares could add riders, it would not add significantly to income per rider, which is needed to achieve the improvements in service.

Non-Federal Support. As stated before, this proposed Federal aid program will represent about 15% of a transit system's total operating costs (minus depreciation). The remaining 85% of costs will be provided by the rider through fares and by any State or local subsidies that might exist. It would, therefore, be superfluous to require local public bodies to provide local revenue support as matching funds to be eligible for Federal aid.

Such a requirement may mean, in many areas, increased taxation merely to produce Federal aid -- aid which is designed to relieve the local burden of support for transit and stimulate expenditures which will improve service. Local governments across the nation today are already facing a serious financial crisis -- a crisis in part caused by the need to raise matching funds for a host of Federal grant-in-aid programs. In many cities, a matching fund requirement for this program would mean that Federal funds for transit operations would be unused.

Local revenue sources already provide the matching share under the capital grants program. Any Federal funds for operating assistance accumulated in reserve should be restricted as to their application to provide local matching funds for the capital grants program.

Eligible Applicants. An eligible applicant for funds under this program would be any public agency, be it local, area-wide or State. Aid should be made available to private companies as well, so as to preclude an inordinate amount of public takeovers, with the resulting increase of capital grants applications. This would prevent what is called "the deterioration cycle" that is now widespread across the nation -- private company losing money, facing rising costs, cuts service or raises fares, or both, loses riders, cuts maintenance, allows equipment to deteriorate, uses up any capital reserve or defers payment to pension fund or both, causes strike, leading to public demands for municipal takeover, leading to large capital grant for purchase of property and new equipment... and local subsidy.

Another fear in the exclusion of eligibility of private properties for Federal aid, would be the possibility of "for sale" transit properties going to irresponsible buyers who might drain off assets and/or cause a public takeover at an even larger public expense.

As with the capital grants program, aid to private companies should be done with a local public authority being the recipient of Federal funds.

Requirements for eligibility of transit systems for Federal aid under this proposed program should be the same as those under the Internal Revenue Code covering reduced Federal gas tax.

Financial Reporting Data. Efforts to understand the financial workings of the nation's transit systems are hampered by lack of uniform financial data. This results primarily from the lack of a coordinated reporting system.

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It is imperative that the transit industry develop a coordinated reporting system. Future analysis of the industry and of the impact and success of a Federal program of operating assistance will depend on the existence of comparable financial data.

The American Transit Association has announced its intention to take the lead in developing a coordinated reporting system. This effort is to be commended, and the results will have useful application to the proposed Federal program of operating assistance.

