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Trip: The Transportation Remuneration and Incentive Program in West Virginia, 1974-1979

Final Report
July 1982

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Service and Management Demonstrations Program

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16. Abstract

This report describes and evaluates a five-year Federal and state financed demonstration of state-administered subsidies for rural transit users and providers in West Virginia, called the Transportation Remuneration and Incentive Program. The demonstration pioneered the use of multi-modal user-side subsidy tickets for some 12,000 low-income elderly or handicapped residents of West Virginia and the creation of new or expanded rural bus service in five of the state's eleven planning and development regions through new regional transit authorities. Significant mobility improvements were experienced by the eligible group of TRIP ticket recipients and by clients of social service agencies, who were often provided special service by the rural bus systems. The taxi industry also benefited because taxis were chosen for about 40 percent of ticket recipients trips. Viable rural bus service persists in the five regions, aided in part by TRIP ticket use and in part by continuing local, state, and Federal financial support of the service.

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PREFACE

This evaluation is intended to report concisely on the conduct and results of West Virginia's federally and state financed Transportation Remuneration Incentive Program, as a guide to similar public transportation efforts in other states. The evaluation was conducted by Crain & Associates, Inc., under contract to the U.S. Department of Transportation (DOT), Transportation Systems Center (TSC), in Cambridge MA, in its role as evaluating agency for the Service and Management Demonstration (SMD) program of the Urban Mass Transit Administration (UMTA). Bruce Spear was the TSC technical monitor and Lynn Sahaj was project manager at UMTA.

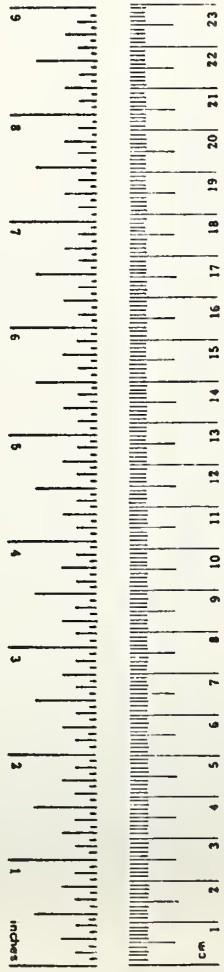
Unlike most Service and Management Demonstration studies that develop or prescribe the data required for project evaluation, this report is based entirely on information that could be obtained from state and local sources during the last year of the demonstration plus an extensive, four-year evaluation sponsored by the West Virginia Department of Welfare and conducted by staff of West Virginia University. Contrary to expectations, no detailed benefit/cost analyses were sponsored in the West Virginia University work. The present report therefore contains fewer quantitative evaluation measures than would have been desirable. In part to make up for this lack, we have included a financial comparison between TRIP and two other statewide user-side subsidy programs, in Pennsylvania and New Jersey.

The author acknowledges his debts to Okey Gillenwater and Phillip Lynch of the West Virginia Department of Welfare for information and insights on the history and current operation of TRIP; to Dr. Wil Smith and his research staff at West Virginia University that carried out the multi-year evaluation of TRIP and associated surveys that were a major source of data for this report; and to many staff members of the Transportation Division and regional transit authorities who were unfailingly generous of their time during what seemed like a continuous uphill effort to keep the buses running.

METRIC CONVERSION FACTORS

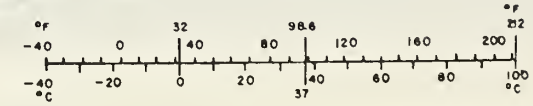
Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
		MASS (weight)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
		TEMPERATURE (exact)		
	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C



Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
		AREA		
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
		MASS (weight)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
		VOLUME		
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	35	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
		TEMPERATURE (exact)		
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



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EXECUTIVE SUMMARY

BACKGROUND

During the period between July 1974 and June 1979, the State of West Virginia was host to the largest Federal demonstration program for improving rural transit service yet attempted, called the Transportation Remuneration Incentive Program (TRIP). The "remuneration" part of TRIP, referred to here as the ticket sales program, was a user-side subsidy scheme entailing the statewide sale of discounted travel tickets to qualifying low-income elderly and handicapped persons. The other part of TRIP, called the transit development program, entailed the provision of technical and planning assistance, buses, and operating subsidies for rural bus service in five of the state's eleven planning and development regions. This report treats the two parts of the program separately, because they are so distinctive and because they were eventually (in FY78 and FY79) administered by different agencies of the state government.

TICKET SALES PROGRAM

Concept and History

The ticket sales part of TRIP was a user-side subsidy plan in which eligible transit riders were sold tickets at a discounted price while the provider got the full fare through redeeming the tickets with the state. TRIP was the first statewide user-side subsidy program. A second important and unique feature of TRIP was the usability of the discounted tickets for different modes of transportation: taxis, urban and rural transit service, social service vans, intercity buses, and Amtrak. The other innovative feature of the ticket program was that it represented

the first major demonstration of user-side subsidies for transportation employing an income test for eligibility.

Eligibility requirements were that the person be either handicapped or at least 60 years old and have a low income, defined in FY79 as an individual monthly income of $270 or less for nonfarm families or $228 for farm families (corresponding to $3240 or $2736 annually). There was no requirement that the user live in a rural area, but nearly all West Virginia is rural; only two cities, Charleston with 67,348 population and Huntington with 68,811, exceeded the definition of small urban areas out of a total state population of 1.8 million in 1975.

West Virginia was a natural choice to test a statewide program to sell discounted transportation tickets to the transportation disadvantaged. The state had pioneered the use of food stamps, a parallel concept to aid low-income families in purchasing food. There was a large potentially eligible group, estimated at 122,200 low-income persons at least 60 years of age or with disabilities -- about 7% of the state's population. Most of the eligible group lived in rural areas, where transit service was typically scarce and declining in quality. It was believed that making public transit more affordable for this group would not only increase their mobility, but would help to revive the ailing transit industry. After several years of debate, study, and eventual sponsorship by the U.S. Department of Transportation, the Community Services Administration, and the Administration on Aging -- spurred in part by Senator Jennings Randolph of West Virginia and by Governor Arch Moore -- sale of discounted tickets began in June 1974 under the name Transportation Remuneration and Incentive Program.

The state agency selected to manage TRIP was the West Virginia Department of Welfare, which had experience in administering similar programs and good access to the eligible group through its 27 field offices. The department was energetic in

its efforts to certify transit providers (for accepting TRIP tickets in lieu of cash) and to contact potentially eligible persons and certify their eligibility through issuance of ID cards. After that, users could purchase tickets by mail or in person at welfare offices, at first with cash, a certified check, or a money order, and later with a personal check as well. Initial prices ranged from $1 to $5 for an $8 book of tickets, all in 25¢ denomination, but low ticket sales the first year caused reduction to a standard price of $1 per book and liberalization of eligibility requirements on July 1, 1975. The number of books that could be issued monthly to one person was also raised from one to four if justified by high transportation costs or medical transportation needs.

Evaluation Findings

Monthly ticket sales grew from 3,024 books in July of 1975 to 13,423 in May of 1977, serving some 12,200 users. Ticket sales remained around the 13,000 level after that. One reason sales did not continue to increase is probably the reduction in TRIP field staff that took place between May and July of 1977. There is also survey evidence that the limit of the interested eligible population was being approached in many areas of the state, principally due to the following reasons (the term "eligible nonusers" refers to a control group of persons surveyed who were eligible for TRIP but chose not to request certification for purchase of TRIP tickets):

a. Availability to eligible nonusers of other transportation (mainly their own or others' autos);

b. Eligible nonusers' physical inability or lack of need to travel;

c. Unavailability or inconvenience of public transit.

These three reasons were advanced, about equally, by 87.5% of the eligible nonusers of TRIP. Their answers to other questions, however, do suggest that a larger fraction than 12.5% were either put

off by the minor difficulties of getting certified and buying tickets, or were simply not well informed about the program.

Typical TRIP users differ in several important respects from eligible nonusers. They tend to be more often female; in poorer health; living alone twice as often (45 vs. 24%); without a working vehicle in the household three times as often (62 vs. 21%); and less frequently able to operate the vehicle. They are as physically able to travel, on the average, as eligible nonusers. Probably the tendencies to live alone and without a motor vehicle are the most significant determinants of users' interest in the TRIP ticket program, since friends and family with whom to obtain rides would be less often a part of their households.

The travel modes of users differ correspondingly from eligible nonusers; taxis are the dominant mode for most TRIP users, compared with private automobiles (their own or others) for eligible nonusers. TRIP users also travel two or three times as much by bus as eligible nonusers, though their total bus travel is still under 10% of all user trips. On the whole, users appear to travel to more places more frequently than eligible nonusers, probably due in part to higher travel needs or interests and in part to the lower cost of travel made possible by TRIP. At the same time, TRIP users say they would travel even more if they could purchase additional ticket books.

The three principal personal benefits that TRIP users said they received were reduced transportation costs, increased mobility, and elimination of the need for another automobile (mentioned by 74, 66, and 21% of users, respectively). In addition, reduced dependency on others for their transportation was important to some users. Many purposes were served by added trips, among which the principal types were doctor or clinic visits, grocery or other shopping, visiting family or friends, and church or church meetings.

There was also a modal shift effect of TRIP, principally toward more taxi use as either a primary mode (increased from 20 to

45%) or secondary mode (increased from 20 to 29%) and less walking and riding in someone else's automobile. Use of users' own cars and hitchhiking also decreased. Bus use increased in frequency, though the number of TRIP users relying on bus transportation increased very little--virtually none as a primary mode, and from 19.9 to 23.6% as a secondary mode. The net result was the replacement of buses by taxis as the principal primary and secondary modes of user travel. About 77% of the tickets themselves were used for taxi trips and 23% for trips by bus or community service vans; this translates into about 39% of the resulting trips by taxi, because taxi trips averaged about $2.00 in cost compared with $0.40 for bus trips.

Regarding effects on providers, taxi operators benefited more than bus operators, but the net effect was masked somewhat by the continuing overall decline of the transit industry in West Virginia, which consists mainly of small operators (median employment is 4.8, and the median number of vehicles is 3). Both taxi and bus operators tend to support the program as beneficial both to them and to the user group. Their main suggestion for improvement is more prompt reimbursement for the tickets.

The total cost of TRIP through FY79 was about $12.1 million: $1 million for planning and evaluation studies; $6.4 million for the ticket sales program; and $4.7 million for the transit development program. Total annual costs of the ticket sales program were $1.4 million for the FY79 level of some 13,000 ticket books sold to 12,200 users. An average of 101 trips per user were made in FY79. Total cost per trip in FY79 was $1.11, of which 20% or $.22 was administrative costs and the balance was subsidy costs. The total cost per trip compares favorably with current subsidy costs of providing conventional urban and suburban transit services, which typically range from $1 to $2 per trip.

Conclusions

The TRIP discounted ticket sales program has brought appreciable mobility benefits to a relatively small but important group of the transportation disadvantaged in West Virginia. Effects on the taxi industry of the state have also been favorable, although the objective of halting the decline of the bus transit industry in the state has not been realized, partly because the ticket program reaches only about a tenth of the eligible population originally envisaged and partly because of user preferences for taxi services for many trips.

The TRIP program can also be viewed as supplementary income transferred to the poor and restricted to the purchase of public transportation. The question might then be raised whether the same purpose could have been achieved by simply adding to the monthly dollar allowance for persons on the welfare roles who have demonstrable transportation problems. However, such an approach could easily become more costly and less focused than the TRIP program, besides entailing similar eligibility determination problems and probably being more difficult to defend politically, since added unconstrained welfare money could be used for other purposes than transportation.

A variation of the present policy would be to limit the use of the discounted tickets to taxis, since taxi trips are being provided at about the same total subsidy cost as bus trips. However, it is likely that this would limit the user's freedom in choosing the most economical mode, would bias the choice against bus transit even where it is convenient and cheaper, and would not save money in any case, since the bus now tends to be used for longer trips.

A final question that might be raised about TRIP ticket sales is the prospective effect of varying the price charged to users for an $8 book of tickets. Two good tests of this policy are available. On state assumption of the program July 1, 1979 the price charged to users was doubled, from $1 to $2, in order to extend the limited funds available. The effect of this price increase through March 1980 was a decline of about 8% in ticket sales. This suggests a price elasticity (percent change in sales divided by percent change in price) of -0.08, or a very inelastic demand. In other words, the tickets were still considered enough of a bargain at $2/book that few users were discouraged from their purchase. A further price increase to $3/book on July 1, 1979 encountered much more sales resistance. The resulting decline in ticket sales was 20.5% by June 1981, for a price elasticity of -0.61.

TRANSIT DEVELOPMENT PROGRAM

Concept and History

The range of transit development activities considered and attempted by the TRIP demonstration program is shown in Table 1, with a brief appraisal of the success of each type of effort. The principal activity by far was the third one listed, offering new or expanded rural bus service through regional transit authorities formed for that purpose. The rural bus program was quite popular. The least successful activities were technical assistance by the state and subscription bus service.

Transit development activities began under Department of Welfare sponsorship and were moved to the Public Transportation Division July 1, 1977. Although short by half from original plans, sufficient Federal funding was made available through the Rural Highway Public

TABLE 1. TRANSIT DEVELOPMENT EFFORTS

Type of Effort	Appraisal
a. State technical assistance to bus operators (Section 3.3)	Too sparse, especially prior to FY79
b. Capital and operating subsidies to rural bus operators (Section 3.4)	Successful in most regions, but state funding was uncertain and late each year. Also, high subsidy costs per trip persisted in Region 10.
c. Rural bus service (Chapter 6)	
- New fixed-route rural bus service	Successful for work trips; low patronage usual for off-peak service
- Subscription bus service for elderly and handicapped (dial-a-ride)	Costly and difficult to provide, and little used
- Reserved bus service (route diversions prearranged by phone)	Widely used to serve elderly and handicapped with minimal route diversions
- Charter bus service	Very popular and priced to recover all costs
d. Service coordination and contractual bus service to social service agencies (Chapter 8)	State review of federal grants to social service agencies for vans and buses appeared successful, as was provision of rural bus service to many social service agency clients
e. Post bus and health transporter	Considered but never tried

Transportation Program* of the Federal Highway Administration (FHWA) and the Urban Mass Transportation Administration (UMTA) to permit starting rural bus service between September 1976 and November 1977 in five of the state's eleven planning and development regions (Regions 4, 6, 8, 9, and 10). Annual state appropriations augmented the Federal funding.

Evaluation Findings

The resulting growth of rural bus passenger trips by quarter for the five regions, shown in Figure 1, was steady in FY77, dipped early in FY78, resumed its sharp increase during the rest of FY78, slackened in early FY79, and resumed its rapid growth after the second quarter of FY79. The pattern seems to be a slackening of demand in the summer and fall quarters, picking up again in the winter and spring.

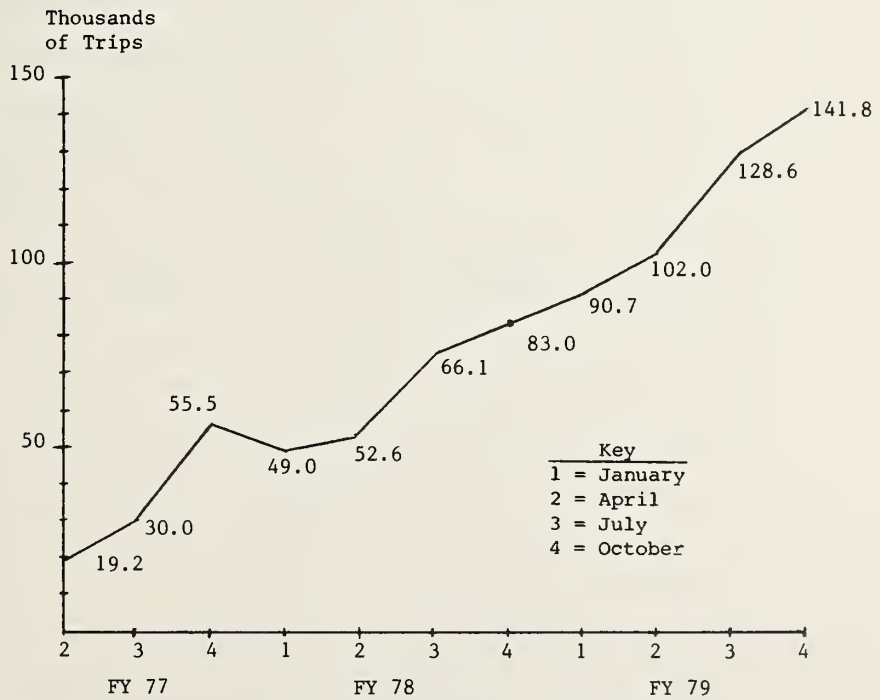


FIGURE 1. RURAL BUS RIDERSHIP TRENDS BY QUARTER

*The demonstration projects for this program were authorized by Section 147 of the Federal Aid Highway Act of 1973, as amended, hence it was called the Section 147 program by FHWA for short. UMTA's grants to West Virginia were appropriated under other legislation, but were coordinated with the Section 147 program.

Initially, the marketing emphasis for the bus systems was on transportation of the elderly and handicapped and the general population by fixed-route buses. The buses were prone to mechanical trouble under heavy use, were often too small, and at first were unmarked. There were virtually no bus stop signs or shelters, no radios for communication enroute, and schedules were changed fairly frequently to try and track demand better: the transit managers were learning on the job without benefit of extensive advance training. Until the transfer of the rural bus program to the Transportation Division in July 1977, it also carried the onus or presumption of an activity for persons on welfare. Under such conditions, riders had to be hardy, diligent, and a bit venturesome. However, as these problems were overcome and especially as the routes and schedules began to favor work trips during commuting hours, ridership grew rapidly.

The total operating deficit, of which 80% was met by Federal grants, climbed from $400,000 in FY77, the first partial year of operations, to $1.1 million in FY79. However, the ratio of revenues to expenses was also rising steadily, from 9.2% in FY77 to 19.4% in FY79--and 24.7% in the last quarter of FY79. In June 1979, the last month of the demonstration, only one transit authority, Region 10 at 13.9%, was below the 20% level. The other levels were 22.7% for Region 4; 26.1%, 27.6%, and 28.1%, for the three operators in Region 6; 32.8% for Region 8; and 36.3% for Region 9. One reason for Region 9's good economic performance was a 59% increase of fares two months earlier, from 5¢ per passenger mile--in common with most other systems--to 10¢, for the first zone, which was followed by only a 6% drop in patronage.

State technical assistance to bus operators was a problem from the beginning. The transit development program had trouble finding staff with sufficient rural transit or even transportation experience to be of real help in planning and operating new rural transit services. There was, in fact, hardly any rural transit experience

to go on, and even the consultant hired at the outset to help plan the program was faulted later for overly drawing on big-city experience in planning rural systems.

Capital and operating subsidies to bus operators were within reasonable ranges, but annual appropriations of the state's share of funding were late and uncertain. The operating costs and performance data for the West Virginia rural bus systems are generally superior when measured against other FHWA Section 147 demonstration projects, with the exception of Region 10 which is on the costly and low performance end of the scale. Regular rural bus fares are augmented by charter fees and contractual earnings in most systems.

Subscription bus service (dial-a-ride) turned out to be inordinately expensive and was replaced by reserved bus service, in which route diversions are arranged by phone for house pickup of the handicapped. Coordination of rural bus service with van and bus service by social agencies has been a continuing problem, but in most cases is worked out satisfactorily, often through contractual arrangements for transit or bus maintenance services by the regional transit authority.

The last two ideas listed in Table 1, post bus and health transporter, were studied in considerable depth but not implemented. The post bus would have involved rural mail carriers providing space on their vehicles for daily passenger service along the route, similar to an operating British system. The main difficulties were poor scheduling, with trips running away from town in the morning, and administrative problems raised by the U.S. Postal Service. The health transporter would have substituted for the overuse of ambulances for non-emergency rural medical trips, but the concept was never funded, first because a survey of prospective users showed less demand for the service than original projections, and second because the shortage of demonstration funds forced their concentration on the rural bus service.

Federal financing of the transit development program fell short of original plans by about half, and costs escalated as delays occurred both in funding availability and in obtaining vehicles. Delays and funding shortages were two reasons the transit development program did not operate statewide as originally planned. Another major reason was the unwillingness of many regional development councils to commit themselves to provide local funding for rural transit services after the end of the demonstration period. As time passed and it became clear that rural bus service would be extended only to five regions, legislative support for the program dwindled and funding of the state's 20% share of the program became an annual problem.

Conclusions

It is to the credit of the regional agency staff that funding uncertainties and a shortage of technical assistance seemed to be accepted, even if not happily, as part of the challenge of the job. The buses not only kept running, but generally kept increasing ridership, due to innovative marketing and scheduling approaches and high standards of driver safety, punctuality, and courtesy. The innovations have included:

a. Picking up and dropping passengers at any safe stopping place along a route, and diverting for short distances when the schedule permits.

b. Linking communities with hospitals, clinics, schools, shopping centers, senior centers, and other places frequented by persons with poor access to automobiles (also linking communities with each other).

c. Scheduling morning and evening "park and ride" service along major arteries leading to employment centers such as factories, then serving more local and senior-oriented trips during the midday.

d. Buying school buses for popular routes to carry larger passenger loads than the original 12-15 passenger equipment would handle.

e. Establishing regular bus service to recreation and transportation centers such as Harper's Ferry.

f. Successful promotion of charter and contractual bus service.

g. Starting discounted downtown circulation service in medium size cities such as Martinsburg.

h. Paying bonuses (of $25) to drivers whose monthly revenues increase 15% or more from the previous monthly high, in Region 4.

i. Adding rural bus routes to existing city bus services in several towns in Regions 6 and 10. However, the add-on systems were not among the most successful or cost effective (and Region 10 usually ranked last), possibly due to the divided attention that the transit management had to give them as well as to preemption of the more profitable urban routes and charter revenues by the pre-existing system.

j. Hiring a marketing person, in Region 6, to encourage travel on specific routes by such means as personal phone conversations and attendance at meetings of community groups. (Usually, the transit authority manager meets with community groups).

k. Occasional use of employees of a firm as bus drivers for commutes to the firm, reducing dead-head driving by parking the bus at the employment site.

The transferability of such innovations to other rural bus systems, as well as the transferability of lessons from early problems with the transit development program, is probably high. Federal financing of the rural bus service shifted in FY80 to the Section 18 Program of the Surface Transportation Act of 1978, administered by the Federal Highway Administration. Bus replacement

will be a serious problem as the present equipment wears out or requires heavier maintenance.

The Section 18 requirement for local government sharing of bus deficits is a good assurance that the local value of the bus program will at least equal its local cost. Whether the total benefits of the program from increased mobility and reduced private vehicle use exceed its public costs of about $2 per trip plus bus replacement is a more general and essentially political question, but such costs are not out of line with those of many urban transit systems and modest fare increases may reduce that cost somewhat. The principal omission of the program, with the advantage of hindsight, was probably the failure to promote vanpooling in rural areas. However, vanpooling was not among the original objectives of the program, and buses were in fact sometimes operated like vanpools, as in the last innovation cited above.

1. INTRODUCTION

1.1 PROJECT OVERVIEW

This report covers West Virginia's five-year demonstration of state-administered subsidies for rural public transit users and providers, called the Transportation Remuneration Incentive Program (TRIP). The demonstration has pioneered (1) the statewide issuance of discounted transit tickets to low-income elderly or handicapped rural residents through the TRIP ticket sales program, a form of user-side subsidy, and (2) providing funding and technical assistance for an extensive expansion of rural transit bus service through the TRIP transit development or rural bus program, a provider-side subsidy.

The ticket sales program, and the transit development program at first, were conducted by the West Virginia Department of Welfare. Beginning July 1, 1977, the transit development program was shifted to the Transportation Division in the Department of Finance and Administration. Financing for TRIP was provided principally by the State of West Virginia, the Community Services Administration, and the U.S. Department of Transportation (FHWA and UMTA).

1.2 RURAL TRANSPORTATION PROBLEMS AND REQUIREMENTS

Residents of rural and small-town areas are exceedingly dependent on access to an automobile for their daily transportation needs. Not only are many employment, shopping, educational and social destinations remote from places of residence, but the shortage or total absense of public transportation service reduces the availability of alternatives to the automobile. Until recently, transit operators in small towns have not had the benefits of Federal financing to help finance equipment and operating deficits, and state or local government support was often inadequate

to maintain them in business serving low-density routes. Rural areas would consider themselves lucky to have any transit service at all, such as one Greyhound bus a day between nearby cities. Many small towns and most rural areas are also poorly served by taxi service, which like rural and small town bus service is provided by small operators without strong financial backing.

As in urban areas, the spread of automobile ownership in the past fifty years has been the principal cause of rural transit decline. For persons with good access to a car, the mobility benefits of this transition have been very positive. For those without such access, typically elderly and low-income individuals, the transition has produced greatly reduced mobility.

The solution to this problem will vary by location and individual. Moreover, a flexible and composite approach is probably more cost effective than a single massive remedy such as subsidizing a high level of rural/small town transit service. Approaches that have been considered or tried are specified in Section 1.4.

1.3 ORIGINS AND OBJECTIVES OF TRIP

In 1970 and 1971, Senator Jennings Randolph of West Virginia, chairman of the Senate Public Works Committee and member of the Special Committee on the Aging, conducted and sponsored over 300 hearings in West Virginia on behalf of the White House Conference of the Aging, focusing on the problems of rural isolation and the need for better transportation services in rural areas. Senator Randolph also called the attention of several Federal agencies to specific interests that each would have in a broad-based demonstration program. With Senator Randolph and Governor Moore's support, a development plan for a combined program of discounted travel tickets and provider development was prepared and submitted to the Community Services Agency (CSA -- then the U.S. Office of Economic Opportunity) in November 1973, followed by an addendum responding to questions in December 1973. The transit ticket and provider development features of the program were chosen

because they appeared to offer complementary solutions to the two main rural transit problems--declining transit service and inadequate access to automobiles by the rural poor and elderly. If tickets were sold at a price that even the poor could afford, and if parallel efforts were made to restore or extend rural transit service on which to use the tickets, mobility of the least mobile section of the population would be improved and perpetuated. It was essentially a decision to work both the supply and demand sides of the problem at the same time.

The U.S. Departments of Transportation (DOT) and Health, Education, and Welfare (HEW) joined CSA in sponsoring and funding TRIP over a three-year demonstration period, later extended to June 30, 1979. A consultant, RCC International, Inc., was hired to prepare an implementation plan, completed in March, 1974; and the sale of discounted transportation tickets began on June 13, 1974. Over the next two years, the Department of Welfare also helped plan the rural bus systems and ordered vehicles for them, but delays kept the systems from starting operations until the 1976-1977 period.

The 1973 development plan suggested three program goals for TRIP:

a. Helping to meet the transportation needs of elderly and handicapped people with low incomes;

b. Providing the transportation industry with customers and revenues needed to keep transportation functioning;

c. Providing and promoting new and improved transportation services all across the state.

A transit user subsidy program was devised and administered by the West Virginia Department of Welfare to meet the first two of these goals. A complementary provider development effort to meet the third goal was initiated by the Department of Welfare in 1974 and shifted to the State Public Transportation Division on July 1, 1977.

The Federal government had similar objectives in sponsoring TRIP, in addition to the aims of learning how to coordinate such

a program among different Federal agencies and obtaining generalizable information about prospective state and local government roles in planning and delivery of transportation services to rural, elderly and handicapped populations. More specifically, the U.S. Department of Transportation (Ref. A12)* wanted to:

a. Ascertain the capability and willingness of states to take a role in promoting balanced transportation planning;
b. Learn more about effective methods of serving the mobility needs of the rural elderly and handicapped;
c. Launch a pilot experiment in delivering mobility to rural populations on a statewide basis with the cooperation and coordination of four Federal funding sources, UMTA, FHWA, CSA, and HEW.

These coordination aims were formally embodied in the TRIP demonstration by assigning staff to the problem of coordinating Federal and state transportation grants for all recipients in each region, consolidating or denying grant requests as necessary to achieve better efficiency in serving local transportation needs (principally of the elderly, poor, or handicapped). The first two DOT goals were intended to be met by the University of West Virginia's evaluation study and summarized by the present report.

1.4 MAJOR PROJECT CONCEPTS

1.4.1 User-Side Subsidies

The idea of selling books of discounted transportation tickets to the elderly in West Virginia was first advanced in 1971 by Dr. Eldon B. Tucker, who served as the Chairman of the Committee on Aging for West Virginia's State Medical Association. He reasoned that if older people could utilize a simple mechanism such as food stamps to secure a discount on food, an equally simple mechanism could secure them a discount on the trip they make in buying the food. The food stamp program had originated

*References in parentheses are keyed to the bibliography at the end of the report. A glossary of special terms and abbreviations precedes the bibliography.

in West Virginia and had been met with general acceptance. About 85 percent of those eligible in West Virginia were participating.

The concept of selling discounted transportation tickets to the elderly and handicapped had several parallels to the food stamp program:

1. The eligible group was short of money, and even when not short in the target commodity (food or transportation), had to give up other necessities in order to acquire it.
2. Users have flexibility and choice in how they spent their food or transportation stamps.
3. Policy makers can direct the program to specific user groups with the greatest need.
4. There are fewer market distortions in a user subsidy system since service is tailored to demand and providers do not have perverse incentives to be inefficient in order to increase the amount of their subsidy.

Other advantages claimed for the discounted ticket system were: it was easy to understand and use; standards were neither confusing nor demeaning; and users could save up tickets for more expensive travel by taxi, train, or intercity buses. Moreover, on-board cash transactions would be minimized and there was little incentive for fraud since the tickets were considered to be even less negotiable than food stamps. Finally, through ticket coding, a potential existed to monitor the distribution and redemption of tickets, to cross-reference users and providers, and to capture other essential information for measuring and improving the system through a management information system.

The ticket scheme was a form of user-side subsidy. A user-side subsidy is a discount on the price of public transit offered to eligible riders, in contrast to a producer-side subsidy, which is paid to the transit operator based on his losses in providing service. The operator receives from the subsidizing agency either the normal fare or a fare calculated to recover his full cost of providing the service.

The advantages sought by user-side subsidies are simplicity of administration, improved ability to subsidize certain classes

of users selectively, and avoidance of disincentives to efficient operation that may result from subsidies based on losses. The more important variables in user-side subsidy schemes include the following:

1. Rules defining the eligibility of users being subsidized, which is most commonly related to age (e.g., at least age 60) and less often to physical disability. TRIP was unusual in that it included a maximum income limit.
2. Type of evidence required to prove (either to a certifying agency or to the transit operator) that the prospective rider is eligible, which can vary from medicare cards and income tax returns to doctors' certificates of disability.
3. Means of offering the subsidy to transit users, which may be discounted individual tickets, sale of passes good for a certain period, or simply evidence of eligibility by the rider when boarding the vehicle.
4. Variety of transit modes for which the tickets can be used, which is typically limited to a single mode but can include more.
5. Type of evidence or information required for reimbursement of the transit operator, which is usually the used ticket stubs, vouchers signed by riders or driver counts of trips taken by eligible users.

Reference C-3, among other sources, expands on the concept of user-side subsidies.

1.4.2 Rural Transit Development Alternatives

One of the first alternatives proposed for developing the supply of rural transit services is subsidization of existing operators, because it is usually easier to continue and upgrade a declining transit property than start a new one from scratch. However, establishment of new fixed route service may be advisable where the existing operator has gone out of business or where one never existed. The major complements to these first two options are to establish new demand responsive bus service and to provide technical assistance to transit operators for improved marketing, administration, bookkeeping, training policies, and so forth.

Finally, suggestions have been advanced for joint use of rural free postal delivery service for transporting people, and for specialized rural health transportation to handle non-emergency health trips.

The TRIP transit development program either implemented or investigated each of these options. Two other options not considered by TRIP were ridesharing and direct subsidization of rural taxi service, probably because the potential for these alternatives was not at all obvious at the time TRIP was started.

1.4.3 Social Service Agency Coordination

A very large number of vans is operated in rural areas and small towns (as well as in larger cities) of the United States by social service agencies to transport their clients for medical, shopping, or social trips. The gradual growth in numbers of these vans has often resulted in overlapping routes or services to certain areas or certain elderly, handicapped, or low income groups. Coordination or even consolidation of social service agency van services has often been proposed to improve their efficiency and equity, and TRIP included such proposals in its own plans.

1.5 EVALUATION OVERVIEW

1.5.1 SMD's Rationale for Studying TRIP

UMTA's Service and Methods Demonstration program has a well-defined procedure for evaluating demonstration projects sponsored by UMTA or FHWA. The procedure entails development of an evaluation plan at the outset of the demonstration, so that the experiemental design of the demonstration and data to be obtained during its conduct can be defined from the beginning. SMD evaluation reports follow the same general outline and format as the present report, and emphasize quantitative measures of the effectiveness of the policies or options being tested plus examination of their transferability to other locations.

Since the SMD program has a long standing interest in the demonstration of new concepts for transportation of the elderly and handicapped, UMTA assigned evaluation of TRIP to the SMD program. However, because TRIP predated establishment of the SMD program, there was no opportunity to develop an advance evaluation plan. In any case, an ambitious evaluation project was to be conducted by West Virginia University for the West Virginia Department of Welfare, with annual installments and including at the end a comprehensive benefit/cost analysis. The disadvantages of the West Virginia University evaluation for wide publication were its bulk and its failure to include all of the necessary elements of the standard SMD evaluation approach. The SMD program accordingly sponsored preparation of the present report by Crain & Associates, to conduct an evaluation following SMD guidelines but relying for data principally on the West Virginia university evaluation project.

1.5.2 Data Sources and Limitations; Evaluation Roles

In most respects, a complete evaluation has been possible using a variety of data sources, but some compromises have been necessary. The West Virginia University evaluation reports for the first four years of TRIP were useful, especially for survey data on TRIP users and on eligible non-users--a control group of persons who were qualified for TRIP but chose not to purchase the discounted ticket books. However, the benefit/cost portion of the West Virginia University work, a substantial undertaking, was never funded, so this report had to be completed without such an evaluation. In its place, we have included comparisons of the financial performance of TRIP with two statewide user-side transit subsidy programs, in Pennsylvania and New Jersey. A second limitation of the West Virginia University evaluation data was the absence of information on trips made by mode with TRIP tickets, which have accordingly had to be estimated from indirect

sources. (Several student research publications on TRIP have since been published by the Office of Research and Development at West Virginia University.)

The second major source of information was the grantee, the State of West Virginia, through the records and staff of the Department of Welfare TRIP office, the Department of Finance and Administration's Transportation Division, and the transportation authorities who operated buses in the five regions served by the transit development program. Finally, the FHWA state representative in Charleston supervising the TRIP demonstration was very helpful, especially in providing a continuous record of the program and an outside viewpoint on its performance, including the results of periodic visits to the rural bus operators. However, Crain & Associates under contract to TSC compiled the evaluation information in its present form and is solely responsible for the conclusions reached in this report.

1.5.3 Major Evaluation Issues

The principal evaluation issue is how well TRIP met its original objectives; or, speaking more broadly, whom did TRIP affect, how were they affected, and to what extent were they affected? An associated issue is how realistic the original objectives were (vs. over ambitious or too limited). Then we want to know how and how adequately the administrative aspects of TRIP were carried out, from initial planning through financing, coordination, implementation, and operation. Another issue addressed in this evaluation is how well the innovative aspects of TRIP worked, in terms of user acceptance and in terms of unit costs compared with other user-side subsidy and rural transit development programs. Finally, we need to know which of the innovations have a potential for transferability to other areas.

Consideration of these issues takes up the balance of the report. Chapter 2 describes the demonstration site, its transportation system, and the travel needs of its residents. Chapter 3 describes implementation and funding of both the ticket sales

program and the transit development program. Chapters 4 and 5 present the details of the ticket sales program and its impacts on rural travel, while Chapters 6 and 7 do the same for the transit development or rural bus program. Chapter 8 documents coordination of social service agency transportation activities. Chapter 9 summarizes our conclusions on the viability of the TRIP concepts, its fiscal performance compared with the Pennsylvania and New Jersey transit user-side subsidy programs, and its transferability.

2. DEMONSTRATION SITE DESCRIPTION

2.1 SITE GEOGRAPHY AND DEMOGRAPHY

West Virginia, classified as a South Atlantic state, extends about 210 miles from northeast to southwest and about 125 miles from northwest to southeast, not counting the panhandles extending north and east. Its area of 24,181 square miles ranks it forty-first among the states in size. The state is mostly rugged in topography, with altitudes ranging from 240 to 4860 feet, and slopes generally toward the Ohio River which forms its northwestern border and drains most of the state. The climate is moderate, with mean monthly temperatures around 32°F in winter and 70°F in summer. Water resources are ample, with average annual rainfalls ranging from 35 to over 50 inches. The most important industries are agriculture; coal and other mining; chemical and primary metal manufacturing; glass, stone, and clay products; machinery and metal goods; petroleum and coal products; textiles; and tourism. West Virginia's massive coal reserves, estimated at 58 billion tons, underlie 55% of the state's total area and promise a more stable source of income as future shifts take place from oil to coal use (barring continued labor/management conflicts).

West Virginia is predominantly a state of small towns, rural communities, and outlying sparsely settled areas. For example, about 61% of the state's population of 1.75 million in 1970 was rural (living in places below 2,500 population), compared with 26.5% nationally under the Census Bureau's definition of rural as places below 2,500 population outside urbanized areas. However, Federal transportation legislation such as Section 147 of the Federal Aid Highway Act of 1973, for a rural highway public demonstration program, defines rural areas as places below 5,000 population and includes as well "small urban areas," places outside urbanized

areas with populations between 5,000 and 50,000. Only two of West Virginia's cities, Charleston with 67,348 population in 1975 and Huntington with 68,811, exceed this definition of small urban areas; hence most of the state is eligible for Federal transportation aid directed to rural and small urban areas.

The state lost population between 1950, when the total was 2.01 million, and 1970, but the 1970s have seen a reversal of that trend as population increased from 1.75 million in 1970 to an estimated 1.81 million in 1976. The largest cities have continued to lose population, which is offset by growth in many of the areas served by the new Interstate and Appalachian highway systems. The population over 65 years of age is increasing at a more rapid rate than the population as a whole.

Per capita personal income was $5,394 in 1976, 16% below the national average of $6,441; but this represented some improvement in West Virginia's rank among the states, from forty-sixth in 1970 to forty-second in 1976, due in part to the resurgence in coal use. Per capita automobile ownership in 1976 was 0.417, or 82% of the national average, and was lower in the more rural counties. About 96% of the state's population in 1970 was white.

2.2 EXISTING RURAL TRANSPORTATION SYSTEM

The state's road system has been extensively upgraded over the past 20 years, particularly through completion of the Interstate and Appalachian Highway System that have provided good accessibility to most areas of the state. Land and industrial development has expanded in many areas served by the improved highways, which have probably contributed to reversal of the population loss trend. However, West Virginia's relatively low auto ownership, about four-fifths of the national average, means many persons are dependent on public transportation, which has not been faring well.

Before 1974, only 27 of West Virginia's 55 counties had any public transit service at all, and two-thirds of the public transit vehicles served only four counties. An average of three bus lines per year had been ceasing operations. Between 1971 and 1974, the number of active local buses and limousines declined from 411 to 383. The transit services that survived were generally caught in the vicious cycle of rising operating costs leading to fare increases which reduce patronage and further increase operating costs per revenue passenger.

Taxi service in 1973 was provided by 114 companies operating 513 cabs, mainly in or near cities over 3,000 population. Eight out of West Virginia's 55 counties, with 146,000 or 8% of the population in 1973, had no taxi service at all. In the counties with taxi service, 27 towns between 1,000 and 4,000 population were not served (another 42,000 persons), and the coverage of taxi service was seldom over half the county land area, so that sparsely populated parts of the counties had no public transit service at all. The number of rural social service agency vans operating prior to initiation of the Federal 16(b)(2) grant program for such vans in 1976 is not known but is believed to be close to zero.

The latest available West Virginia University survey data on bus and taxi providers (Ref. B-4) is summarized in Table 2-1. The table highlights the small size of typical firms, with about 40% having fewer than 3 employees or vehicles. Taxis comprised 73% of the total vehicles, buses 24%, and vans or limousines 3%. Median employment is 4.8, the median number of vehicles is 3, and 97% of the firms were TRIP participants.

TABLE 2-1. FULL-TIME TRANSIT EMPLOYMENT AND VEHICLE OWNERSHIP BY PERCENT OF FIRMS SAMPLED, 1976

Employment	Percent	Vehicles Owned	Percent
1	22.1%	1	21.1%
2	17.6	2	22.5
3-5	16.2	3-7	30.9
6-9	11.7	8-15	14.0
10-20	17.7	16-34	8.4
21-50	7.4	57	1.4
51-100	6.0	70	1.4
122	1.5		

Source: Reference B-4. The sample size was 72 responses out of 147 transportation firms--all those in business in 1976--that were surveyed. Thirteen of the 72 companies offered only bus service. A phone check of non-respondents showed some tendency for smaller firms not to respond, so the figures in the table are somewhat biased toward larger firms.

2.3 TRAVEL NEEDS OF RURAL CITIZENS

Up to 1974, West Virginia was largely untouched by Federal and state assistance programs for urban transit systems or the transportation disadvantaged population. Governor Arch A. Moore described the mobility deficiencies of the state as follows in December of 1974 (Ref. A-4):

> In West Virginia, the majority of our citizens over the age of 60 reside in rural communities--communities that cannot financially support mass transit operations except for fragmented and expensive taxi systems that can quickly dissipate the limited, fixed incomes of our older population while failing to provide an adequate measure of relief for their transportation needs.
>
> Such locales have virtually become "aged ghettos" in the sense that individuals in their autumn years have been robbed of independence and isolated by the limitations of advancing age.

> Compounding our transportation headaches has been the persistent erosion of public transit facilities. One of our common problems has been that public carriers, caught in the squeeze of inflation, lack of capital and rising operational costs, have resorted to hiking fares, trimming services and deferring maintenance.

Governor Moore held that such deficiencies deny the aged and disabled "full participation in community life and adequate access to the facilities and services they need to maintain their health and well being." The Governor's observations tend to be confirmed by the data below on travel characteristics in the state.

A survey of statewide travel needs was administered by West Virginia University to 2527 representative households in 1975. The sample was drawn randomly from Polk City Directories for cities subscribing to this service, and from Master Enumeration District tapes of the U.S. Census Bureau for other areas (see Ref. B-2, #3, pp. 39-110, for survey procedures). Results of the survey indicated the following important travel characteristics of the respondents:

1. 12% of households had handicapped members and 39% had members age 60 and over. These households averaged 60% car ownership compared with 86.7% for all respondents.

2. Round-trip distances for all respondents averaged 12.5 miles to work, 10.5 miles to doctors or clinics, 5.4 miles for groceries, 11.4 miles for other stores, and 3.3 miles to church. Maximum distances travelled were often high, e.g., 50 miles round trip.

3. 71.8% of all respondents never used public transportation such as buses or taxis, and only 11.2% used public transport regularly (once a week or more), while the remainder used it less regularly. About 32%, or three times the present level, said they would use public transportation regularly if it was available.

4. 35% of all respondents could not always get to places they needed to or would have liked to go, deterred by lack of money (18.1%), lack of public transportation (14.1%), inconvenient public transportation schedules, lack of auto ownership or access, poor health or physical handicaps, or poor condition of public transportation vehicles.

A parallel survey was made of 595 persons eligible for purchasing discounted travel tickets on criteria of income and age or being handicapped (Ref. B-1, pp. 20-44). This group corresponds to prospective TRIP users (about 58% were already users), so its characteristics are of particular interest in defining the market for the program. Some results of this survey were:

1. 68.5% of eligible persons are female; 75.8% had completed only 8 years or less of education; and only 2.6% had attended college.

2. 53% felt they were in poor health, and another 34% described their health as only fair. About 60% reported trouble in getting around, including being confined to their bed or house, needing help from another person or from mechanical aids, and difficulty in standing or sitting.

3. The places to which or purposes for which respondents travelled are ranked below by the number of respondents mentioning the destination:

Doctor, clinic, or dentist	96%
Groceries	90
Other shopping	72
Welfare office	68
Visiting	62
Voting	56
Church	55
Food stamps	55
Senior citizens' center	14
Lawyer	9
Work	6
School	6
Library	6
Other	14

The strong need of this group for trips for health services is evident, and it will be recalled from the survey reported on earlier that trips to doctors or clinics averaged 10.5 miles in round trip length.

4. The average frequency of visits to the doctor was once a month, but many went two or more times (unfortunately, no other data on trip frequency were reported). Over 80% of the group's medical costs were covered by health insurance of different types, chiefly medicare.

5. 64.5% of the group received food stamps, and many others received other types of social, health, or financial assistance.

6. Only 25% of the sample owned a motor vehicle; 45% had no bus available in their area; and 35% had no taxi service. Of those with a bus available, the median distance to the route was 0.2 miles, and 78% lived within 0.5 miles of the route.

7. The method of travel was distributed as follows by frequency of present use and preferences:

Method	Present Use	Preferences	Change from Present Use
Friend's car	29.5%		
Family car	12.7		
Subtotal	42.2	38.8%	- 3.4
Own car	13.8	11.7	- 2.1
Subtotal	55.0	50.5	- 5.5
Taxi	17.5	26.4	+ 8.9
Bus	13.8	19.5	+ 5.7
Walk	12.7	1.0	-11.7
No preference		2.7	+ 2.7
	100.0%	100.1%	+ 0.1

It appears that the principal travel mode changes this group would prefer are much less walking; a lot more taxi and bus use; and, surprisingly, a wish for somewhat less automobile use. Part of this latter preference is accounted for by the eligible group's wish to drive less themselves, and the balance probably arises from not wishing to burden friends or family with their transportation requests.

8. 55% of respondents indicated that they did not get to travel as much as they needed to, due to reasons such as lack of money (61% of those wishing to travel more), personal health or handicaps (50%) and poor transportation availability (44%). However, 73% said they wanted to travel more if they could. Visiting and socializing was the most common purpose for which additional travel was desired.

The disadvantaged travel capabilities of this TRIP group relative to those in the previously reported general sample of households are evident from the last three results noted above. Some allowance should be made for the bias inherent in asking actual or prospective TRIP subsidy users whether they need to travel more, i.e., whether they need the subsidy. But the direction of the answers, if not their exact magnitude, is certainly plausible.

3. PROGRAM IMPLEMENTATION

3.1 PROGRAM STRUCTURE AND ORGANIZATION

3.1.1 Structure

The State of West Virginia is divided into 55 counties and 11 planning and development regions, administered by regional planning councils. The entire state was included in the TRIP ticket program, and Figure 3-1 shows the five planning and development regions (4, 6, 8, 9, and 10) that were covered by the provider development program.

The principal agencies involved in TRIP and synopses of their roles are listed below. Figure 3-2 summarizes the relations between these agencies.

1. The U.S. Office of Economic Opportunity, later changed to the Community Services Administration (CSA), issued the original grant for preparation of a TRIP development plan and has continued to participate in the demonstration project.

2. The Administration on Aging (AOA) in the U.S. Department of Health, Education, and Welfare, provided funds and guidance to TRIP.

3. The Urban Mass Transportation Administration (UMTA) and the Federal Highway Administration (FHWA) of the U.S. Department of Transportation have provided funding and guidance to the provider development and transportation coordination aspects of the demonstration project. For UMTA, there are capital demonstration and technical grants under Sections 3, 6, 9, and 16(b)(2) of the Urban Mass Transportation Act of 1964, as amended. For FHWA, the grants are under the Rural Highway Public Transportation Development Program, Section 147 of the Federal-Aid Highway Act of 1973, as amended.

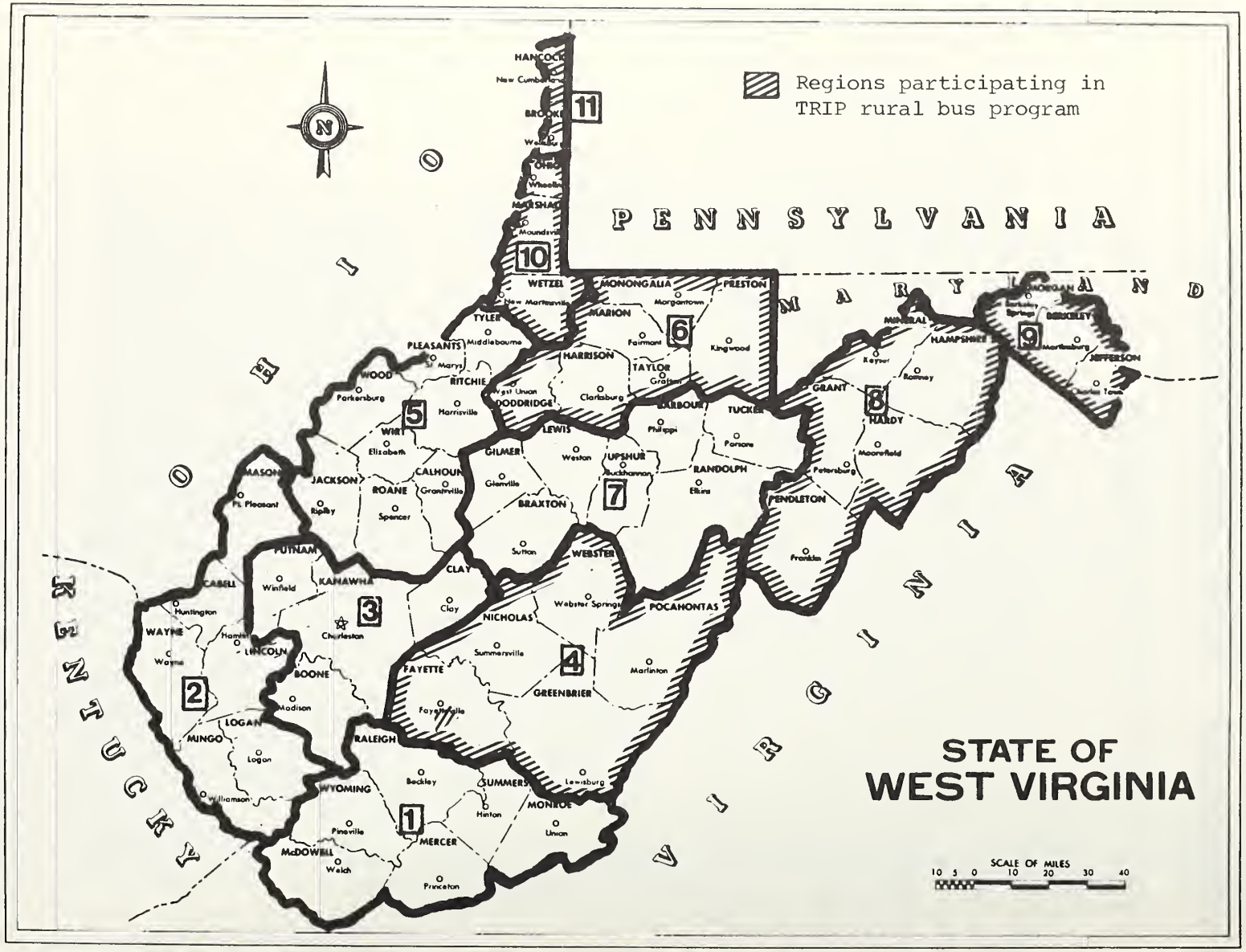


FIGURE 3-1. PLANNING AND DEVELOPMENT REGIONS

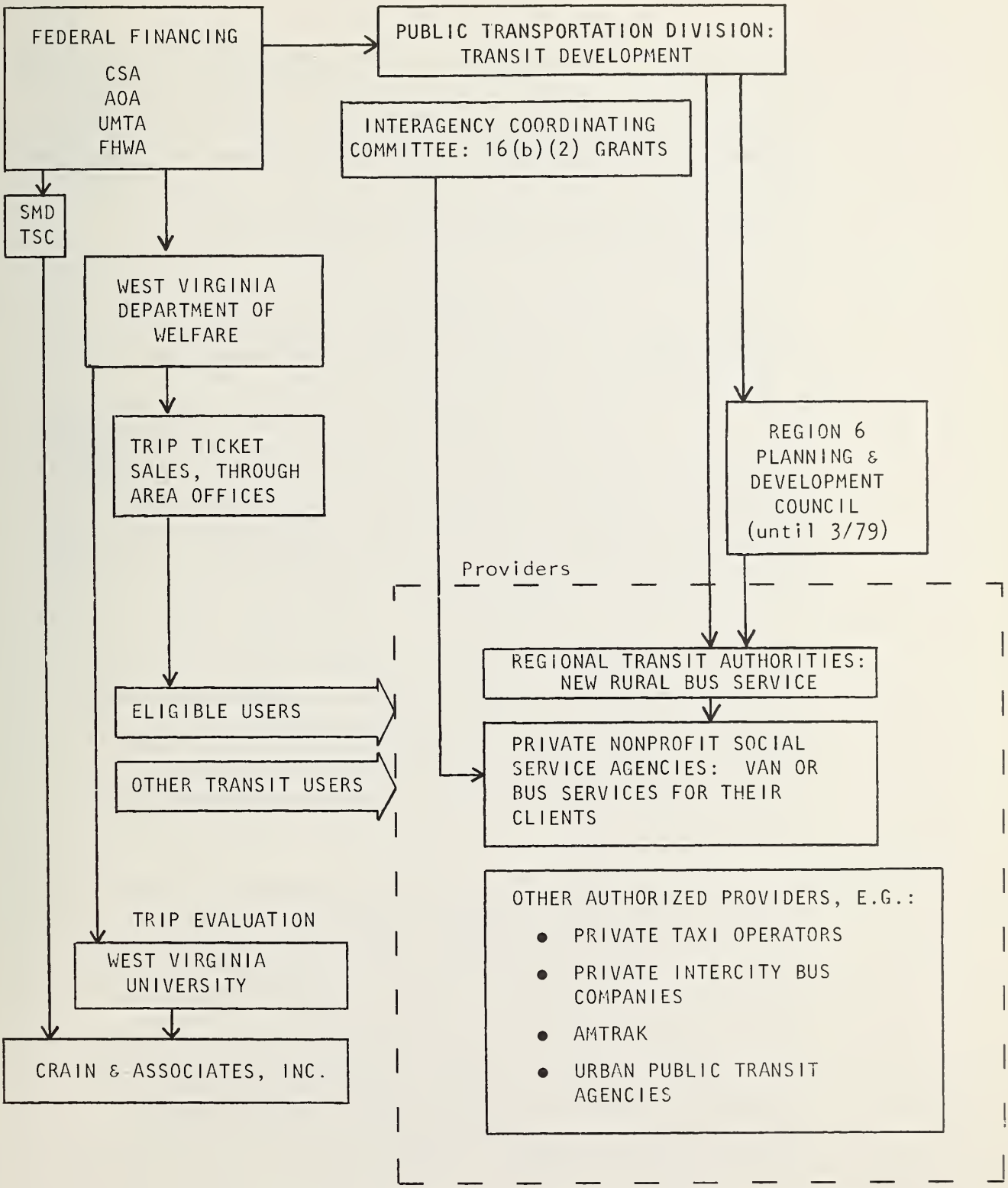


FIGURE 3-2. AGENCIES INVOLVED IN TRIP TICKET SALES AND TRANSIT DEVELOPMENT

4. The transit development part of the West Virginia Department of Welfare has been administering the sale of discounted transportation tickets and the associated management information system since inception of the program and also managed the transit development activities through FY77. The Department was assisted for the first two years by a consulting firm, RCC International, Inc.

5. The Public Transportation Division of the Department of Finance and Administration, which also administers the State's UMTA 16(b)(2) capital grant program, has had state responsibility for administration of TRIP since July 1, 1977.

6. The Interagency Coordinating Committee (ICC) serves as the coordinating body and makes recommendations to the State relative to Section 16(b)(2) project funding. It meets quarterly, and is comprised of representatives from six state agencies: the Transportation Division; the Departments of Welfare and Health; the Division of Vocational Rehabilitation; and the Commission on Aging.

7. Regional transit authorities have been created in several planning and development regions of the State, under the regional planning councils, to operate transportation services within a defined area. In Region 6, the regional planning and development council administered the transit provider development side of the demonstration project through three regional transit authorities until March 1979.

8. The Office of Research and Development of the Center for Extension and Continuing Education, West Virginia University, collected data and conducted a detailed longitudinal evaluation of TRIP under contract with the Department of Welfare. Crain & Associates has drawn on West Virginia University's work as well as on Federal, state, and local sources in preparing this report, under contract to the Transportation Systems Center (TSC) at Cambridge in its role as evaluator of programs for the Office of Service and Methods Demonstration (SMD) of UMTA.

3.1.2 Agency Selection

The West Virginia Department of Welfare was selected to administer the TRIP ticket system for several reasons:

1. It had successfully administered the innovative food stamp program, was regarded as a cost-effective agency, and held the confidence of the state administration and legislature.

2. The department was decentralized, so its 27 field offices could determine eligibility locally, allowing an eligible person to apply for and receive an authorization card and a book of tickets on his or her first visit.

3. The Department of Welfare's existing administrative structure could quickly implement the new program with only minor staff increases, since the department had ongoing outreach programs in its field offices that provided good access to the target group. The state's central computer bank could assist in monitoring the program through terminals in Welfare field offices.

4. There was no state department of transportation or other rival agency (as a result, the Department also administered the provider development and transportation coordination parts of the program until July 1, 1977).

Programs under the auspices of the West Virginia Department of Welfare are integrated "horizontally," in that organizational hierarchy is not by programs such as TRIP, but rather by decentralized administrative units, the department's 27 field offices, that handle all programs. The advantage of this arrangement is that coordination of programs and functions can be achieved at lower organizational levels. This concept helps make the department's programs useful, convenient, and understandable to target families and individuals, who often participate in more than one of the department's programs. A major department goal is that each family have only one set of records regardless of the number of programs in which it was participating. Frequent contacts by

different case workers on different matters are considered both inefficient and dehumanizing.

Though each Department of Welfare program is assigned staff personnel in the department's central headquarters in Charleston, they are not in charge of program administration. Their function is mainly program development, grant procurement, and evaluation. Ongoing program responsibility is shared by the department's Commissioner and his 27 area administrators, who manage and monitor all programs under the field offices. Under the area administrators are program supervisors, who usually have field staff under them.

3.1.3 Staffing

Initial organization of the TRIP ticket program was achieved at headquarters through a planning and evaluation staff of two professionals and two secretaries, assisted until mid-1976 by the consulting staff of RCC International. The central staff grew during FY76 and FY77 to nine professionals and five clerical employees, but shrank to one professional and a secretary in mid-1977 when TRIP transit development and coordination functions were transferred to the state Transportation Division. Each of the 27 Department of Welfare area offices was staffed by a TRIP Supervisor and generally either one or two eligibility specialists, depending on the workload. The TRIP supervisors monitored the ticket sales program and promoted new applicants through "outreach" activities designed to inform and enroll eligible persons. These activities included newspaper advertising and interviews; direct mail solicitation to welfare recipients; contacts with senior citizen, church, and retirement groups; workshops with and referrals from other social service agencies; county fair exhibits; visits to senior housing centers; and TRIP information distribution to transit providers. Initial reliance was heavier on mass media and mail contacts, with more subsequent emphasis on the other generally more

personal approaches as the limited effectiveness of indirect media became apparent.

Eligibility specialists with area offices processed and appraised applications for authorization cards and renewals (see Section 4 for details), personally verified user eligibility on the basis of small random samples, and assisted as available in outreach activities. Clerical workers handled the monthly issuance of tickets. However, the TRIP supervisors and eligibility specialist positions were sharply reduced between May and July 1977, due to continued low demand for tickets in many areas and coincident with the shift of provider development and transportation coordination responsibilities to the state Transportation Division. Since then, regular welfare case workers have processed TRIP applications.

3.2 IMPLEMENTATION OF THE TICKET PROGRAM

This section describes the method of obtaining an authorization card and TRIP tickets and compares early ticket sales projections with actual experience. The approach parallels the authorization and sale of food stamps. Inherent in such programs is a strong objective to minimize fraud, due to public concern with welfare abuses. However, in the case of TRIP there was also a great emphasis on achieving maximum participation by those who were eligible. These two objectives are not complementary and sometimes are not compatible.

Early in TRIP's development, it was hoped that all low income persons could be eligible to purchase discounted tickets. However, fiscal constraints forced the limitation of the target group to low income persons either at least 60 years old or with physical and mental disabilities. "Low income" is defined by OEO guidelines, which are adjusted automatically from time to time with changes in

social security benefits. Eligibility was not extended to the entire elderly and handicapped population because much public transportation was already subsidized and the proposed TRIP vehicles would also have a subsidized fare. When used on public transportation, the discounted TRIP tickets could be thought of as a second tier subsidy.

Originally, all eligible persons, up to a maximum of three per household, could purchase an $8 book of TRIP tickets each month. Depending on household income, the tickets were sold to eligibles at a price of $1 to $5. Thus a household with two eligible persons could purchase $16 worth of TRIP tickets per month at a cost ranging from $2 to $10, depending on their income, and a three-person household could purchase $24 worth of TRIP tickets per month, at a cost ranging from $3 to $15.

Each $8 book contained 32 tickets of 25¢ denomination, because 25¢ was the base fare in most urban areas and it was assumed that new rural systems would have 25¢ zone fares. When fares were not in 25¢ multiples (such as in taxi systems), the operators were permitted to make change or provide due slips.

The $8 book value was also determined by the dollar constraints of the program. Program planners knew that many persons needed more transportation services than a monthly $8 book of tickets could provide, but it was hoped that for this group, the TRIP tickets would at least satisfy more urgent travel needs.

In its first year, FY75, the TRIP ticket program achieved about one fifth of its anticipated level of participation (3,024 ticket books sold instead of 15,000). Moreover, few books of tickets were sold at a price higher than $1. Potential users balked at higher prices plus the inconvenience of purchasing the tickets in person at an area welfare office or sending a certified check through the mail.

On July 1, 1975 Governor Moore liberalized ticket eligibility guidelines, which increased the size of the eligible group and

reduced the average cost of the ticket books. Individual rather than household income could be considered in the determination of eligibility. All ticket books would be sold at $1, instead of $1 to $5 based on income. An eligible person could designate an individual to use tickets to either accompany him or her to purchase goods on his or her behalf, thus facilitating the use of tickets by those in nursing care homes. Then in April 1976, TRIP authorized eligible persons to purchase up to four ticket books a month if participants incurred higher-than-average transportation costs, required frequent trips for medical purposes, or lived in extremely isolated areas. Documentation or proof of these extenuating circumstances must be provided. These steps toward expanding the coverage of the program were possible because ticket sales were proceeding much less rapidly than expected.

Eligible ticket holders could use their TRIP tickets at any time, to any destination, as long as the fare was paid in West Virginia. Transportation carriers that accepted TRIP tickets had to have a Certificate of Convenience and Necessity from the West Virginia Public Service Commission, and they had to meet the Commission's regulations for insurance, vehicle safety inspection, and fares. Each company also had to apply to the West Virginia Department of Welfare to receive a Certificate of Authorization. The Department of Welfare was aggressive in its attempts to enroll transportation carriers in the TRIP program. By June 1976, TRIP had granted authorization to over 90% of the total number of carriers such as Greyhound and Amtrak and nearly all taxi companies were among those authorized.

The next few pages contain exhibits of informational literature from the TRIP program. Exhibit 1 is the pamphlet, A Guide for Users (Ref. A-2); Exhibit 2, How to Get Your Money, is from A Guide for Transportation Providers (Ref. A-3); Exhibit 3, Trip Taking and How to Do It, is from TRIP Facts (Ref. A-4); and Exhibit 4 gives the income standards for TRIP eligibility, from the 1980

WHAT IS TRIP?

The Transportation Remuneration and Incentive Program (TRIP) is designed to provide transportation for West Virginia's low-income elderly and handicapped citizens at rates they can afford. Eligible participants will be able to buy TRIP tickets at a discount to pay for rides anywhere they choose. TRIP will also help bring new vehicles to areas where transportation is inadequate.

This pamphlet is designed to explain who is eligible for TRIP and how to apply. It also answers the questions of how the ticket system works, how to buy tickets and how to use them.

WHO IS ELIGIBLE?

If.. *you are at least 60 years old*

OR

If.. *you are physically or mentally disabled*

AND

If.. *you live in a household with income and resources no greater than allowed by the financial guidelines,*

Then, *you qualify for TRIP.*

* *Standards for participation in TRIP are the same for everyone without regard to race, creed, color, national origin, sex or political beliefs.*

MAKING CHANGE

The 25-cent ticket should cover most fares. If the amount is not exact, you have the choice of either paying the difference in cash or accepting up to 25 cents change from the driver.

CHECKING INFORMATION ON THE TICKET

The back of every ticket has five boxes marked with different kinds of places to which you might be traveling. You will not always be asked to check these boxes, but you may sometimes be asked to give this information to help the Department of Welfare get additional federal funding for TRIP.

For more information contact:

West Virginia Department of Welfare
Transportation Division (TRIP)
1900 Washington Street, East
Charleston, West Virginia 25305

Transportation Remuneration Incentive Program

A GUIDE FOR USERS

WEST VIRGINIA DEPARTMENT OF WELFARE

ARCH A. MOORE, JR.
Governor

EDWIN F. FLOWERS
Commissioner

EXHIBIT 1

HOW TO APPLY

You can get an application by calling, writing, or going in person to your local welfare office. Applications are also available at some Community Action Agencies, senior citizens centers and churches.

When you get your application form, it is important to answer all the questions fully. Incomplete answers or false information may result in the denial of your application. All information that you give will be kept strictly confidential.

The local welfare worker will determine your eligibility when you apply so you can leave the office with your first book of TRIP tickets that same day.

If you have applied by mail, it is possible that you will be asked to visit the office or you may be called on in your home before your application is approved. It is also possible that you will get your approval and the Authorization Card by mail if your form is complete.

TRANSPORTATION TICKETS

TRIP tickets are worth 25 cents each and come in books of $8. The $8 book will cost between $1 and $5 depending on an individual's household income. The value of TRIP tickets will not replace or reduce money received from other sources. It is not counted for taxes or for public assistance grants.

Every eligible person, up to three in a household, may buy one book each month. This allows each person to have their own book so they can ride anywhere at any time even while another person from the same household is traveling elsewhere.

BUYING TRIP TICKETS

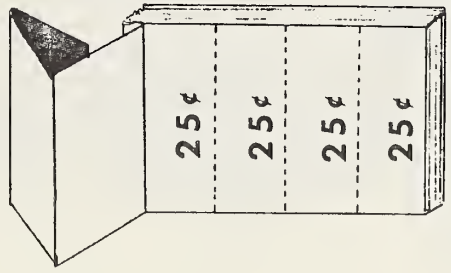
You will get one Identification Card for your household when you are first accepted for TRIP and each time you are recertified you will get a new one. This card is used to buy tickets. You can also use it to show the driver of a bus or taxi as proof of your identity if he should ask, but you will not have to do this every time you ride.

Each eligible household will get an Authorization Card when they are first accepted for TRIP and another will be mailed each month after that. This card is used with the Identification Card to buy tickets and is valid only for one month.

TRIP tickets can be bought from the local welfare office in person, by an authorized proxy in cases of disability, or by mail.

Buying tickets by mail may be the easiest method since it allows purchasers to remain at home and have their tickets delivered. You would simply mail in the Authorization Card with a certified check or money order for the price of the tickets and your tickets would be mailed to you on the same day your order was received.

In addition to this, other places such as churches, senior citizen centers, and Community Action Agencies will be used as distribution centers for tickets.



USING TRIP TICKETS

Once you have your TRIP tickets, you can spend them on any authorized transportation. This will include taxis, local and interstate buses, small buses run by Community Action Agencies, and some bus and car services offered by churches, senior citizen centers and similar agencies.

You can use the tickets to travel anywhere you like --- to the grocery, to visit friends, to a clinic or wherever else you want to go. You must buy the tickets monthly, but you could even save them up to take a longer trip, for example to visit relatives in another state, as long as you pay for the entire ride in the State of West Virginia.

If there is little or no transportation where you live, you will be able to use TRIP tickets in the future because TRIP will be helping to bring new vehicles to areas that need them.

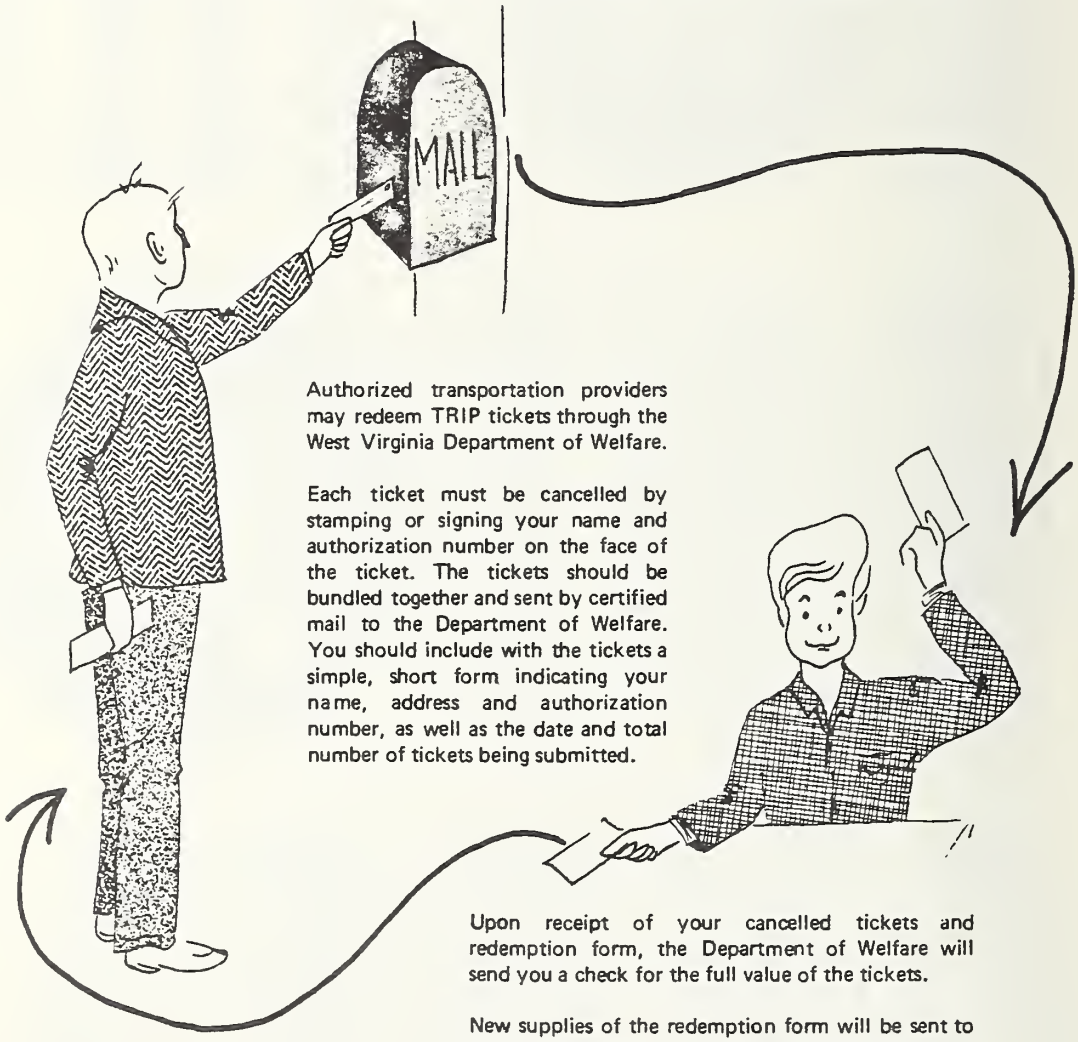
When you get your ticket book you should sign it right away. You should not take tickets out of the book until the time you use them because the drivers are not supposed to accept tickets unless they are torn out of the book at the time of the ride. You should always keep the book yourself and never leave it with a transportation provider.

There are no restrictions on using TRIP tickets as long as you take the tickets from the book and give them to the driver at the time of your ride. This means that you cannot use TRIP tickets to pay for credit accounts. No one but you can use your tickets as they were issued for your benefit exclusively. You cannot sell them or give them away.

EXHIBIT 1 (Cont'd)

EXHIBIT 2

HOW TO GET YOUR MONEY



Authorized transportation providers may redeem TRIP tickets through the West Virginia Department of Welfare.

Each ticket must be cancelled by stamping or signing your name and authorization number on the face of the ticket. The tickets should be bundled together and sent by certified mail to the Department of Welfare. You should include with the tickets a simple, short form indicating your name, address and authorization number, as well as the date and total number of tickets being submitted.

Upon receipt of your cancelled tickets and redemption form, the Department of Welfare will send you a check for the full value of the tickets.

New supplies of the redemption form will be sent to you automatically. If you should run out before your new supply arrives, contact the Department of Welfare.

Trip Taking & How to do it

When all the numbers have been set down and totalled up, the essence of TRIP is still one person, taking a ride to get those things most necessary to life or the interface of the user with the system is designed with that essential consideration foremost.

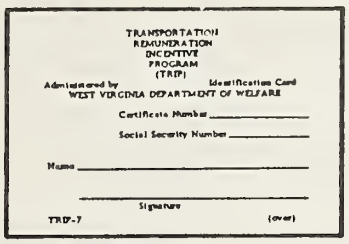
Application can be made in person or by mail.

It starts with the processing of an application at the local office of the state Welfare Department. One person may make application for others in his household.

Eligibility is determined locally.

The local office determines the applicant's eligibility under Office of Economic Opportunity guidelines. So, for someone who comes in in person it is possible to make application, be declared eligible, and leave with his first book of tickets on the same day.

Once accepted, a person remains eligible unless household income goes above the levels specified by OEO or he stops buying ticket books for a period of fourteen months.


TRANSPORTATION
REMUNERATION
INCENTIVE
PROGRAM
(TRIP)
Administered by
WEST VIRGINIA DEPARTMENT OF WELFARE
Identification Card
Certificate Number
Social Security Number
Name
Signature
TRIP-7
(over)

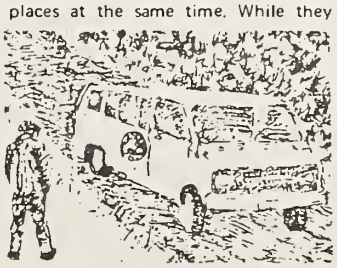
Proof of eligibility.

Eligibility takes the outward form of two cards. The identification card is permanent, to be used by a participant as long as his account stays active. An authorization card is valid for one month only, and each one permits the purchase of a book of tickets during the month specified.

Local Welfare Office sells tickets.

Users can buy tickets at the local Welfare Office by showing identification and authorization for each eligible person up to the household limit of three. For a book of tickets worth $8.00, they are charged $1.00 to $5.00, depending on ability to pay as determined by the Welfare Department.

The provision of multiple books for the same household makes it possible for members to travel to different places at the same time. While they can purchase only once a month, they can pool their tickets or save them up from month to month for longer, more expensive trips.



TRIP vehicles are easy to spot.

Transportation services participating in the program are readily identified by the colorful TRIP emblem in red, yellow and blue. They may carry people other than TRIP users. The fare is the same for everybody.

A quarter's worth of transportation.

Onboard a participating vehicle, a TRIP ticket is exactly the same as a quarter. If the fare is not an exact multiple of twenty-five cents, the user can supplement it with change. Or the driver can give him change in cash. On exact-fare vehicles, where the cashbox is locked, the driver issues a due slip, usable on future trips.

Vehicles put into service as part of TRIP provider development reflect the special travelling problems of elderly and handicapped persons. Lower steps, extra headroom and wider seats are some of the features specified.

New authorization card comes by mail.

Every month the user automatically receives his new authorization card by mail as long as he remains eligible for the program.

EXHIBIT 4

TRANSPORTATION REMUNERATION INCENTIVE PROGRAM
ELIGIBILITY REQUIREMENTS

A. ALLOWABLE INCOME STANDARDS AND BASIS FOR TRIP TICKET BOOK ISSUANCE

Number of Eligible Persons in Household	Non-Farm Family		Farm Family	
	Yearly	Monthly	Yearly	Monthly
1	$3,240	$270	$2,736	$228
2	4,326	353	3,612	301
3	5,244	437	4,464	372
4	6,264	522	5,328	444
5	7,272	606	6,192	516
6	8,280	690	7,068	589
7	9,240	770	7,944	662
add to each additional member	948	79	816	68

Farm households mean persons living on places of ten or more acres from which sales of farm products amounted to $50 or more in the preceding calendar year or on places of less than ten acres from which sales of farm products amounted to $250 or more in the preceding year. (Standards were effective on September 1, 1977.)

B. TICKET COST AND VALUE

Allowable Monthly Income of Eligible Individuals	One Person		Two Persons		Three or More	
	Ticket Cost	Ticket Value	Ticket Cost	Ticket Value	Ticket Cost	Ticket Value
$ 0-270	$1.00	$8.00	$2.00	$16.00	$3.00	$24.00
271-353			4.00	16.00	6.00	24.00
354-437					9.00	24.00
438-522					12.00	24.00
523-606					15.00	24.00
607-690					15.00	24.00
697-770					15.00	24.00

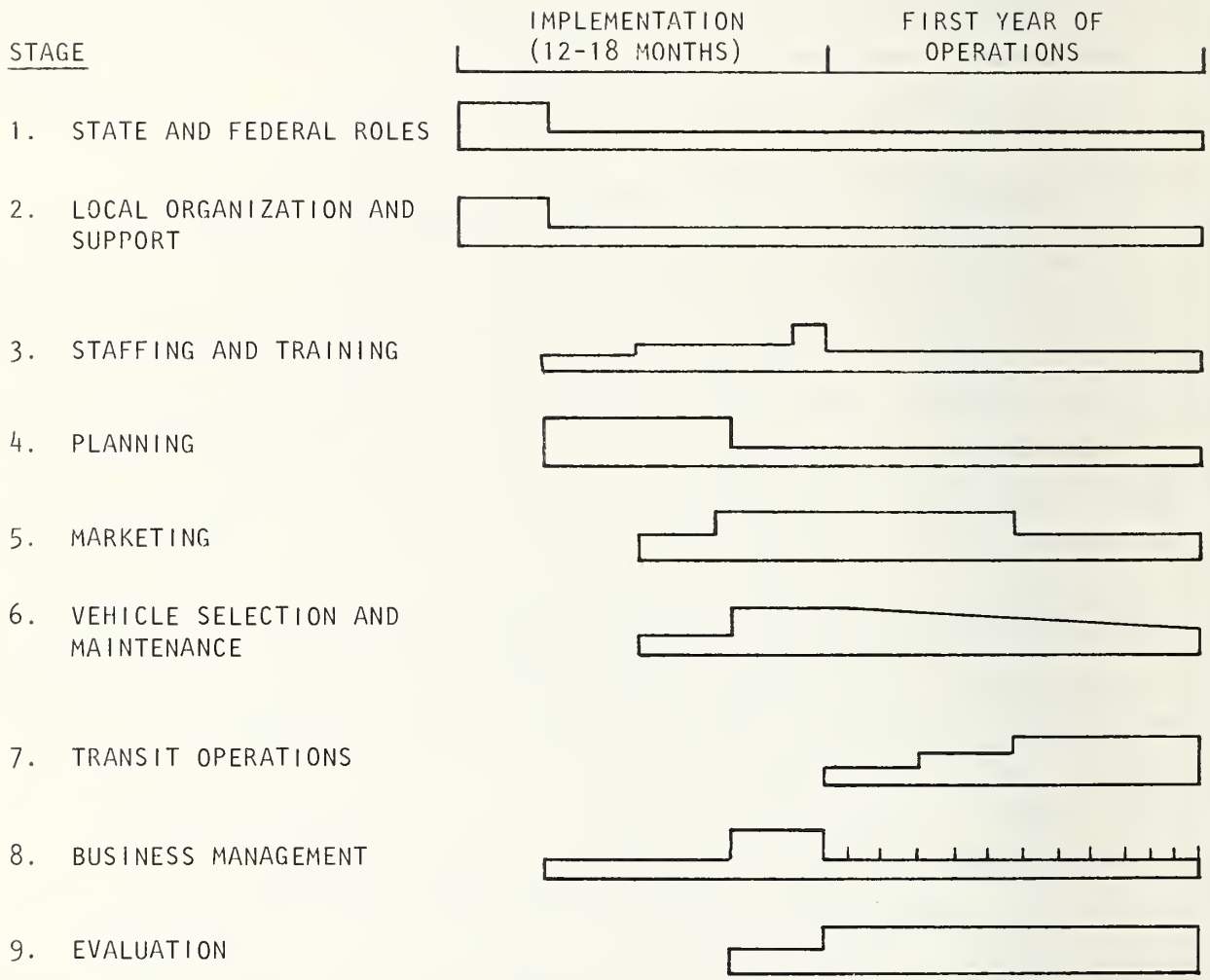
TRIP operating manual. Note that higher prices are still specified, in part B of Exhibit 4, for two and three person families when monthly income exceeds $270. However, such groups can opt to be counted as individuals, where the cost is only $1 per book, so new sales are always at the $1 price.

3.3 IMPLEMENTATION OF THE TRANSIT DEVELOPMENT PROGRAM

West Virginia's approach to setting up rural bus transit service, which was the major activity under the transit development program, can be generalized by the nine stages shown in Figure 3-3. The time axis of the figure is divided between implementation and the first year of operations. The length of the implementation phase varies with previous local experience and responsiveness to the idea: 12 to 18 months was the range in West Virginia.

Stage 1, the state and Federal role, refers to the Federal funding process and to state technical assistance of various types: in assessing rural transportation needs, encouraging the formation of transit authority, facilitating equipment and insurance purchases, and coordinating transportation grants. In West Virginia, this stage was preceded and aided by the planning consultant, RCC International, Inc., whose team produced a detailed report (Ref. A-8) in December 1976, proposing rural bus service for each of the state's 11 planning and development districts. Bus sizes, route maps, and service frequencies were all specified, and the Department of Welfare proceeded to order buses based substantially on that plan in the five regions where transit authorities could be organized (three separate authorities operated in Region 6).

No transportation technical assistance was available from Department of Welfare staff, but the consultant's staff visited interested regions and explained the plan. Later, the appraisal of this stage by some rural bus operators was that false expectations had been created that (1) the bus systems would be 50% self-sustaining with a few years and (2) the state was firmly behind the program.



Note: The height of each bar represents the intensity of activity at each period of time.

FIGURE 3-3. STAGES IN PROVIDING RURAL BUS SERVICE IN WEST VIRGINIA

Stage 2 of Figure 3-3, local organization and support, entails creating a local or regional transit operating agency and its public governing body; obtaining moral or financial support from local government; and making initial contacts with local interest groups such as large employers, private transit operators, and social service agencies. The transit authorities have all been shown good support by their governing bodies and local business, with the exception just noted of overly high expectations for operating ratios. Figure 3-4 shows how a typical transit authority, PVTA in Region 8, is organized.

Stage 3, staffing and training, begins with hiring a transit manager, continues with hiring an assistant who can contribute to the next two stages, and peaks with hiring and training of drivers, dispatchers, and other staff once an operating plan and schedule have been set. The backgrounds of transit managers in West Virginia varied: three were already operating small urban transit systems (two in Region 6 and one in Region 10), so they knew the business. One had driven and helped manage a bus program for Kent State University, and the other three were from unrelated backgrounds but learned quickly on the job. Table 3-1 shows transit authority staffing and equipment levels in West Virginia as of June 1979. Turnover has been remarkably low among managers and staff, suggesting that the work must have been enjoyable and have attracted good people--because it was certainly a difficult job for managers and was not highly paid work for anyone. Bus drivers, for example, were usually paid the equivalent of $3.00 to $3.50 per hour.

Planning in Stage 4 began with the consultant's planning document for the region and confirming the accuracy of that work by documenting existing service; estimating the magnitude and location of prospective transit demand by the poor, elderly, and handicapped, as well as by other prospective users; defining service objectives and fare policies; comparing different service concepts, such as fixed route vs. subscription buses, for meeting the service objectives; and preferably by preparing a first year marketing and

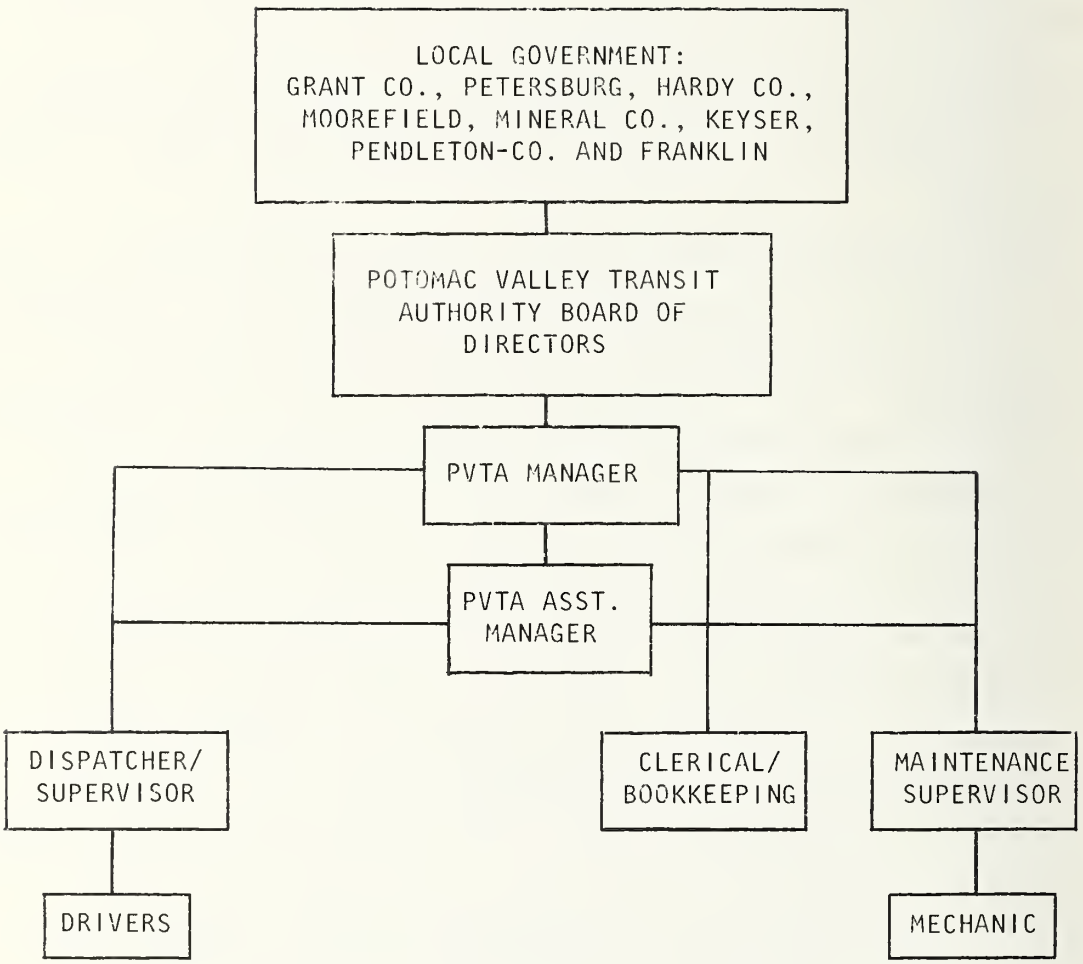


FIGURE 3-4. ORGANIZATION OF PVTA

TABLE 3-1. TRANSIT AUTHORITY STAFF AND EQUIPMENT BY REGION, JUNE 1979

	Capacity	Region 4	6	8	9	10	Totals
Drivers							
Full-time		16	19	10	14	7	66
Part-time		12		7			19
Mechanics			3	3	2	1	9
Administrative staff							
Full-time		5	9	5	2	4	25
Part-time						2	2
Buses without lifts							
1975 Grumman	22/23		2			2	4
1977 Coach & Equipment	20	2		2			4
1975 Mercedes D309	16				6		6
1977 Grumman	16	16		16			32
1975/76 Grumman	12	3	19		1	6	29
1975 Grumman	8				1		1
Buses with lifts							
1975 Mercedes D309	13				1		1
1977 Grumman	15	1					1
1975-77 Grumman	10/11	1	2	2		2	7
Total buses		23	23	20	9	10	85

Source: Reference C12.

Notes:
1. Two mechanics have since been added in Region 4.
2. The State Transportation Division had a professional staff of six persons of whom one worked with a non-TRIP program (social service agency transportation coordination).

and operating plan and an associated budget. The transit authority board reviewed and approved the product of each step. The operating plan included means for coordinating with, contracting with, or in some cases taking over, transit operations by others within the prospective service area. The marketing plan (where one existed) became the guide for Stage 5; the operating plan for Stages 6 and 7; and the financial plan for Stage 8.

Stage 5, marketing, is often a neglected or understaffed rural transit function, in West Virginia as elsewhere. Marketing begins--either through the transit manager, his assistant, or a marketing person--during planning for initial operations, by personal and group contacts to help encourage and estimate transit demand. Each new route or service area can receive such attention, and sometimes volunteer labor can be used to help spread the news of prospective transit service and obtain expressions of interest, especially for subscription service or intermittent service that will occur less than five days per week. Media publicity precedes the ceremonial opening of service. Thereafter, marketing serves as an intermediary between the transit staff and users to be sure that operations are both responsive to user needs and present a clear and helpful image to prospective users and to the community in general.

The selection and purchase of vehicles in Stage 6 was carried out entirely by the state Department of Welfare in order to obtain quantity discounts and standardize on vehicle types. The vehicle types purchased are listed by region in Table 3-1. Except for the Mercedes buses in Region 9, which were bought early with state funds, most equipment was made by Grumman through building bus bodies on truck chassis. The transit authorities are almost united in their dislike of the Grumman buses, claiming that they are top heavy, ride poorly, are often too small, are prone to electrical and mechanical problems, and are difficult to get parts for from Grumman. The state contract with Grumman specifies continued availability of parts, but Grumman often has to obtain a part from

a component manufacturer first, and in many cases the part needs to be ordered directly from one of several component manufacturers, complicating and delaying repairs.

A strong program of preventive and restorative maintenance is the second and continuing step in Stage 6, carried out either through transit operator mechanics or by arrangements with private repair shops. A central facility with spare equipment available was used in June 1979 by all regions except Region 4, where buses could not conveniently be scheduled to begin or end the day's run from a central location. Even Region 4 now has developed its own repair facility, though private repair shops are still used when a bus breaks down too far from its facility.

Stage 7, transit operations, is shown in Figure 3-3 as beginning gradually and adding routes to achieve full operations in about six months. Successfully beginning and debugging just one new route typically occupies much of the manager's spare energies (although any interdependent routes may need to be started simultaneously). Besides, the drivers and other staff learn as they go, and profit on later routes from experience with earlier ones.

Stage 8, business management, begins in a small way with record keeping from the time the manager is hired and transit funds are expended. The caption "business management" may appear too elegant for what often falls to the role of bookkeeper, but it expresses the broad aims of this function, whose execution may be shared with the manager or his assistant. Designing and maintaining the financial and operating records of the transit authority, preparing monthly reports, and accounting for cash receipts are part of the business management responsibilities. In addition, business management includes cost control--monitoring expenses and looking for ways to reduce the costs of operations or to provide better service at the same cost. Pressure from the state Transportation Division to increase the operating ratio (of revenues to operating and administrative costs) probably helped keep transit authority

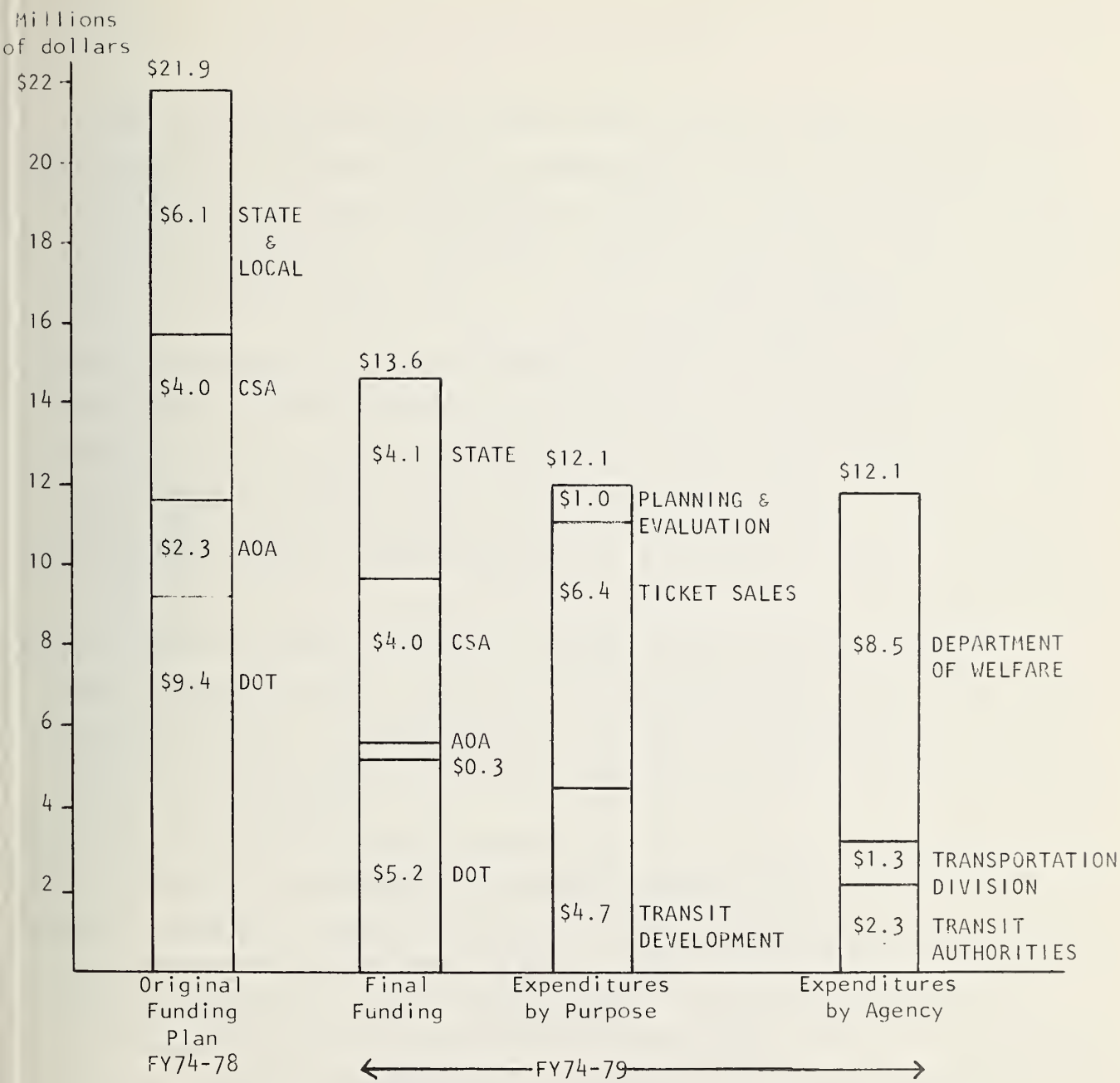
costs down, contrary to the experience of many other rural bus systems. On the negative side, most managers complained about the great volume of paper work and reporting requirements of the Federal government, claiming that it often took time that was needed for marketing and operations control.

Stage 9, evaluation, is closely connected with Stage 4, planning, since a comparison with the expectations embodied in the operating, marketing, and financial plans is fundamental to the evaluation process. Both the manager and the marketing person, if separate, need to keep in close touch with system performance based on periodic reports and surveys; unsolicited comments from riders and the community; and their own observations.

The number of separate topics identified in foregoing stages and the complexity of many of them suggest that persons of unusual breadth and training are important to the role of rural transit manager--both because the manager needs to understand the importance of each function in filling other staff positions, and because the manager himself or herself often turns out to be responsible for carrying out the activity, not just hiring someone else to do it. Also, the predictable difficulties of finding people and money to carry out successfully this whole range of activities in a number of rural communities (starting with nothing in some areas and with little but skimpy taxi service and infrequent social service vans for scattered and narrowly selected riders in others) suggests the magnitude of the rural transit development task in West Virginia, as in other states that seek to follow a similar path.

3.4 PROGRAM FUNDING

The original application for TRIP called for $21.9 million to be appropriated over a four-year period. Figure 3-5 compares the funding sources for that plan with the actual sources for the five-year program (second bar from left). Both AOA and DOT were far



Source: West Virginia Department of Welfare and Public Transportation Division.

Note: The $1.5 million difference between funding and expenditures was unexpended balances on June 30, 1979 ($0.7 million in state funds and $0.8 million in DOT funds).

FIGURE 3-5. ORIGINAL vs. FINAL TRIP FUNDING, AND TRIP EXPENDITURES BY PURPOSE AND AGENCY

below the original estimate, and the state matching share shrank accordingly. DOT grants consisted of $2.0 million in Section 147 funds from FHWA plus $3.2 million from UMTA, consisting of $.6 million under Section 3 (capital equipment), $2.0 million under Section 6 (demonstration), and $.6 million under Section 9 (technical studies and planning).

Figure 3-5 also shows TRIP expenditures by purpose and agency. Planning and evaluation contracts accounted for 8% of TRIP costs, ticket sales for 53%, and transit development for 39%. The Department of Welfare spent 70% of the funds, the Public Transportation Division 11%, and transit authorities 19% (after the funds passed through either the Department of Welfare or the Public Transportation Division).

Delays in securing the program's Federal appropriations and in obtaining buses caused postponement of the original schedule and, eventually, extension of Federal participation in the program by a year in order to provide, in FY79, a year's demonstration of the full-scale rural transit systems. The state's support for the program was uncertain from year to year until action by the legislature or the governor. That contributed to low morale and planning difficulties in the regional transit programs, because managers, drivers, and other staff were not sure of their continuing employment.

The funding shortfalls and uncertainties also contributed to contraction of the rural bus program from all 11 of the planning and development regions to only 5. The principal reasons given by regions for not participating were uncertainty about state and Federal support when the Federal demonstration funding ended, and the associated possibility of having to terminate a service on which users had come to depend when local funding might be unavailable. Region 2 was interested at first and even ordered buses, but cancelled for those reasons. Region 7 was ready to join the program, but funding was insufficient to provide buses for both Regions 7 and 4, and 4 was selected. So eventually, the rural bus funding extended to all but one of the interested regions.

The state funding problems sometimes had political and organizational aspects, as in the spring of 1977 when Governor Rockefeller declined to include a $550,000 TRIP funding request in the state budget. A parallel concern was lack of transportation expertise in the Department of Welfare's TRIP program. After public debate and some strong expression of support for TRIP, state funding was restored by the Governor and the provider development portion of TRIP was transferred to the Public Transportation Division in the new Office of Economic and Community Development in the Governor's Office under a transportation professional. In June 1978, another financial crisis emerged when the legislature failed to approve a TRIP appropriation request. That dilemma was resolved by Governor Rockefeller committing $659,000 in administrative funds at the end of June, at the same time transferring the Public Transportation Division to the Department of Finance and Administration. The Department set as an efficiency aim the increasing of the share of bus expenses financed by fare revenues to 30% by the end of FY79.

There was also uncertainty about future state financing at the end of FY79, when Federal demonstration funding was running out. Local support of participating transit providers was successfully sought in FY80, since the systems had by then proven their value and the new Section 18 funding required local participation.

This brief financial history illustrates the difficulties of putting a unified rural public transportation program together from disparate funding sources. Perhaps it is only surprising that the rural bus program worked as well as it did, retaining good managers, drivers, and other staff, in spite of the financial uncertainties.

4. TICKET PROGRAM COST AND OPERATION

4.1 PROGRAM COSTS

On a monthly basis, some 12,200 TRIP users were receiving about 13,000 ticket books worth $104,000 at a cost to them of $13,000, so a monthly subsidy of $91,000 was involved at $7 per book. This cost, paid until September 1978 by Federal grants, was 80% of total program costs. Department of Welfare administrative costs constitute the remaining $22,750 per month, for a total of $113,750 per month or $1,365,000 per year. Estimating 1,229,729 trips per year from the cost-per-ride and trip distribution factors in Section 5.1 produces an estimated average cost per trip of $1.11. This does not appear excessive compared with the current costs of providing bus and rail transit service in many urban and suburban areas now, where subsidies of $1 to $2 per ride are common.

4.2 FIELD STAFF ACTIVITIES AND ATTITUDES

The West Virginia University evaluation study found that the 27 area administrators of welfare field offices supervised staff sizes of 58 to 360 (Ref. B-4, p. 105). The most frequently cited number of professional and paraprofessionals was 73. Most area administrators reported spending little time--1.3% on the average--on TRIP-related activities. About 17% considered TRIP ticket sales a high field office priority, 48% considered it an average priority, and 35% considered it a low priority. At that time, most administrators (62.5%) felt TRIP had created no problems for the area office; and the problem mentioned most by the remaining respondents was insufficient funds. Nevertheless, 12 of the area administrators (57%) did not think the Department of Welfare was the appropriate agency to administer the TRIP

program. The most frequently cited reason was that the welfare stigma might be hurting the promotion and public support of the program, in spite of the advantages from Department of Welfare staff "knowing the eligible population." The administrators' doubts seldom extended to the level of the TRIP supervisors, who were enthusiastic about their work and the need for the program--indeed, even the area administrators believed the program was needed, though they felt that a state department of transportation would be a more appropriate administering agency.

The TRIP supervisors surveyed reported that they used most of their working hours on TRIP-related activities, spending on the average 3.5 days per week in the office supervising ticket system activities and the remaining 1.5 days in the field on speaking engagements, developing personal contacts, and conducting other outreach activities. Most supervisors had been hired from within the field office. They were familiar with the programs and procedures of the Department of Welfare. The turnover of TRIP supervisors was considered lower than in other field office staff positions.

Only limited TRIP field staff training activities were considered necessary by the Department of Welfare because of parallels between TRIP and the food stamp program that it was already administering. Besides quarterly seminars held for TRIP state staff and area office supervisors, a marketing consultant was employed to conduct two workshops focused on field staff training needs, in April and July 1976, as components of two quarterly seminars. Following the workshops, the consultant indicated the need for a formal training program. No such program was established, however. Neither at the headquarters nor the area office level of the Department of Welfare were any staff with professional transportation experience available, other than those of the consulting firm, RCC International.

The TRIP supervisors interviewed in the 1977 West Virginia University study identified the following five problems as major obstacles to higher ticket sales.

1. Lack of available public transportation and problems related to the implementation of new provider systems.
2. Inadequate visible public support for the TRIP ticket and transportation system.
3. Lack of local administrative support (half reported that TRIP was considered a low priority program in field offices).
4. Inadequate nature and amount of information available to TRIP supervisors, both for their own use and for public use.
5. Perceived need for improved relationships with other agencies to generate more referrals from social service agencies, senior citizen centers, and community action agencies.

The most frequently cited of these problems was the lack of available public transportation, which accentuates the need for the provider development part of the TRIP program that was late compared with TRIP ticket sales. The second problem, believed by one-third of the supervisors to be the most serious obstacle, is largely external but could presumably be influenced by successful community relation efforts (though with great difficulty until the first problem is addressed). The last three problems are strictly administrative or internal. Half or more of the supervisors were not troubled by any of these problems, and felt they were not serious obstacles to the success of TRIP ticket sales in their own areas.

A mixed picture results from the preceding information. On the one hand, no serious administrative problems were encountered in accommodating TRIP ticket sales within Department of Welfare field office procedures. On the other hand, the program was often considered either a low priority or an inappropriate welfare activity by area administrators. That view evidently prevailed in mid-1977 with creation of the new state Transportation Division to handle provider development and transportation coordination, while TRIP ticket promotional activities ceased. In part, this change probably anticipated the cessation of Federal support and doubts about state continuation

of an expensive subsidy activity. State officials must have reasoned that if the TRIP ticket program was really needed, it would continue to grow or at least survive without such promotional efforts. Also, it must have seemed important to shift the program financing towards the lagging provider development activities, which were presumably limiting increased ticket sales in any case.

Some further judgments on the administration of TRIP came from the 1977 West Virginia University survey team, which concluded that (1) TRIP field staff tended to spend a disproportionate amount of time on office vs. outreach activities and (2) there was too much emphasis on current welfare recipients vs. other sources of TRIP eligibles. In both of these respects, however, the team noted significant progress since the preceding annual survey. The survey team also recommended that TRIP staff selection criteria should permit backgrounds in marketing and rural transportation as well as welfare experience, though they observed that TRIP supervisors were sincerely interested in and trying to sell the program. The team also supported a formal and comprehensive TRIP-specific training program, though the quarterly seminars for TRIP supervisors appeared to be an adequate type of training and they themselves did not complain about insufficient training for their jobs.

Another University team recommendation was that area office TRIP staffs be responsible directly to a strong headquarters TRIP office in Charleston. However, this would be contrary to the decentralized organizational principles of the Department of Welfare and probably disruptive, whether or not it better fostered TRIP ticket sales. Ironically, the area office TRIP promotional staffs were disbanded before the benefits of these recommendations could be tested. Applications, eligibility verification, and ticket sales continued to be handled by regular area office staff members.

The problem of a welfare "image" being associated with administration of the entire TRIP program by the Department of Welfare

does not appear to have been anticipated, and has probably affected both the ticket sales and provider development activities since eligible persons not on welfare may hesitate or refuse to apply for tickets or to ride "welfare buses." The Department has considered making tickets available through third parties such as transit agencies and senior centers, which would have helped and has precedent in other areas. There were some limited local efforts to disperse ticket sales points, but the idea never caught on statewide.

The other unanticipated problem was the lack of trained transportation professionals in the Department. It seems clear that this and the welfare image problem were the main motivations for creating the Public Transportation Division in mid-1977 to administer the TRIP provider development and transportation coordination activities. Bus ridership and public support for the program have generally grown significantly in areas where bus service was augmented or instituted since then. Two reasons are probably that individual bus operations are no longer identified with the TRIP logos or program, and that the operators serve community and commuting travel needs in addition to those of the elderly, poor, and handicapped.

5. IMPACTS OF THE TICKET PROGRAM ON RURAL TRAVEL

5.1 PROJECT REGISTRATION AND TICKET SALES

The size of the elderly and handicapped group falling within the income guidelines was initially estimated to be 122,200 persons (99,300 elderly and 22,900 handicapped), using 1970 Census and National Health Survey data, factoring in a growth factor of 1.2%/year, and adjusting the results to reconcile the problem of double counting those who are both elderly and handicapped.

Projected use and growth of the TRIP discounted tickets was based on the history of the food stamp program in West Virginia - a slow start, rapid expansion, and then a gradual tapering off of growth. About 15,000 certified eligible users (12% participation) were projected by July 1, 1975, the end of the first year of the program; 44,000 (36% participation) by the end of the second year; and 103,870 (85% participation) by the end of the third, after which increases should keep pace with changes in the eligible population.

Monthly ticket sales were originally projected at the same level as the certified eligible population, on the assumption of one ticket book used per month per eligible person. However, monthly ticket sales were always lower, by about a fifth to a third, than the certified eligible population, indicating irregular use, or use of less than one book per month, by many registrants. Moreover and more importantly, ticket sales only reached 3,024 by July of 1975, about one-fifth of the level expected by then. Based on this experience, projected sales were revised downward in the first-year TRIP report to a range of from 19,030 to 32,630, the low end being about 35% of the original target for the end of 1976 (Ref. A6, p. 3-4).

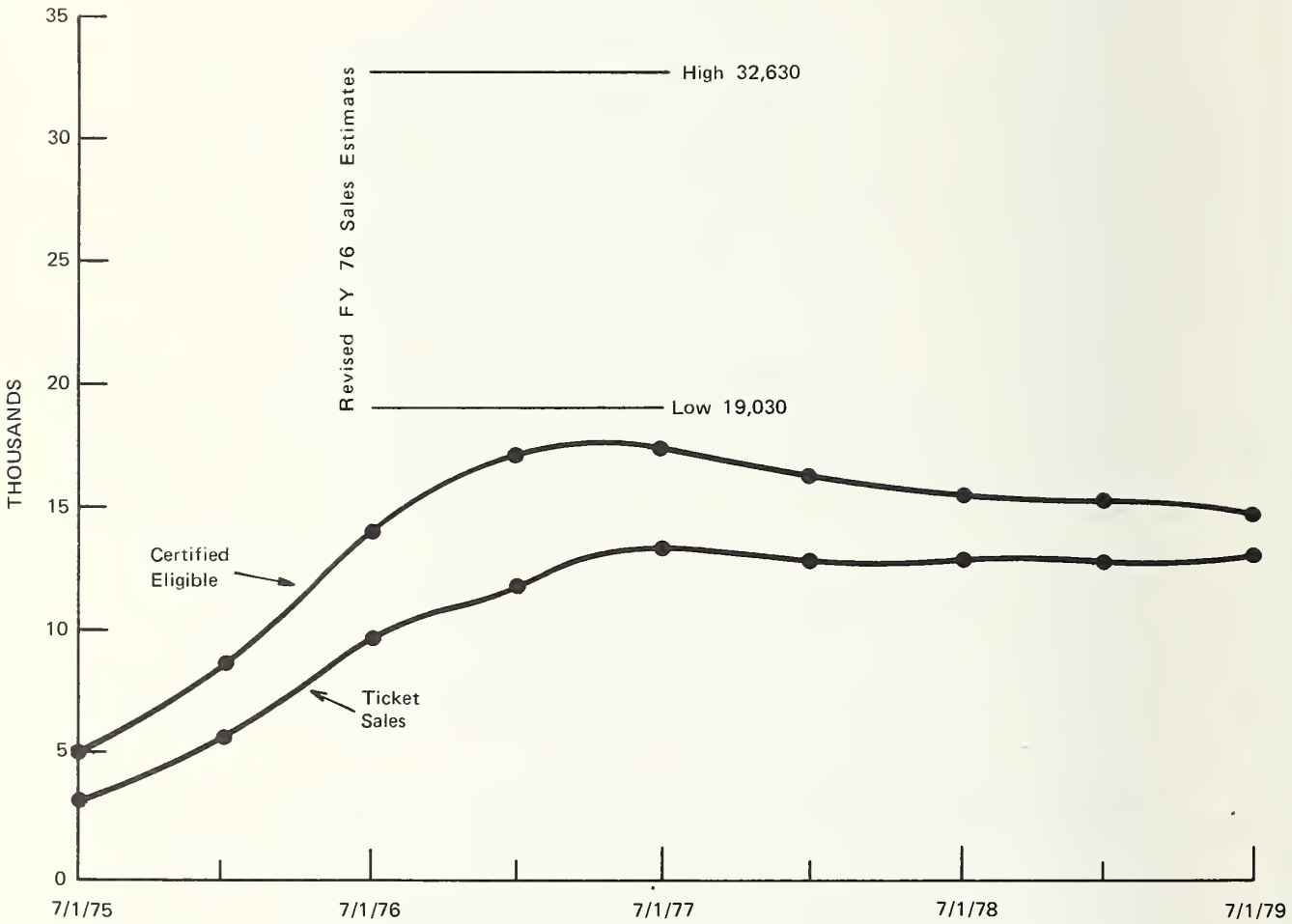


FIGURE 5-1. CERTIFIED ELIGIBLE AND TICKET SALES VS. REVISED FY76 SALES ESTIMATES

Sources: Refs. A-6, A-11, and Crain & Associates. Data are plotted quarterly.

Figure 5-1 presents historical data on active TRIP cases (number of certified eligible persons) and redeemed cards (ticket sales) compared with the revised sales estimate for FY 76. Ticket sales grew only to 9,426 by July of 1976, about half of the low projection, and ultimately peaked in May of 1977 at 13,423 ticket books per month, about 70 percent of the low target and 13% of the original target of 103,870. The timing of the gradual decline in active cases and the flattening of sales since May, 1977, are probably due to the reduction of Department of Welfare promotional efforts in field offices beginning that month.

An important feature of TRIP ticket use has been the relatively heavy use of taxis. Table 5-1, for example, gives recent data on the distribution of ticket redemptions by type of provider and the estimated relative use of each type.

TABLE 5-1

TRIP TICKET REDEMPTION AND ESTIMATED TRIP FREQUENCIES BY TYPE OF PROVIDER, JANUARY-MARCH, 1978

Provider	Percent of Total Tickets Redeemed	Estimated Percent of Total Trips*
Taxis	76.8%	38.97%
Buses	21.0	53.28
Community action vans	1.4	5.69
Health related vans	0.5	2.03
Amtrak	0.3	0.03

*Based on an average estimated fare per trip of $2.00 for taxis, $.40 for buses, $.25 for vans, and $10.00 for Amtrak.

Sources: Reference A-11; reference B-4, page 17; and Crain & Associates.

The first column shows that taxis are redeeming about 77% of total TRIP tickets and buses are redeeming most of the remainder. The last column of the table shows the estimated percent of total trips by type of provider, based on the cost estimates per trip shown in the footnote to the table. About 39% of user trips are by taxi vs. 53% by transit bus, and nearly all of the remaining 8% is by community action or health related vans. The reason for the heavy dependence on taxi service is surely a combination of their convenience in door-to-door service and the fact that they are the only public transit mode available in many areas. However, the cheaper buses are also clearly ridden where they are available, and one popular combination in such cases is to take a bus one way, as for shopping in town, and a taxi on the return trip. Also, taxi trips average a shorter distance, four miles compared with eight miles for buses.

5.2 CHARACTERISTICS OF TRIP TICKET USERS VS. ELIGIBLE NONUSERS

This section documents the personal characteristics of TRIP ticket users and eligible nonusers (persons meeting TRIP eligibility requirements but not registered for the program) based on surveys of these two populations by the University of West Virginia study from 1975 through 1978. Both users and eligible nonusers were selected randomly, the former from lists of TRIP users and the latter from lists of persons deemed by the Department of Welfare to be eligible for the TRIP program. The same persons were surveyed in 1975 and resurveyed in 1976 and 1977, to permit drawing conclusions about longitudinal changes. Sample sizes varied with the question, as specified on the tables and figures, but the total users responding to the survey were 384 in 1975, 300 in 1976, and 248 in 1977, while comparable numbers for nonusers were 362, 244, and 201. A more intensive survey was also conducted of users and eligible nonusers in two of the most rural areas of the state, Regions 4 and 8, in 1978, just

after new rural bus services had been started. This latter survey provides the best available information on characteristics and travel patterns of rural users and eligible nonusers. Sample sizes for that survey were 365 users and 572 eligible nonusers.

Figure 5-2 shows several of the characteristcis that distinguished TRIP ticket users and eligible nonusers in the 1978 University of West Virginia survey. The resulting data are consistent with earlier statewide surveys, and indicate that the typical TRIP user tends to be:

1. Female much more often than male, and somewhat more often than eligible nonusers
2. In poor-to-fair health, and less than half as likely to be in good health than nonusers
3. Living alone almost twice as frequently as eligible nonusers--45 compared with 24%
4. As physically able to travel as eligible nonusers, in spite of poorer health
5. Without a working vehicle in the household--only 21% had this luxury, compared with 62% of nonusers
6. Less frequently able to operate a motor vehicle than nonusers

Of these characteristics, probably the tendencies to live alone and not to have a motor vehicle in the household are the most significant determinants of the users' interest in the TRIP ticket program, because their implication is that personal transportation vehicles and friends or family to obtain rides with are seldom part of their households.

In this connection, later evaluation of the social environment of elderly travelers in West Virginia (References B-7 and B-8) has revealed that informal transportation networks often met at least the minimal travel needs of the elderly, especially for nonusers of TRIP. The extent and viability of these informal networks of families and friends offering regular or intermittant rides was probably underestimated in the original forecasts of TRIP ticket sales.

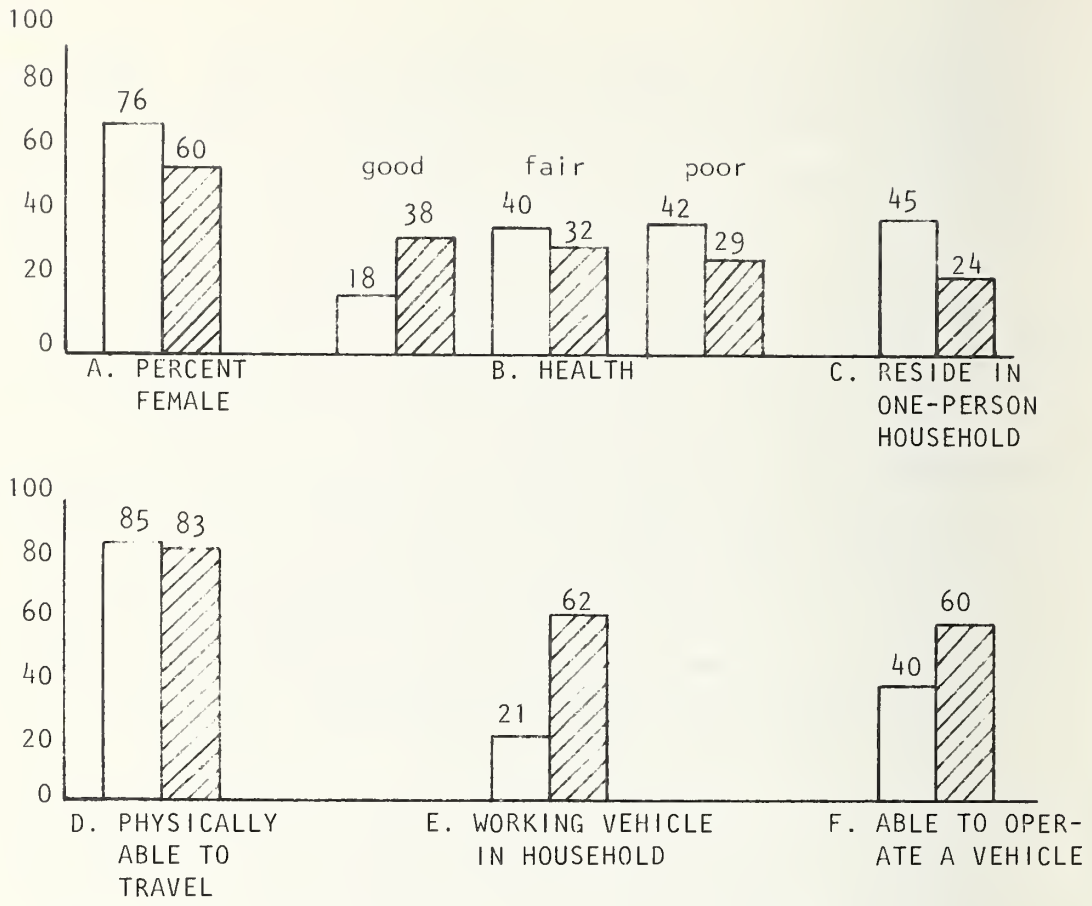


FIGURE 5-2. SELECTED CHARACTERISTICS OF USERS (▭) AND ELIGIBLE NONUSERS (▨) IN REGIONS 4 AND 5, 1978

Sources: Reference B5 and Crain & Associates. Sample sizes were 365 users and 572 eligible nonusers.

5.3 REASONS FOR LOW ENROLLMENT

The general problem of lower-than-expected TRIP enrollment and ticket sales has been attributed to many causes by the Department of Welfare, RCC International, and the University of West Virginia study team. The following six reasons are the most frequently mentioned:

1. The pre-TRIP estimates of both the size of the eligible group and its maximum participation rate were unrealistically high, so TRIP sales reached the limits of the eligible and interested group at a lower level than expected.

2. There has been a continued lack of usable transit in many areas as the proposed statewide transit system development plan was scaled down and delayed.
3. Initial target group promotional efforts outside the welfare roles were not entirely effective, and although such efforts kept improving, they were terminated entirely in mid-1977 as described in the previous section.
4. The welfare stigma of the tickets and their source discouraged some nonwelfare recipients from applying.
5. The method of ticket purchase--in person at an area welfare office or by mail using a certified check or money order--was inconvenient.
6. Some persons believed the cost of TRIP tickets still to be too high for many eligible users, even at one-eighth of their face value.

Of these reasons, the first two appear to explain the majority of the shortfall--probably around 90%--with varying but minor influences coming from each of the others. Evidence for this conclusion comes from surveys by West Virginia University of the reasons that eligible nonusers were not enrolled in TRIP. For example, Table 5-2 summarizes the answers from the 1977 survey.

TABLE 5-2. PRINCIPAL REASON ELIGIBLE NONUSERS CHOSE NOT TO PARTICIPATE IN TRIP (1977 NONUSER SURVEY)

Reason	Percent
Lack of personal need or ability	
Have other available transportation	24.8%
Physically unable	16.5
No need	13.2
Dislikes travelling	0.8
Subtotal	55.3
Public transportation inadequacies	
No TRIP transportation available	28.1
Inconvenient routes	4.1
Inconvenient schedule	0.8
Subtotal	33.0
Administrative reasons	
Lack information	8.3
Never received tickets	2.5
Tickets too expensive	0.8
Subtotal	11.6
TOTAL	99.9%

Source: Ref. B-4 and Crain & Associates

The leading type of reason given for nonparticipation is lack of need or ability, for 55% of the respondents. Another 33% live in areas with transportation system inadequacies. The remaining administrative reasons, which would be most easily correctable, are only 11.6% of the total, and most of this is the 8.3% who lacked information.

It can be concluded that the TRIP publicity was quite effective if, as implied here, only 8.3% of eligible nonusers lacked information about the program. A University experiment to test the effectiveness of direct mail solicitation and free sample ticket books achieved less than 5% additional enrollment among the eligible nonuser group contacted (Ref. B4, Sec IX), which also suggests that other reasons for nonparticipation were more important than a lack of information.

When the eligible nonuser group was asked if they would use TRIP if their eligibility were officially ascertained, a surprising 41% responded affirmatively. Of the 59% responding "no," the reasons given were as follows:

Lack of need or ability	87.1%
Public transportation inadequacies	10.2%
Other	2.7%

It is interesting that reasons of inadequate public transportation have dropped to about 10% from the 33% in Table 5-2. This suggests that some potential market does exist in the nonuser group among persons who allege either disinterest or inadequate public transportation, but in fact are inhibited by the need to establish eligibility.

The hypothesis of some market among eligible nonusers is strengthened by another survey finding. Eligible nonusers who had heard of TRIP were asked if they perceived any benefits for themselves from participation in TRIP. Table 5-3 presents the results, which cite perceived benefits from about half of the sample, even in 1977. The reduction in sample size from 184 to

103 between 1975 and 1977 is partially due to eligible nonusers becoming eligible users, which also explains the growing percentage of respondents citing no benefits or advantages. Of those citing advantages, the major reasons were in money savings, increased general activity, and decreased dependency on others for transportation.

TABLE 5-3. MAIN ADVANTAGE ELIGIBLE NONUSERS SEE FOR THEMSELVES FROM PARTICIPATION IN THE TRIP PROGRAM

Advantage	Percent		
	1975	1976	1977
No benefit or advantage	40.2%	47.3%	53.4%
Cheaper transportation would enable me to save money	30.4	15.3	14.6
Would make me more active	15.2	10.0	12.6
Would provide me with an alternative means of transportation which would decrease my dependency on others	4.3	10.0	12.6
Would enable me to accomplish necessary activities	5.4	7.3	1.0
Would provide transportation enabling me to travel	2.7	8.0	3.9
Would provide more convenient routes	1.6	0.7	
Would help disabled persons to get around		0.7	
Would enable me to go on a long trip		0.7	
TOTAL	100.0%	100.0%	100.0%
Sample size	184	150	103

Source: Ref. B-4. Only eligible nonusers who had heard of TRIP were asked to respond to this question.

Table 5-4 gives the reasons of former TRIP users who were no longer active or not participating, according to the same general categories used in Table 5-2. About 12% of the former TRIP users claimed that they were no longer eligible for the subsidy. Among those who were still eligible, administrative reasons and transportation system problems take on more weight. Among the administrative reasons a total of 15% "lacked information" or had never purchased or received tickets, in spite of having had their eligibility established. Even so, it is hard to criticize the TRIP program for this problem. One suspects that the eligible person himself has somehow lost interest or is easily confused. The other administrative reasons are the expense of tickets (7.4%) and the distance to the welfare office to pick up tickets (2.2%), both among the four reasons cited earlier as probable minor causes. Interestingly, the welfare stigma reason did not appear among either this group or among the eligible nonuser group who had never tried

TABLE 5-4. PRINCIPAL REASON FORMER TRIP USERS CHOSE NOT TO PARTICIPATE

Reason	Percent of those still eligible
Lack of personal need or ability	
No trips I want to take	9.5%
No need	3.2
Prefer other modes	3.2
Physically unable	3.2
Subtotal	19.1
Public transportation inadequacy	
No transportation available	45.8
Inconvenient schedules	6.4
Too expensive	4.2
Subtotal	56.4
Administrative reasons	
Lack information	9.6
Never purchased or received tickets	5.4
TRIP tickets too expensive	7.4
Too far to pick up tickets	2.2
Subtotal	24.6
TOTAL	100.1%
Ineligible (percent of total sample)	12.1%

Source: Ref. B-4 and Crain & Associates

TRIP, but it is the type of issue that may not easily come to the surface during an interview session.

The remaining former TRIP users seem to have joined other eligible nonusers in attributing their nonparticipation to the two main reasons for the ticket shortfall, either lack of need or ability on the one hand, or inadequate public transportation on the other.

5.4 CHANGES IN TRAVEL BEHAVIOR

5.4.1 Trip Frequency and Purpose

Table 5-5 shows the percentage of users who said they experienced different types of benefits from participating in TRIP for 1975 through 1977. Savings in transportation costs and increased mobility have always been the leaders, and the percentages of users mentioning each of these reached 73 and 66% respectively in 1977. The two benefits go together; in effect, by reducing the price of transportation to ticket users, TRIP has increased the amount of travel possible.

The third most cited benefit, eliminating the need for another automobile, reached 20.6% in 1977. To eliminate the need for an automobile among more than one-fifth of the target group can be counted as a major achievement of TRIP.

The percentage citing no benefits from TRIP is misleading. For example, most of those that gave this answer were inactive users, having signed up for TRIP but either not purchased or not used the discounted tickets. The small number of users who were helped to obtain a job for themselves or someone in their household (1.1% in 1977) indicates some but small benefits from this effect which is to be expected from the age of the population served.

To these types of benefits to users should be added those advantages expected by nonusers from participating in TRIP, mentioned earlier in Table 5-3. The principal ones were: "would

make me more active" (12.6%) and "would provide me with an alternative means of transportation which would decrease my dependency on others" (also 12.6%). This latter advantage is also a benefit, sometimes substantial, to the person on whom dependence is decreased.

TABLE 5-5. PERSONAL BENEFITS USERS SAID THEY HAD RECEIVED FROM PARTICIPATION IN THE TRIP PROGRAM, 1975-1977

Benefits Gained From TRIP	Percent* 1975	1976	1977
Enabled me to spend less for transportation	56.0%	64.4%	73.5%
Increased mobility	41.1	54.0	66.2
Eliminated the need for another automobile	11.7	17.9	20.6
None (principally inactive users)	43.0	33.8	23.8
Enabled me or someone else in my household to get a job	3.0	1.1	1.1
Other	0.8	4.0	4.3
Sample size	384	300	248

*Percentages represent those responding "yes" to each benefit.

Table 5-6 shows where the added travel is used. The most frequently mentioned places that eligible users travel to more as a result of TRIP are doctors' offices and clinics, shopping, visits with family and friends, and church services and meetings. Note that the increases in travel to these four places was on the upswing from 1975 to 1977. Also, these same four destinations were the leaders as places that users would travel to more if they had additional tickets (see Table 5-10 in Section 5.5).

TABLE 5-6. PLACES THAT USERS TRAVELED TO "MORE" AS A RESULT OF ENROLLMENT IN THE TRIP PROGRAM, PERCENT FOR EACH PLACE BY YEAR

Places Traveled to More	Percent		
	1975	1976	1977
Doctor/clinic	22.3	32.8	78.6
Shop or grocery store	41.5	41.0	77.3
Visits with family and friends	19.9	27.7	57.4
Church or church meetings	13.2	15.6	31.0
Dinner at restaurants	3.6	8.7	12.2
Civic meetings	6.2	5.6	11.1
Parks/recreation halls/or picnics	1.4	6.4	8.7
Volunteer work	5.9	4.2	8.7
Museums/libraries	5.0	3.8	7.0
Parties or socials	3.2	4.6	6.1
Fish/hunt/see sports	1.8	1.3	5.7
Clubs/play cards	3.3	3.8	3.1
Work	1.4	2.1	2.6
Concerts	0.5	1.7	1.7
Other (not included in 1977 Survey)	2.7	1.7	-
Sample size	384	300	248

Source: Reference B-4

Figure 5-3 shows the principal travel destinations for users and eligible nonusers by the percentage making the trip at least once during 1977. Such patterns have changed only in minor ways over the past few years. For all categories, the TRIP users exceed nonusers in the occurance of travel of the given type during the year, sometimes by substantial amounts. The extra travel of users to welfare offices and for food stamps can be explained by greater dependence on those programs--eligible nonusers rely more on social security checks, which come by mail. The greater percent of travel

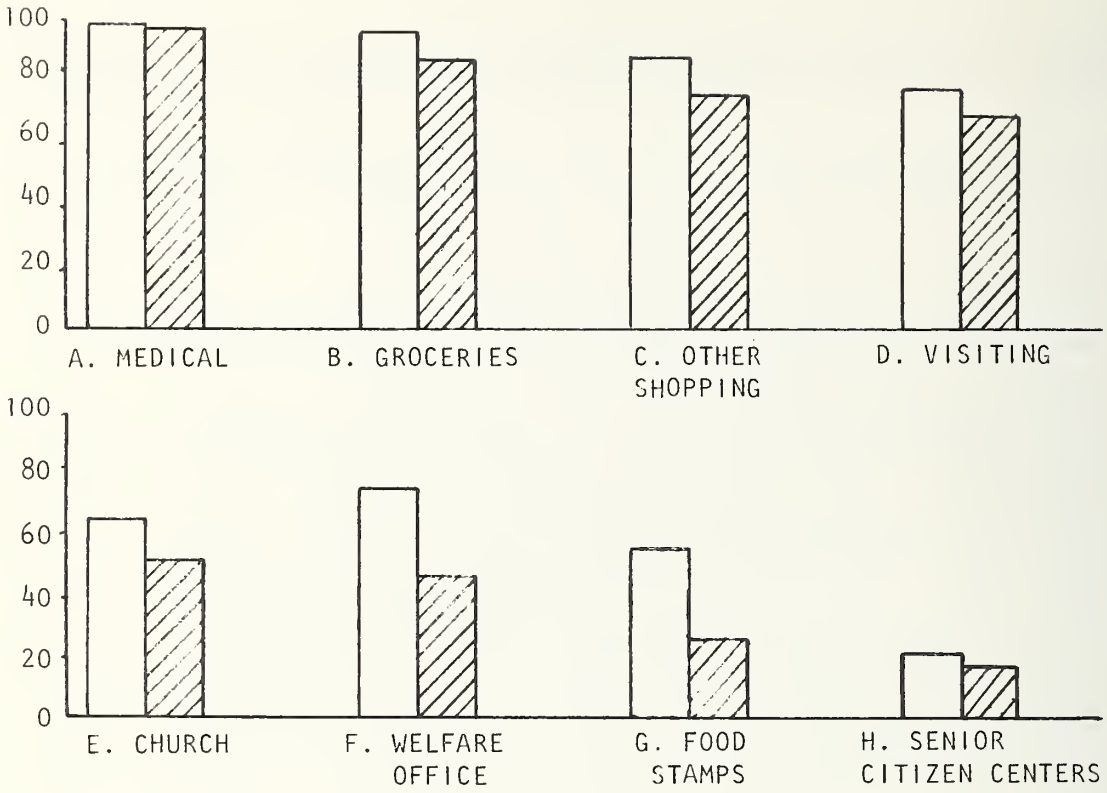


FIGURE 5-3. PRINCIPAL TRAVEL DESTINATIONS FOR USERS (□) AND ELIGIBLE NONUSERS (▨) DURING 1977

Sources: Reference B-5 and Crain & Associates. The sample sizes were 365 users and 572 eligible nonusers.

of users for shopping, visiting, church, and to senior citizens centers may be explained in part by the fact that TRIP users tend to live alone and hence are more likely to seek the companionship of others by traveling away from their homes and in part simply by the increased demand for travel when the price of travel is reduced.

Figure 5-4 shows the usual modes of travel for three important types of trips, to doctors, for groceries, and for visiting, in Regions 4 and 8. There are dramatic differences in the user and eligible nonuser modes. For all three types of trips, taxis are the dominant user mode whereas nonusers predominantly take their own vehicle. Family and friends generally provide more rides for eligible nonusers than for users, and users make equal or greater

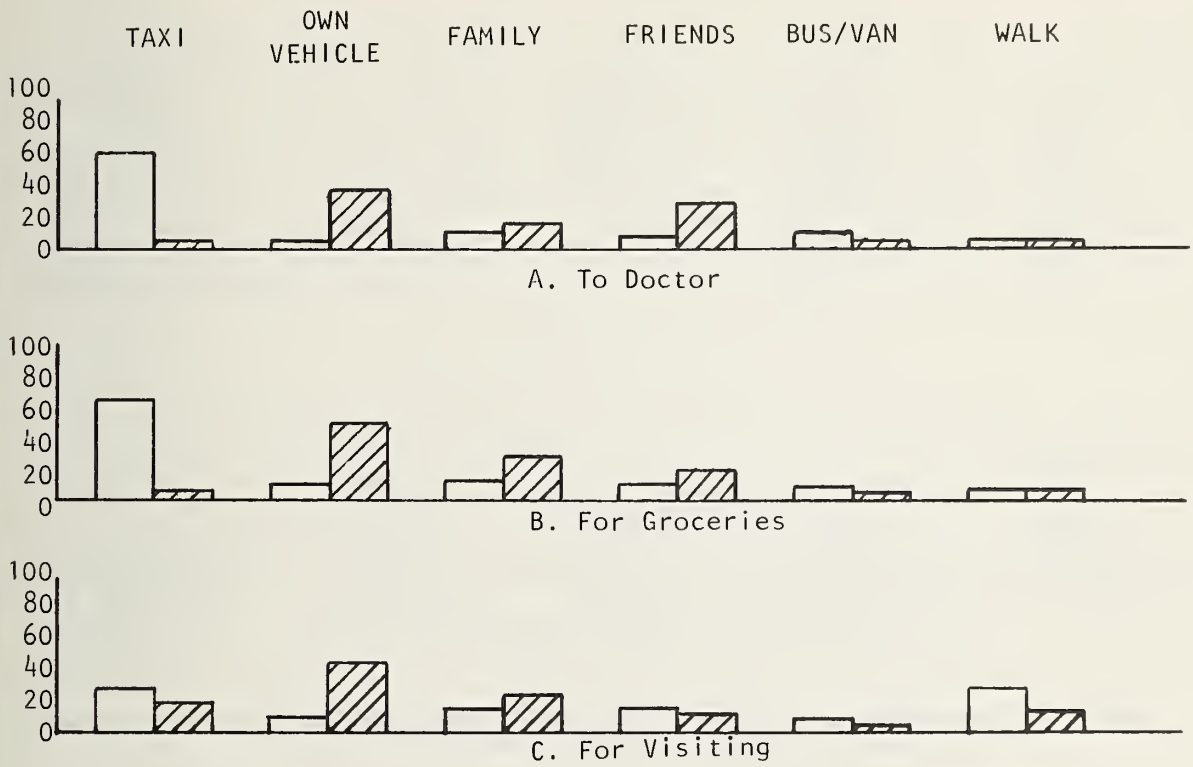


FIGURE 5-4. USUAL MODES OF TRANSPORTATION FOR USERS (□) AND ELIGIBLE NONUSERS (▨) FOR SELECTED TRIP TYPES IN REGIONS 4 AND 8, 1978

Sources: Reference B-5 and Crain & Associates. The sample sizes were 365 users and 572 eligible nonusers.

use of buses, senior citizen vans, and walking. A seventh mode, paying someone else for a ride, is not shown in the figure, but was utilized between 0.6 and 4.1% for different trip types and about equally by users and nonusers.

Figure 5-5 shows the access to and use of public transportation in Regions 4 and 8 in 1978. More users than eligible nonusers live on paved roads; have a local taxi available in their area; make use of the local taxi; and have made use of the bus system in the past year. Fewer users than eligible nonusers have spent anything on private automobile transportation in the past year, and when they do, though not shown on the figure, it is in smaller

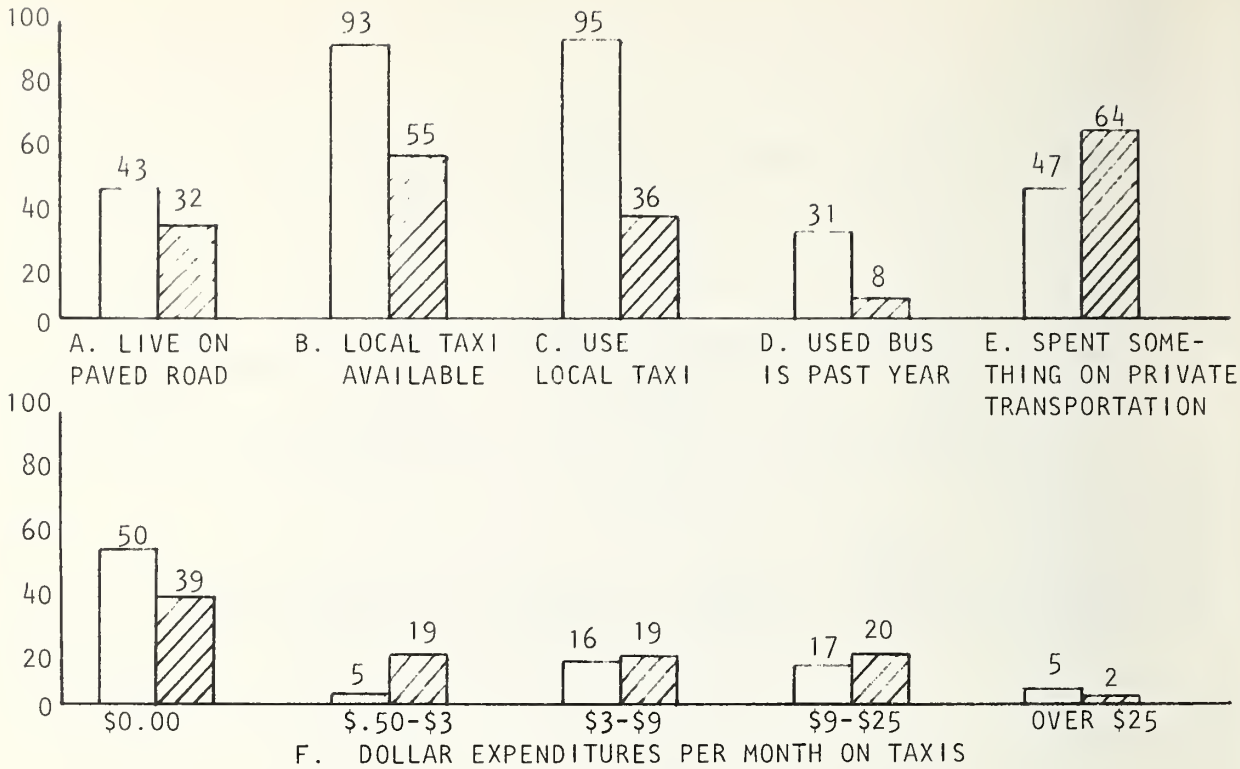


FIGURE 5-5. ACCESS TO AND USE OF PUBLIC TRANSPORTATION BY USERS (□) AND ELIGIBLE NONUSERS (▨) IN REGIONS 4 AND 8

Sources: Reference B-5 and Crain & Associates. The sample sizes were 365 users and 572 eligible nonusers.

amounts--most usually in the range of $10 to $20 per month compared with over $30 for nonusers.

Chart F on Figure 5-5 shows the cash per month spent on taxis. It is interesting that users exceed nonusers' expenditures per person only in the zero and over-$25 categories. The high proportion of users in the zero category may be caused by many users paying their full taxi fares with TRIP tickets, hence "spending" nothing at that moment. However, the actual interpretation of this question by users cannot be confirmed. The number of users who spend over $25, two and one-half times the percent of nonusers though still only 5%, must be the result of their poorer access to automobiles. So on the whole, Figure 5-5 confirms the observations made in connection with Figure 5-3 and 5-4, and helps to fill out the portrait of TRIP ticket users and nonusers.

The high tendency of TRIP users to take taxis has already been mentioned. This tendency was explored through survey questions that compared the two most important transportation modes of the same sample of users before and after starting the TRIP program. Table 5-7 summarizes the answers to these questions for the primary mode of transportation, and Table 5-8 does the same for the secondary mode.

In Table 5-7, the taxi share grew from 20 to 45% of the primary mode, buses remained constant at about 35%, and the importance of all other modes declined, suggesting substitution of taxi travel for use of others' cars, walking, and one's own car (total trips made increased by an unknown amount, so the exact substitution cannot be calculated). There was probably also substitution of bus travel for these modes, and an offsetting shift from buses to taxis so that bus travel remained about a constant percentage.

TABLE 5-7. 1977 USERS' PRIMARY MODE OF TRANSPORTATION BEFORE AND AFTER TRIP

Mode of Transportation	Percent	
	Before TRIP	After TRIP
Taxi	20.0%	44.8%
Bus	34.8	35.3
Car of family, friend, relative, or acquaintance	19.1	9.5
Walking	13.5	5.2
Unspecified car	3.5	2.6
Own car	4.8	1.7
Hitchhiking	1.7	0.4
Community transportation	0.4	0.4
Used no transportation	2.2	--
Total	100.0%	100.0%
Sample size	230	232

Source: Reference B-4

In Table 5-8, the taxi share as a secondary mode also grew, from 20 to 29%; bus share grew slightly, from 20 to 24%; and other modes generally declined, though less than in their use as a primary mode.

TABLE 5-8. 1977 USERS' SECONDARY MODE OF TRANSPORTATION BEFORE AND AFTER TRIP

Mode of Transportation	Percent	
	Before TRIP	After TRIP
Taxi	19.9%	29.2%
Car of family, friend, relative, or acquaintance	27.1	25.5
Bus	19.9	23.6
Walking	23.8	15.1
Unspecified car	7.2	5.2
Community transportation	0.6	0.9
Ambulance	--	0.5
Own car	1.7	--
Total	100.0%	100.0%
Sample size	181	212

Source: Reference B-4

Figure 5-6 provides a closer look at the changes in frequency of use of both the bus and taxi modes for the same 1977 users before and after enrollment in TRIP. There is a general shift from the use of buses 1 to 4 times a month into higher frequency-of-use categories, although there is little change in the zero-use category of bus use. For taxis, there is both a reduction in the zero-use category and a shift toward higher freqency-of-use categories. The figure thus illustrates some increase in frequency of bus use, but a more dramatic increase in frequency of taxi use, taken largely as we have seen, from modes other than bus travel.

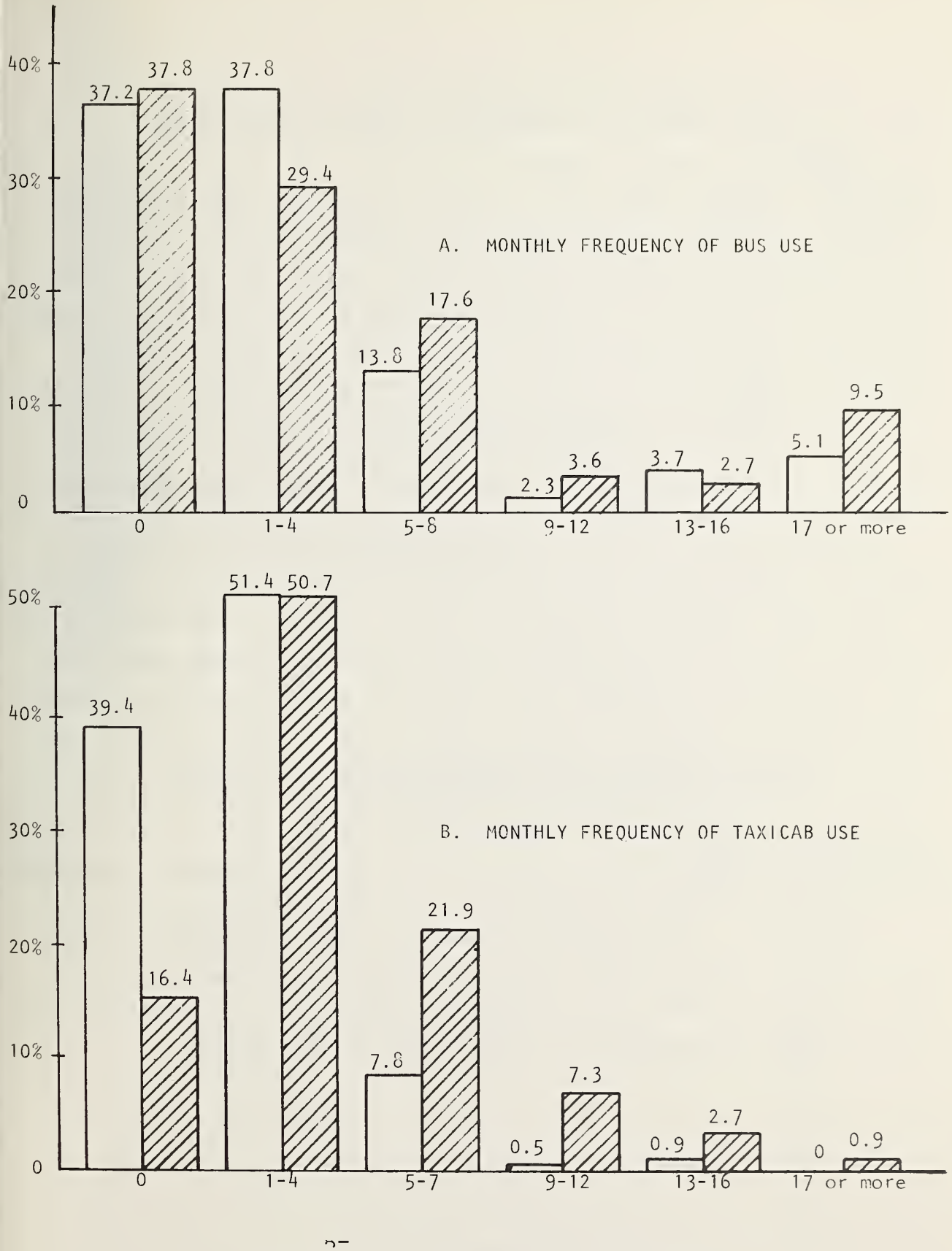


FIGURE 5-6. PERCENT OF 1977 USERS
BY MONTHLY FREQUENCY OF BUS AND TAXICAB USE
BEFORE (□) AND AFTER (▨) TRIP ENROLLMENT

Source: Reference B-4 and Crain & Associates; sample size 248.

5.5 ATTITUDES TOWARD THE PROGRAM AND UNMET TRAVEL NEEDS

There is a strong indication of still unmet travel needs among TRIP users, along with evidence that such needs have been gradually decreasing. When asked if they traveled as much as they needed to, 43.8% of those surveyed responsed "yes" in 1975, 46.5% in 1976, and 52.9% in 1977. Answers to the question whether they would like to use public transportation and taxi services more often were 85% affirmative in 1975 and 1976, down to 79% in 1977. An increased monthly allocation of TRIP tickets was the most significant change that would enable users to travel more--in 1977, for example, 74% said they would travel more with additional TRIP ticket books.

Corroboration for this last observation also comes from Table 5-9 which lists the improvements in TRIP services recommended by users and eligible nonusers in 1977. About 43% of users recommended increasing the monthly ticket allocations. The next four user suggestions, totaling 45.7%, have to do with improved public transportation service, another side of unmet travel needs. Eligible nonuser suggestions are predominantly for improved transportation services, with about 11% desiring better TRIP information or elimination of eligibility requirements. However, since the sample size in this latter case is 18, 11% is only two persons, not enough for high statistical reliability.

Table 5-10 indicates the places to which users would travel more often if added tickets were available. Increased visiting leads the list at 89%, with shopping, doctor or clinic visits, and church visits all mentioned by over 50% of respondents.

TABLE 5-9. IMPROVEMENTS IN TRIP SERVICES SUGGESTED BY 1977 ELIGIBLE USERS AND NONUSERS

Suggested Improvements	Percent	
	User	Eligible Nonuser
Increase monthly ticket allocations	43.4%	--
Provide transportation or more transportation in area	27.7	50.0%
Make transportation more accessible	9.6	27.8
Have more frequent scheduling of public transportation	4.8	5.6
Reduce transportation costs	3.6	5.6
Lower eligibility requirements	3.6	--
Have closer tickets distribution centers	2.4	--
Make taxis give change from TRIP tickets	2.4	--
Use TRIP tickets for car gas	1.2	--
Implement program	1.2	--
Provide better TRIP information	--	5.6
Eliminate eligibility requirements	--	5.6
Total	100.0%	100.0%
Sample size	83	18

Source: Reference B-4

TABLE 5-10. PLACES USERS WOULD TRAVEL TO MORE IF THEY HAD ADDITIONAL TRIP TICKETS, 1977

Places Would Travel To	Percent Responding "Yes" for Each Place
Visits with family and friends	89.0%
Shop or grocery store	71.9
Doctor/clinic	59.3
Church or church meetings	52.9
Restaurants	36.0
Parks/recreation halls/or picnics	32.2
Civic meetings	23.4
Museums/libraries	18.8
Parties or socials	16.4
Fish/hunt/see sports	13.4
Volunteer work	12.2
Concerts	8.2
Clubs/play cards	5.8
Work	3.5
Sample size	248

Source: Reference B-4

6. RURAL BUS SERVICE

The transit development program, the second major component of TRIP, had as its major activity the creation and expansion of rural bus service. Section 3.3 described the approach used in setting up rural bus service. This chapter describes the results of those activities, which include new fixed-route rural bus service, subscription bus service for the elderly and handicapped (dial-a-ride), reserved bus service (route diversions prearranged by phone), and charter bus service.

6.1 SERVICE AREAS AND OPERATING CHARACTERISTICS

This section describes the TRIP rural bus service areas and operations, as background for our findings regarding their performance and impacts. Figure 6-1 shows pictures of typical bus equipment and operations. From the top down, we have:

A. One of the seven Mercedes D309s in Region 9, the only region with such equipment, stopping for change. A high proportion of drivers are women.

B. Four Grumman 12-passenger models owned by Mountain Transit Authority in Region 4. These vehicles comprised 29 of the 85 buses purchased, with another 32 similar buses plus 6 Mercedes having space for 16 passengers and 8 larger buses seating 20 to 23. The remainder are smaller buses with lifts--of which each region had two.

C. A prospective passenger flags the bus from the roadside.

D. A wheelchair passenger is assisted in departing.

Also typical though unphotographed are crowded busloads of workers commuting to or from their jobs.

The TRIP rural bus service in the five regions with such service was as follows:

a. The Mountain Transit Authority (MTA) of Region 4 in Summersville, operating 16 buses in a low-density five-county area. Limited service began November 1977, with a large expansion in April 1978.

FIGURE 6-1. RURAL BUS EQUIPMENT AND OPERATIONS

FIGURE 6-1. RURAL BUS EQUIPMENT AND OPERATIONS

b. The Potomac Valley Transit Authority (PVTA) of Region 8 in Petersburg, operating 17 buses in the most rural of the five regions. Service began in October 1977, and was also expanded considerably in April 1978.

c. In Region 6 there are three systems, formerly (until March 1979) supervised by the Region 6 Planning and Development Council: Monongalia Transit System (MTS) serving Monongalia and Preston Counties out of Morgantown with seven buses; Fairmont-Marion County Transit (FMCT) in Fairmont with seven buses providing rural service in Marion and Taylor counties in addition to operating the city transit system; and Central West Virginia Transit Authority (CWVTA) in Clarksburg with six buses in rural service to Harrison and Doddridge counties besides the Authority's own city transit service. Morgantown also has city bus service but did not want to cooperate in providing joint rural/city service as in the other two systems. Service began September 1976 for all the systems.

d. The Eastern Panhandle Transit Authority (PanTran) of Region 9 in Martinsburg, serving a three-county area since November 1976--with eight buses in June 1979.

e. The Ohio Valley Regional Transit Authority of Region 10 in Wheeling, also serving a three-county area. Rural service began here in September 1976 and in June 1979 utilized seven buses.

There are some similarities between Regions 4 and 8--they are adjoining low-density areas, were the last to initiate service, and have shown the most consistent growth in ridership. Region 6 is unique with its three separate, small rural systems; and Regions 9 and 10 utilize about the same number of buses, even though their operations are very different. We will therefore list the regions in that order--4, 8, 6, 9, 10--for subsequent comparisons, and will generally treat the three Region 6 systems together.

Table 6-1 shows the area, population, and other information on each region served by rural bus systems (through item e) plus survey results, in percentages, for an on-board survey developed by FHWA and administered by the Transportation Division at the most heavily travelled time for each bus route (see Appendix A for the questionnaire). The last column of the table shows simple averages through item c and averages weighted by passenger trips thereafter.

Line d shows the low densities and large areas prevailing in Regions 4 and 8, and line e shows the relative coverage of each region's population by the rural bus service in monthly trips per 1,000 population. Regions 4, 8, and 9 provide the highest coverage-about double or greater than Region 6, which in turn is more than double Region 10. The higher coverage of Regions 4, 8, and 9 occurs because the transit authority provides essentially the only bus transportation in those regions, whereas Regions 6 and 10 have operating urban bus systems in their major cities.

Items f and g show a high percentage of patrons living within ¼ mile of the bus stop and walking to it except in Region 8, where there is clearly more "park and ride" service. Item h shows the low proportion of other modes, even taxis, available to riders in Regions 8 and 9. The number of households with no cars ranges from 13% in Region 8 to 73% in Region 10, which is consistent with the next two items showing Region 8 with the highest percentage taking 25 or more bus trips per month (indicating commuter service) and the highest percentage of work trips, while Region 10 has the lowest in each case. Note that items j and k measure the number and purpose of the respondents' bus trips, not all trips as was suggested by the questionnaire in question 8, because West Virginia departed from the standard questionnaire at that point.

The next items show low elderly levels in Region 8, higher in Regions 4, 6, and 9, and highest in Region 10. The handicapped percentages do not correspond, and one wonders if the two "zeros"

TABLE 6-1. SERVICE AREA AND SURVEY DATA

Item	Reg. 4 MTA	Reg. 8 PVTA	Reg. 6 (3 systems)	Reg. 9 Pan Tran	Reg. 10 OVRTA	Average
Service Area Data:						
a. Area served (square miles)	3,847	2,722	2,253	786	785	2,072
b. Service area population	129,032	63,109	255,500	77,500	123,820	129,792
c. Passenger trips for June 1979	12,922	12,155	13,056	6,957	2,596	9,537
						Weighted Average
d. Population density (b/a)	34	23	113	99	158	62
e. Monthly trips per 1,000 population (c/b x 1,000)	100	193	51	90	21	74
Survey Data (percentages):						
f. Picked up:						
1. at house	31%	31%	41%	52%	64%	38%
2. within 1/4 mile	36	22	36	36	30	32
3. 1/4 mile to 1 mile	23	5	18	7	6	14
4. over 1 mile	10	42	5	5	-	16
g. Walked to bus stop	40	15	51	42	64	30
h. Used other public transit	25	7	54	85	58	34
i. Cars in household:						
1. None	42	13	27	48	73	33
2. One	25	24	52	37	18	33
3. More than one	33	63	21	15	9	34
j. Bus trips per month:						
1. 1- 8	23	5	44	9	24	22
2. 9-15	10	9	2	7	-	7
3. 16-24	8	4	20	22	61	15
4. 25 and above	59	82	34	60	15	56
k. Purpose of all bus trips by respondent:						
1. Work	61	94	62	46	6	65
2. Grocery shopping	14	1	4	10	42	9
3. Other shopping	6	1	10	19	28	9
4. Medical/dental	1	1	5	3	9	3
5. School	8	2	10	12	-	7
6. Other	10	1	9	10	15	7
l. Age in years:						
1. 7-15	4	-	2	-	-	2
2. 16-24	23	20	20	10	9	19
3. 25-29	50	68	49	64	36	56
4. 60 and above	23	12	29	26	55	23
m. Handicapped	6	0	1	10	0	3
n. White descent	81	98	99	83	97	91
o. Female	73	64	74	67	52	67
p. Annual household income:						
1. Less than $3,000	26	5	16	21	45	18
2. $3,000-$5,999	20	24	33	26	35	26
3. $6,000-$9,999	31	30	24	24	10	27
4. $10000-$19999	15	36	22	14	10	22
5. $20000 and above	8	5	5	15	-	7

Source: Transportation Division survey results from February-May, 1979, and Transit Authority Section 147 reports for June, 1979.

are due either to the inattention of the survey workers or to the fact that the handicapped may avoid the most crowded buses on each run (where the survey was taken) if there is a choice.

The next two items show high percentages of whites and females in every region except for the nearly even male-female split in Region 10. Finally, the income data in item p confirm the suspicion that more low income persons ride the bus in Region 10 than for other regions; more of the Region 8 people are probably employed than for other regions; and the other three regions lie in between these extremes.

Table 6-2 compares three percentages from Table 6-1 (items k.1, 1.4, and m) with similar information estimated by the transit authorities for June 1979. The June reports show generally fewer work trips, more elderly, and more handicapped than indicated by the survey--all of which can be accounted for by the fact that taking the survey on the most popular run of a route would tend to bias results toward work trips and away from elderly and handicapped usage later in the middle of the day, on less crowded buses. However, the very large differences in work trips between the survey and the June 1979 reports suggest that in some cases the transit authorities may be underestimating work trips.

As an illustration of the diversity of bus service offered, Table 6-3 shows the routes for the five buses in daily use by PanTran in Region 6. These routes and services are representative of the diversity found in other regions as well. A sixth PanTran bus is in frequent charter use, and the other three are used for spares and rotation in and out of preventive maintenance.

The city loop in Martinsburg is a popular service, facilitated by the relatively large size of Martinsburg. Routes C and D provide frequent daily intercity service between the main cities of the region, including an Amtrak station in Harpers Ferry with good service to Washington, D.C. Route E goes to and from a more rural

TABLE 6-2. COMPARISON OF SELECTED SURVEY RESULTS AND JUNE 1979 TRANSIT AUTHORITY REPORTS

	Route					Weighted
	4	8	6	9	10	Average
Work Trips:						
Survey	61%	94%	62%	46%	6%	65%
June 1979 report	28	38	13	20	3	24
Elderly:						
Survey (60 and above)	23	12	29	26	55	23
June 1979 report	22	24	37	18	20	26
Handicapped:						
Survey	6	1	0	10	0	3
June 1979 report	6	4	3	2	17	5

TABLE 6-3. PANTRAN ROUTES

Route Number	Route	Round Trips Per Weekday	Route Length (miles)	Travel Time (min.)
A	Greater Martinsburg City Loop	12	15	60
B	City Loop, opposite direction	12	15	60
C	Ridgeway-Martinsburg-Shepherdstown	6	18	60
D	Martinsburg-Charles Town-Harpers Ferry	5	22	60
E	Martinsburg-Berkeley Springs	1	32	60
Bus Pool 1	GM plant from Ridgeway	1	13	15
Bus Pool 2	GM plant from Martinsburg	1	8	10
Bus Pool 3	Martinsburg-Veterans Center	1	7	15

part of the region only once a day. The three "buspools" are the first runs of other routes that offer reserved bus service to employees at GM and the Veterans Center. These contrast with two buspools of over 20 miles distance in Region 8 that utilize dedicated buses and are driven by employees who keep them at the worksite during the day, eliminating deadheading and prolonging the life of the bus through reduced daily use.

All of the Region 6 buses except the morning buspools will divert from their routes up to several miles at the request of onboard passengers or if someone calls the central office in time for the driver to be notified at the dispatch office or by radio. The extra charge for such service ranges from $.25 to $1.25 depending on distance, and if off-route points become popular enough, the route may be changed. For example, an apartment complex four miles off the Harpers Ferry run, Jeffersonian Manor, has originated so many diversion requests that it has now been added to the standard route.

A similar type of route diversion or reserved bus service is offered now on most routes in all regions, after experiments with dial-a-ride type service that proved very costly per trip served. Runs of 50 miles to pick up a single passenger were not uncommon; directions were a problem on West Virginia's system of small back roads; and the caller would sometimes have gotten another ride while waiting.

Marketing of rural transit services in West Virginia has been limited to date, chiefly consisting of media advertising, contacting large employers to assist in generating transit interest by their workers, and appearances at public occasions such as county fairs. Marketing efforts are up to the manager in all operating agencies, with occasional advice from the state Transportation Division. This obligation is regarded as of prime importance by most managers though some have observed that they would have more time to generate new business if Federal and state paperwork requirements were less demanding.

In Region 6, one person was hired in 1978 by the Planning and Development Council to be available to the region's three rural bus operators exclusively for marketing purposes and to assist in developing ridership on a personalized, line-by-line basis. This experiment ended in March 1978 with dissolution of the intermediary role of the Region 6 Planning and Development Council. There were still, in 1979, virtually no marked bus stops, seats, or shelters, though the state Transportation Division was in the process of purchasing and distributing them. Although rural transit buses can be hailed to stop along their route at any safe spot, there is some advertising and convenience value to signs and seats, especially in shopping areas and at route ends. Also delays in procurement of two-way radios handicapped the dial-a-ride experiments in each region and slowed implementation of effective route diversion bus service in several regions.

6.2 PATRONAGE, PRODUCTIVITY, AND FARE TRENDS

The next six figures, 6-2 through 6-7, show the changes in passenger trips and operating ratios--the percent of operating and administrative expenses covered by revenues--over the period FY78 and FY79. Each chart compares these systems for the variable of interest:

a. Figures 6-2, 6-4, and 6-6 show passenger trips, first for Regions 4 and 8; next for Region 6, with its three systems shown separately after January 1979, when separate reports were filed (no data are available for January 1979); and last for Regions 9 and 10.

b. Figures 6-3, 6-5, and 6-7 show the operating ratios for the same sequence of systems as on Figures 6-2, 6-4, and 6-6, except that the three Region 6 systems are not shown separately after January 1979.

FIGURE 6-2. PASSENGER TRIP HISTORY FOR REGIONS 4 AND 8

FIGURE 6-3. OPERATING RATIO HISTORY FOR REGIONS 4 AND 8

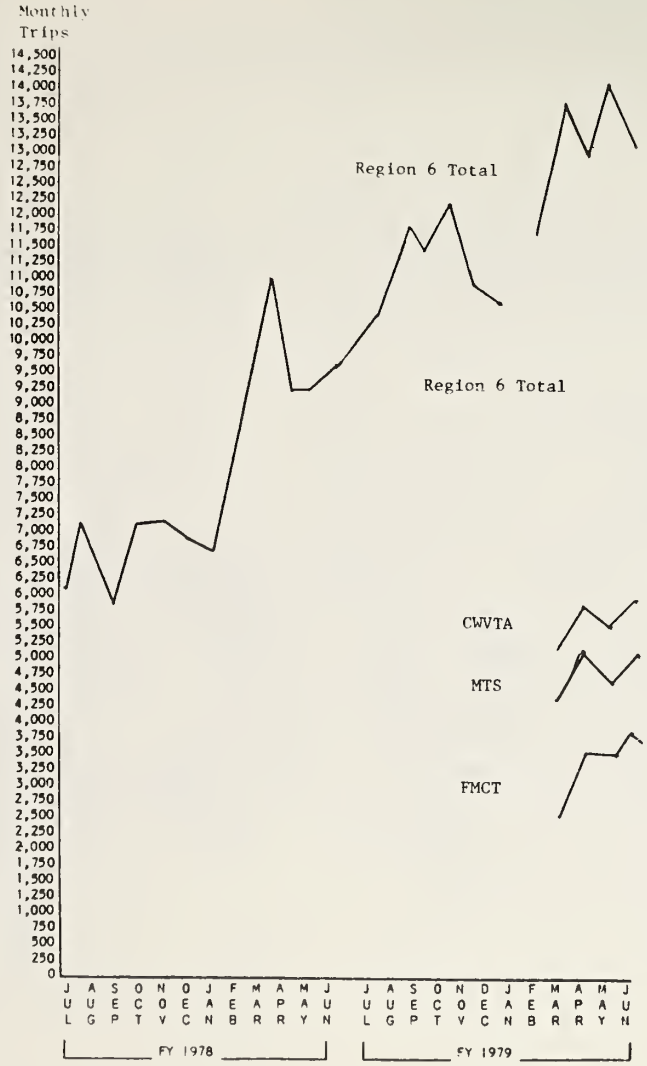


FIGURE 6-4. PASSENGER TRIP HISTORY FOR REGION 6

FIGURE 6-5. OPERATING RATIO HISTORY FOR REGION 6

FIGURE 6-6. PASSENGER TRIP HISTORY FOR REGIONS 9 AND 10

FIGURE 6-7. OPERATING RATIO HISTORY FOR REGIONS 9 AND 10

It is clear from these figures that passenger trip growth has been dramatic in Regions 4 and 8; more gradual in Regions 6 and 9; and almost flat in Region 10. Operating ratios have also shown the steadiest increase in Regions 4 and 8 (except for the June 1979 dip in Region 4) and have fluctuated around average levels in the other regions: about 15% in Region 6, 23% in Region 9, and 14% in Region 10. The reason for the relatively poor performance in Regions 6 and 10 appears to be the practice in Region 10 and for two of the systems in Region 6 of organizing the rural transit service as an adjunct to existing urban transit systems. The underlying cause may lie in the dominance of the urban systems in each case in the more profitable routes, and possibly also in the reduced attention given a rural system that is not the manager's sole responsibility.

The jump in the operating ratio for Region 9 after April 1979 may be traced to a fare increase that had interesting effects. Fares in all regions are calculated by zone, in increments of from 5¢ to 25¢. Prior to April 1979 fares were based on a 5¢/mile rate with a 25¢ minimum except in Region 8 where the basis was 6¢/mile and in Region 10 where the basis was 10¢/mile. Elderly and handicapped passengers paid half fare. On April 1, 1979, PanTran raised the Region 9 fare by adding 25¢ to the ticket cost for each zone, so that the first zone was 50¢, the second 75¢, and so on, instead of 25¢, 50¢, and so on as before. The average fare paid increased by 59%, from 39¢ to 62¢--still at about the mean between the first and second zone fares. The effects on ridership, revenues, and operating ratios are shown below:

	Passenger Trips	Revenues	Operating Ratio
February-March average	7278	$3118	15.0%
April	6936	4851	23.7
May	7131	5797	24.6
June	6957	6342*	26.4
Change, February-March to June	-5.7%	+203.4%	+176%

*Normalized by subtracting $2386, the extra charter revenue in June compared with May, a more representative month. The actual June operating ratio including all charter revenue was 36.3%.

The resulting fare elasticity, taking the average of February and March compared with a modified June, was -5.7/59 (percent change in patronage/percent change in fare), or -0.1. This is lower than typical elasticities of transit fares, which tend to range from -0.15 to -0.33. Lower elasticities indicate either more of a captive ridership, with fewer alternative transportation options, or better financed riders, with lower sensitivity to price changes, or more dedicated riders, with less interest in other alternatives; or perhaps a little of each. In any case, the low elasticity produced a large jump in revenue from the fare increase with little loss in patronage, and suggests that the PanTran service was solidly accepted by its patrons or that they had no other alternatives.

6.3 OTHER PERFORMANCE INDICATORS

Table 6-4 compares selected average data on the five West Virginia rural transit regions (first column) with typical information from other projects in FHWA's Section 147 program. The second column gives the mean for rural bus systems reporting, and the last two columns give the estimated 20th and 80th percentiles for such systems.

The first seven items on the table are descriptive, and in most respects the West Virginia regions are about average but with about 80% more vehicles in operation, and 80% more passenger trips per system. Monthly miles per vehicle are also on the high side. The last five items are performance indicators.

In the first four of these, West Virginia averages toward the favorable end of the scale, and in the fifth, costs per vehicle hour, it is about at the midpoint.

Table 6-5 presents region by region data for the last eight items in Table 6-4 (see items a, c, k-1, l, m-3, m-1, m-2 and m-4) plus other data and performance indicators for which no comparative

TABLE 6-4. SELECTED OPERATING DATA AND CRITERIA COMPARISONS

Item	June 1979 WEST VA Average	Comparative Section 147 Data Mostly from August 1978		
		Mean	20% Percentile	80% Percentile
Area served (square miles)	2,072	2,364		
Service area population	129,792	96,073		
Population density	62%	98.1%		
Monthly trips per 1,000 population	74		20	173
Number of vehicles operated	13.4	7.5		
Monthly passenger trips	9,500	5,200		
Monthly miles per vehicle	3,279		1,841	3,238
Passgr. trips per vehicle hr.	5.2		1.7	5.2
Passgr. miles per seat mile (load factor)	.20		.03	.32
Operating & administrative costs per:				
Vehicle mile	$ .58		$ .36	$ 1.06
Passenger trip	$ 2.65		$1.26	$ 7.40
Vehicle hour	$13.84		$6.52	$20.51

Source: Reference 3-13, plus data from Tables 6-1 and 6-5 for the first column.

TABLE 6-5. RURAL TRANSIT OPERATING DATA FOR JUNE 1979

Item	Reg. 4 MTA	Reg. 8 PVTA	Reg. 6 (3 systems)	Reg. 9 Pan Tran	Reg.10 OVRTA	Total
a. No. of vehicles operated (spares excluded)	16	17	20	6	7	66
b. Vehicle mi. driven (000)	59.8	58.1	54.6	24.9	19.0	216.4
c. Passenger trips (000)	12.9	12.2	13.1	7.0	2.6	47.7
d. Passenger miles (000)	150.2	206.1	130.6	60.7	64.9	612.5
e. Seat miles (000)	966.8	923.6	656.7	379.1	171.2	3097.4
f. Vehicle hours	2,423	1,820	2,520	1,292	1,079	9134.0
g. Gallons of fuel	5,310	6,608	5,653	1,700	3,203	22,474
h. Operating & administrative costs (000)	$28.1	$28.4	$31.6	$24.0	$14.4	$126.5
i. Revenues (000)	$ 6.3	$ 9.3	$ 8.6	$ 8.7	$ 2.0	$ 34.9
j. Subsidy (h-i) (000)	$21.8	$19.1	$23.0	$15.3	$12.4	$ 91.6
k. Vehicle miles per:						Average
1. vehicle (b/a)	3,737	3,417	2,730	4,150	2,714	3,279
2. gallon of fuel (b/g)	11.3	8.8	9.7	14.6	5.9	9.6
l. Passenger trips per vehicle hour (c/f)	5.3	6.7	5.2	5.4	2.4	5.2
m. Passenger miles per:						
1. Vehicle mile (d/b)	2.5	3.5	2.4	2.4	3.4	2.8
2. Passenger trip (d/c)	11.6	16.9	10.0	8.7	25.0	12.8
3. Seat mi. (load factor d/e)	.16	.22	.20	.16	.38	.20
4. Gallon of fuel (d/g)	28	31	23	36	20	27
n. Operating & administrative costs per:						
1. Vehicle mile (h/b)	$ 0.47	$ 0.49	$ 0.58	$ 0.96	$ 0.75	$ 0.58
2. Passenger trip (h/c)	$ 2.18	$ 2.33	$ 2.41	$ 3.43	$ 5.54	$ 2.65
3. Passenger mi. (h/d)	$ 0.19	$ 0.14	$ 0.24	$ 0.40	$ 0.22	$ 0.21
4. Vehicle hour (h/f)	$11.60	$15.60	$12.54	$18.60	$13.34	$13.84
o. Subsidy cost per trip (j/c)	$ 1.69	$ 1.57	$ 1.76	$ 2.19	$ 4.77	$ 1.92
p. Operating ratio (i/h/100)	22.7%	32.8%	27.3%	36.3%	13.9%	27.6%

Source: Transit Authority Section 147 operating reports for June 1979; and Crain & Associates estimates (for item g in Regions 6 and 9).

information of the type shown in Table 6-4 is available. One of the interesting items is passenger miles per gallon of fuel (m-4), which ranges from 20 to 36--more or less than range of average-occupant automobiles.

Another interesting statistic is o, the subsidy cost per trip, which is fairly close except for Region 10 where it is over double that of Region 9, the next highest. The low operating ratio for Region 10 compared with others also identifies it as the most costly of the five. However, referring back to Figure 6-6, it is clear that Region 10's operating ratio has on the average been close to that of Region 6, which showed an increase in May and June of 1979 due principally to increased charter revenues and decreased costs for Fairmont-Marion County Transit. Also, a comparison of the five Region 10 statistics with corresponding Section 147 data in Table 6-4 (Table 6-5, items 1, m-3, n-1, and n-4) show that Region 10 is within or better than the 20th to 80th percentile for all five items.

A final observation on Table 6-5 is connected with the relatively high vehicle miles per bus in Region 9, about 27% above the average for all buses, which as shown in Table 6-4 is already high for Section 147 systems. Region 9 being less hilly than other regions facilitates longer bus routes, though the Mercedes buses should be able to stand up. Nevertheless, recent bus breakdowns have necessitated dropping the Berkeley Springs route until more equipment is ready for the road. Probably this is due more to the former lack of a preventive maintenance program in Region 9, which has now been remedied, than to high bus mileage, but the experience does indicate the hazards of neglecting equipment in a small bus system with limited backup buses.

7. IMPACTS OF TRIP ON THE TRANSIT INDUSTRY

7.1 TRANSIT OPERATORS

The West Virginia transit industry is dominated by small taxicab companies and small transit operators, many of them marginal businesses with poorly-maintained equipment. It is difficult to obtain reliable general information concerning the financial impacts of TRIP on this group. For example, the West Virginia transit industry has continued its gradual economic decline in spite of TRIP. The decline would likely have been faster, especially for taxicabs, in the absence of TRIP; but without a control group, no one can say by how much. Moreover, a provider survey was conducted by West Virginia University (see Section 2.2) only in 1976, missing most of the impacts of new rural bus service, which was building rapidly between 1976 and 1979. Whatever impacts are measured by those surveys are therefore due principally to the TRIP ticket program rather than to the provider development program.

Results of the 1976 West Virginia University provider survey are presented in Table 7-1, which gives comparative data for 1974 and 1976 on the same 72 bus and taxi companies that were examined in Section 2.2. The table shows declines of several percent in all of the provider statistics except mean total receipts, which increased by 1%, and labor costs as a share of total receipts, which increased by 7%--more than enough to wipe out the 1% increase in receipts. Thus it is reasonably clear that the TRIP ticket program did not halt or reverse the decline of West Virginia's transit industry in its first year of operation, from 1975 to 1976, but without a control group or later data it is impossible to say more about its quantitative effects.

TABLE 7-1. CHANGES IN PROVIDER STATISTICS BETWEEN 1974 OR 1975* AND 1976

	1974(5)	1976	% Change
Mean number of vehicles owned	8.125	7.423	-9.5%
Mean number of seats per company	142.3	123.3	-15.4%
Mean total miles driven (thousands)	382.9	357.2	-7.2%
Mean persons hauled (millions)	436.9	366.2	-19.3%
Mean total receipts (thousands)	$112.6	$113.7	+1%
Mean percent of receipts paid for labor	39.9%	42.7%	+7.1%
Mean employment:			
Full-time	13.16	11.91	-10.5%
Part-time equivalents	.64	.46	-39.5%
Total	13.80	12.37	-11.6%
Sample size	72	72	

*For firms not established until 1975

Source: Reference B-4.

In spite of the general decline of the industry, providers had a strong positive attitude toward TRIP. A majority believed that its principal advantage was helping the poor, old, and handicapped or increasing their mobility, and about 40% thought that increasing transit companies' revenues was its principal advantage. However, not one company believed that TRIP would propel the industry to a long-run self-sustaining state of health. The main complaint providers had with TRIP was delays in being reimbursed. Table 7-2 summarizes providers' suggestions for improvement in TRIP.

Besides the strong backing for faster reimbursement, several other suggestions are interesting. Eight providers wanted to increase TRIP's economic impact on providers--how was not specified--and several other answers suggested increases in subsidy levels or coverage of providers' costs. The five providers suggesting elimination of government subsidized buses were probably taxi companies resentful of the competition (see the next subsection for details) Finally, the suggestion to "eliminate conversion of TRIP tickets

TABLE 7-2. PROVIDERS' SUGGESTIONS FOR IMPROVING TRIP

Suggestion	Number of Providers
Immediate ticket reimbursement through local banks, welfare offices, etc.	15
Increase TRIP's economic impact on providers	8
Change ticket denominations	5
Eliminate government subsidized buses	5
Pay providers' postage and bookkeeping costs	4
Increase rural area subsidy	4
Increase TRIP advertising and education	4
Move TRIP to a State Department of Transportation	2
Eliminate conversion of TRIP tickets into cash by "users"	1
Adopt a punch card system to replace tickets	1
Sample size	72

Source: Reference B-4

into cash by users" indicates that there was some problem with at least one provider being asked to cash tickets. However, no other evidence of fraud or abuse of the TRIP ticket system has come to our attention.

7.2 TAXI-BUS COMPETITION

The significant increase in taxi use by TRIP ticket users has already been documented in Tables 5-7 and 5-8 of Chapter 5. However, as with bus companies, no overall impact data are available.

Taxi companies were affected by the new rural bus service in two ways. Bus service substituted for some of their business, particularly with social service agency clients. However, many of the new bus passengers would take taxis for one leg of the trip, often using TRIP tickets for this purpose.

By now, most taxi operators welcome the rural bus transit development efforts, but many opposed new rural bus service at first as unfair competition. In some cases, bus routes have been

changed or higher in-town fares have been levied to reduce competition with taxis, usually at the behest of the transit authority board after hearing taxi operator protests. No consideration appears to have been given to improved regulation or facilitation of taxi services in place of the publically operated bus systems, or to seeking taxi company coordination of social service agency transportation needs, but most taxi companies are too small for such a venture.

8. COORDINATION OF TRANSPORTATION BY AND FOR SOCIAL SERVICE AGENCIES

8.1 BACKGROUND

One of the objectives of Section 147 demonstration projects is to encourage a coordinated approach to organizing and financing public transportation. The main problem in such coordination, and the principal focus of this chapter, is coordinating the provision of transportation for clients of social service agencies.

A large range of Federal categorical grant programs have developed that fund the purchase or operation of vehicles by such agencies so that they can provide transportation for their own clients, leading to two problems. In many cases, the agency is ill equipped to operate and maintain the equipment, or would rather not do so if other public transportation were available for their clients. In other cases, multiple grants to nearby agencies result in duplication and underutilization of equipment and services that could more efficiently be operated jointly. In many states, effective solutions to these problems have been blocked by regulatory or institutional issues or by sheer inertia, with no one taking the initiative to resolve them.

West Virginia had two sensible answers to these problems: first, to conduct a central review in the Public Transportation Division of most new applications for Federal funding of social agency transportation equipment; and second, to provide such services wherever possible through the new regional transit authorities in the five regions served. These two activities are described next.

8.2 STATE REVIEW AND COORDINATION

The type of vehicle grant reviewed by the Public Transportation Division was that authorized by UMTA under Section 16(b)(2) of Public Law 93-87, referred to as the 16(b)(2) program. An elaborate set of application instructions, running to 62 pages, was prepared by the Transportation Division and sent to applicants with a letter from the Governor explaining that the grant required 20% local matching plus demonstration by the recipient organization that it has the resources to cover the vehicle's operating costs over its lifetime. A few other Federal sources of social service agency transportation grants were available through state government programs on aging or welfare, but these sources tended to be used for vehicle operating funds rather than vehicle procurement.

The core of the 16(b)(2) application was a questionnaire about the organization's need for the requested vehicle, why existing transit or taxi services could not meet the needs, how fully the vehicle would be utilized, and how the vehicle's use would be coordinated with other "interested agencies and transit operators." Public notices had to be issued inviting comments from all interested public, private, or paratransit operators, and a "sign-off" was required from all such organizations.

In one case a regional transit authority manager refused to sign off on the grounds that he could provide the service, and although there were some bitter feelings, the application was denied. In other cases, service has been provided by transit authorities before an application is filed. Another example of 16(b)(2) coordination results in the combined request of Doddridge County Mental Health Center and the Commission on Aging, where a single van was requested to serve two facilities. Finally, several applications have been turned down due to objections by taxi companies who claimed that they could provide the service needed.

in all, seven applications were denied for these reasons between 1977 and 1979.

One interesting feature of the state 16(b)(2) review process is the rating system used in ranking the merits of grant applications. Ratings are based on assignment of merit points to specific answers on the preliminary grant application.*

The 16(b)(2) review process was staffed by one professional with some additional help during peak work periods. Review and final approval was performed by the Interagency Coordinating Committee portrayed earlier, in Figure 3-2 of Chapter 3. The level of successful grant applications varied by year, starting with 12 in the FY76 program and growing to 20 in both FY77 and FY78. Some grants entailed purchase of more than one vehicle. In several cases, the number of vehicles requested was reduced through raising questions about the needs of low-rating projects. Federal funding, 80% of the total, was $283,000 for FY77 and $321,000 for FY78, and the "FY78" program was not in fact submitted until FY80. The other 20% of the funding was put up by the grant recipient. Technically, the 16(b)(2) review process was not counted as part of the TRIP program, but it was carried out by the same state office and was coordinated with TRIP.

8.3 SOCIAL SERVICE AGENCY COOPERATION WITH TRANSIT AUTHORITIES

Most of the transit authorities have agreements with social service agencies in their areas, typically with from three to five agencies, to provide various types and levels of service. For example, Table 8-1 shows the five agreements presently in effect for the Mountain Transit Authority in Region 4 plus an agreement on

*The Public Transportation Division will be glad to send a copy of the rating procedures in response to any requests.

TABLE 8-1. MOUNTAIN TRANSIT AUTHORITY
COOPERATIVE SERVICE AGREEMENTS

Agency	Agreement	Nature
Greenbriar County Committee on Aging	Written	First MTA service was leasing the Committee a bus, which they maintained and drove. Now MTA provides the driver as well, who daily works at the Committee's direction at about MTA's cost.
Greenbriar Center in Lewisburg	Oral	MTA provides daily route deviation service to the homes of senior citizens who live in White Sulphur Springs and participate in the Center's foster grandparents program.
Nicolas County Mental Health Center, Summersville	Oral	The MTA bus to Craigsville deviates to serve the mental health group home, and also to bring and pick up daily workshop attendees at the Center. Riders pay the standard bus fare.
Federal Correctional Institution, Alderson	Written	Route deviation service is provided from Alderson (one mile distant) daily at MTA's estimated cost of $30/month.
Senior citizens organizations in Fayette County	Oral	The new MTA maintenance facility in Fayette Couty services senior citizen vans, at a saving in costs of both parts and labor compared with private garages.
Greyhound Bus Lines	Oral	MTA schedules are aligned with Greyhound's, to the extent possible, to facilitate transfers at their common terminals in Lewisburg and Gauly Bridge.

scheduling with Greyhound Bus Lines. These agreements have evolved over time and are both well integrated with MTA operations and appreciated by the agency served. Route deviation is the most common type of agreement, where a "fixed" route will be varied either to serve a nearby facility or to pick up clients of the facility at or near their homes.

Another illustration of a social service agency contract comes from Region 8, where a 20-mile run is made every Tuesday by a Potomac Valley Transit Authority bus to pick up interested elderly persons designated by the Hardy County Committee on Aging at their homes in Wardensville and take them to Moorefield for shopping, doctors appointments, and nutrition center visits. In contrast, the Grant County Committee on Aging, also in Region 8, operates its own van because the transit authority buses are too large to negotiate some of the narrow lanes to their clients. A final example is from Region 9, where a PanTran bus stops off on its regular schedule inside the Veterans Center near Martinsburg for a well-patronized ride to town, to return later in the day. This stop doesn't require any special agreement, but does provide service that would otherwise be sorely missed and would perhaps have to be supplied by the Veterans Administration.

Comparing the scope and relationship of the state 16(b)(2) review and the transit authority cooperative agreements, it appears that the transit authorities could be helpful in providing transportation for social service agency clients when the central destination was near a fixed route bus line or could be served by buses surplus to the fixed-route needs. At the same time, there were clearly many other cases where a 16(b)(2)-financed social service agency vehicle was the only viable answer.

9. CONCLUSIONS AND TRANSFERABILITY

This chapter reports on our conclusions regarding the major evaluation issues identified in Section 1.5.3, which were: the extent to which original TRIP objectives were met and how realistic were the objectives; how adequately program administration was carried out; how well did the innovative features of the program work; and finally, which of the features are potentially transferrable to other areas.

9.1 PROGRAM PERFORMANCE AND VIABILITY

As noted in Section 1.3, the original goals of TRIP were to help meet the needs of elderly and handicapped, low income people; provide more customers and revenues for the local transportation industry; and provide and promote new and improved transportation services all across the state. The third goal was later reduced to providing new and improved services in the five regions that joined the program, and the minimal numerical targets for TRIP ticket sales were reduced from 103,870 to 19,030. Measured against its original goals of 103,870 monthly ticket sales and improved transit service in 11 regions, the attainment of 13,000 monthly ticket sales and improved transit service in five regions may seem low. However, the shortfalls in ticket sales were certainly due in large part to initial overestimation of demand, and the hope of complete state coverage for transit improvements was denied mainly by delays in implementation, funding shortfalls, inflation, and the lack of interest in participating among some regions. In retrospect and in brief, the original numerical objectives were overoptimistic.

In the five regions served by transit operations, however, and statewide for the TRIP ticket program, many examples of achieving more specific program objectives can be cited.

1. The TRIP ticket program significantly broadened travel opportunities for some 12,200 elderly or handicapped persons monthly, leading to reduced transportation costs, increased mobility, and frequently to reduced need for an automobile. For TRIP users, there were significant shifts toward taxi use and away from walking and riding in someone else's car. The taxi industry was another clear beneficiary of the ticket program.

2. The rural bus systems are generally highly regarded by their passengers and enjoy local political support. Many workers are saving commuting costs and some are dependent on the bus system for their commute trip, so local employment is facilitated. Passenger support of the systems is illustrated by unsolicited letters to the transit authorities (one is reproduced in Appendix B) and by other letters, not always unsolicited, to the Governor and state legislature when funding renewals are threatened.

3. Employers served by rural buses are appreciative of the reduced parking requirements and increased access to labor pools, and downtown merchants claim that the service increases trade and reduces parking problems.

4. State coordination and support of social service agency transportation has improved, and good coordination of social service agency transportation with the new rural bus service has been achieved.

The cost efficiency of the rural bus systems was examined in Chapter 6 and found to be high for Regions 4, 8, and 9. Efficiency was lower in Region 6 and still lower, though within the eightieth percentile of all Section 147 systems for which data were available, in Region 10.

The rural bus systems also pioneered or tested a variety of new approaches: some novel, some new to West Virginia, and some new to the rural areas that were served. Eleven such innovations are summarized in Table 9-1. Each of these was successful, though the applications of d, g, h, j, and k were not widespread among the regions, and the rural route add-ons to existing systems (item i) did not do as well financially as the wholly new rural systems. The sources of the innovations ranged from the original plans for the program, to later state initiatives, to the local transit operators. They were a notable achievement of the TRIP program and most of them deserve to be emulated in other rural areas along with two newer options that were not well developed at the time of TRIP, rural vanpooling and carpooling.

TABLE 9-1. SUMMARY OF TRANSIT DEVELOPMENT INNOVATIONS

a. Pickups at any safe place, including short route diversions
b. Linking communities with each other and with activity centers frequented by seniors
c. Scheduling AM and PM park and ride service along employment arteries, complemented by midday local and senior-oriented trips
d. Purchase of school buses for popular routes
e. Providing regular bus service to recreation and transportation centers such as Harper's Ferry
f. Promotion of rural charter and contractual service
g. Initiating downtown circulation service in medium-size cities
h. Paying bonuses of $25 to drivers for patronage increases of 15% or more from previous monthly high, in Region 4
i. Adding rural bus routes to existing bus service in several towns
j. Hiring a marketing person to promote travel on specific routes, in Region 6
k. Use of employees as part-time bus drivers to and from their worksites, where the bus would be parked until return trip

The program administration for TRIP has been diligent and honest, with the principal weaknesses being delays in obtaining professional transportation staff and a consequent shortage of technical assistance to the regional bus systems. These and other problems are illustrated by the following suggestions for improvement of TRIP administration by a West Virginia University report in 1977 (Reference B-4):

1. Improving coordination with other community service agencies

2. Exploring marketing strategies aimed at the noneligible population and developing target-group-specific promotional strategies

3. Hiring more transportation-qualified and interested staff into the state Transportation Division

4. Preparing a TRIP program manual (presumably for rural transit operations)

5. Expanding both the number and type of rural transportation services as originally planned in areas where such services are now inadequate

6. Studying the effects of variations in the discount value, eligibility requirements, and monthly ticket allotments, plus other subsidy strategies.

The first of these suggestions, and to some extent the second, has been followed through written marketing plans prepared by the Public Transportation Division (Reference C-6). As of June 1, 1979 the division was headed by a transportation professional but had no others on the staff. There was also no TRIP program manual, a serious deficiency. Other available materials on rural bus operations could readily be adapted to this purpose. The fifth suggestion would clearly require more time and funds than the Public Transportation Division has in prospect, whatever its merits. A partial solution to needed funds would be modest fare increases, of the type successfully levied by PanTran in April 1979.

No serious consideration was given to the sixth suggestion, for studying variations of ticket eligibility and pricing policies plus "other subsidy strategies." We believe that the Department of Welfare's failure to study modifications in the ticket program was due to three reasons: lack of conviction that any substantial changes were needed, shortage of staff to conduct a thorough appraisal of possible improvements, and lack of incentives in the demonstration program itself to make any changes. The fact that termination of Federal support in June 1979 led to an immediate doubling of the $1 price for ticket books, without serious effects on sales, suggests that at least some pricing options were available earlier but that there was no incentive to adopt them.

There were two principal innovative features of the TRIP ticket program: usability of the discounted tickets for all modes of public transportation, and inclusion of a maximum income test in the eligibility requirements. The first of these innovations certainly broadened the market for the discounted tickets, while the second one restricted the market and added to the administrative costs of the program. The net result was a user-side subsidy program tightly focused on bringing substantial increases in mobility to the group in most need of help.

To illustrate the foregoing conclusion, we compared the financial results for the TRIP ticket program with two other statewide approaches to public transportation subsidies for the elderly--Pennsylvania's free transit program for senior citizens and New Jersey's reduced transit fare program. Please keep in mind during this comparison that these are <u>three different approaches to very different markets</u>. The comparison is to illustrate differences more than similarities. In particular, the group served in West Virginia has more serious travel problems and less availability of good bus service than groups served in the other two states. Consequently, the West Virginia user group is more dependent on taxi service, which is not covered at all by the Pennsylvania or New Jersey programs.

Table 9-2 provides a detailed comparison of the West Virginia Pennsylvania, and New Jersey subsidy programs. Both the Pennsylvania and New Jersey programs aimed at broad coverage of the elderly population (line c) at low unit costs per trip (line k). These two programs achieved some of the same results as TRIP: greater user mobility, travel cost savings, and an interesting category in Pennsylvania--cash savings to over half of the users resulting fro easier travel to lower priced stores and sales--that was not documented for TRIP or New Jersey.

Line f2 in Table 9-2 indicates higher administrative costs fo TRIP than for the other two state programs. The difference in administrative costs is even more dramatic when expressed per acti user per month. For West Virginia this is $1.86, for Pennsylvania 0.4¢, and for New Jersey 2.8¢. The only apparent reason for the higher costs of West Virginia's program are its additional, income related eligibility requirements and the sale of tickets through a state agency (in New Jersey, tickets are sold mainly through banks and the Pennsylvania program operates without tickets). Another interesting statistic is active users as a percent of the populati line n. There are proportionately four to five times more active users in the other two state programs (3.4 and 4.8% of the population versus 0.68% for West Virginia), illustrating the greater stringency of the eligibility requirements in West Virginia. It could also be said that TRIP is much better targeted on the needy group, so wastes far less resources on elderly and handicapped persons with adequate means to travel.

9.2 IMPLICATIONS FOR TRANSFERABILITY

The most innovative feature of the TRIP ticket program, multimodal use of discounted tickets, is readily transferrable to other areas since little administrative effort is needed to monitor such

TABLE 9-2. DATA ON SELECTED TRANSIT USER SUBSIDY PROGRAMS

Feature	West Virginia	Pennsylvania	New Jersey
a. Title	Discounted ticket part of Transportation Remuneration and Incentive Program (TRIP)	Free Transit Program for Senior Citizens	New Jersey Reduced Transit Fare Program
b. Administering agency; program start date	West Virginia Department of Welfare; July, 1974	Pennsylvania Bureau of Mass Transit Systems; July, 1973	New Jersey DOT, Office of Special Programs; May, 1975
c. Eligibility	Persons of low income and either at least age 60 or handicapped	Persons age 65 or older	Persons either at least age 62 or handicapped (only 1.9% are handicapped)
d. Type of service	Authorization to purchase $8 worth of transportation tickets per month for $1, or up to $32 worth per month for $4 in hardship cases, from local welfare offices.	Unlimited free transit during off-peak hours (excepting only weekdays from 6 to 9 AM and 3:30 to 6:30 PM) upon display of medicare card or senior citizen identification card (provided by local transit agency)	Half-fare transit tickets good from 9:30 AM to 4 PM and 7 PM to 6 AM weekdays and all day weekends and holidays. Obtainable from participating banks and Offices on Aging, without limit on numbers
e. Participating systems	Nearly all taxi, transit, and intercity bus and train systems in the state	Nearly all fixed-route, scheduled transit systems in the state	Nearly all fixed-route, scheduled bus transit systems,which are all private (also commuter railroads, under different financing)
f. Annual cost			
1. Subsidy	$1,092,000	$14,981,759	$4,500,000
2. Administration	273,000	18,241*	120,000
3. Total	$1,365,000	$15,000,000(FY '78)	$4,620,000(FY '79)
g. Funding sources	Formerly federal & state, now state only	State lottery fund	State general funds
h. Annual trips	1,229,729	61,009,000	14,000,000
i. Active users	12,200	400,000*	350,000*
j. 1975 state population	1,799,000	11,860,000	7,333,000
k. Cost/trip (f3/h)	$1.11*	$.25	$.33
l. Annual cost/user (f3/i)	$111.88	$37.50	$13.20
m. Monthly trips/user (h/i/12)	8.40	12.70	2.59
n. Users as percent of population (i/j x 100)	0.68%	3.4%	4.8%
o. Estimated percent of 1976 population 65 and older (vs 10.7% nationally)	11.8%	11.8%	10.7%
p. Percent of persons in 1975 below poverty level (vs 11.4% nationally)	15.1%	9.7%	8.1%

*Crain & Associates estimate, based on information supplied by the supervising agency.

Sources: West Virginia Department of Welfare; Reference C4; Correspondence with New Jersey DOT and Pennsylvania Bureau of Mass Transit Systems; Statistical Abstract of the United States, 1977, pgs. 11, 28, and 458.

a program. More effort would be advisable than was accorded its administration in West Virginia, however, to assure that transportation providers are paid promptly after submission of tickets. Perhaps immediate payment should be the rule, with a follow-up audit to verify the provider's count of tickets and make any other needed checks.

The other innovative feature of the ticket program, an income limitation for eligibility, entails additional administrative cost to process applications, verify eligibility, and distribute the tickets. Not every area will want to go to the trouble. However, perhaps there could be a short-cut through relying on the honor system for claiming eligibility but recording the distribution of tickets by person to keep the number obtained to specified limits. Spot checks could still be made of actual eligibility, much as such checks are now made on fare payment for transit systems that do not verify that every passenger has a ticket, at much lower cost than checking every case. Another important feature would be to put a termination date on the tickets. TRIP began doing this only in 1982, with a ticket life of one year, to reduce a considerable contingent liability for unredeemed tickets from past years.

One barrier to new TRIP-type ticket programs may be financing Nevertheless, the TRIP user-side subsidy model seems by far the cheapest route to increase the mobility of a highly select group of the transportation disadvantaged, and should fare well in comparison with direct subsidies of transit systems for achieving that end.

The 11 transit development innovations that were listed in Table 9-1 all did reasonably well in West Virginia. They appear to be eminently transferable to similar situations in other rural areas.

GLOSSARY

AOA. Administration on Aging, part of the U.S. Department of Health, Education, and Welfare.

AUTHORIZATION CARD. Document permitting the purchase of up to three books of TRIP tickets per household, and the source of statistical data on users.

BONUS VALUE. Difference between the $8 face value of a book of TRIP tickets and the price to users, now $1 but formerly ranging from $1 to $5.

CWVTA. Central West Virginia Transit Authority, one of the three rural transit contractors in Region 6, located in Clarksburg.

DEMAND RESPONSIVE. Bus, van, or taxi service provided to a user on call, in contrast to scheduled service that runs only on specified routes and time schedules.

FEEDER. Transportation service that connects users living on secondary, unimproved, or primitive roads with service on the primary highway network.

HOLLOWS. Long, narrow valleys typically accessed by winding, dead-end roads -- a common feature of West Virginia terrain.

IDENTIFICATION CARD. Permanent document issued to TRIP users upon certification of eligibility; used with authorization card to purchase discounted TRIP tickets.

MCT. Marion County Transit, one of the three rural transit contractors in Region 6, located in Fairmont.

MTA. Mountain Transit Authority, the contractor operating in Planning and Development Region 4 out of Summersville.

MTS. Monongahela Transit System, one of the three rural transit contractors in Region 6, located in Morgantown.

OVRTA. Ohio Valley Regional Transit Authority, the rural transit contractor (and local bus operator) of Region 10 centered in Wheeling.

PAN TRAN (or EPTA). Eastern Panhandle Transit Authority, the rural transit contractor in Region 9 operating out of Martinsburg.

PHS. Public Health Service, an agency of the U.S. Department of Health, Education, and Welfare.

PVTA. Potomac Valley Transit Authority, the rural transit contractor in Region 8 operating from Petersburg.

PROVIDERS. Common carriers or individuals that meet Public Service Commission and TRIP requirements and accept TRIP tickets for fares.

ROUTE DEVIATION. Minor departures from a fixed bus route to pick up or drop off passengers.

RURAL. Places outside urbanized areas with a population under 2,500 by Census Bureau definition, or under 5,000 in some federal transportation legislation.

SHARED RIDE TAXI SERVICE. Accommodating trips by unaffiliated but concurrently riding passengers with different origins or destinations simultaneously by the same vehicle using route deviations. Shared riding usually involves one fare calculation for each origin-destination set.

SUBSCRIPTION SERVICE. A type of demand-responsive bus, van, or taxi service in which users call in or sign up in advance (typically at least 24 hours ahead or by the preceding afternoon for pick-up. Such rides are pooled to the extent permitted by timing, geography, and vehicle capacity.

TRANSIT DEVELOPMENT PLAN (TDP). Transit planning effort with a five-year horizon.

TRANSIT AUTHORITY. A local or regional body legally constituted to administer, oversee, and/or operate public transit services within a defined geographic area of West Virginia.

TRIP. Acronym for Transportation Remuneration Incentive Program.

URBAN AREAS. Places with populations over 2,500 or 5,000 (see definition of rural).

URBAN CENTER. Any city of 10,000 or greater population.

USERS, OR TRANSIT USERS. Anyone, including TRIP ticket holders, who utilizes public, private, or non-profit transit services, including taxicabs.

USER-SIDE SUBSIDY. Government subsidies to transit users based on the amount of transit use. Producer-side subsidies by comparison are based on factors other than use, though both types may involve payments directly to the producer.

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APPENDIX A
PASSENGER SURVEY QUESTIONNAIRE

APPENDIX A

RURAL HIGHWAY PUBLIC TRANSPORTATION DEMONSTRATION PROGRAM
DATA INTAKE FROM 09
PASSENGER SURVEY QUESTIONNAIRE

PROJECT SPONSOR:_____

INTERVIEWER'S NAME:_____

Form		Project			Interview No.				Card No.		
0	9								0	1	
Cols. 1	2	3	4	5	6	7	8	9	10	11	12

Date of Interview ___/___/___ (Example: for July 4, 1976: 07/04/76)
Cols. 13 14 15 16 17 18

Hello, my name is_____. I am working on a survey to help us improve this transportation program for you. I would like to take a little of your time to ask a few questions. All of your answers will be held in the strictist confidence. Has anyone else interviewed you this week or last week concerning the transportation project? (IF YES, THANK RESPONDENT AND TERMINATE INTERVIEW).

CIRCLE NUMBER AFTER ANSWER

1. (CODE BY OBSERVATION: SEX OF RESPONDENT) — Col. 19
   - Male.....-1
   - Female.....-2

2. How far is the bus stop from your house? — Cols. 20-21
   - Stops at my house (SKIP TO Q.4).....-00
   - Less than 1/4 mile.....-01
   - 1/4-1/2 mile.....-03
   - 1/2-1 mile.....-06
   - More than 1 mile.....-12

3. (IF NOT PICKED UP AT HOME) How did you get to the bus stop? (DON'T READ CHOICES) — Col. 22
   - Walk.....-1
   - Family car.....-2
   - Friends/Neighbors.....-3
   - Other.....-4

4. Besides this service, is there any other public transportation available to you within one-half mile? — Col. 23
   - Yes.....-1
   - No.....-2

5. How many vehicles are there in your household in running condition.....Number ☐ Col. 24

6. Including yourself, how many people are there in your household?.....Number ☐ Col. 25

7. How many trips per month do you make using this transportation service? (COUNT EVERY TIME A PERSON GETS ON AND OFF A VEHICLE AS ONE TRIP)..... Cols. ☐☐☐ 26 27 28
   (Times per month)

Form	Project	Interview No.
0 9		

Cols. 1 2 3 4 5 6 7 8 9

CODES FOR MEANS OF TRANSPORTATION

This service.....1
Auto: driver.....2
Auto: passenger with family.....3
Auto: passenger with friends/ neighbors.....4
Long distance bus.....5
Local bus other than this service.....6
Taxi.....7
Social Agency.....8
Walking.....9
Other.....0

8. Including today, where are all of the places you went during the past week using this service, or any other means of transportation? Did you do...(PROBE EACH PURPOSE) (b) How do you get there? (c) How often do you go? (d) How much does it cost to go there? (BE SURE TO GET ONE-WAY TRIP COST EVEN IF THIS MEANS ASKING ROUND-TRIP COST AND DIVIDING BY TWO)

   Before this service started, where didyou usually go each week? (PROBE EACH PURPOSE.) (e) How did you get there? (f) How often did you go? (g) How much did it cost to go there? (BE SURE TO GET ONE-WAY TRIP COST)

Card No. (10-12)	(a) Purpose	(b) Transportation (13)	(c) Frequency (14-15)	(d) Typical One-Way Trip Cost (16-19)	(e) Transportation (20)	(f) Frequency (21-22)	(g) Typical One-Way Trip Cost (23-26)
02	Work		/wk	$		/wk	$
03	Grocery Shopping		/wk	$		/wk	$
04	Other Shopping		/wk	$		/wk	$
05	Medical/ Dental		/wk	$		/wk	$
06	Social/ Recreation		/wk	$		/wk	$
07	Church		/wk	$		/wk	$
08	Welfare/ Food Stamps		/wk	$		/wk	$
09	Senior Centers		/wk	$		/wk	$
10	Nutrition Sites		/wk	$		/wk	$
11	Civic/ Community Action		/wk	$		/wk	$
12	School/ Educational		/wk	$		/wk	$
13	Transfer Mode		/wk	$		/wk	$

Form		Project			Interview No.				Card No.		
0	9								1	4	

Cols. 1 2 3 4 5 6 7 8 9 10 11 12

Circle Number After Answer

(ASK ONLY FOR THOSE USING SERVICE FOR WORK TRIPS--FOR ALL OTHERS, SKIP TO QUESTION NO. 10.)

9. Would you have to leave your present job if this service was no longer available? — Col. 13
   Yes....-1
   No....-2

10. Which of the following groups describes your age? — Col. 14
   Less than 15 yrs....-1
   15-24....-2
   25-34....-3
   35-44....-4
   45-59....-5
   60-64....-6
   65-74....-7
   75 and above....-8

11. (ASK ONLY IF NOT OBVIOUS; CIRCLE CODE) What is your race or ethnic decent? — Cols.
   White, not of Spanish decent.... 15-1
   Black/Negro.... 16-1
   Japanese, Chinese, Filipino.... 17-1
   American Indian.... 18-1
   Spanish decent.... 19-1
   Other (Specify) _____.... 20-1

INTERVIEWER: IF RESPONDENT IS BLIND OR UNABLE TO READ, ASK FOR HIS TOTAL INCOME USING CARD AND CIRCLE APPROPRIATE CATEGORY. FOR ALL OTHER RESPONDENTS, HAND THEM CARD AND ASK:

12. What was the total income for all persons in your household over the past 12 months before taxes? We don't need to know the exact amount; just tell me the letter next to the approximate amount. — Cols. 21-22

Annual	Monthly
Under $1,000	A. Under $83....-01
$ 1,000-1,999	B. $ 83-166....-03
$ 2,000-2,999	C. $ 167-249....-05
$ 3,000-3,999	D. $ 250-333....-07
$ 4,000-4,999	E. $ 334-416....-09
$ 5,000-5,999	F. $ 417-499....-11
$ 6,000-7,499	G. $ 500-625....-14
$ 7,500-9,999	H. $ 626-833....-18
$10,000-14,999	I. $ 834-1,249....-25
$15,000-19,999	J. $1,250-1,666....-35
$20,000 & over	K $1,667 & over ....-60

Don't know....-98
Refused to answer....-99

INTERVIEWER: TELL RESPONDENT "Thank you very much for your time."

13. INTERVIEWER: (DON'T READ OUT LOUD) DID THE INTERVIEWEE HAVE ANY OF THE CONDITIONS? (IF YOU COULD NOT TELL, THE ANSWER IS NO: THEN CIRCLE NO PROBLEM FOR THE APPLICABLE CATEGORY) — Cols.
   Difficulty Seeing.... 23-1
   Blindness.... -2
   No sight problems.... -0
   Difficulty hearing.... 24-1
   Deafness.... -2
   No hearing problems.... -0
   Difficulty walking or getting around. 25-1
   Unable to walk (need wheelchair or personal assistant).... -2
   No problems walking.... -3

APPENDIX B

LETTER FROM PASSENGERS OF A CROWDED RURAL BUS OUTSIDE OF CLARKSBURG (Original Handwritten)

June 19, 1978

To Whom It May Concern,

We are people who ride the earlies and probably the longest run that the R.P.T. makes.

Our bus comfortably seats twelve passagers. For this reason we would like to put in a request for a larger bus. Why do we need a larger bus? There are two passagers sitting in a seat for one, three passagers sitting in a seat for two, we even take turns of sitting on the heater, the dash, and standing in the door way. This is not a safe way to travel, but we all need to work and this is our only transportion. We think if there was a larger bus we would have more passagers. We fell our part time passagers would become full time passagers, if there was more room.

For some of us this is our one and only way to work. Some of us can drive but only one car in the family. We can not always depend on some onelse, like we can the bus. For some of us our bus driver takes our children to the babysitter. We all appreciate our bus driver and you people who make this rout possible.

Yours truly
The passagers of
R.P.T.Earliest run

p.s. We would apprecite anything that you can do.

APPENDIX C
NEW TECHNOLOGY

The work performed under this contract, while not leading to any new technology, has made use of existing methodologies as required to complete a comprehensive analysis of findings available on the implementation and operation of the demonstration project. These findings will be useful to other rural communities throughout the United States in the planning and design of improved public transportation services.

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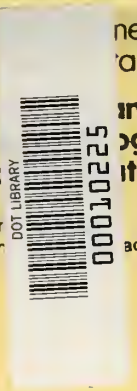

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