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Mercer County (N.J.) Coordination/Consolidation Demonstration Project

Final Report
March 1982

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Service and Methods Demonstration Program

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16. Abstract

From November 1977 through June 1981, Mercer County was the site of an UMTA Service and Methods Demonstration of coordination of human service agency transportation programs. The Mercer County Coordination/Consolidation Demonstration Project involved the consolidation of several transportation services within a specially-created division of the county government - TRADE (Transportation Resources to Aid Disadvantaged and Elderly). The evaluation report covers the period through December 1980.

TRADE evolved into a system incorporating 5 agencies, with a fleet of 18 vehicles. The monthly ridership (through 1980) was over 11,000, including approximately 1000 unduplicated users. The ridership figure is higher than many similar types of systems. The productivity of 5.89 trips per vehicle hour and the unit operating cost ratios, i.e., cost per trip, cost per mile, and cost per vehicle hour, of $2.00, $0.86, and $10.93, respectively, compare very favorably with other coordinated and consolidated systems. Various problems were encountered during the project's development, including problems securing agency participation, frequent vehicle breakdowns (and slow maintenance), limited fuel availability, high personnel turnover, and a general lack of support from the County Administration.

A number of evaluation findings have definite implications for other sites considering development of coordinated/consolidated systems. The most important transferable findings can be summarized as follows: 1) consolidation may be, in some instances, easier to achieve than "lower" levels of coordination; 2) it is unrealistic to expect that all agencies in an area will benefit from participating in a coordinated/consolidated system; and 3) both perceived and real barriers can prevent the development of extensive trip-sharing in a coordinated/consolidated system.

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PREFACE

The Mercer County Coordination/Consolidation Demonstration was funded, in part, by the U.S. Department of Transportation under the UMTA Service and Methods Demonstration Program. As part of that program, Multisystems, Inc., under contract to the U.S. DOT's Transportation Systems Center, has prepared this Final Evaluation Report.

The report is based on analyses of data from TRADE and Mercer County and discussions with numerous persons associated with the project. The author wishes to express particular thanks to the following individuals for their assistance:

James Holman	Current Director, TRADE
John Huntoon	Original Director, TRADE
Carl West	Director, Mercer Co. Division on Aging
Margaret Broadwater	Social Service Coordinator, TRADE
Ted Larve	Principal Clerk/Bookkeeper, TRADE
Joe Morris	Financial Officer, Mercer Co.
Robert Casey	Evaluation Monitor, Transportation Systems Center
Mary Martha Churchman	Project Manager, UMTA

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METRIC CONVERSION FACTORS

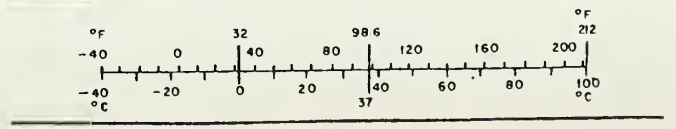
Approximate Conversions to Metric Measures

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	metars	m
mi	miles	1.6	kilometers	km
	AREA			
in^2	squere inches	6.5	square centimeters	cm^2
ft^2	square feat	0.09	square meters	m^2
yd^2	square yards	0.8	squere meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	ecras	0.4	hectares	ha
	MASS (weight)			
oz	ounces	28	grams	g
lb	pounds	0.45	kilogrems	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	qvarts	0.95	litars	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)			
°F	Fahranheit tempereture	5/9 (aftar subtracting 32)	Celsius temperature	°C

*1 in = 2.54 (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ. 286, Units of Weights and Measures, Price $2.25, SD Catalog No. C13.10:286.

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 centimetars	0.18	squere inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hecteres (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 (than add 32)	Fahrenheit temperature	°F



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CHAPTER 1

1.0 EXECUTIVE SUMMARY

1.1 Introduction

From November 1977 through June 1981, Mercer County, New Jersey was the site of an Urban Mass Transportation Administration (UMTA) Service and Methods Demonstration of coordination of human service agency transportation programs. The Mercer County Coordination/Consolidation Demonstration Project involved the consolidation of several transportation services within a specially-created division of the county government - TRADE (Transportation Resources to Aid the Disadvantaged and Elderly).

As of December 1980, TRADE provided service to clients of five agencies and programs and operated a fleet of eighteen vehicles in three types of service: fixed schedule/ subscription, demand-responsive, and fixed route. During the demonstration period, TRADE operated with grants from UMTA, Title III,* and Mercer County, as well as through four purchase of service contracts with state and local agencies. The total demonstration project budget was $769,164, of which UMTA provided 25%.

1.2 Project Background

The impetus for coordinating human service transportation programs in Mercer County originated in 1976 when a local transportation workgroup developed a proposal for demonstration funding. The proposal, submitted to both UMTA and the Office of Human Development Services (OHDS) of the Department of Health, Education, and Welfare (HEW), called for the step-by-step coordination of the transportation operations of seven designated agencies, with the eventual creation of a totally consolidated system.** These seven agencies had agreed to participate in the project, although at the time of

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* of the Older Americans Act of 1965

** "Consolidation" differs from "coordination" in that the former entails the integration of all operating and administrative functions within a single organization (e.g., TRADE). This central organization is given full control over all of the vehicles originally used by the paticipating agencies and, in turn, provides service for all participants through individual contracts. Under coordination, certain activities are centralized, but the participating agencies retain control over their own vehicles.

the proposal no formal agreements had been made. Members of the workgroup assumed that, once a demonstration grant was procured and a lead coordination agency (i.e., TRADE) was established, formal agreements would be worked out.

The UMTA grant was approved in February 1977; following a lengthy search, a project director was hired and other staff positions were filled. Negotiations were then begun with the original project "participants" in an effort to initiate coordination activities. TRADE essentially became operational in April 1978, when it assumed control of the eight vehicles of the Mercer County Nutrition Project. Coordination activities, in the form of centralized maintenance and centralized dispatching, were introduced at that time, but were utilized by only three of the seven agencies.

As it turned out, coordination activities never expanded beyond a very limited basis with the group of agencies which initially agreed to participate. Five of the original seven eventually "withdrew" from the project. Each had its own reasons; these included misunderstandings of the nature of the project, fear of loss of control over vehicles and clients, and feeling that the benefits of joining TRADE would be outweighed by the disadvantages.

However, as negotiations with the agencies were becoming bogged down, TRADE began seeking out new participants. Proposals to provide service on a contract basis were submitted to a number of agencies and programs, and TRADE was successful at securing three new contracts (with Title XX of the Social Security Act of 1935, the New Jersey Department of Labor and Industry's JOBS Transportation Project, and the Borough of Hightstown/Township of East Windsor), to supplement the two remaining original participants (Nutrition and the New Jersey Division of Vocational Rehabilitation Services, or Voc. Rehab.). TRADE thereby built on its base of the eight Nutrition vehicles by adding five vehicles that had been used for Title XX service by the previous provider of that service (Red Cross), and one vehicle that had been purchased by Hightstown and E. Windsor. Four new vehicles were purchased through the various contracts, bringing the fleet size to eighteen.

Thus, TRADE successfully shifted directions when the original plan ran into problems. Instead of coordinating the transportation programs of the original "participants," and gradually evolving into consolidation, TRADE went right to consolidation - with a largely new group of agencies. Myriad difficulties were encountered during the project's development (see Sec. 1.3 below). In light of these barriers, TRADE's development into a consolidated system was noteworthy.

1.3 Major Problems and Barriers Encountered

The major reasons for agencies declining to participate in TRADE stemmed from operational and institutional barriers, as well as constraints which are attitudinal in nature (e.g., related to the feelings/concerns of agency directors). The operational and institutional issues encountered by TRADE included both constraints affecting the individual agencies and problems experienced by TRADE in its operation. The major problems/ barriers related to TRADE are summarized below.

Institutional Issues

- o highly-charged political nature of County setting, causing changes in level of support for TRADE: originally, system hampered by lack of clear support on the part of the County Administration

- o difficulties in developing a sound funding base due to uncertainties over continuation of contracts, different funding periods for different contracts, and inability of some agencies to commit sufficient funds to cover all TRADE costs (e.g., director's salary)

- o inability of agencies to participate in consolidated system because of unavailability of funds to purchase transportation services (e.g., because of reduced funding levels at the State or Federal level, forcing agencies to limit expenditures for "auxiliary" activities such as transportation)

- o jurisdictional/political differences with other public bodies (e.g., municipal governments - Hamilton, Ewing) and within the County (e.g., over Nutrition's participation)

- o county civil service system which made it difficult to hire staff persons

- o problem of hiring (and keeping) competent drivers and other personnel because of the low civil service salary levels; this has caused a constant shortage of staff requiring the director, social service coordinator, and bookkeeper to fill in as dispatchers and drivers

- o problems in meeting TRADE's payroll - lack of funding in certain programs to cover all employees' time (e.g., Nutrition programs had no money budgeted to overtime)

- o underutilized services for certain programs (e.g., individual JOBS counselors often did not refer clients to TRADE)

- o lack of any real advisory board (e.g., a group made up of providers, clients, county and municipal officials) to provide guidance and control over the project

- o negative image among local gencies (i.e., public relations problems, reports of poor service reliability, and lack of publicity and public information)

Operational Issues

- o frequent vehicle breakdowns, with no backups (complicated by slow repairs and long "down" periods); no preventive maintenance; County maintenance facility understaffed and underfunded; broken fuel gauges on some vehicles, causing them to run out of gas

- o frequent problems with drivers, including high turnover

- o lack of a program analyst, as well as changes in director and bookkeeper, which caused TRADE to fall behind in statistical reporting and requests for reimbursement, and created gaps in statistical records

- o (perceived) infeasibility of intermixing agency client populations on the same vehicle

- o difficulties inherent in locating agency vehicles away from the agency's primary facility (i.e., the integration of the transportation program with the agency's primary service is considered absolutely necessary)

- o agency dissastisfaction with services available through coordinated system (e.g., centralized maintenace found to be too slow or unsatisfactory, or lack of wheelchair-accessible vehicles)

- o agency unwillingness to comply with coordination reporting/accountability requirements

- o limitations on gasoline allocation for TRADE, restricting the amount of service which could be offered (i.e., limiting expansion); also, difficulties in obtaining fuel in the morning, due to late opening of County pumps

- lack of formal marketing activities on part of TRADE (e.g., lack of public information - certain agencies unaware of system)

Attitudinal Issues

- agency concerns over unique travel patterns or on-vehicle assistance needs of clients of different agencies
- agency feeling that it already has an efficient operation and stands to gain little by joining coordinated system
- agency fearing loss of local control over own service (i.e., inability to maintain control over quality of service provided)
- agency concern over loss of visibility and credit for operating service (i.e., unwilling to yield power)
- agency concern over uncertainty of future funding base of coordinated/consolidated system
- agency concern over possible increases in costs
- agency convern over vehicle depreciation and replacement
- agency administrative personnel change since original coordination agreements made; new administrator may have misconceptions over terms of coordination

The impact of these barriers/problems varied considerably. Some barriers (primarily attitudinal) proved insurmountable (i.e., in terms of dissuading various agencies from joining TRADE), while others were successfully overcome. In terms of operational problems, some (e.g., vehicle breakdowns, personnel problems) plagued TRADE throughout the course of the demonstration, while others (e.g., the limit on TRADE's gasoline allocation) were eventually eased. (The most serious problems and barriers are included in the Transferable Findings below.)

1.4 Transferable Findings

One of the most important objectives of this evaluation is the identification of findings which may prove useful to other coordination efforts. Many of the lessons learned from TRADE's development and operation are rather site-specific, dealing primarily with the particular personalities and political situation within Mercer County. A number of findings, however,

apply generally to any similar effort. TRADE's development provides insights into the types of problems that can impede progress in such a project, as well as procedures which can prove effective; several key findings can be isolated as having definite implications for other sites:

Consolidation may be, in some instances, easier to achieve than "lower" levels of coordination. Once a base vehicle fleet is secured (i.e., through participation of at least one fairly large provider) it may be easier to build a specialized system through purchase of service agreements with agencies having transportation budgets, but not directly operating their own service, than through coordination or consolidation of the operations of agencies providing their own services. By building through agencies which do not directly provide service (i.e., they contract for service), it is possible to avoid certain barriers which typically face coordination efforts (e.g., turfism/loss of control, fear of lowering service quality, concerns over vehicle depreciation/replacement, etc.). As in TRADE's development, "purchase of service" agencies may simply be more willing to participate than those with their own transportation operations, who often fear losing more than they might gain from coordination. (Once any type of coordinated or consolidated system has been in operation for a while, however, it may be easier to attract agencies whose concerns deal with the ability of the new system to serve their clients' needs.)

It is unrealistic to expect that all agencies in an area will benefit from participating in a coordinated/consolidated system. Certain types of agencies will not benefit from such a system. For instance, an agency operating one or two vehicles may experience greater operating costs by having to absorb some of the administrative cost of a large system, and may have to give up control of its vehicle(s) (e.g., have it stationed away from the agency). If this agency is already able to effectively transport its clients, it may not realize any real benefit from coordination.

In developing a consolidated system through purchase of service contracts, in addition to normal operating costs (i.e., fuel, maintenance, driver and dispatcher salaries), it is important to provide for vehicle depreciation (i.e., to build up funds for vehicle replacement) and administrative salaries. Since agencies may not be using their own vehicles (and since use by their clients' is accelerating the deterioration of the consolidated systems' vehicles), it is important that they contribute to the eventual replacement of the system's vehicles. It is also important to insure that the salary of the consolidated system's director (and other personnel, such as clerk/bookkeeper) is covered through the various on-going service contracts.

Vehicle and maintenance problems can be among the most serious barriers to successful operation/expansion of a coordinated/consolidated system. One of the theoretical advantages offered by coordination/consolidation is the availability of backup vehicles (i.e., one agency's idle vehicle can be substituted for another agency's vehicle when the latter breaks down). However, when a number of vehicles are frequently down - and for extended periods of time (due to slow maintenance) - the backup capability is neutralized. This can lead to poor service reliability and a resulting negative image, which may discourage interested agencies from participating in the project.

Various barriers (both perceived and real) can prevent the development of extensive trip-sharing (referring, in this case, to clients of more than one agency being transported in a vehicle at the same time) in a coordinated/consolidated system. Incompatible travel patterns can present a significant barrier, especially on subscription-type fixed schedule trips (e.g., to a nutrition site). Such trips permit the carrying of riders for trip purposes other than the primary one only where their desired travel times, origins, and destinations coincide with the scheduled trips. Thus, if a coordinated/consolidated system is comprised largely of subscription service, the potential for trip-sharing may be quite limited. A second barrier to trip-sharing, which applies to all types of service, is the perception that different types of agency clients should not be mixed on the same vehicle (e.g., emotionally-disturbed children and the elderly). Whether or not such "client-mixing" presents real problems, an agency's perceptions that it does will hamper ride-sharing efforts.

A strong (i.e., energetic and organized) director is crucial to the successful implementation and operation of a coordinated system. Due to the complexity of the situation (e.g., various actors, all having different aims and concerns; multiple funding sources; diverse client needs), the project director must be able to maintain control over all aspects of the development process. She/he must be able to effectively deal with agency directors and government officials, as well as to manage all personnel and handle everyday operating problems. It is helpful in those regards if the director has some experience/background in the management of specialized transportation operations; otherwise, considerable time and effort can be expended "on the job" in gaining the necessary experience.

Effective marketing and good interagency relations are important elements in the development of a coordinated/consolidated system. In attempting to establish a coordinated system, it is necessary to contact a wide variety of agencies, determine their transportation needs (and what they have to offer), and show them how they might benefit from participating. It is important to develop good working relationships with

agency directors and transportation coordinators, and to maintain these relationships throughout the implementation and operation of the system.

The institutional setting of a specialized transportation program can be a significant factor in the development, operation and expansion of that program. The particular type of institutional framework (e.g., a branch of the county government, part of a public transportation authority, or a private non-profit operation) largely determines the nature of local support (both financial and administrative/political), and can have a substantial impact on how the transportation service is operated and marketed. The lack of clear support from the relevant institutional authority (e.g., county administration) can produce (or at least exacerbate) day-to-day operational problems (e.g., limited fuel availability, inadequate maintenance, and personnel problems) and can create uncertainty over the future of the program; these problems/uncertainties can, in turn, hamper the program's efforts to recruit new participants. For these reasons, a political environment, such as county government, may not be the most appropriate setting for a specialized transportation program. The political nature of governmental bodies suggests: 1) that support for certain programs (e.g., a coordinated transportation service) can vary depending on the feelings of the administration in power; and/or 2) that support at any given time can be fragmented due to rivalries among governmental department heads. Related to the latter point, the specialized program must compete with other governmental (i.e., county) agencies for generally scarce resources (e.g., fuel, office space, maintenance facilities, etc.). In addition, location within a governmental agency means that the program must work through a civil service system to hire personnel; this can present barriers to attracting and maintaining a qualified staff, especially where civil service salaries are relatively low. Thus, though a governmental setting does offer certain advantages, including (often) provision of "in-kind" office space and other equipment and facilities, a specialized transportation service may be better off in a non-governmental setting.

An accurate reporting and accounting/billing system is necessary for effective system operation and contract negotiation. In a coordinated/consolidated system involving multiple funding sources, accounting and statistical reporting procedures can be quite complex, and they must be carried out in an accurate manner. A full-time program analyst charged with statistical reporting is very helpful, as is accurate completion of trip logs by drivers. Accurate reporting and accounting are needed for the following reasons:

a) participating agencies/programs must be able to document proper expenditure of transportation funds to their funding sources/parent agencies

b) the consolidated project itself must be able to justify its use of supplies and personpower to both its parent agency and the project participants

c) an inaccurate system can lead to cash flow problems in the short run, and insufficient project funding in the long run; these result from an inability to determine the true costs of providing service

d) an inaccurate system can prevent determination of the cost-effectiveness of the project's component services, which hampers project marketing efforts (i.e., in showing potential project participants benefits).

1.5 Operational Characteristics and Results

TRADE has evolved into a system incorporating 5 agencies with a fleet of 18 vehicles. The monthly ridership (through 1980) was over 11,000, including approximately 1000 unduplicated users. The ridership figure is higher than many similar types of systems. The productivity of 5.89 trips per vehicle hour and the unit operating cost ratios, i.e., cost per trip, cost per mile, and cost per vehicle hour, of $2.00, $0.86, and $10.93, respectively, compare very favorably with other coordinated and consolidated systems.

The characteristics of TRADE's component services vary significantly, although the statistics are dominated by those of the Nutrition service, which accounts for nearly 80% of the total TRADE ridership. The relatively high productivity (7.28 trips per hour) and low unit cost per trip ($1.34) of the subscription Nutrition service balance out the lower productivities and considerably higher unit costs of the Voc. Rehab., JOBS, and Hightstown/E. Windsor services. Those have been more costly and less productive than would be expected, considering that they all consist of subscription/ fixed schedule or fixed route service; the demand has simply been too low to enable them to truly benefit from consolidation.

The Title XX service, on the other hand, has been fairly efficient for a demand-responsive service. Its productivity of 3.47 trips per hour is comparable to other demand-responsive services, while its unit operating cost of $3.79 per trip is relatively low. This service accounts for the second largest group of TRADE trips: approximately 16% of the total. Of the

Title XX trips, 55% are made for health care, 32% for social/recreational, and 13% for assorted other purposes.

1.6 Conclusions

In addition to the general results mentioned above, the TRADE demonstration produced a number of significant accomplishments (while experiencing several key disappointments). The major accomplishments were as follows:*

- o TRADE was able to build up a reserve of funds for vehicle replacement by including vehicle depreciation in purchase of service contracts.

- o TRADE established a basis for trip-sharing and time-sharing by including provisions in the individual contracts allowing each agency's vehicles to be used to carry clients of the other participating agencies. TRADE successfully instituted time-sharing with four vehicles.

- o TRADE's users view the service as being very valuable and, often, necessary in meeting their travel needs; 55% of those user survey respondents who supplied comments gave TRADE "very favorable" comments.

- o Four of the five participating agencies/programs view TRADE as being generally successful in efficiently providing transportation to their clients.

Beyond the problems/failures noted earlier, the major disappointments experienced by TRADE include the following:

- o TRADE was generally unable to expand its operation (i.e., beyond its 5 agencies/programs), and, in particular, was unable to secure the participation of any private agencies or municipalities (other than Hightstown/E. Windsor); this was apparently related to TRADE's day-to-day operational problems and the lack of strong support from the County.

- o TRADE failed to develop any significant trip-sharing among different agencies.

- o TRADE failed to develop an accurate and comprehensive accounting system and data base which would enable the determination of true transportation costs.

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* The project's accomplishments and disappointments, as well as operating, cost, and user characteristics, are reviewed in greater detail in Chapter 8.

On the whole, TRADE's accomplishments have certainly outweighed its failures. The project has been plagued throughout by serious operational and institutional problems. However, it has successfully overcome (or managed despite) the various obstacles, and has established an important service. TRADE can certainly stand improvement in a number of areas: vehicles need to be replaced (and/or maintenance has to be improved); the billing and accounting procedures need to be revamped; driver reliability needs to be improved; and marketing should be strengthened. Nonetheless, TRADE has provided a fairly cost-effective service to the elderly and disadvantaged of Mercer County.

CHAPTER 2

2.0 INTRODUCTION

This report presents an evaluation of an Urban Mass Transportation Administration (UMTA) Service and Methods Demonstration of the coordination/consolidation of human service transportation programs in Mercer County, New Jersey. The demonstration project has been operated by the Mercer County Department of Human Services, through a specially-created division called TRADE (Transportation Resources to Aid the Disadvantaged and Elderly.) The demonstration grant was awarded in February 1977, with TRADE the grantee. Initial funding for the project was $341,960 (for two years), consisting of $195,960 from UMTA, $86,000 from Title III (through Mercer County), and $60,000 from Mercer County. The demonstration period was later extended through December 31, 1980, and subsequently through June 30, 1981.

2.1 Description of the Demonstration

The original thrust of the demonstration was to improve the service delivery structure within the County through a three phase process: 1) background data collection and planning, and development of a uniform data retrieval system; 2) coordination of agency transportation operations through centralized dispatching, centralized maintenance, and centralized purchasing activities; and 3) consolidation of all participating agency transportation operations within TRADE. However, the demonstration shifted somewhat from this plan, due to difficulties in securing participation from the originally-designated agencies. The coordination phase never developed to the extent intended, and TRADE evolved into a consolidated system with a new group of participants, providing service for five different agencies and programs. As of the completion of this report (December 1980), TRADE was supported through grants and purchase of service contracts from the following sources:

- o UMTA (Service and Methods - Section 6)
- o Title III of the Older Americans Act of 1965 (through the Mercer Co. Nutrition Project)
- o Title XX of the Social Security Act of 1935 (through the New Jersey Division of Youth and Family Services)
- o New Jersey Department of Labor and Industry
- o Borough of Hightstown and Township of East Windsor

As of December 1980, TRADE was operating with a fleet of eighteen vehicles, providing over 11,000 passenger trips per month. Some coordination (i.e., time-sharing) of vehicles was occurring, but no ride-sharing (i.e., mixing of agency clients on vehicles) was taking place.

A myriad of problems (political, institutional, administrative, and operational) presented barriers to coordination and created operating difficulties throughout the demonstration. For this reason, coupled with gaps and inconsistencies in TRADE's statistical reporting procedures, this evaluation has focussed on the coordination/consolidation process itself, rather than on the impacts of this process. An assessment of the project's history, accomplishments, and operational statistics (to the extent possible) provides valuable insights into the nature of problems and the potential of coordination and consolidation efforts. These issues are documented in this report.

The remainder of this chapter describes the organizational roles, the demonstration objectives, and the evaluation issues and approach.

2.2 Organizational Roles

As part of the Mercer County Department of Human Services (DHS), TRADE falls under the jurisdiction of the County Administration.* All personnel are hired by TRADE through the County civil service system. All vehicles are owned and maintained by the County, but are totally controlled by TRADE. TRADE provides service to clients of the five participating agencies/programs, as well as limited service to a sixth agency - a prospective participant.

UMTA has overall responsibility for the Service and Methods Demonstration (SMD) Program itself, while the Transportation Systems Center (TSC) of the U.S. Department of Transportation (DOT) has overall responsibility for the evaluation of all SMD projects. Actual evaluation activities have been performed under contract to TSC. In this case, there were two evaluation contractors. Applied Resource Integration (ARI), Ltd. was the original evaluator and prepared the Evaluation Plan, supervised an initial round of data collection activities, and monitored the project until January 1980. At that point, ARI's evaluation contract expired, and they were replaced on the project by Multisystems, Inc. Multisystems assumed responsibility for monitoring the project activities, overseeing additional data collection, and preparing a final evaluation report.

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* Because TRADE's demonstration funding had not expired at the time that this evaluation was completed, TRADE's operation is described herein in the present tense.

The evaluation contractors interacted directly with the grantee (TRADE), as well as with the project participants (and non-participant) agencies and county personnel (e.g., County Administrator, Director of Human Services, Director of Division on Aging, and County Financial Officer).

2.3 Demonstration Objectives

The TRADE demonstration was intended to address a variety of objectives related to the coordination of human service transportation programs and the improvement of the mobility of the transit dependent. TRADE's demonstration grant application specified the following objectives:*

- o Demonstrate that the perceived barriers of client mix, insurance, restrictive usage as mandated by funding sources, scheduling, and other impediments to the development of a coordinated/consolidated system can be overcome.

- o Improve the delivery of human services through the coordination of existing transportation resources including bus and taxi operations.

- o Develop a data base for agency transportation operations which will later allow them to assess their real cost and efficiency.

- o Demonstrate that, through efficient management of existing transportation resources, a significant increase in the quantity and quality of transportation services will be realized without an appreciable increase in cost.

- o Develop training programs and instruments for project personnel which will improve the quality and quantity of transportation service provided to agency clients.

Overall, the demonstration was designed to determine the extent of benefits obtainable through coordination and consolidation, and to show whether those benefits are significant enough to enable TRADE to offer specialized transportation services to the transit dependent not affiliated with a participating agency. This evaluation report addresses the extent to which the various objectives have been met.

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* Mercer Co. Department of Human Services - Division on Aging. Transportation Resources to Aid the Disadvantaged and Elderly. February 2, 1977.

2.4 Evaluation Issues and Approach

The Evaluation Plan (prepared by ARI)* identified the key demonstration issues as follows: 1) the changes in the cost and quality of the agency transportation provided in the decentralized stage (the "before" stage) and in the coordinated and consolidated stages (the "after" stages); 2) the extent to which coordination/consolidation occurs in the agency population; 3) the factors which affect the extent of coordination; 4) the process by which coordination takes place; 5) project supply and demand characteristics; 6) project productivities and economics; and 7) user, agency, and transportation provider impacts.

To assess these issues, the data collection plan included the following activities:

- o monitoring TRADE's activities through the demonstration (through telephone, mail and site visits)
- o conducting interviews with participating agencies
- o conducting interviews with non-participating agencies
- o conducting on-board surveys
- o conducting user and non-user surveys
- o compiling TRADE's operations/cost/ridership data (through driver trip logs, county financial records, and TRADE accounting records)

The first round of data collection (i.e., pre-coordination data) occurred in February - April 1978; two more "rounds" were planned, to assess the impacts of, first, agency coordination, and, second, consolidation. (The data collection activities are described in Appendix A.) This effort established a pre-coordination data base. However, changes in the project participants made it impossible to compare "before-after" results of the demonstration: only two of the original participants remained in TRADE.** None of the other members joined the project until 1979; no "pre" data were collected for these agencies/programs, because of the development process and the nature of the programs (i.e., most did not have transportation service before TRADE).

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* ARI, Ltd. Evaluation Plan for the Mercer County Coordination/Consolidation SMD Project, submitted to U.S. DOT/TSC. July 1978.

** Of these two, pre-coordination data were available only for the Nutrition program; these data are compared to post-coordination data - to the extent possible - in Chapter 7.

The evaluation thus focussed on these issues: 1) the process by which TRADE developed into a consolidated system; 2) the barriers to coordination/consolidation, and how they were overcome (if indeed they were); 3) the extent to which coordination/consolidation activities occurred; and 4) ridership and cost characteristics of the consolidated system.

Multisystems monitored TRADE's operations from January 1980 through November 1980. Throughout the demonstration, TRADE was responsible for day-to-day collection of all cost, ridership, and other operational data. To supplement these data, Multisystems conducted one round of additional data collection activities (see Appendix A). The results of these activities provided the basis for certain elements of the evaluation. However, Multisystems also relied heavily on descriptive information including progress reports, meeting notes, and correspondence and discussions with key individuals to evaluate the project's development and accomplishments/failures.

The remainder of this report is organized as follows: Chapter 3 describes the demonstration setting providing geographic, demographic, economic, and transportation characteristics of Mercer County. Chapter 4 describes the nature of TRADE's operation and discusses the project's development/history. Chapter 5 assesses the process of coordination/consolidation in Mercer County. Chapter 6 provides an analysis of travel behavior and user characteristics. Chapter 7 examines project supply characteristics, economics and productivities. Finally, Chapter 8 presents conclusions of the evaluation and implications of the project's results and development process which may be transferable to other sites considering the implementation of similar systems.

CHAPTER 3

3.0 DEMONSTRATION SETTING*

This section of the evaluation report describes the site characteristics and the existing transportation services found within the demonstration area - Mercer County, New Jersey.

3.1 Geographic and Political Characteristics

The demonstration project service area includes all of Mercer County (approximately 226 square miles in area). The County is located in the middle of New Jersey, approximately 40 miles northeast of Philadelphia and approximately 50 miles southwest of New York City. It is bounded on the southeast by the Delaware River and on the northeast by the Millstone River. The primary urban center within the County is Trenton (the state capital). The remainder of the County, which is rather rural in nature, consists of the Townships of East Windsor, Ewing, Hamilton, Hopewell, Lawrence, Princeton, Washington and West Windsor, and the boroughs of Hightstown, Hopewell and Pennington. Figure 3-1 presents a map of Mercer County and its constituent municipalities. The political organization of the County is based on a seven-member Board of Chosen Freeholders, who are elected at large from the entire County.

3.2 Demographic Characteristics

The demographic profile of Mercer County is based upon a review of the following characteristics:

- o Population (Total, White, Non-White, Age, Sex)
- o Elderly and Transportation-Handicapped Population
- o Land Area and Population Density
- o Income Distribution
- o Auto Availability
- o Educational and Occupational Distribution

Table 3-1 presents a summary of the age, sex, and white/non-white population distribution in Mercer County, based on the 1970 Census of Population. In general, Mercer County

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* Much of the material in this chapter was prepared by the original contractor for evaluation, ARI, Ltd.

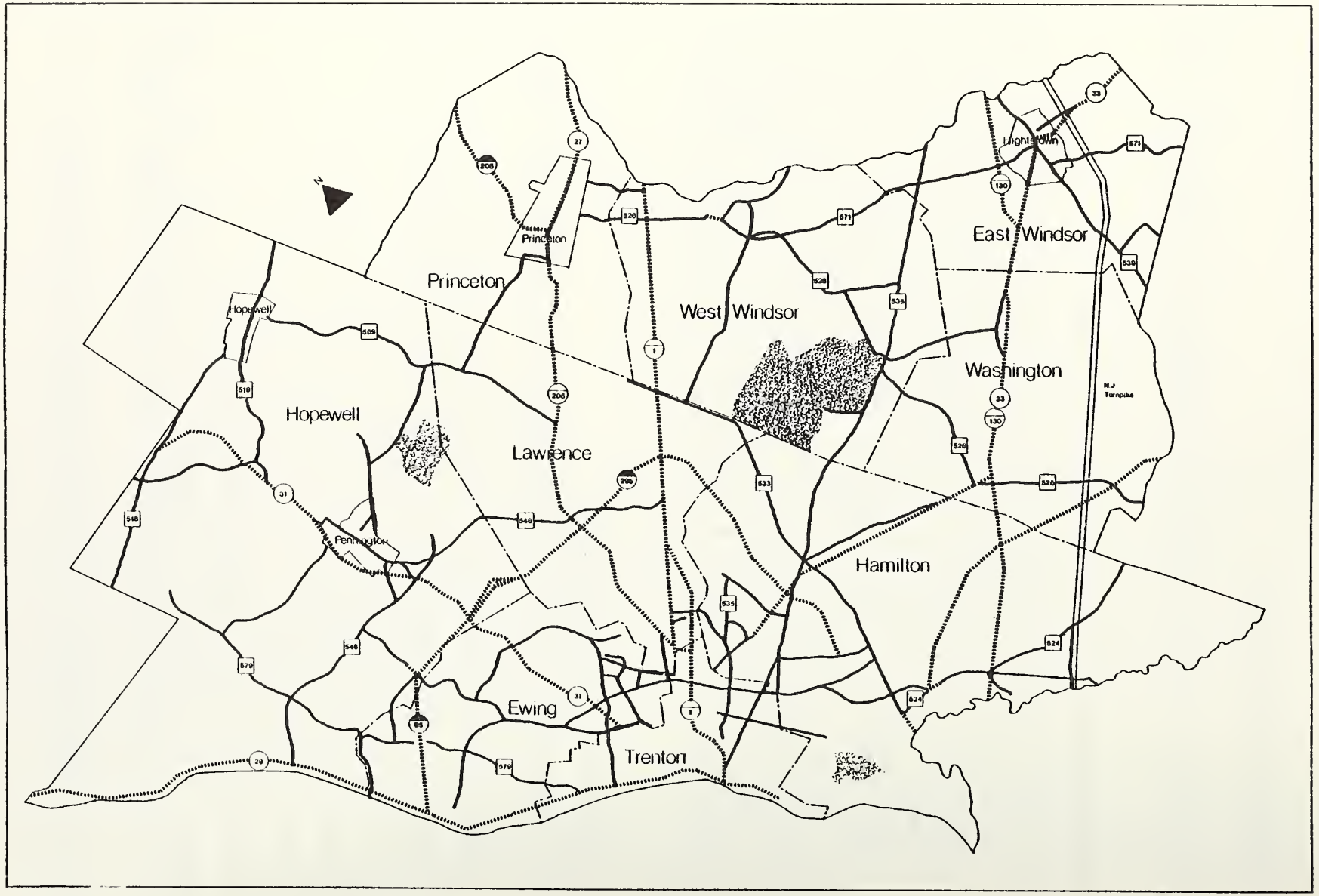

FIGURE 3-1. MERCER COUNTY, NEW JERSEY

TABLE 3-1. SUMMARY OF AGE, SEX, WHITE AND NON-WHITE POPULATION DISTRIBUTION IN MERCER COUNTY

		MALE/FEMALE POPULATION			WHITE/NON-WHITE POPULATION			
Municipality	Sex	Under 20	20 - 64	65 and over		No.	% Of Total	Total Population
East Windsor Twp.	M	2,171	3,528	138	W	11,199	95.2	11,736
	F	2,127	3,590	182	NW	537	4.8	
Ewing Twp.	M	5,621	8,761	1,191	W	29,675	89.4	32,831
	F	5,482	9,908	1,805	NW	3,156	10.6	
Hamilton Twp.	M	14,498	21,155	2,808	W	76,975	96.6	79,609
	F	13,989	23,144	4,015	NW	2,634	3.4	
Hightstown Bor.	M	868	1,310	292	W	4,911	89.4	5,431
	F	864	1,447	650	NW	520	10.6	
Hopewell Bor.	M	457	569	100	W	2,190	96.3	2,271
	F	366	633	146	NW	81	3.7	
Hopewell Twp.	M	1,942	2,709	376	W	9,756	97.2	10,030
	F	1,774	2,762	467	NW	274	2.8	
Lawrence Twp.	M	3,781	5,304	547	W	18,292	93.0	19,567
	F	3,785	5,333	817	NW	1,275	7.0	
Pennington Bor.	M	378	536	109	W	2,072	96.2	2,151
	F	402	566	160	NW	79	3.8	
Princeton Bor.	M	2,469	4,482	476	W	10,825	86.3	12,311
	F	1,296	2,758	830	NW	1,486	13.7	
Princeton Twp.	M	2,588	3,653	400	W	12,652	92.1	13,651
	F	2,433	3,980	587	NW	999	7.9	
Trenton City	M	17,894	26,678	5,191	W	64,305	62.7	104,638
	F	18,368	28,916	7,591	NW	40,333	37.3	
Washington Twp.	M	622	895	139	W	3,135	94.4	3,311
	F	595	900	160	NW	176	5.6	
West Windsor Twp.	M	1,199	1,789	205	W	6,215	96.6	6,431
	F	1,174	1,843	221	NW	216	3.4	
Mercer Co.	M	54,488	81,369	11,972	W	252,202	83.0	303,968
	F	52,728	85,780	17,631	NW	51,766	17.0	
TOTAL		107,216	166,149	29,603		303,968		

Source: 1970 Census of Population

on the 1970 Census of Population. In general, Mercer County (1977 population of approximately 317,000) can be characterized as a largely rural county with one large urban area (Trenton - 1977 population of approximately 98,000) and an array of townships and boroughs of varying size. Trenton's population is almost two-thirds white, but its non-white population represents approximately 78% of the County's total non-white population. Hamilton Township is the second largest municipality in Mercer County, with a 1977 population of approximately 83,000. Similar to other townships and boroughs in Mercer County, Hamilton's population is predominantly white.

Approximately 35% of the County's population is under 20 years of age, 55% of the population is between 20 and 64, and the remaining 10% is 65 years of age and older. The size of the oldest age group (65 years of age and older) is close to the average size for the nation as a whole. In addition, most of the towns and boroughs, as well as Trenton, have elderly populations (aged 65 and over) between 8% and 12% of their total population. East Windsor, Lawrence, Princeton (Twp.) and West Windsor, however, have elderly populations which are less than 8% of their total population, while only Hightstown has an elderly population which is greater than 12%.

Mercer County's population is almost equally divided between men (49%) and women (51%). However, the data indicate that, as the age cohort increases, the percentage of females increases. The increase is most dramatic among the elderly population, which is 60% female.

Table 3-2 summarizes the elderly and handicapped population data by municipality. The data indicate that the majority of Mercer County's elderly reside in Trenton and Hamilton, although, as previously discussed, these municipalities do not have an unusually high percentage of elderly residents.

The more interesting data contained in Table 3-2 are the estimates of Mercer County's handicapped population. This census estimation, based on a 5% sample, categorizes about 5% of Mercer County's population as handicapped. As was true of the distribution of the elderly population, most of the municipalities in Mercer County have about the same percentage of handicapped persons in their populations (between 4% and 6%). Only East Windsor, Lawrence, Princeton (Twp.) and West Windsor have slightly lower percentages of handicapped individuals, which is probably due to the slightly lower percentage of elderly persons in their populations. Hightstown has a slightly greater percentage of handicapped persons in its population than the County as a whole. This is probably related to its slightly higher percentage of elderly.

Table 3-3 presents an estimate of the transportation handicapped (TH) and able-bodied elderly in Mercer

TABLE 3-2. ELDERLY AND HANDICAPPED POPULATION DATA BY MUNICIPALITY FOR MERCER COUNTY

		Population Aged 65 and Over [A]			Handicapped Population [B]		
MUNICIPALITY	TOTAL POPULATION	NO. PERSONS	% OF MUNICIPAL POPULATION	% OF TOTAL COUNTY ELDERLY	NO. PERSONS	% OF MUNICIPAL POPULATION	% OF TOTAL COUNTY HANDICAPPED
East Windsor Twp.	11,736	320	2.7	1.1	357	3.0	2.4
Ewing Twp.	32,831	2,996	9.1	10.1	1,712	5.2	11.4
Hamilton Twp.	79,609	6,823	8.6	23.1	3,583	4.5	23.9
Hightstown Bor.	5,431	942	17.3	3.2	378	7.0	2.5
Hopewell Bor.	2,271	246	10.8	0.8	132	5.8	0.9
Hopewell Twp.	10,030	843	8.4	2.9	459	4.6	3.1
Lawrence Twp.	19,567	1,364	7.0	4.6	666	3.4	4.4
Pennington Bor.	2,151	269	12.5	0.9	68	3.2	0.4
Princeton Bor.	12,311	1,306	10.6	4.4	504	4.1	3.3
Princeton Twp.	13,651	989	7.2	3.3	410	3.0	2.7
Trenton	104,638	12,782	12.2	43.2	6,472	6.2	43.1
Washington Twp.	3.311	299	9.0	1.0	148	4.5	1.0
West Windsor Twp.	6,431	426	6.6	1.4	129	2.0	0.9
Total Mercer Co.	303,968	29,603	9.7% of County Pop.	100.0	15,018	4.9% of County Pop.	100.0

Source: A - 1970 Census of Population
B - P 4M 52 (Estimated from 5% sample, excludes handicapped persons under 16)

TABLE 3-3. ELDERLY AND TRANSPORTATION HANDICAPPED ESTIMATE FOR MERCER COUNTY

Municipality	Total Pop.	Transportation Handicapped Population: Aged 65 and Over — No. Persons	Transportation Handicapped Population: Aged 65 and Over — % of County Total Pop. aged 65 & Over	Transportation Handicapped Population: Under Age 65 — No. Persons	Transportation Handicapped Population: Under Age 65 — % of County Total Pop. Under 65	Able-Bodied Elderly Population — No. Persons	Able-Bodied Elderly Population — % of County Able-Bodied Pop. Aged 65 & Over
East Windsor Twp.	11,736	52	1	139	3	268	1
Ewing Twp.	32.831	483	10	528	11	2,513	10
Hamilton Twp.	79,609	1,103	23	1,240	27	5,720	23
Hightstown Bor.	5,431	149	3	74	2	793	3
Hopewell Bor.	2,271	40	1	31	1	206	1
Hopewell Twp.	10,030	136	3	156	3	707	3
Lawrence Twp.	19,567	220	5	295	6	1,144	5
Pennington Bor.	2,151	43	1	32	1	226	1
Princeton Bor.	12,311	211	4	156	4	1,095	4
Princeton Twp.	13,651	159	3	210	5	828	3
Trenton	104,638	2,061	43	1,571	34	10,721	43
Washington Twp.	3,311	48	1	49	1	251	1
West Windsor Twp.	6,431	69	2	94	2	357	2
Total Mercer Co.	303,968	4,774	100	4,596	100	24,829	100
			1.6% of Mercer Co. Total Pop.		1.5% of Mercer Co. Total Pop.		8.2% of Mercer Co. Total Pop.

Source: ARI, Ltd.

3-6

County.* Seven TH categories were used in preparing this estimate:

1. Use transit with difficulty (have trouble getting around alone)
2. Use transit with difficulty (use special aid, not wheelchair)
3. Cannot use transit (use special aid, not wheelchair)
4. Cannot use transit (use wheelchair)
5. Cannot use transit (need help from another person)
6. Cannot use transit (confined to house)
7. Acute, or temporary, conditions.

It is estimated that 3.1% of the County population can be classified as TH. The TH have been further categorized as elderly TH and non-elderly TH. These groups are of almost equal size, although the incidence rate for the elderly classified as TH is much greater than for the non-elderly. The remaining segment of the elderly population has been categorized as Able-Bodied Elderly, and this group accounts for approximately 8% of the County population. The estimate of elderly and transportation handicapped population is summarized as follows:

Category	Number	Percent of County Population
Elderly TH	4,774	1.6%
Non-Elderly TH	4,596	1.5%
Able-Bodied Elderly	24,829	8.2%
	34,199**	11.3%

* These estimates were made by ARI. ARI's estimation technique is based on the application of National Health Incidence Rates on population data disaggregated by mobility classes. For a more complete description of the ARI estimation technique see ARI Technical Memo Report No. 6, Estimates of the Transportation Handicapped and Elderly In the MBTA Region For 1977, July 14, 1976.

** This type of estimate cannot be developed from the data in Table 3-2 because the elderly population includes an unknown proportion of handicapped. Combining the handicapped estimate and the elderly population will result in double counting.

Data on land areas and population densities in Mercer County are presented in Table 3-4, which indicates that the County has urban areas, characterized by high population densities, as well as suburban and almost rural areas characterized by very low population densities.

Table 3-5 presents data on per capita income in the County. These data allow for comparisons between the municipalities in Mercer County and the State of New Jersey. In 1974, all of the municipalities except Trenton and Hamilton had per capita incomes which were greater than the New Jersey average ($5,226). The majority of the municipalities' per capita income levels are in a range between $4,946 and $5,843, with West Windsor ($6,603), Hopewell Twp. ($7,556), Pennington ($7,862), and Princeton Twp. ($10,809) falling considerably above the state average. The figures in Table 3-5 indicate that per capita income in Princeton Twp. has been more than twice the state average over the past few years.

Table 3-6 illustrates auto availability by occupied housing units in Mercer County. The total percent of occupied units which do not have any automobiles available to them is heavily influenced by the Trenton figure. In Trenton, 35% of the occupied units have no autos available, and Trenton accounts for 36% of all occupied units in Mercer County. This is consistent with the low per capita and family median income in Trenton, as compared to the remainder of Mercer County and New Jersey.

Generally speaking, autos are available to the vast majority of Mercer County's occupied units, except in Trenton, Hightstown and Princeton Boro., in which, respectively, 35%, 23% and 21% of the units have no autos available. While Princeton and Trenton have reasonably good transit coverage, persons without automobile availability in Princeton Boro., and particularly in Hightstown, may have severe mobility problems.

Table 3-7 presents a profile of the Mercer County labor force and the unemployment rate (in 1975). As might be expected, Trenton exhibited the highest unemployment rate, at 10.7%. This contributes to Trenton's relatively low per capita income. In fact, almost half of Mercer County's unemployed labor force resides in Trenton, and Trenton's residents comprise one-third of the County labor force.

3.3 Existing Transportation System Characteristics

The emphasis of this demonstration project is on the coordination and consolidation of human service agency transportation. However, to present a more complete picture of the demonstration site, other existing transportation systems are described briefly below.

TABLE 3-4. SUMMARY OF LAND AREA AND POPULATION DENSITY IN MERCER COUNTY

MUNICIPALITY	LAND AREA SQ. MILES	POPULATION DENSITY PERSONS/SQ. MILE
EAST WINDSOR TWP.	15.60	1,308.01
EWING TWP.	15.13	2,056.18
HAMILTON TWP.	39.38	2,104.49
HIGHTSTOWN BOR.	1.23	4,544.49
HOPEWELL BOR.	0.75	3,046.67
HOPEWELL TWP.	58.00	182.07
LAWRENCE TWP.	21.89	915.26
PENNINGTON BOR.	0.99	2,191.92
PRINCETON BOR.	1.76	6,948.86
PRINCETON TWP.	16.25	865.54
TRENTON	7.50	14,243.33
WASHINGTON TWP.	20.70	169.08
WEST WINDSOR TWP.	26.84	275.71
TOTAL - MERCER COUNTY	226.02	1,411.60

TABLE 3-5. SUMMARY OF PER CAPITA INCOME
FOR MERCER COUNTY

MERCER COUNTY	GOV'T	1969	1972	1974
East Windsor	Twp.	4,111	5,009	5,843
Ewing	Twp.	3,953	4,839	5,646
Hamilton	Twp.	3,374	4,205	4,946
Hightstown	Boro.	3,753	4,615	5,365
Hopewell	Boro.	4,012	4,928	5,731
Hopewell	Twp.	5,165	6,492	7,556
Lawrence	Twp.	4,131	5,122	5,827
Pennington	Boro.	5,153	6,824	7,862
Princeton	Boro.	4,297	4,807	5,458
Princeton	Twp.	7,707	9,377	10,809
Trenton	City	2,723	3,327	3,831
Washington	Twp.	3,286	4,399	5,263
West Windsor	Twp.	4,442	5,634	6,603
Total	State	3,626	4,477	5,226

Source: Office of Business Economics, Division of Planning and Research
N. J. Department of Labor and Industry, March 1976

TABLE 3-6. AUTO AVAILABILITY BY OCCUPIED UNITS
IN MERCER COUNTY

MUNICIPALITY	NONE	% NONE	1 AUTO	% 1 AUTO	2 OR MORE AUTOS	% 2 OR MORE AUTOS
East Windsor Twp.	102	3	1,833	47	1,944	50
Ewing Twp.	507	5	4,583	45	5,026	50
Hamilton Twp.	2,014	8	11,462	47	10,789	45
Hightstown Boro	452	23	904	46	628	31
Hopewell Boro	45	6	400	54	289	40
Hopewell Twp.	114	4	830	29	1,953	67
Lawrence Twp.	247	5	1,982	39	2,886	56
Pennington Boro	30	4	262	39	383	57
Princeton Boro	682	21	1,644	52	864	27
Princeton Twp.	223	5	1,620	39	2,273	56
Trenton City	11,801	35	15,280	46	6,474	19
Washington Twp.	64	6	444	43	518	51
West Windsor Twp.	13	1	812	42	1,109	57
TOTAL	16,294		42,056		35,136	
% of Occupied Units	17.4		45		37.6	

Source: 1970 United States Census

TABLE 3-7. MERCER COUNTY LABOR FORCE
ANNUAL AVERAGE 1975

Municipality	Labor Force	Percent	EMP	UNEMP	Percent	UNEMP Rate
East Windsor Twp.	5,608	3.9	5,409	199	1.8	3.5
Ewing Twp.	16,365	11.5	15,984	981	9.1	6.0
Hamilton Twp.	37,780	26.5	35,506	2,274	21.3	6.0
Hightstown Boro.	2,347	1.6	2,158	189	1.7	8.1
Hopewell Boro.	1,116	.7	1,079	37	.3	3.3
Hopewell Twp.	4,506	3.1	4,303	203	1.9	4.5
Lawrence Twp.	9,311	6.5	8,593	718	6.7	7.7
Pennington Boro.	1,112	.7	1,040	72	.5	6.5
Princeton Boro.	5,934	4.1	5,567	367	3.4	6.2
Princeton Twp.	5,885	4.1	5,580	305	2.8	5.2
Trenton	47,641	33.5	42,546	5,095	47.6	10.7
Washington Twp.	1,627	1.1	1,553	74	.6	4.5
West Windsor Twp.	3,069	2.1	2,882	187	1.7	6.1
County Total	142,300		131,600	10,700		7.5

SOURCE: Division of Planning and Research Manpower Statistics and Analysis, 2/4/76

3.3.1 Transit

Public transportation in the region is provided principally by Mercer Metro, a division of the Mercer County Improvement Authority (MCIA). Mercer Metro operates sixteen routes, with average weekday peak-period headways of 30 minutes and off-peak headways of between 30 and 120 minutes. Table 3-8 summarizes Mercer Metro's operating statistics.

Additional transit service in Mercer County (e.g., connecting the County with other counties) is provided by New Jersey Transit, Suburban Transit Bus Lines, Trenton-Philadelphia Coach, Starr Transit and Blue Bus Lines. Figure 3-2 illustrates the location of all transit routes in Mercer County.

3.3.2 Taxis and Other Private Providers

Much, though not all, of Mercer County is currently served by taxi companies. Nine of the thirteen municipalities report having licensed at least two companies to operate there (see Table 3-9). Taxi fares within the county are based on a zonal system, rather than on standard meter rates; shared-riding is permitted within the County. In addition, the county is served by five private ambulance services.

3.4 Economic and Growth Climate in Mercer County

Since the 1930's, manufacturing, particularly heavy industry, has been on the decline in and around Trenton. At the same time, the municipalities in Mercer County have seen an increase in the number of companies involved in research and development activities. This development trend presents potential employment problems for the older non-professional population in the urban areas of Mercer County.

In terms of population projections, all of the municipalities are expected to exhibit steady growth, with the exception of Trenton. Trenton's population is expected to continue its decline, which began in 1950.* The implications of Mercer County's growth patterns on its transit needs would appear significant. The trend is for the County population to become less urban and more suburban and rural in nature. This implies that fixed route bus service may be less capable of meeting overall future travel demand in Mercer County than it is today.

Similarly, the County's elderly and transportation-handicapped population will tend to be dispersed throughout the County, while large concentrations such as those in Trenton may decline. This transition will eventually put an added strain on the County's specialized transportation resources.

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* Trenton's population has already dropped farther than was projected.

TABLE 3-8. 1977 OPERATING STATISTICS MERCER METRO

STATISTIC	MERCER METRO
Revenue Bus Miles	3,211,905
Other Bus Miles	255,029
Total Bus Miles	3,466,934
Revenue Passengers	6,526,977
Other Passengers	85,270
Total Passengers	6,612,247
Regular Route Revenue	$ 1,446,829
Other Operating Revenue	$ 420,275
Total Operating Revenue	$ 1,867,104
Total Expenses	$ 4,918,039
Passengers Per Bus Mile	1.91
Regular Route Revenue Per Revenue Bus Mile	$ .22
Total Operating Revenue Per Total Passengers	.28
Expenses Per Bus Mile	$ 1.42
Expenses Per Passenger	.75
Operating Ratio (Expenses/Revenue)	2.63

Source: 1977 PUC Annual Report

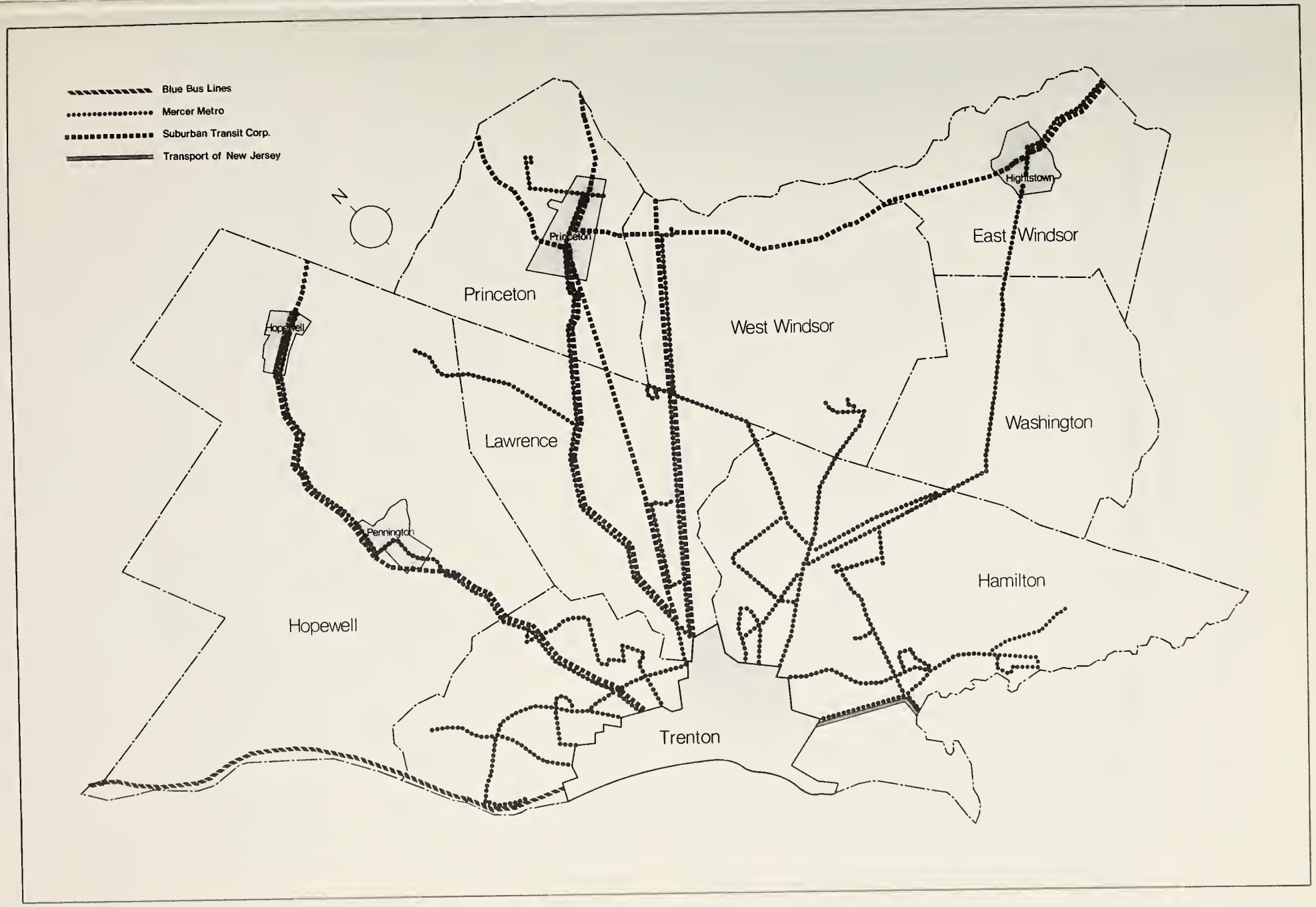

Figure 3-2. LOCATION OF PUBLIC TRANSIT ROUTES IN MERCER COUNTY

TABLE 3-9.

TAXI COMPANIES LICENSED IN MERCER CO. MUNICIPALITIES

MUNICIPALITY	NO. TAXI COS.	TOTAL NO. CABS
E. Windsor	3	13
Ewing	14	56
Lawrence	2	2
Hightstown	2	6
Hamilton	11	40
Princeton Boro.	21	28
Princeton Twp.	4	6
Trenton	38	105
W. Windsor	8	26

Source: N.J. DOT survey of taxi operators, January 1978.

CHAPTER 4

4.0 PROJECT DEVELOPMENT AND OPERATIONS

This chapter describes TRADE's operational characteristics and reviews the development of the project since its inception.

4.1 Operating Characteristics

4.1.1 Overview

As of December 1980, TRADE was operating - and coordinating the use of - 18 vehicles to serve clients of five different social service programs; however, the agency was providing very little service to non-ambulatory handicapped (i.e., persons in wheelchairs), since its fleet included only one wheelchair-accessible vehicle. This section describes TRADE's operating characteristics as of that time, including the following aspects of the system:

- o institutional setting
- o project funding/nature of participating agencies
- o services provided
- o operations structure/record-keeping
- o staff
- o vehicles
- o project marketing/interaction with human service agencies

4.1.2 Institutional Setting

TRADE's major objective is to provide transportation services to the clients of human service programs/agencies in Mercer County. The creation and implementation of TRADE was made possible, in part, by an UMTA Service and Methods Demonstration (SMD) grant, awarded on February 17, 1977.

TRADE operates a consolidated transportation system; thus all administrative and operating functions are integrated so that a single organization (TRADE) is responsible for all transportation services for participating agencies. TRADE operates and maintains all of the vehicles originally owned by the participating agencies, and provides transportation service for these participants at agreed upon rates (discussed in Chapter 7). TRADE handles all dispatching, referral, maintenance, purchasing, and billing/accounting.

In addition to operating the vehicles formerly belonging to several agencies, TRADE provides service to other agencies/programs (i.e., not having vehicles of their own) on a purchase of service basis, through which TRADE agrees to serve the clients of these agencies/programs at an agreed upon contract rate.

4.1.3 Project Funding/Nature of Participating Agencies

TRADE is currently funded through grants from UMTA and Title III (of the Older Americans Act), as well as purchase of service contracts with the N.J. Division of Vocational Rehabilitation (Voc. Rehab.), N.J. Department of Labor and Industry's JOBS program, the Borough of Hightstown and Township of East Windsor, and Title XX (through the State Division of Youth and Family Services). The nature of these contracts and the individual agencies/programs are described below.

UMTA Section 6 (Service and Methods Demonstration) - This grant, originally awarded in February 1977, ran through June 1981. The original grant award was $195,960 for a period of two years. However, since not all of these funds were expended within the initial two year period, the grant was extended through the end of 1980 and subsequently through mid-1981. The funds awarded were intended to cover administrative salaries and other administrative expenses.

Title III and Mercer County Nutrition Project - These funds come to TRADE through the Mercer County Office on Aging. The level of this funding for FY 1980 was approximately $106,500. These funds are used for operating expenses (e.g., gasoline, insurance, maintenance and drivers' salaries) and vehicle replacement. The Nutrition Project provides lunches to senior citizens (age 60 and over) at twelve sites throughout the County. In addition, the program provides certain social services in the mornings. TRADE transports eligible Mercer County residents to and from activities at nine of the sites. (This service is described further in the next subsection.)

Title XX (Social Security Act) - TRADE has a contract to transport Mercer County residents eligible for Title XX programs (e.g., AFDC* recipients, Medicaid recipients, "battered" women, or persons earning less than 80% of the state's median income - $17,000/year). The TRADE contract (approximately $71,000 for the period April 1, 1980 to March 31, 1981) is administered through the State Department of Human Services - Division of Youth and Family Services (DYFS). TRADE took over the Title XX contract (including vehicles and drivers) from the Mercer County Red Cross, which was no longer interested in providing the service.

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* Aid to Families with Dependent Children

N.J. Department of Labor and Industry/JOBS Transportation Project - This is a state-funded demonstration program involving a contract with TRADE for approximately $35,000 (for the period July 1, 1980 to June 30, 1981), including $20,000 designated for the purchase of a lift-equipped vehicle. (This will be done jointly with the Division of Vocational Rehabilitation.)* The Mercer County Jobs Transportation Project is funded by the state Department of Labor and Industry to test whether job placements can be increased by providing transportation to those unemployed and not having access to other forms of transportation. (Mercer County is one of nine in the state participating in the demonstration program.) TRADE provides service as requested by employment centers (e.g., CETA offices) to transport their clients to and from work sites (for work and/or interviews, and, formerly, for training). The contract is currently at a fixed price; for the next fiscal year, however, plans call for conversion to a per trip purchase of service agreement.

N.J. Division of Vocational Rehabiliation (Voc. Rehab.) - This agency (also located within the N.J. Department of Labor and Industry) has a purchase of service agreement with TRADE (amounting to $56,500 for 1980) to provide service for its clients who are participating in vocational rehabilitation programs (e.g., sheltered workshops and other training facilities). Voc. Rehab. has provided one vehicle fitted with a ramp, and has worked out an agreement with the JOBS Project to purchase a lift-equipped vehicle.

Hightstown/East Windsor - TRADE has a contract (for $12,000 for 1980) with the Borough of Hightstown and Township of E. Windsor to transport elderly residents to and from shopping, classes, and other activities. Under the terms of the purchase of service agreement, E. Windsor pays 75% of the cost, Hightstown 25%.

Mercer County - TRADE is also receiving assistance from the County (approximately $25,600 for 1980) to help cover administrative salaries.

In addition to the above contracts and grants, TRADE is supported through CETA (the Comprehensive Education and Training Act) funds, which pay the salaries of two part-time drivers. The breakdown of TRADE's current (1980) funding is shown in Table 4-1.

4.1.4 Service Provided

TRADE provides three basic types of service to the clients of the participating agencies/programs: fixed route/fixed

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* The possibility of a joint purchase was made possible by depreciation allowances for TRADE vehicles which were built into the agency contracts.

TABLE 4-1.

TRADE CONTRACTS - FISCAL YEAR 1980

Program/Source of Funds	Amount of Contract/ Grant	Expiration Date
UMTA SMD	$85,626	12/31/80
Title III (and Nutrition Project)	$106,510	12/31/80
Title XX	$70,933	3/31/81
JOBS	$34,875	6/30/81
NJDVRS	$56,475	12/31/80
Hightstown/E. Windsor	$11,971	12/31/80
Mercer Co.	$25,643	12/31/80

schedule, demand-responsive, and subscription service. The nature of service provided to the individual agencies/programs is as follows:

Nutrition - Eligible persons are transported by TRADE to one of nine County Nutrition sites, where they receive a meal, and are subsequently taken home. Service is provided on a door-to-door subscription basis; each of the Nutrition drivers makes two (or sometimes three) regularly-scheduled runs to a particular site each day, and then makes two return runs. The passenger list for each run remains basically the same from day to day, although not every person on the list travels every day. Each driver calls his/her destination site each day, and the site manager informs the driver as to who will and will not be coming to the site that day (each day the clients are asked their plans for the following day). Persons deciding not to be picked up on any day are requested to call TRADE that morning. In addition to transporting clients, TRADE delivers meals to the homes of those clients unable to travel.

Title XX - TRADE transports Title XX-eligible residents of Mercer County on a demand-responsive, door-to-door basis. Trip purposes are predominantly medical and educational. Service is available between the hours of 6:30 AM and 4:30 PM each day (Monday - Friday), with 24 hour advance notice requested for each trip. Persons eligible for Title XX assistance call TRADE directly to request service. The TRADE dispatcher asks if the

caller is eligible, and if so, the trip is scheduled and the dispatcher completes a DYFS Service Application (see Appendix B) for the caller with information supplied over the phone (the application is completed only once for each person). When the driver goes to pick the person up, he/she has the person show proof of eligibility (e.g., a pay stub or Medicaid card) and then sign the completed application, which is later turned in to the TRADE bookkeeper.

JOBS - TRADE transports persons eligible under this program to and from employment centers on a subscription basis, with demand-responsive service available, as well. There are two JOBS runs per day. Service is requested for individual clients by the Mercer County CETA office. Service is available between the hours of 6:30 AM and 4:30 PM.

Voc. Rehab. - TRADE transports clients of this program to and from vocational rehabilitation sites on a fixed schedule/ subscription basis. As of October 1980, there was only one Voc. Rehab. run per day - to and from the Hunterton Occupational Training Center (HOTC) in Flemington Township. Voc. Rehab. schedules client trips with TRADE at least three weeks in advance of when the client is to begin vocational training.

Hightstown/East Windsor - TRADE provides three different types of service to residents of Hightstown and East Windsor. A regularly scheduled fixed route is operated Monday through Thursday from noon to 1 PM; the route is then retraced between 3:15 and 4:00 PM. On Monday, Tuesday, and Thursday, demand-responsive (24 hour advance notice is requested) service is available from 1:15 to 3:15 PM; this is primarily for medical appointments, but other types of trips are accomodated when time permits. On Wednesdays, demand-responsive service is available (also from 1 to 3:15 PM) only for trips to Princeton. On Fridays (from 12 to 4 PM), special chartered "mini-trips" are arranged.

The bulk of TRADE's trips are fixed schedule/subscription in nature (Nutrition trips alone account for over 80% of all TRADE trips); demand-responsive trips constitute approximately 12% of all trips, while fixed route (i.e., non-door-to-door) and special charter trips make up the remaining 8%. (See Chapter 6 for a discussion of TRADE's ridership.)

4.1.5 Operations Structure/Record-Keeping

Relatively few users actually call TRADE to request service; all of the subscription trips are requested by an "agency" (i.e., employment training center or nutrition site), while fixed route runs have no scheduled pickups. Of course, those persons scheduled for pickup who are unable to make the trip are requested to notify TRADE directly the morning of the scheduled trip.

All scheduled pickups are typed in advance onto driver trip logs, showing each rider's name, address, destination address, and scheduled arrival time at destination* (see Appendix A for samples of logs used). The logs/schedules are distributed to the appropriate drivers each day. The TRADE dispatcher is responsible for indicating on each log which of the listed riders are to be picked up that day; the dispatcher also schedules requested demand-responsive trips, and types the scheduled route for each Title XX driver.

Each driver is responsible for picking up and delivering the passengers as scheduled on his/her trip log. In addition, the demand-responsive drivers are supposed to record actual pickup and delivery times and mileage figures on the trip logs, while the subscription service drivers are asked to record the start and end time of each run, the number of passengers on each run, and the start and end mileage for the day. At the end of the day, the drivers turn their logs in to the TRADE bookkeeper. According to the statistical reporting procedures originally established by TRADE, total passenger trips, mileage, and service hours were to be totaled on a monthly basis for each of the participating agencies. These figures were to be used in computing reimbursement rates for the participants, as well as for evaluation purposes; each agency is sent a monthly financial report (see Appendix B for copies of the various forms).

Fairly complete statistical records were maintained during the first year of the consolidated operation (1979). However, the change in TRADE's management (in April 1980), coupled with the high turnover in the clerical position (see section 4.2) produced a discontinuity in statistical recording procedures. These problems resulted in gaps in the records for much of 1980.

Coupled with the recording difficulties, TRADE also experienced problems in its reporting and billing of participating agencies; as of November 1980, TRADE was several months behind in its billing. This was due in part to staffing problems (i.e., there is only a single bookkeeper, who has frequently been called on to fill in as a dispatcher and/or driver), and also to the complexity of the billing/accounting requirements made necessary by six different direct funding sources, each having a different type of contract (see section 4.1.3). The overall accounting for TRADE (i.e., payroll and actual issuance of operating funds) is handled by the Mercer County Financial Office, but these functions are also dependent on TRADE's reporting procedure. As of the preparation of this evaluation, TRADE was making efforts to improve its recording/ reporting functions. However, the problems related to these

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* As of the time of this evaluation, actual pick-up times for demand-responsive trips were not being scheduled; only arrival times at the desired destination were included on the trip logs. The original dispatcher apparently felt that it was infeasible to schedule pick-up times.

functions have largely prevented TRADE from developing an accurate and comprehensive data base from which to assess true operational and administrative costs and system efficiency.

4.1.6 Staffing

The operations staff of TRADE includes a director, social service coordinator, dispatcher, assistant dispatcher, clerk/bookkeeper, fourteen full-time drivers, and four part-time drivers (two of whom are actually CETA employees). The director is responsible for project activities, including the direct supervision of all TRADE employees; he, in turn, reports to the Director of Human Services of Mercer County. The social service coordinator is technically responsible for all interactions with human service agencies within the County, although the director has, to-date, assumed primary responsibility for this function. The dispatchers handle trip scheduling; they are on duty in overlapping shifts (see Table 4-2 for the overall employee schedule). The clerk/bookkeeper is responsible for all recordkeeping, statistical reporting and billing of agencies.

Due to staff shortages at various times (e.g., drivers calling in sick, and gaps in hiring new dispatchers), the director, social service coordinator and bookkeeper have frequently had to fill in as dispatchers and drivers.

As shown in Table 4-2, the salaries of the various personnel are paid through several sources. The staff was hired through the Mercer County civil service system. The latter has presented problems for TRADE in that the County did not have classifications for dispatcher and assistant dispatcher, making it quite difficult to hire people to fill those positions. Although these classifications were eventually created, TRADE has continued to have problems because of the County's definition of the positions.*

TRADE has no formal training procedures for new staff.** There are Driver Guidelines (see Appendix C), however, which specify rules, responsibilities, and procedures for drivers to follow in checking out (and returning) and operating vehicles

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* In the Fall of 1980, for instance, the County ruled that TRADE's assistant dispatcher was not "qualified" for the position, and had him removed. TRADE managed to retain him as a driver, but then had to go through the process of hiring another dispatcher.

** TRADE's original director had explored possible driver training arrangements with Mercer County College, but no program was developed. Two of TRADE's drivers did, however, participate in a Red Cross training porgram when the Title XX service was transferred from that agency to TRADE.

TABLE 4-2.

TRADE STAFF SCHEDULE

Position	Hours	Source of Funding*
Director	8-5	U
Social Service Coordinator	8:30-4:30	M
Senior Dispatcher	6:30-2:30	III, XX, H, V
Assistant Dispatcher	10:30-6:30	XX, M
Clerk/Bookkeeper	7:30-3:30	III, XX, H, V
Driver (Part-Time)	9-2	N
Driver (Part-Time)	11-5	H
Driver (Part-Time)	2:30-6	C (for Voc. Rehab.)
Driver (Part-Time)	8-12	C (for Title XX)
Driver	6:30-2:30	XX
Driver	6:30-2:30	N
Driver	6:30-2:30	XX, J
Driver	6:30-2:30	N, V
Driver	7-3	N
Driver	8-4	XX
Driver	8-4	XX
Driver	8-4	N
Driver	8-4	III (backup)
Driver	8:30-4:30	N
Driver	8:30-4:30	N
Driver	8:30-4:30	N
Driver	8:30-4:30	N
Driver	9-5	V

* U = UMTA
M = Mercer County
III = Title III
XX = Title XX
N = Nutrition
H = Hightstown/E. Windsor
V = Voc. Rehab.
J = JOBS
C = CETA

and dealing with passengers. A Driver's Daily Inspection Report must be filled out by each driver.

4.1.7 Vehicles and Facilities

As of November 1980, TRADE was operating a fleet of 18 vehicles (see Figure 4-1). Table 4-3 summarizes the characteristics of the fleet. Only one of the vehicles is wheelchair-accessible (see Figure 4-2). The fleet is quite old, in general, and TRADE has been plagued by frequent breakdowns, as described in Section 4.3. Maintenance is performed by the County, and its facilities have not permitted the institution of any real preventive maintenance.

At that time, TRADE had five 2-way radios and a base unit. Three of the radios are permanently installed in vehicles, while the other two were being used in different vehicles, as needed.

Also at that time, TRADE's office was located on the grounds of Donnelly Hospital in Hamilton Township.* The vehicles were also based at the Hospital, although the County's maintenance facility was roughly half an hour's drive from there.

4.1.8 Project Marketing/Interaction with Human Service Agencies

TRADE has been moderately successful in its marketing efforts and interaction with human service agencies. The efforts to coordinate the activities of the seven "original" agencies were not totally successful (the agencies' reasons for participating in or withdrawing from TRADE are discussed in Sec. 4.2 and in Chapter 5). However, TRADE did secure the participation of three new agencies through the marketing efforts of the first director.

In general, TRADE's marketing efforts have been limited by operational problems facing the system; these have included constant vehicle breakdowns, poor driver performance, and scheduling problems. In addition to these continuing problems, marketing during the first two years of the project** was

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* In March 1981, TRADE moved to another location in the County - the site (in Trenton) of the Mercer County Veterans Outreach Center.

** The institutional constraints were basically removed in early 1980, following the election of a new County Administration. The new Administration lent its support to TRADE, seeing it as an important component of the County Government. Furthermore, TRADE's fuel allocation was expanded at that time through an increased allocation from the regional distributor.

FIGURE 4-1. TRADE 14-PASSENGER VAN

FIGURE 4-2. TRADE WHEELCHAIR-ACCESSIBLE VAN

TABLE 4-3.

TRADE VEHICLES

MAKE	YEAR	SEATING CAPACITY (# PAX)	PROGRAM USED FOR	APPROXIMATE DAILY MILEAGE
Plymouth Sedan	1974	4	Title XX	100
Plymouth Sedan	1974	4	Title XX	100
Ford Van	1974	7	Nutrition	50
Dodge Van	1975	14	Nutrition	60
Dodge Van	1975	14	Nutrition	100
Chevrolet Van	1975	7	Title XX	100
Chevrolet Van	1975	4 (+1 wheelchair)	Title XX/Voc. Rehab.	100
Chevrolet Wagon	1975	5	Title XX	80
Dodge Van	1975	14	Nutrition	80
Dodge Van	1975	14	Nutrition	90
Plymouth Van	1976	14	Nutrition	70
Plymouth Van	1977	14	Nutrition	50
Dodge Van	1977	14	Nutrition	70
Dodge Van	1978	14	Nutrition	70
Dodge Van	1979	14	Voc. Rehab./JOBS/Nut.	110
Dodge Van	1979	14	Title XX/Hights/ E. Windsor	100
Dodge Van	1979	14	Nutrition/Voc. Rehab.	120
Dodge Van	1979	14	all (backup)	100

hampered by institutional problems, including lack of support for the project from the County Administration and restrictions on the amount of fuel available to TRADE (these constraints are discussed further in Sec. 4.2 and in Chapter 5). These problems apparently made it difficult to promote TRADE to potentially interested agencies.

For this and other unspecified reasons, TRADE has never developed a formal marketing plan. Although recommendations were made by a consultant concerning the development of marketing materials (e.g., a logo, a brochure describing TRADE and presenting its advantages to agencies), nothing was ever developed to promote TRADE services to either human service agencies or individuals. TRADE's original director had requested the Director of Human Services to assign someone to develop a logo, but none was ever developed. TRADE's only formal marketing effort has consisted of occasional talks by the director to interested groups. As of December 1980, TRADE had new plans for developing a logo and other (unspecified) marketing schemes.

4.2 Project History

This section summarizes the history of the project, highlighting the key institutional and political factors which shaped its direction.

4.2.1 1975-77

The impetus for a coordinated transportation program began in the summer of 1975, with a series of meetings, running through early 1976, involving various parties interested in investigating the possibilities of coordination/consolidation. These meetings were organized by the director of the Mercer County Division on Aging, and were attended by representatives/ agency heads of social service agencies, Mercer County townships, and planning groups, as well as federal, state, and local transportation specialists. The meetings centered on the assessment of the possibilities and potential of coordinating various transportation services for the elderly and handicapped. A transportation study of Mercer County's specialized transportation services had revealed an "uncoordinated, duplicative, and inefficient network of services," thereby suggesting a considerable need and potential for improving efficiency and effectiveness through coordination of resources. A transportation workgroup was formed among the meeting attendees, and this group developed a proposal for establishing a coordinated transportation system within the county. The group travelled to Washington in March 1976 to meet with representatives from UMTA and the U.S. Department of Health, Education, and Welfare. UMTA encouraged Mercer County to apply for a Section 6 demonstration grant to fund a coordinated system, while HEW (specifically, the Office of

Human Development Services) encouraged the County to apply for an OHDS demonstration grant.

The OHDS application called for a project budget of $368,530, and a projected starting date of January 28, 1977. Mercer County was selected as one of the ten finalists for the OHDS Demonstration Program, but was eventually excluded from the final group of five. The reason for rejection was apparently that OHDS was aware that the project would be funded (in full) by UMTA, and thus decided to fund other applicants instead.

The UMTA grant was approved in February 1977. The contract was signed in April; staff positions were then created, and a dispatcher and project director were hired in October (this long delay was due, in part, to the large number of applications which had to be reviewed). This marked the official beginning of the project.

At that time, a preliminary management information (i.e., accounting/billing) system was designed. Visits were made and contract and schedule negotiations begun with the following agencies designated (in the application) as willing to participate in the project: Mercer County Community Action Council (MCCAC); Mercer County Community Guidance Center; Hamilton Township; Ewing Township; Trenton Office on Aging; Mercer County Nutrition Office; and New Jersey Division of Vocational Rehabilitation Services (NJDVRS). Initially, the participation of three other agencies had been solicited, but two declined and the third went out of business. (The reasons of all of the agencies for wanting to take part in the project are discussed in Chapter 5.) The agency visits were undertaken by the TRADE director and the social service coordinator over the next few months (i.e., through the end of 1977). Meanwhile, other staff positions were being filled: a bookkeeper and four drivers (covered by CETA) had been hired by February (1978).

4.2.2 1978

In March (1978), pre-coordination data collection commenced in the form of maintenance of detailed driver trip logs, distribution/collection of on-board surveys, and conducting of interviews of the seven original participating agencies. Also during March, TRADE moved to its headquarters - at the Donnelly Memorial Hospital Complex.

For all practical purposes, TRADE became operational in April 1978, with the relocation of the eight Nutrition project vehicles at TRADE headquarters. At that time, the plan was for the other agencies' vehicles to be operated in a coordinated manner by June 1978. Toward this end, TRADE began pursuing actions aimed at establishing a scheduled maintenance program, resolving insurance questions, establishing lines for

centralized purchasing through Mercer County, and developing centralized accountability/interagency billing mechanisms. A step-by-step process for inaugurating centralized dispatching was designed to facilitate each agency's entry into the program. The steps varied for each agency, but all dealt with the same basic issues: base vehicle location, preparation of client master lists, procedures for handling subscription trips, and procedures for handling demand-responsive trips.

Once these implementation plans were developed, TRADE began the process of working out details with the individual agencies. This was a slow and difficult process, as the agencies requested various guarantees and raised questions concerning individual aspects of the overall coordination process, including insurance, inter-agency reimbursement, operational visibility, local control, vehicle depreciation, level of service and specialized client needs. It became evident that the agency heads had certain misconceptions concerning the details of the project. Some of these people thought that TRADE would replace their vehicles; others believed that TRADE would assume all operating expenses. (These inaccurate expectations were partly the result of changes in County and agency personnel during the process of initiating the coordinated system.)

As a result of the misconceptions, two of the original agencies - Ewing and Hamilton Townships - withdrew from the project. Meanwhile, a third agency - Mercer County Community Action Council - decided to delay its entry into the coordinated system until the beginning of August 1978.

At this time (June 1978), although centralized purchasing was available to TRADE agencies, it was not being used. The Head Start Program, for instance, decided to make purchases for its vehicle operation through private sources rather than through the County. Likewise, Head Start chose to have maintenance performed privately, rather than through the County, which made centralized maintenance available to all participating agencies. The CAC felt that County maintenance was too slow for its needs, but the Community Guidance Center made use of the centralized maintenance feature, and found the work quite satisfactory.

After considerable preparation, TRADE began its central dispatching operation - the real key to the coordinated system - in August (1978), with the eight nutrition program vehicles and two Trenton Office on Aging vehicles. (The TRADE dispatcher thus became responsible for the scheduling of these vehicles, as well as monitoring the efforts of the drivers with regard to maintaining vehicle checkout sheets and trip logs. However, it was decided that the Trenton vehicles would not be based at TRADE, and that Trenton would call the TRADE dispatcher to attempt any desired coordination.)

Efforts continued to bring the other participating agencies' vehicles on-line, while TRADE also continued to pursue participation on the part of additional agencies. Talks were conducted at this time with the Trenton Area Chapter of the Red Cross (then operating the Title XX service, under contract to the New Jersey Department of Youth and Family Services), and the Bureau of Day Training (operating eleven vehicles). TRADE developed new proposals to the Head Start Program* and Ewing Township in an attempt to bring them back into the project. However, it was decided that little benefit would result from including either Head Start or the Community Guidance Center** in the demonstration as it was then structured, and these agencies never actually became part of the consolidated system.

In September 1978, as part of the effort to attract new participants, TRADE prepared and submitted proposals (to provide transportation service) to three agencies/programs, as follows:

1. Bureau of Day Training (for over $78,000);

2. Division of Youth and Family Services (to provide transportation for its Title XX programs, for a total of $67,555);

3. New Jersey Department of Labor and Industry (in response to a request for proposals seeking operators interested in providing service to work places for persons without access to public transportation).

In the last case, TRADE coordinated the proposal effort for itself and three other agencies: Trenton CETA Office, Mercer Co. CETA Office and United Progress, Inc. (a local nonprofit agency). The total contract amount of the proposals was approximately $42,000 (including $18,000 designated for the purchase of two vans). TRADE also applied for funds under UMTA's 16(b)(1) program.

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* The director of the MCCAC had sought approval from the Department of Health, Education and Welfare (HEW) concerning the possible coordination of the Head Start vehicles. The regional office of HEW had informed the MCCAC that "sharing of Head Start resources" is encouraged (under certain conditions), but advised that the program's vehicles should not be coordinated with TRADE until after the end of the school year so as to avoid disruptions to the Head Start program.

** Although the Community Guidance Center had briefly participated in centralized maintenance, its vehicles were never brought into centralized dispatching.

4.2.3 1979

The efforts of 1978 paid off, as TRADE succeeded in expanding its base of operation as the year ended. The New Jersey Department of Labor and Industry's (NJDLI) grant - to fund the Mercer County JOBS Transportation Project - was awarded to TRADE in December, with service beginning in January (1979). TRADE initially employed county cars to provide the service, using five drivers (two were TRADE CETA drivers and three were employees of United Progress, Inc.), and two new vans were ordered. (Also, during January, TRADE persuaded the Princeton Joint Transportation Committee to appropriate $1500 for the purpose of purchasing service for Princeton's elderly and handicapped residents through TRADE. This would involve the expanded use of one of the Nutrition vans. However, this proved to be infeasible due to driver constraints, and the contract was never implemented.)

Also at this time, TRADE contracted with DYFS to provide service under Title XX (i.e., taking over the service formerly provided by the Red Cross), and began discussions with them concerning the provision of service under Title XIX. The Title XX contract, which began in April, entitled TRADE to receive five vehicles (two station wagons and three vans), and resulted in TRADE's employing the Red Cross dispatcher and two of its drivers. The service was initially run exactly as it had been under Red Cross, with an understanding that possible improvements and coordination with other TRADE services would be examined over the first couple of months of the contract.

At the same time that the Title XX service began, however, the 16(b)(1) request was denied, due to "financial limitations" within the UMTA program, as well as the fact that the request had not been included in the local Transportation Improvement Program (prepared by the local metropolitan planning organization - the Delaware Valley Regional Planning Commission).* A second vehicle request was also turned down when the Donnelly Hospital Chest Clinic (ending its operation at the Hospital) chose to give its vehicle to another party rather than to TRADE.

TRADE also suffered setbacks in the area of personnel during January, as the administrative analyst and a CETA driver resigned. The reason cited for these resignations was the low salary level. In general, the TRADE salaries were very low and, especially for the analyst, not consistent with the work requirements of the position.

TRADE's expansion and progress continued, as a contract was finally executed in March (1979) to serve clients of the New

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* TRADE's original director reported that no elderly and handicapped transportation service requests were included in the TIP that year, despite his urging.

Jersey Division of Vocational Rehabilitation Services (one of the "original" participants). This service began in April. This was followed in the same month by the completion of negotiations with the township of East Windsor and the borough of Hightstown to serve elderly residents under a purchase of service agreement. However, at this time it was decided (by TRADE, the Mercer County Improvement Authority and the County Executive) that TRADE would not seek Section 18 funds (transit assistance for non-urbanized areas), since receipt of those funds would require that TRADE be made available to all rural residents of the County - a policy that was not consistent with TRADE's objectives at that time.

Fortunately, support for TRADE from Mercer County was increasing during this period. The major example of this was that TRADE was given complete control over the transportation element of the Nutrition Program. This entailed TRADE directly distributing paychecks to the Nutrition drivers, as well as having responsibility for their hiring and firing. These changes were designed to eliminate the dual control then existing in the management of the Nutrition transportation service.

The transfer of control of the Nutrition vehicles and drivers and the procurement of the purchase of service contracts were quite significant to the demonstration in that they represented the actual beginning of the consolidation phase of the project.

As a consolidated system, TRADE had to deal with many of the problems typically facing specialized "transit" systems. These included mechanical problems with the vehicles (and slow repair work),* problems in finding (and keeping) competent/ reliable drivers (and administrative personnel), insufficient quantities of gasoline, and difficulties in developing a sound financial base. With regard to vehicles, for instance, TRADE theoretically had several back-up vehicles for the different components of the system (e.g., vehicles used in the Nutrition program could serve as back-ups for other programs); however, because of a high number of breakdowns, the backup system was unable to serve its specified function.

As for personnel difficulties, the major problem was apparently the low salaries. A more competitive salary

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* TRADE's original director had proposed the following possible solutions to the maintenance problems: 1) TRADE vehicles could be worked on at night by a part-time mechanic whose salary would be included (in part) in purchase of service agreements; and 2) TRADE would be included in the proposed move of County Public Works vehicles to the County Airport, which would have given TRADE direct access to maintenance facilities (and fuel). However, these suggestions were rejected by the County Director of Public Works as being infeasible.

structure would likely have attracted more reliable drivers and administrative staff. Driver reliability problems were underscored in March 1979, when one of the CETA drivers was suspended for driving while intoxicated and another was dismissed following his arrest on drug possession charges.

The availability of gasoline became an important issue during April (1979), as Mercer County's overall allocation was reduced to 90% of its 1978 allocation (this was the time of the nation's second energy "crisis"). At first, the County wanted to limit TRADE to five gallons of gasoline per day per vehicle, but then decided to raise this to ten due to the importance of the service. TRADE attempted to increase its allocation by requesting permission to use the gasoline pumps at Donnelly Hospital, which receives its own allocation and does not use it all; this request was not approved. The limited County allocation made it very difficult for TRADE to expand to additional agencies seeking to purchase service. In an effort to alleviate the fuel problem, TRADE suggested that the County request a supplemental allocation (of 63,000 gallons per year) from the State Department of Energy (DOE). The County Administration opposed such a move, but agreed, in May, to apply for the increase nevertheless.*

TRADE also encountered serious operational problems at this time, when the dispatcher handling Title XX trips resigned. TRADE was forced to cover these trips with the remaining dispatcher, assisted by other staff. It was rather difficult to hire a replacement, since the position had to be filled through the Civil Service process, but no employment category for "dispatcher" existed in the Mercer County Civil Service system. This situation soon became compounded by the resignation of the regular dispatcher. This necessitated that dispatching responsibilities be handled by the TRADE project director and the social service coordinator, which, of course, detracted from their ability to perform their normal administrative responsibilites. A new dispatcher and assistant dispatcher were finally hired in August.

Around that time, vehicle breakdowns, which had always plagued the system, became an acute problem, often disrupting service. In addition, a previously annoying situation developed into a serious problem: TRADE drivers began taking increasing numbers of sick days, frequently resulting in a driver shortage. Since there was no pool of back-up drivers, TRADE administrative staff members were frequently pressed into emergency service.

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* Whether this application was actually made was later cast in considerable doubt, in light of events of a year later; see page 4-21.

Because of energy conservation measures implemented by the County,* TRADE was ordered by the County Executive not to expand its services (although its daily per vehicle allocation was actually raised - to 12 gallons). However, beginning in September, TRADE was allowed to initiate service to Hightstown and E. Windsor, because the fuel required was to be obtained from the municipal Police Departments, rather than from the normal County supplies.

As the second year of the demonstration ended (in October 1979), the UMTA project funds had not yet been fully expended, and an extension was obtained. In addition, TRADE began to investigate the possibility of becoming part of the Mercer County Improvement Authority (MCIA - which includes Mercer Metro, the local transit operator). Under this proposal, TRADE would be part of a distinct "paratransit" division.

In conjunction with this possible reorganization, MCIA was involved in a proposal to the New Jersey Department of Transportation to develop a comprehensive ride-sharing demonstration program, which would consist of both work trip ride-sharing (i.e., carpooling and vanpooling) and specialized transportation for the elderly and handicapped (i.e. TRADE).

As 1979 ended, TRADE was busily engaged in trying to secure renewed funding from its participating programs. The JOBS contract was due to expire on December 31, for instance, and NJDLI was not sure how much funding it would be able (and willing) to provide for the following year; the absence of that contract would have jeopardized two of TRADE's driver positions. Meanwhile, the Hightstown/E. Windsor contract was also in jeopardy at the end of the year, as Hightstown was uncertain as to its ability to meet its expected financial responsibility for 1980.**

4.2.4 1980

The new year was marked by a political change in the County administration, as a result of the November elections. A new County Administrator and a new Director of Human Services were appointed, casting some uncertainty over TRADE's future. Since TRADE had been developed under the old administration, its

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* The County had not been granted, by that time, an increased allocation from the N.J. DOE.

** In a parallel development, it was decided (in December 1979) that the original evaluation contractor should be phased out of the evaluation and replaced by another contractor (Multisystems, Inc.). The reason for this change was that the funds in ARI's overall evaluation contract to TSC were exhausted.

staff and participating agencies were unsure as to whether the new administration would support the service. These concerns were partially answered when the administration decided not to retain the original TRADE director but to replace him with an appointee of its own choosing. (Had the County wanted to discontinue TRADE, there would have been no reason to change directors). The original director was notified that his contract would be terminated as of the beginning of May. He continued to perform his duties until that time, although the project's future status was still uncertain (i.e., regarding the level of future County support and the status of the MCIA merger).

Meanwhile, operational and personnel problems continued. In February, for instance, a TRADE van was stolen during the weekend from the Donnelly Hospital parking lot, and later found, abandoned, in downtown Trenton, with considerable body damage. That same month, the clerk/driver who had had responsibility for the stolen van (and had left the keys in the ash tray) was terminated for attempting to have another TRADE employee cash a payroll check belonging to a Donnelly Hospital employee. In March, the bookkeeper resigned (and was replaced), and the Director of the Mercer County Division on Aging terminated Title III funding for the social service coordinator position, feeling that the position was not being used for its intended purpose. (The social service coordinator had spent much of her time filling in for other positions, such as dispatcher, clerk, and driver. TRADE's director was handling most of the agency interaction functions and felt that the coordinator was most needed to provide general administrative and operational support.) However, funding for the position was soon reinstated by the County, and the coordinator was thus allowed to remain with TRADE.

TRADE's expansion possibilities received their first setback of 1980 when the proposal to provide service under Title XIX was rejected until a more acceptable billing rate - and method of billing which would keep Title XIX and Title XX trips separate - could be established; TRADE had proposed a conditional per passenger trip rate ($3.94) for the first quarter which could be reviewed and adjusted based on actual performance.* With regard to existing contracts, all of the participants renewed (or promised to renew) their contracts for the coming year. In addition, UMTA approved TRADE's request for a contract extension through the end of 1980.

The new TRADE director took over operations in April 1980. He had met with the original director on several occastions during the one-week overlap period. During these meetings, all contracts were reviewed, problems discussed, and billing/ reporting procedures explained. The first director made a

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* Discussions have continued over the Title XIX contract, but, as of this writing, no agreement has been reached.

concerted effort to ensure the continuity of the project's operations. However, due to the brief overlap period, a number of items (in particular, those related to billing and reporting) were not covered in sufficient detail, and the new director was unclear as to certain administrative procedures. Nevertheless, operations continued as the new director became acclimated, but expansion efforts, in the form of recruitment of new agencies and procurement of new contracts, were not as actively pursued until the end of the summer.

There was, however, a significant breakthrough in May which greatly improved expansion possibilities. TRADE was essentially exempted from gasoline restrictions, as the State's fuel dealer agreed to expand Mercer County's allocation. The increase in TRADE's allocation was indicative of the new County Administration's support for the project - the County administrator was interested in having TRADE expand, and thus cooperated in securing the expanded allocation.

This action demonstrated the marked contrast to the attitude of the prior Adminstration toward TRADE. Despite the fact that the previous Administration had agreed to apply for an increased fuel allocation in May 1979, such an application was apparently never submitted, and the local dealer was not contacted. It was not until the new Administration took office that a request was made - through the efforts of the Director of the County Division on Aging, in conjunction with the County Administrator. This episode underscored the impact of the political nature of TRADE's institutional setting and the importance of County support in such a project.

In August, TRADE made a step toward expansion, as a non-profit agency - ECHO* - offered to turn its one van (lift-equipped) over to TRADE. ECHO also offered to procure a new lift-equipped vehicle (under UMT Section 16(b)(2)) for TRADE's use. This was a result of rather indirect marketing: the director made a presentation about TRADE to a local housing group, and the director of ECHO was in the audience. (ECHO had originally been approached to join TRADE in the very beginning of the project, but ECHO's director was not inclined to participate at that time.) Unfortunately, the offer of the existing vehicle was rather premature, since it turned out that the van did not, in fact, belong to ECHO, but rather was on loan from another organization - the Lutheran Housing Corporation. This latter group did not feel that it would benefit from participating in TRADE, and thus did not want its vehicle "given up."

Also during August, TRADE's director made two disquieting discoveries: 1) the agency had neglected to requisition UMTA for reimbursement; and 2) it became apparent in reviewing the various contracts for the coming year that the director's

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* Elderly-Communication-Help-Outreach.

salary was not covered in any of them. The former could be easily remedied; the latter had not been settled as of the writing of this report. The director's salary was being paid through the UMTA grant, but this was due to run out at the end of 1980.*

During September, TRADE's director began to pursue the acquisition of wheelchair-accessible vehicles. One of TRADE's vans was retrofitted with a wheelchair ramp. This van, funded jointly through Voc. Rehab. and the JOBS project, was being used by TRADE to transport several Voc. Rehab. clients. TRADE was also promised, in September, two other accessible (lift-equipped) vehicles - one from ECHO (through 16(b)(2)), as mentioned above, and one from the Mercer County Division on Aging. TRADE's director at that time decided to move slowly in advertising the fact that TRADE had an accessible vehicle, because there was, as yet, only a single such vehicle.

As of the completion of this evaluation (November 1980), TRADE was still facing some of the same problems which had plagued it from the beginning: vehicles were still breaking down too frequently, administrative staff members were still filling in as drivers and dispatchers (one driver was terminated during this period when it was discovered that he did not have a driver's license), and future funding remained an uncertainty. In addition, there was renewed opposition to TRADE from within the County - from the directors of the Departments of Public Works and Public Safety, primarily concerning fuel usage. (The various operational and institutional problems experienced by TRADE are summarized in Chapter 5.)

4.2.5 Prospects for the Future

Potential loss of funding presents the most serious problem for TRADE. After another year, for instance, Title III transportation funding is likely to be cut substantially, as Offices on Aging may be forced to spend increasing amounts of funds for more "primary" purposes, such as operation of nutrition sites. For that matter, human service programs are always subject to reduction or elimination through budget balancing efforts at both the state and federal levels. There have already been cutbacks in Title XX funding, for example,

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* The original director claimed that he had informed the County Administration that the director's salary would not be covered after December 1980, and it could not be written into the service contracts (due to "ceiling limitations" which prevented the inclusion of all TRADE costs). The County allegedly chose to defer dealing with the problem. The UMTA grant was subsequently extended through June 1981, thereby covering the director's salary through that time.

and this may well filter down to TRADE by the end of the current Title XX contract (in March 1981).

Of course, the proposed merger with MCIA (dormant as of this writing) would change the situation - in fact, such a move could ensure TRADE's continued existence by providing an on-going funding base (i.e. public transit funding). The merger has not been formally discussed for several months, but once TRADE obtains several lift-equipped vehicles, MCIA's interest may be renewed - notably as a potential means of satisfying Sec. 504 interim accessibility requirements. TRADE's director was not interested in the merger, (as of November 1980) but funding problems could eventually alter this position. Over the longer term, TRADE's institutional location is far from certain.

Besides phasing in wheelchair-lift service, plans for the near future include moving to another site (closer to the County maintenance facility), installing four new radios (two in lift-equipped vehicles), continuing active pursuit of new participants (agencies with vehicles, as well as agencies wishing to purchase service*), and improving TRADE's image (now apparently quite negative among many agencies). In addition to continually improving service, the last task will involve discussions with interested groups and meetings with agency heads, as well as painting all the vehicles and adding a TRADE logo (to be chosen through a contest among senior citizens beginning in January 1981).

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* One agency - the Association for the Advancement of the Mentally Handicapped (AAMH), for instance, is very interested in purchasing service from TRADE, and discussions between the two organizations had begun at the time of this evaluation.

CHAPTER 5

5.0 THE COORDINATION/CONSOLIDATION PROCESS

The Mercer County Project was designed to demonstrate the benefits which could be produced through the coordination of existing social service agency transportation programs. As originally conceived, the project was designed to involve two distinct stages: 1) coordination of agency transportation operations through centralized dispatching, maintenance, and purchasing; and 2) consolidation of services within a single agency/provider. In the first stage, agencies would continue to own and operate their own vehicles; in the second, the central provider would take over ownership (outright or through a lease arrangement) and the operation of all vehicles.

This plan was pursued during the initial phase of the project, as a group of agencies was sought out to participate in a coordinated system, and certain of the coordination elements were successfully set in place (as already described). However, as most of the original agencies withdrew and a series of institutional problems befell the project, the focus shifted away from coordination and directly toward consolidation. As a result, the present participants differ considerably from the original group, and the project has evolved quite differently from the original plan.

This chapter discusses the coordination/consolidation process (as it occurred in Mercer County), in terms of: the seven original agencies' reasons for agreeing to participate initially, and their reasons for subsequently withdrawing; a summary of the barriers to coordination enountered by TRADE; the reasons for the "new" agencies' desire to join TRADE; and agency views of TRADE's success.

5.1 Attempts at Developing Agency Participation: the Original "Participants"

5.1.1 Nature of Agencies' Interest

Seven agencies/programs had originally agreed to participate in the project. These represented a variety of institutional settings: three municipal agencies (Ewing Township, Hamilton Township, Trenton Office on Aging), two non-profit agencies (Mercer Co. Community Action Council and Mercer Co. Community Guidance Center), one County program (the Nutrition Program), and one State agency (Voc. Rehab.). Several of these had shown interest by participating in the initial meetings, while the others were subsequently invited to take part in the project.

The original group of agencies can be divided into two basic categories: 1) those which felt that their transportation programs were already of high quality, and were, in effect, challenging TRADE to show improvements; and 2) those which had more modest transportation programs and essentially wanted to get out of the transportation business. Those in the former group, (specifically Ewing and Hamilton Townships, the Nutrition Program, and the Mercer Co. Community Guidance Center) had reservations about joining TRADE, and tended to be somewhat unsure of its potential for success. Those in the second group (Voc. Rehab., and the Mercer Co. CAC) were generally more enthusiastic about TRADE's potential. The one remaining agency - the Trenton Office on Aging - had an established transportation operation and was not seeking to be relieved of its control, but shared with the second group a sense of optimism over TRADE's prospects for success and an interest in being in on the "ground floor of the coordination effort."

The initial views of the individual agencies, as taken from the first round of agency interviews, can be summarized as follows:

- o Trenton Office on Aging - The director of this agency saw TRADE as a means of establishing greater efficiency in the use of agency vehicles, resulting in more extensive service coverage. Her interest in joining TRADE was based on a desire to improve her agency's vehicle reliability. The agency had no back-up vehicles, meaning that service was interrupted whenever a vehicle broke down. She felt that TRADE could be successful with the full cooperation of the participating agencies and other involved parties.

- o Mercer County Community Guidance Center (The Children's Day School) - The principal of the Children's Day School hoped that TRADE could ease the financial burden resulting from attempting to operate with unreliable vehicles. Financial limitations precluded the purchase of new vehicles, and TRADE would presumably improve the availability of reliable vehicles. This principal had not made the original commitment to join TRADE, however, and he had mixed feelings about its potential for success. TRADE could be of great help to the school, since vehicle problems were undermining the education programs. However, he also felt that it might not be a good idea to have the school's vehicles stationed away from the school at TRADE headquarters because he felt a vehicle should be present at the school at all times for emergency purposes. Furthermore, the prinicipal thought that the children attending the school should not be

mixed on vehicles with other passengers, and, pointed out that they require the constant supervision of a skilled professional while being transported. (The children attending the school have emotional and behavioral problems which are significant enough to prevent their being able to use regular public or private school facilities). Finally, the school had made use of the transportation services of an outside provider - the Red Cross - on several occasions and had been "continually disappointed."

- o Ewing Township Senior Citizens Program - This program chose to join TRADE with the expectations that TRADE would provide additional service to Ewing beyond that currently provided by the township. This supplemental service would consist of extended evening service hours, as well as greater availability of daytime service. However, the director of the Ewing program believed that Ewing's service was already of a very high quality, and was rather apprehensive over the prospect of Ewing losing any control over its operation and of the service losing its "personal touch." The director was dubious of TRADE's potential for success, and promised to withdraw from the project if Ewing did not realize definite benefits.

- o Hamilton Township Senior Citizens Program - Hamilton also joined TRADE with a rather cautious attitude. The director expected Hamilton to receive additional service at reduced costs, and essentially challenged TRADE to accomplish this. As with Ewing, the Hamilton representative made it clear that the township would pull out of TRADE if it experienced "any decrease in service."

- o Mercer Co. Community Action Council (MCCAC): Head Start Program and Hightstown/East Windsor Service Center - These programs saw TRADE as a means of getting out of the transportation business, and were willing to be patient during the early stages of the operation. The directors felt that TRADE's overall objective was to achieve economies in the provision of transportation by making efficient use of all available vehicles in the County. These programs faced problems of limited resources, and the Service Center also had problems due to its remote location (relatively removed from major activity centers in the County).

- o Voc. Rehab. - This State agency had a contract with another provider - Pioneers on Wheels (POW) - at the

time of TRADE's formation, but sought more economical service than was being provided by POW, and therefore became interested in TRADE.

- o Mercer Co. Nutrition Program for the Elderly - The Nutrition Program's decision to join TRADE was apparently made by the County administration. The director of the Nutrition Program did not really understand TRADE's basic objectives, and was apparently reluctant to relinquish any control over her transportation operation, which lacked back-up drivers and vehicles, but otherwise was running fairly well. Therefore, Nutrition joined TRADE amidst something of a County power struggle.

Thus, the original TRADE participants differed considerably in their feelings toward the project. In several cases, the decision to join TRADE had been made by persons no longer connected with the agency; consequently, the reasons for participating may have been quite different from those expressed in the agency interviews (and reported above). Several of the agencies were less than totally committed to the project, a situation which contributed greatly to later implementation problems.

Nonetheless, each agency initially agreed to cooperate with the others in undertaking centralized maintenance, purchasing, and dispatching, with the presumed understanding that eventually all of their vehicles would be operated out of a central site.

5.1.2 Agencies' Withdrawal from the Project

As previously discussed, only two of the original agencies actually became part of the consolidated system. The others never reached agreements with TRADE, and thus never became official participants in the demonstration.

As indicated in the interview summaries, heads of several of the agencies had reservations over TRADE's chances for success from the beginning, while others were laboring under significant misconceptions concerning the potential benefits of coordination. The specific reasons for not participating varied considerably. Two of the agencies (Ewing and Hamilton) decided that their concerns over loss of control and visibility, possible increased costs, and vehicle replacement were strong enough to warrant their withdrawal from the project, without ever having participated in any coordination activities. One agency did take part in the initial coordination effort through the use of centralized maintenance (M.C. Community Guidance Center), but never entered the consolidation phase because TRADE apparently decided that there would be little benefit to its inclusion in the system and thus did not actively pursue

negotiations. The final two (Trenton Office on Aging and MCCAC) seemed to be interested in joining TRADE (and vice versa), but, for undetermined reasons, no formal agreements were ever reached. Consequently, of the original agencies, only Nutrition and Voc. Rehab. remained in the project.

5.2 Summary of Operational/Institutional Problems and Barriers to Development of a Coordinated/ Consolidated System

In pursuing coordination or consolidation, it is generally assumed that some agencies will benefit from coordination and will thus have an interest in taking part in such efforts, while others will not be inclined to join, for a variety of reasons.

The major reasons for agencies declining to participate in TRADE stem from barriers resulting from operational and institutional issues, as well as constraints which are attitudinal in nature (e.g., related to the feelings/concerns of agency directors). The operational and institutional issues included both constraints affecting the individual agencies and problems experienced by TRADE in its operation. The specific problems/barriers related to TRADE are summarized below.

Institutional Issues

- o highly-charged political nature of County setting, causing changes in level of support for coordinated system: originally, system hampered by lack of clear support on the part of the County Administration

- o difficulties in developing a sound funding base due to uncertainities over continuation of contracts, different funding periods for different contracts, and inability of some agencies to commit sufficient funds to cover all TRADE costs (e.g., director's salary)

- o inability of agencies to participate in consolidated system because of unavailability of funds to purchase transportation services (e.g., because of reduced funding levels at the State or Federal level, forcing agencies to limit expenditures for "auxiliary" activities such as transportation)

- o jurisdictional/political differences with other public bodies (e.g., municipal governments - Hamilton, Ewing) and within the County (e.g., over Nutrition's participation)

- county civil service system which made it difficult to hire staff persons

- problem of hiring (and keeping) competent drivers and other personnel because of the low civil service salary levels; this has caused a constant shortage of staff, requiring the director, social service coordinator, and bookkeeper to fill in as dispatchers and drivers

- problems in meeting TRADE's payroll - lack of funding in certain programs to cover all employees' time (e.g., Nutrition programs had no money budgeted for overtime)

- underutilized services for certain programs (e.g., individual JOBS counselors often did not refer clients to TRADE)

- lack of any real advisory board (e.g., a group made up of providers, clients, county and municipal officials) to provide guidance and control over the project

- negative image among local agencies (i.e., public relations problems, reports of poor service reliability, and lack of publicity and public information)

Operational Issues

- frequent vehicle breakdowns, with no backups (complicated by slow repairs and long "down" periods); no preventive maintenance; County maintenance facility understaffed and underfunded; broken fuel gauges on some vehicles, causing them to run out of gas

- frequent problems with drivers, including high turnover

- lack of a program analyst, as well as changes in director and bookkeeper, which caused TRADE to fall behind in statistical reporting and requests for reimbursement, and created gaps in statistical records

- (perceived) infeasibility of intermixing agency client populations on the same vehicle

- difficulties inherent in locating agency vehicles away from the agency's primary facility (i.e., the

integration of the transportation program with the agency's primary service is considered absolutely necessary)

- o agency dissatisfaction with services available through coordinated system (e.g., centralized maintenance found to be too slow or unsatisfactory, or lack of wheelchair-accessible vehicles)

- o agency unwillingness to comply with coordination reporting/accountability requirements

- o limitations on gasoline allocation for the coordinated/consolidated system, restricting the amount of service which could be offered (i.e., limiting expansion); also, difficulties in obtaining fuel in the morning, due to late opening of County pumps

- o lack of formal marketing activities on part of coordinated/consolidated system (e.g., lack of public information - certain agencies unaware of system)

Attitudinal Issues

- o agency concerns over unique travel patterns or on-vehicle assistance needs of clients of different agencies

- o agency feeling that it already has an efficient operation and stands to gain little by joining coordinated system

- o agency fearing loss of local control over own service (i.e., inability to maintain control over quality of service provided)

- o agency concern over loss of visibility and credit for operating service (i.e., unwilling to yield power)

- o agency concern over uncertainty of future funding base of coordinated/consolidated system

- o agency concern over possible increases in costs

- o agency concern over vehicle depreciation and replacement

- o agency administrative personnel change since original coordination agreements made; new administrator may have misconceptions over terms of coordination

In terms of the first category of barriers - institutional issues - the most serious problems were those related to the nature of the institutional setting itself. The lack of support from the County Administration during TRADE's developmental stages,* as well as the continuing opposition from the County Department of Public Works and civil service-related problems seriously hampered TRADE's development, operation, and expansion. Whereas other institutional constraints (e.g., lack of funds) certainly acted to deter certain agencies' participation in TRADE, such factors were not at issue for most of the agencies which declined to participate in (or withdrew from) the project. Furthermore, it is worth noting here that few of the institutional problems traditionally identified as being potential barriers to coordination (e.g., statutory constraints associated with Federal funding programs which prohibit/frustrate sharing of resources) were constraints in Mercer Co.** However, in those Mercer Co. cases that <u>were</u> affected by funding issues, the barriers have proven largely insurmountable - i.e., several agencies have expressed interest in receiving service from TRADE, but simply do not have funds available for transportation.

Issues in the other two categories posed barriers of varying impact on TRADE's development. Several of the attitudinal barriers proved to be essentially impenetrable, while others reflected specific personalities (i.e., agency directors, TRADE personnel, and other key actors) subject to change over time (i.e., with a change of personnel). The operational barriers also varied significantly in terms of degree of impact on the project. Many of both types of barriers reflect largely legitimate concerns on the part of the individual agencies. For instance, an agency/organization operating a single vehicle (e.g., Ewing or Hamilton Townships) has every right to be concerned that, in giving this vehicle up to a consolidated system, it will lose control over the quality of service provided to its clients, while not necessarily realizing appreciable benefits as part of a larger system. This apprehension is obviously compounded in a completely unknown situation such as the creation of a new system.

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* As explained earlier, the new County Administration, which took office in January 1980, was considerably more supportive of TRADE's efforts.

** As evidenced by the recommendations of the regional office of DHEW concerning sharing of Head Start vehicles (see p. 4-15), regulations governing Federally-administered social service programs generally no longer place restrictions on serving persons not funded under the particular programs, but, nevertheless, recipients of these program funds have often resisted coordination out of <u>fear</u> of violating program rules and thereby losing funds.

Similarly, an agency with an established transportation operation stands to gain little (and has little to offer the overall system) from entering a consolidated system if the nature of its service and clientele make it infeasible to use its vehicles in a coordinated manner (i.e., for ride-sharing and/or time-sharing). For instance, certain client groups (such as the emotionally-handicapped children of the Community Guidance Center) probably should not ride together with clients from certain other groups (e.g., the elderly). Differences in travel patterns also pose problems for coordination. In fact, TRADE itself decided that coordination of certain agencies (e.g., Community Guidance Center, MCCAC) would prove advantageous to neither the individual agency nor the overall system.

On the other hand, certain operational and attitudinal barriers were (or can be) overcome through TRADE's efforts. Such efforts include attempts at improving its image by upgrading service quality and improving relations with local agencies, and procuring wheelchair-accessible vehicles - thereby enhancing TRADE's attractiveness to potential participating agencies.

5.3 Development of a Consolidated System

5.3.1 Securing Participation of "New" Agencies/Programs

In light of TRADE's inability to involve most of the original agencies, the Director chose to pursue other participants. TRADE was successful in developing a consolidated system, although this was achieved primarily through purchase of service contracts with agencies/programs needing transportation, but not having their own transportation operations, rather than through transfer of control of existing transportation programs. One existing program - Nutrition - became the base for the consolidated operation, and additional vehicles were obtained through the individual purchase of service agreements.

The "new" agencies all chose to participate primarily as a means of providing transportation for their clients without having to operate the service themselves - i.e., TRADE allows them to concentrate on their primary functions. (It should be noted that three of the five participants are state agencies which contract for transportation service with different providers in different counties or regions; thus, TRADE is not unique in providing service to these agencies, but it is relatively unique in terms of its particular mix of service recipients.) This has definite implications for methods of developing a consolidated system. Agencies/programs wishing to "get out of the transportation business" will obviously be interested in purchasing service from a central provider. As evidenced by TRADE's experience, however, many agencies which

operate their own services will be reluctant to give up their vehicles to a central provider. Of course, building through purchase of service agreements requires that there be a base vehicle fleet (such as the Nutrition vehicles) and/or that purchase of vehicles be built into the service contracts.

5.3.2 Developing Agency Service Contracts

An integral element of a consolidated system is the purchase of service contracts with the participating agencies/programs. The provisions set forth in these contracts will dictate not only the amount and type of service to be furnished but also the nature of system costs which can be covered and the level of service coordination which can be undertaken. As suggested above, vehicle depreciation/replacement can be an important item to be built into contracts, and covering administrative salaries can, similarly, be a crucial issue.

Human service agencies and programs vary in the types of costs which can be covered using their funds. In some cases, funding limitations constrain what can be covered, as evidenced by the inability to build the TRADE director's salary into the service contracts. In others, funding sources (i.e., at the Federal level) place certain restrictions on what can be covered; for example, some programs have regulations which prohibit the escrowing of money for vehicle replacement (although this was not encountered with the TRADE participants).

Beyond funding and regulatory constraints, the development of service contracts can be affected by the perceptions of particular agency administrators, i.e., regarding the nature of transportation costs. For instance, some agencies may be unaware of the full extent of costs associated with providing transportation, and thus may balk at contracts set so as to recover appropriate portions of all reasonable expenses (i.e., administrative costs - not drivers, fuel, and maintenance).

As indicated earlier, TRADE was not successful at establishing contracts with most of the "original" project participants, although actual provisions were not an issue in these instances. However, TRADE did, obviously, negotiate successfully with four agencies/programs,* although the terms of these contracts had to be renegotiated following the initial period of service, due to inaccurate projections of ridership and/or inappropriate service contract units (i.e., amounts per mile, hour, or trip provided). In developing each purchase of service contract, TRADE - in conjunction with the contractor -

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* Nutrition funds come to TRADE through the County; expenses are covered, but there is no actual "contract" for provision of service.

estimated the number of trips which it expected to provide for clients of that agency, and established a service charge to reflect the costs associated with the projected amount of service in each case.* In light of varying perceptions of costs, as well as different types and levels of service, the different TRADE service contracts were (and continue to be) based on different rates per unit of service (i.e., per trip or per mile). The billing rates (as of December 1980) were as follows:

- o Voc. Rehab. - $7.21 per trip
- o Title XX - $3.94 per trip
- o JOBS - fixed contract amount, with per trip rate "to be determined later"
- o Hightstown/E. Windsor - $1.14 per mile

Total contracts amounts, amounts actually billed, and contract periods are discussed in Chapter 7.

Within the reimbursement rates for each agency/program, TRADE was able to build in vehicle depreciation figures which eventually could be used for vehicle replacement purposes. Thus, each agency/program contract was established to include $0.15** per mile of service supplied (based on the estimate for the contract period). (The amounts built up for vehicle replacement are presented in Chapter 7.)

Finally, the service contracts were worded so as to enable coordination of the different agencies' vehicles through time-sharing and ride-sharing. Each contract was designed with provisions allowing the vehicles purchased by any agency to be used for clients of other agencies, as well. Such provisions are very important in developing a consolidated system, since service coordination is essentially based on vehicle-sharing in one form or another.***

In summary, the development of purchase of service contracts in a consolidated system can be a rather complex procedure, involving differing perceptions of service costs, differing budgetary cycles and contract periods, and differing funding limitations and requirements. Furthermore, the nature of these contracts can be crucial to the operation of the system, e.g., through provisions facilitating coordination and enabling the accumulation of vehicle replacement funds, as well as simply providing the system with sufficient revenue to cover administrative and operating expenses. TRADE was able to

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* The Hightstown/E. Windsor contract is based on miles of service, rather than trips provided, because it is a fixed route service, and is run regardless of the level of demand; the other contracts are based on number of trips.

** This figure was raised to $0.16 for 1981 contracts.

*** The extent of service coordination in TRADE is discussed in Chapter 6.

incorporate provisions in its contracts covering the former two items; TRADE's experience with the latter issue is discussed in Chapter 7.

5.3.3 Impacts of Consolidation: Agencies' Views

An important element in attracting new participants to a coordinated/consolidated system is the nature of the impacts of the system on those agencies already participating. For reasons discussed elsewhere, TRADE's impacts could not be measured quantitatively; the best indicator available was agency impressions of the system. As part of the second round of data collection for the evaluation, Multisystems interviewed representatives of nine agencies/programs - both participating and non-participating. Their views of TRADE's success and impacts are as follows:

Nutrition - The director of this program was generally satisfied with TRADE, but pointed out that "nothing has really changed" about the nutrition trips themselves - the vehicles (and most of the drivers) and level of service provided are the same as Nutrition's pre-TRADE service. The Nutrition director cited the lack of lift-equipped vehicles as the project's only major inadequacy.

Voc. Rehab. - The representative of this agency expressed satisfaction with TRADE's service; service was being provided at a lower cost than that provided by the previous provider - Pioneers on Wheels (still operating a portion of Voc. Rehab. service due to jurisdictional factors).* He felt that TRADE had been hampered by internal administration problems, but that this situation had improved considerably under its new administration - TRADE was now "going in a more positive direction." He also felt, however, that certain elements of the operation were still quite deficient; these were, notably, inadequate driver training and poor vehicle maintenance (leading to "atrocious" amounts of downtime). Finally, the interviewee reported that TRADE was not being used properly by vocational rehabilitation counselors - i.e., they were frequently not referring their clients there; this is not a reflection on TRADE, he pointed out, but rather caused either by inadequate information disseminated by Voc. Rehab., or else simply lack of initiative on the part of the individual counselors.

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* Of course, it must be pointed out that this cost saving is largely attributable to the fact that TRADE administrative and operating costs were partially subsidized by the UMTA and Mercer County grants, as well as by the use of CETA-paid drivers.

JOBS - In the opinion of the former transportation coordinator of the JOBS program, the JOBS project in Mercer County has been rather disappointing. Use of TRADE for JOBS service has been considerably below what NJDLI had expected. This is attributable to a failure of individual employment centers to refer clients there, which has been caused by actual problems with TRADE, as well as simply inadequate use of an available resource by the employment counselors (similar to the case with Voc. Rehab.). Apparently, trip requests have sometimes been handled poorly by TRADE, producing reluctance among certain employment center personnel to make use of its service. The former JOBS coordinator felt that, in light of the manner in which TRADE was being used, it may be more appropriate for the individual employment centers (e.g., the CETA Prime Sponsor) to directly pay for transportation services themselves, rather than having all service covered by the State (NJDLI). The coordinator did feel that TRADE had made one identifiable impact, however, in getting different employment training offices to talk together (i.e., in discussing the transporting of clients), which had not previously been the case.

Title XX - The administrators of the Title XX contract* felt that TRADE was fairly successful in efficiently using funds and resources to provide transportation for those without alternatives. They noted that there had been administrative/ organizational problems with TRADE, but that it was improving in this respect. Service was apparently no worse, yet no-better, than that provided by Red Cross prior to the switching of the Title XX contract to TRADE. However, while noting that TRADE provides a valuable service, the administrators were of the opinion that Title XX funds should not be used to fund transportation service; rather, services such as TRADE should be funded by the NJ Department of Transportation. If Title XX were to be excluded from funding transportation, the impact on TRADE would be quite significant, since it now represents a major component of TRADE's funding.

Hightstown/E. Windsor - The senior citizen coordinator for Hightstown and East Windsor expressed great satisfaction with TRADE. It is providing a service for the residents of these towns that the towns would be hard pressed to offer on their own. Hightstown and East Windsor had jointly purchased a vehicle, but they lacked the expertise and facilities for support services (i.e., call-taking, dispatching, maintenance, overall administration) necessary to provide service themselves. Thus, TRADE relieved them of the burden of operating the service. Since no such service was provided before TRADE, it has obviously produced a benefit to the towns' residents in improving mobility options. The Hightstown/E.

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* The administrators of the Title XX contract are the local Title XX representative and a representative of the State Division of Youth and Family Services (DYFS).

Windsor coordinator reported having been contacted by several other towns in Mercer County concerning TRADE, and felt that it could similarly benefit them, but these towns apparently lack the funds to purchase service. The coordinator saw only one problem with TRADE's service: the high turnover of drivers. This has prevented the passengers from getting to know their drivers; this is not a major problem, but greater continuity would apparently make the regular riders feel more secure.

Trenton Office on Aging (TOA) - The TOA originally agreed to participate in TRADE, but never actually entered into any of the coordination activities. Despite the fact that the TOA has never officially participated in the system, the agency's director still considers the agency to be a "part" of TRADE. She apparently does not fully understand TRADE's consolidated structure, since she considers TOA to be a "branch" of TRADE - operating independently, but available for potential coordination efforts. TOA's director felt that TRADE was good "in theory," but that the system was severely hampered by the lack of back-up vehicles and drivers and the inability to perform preventative maintenance. She did feel, though, that TRADE's overall operation had improved considerably since it was initiated.

Hamilton Township - The director of the township's senior citizens program felt that her agency's service was quite satisfactory, and had little interest in TRADE - she had no impression of its level of success or of its problems. However, she perceived TRADE as lacking the proper concern for the needs of the agencies' clients.

ECHO - This agency had been approached early in TRADE's development phase about participating in the project, but had been apprehensive at the time and thus had not joined. However, ECHO's director reported that she would have reconsidered once TRADE was actually operational, but was never subsequently approached by TRADE. (This surprised her since ECHO operated one of the few lift-equipped vehicles in the County). Nevertheless, ECHO has referred some of its clients to TRADE, and would like to officially join the project. ECHO's director reported some dissatisfaction over TRADE's current limited service to her clients (i.e., some have complained about long waiting times), but she felt that the situation was improving. ECHO has applied for a 16(b)(2) lift-equipped vehicle to be used by TRADE.

Association for the Advancement of the Mentally Handicapped (AAMH) - The AAMH provides no transportation on its own, and, in fact, has no funds allocated for transporting its clients. The director reported that the agency has wanted to join TRADE "for a long time," but did not know how to do so; the director

claimed that TRADE had been of little help in this regard.* AAMH's director did not understand how TRADE works (i.e, she did not realize that her agency would have to negotiate a purchase of service agreement to receive service). AAMH has called TRADE on numerous occasions to request service for its clients, but has always been turned down on these requests - without explanation. AAMH's director claimed that had she known of the need for a contract to be served by TRADE, she could have set aside funds in the agency's budget for transportation purposes. (She has since met with TRADE's director and the agency may join the project in the next fiscal year.)

Summary: Agencies' Views

The participating agencies interviewed generally viewed TRADE in a positive light; it has benefitted the participating agencies/programs by providing transportation where there was none previously, or by relieving agencies of the burden of operating service themselves. However, the agencies' views were all quite general - it is rather difficult to measure TRADE's impact on their programs, particularly since several programs had no previous service to use as a basis for comparison. Those agencies which did have previous service generally reported no noticeable change in the quality of service provided once TRADE took over; of course, this in itself can be considered a "positive" impact, in that coordination (i.e., time-sharing of vehicles)** could easily have led to a deterioration in service quality.

Of course, perhaps the key indicator that TRADE has had a positive impact is the fact that none of the participating agencies/programs have withdrawn from TRADE once they officially joined. This would suggest that TRADE has met their needs/expectations, at least to some extent. Finally, it should be noted that two agencies which had previously declined to participate in the project were now expressing interest after seeing that TRADE was capable of providing acceptable service to other agencies' clients.

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* In reality, AAMH had been contacted about the possibility of joining TRADE in the early stages of TRADE's development, but had declined due to budgetary constraints. Apparently, there have been changes in the AAMH staff since these discussions took place, which might explain the different viewpoints.

** The extent of time-sharing is discussed in Chapter 7.

CHAPTER 6

6.0 TRAVEL BEHAVIOR AND USER CHARACTERISTICS

Although the focus of this evaluation is on the process and problems of coordination and consolidation, it is important to examine how the project impacted travel behavior. In light of the general lack of "pre-coordination" data, however, this chapter is necessarily limited to an examination of the changes in demand during the course of the demonstration. The chapter addresses ridership, travel characteristics, and user characteristics.

6.1 Travel Behavior Impacts

This section examines the demand for TRADE's services, including ridership, travel patterns, and user characteristics. The analyses are based on data maintained by TRADE (from driver trip logs), as well as the results of a user survey it distributed in late September.* Results are presented for the entire system, as well as for the individual components.

6.1.1 Project Ridership

During 1980, TRADE provided an average of 11,222 one-way trips per month, an increase of 3% over 1979 (10,921 trips per month).** This ridership is substantial when one compares it to other coordinated or consolidated transportation services. As shown in Table 6-1, TRADE's ridership is higher than that of four of the OHDS demonstration projects (METROVAN, URTA, WCTP, and Project Respond) and is close to that of ACCESS. While the others listed carried more passengers, TRADE's target population (i.e., those persons eligible to use the service) is smaller than all of them except URTA (although no figures were available for RIDE, WCTP, and Project Respond).

TRADE's ridership is broken out by participating program/agency in Table 6-2. With two exceptions, the ridership level of each agency remained fairly stable during the two years.

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* The survey was distributed by drivers on-board TRADE vehicles; each survey was accompanied by a stamped envelope, addressed to TRADE. A total of 500 surveys were handed out, and 214 were completed and returned.

** Those figures shown in Table 6-2 are based on averages for the same months during each of the two years (e.g., the Nutrition figures cover January - September for each year, while Title XX figures cover April-August; the Title XX service did not begin until April 1979).

TABLE 6-1.

COMPARATIVE RIDERSHIP -

COORDINATED TRANSPORTATION SYSTEMS

	Avg. Monthly Ridership (one-way trips)	Est. Target Population
TRADE	11,222	40,000
RADAR (Roanoke, VA)	16,000	60,000
CRT (Cleveland)	32,000	160,000
Metro Mobility (Minn./St. Paul)	14,504*	70,000
Metrovan (Grand Rapids, MI)	6,588	75,000
URTA (Howard Co., MD)	3,420	13,000
RIDE (Jacksonville, FL)	27,949	N/A
WCTP (Westchester Co., NY)	624	N/A
Project Respond (Fayetteville, AR)	1,701	N/A
ACCESS (Pittsburgh)	12,500	260,000

* Taxi and non-profit provider components only

Sources: see Chapter 7, Table 7-18

TABLE 6-2.

AVERAGE MONTHLY RIDERSHIP - 1979 AND 1980

PROGRAM/AGENCY	1979	1980 (% CHANGE)
Nutrition	8195	8745 (+7%)*
Title XX	1790	1773 (-1%)**
Voc. Rehab.	297	391 (+32%)***
JOBS	371	55 (-92%)+
Hightstown/ E. Windsor	268	258 (-4%)++
Overall System	10921	11222 (+3%)

* based on data available for 9 months of each year

** based on data available for 5 months of each year

*** based on data available for 3 months of each year

\+ based on data available for 6 months of each year

++ based on data available for 2 months of each year

The exceptions are the JOBS project, which experienced a substantial decrease (92%), and Voc. Rehab., which gained 32%. Much of these changes are attributable to the fact that the classification of JOBS trips was changed in February 1980, at which time some of what had been included under JOBS were redefined (by the NJ Department of Labor and Industry) as Voc. Rehab. trips. Thus, as of February, the JOBS ridership dropped considerably. The January 1980 total for JOBS was 220; in February, the total was 30. Consequently, Voc. Rehab. ridership rose from 297 trips per month in 1979 to 391 in 1980. However, the combined mothly JOBS - Voc. Rehab. ridership for 1979 was 668, versus only 419 in 1980; thus, the total demand for the services was down 37% in 1980. Since both of these are referral programs (i.e., a job training or rehabilitation counselor requests transportation for a client), the decrease indicates that fewer referrals were made. As suggested in the agency interview (see Chapter 5, under Agencies' Views of TRADE), certain counselors have simply chosen not to make use of TRADE. In November 1980, TRADE introduced a new Voc. Rehab. run; thus, ridership should rise in 1981.

Ridership for the Nutrition program rose by 7% from 1979 to 1980. The Nutrition ridership figures can be directly compared with pre-consolidation figures. In 1978, it had an average monthly ridership of 6260 (with 1021 driver pay hours per month). The 1979 total ridership was 31% higher (and driver pay hours were 11% higher). (In addition, the productivity level increased from 6.13 passenger trips/driver pay hour in 1978 to 7.13 in 1979, and to 7.28 in 1980; this is discussed in Chapter 7.)

Ridership dropped slightly (in 1980) for the Title XX and Hightstown/E. Windsor programs: 1% and 4%, respectively. The Title XX TRADE ridership levels were considerably lower than the pre-TRADE level; the Red Cross had served an average of 2400 Title XX trips per month during 1978 - 34% more than TRADE's 1979 monthly average. The reason for this change could not be determined. The Hightstown/E. Windsor ridership could not be compared to pre-TRADE levels, since the service did not exist before 1979.

6.1.2 Travel Patterns

Other behavior measures relate to the travel patterns of TRADE users: what are the major trip purposes of TRADE users, how frequently do they use TRADE, and what other modes are (or were) employed by TRADE users? (Information regarding these issues was derived from the User Survey of September 1980).

Trip Purposes - The distribution of TRADE trips by purpose (for each program) is shown in Table 6-3. It shows that trips to nutrition sites constitute by far the greatest percentage

TABLE 6-3.

TRADE TRIP PURPOSES

PERCENTAGE OF TRIPS

PURPOSE	Nutrition	Title XX	Voc. Rehab.	Hights./ E.W.	JOBS	Total
Nutrition Site	95.9%	10.0%	0%	4.5%	0%	62.1%
Health Care	0%	55.0%	0%	9.1%	0%	12.1%
Job Training/ Occ. Therapy	0%	0%	87.5%	0%	83.4%	6.1%
Work	0%	0%	0%	0%	16.7%	0%
School	0%	17.5%	0%	0%	0%	3.5%
Shopping	2.5%	2.5%	0%	54.5%	0%	8.1%
Social/Rec.	0%	7.5%	0%	31.8%	0%	5.1%
Other	1.6%	7.5%	12.5%	0%	0%	3.0%

(62.1%) of all trips reported in the Survey.* This is followed by health care trips (12.1%), most of which (92%) were

* However, the distribution of trip purposes indicated by the survey does not accurately reflect the true distribution: from the ridership figures, we know that over 78% of all passenger trips made in 1980 were for the Nutrition project. Since vitually all of these trips are to nutrition sites, the total percentage of TRADE trips which have nutrition visits as their purpose is higher than the 62.1% indicated by the survey. This means that the percentages for at least some of the other purposes are overstated. This discrepancy indicates that a smaller percentage of Nutrition clients responded to the survey than did other agencies' clients. However, the survey still provides a general idea of the relative standing of the different purposes.

made by Title XX clients. The other purposes were mentioned by relatively few respondents.

The preponderance of nutrition trips is an important aspect of TRADE's operation. The fact that nearly 78% of all TRADE trips are to nutrition sites, while that service consumes only 63% of the total driver pay hours, is key to keeping TRADE's overall operating costs (discussed in Chapter 7) in a reasonable range. The Nutrition runs constitute a high productivity service compared to the health care trips, for example, which can generally be served only on an individual basis.

Frequency of Use of TRADE - The frequency with which clients of the different agencies/programs use TRADE (as determined from the User Survey) is summarized in Table 6-4. As shown, over half of TRADE users ride daily, while nearly a third ride "once every few days." The distribution of frequency of use by program indicates that Nutrition and Voc. Rehab. have the highest percentage of daily users. This is not surprising considering that these are subscription trips and the trip purposes of these programs represent daily needs - i.e., a daily meal and vocational training, as opposed to other trip purposes (e.g., health care or shopping) which may not be needed as regularly. This is reflected in the fact that the highest percentage of Title XX clients have used TRADE "once or twice," or that half of the Hightstown/E. Windsor respondents use TRADE "once every few days."

The number of unduplicated users (i.e., the number of different persons who make at least one trip within a given period of time) is an important measure of demand. TRADE served approximately 995 unduplicated individuals in 1979, as reported in its monthly records. Records of unduplicated individuals in 1980 were maintained only for Nutrition and Title XX. The totals for the different programs are shown in Table 6-5.

As indicated by the consistency in the Nutrition and Title XX services, the number of persons using TRADE did not grow, as might have been expected; there were actually fewer Nutrition users in 1980 than in the previous year. However, total ridership levels for the programs indicate that the trip rate for each user did increase in 1980. Taking a ratio of the total number of trips made per month to the number of unduplicated users, one can estimate the user trip rates as follows:

Nutrition - 18.3 trips per month per user (1979)
20.2 trips per month per user (1980)

Title XX - 5.5 trips per month per user (1979)
6.0 trips per month per user (1980)

TABLE 6-4.

FREQUENCY OF USE OF TRADE

PERCENTAGE OF USE*

FREQUENCY OF USE	Nutrition	JOBS	Title XX	Voc. Rehab.	Hights./ E.W.	Overall Percentage**
Daily	70.2%	33.3%	19.5%	100.0%	9.1%	53.2%
Once every few days	27.4%	50.0%	7.5%	0%	50.0%	31.3%
Once a week	1.6%	16.7%	9.8%	0%	13.6%	5.0%
Once or twice a month	0%	0%	29.3%	0%	27.3%	9.0%
Rarely	0.8%	0%	4.9%	0%	0%	1.5%

* Each cell represents the percentage of that program's trips, as revealed by the user survey.

** This represents percentage of all trips/responses.

Voc. Rehab. - 12.7 trips per month per user (1979)
(N/A for 1980)

JOBS - 2.0 trips per month per user (1979)
(N/A for 1980)

Hightstown/
E. Windsor - 4.0 trips per month per user (1979)
(N/A for 1980)

Thus, although fewer individuals used TRADE during 1980 than in the previous year, the individual user trip rates were higher, accounting for the higher ridership levels.

Modal Usage of TRADE Users - Although TRADE is theoretically providing a service for those without alternative forms of transportation, some TRADE users also use other modes for travel (the availability of alternatives is discussed in the next subsection, User Characteristics). Table 6-6 indicates the modes used and the purposes of these trips, based on the responses to the User Survey. The survey respondents (i.e., TRADE users) reported making 27% of their trips by other modes - 11% by bus and 8% driving cars; TRADE users made few trips as car passengers, by taxi, or on foot.

6.2 User Characteristics and Impacts

In evaluating the nature of demand for TRADE's services, it is important to understand the characteristics of the users and the impact which TRADE has had on them. This section addresses these issues, based primarily on the results of the User Survey.

Socioeconomic Characteristics - A summary of the socio-economic characteristics of TRADE users is presented in Table 6-7. The service used predominantly by women, is targeted at the elderly and disadvantaged, although it is serving a wide distribution of ages. The table shows that nearly 70% of the users are 65 years of age or older, with nearly 33% over 75. However, a sizeable percentage (14%) of the users are under 15.

TABLE 6-5.

UNDUPLICATED USERS

	NUMBER OF UNDUPLICATED USERS	
	1979	1980
Nutrition	450	432
Title XX	288	292
Voc. Rehab.	22	N/A
JOBS	171	N/A
Hightstown/E. Windsor	64	N/A

TABLE 6-6.

DISTRIBUTION OF REPORTED MODES OF TRAVEL
OF TRADE USERS, BY TRIP PURPOSE

TRIP PURPOSE	MODE OF TRAVEL*						
	TRADE	Bus	Car (Driver)	Car (Rider)	Taxi	Walk	Other
Work	43%	43%	14%	0%	0%	0%	0%
Voc. Rehab.	88%	0%	0%	6%	0%	0%	6%
Shopping	53%	21%	13%	5%	0%	8%	0%
Health Care	64%	8%	8%	8%	0%	12%	0%
Social/Rec.	35%	19%	19%	15%	0%	8%	4%
Nutrition	95%	3%	2%	0%	0%	0%	0%
Personal	22%	33%	22%	0%	11%	11%	0%
All Purposes Combined	73%	11%	8%	2%	1%	4%	1%

* Each cell represents % of that row (e.g., 43% of the work trips made by TRADE users during the previous week were made on TRADE; 19% of social/recreational trips made by TRADE users during the previous week were made by bus).

TABLE 6-7.

SUMMARY OF USER CHARACTERISTICS

Sex:	
male	20.9%
female	79.1%
Age:	
under 15	14.0%
16-44	8.2%
45-64	8.2%
65-75	36.7%
76+	32.9%
Employment Status:	
employed full-time	1.6%
employed part-time	1.6%
unemployed, looking	3.2%
student	1.6%
homemaker	11.9%
retired	68.6%
other	11.4%
Household Income:	
$0-$4999	59.6%
$5000-$6999	21.9%
$7000-$9999	10.3%
$10000-$14999	4.1%
$15000+	4.1%

Users under 65 qualify for TRADE because of low income or unemployement; Table 6-7 shows that less than 2% of users are employed full-time, while an equal percentage are employed part-time. Nearly 12% consider themselves "homemakers." The majority of the survey respondents are retired - approximately 69% - which corresponds with the percentage over 65 years of age. The income levels reported by the respondents generally parallel the employment status; nearly 60% reported annual household incomes as less than $5000, while only 18.5% were above $7000.

Thus, TRADE users are typically very poor, which severely limits their transportation options and makes TRADE's lack of fare quite attractive. Table 6-8 shows that the availability of driver's licenses and automobiles among TRADE users is very low; less than 18% of them possess driver's licenses and only 32% have one or more automobiles in their households. Approximately 12% of the survey respondents "frequently" have access to an auto (as a passenger), while only 6% frequently have an auto available to drive. As indicated in Table 6-9,

TABLE 6-8.

AUTO AVAILABILITY AND MOBILITY OF TRADE USERS

Valid Driver's License:	
yes	17.9%
no	82.1%
Auto Owned by Household:	
0	68.3%
1	20.2%
2	9.3%
3 or more	2.2%
Availability of Auto, as Passenger:	
frequently	12.3%
seldom	31.0%
never	56.7%
Availability of Auto, as Driver:	
frequently	6.1%
seldom	3.8%
never	42.7%
does not apply	47.3%
Use of Aids:	
none	43.0%
wheelchair	0.5%
walker	1.4%
hearing aid	5.3%
braces	1.0%
cane	16.9%
personal escort	7.2%
other	5.8%
Would Make Trip, without TRADE:	
yes	15.6%
no	84.4%
How to Make Trip, without TRADE (if yes to above):	
car passenger	15.0%
car driver	20.0%
taxi	10.0%
bus	45.0%
other	10.0%

TABLE 6-9.

ABILITY OF TRADE USERS TO USE PUBLIC TRANSIT

	CATEGORY OF RESPONSE*			
	Easily	With Some Difficulty	With Great Difficulty	Not at All
Ability to get on and off a bus	36.1%	46.1%	9.4%	8.3%
Ability to walk 2-3 blocks	36.5%	38.9%	13.2%	11.4%
Ability to stand and wait 10 or more minutes	37.5%	35.7%	19.6%	7.1%
Ability to keep balance on a bus	26.5%	34.3%	21.1%	18.1%
Ability to move around in a crowd	38.5%	31.4%	17.3%	12.8%

* Each cell represents the percentage of persons responding to that particular question.

over 84% of the respondents would not have made the trip on which they were surveyed without TRADE; of the 16% who would have made the trip without TRADE, 45% would have used the bus and 35% would have traveled by auto. The fact that only 10% would have used a taxi further suggests that the free fare aspect of TRADE is important to its users.

Mobility Characteristics and Impacts on Other Providers - Trade is primarily a service for the ambulatory; the single wheelchair-accessible vehicle serves very few persons. Thus, TRADE users are generally not severely handicapped (i.e., confined to a wheelchair). As shown in Table 6-8, less than 1% of the survey respondents use wheelchairs; 17% reported using canes, and 7% require a personal escort. However, when questioned about various aspects of their ability to use public

transit, the majority reported at least "some difficulty" with the actions associated with transit use. As shown in Table 6-9, for instance, 46% of respondents indicated that they could get on and off a bus "with some difficulty," 9.4% reported "with great difficulty," and 8.3% "not at all;" 36% said they could "easily" get on and off a bus. The survey respondents reported greater levels of difficulty with the other functions; "keeping balance on a bus" is apparently the most difficult activity, with only 26.5% indicating ability to do this "easily" and over 39% indicating "with great difficulty" or "not at all."

Although the majority of TRADE users apparently have some difficulty using transit, over a third do not. This might indicate that TRADE would be diverting some trips from transit. However, the exact percentage is difficult to determine, in light of the facts that: 1) certain areas of Mercer Co. are not well served by transit; and 2) less than 16% of the users "would have made the trip" if TRADE did not exist. The latter includes both trips that could not have been made due to mobility limitations, and trips that are discretionary (i.e., non-essential) in nature, and therefore can be said to have been induced by TRADE. As mentioned above, of the nearly 16% of the Survey respondents who would have traveled without TRADE, 45% would have used transit; if these percentages held for all TRADE users, then approximately 7% of TRADE's ridership, or 800 trips per month, would be diverted from transit; this represents a negligible percentage of the monthly Mercer Metro ridership (approximately 600,000 per month). In terms of diversion of trips from taxis, the figure would be roughly 180 passenger trips per month (10% x 15.6% x 11,161). Thus, TRADE's impact on other transportation providers is apparently minimal.*

User Satisfaction - In terms of the users' level of satisfaction with TRADE, the comments supplied by the respondents provided a good indication of specific feelings. The comments were categorized (by the evaluator) as being very favorable, neutral (i.e., generally positive, but with a specific criticism, such as "TRADE needs new vehicles"), and unfavorable, based on the nature of the criticisms and commendations. Of the 214 completed surveys, 105 provided comments. Of these, 55% (58) were judged "very favorable," 19% (20) were considered neutral, and 26% (27) were "unfavorable." The favorable comments tended to cite the importance of TRADE to the respondent's well-being, pointing out the absence of alternatives, and praising individual drivers. Those comments

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* Of course, such a survey produces non-commital responses; if TRADE did not exist, it is likely that a greater percentage of respondents would find a way to make use of alternative modes than was indicated by their responses. In other words, the fact that TRADE does exist undoubtedly biased the responses to the question.

judged "neutral" expressed sentiments similar to the "favorable," but these laudatory comments were often tempered by criticisms of the vehicles' physical condition (the most common criticism) or of drivers' behavior (e.g., rudeness, driving too fast, etc.). The unfavorable comments typically reflected these same criticisms, and also complained about not being picked up at the right time. A general feature of the users' comments was gratefulness for the service, but a feeling that the vehicles were too run down.

CHAPTER 7

7.0 PROJECT SUPPLY, ECONOMICS AND PRODUCTIVITY

This chapter assesses TRADE's supply characteristics, economics and productivity. It examines: the demonstration's impact on service characteristics such as travel time, service time, and vehicle mileage; how the different components of TRADE compare with one another; how TRADE's actual operating costs compare with the budgets drafted for the component services; and how TRADE's productivity and unit cost figures compare with those of similar services in other locations.

7.1 Supply Characteristics

As discussed in Chapter 4, TRADE provides three basic types of service:

1. fixed schedule/subscription;
2. demand-responsive
3. fixed route

Subscription service was typically provided for persons making regular trips (i.e., on a recurring basis), while demand-responsive trips varied considerably from day to day. The fixed route service apparently carried a number of recurring riders, but this was never actually measured, since logs did not record fixed-route users.

The vast majority of TRADE's trips (82% of the monthly average) are subscription in nature, with 16% demand-responsive, and 2% fixed route. This is largely attributable to the fact that approximately 78% of all of TRADE's trips are for the Nutrition Project. Title XX trips constitute virtually all of the demand-responsive trips, while all the fixed route service is for Hightstown/E. Windsor. The relative percentages of the trips of different programs should be kept in mind when considering the supply (and demand) analysis.

7.1.1 Travel Time*

For the subscription services (Nutrition, Voc. Rehab. and JOBS), travel time was computed for each run for the total

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* For door-to-door service, travel time (for individual passengers) includes not only the actual in-vehicle (ride) time, but also the access and egress time (i.e., dwell time at origin and destination, respectively). Access and egress

(continued on next page)

group from the pickup time of the first passenger to the dropoff time at the group's destination. Travel times for the fixed route service (Hightstown/E. Windsor) could not be computed from the trip logs, since individual passengers were not recorded. The average tour travel times for the subscription services are as follows:

JOBS 43.4 minutes

Voc. Rehab. 64.3 minutes

Nutrition 45.1 minutes

For the demand-responsive service (Title XX), travel time was computed for individual passengers. The average travel time for Title XX passengers is 19.1 minutes. In Title XX, the travel times varied significantly between visits to doctors (12.8 minutes) and trips for other medical treatment (24.4 minutes); the others each serve only a single trip purpose (Nutrition clients do occassionally make shopping or other types of trips, but these are minimal in number).

7.1.2 Service Times

Service time measures indicate the daily use of a vehicle (and the associated driver). These measures include the percentage of the driver's pay hours which are used in the actual transportation of passengers (i.e., passenger service hours, the time during which passengers are physically inside the vehicle or in the act of boarding/alighting), and the percentage which is "unutilized" (i.e., no passengers are in the vehicle). Unutilized time consists of the following components:

deadheading time - during which the vehicle is on its way to pick up a passenger or returning to the office after dropping off a passenger

dead time - during which the vehicle and driver are waiting at the garage or office; i.e., there is no demand at that time

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(continued from previous page)
times are useful in assessing the amount of driver assistance needed by clients of the different agencies/programs. However, measuring these components requires very careful recording of times on detailed driver trip logs. TRADE drivers were instructed to maintain these logs for a period of two weeks (August 27 - Sept. 10, 1980). Although the logs were kept, the information they contain was not detailed enough to permit the isolation of access and agress times, and thus these measures are not addressed in this evaluation. However, average ride times for the different programs were computed from the logs.

layover time - during which the vehicle and driver are waiting away from the garage/office; e.g., lunch

There are two other periods during operating hours when no one is on the vehicle:

idle time - during which the vehicle and driver are not scheduled for service

administrative time - during which the driver and/or vehicle are involved in other duties (e.g., errands, maintenance, fueling) which preclude the transporting of passengers

The ratio of passenger service hours to driver pay hours (utilization ratio) indicates the extent to which a vehicle's service hours are being productively used. Certain portions of unutilized time (i.e., layover) are purposely scheduled. However, dead time and deadhead time are related to scheduling, as well as demand levels and patterns. Efficient scheduling (i.e., grouping of trips in a demand-responsive service) can, to a certain extent, minimize both components.

Service time measures were analyzed for four of the five services (the Hightstown/East Windsor trip logs did not provide the information necessary to perform the analysis), based on information contained in the detailed driver trip logs.* Average daily figures for the different services are summarized in Table 7-1; a breakdown of the components for the individual Nutrition runs is given in Table 7-2.

As shown in Table 7-1, the utilization ratios vary considerably among the programs. The overall ratio for TRADE is 51%. The JOBS and Voc. Rehab. ratios are quite high (74% and 80%, respectively), indicating efficient vehicle use. Of course, the high ratios also reflect the nature of services provided: fixed schedule/subscription trips to a single destination. Since they

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* Not all drivers/vehicles scheduled (see Figure 7-1) are included in the analysis due to significant omissions on the respective trip logs; several drivers apparently did not complete logs at all, while others maintained incomplete logs. Furthermore, on the trip logs, it was generally impossible to distinguish between dead time and deadhead time; long periods of unutilized time between pickups undoubtedly include both, but the amount which can be considered deadheading was unclear. Thus, in this analysis, all "unutilized" time represents the total dead and deadhead time, in addition to scheduled layover/lunch time.

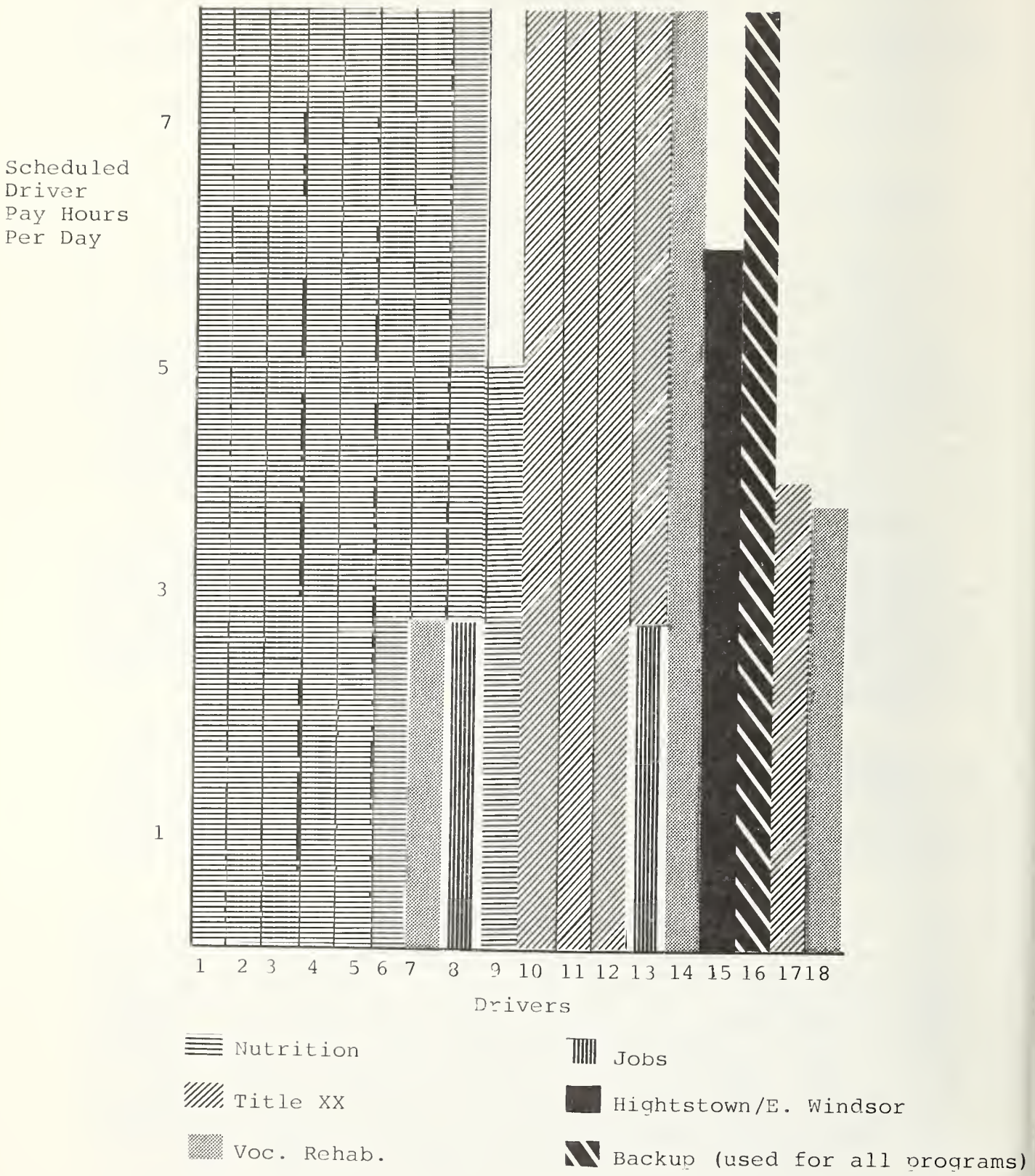

FIGURE 7-1. TIME-SHARING, BASED ON DRIVER SCHEDULES

include little unutilized time, both services are apparently being run quite efficiently. Because the driver pay hours listed on the table represent less than a full eight hours for both JOBS and Voc. Rehab., one might suspect that there is considerable idle time for each. However, this is not the case: within TRADE's time-sharing of vehicles, the JOBS and Voc. Rehab. runs are made on vehicles which are used for other service (e.g., Nutrition or Title XX) during the remainder of the day (Figure 7-1 shows the extent of TRADE's time-sharing based on driver schedules,* which is discussed later in this section).

Unlike the situation for JOBS and Voc. Rehab., the utilization ratios for Nutrition and Title XX indicate that each service includes a considerable amount of unutilized time. The Title XX service, especially, shows a very low

TABLE 7-1.

AVERAGE DAILY SERVICE TIME COMPONENTS

	Nutrition	JOBS	Voc. Rehab.	Title XX	Overall
Driver Pay Hrs.	59.0	5.0	2.5	24.0	90.5
Passenger Service Hrs.	32.3	3.7	2.0	8.6	46.6
Unutilized Time	26.7	1.3	0.5	15.4	43.9
Utilization Ratio (Pax Service Hrs./ Driver Pay Hrs.)	55%	74%	80%	36%	51%

* This table covers a period of two weeks: August 27 - September 10, 1980.

* Figure 7-1 shows one full-time driver (and vehicle) and a second part-time driver for Voc. Rehab. The full-time vehicle and driver were not indicated on any of the trip logs of late August/early September, and are therefore not included in the service time analysis. The vehicle is apparently used for a run which had not begun until November 1980; no service time data were available at the time of this report. The second part-time driver shown was driving at the time of the trip logs, but did not provide adequate information on his logs to permit analysis.

TABLE 7-2*

DAILY SERVICE TIME COMPONENTS: NUTRITION

Nutrition Site No.	Driver Pay Hrs.	Passenger Service Hrs.	Unutilized Hours
3	8	4.8	3.2
4	5.5	3.1	2.4
5	8	3.3	4.7
6	8	3.8	4.2
7	8	6.0	2.0
8	5.5	3.1	2.4
9	8	3.0	5.0
11	8	5.2	2.8
1	N/A**	N/A**	N/A**
Total	59	32.3	26.7

* This table covers period of two weeks: August 27 - September 10, 1980.

** Trip logs for this driver/site were incomplete, and thus not used for this analysis.

utilization ratio (36%). Since it was not possible to distinguish between dead and deadheading time on the trip logs, one must rely only on their total, and conclude that either the scheduling of these trips was quite inefficient or demand for the service was low. Indeed, the analysis of service reliability for Title XX (discussed in the next subsection), indicates that 73% of all pickups are made before the scheduled pickup time, which implies that the pickup schedules for these drivers allowed too much time between pickups.

The Nutrition service provides the only real opportunity to measure TRADE's service time improvement (over the pre-coordination situation). A comparison of the analysis discussed here and the detailed driver trip logs analyzed by ARI at the beginning of the evaluation shows that the utilization ratio has improved from 45% (1978) to 55% (1980). (The two sets of figures are compared in Table 7-3.) However, it is unlikely that the increase in utilization ratio is totally attributable to coordination/consolidation. Since the time between each driver's Nutrition runs is generally an hour or less, a driver's capability for providing additional service during this time is quite limited. Time-sharing has been accomplished, but this has been during idle hours rather than dead hours. The improvement in utilization ratio is most likely due to an increase in ridership - a greater number of passengers must be picked up, meaning that the first passenger must be picked up earlier than before to allow all of the passengers to be picked up and still arrive at the nutrition site on time. Conversely, the return run is likely to take longer, thereby extending the passenger service hours for each run. As an indication of this change, the average daily mileage per vehicle increased from approximately 48.7 in 1978 to over 78.3 in 1980, while average travel time per run per vehicle increased during that period from 41.3 to 45.1 minutes.

The Nutrition vehicles' utilization ratio of 55% is actually quite reasonable, and is likely to increase somewhat if ridership continues to grow. Moreover, it is possible that TRADE might be able to increase the ratio further by introducing time-sharing between Nutrition runs. Occasional trips can be served between runs, although the bulk of TRADE's potential for time-sharing with Nutrition vehicles continues to be the hours before the first run and after the last.

7.1.3 Service Coordination

As of the time of this evaluation, TRADE had instituted time-sharing with four vehicles (not including the backup vehicle, which has been used for all programs) and three drivers (see Figure 7-1). One vehicle is used for Nutrition and Voc. Rehab. - the Voc. Rehab. HOTC (Hunterton Occupational Training Center) run is made in the morning; after dropping off these passengers (at 9 AM) the driver begins his pickups for

TABLE 7-3.

COMPARISON OF NUTRITION SERVICE TIME COMPONENTS
(BEFORE AND AFTER COORDINATION)

	BEFORE COORDINATION (1978)	AFTER COORDINATION (1980)
Driver Pay Hrs.	55.0	59.0
Passenger Service Hrs.	24.5*	32.3
Unutilized Time	30.5	26.7
Utilization Ratio	45%	55%

* This includes 5.2 hours expended for home-delivered meals; these "administrative" hours were not indicated on the 1980 trip logs, and are thus assumed to be included in passenger service hours for the after-coordination figure, as well.

his first Nutrition run. Later in the day, the Nutrition driver (another driver, since the morning shift has ended) goes from the closest Nutrition site to HOTC to pick up the Voc. Rehab. clients for their return home.

A second vehicle is used for Title XX and Hightstown/E. Windsor service; Title XX service is provided during the periods that the Hightstown/E. Windsor route is not being run. A third vehicle is used to make the JOBS Fairmont Center run (clients are delivered at the center at 8:30 AM), and then for Nutrition service similar to the Voc. Rehab./Nutrition use. Finally, TRADE's lone wheelchair-accessible vehicle is used for clients of both Title XX and Voc. Rehab., as needed.

The greatest potential for additional time-sharing is in additional use of the Nutrition vehicles, as suggested in the previous subsection. As shown in Figure 7-1, TRADE actually has little idle time in its driver/vehicle schedule. Drivers represented by 9, 15, 17, and 18 in Figure 7-1 are part-time employees; thus, the vehicles they drive are theoretically idle during their off-hours (a total of 14.5 idle vehicle hours).

Of course, due to TRADE's frequent vehicle breakdowns, these vehicles are often used as backups during these hours. Thus, it would be difficult for TRADE to expand its passenger service time with its current fleet.

The other major form of service coordination is trip-sharing (referring to clients of more than one agency traveling in a vehicle together). As of this report, TRADE had not made use of this procedure. This is due primarily to the nature of the different programs and types of trips; the best opportunities for trip-sharing are in demand-responsive services, and since TRADE provides such service to only one group of clients (Title XX), there is limited opportunity for trip-sharing. The fixed schedule subscription trips would permit trip-sharing only if the non-subscription riders had origins and destinations along the scheduled route. TRADE's potential for promoting trip-sharing will increase once it receives the lift-equipped vehicles which have been ordered. Once a substantial demand for these vehicles is established, TRADE will have to group rides to be able to effectively serve wheelchair-using clients of the various programs.

7.1.4 Vehicle Mileage and Hours

The average monthly vehicle mileage and driver pay hour figures for TRADE's services changed considerably from 1979 to 1980, as shown in Table 7-4.* Overall, the 1980 mileage figures were somewhat lower than those of 1979, suggesting that the overall supply of service decreased during the second year of consolidated operations. The changes in driver pay hours were less consistent.

The average mileage figures for Nutrition actually dropped by 8% in 1980, although the average driver pay hours increased by approximately 6%. These differences are likely attributable to differences in vehicle travel patterns (e.g., client locations), although some of the difference may result from inconsistent completion of trip logs and/or reporting totals.

The average monthly mileage for Title XX also decreased from 1979 to 1980 (by 14%), as did the driver pay hours (by 17%). These changes probably reflect: 1) an improvement in TRADE's scheduling efficiency, as Title XX ridership grew by 9%

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* The figures shown in Table 7-4 represent only those months for which data were available for both 1979 and 1980 (e.g., since the Hightstown/E. Windsor service did not begin until September 1979, and 1980 figures were available only through October 1980, the "averages" shown cover only September and October of each year). The "N/A's" in the Table indicate that no comparable monthly figures for 1979 and 1980 were available; this primarily reflects the fact that there were significant gaps in TRADE's 1980 statistical records.

TABLE 7-4.

AVERAGE MONTHLY MILEAGE AND HOURS

	Avg. Monthly Mileage		Avg. Monthly Driver Pay Hours	
	1979	1980	1979	1980
Nutrition*	14350	13246	1130	1202
Title XX**	6968	5997	609	504
Voc. Rehab.***	N/A	N/A	N/A	N/A
Hightstown/ E. Windsor+	1097	1848	N/A	N/A
JOBS***	N/A	N/A	N/A	N/A

* Averages based on mileage figures for 7 mos. of each year, hour figures for 4 mos. of each year.

** Averages based on mileage figures for 5 mos. of each year, hour figures for 7 mos. of each year

*** No comparable figures (i.e., for same months in 1979 and 1980) available.

+ Averages based on mileage figures for 2 mos. of each year, no comparable hour figures available.

in 1980 (see section 6.2 for a discussion of demand issues), and 2) the elimination of the "out of town" trips (to Philadelphia and other points outside of the County), which had been made on occasion for a few clients. Title XX productivity increased from 2.62 passengers per driver pay hour in 1979 to 3.47 in 1980 (see Sec. 7.3 for a discussion of productivity issues).

In the Hightstown/E. Windsor service, mileage increased by 68% (for the months compared) in 1980. The substantial difference may be the result of an increase in the demand-responsive and charter portions of the service (the fixed route portion did not change), but the extent of these portions could not be ascertained from TRADE's data (including trip logs); thus, at least part of the difference may be the result of incompleteness of trip logs. Driver pay hour figures for Hightstown/E. Windsor were not available.

Changes in mileage and hours for the JOBS and Voc. Rehab. service could not be determined, for reasons mentioned earlier. However, it is very likely that both figures were considerably lower in 1980 for JOBS, in light of a 92% drop in ridership, but somewhat higher for Voc. Rehab., which experienced a 32% jump in ridership.

7.1.5 Service Reliability

Service reliability (i.e., the dependability of system operations) for the purpose of this evaluation was considered to consist of the following components:*

vehicle reliability - dependability of vehicles (i.e., percentage of time vehicle is in good repair and available for service)

driver reliability - dependability of drivers

Vehicle reliability is a function of both vehicle condition and the quality of the system's maintenance/repair program. As discussed in Chapters 4 and 5, vehicle breakdowns have always been a major problem for TRADE. Mercer County's maintenance facilities and personnel do not have the capability to perform preventive maintenance, and, since TRADE's fleet is generally quite old (see Table 4-3), it is not surprising that there are

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* A third measure - time reliability, or adherance to scheduled pick-up time - represents an important component of sevice reliability in examining demand-responsive service. However, since TRADE does not schedule actual pick-up times, it was not possible to assess time reliability.

frequent vehicle problems. (TRADE does not keep records of missed trips or vehicle down time; thus actual measures of vehicle reliability cannot be developed.) The maintenance problem has been further exacerbated by the fact that the County's maintenance facility is approximately half an hour's drive from TRADE's office.* This has complicated routine maintenance procedures, in that dropping off or picking up a vehicle always requires two people - the vehicle's driver and someone to transport him/her to or from the maintenance facility. To help improve this situation, TRADE has requested authorization from the County to hire its own part-time mechanic in 1981.

Driver reliability has also been a source of considerable difficulty for TRADE, as discussed in Chapter 4. The original director had instituted a complaint sheet and warning system, as well as driver guidelines, in an attempt to improve the level of performance of the drivers. Driver performance was supposed to be monitored by the dispatcher, but the guidelines and warning system were not effectively administered through that arrangement. The second director implemented a second set of guidelines (largely based on the first set), and assumed responsibility for monitoring driver performance himself. No documentation was available to indicate whether the situation has improved.**

7.2 Costs

7.2.1 Capital Costs

Capital costs represent the funds expended for the purchase of major pieces of equipment. In TRADE's case, the only major acquisitions were for vehicles and radios:

- o 2 1979 Dodge Vans (14 passenger) at $8799.50 each = $17599
- o 2 1979 Dodge Vans (14 passenger) at $8988.00 each = $17976
- o 5 Motorola 2-way mobile radios = $ 5584
- o Total capital cost = $41159

These vehicles were obtained with funds from the purchase of service contracts: two through the JOBS contract, the other two through combinations of the other contracts. The radios were purchased with funds from the Title XX contract.

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* TRADE's new office is somewhat closer to the maintenance facility; this should improve the maintenance situation to some extent.

** Problems have continued, however, as disciplinary actions have been reported as late as mid-1981.

As a means of providing for future vehicle replacement, TRADE has built special funds into the service contracts. Each participating agency/program's contract cost includes $0.15 for each vehicle mile of service supplied for its clients.* The totals accrued for 1979, based on TRADE's mileage records, were as follows:**

Nutrition	- $24,907
Title XX	- $8,922
Voc. Rehab.	- $3,628
JOBS	- $4,911
Hightstown/E. Windsor	- $627
Total	- $42,995

As of the completion of this report, the 1980 totals are not available, but, based on the extrapolated mileage (see Chapter 6) figures, can be estimated as follows:

Nutrition	- $23,800
Title XX	- $11,300
Voc. Rehab.	- $5,800
JOBS	- N/A (no mileage figures were available)
Hightstown/E. Windsor	- $2,200
Total	- $43,100

7.2.2 Operating Costs and Contract/Budget Amounts

The sources for the analysis of TRADE's operating costs were primarily TRADE's billing records and Mercer County financial records. However, due to the incompleteness of TRADE's records, differences in line items between different billing and accounting reports, and the overlapping of the various contract periods, the breakdown of certain cost categories had to be estimated by the evaluation contractor. (These estimates are indicated in the tables in this chapter.) Estimates were based on available cost data, program budget line items, relative hours of service provided to the

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* This has been increased to $0.16 per mile for 1981 contracts.

** The vehicle replacement funds are paid to TRADE as part of the reimbursement for service. Thus, it is up to TRADE to separate them out; the exact totals built up in the vehicle replacement account could not be determined from TRADE's records. As of December 1980, these funds had not been used to purchase any new vehicles.

individual participating agencies, annual salary levels*, and known fixed rates, such as for insurance. Furthermore, cost levels were extrapolated through the end of calender year 1980 from data available through October. The costs discussed in this chapter exclude project start-up costs (i.e., the costs incurred in 1977 and 1978, before TRADE included the current agencies/programs) and in-kind costs (i.e., building space and utilities) covered by the County; data on these costs were not available.

For evaluation purposes the costs of TRADE's operation are separated into four basic categories:

- o direct hourly costs
- o mileage-related costs
- o fleet costs
- o administrative costs

Direct hourly costs include drivers' wages and benefits. Mileage related costs are those which are a direct result of vehicle use, i.e., primarily fuel and maintenance. Fleet costs are fixed vehicle-related costs which do not vary significantly with miles traveled (i.e., insurance). The salaries (and benefits) of personnel other than drivers, as well as office supplies, consulting contracts, and travel, are included as administrative costs.

TRADE's operating cost for 1979 and the estimated cost for 1980 are shown in Table 7-5. The total operating cost for 1979 was approximately $257,500, but it should be kept in mind that this does not represent a full year of service for all of the programs (they began at different points in the year). As shown in Table 7-8, the initial contract periods for JOBS and Hightstwon/E. Windsor were 11+ and 3+ months, respectively. The operating cost for 1980 was projected to be approximately $268,000. (Since data were available only through October, this total was extrapolated through the end of the year.) As indicated in Table 7-5, the relative levels of the different cost categories were quite close for the two years. The relative percentages of direct hourly, mileage-related, and fixed (i.e., fleet and administrative) costs, as defined above, are as follows (the percentages are virtually indentical for 1979 and 1980): 48%, 15%, and 37%, respectively.

The actual operation costs for each of the participating agencies/programs are shown in Table 7-6. These figures include costs that were covered by UMTA and Mercer County, but can be apportioned among the participants (by amount of service

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* For instance, the drivers' salaries were allocated to the different agencies/programs based on how they are assigned (see Chapter 4).

TABLE 7-5.

SUMMARY OF TRADE COSTS FOR 1979, 1980

COST CATEGORY	COST	
	1979	1980 (estimated)
Direct Hourly Costs	$122,792	$128,517
Driver Wages	$ 94,455	$ 98,859
Driver Benefits	$ 28,337	$ 29,658
Mileage-related Costs	$ 33,231	$ 37,446
Fuel	$ 26,200	$ 29,208
Maintenance and Parts*	$ 7,031	$ 8,238
Fleet Cost (insurance)	$ 6,120	$ 7,435
Administrative Costs	$ 95,260	$ 94,718
Administrative Salaries	$ 68,599	$ 72,209
Administrative Benefits	$ 20,580	$ 21,663
Office Supplies	$ 1,299	$ 864
Other (consultants)	$ 5,000	-
Total	$257,512	$268,116

* This does not reflect total maintanence cost; this is what was allocated to the participating agencies. The remainder was supplied as an in-kind service by the County; this figure was not available.

Note: The 1979 total is taken from County year-end financial records; the cost breakdown is based on County financial records and TRADE's payroll records. The 1980 figures are from TRADE's records on salaries, fuel, and maintenance; these figures were supplied by TRADE through October; they were then extrapolated through December.

TABLE 7-6.

OPERATING COSTS BY PROGRAM/AGENCY - 1979, 1980

AGENCY/PROGRAM	COST* 1979	estimated 1980
Nutrition	$157,288 (61%)	$140,513 (52%)
Title XX	$ 70,820 (28%)	$ 79,520 (30%)
Voc. Rehab.	$ 11,232 (4%)	$ 19,599 (7%)
JOBS	$ 14,447 (6%)	$ 20,699 (8%)
Hightstown/E. Windsor	$ 3,725 (1%)	$ 7,785 (3%)
Total	$257,512	$268,116

* UMTA and Mercer Co. funds are allocated among agencies/ programs proportionally by hours of service provided.

Note: These 1979 figures are taken from County financial records. The 1980 figures are from TRADE's records - figures were supplied through October and were then extrapolated through December.

provided);* thus these figures do not represent the amounts actually paid by the participating agencies (which are summarized in Tables 7-7 and 7-8).**

Comparing Table 7-6 to Tables 7-7 and 7-8 indicates that, in general, the agencies paid less than the full cost of providing the service; the differences were subsidized by the UMTA and County grants. (In those cases where the agencies paid TRADE more than the actual operating costs, the differences can be attributed to vehicle purchase expenditures.)

As shown in Tables 7-7 and 7-8, the amounts received from some programs exceeded the amounts budgeted, while for others the expenses fell short of the budgeted funds. The reasons for these differences varied by program; the nature of the contract and service actually provided dictated certain differences, while TRADE's administrative decisions produced the others.

Service for Title XX, JOBS, and Voc. Rehab. is provided through contracts tied to the number of trips provided; Hightstown/E. Windsor reimbursement is tied to the number of miles of service provided; Nutrition funding comes to TRADE through the County; actual expenses are covered, but there is real "contract" (and hence, no contract rate) for the provision of service. The expenses/amounts received for each of the programs thus reflect the amount of service received - either more or less than was anticipated in drawing up the contracts (at the end of the previous year).

TRADE had prepared estimated budgets for each of the participants based on the provision of mutually agreed-upon levels of service; these budgets (which are shown in Tables 7-9 and 7-10) were designed so as to allocate the total system

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* Since the administrative costs funded by UMTA and the County are not included in the revenues received from the individual agencies, it was necessary to allocate them among the agencies in order to determine "true" operating costs. While arguments could be made for a variety of allocation methods (and, in fact, different administrative costs might be allocated differently), Multisystems feels that an allocation on the basis of relative hours of service (i.e., driver pay hours) provided is the most equitable and realistic method. The relative percentages for 1979 are as follows: Nutrition - 61%, Title XX - 24%, Voc. Rehab. - 4%, JOBS - 9.5%, and Hightstown/E. Windsor - 1.5%. The percentages for 1980 are Nutrition - 60%, Title XX - 25%, Voc. Rehab. - 5%, JOBS - 5%, and Hightstown/E. Windsor - 4%.

** The operating revenues in these tables include vehicle purchase and replacement funds; these funds are treated as capital costs and, thus, are not included in the operating cost figures shown in Tables 7-5 and 7-6.

TABLE 7-7.

TRADE FUNDING - 1979

FUNDING SOURCE	TRADE OPERATING REVENUES (PERCENT OF TOTAL)	FUNDS ALLOCATED/ AMOUNT IN CONTRACT
UMTA SMD	$ 54,905 (19%)	$140,531[1]
Title III & Nutrition	$117,866 (40%)	$ 86,000[2]
Title XX	$ 54,700 (19%)	$ 64,000[3]
NJDLI (Voc. Rehab.)	$ 7,712 (3%)	$ 12,000[4]
NJDLI (JOBS)	$ 23,686 (8%)	$ 36,400[5]
Hightstown/ E. Windsor	$ 2,045 (1%)	$ 3,200[6]
Mercer Co.	$ 33,088 (10%)	$ 35,000[7]
Total	$294,002	$377,131

[1] total UMTA grant is $195,960; of this, $55,429 was expended in 1977-78, leaving $140,531

[2] contract period 1/1/79 - 12/31/79; this figure represents the Title III grant only; the remainder of the funds expended were from the Nutrition Project (various funding sources)

[3] contract period 4/2/79 - 3/31/80

[4] contract period 4/9/79 - 12/31/79

[5] contract period 1/22/79 - 12/31/79

[6] contract period 9/4/79 - 12/31/79

[7] contract period 1/1/79 - 12/31/79

TABLE 7-8.

TRADE FUNDING - 1980

FUNDING SOURCE	TRADE OPERATING REVENUES* (PERCENT OF TOTAL)	FUNDS ALLOCATED/ AMOUNT IN CONTRACT
UMTA SMD	$ 26,044 (9%)	$ 85,626[1]
Title III & Nutrition	$118,513 (40%)	$106,510[1]
Title XX	$ 71,991 (25%)	$ 70,933[2]
NJDLI (Voc. Rehab.)	$ 23,137 (8%)	$ 56,475[1]
NJDLI (JOBS)	$ 19,199 (7%)	$ 34,875[3]
Hightstown/ E. Windsor	$ 8,028 (3%)	$ 11,971[4]
Mercer Co.	$ 25,643 (8%)	$ 25,643[1]
Total	$292,555	$392,033

[1] contract period 1/1/80 - 12/31/80; UMTA grant remaining as of 1/1/80 was $85,626

[2] contract period 4/1/80 - 3/31/81

[3] contract period 7/1/80 - 6/30/81; includes purchase of one vehicle

[4] contract period 1/1/80 - 12/31/80 (no service during July and August)

* funds for calender year 1980 - extrapolated through 12/31/80, based on data available through 10/31/80

TABLE 7-9. TRADE BUDGET-1979

EXPENSE CATEGORY	TITLE III/ NUTRITION	TITLE XX	VOC. REHAB.	JOBS	HIGHTSTOWN/ E. WINDSOR	MERCER CO.	UMTA	TOTAL
Labor	$82,000	$31,800	$3,816	N/A	N/A	$35,000	N/A	$152,616
Salaries	$63,077	$25,400	$2,924			$26,923		$118,324
Overtime	-	$ 1,400		N/A	N/A	-	N/A	$ 1,400
Benefits	$18,923	$ 5,000	$ 892			$ 8,077		$ 32,892
Fuel	$ 4,000	$ 4,200	$2,828	N/A	N/A	-	-	$ 11,028
Maintenance & Parts	N/A	$ 2,322	$ 722	N/A	N/A	-	-	$ 3,044
Veh. Insurance	N/A	$ 1,645	$ 360	N/A	N/A	-	-	$ 2,005
Vehicle Lease & Depreciation	N/A	$ 5,000	$3,688	$17,600 (purchase)	N/A	-	-	$ 26,288
Office Supplies	N/A	$ 100	-	N/A	N/A	-	-	$ 100
Travel	N/A	-	-	-	N/A	-	-	
Misc.	N/A	Communication Equipment: $5,600 Other: $13,333	Consultant: $586	Specialized Service: $16,400 Equipment & Property Rental $2,400	Purchase of Service $3,200		Total: $140,531	$182,050
Total	$86,000	$64,000	$12,000	$36,400	$3,200	$35,000	$140,000	$377,131

* This figure represents total amount of UMTA grant remaining as of 1/1/79.

Note: The missing figures (N/A) could not be determined from TRADE's records.

TABLE 7-10. TRADE BUDGET-1980

EXPENSE CATEGORY	TITLE III/ NUTRITION	TITLE XX	VOC. REHAB.	JOBS*	HIGHTSTOWN/ E. WINDSOR	MERCER CO.	UMTA	TOTAL
Labor	$ 87,710	$52,215	$26,706	$ 6,760	$ 8,548	$25,643	$57,626	$258,448
Salaries	$ 67,469	$38,074	$20,224	$ 5,200	$ 6,514	$19,725	$44,328	$196,334
Overtime	-	$ 2,113	$ 415	-	$ 62	-		$ 2,590
Benefits	$ 20,241	$12,028	$ 6,067	$ 1,560	$ 1,972	$ 5,918	$13,298	$ 59,524
Fuel	$ 11,000	$ 8,512	$12,604	$ 800	-**	-	-	$ 32,915
Maintenance & Parts	$ 3,300	$ 2,600	$3,207	$ 350	$ 737	-	-	$ 10,194
Veh. Insurance	$ 4,500	$ 1,752	$ 526	$ 175	$ 292	-	-	$ 7,245
Vehicle Lease & Replacement	N/A	Lease: $ 5,616	$13,233	$ 1,100	$ 2,244	-	-	$ 22,193
Office Supplies	N/A	$ 138	N/A	$ 50	$ 100	-	N/A	$ 288
Travel	N/A	$ 100	N/A	$ 40	$ 50	-	$ 2,500	$ 2,690
Misc.	-	-	Admin. Overhead: $200	Purchase of Service: $5,600* Purchase of veh.: $20,000	-	-	Consultant: $17,500 Transit Improvements: $ 8,000	$ 51,300
Total	$106,510	$70,933	$56,475	$34,875	$11,971	$25,643	$85,626	$392,033

* JOBS contract for 7/1/80 - 6/30/81 broken into two segments: $9,275 covers period 7/1/80 - 9/30/80; $5,600 covers remainder of contract. Latter amount not broken out by category.

** Gasoline provided by Hightstown and East Windsor.

operating costs among the participants, based on the nature of service to be provided. In 1979, the demand for service for each program except Nutrition was lower than had been expected, leading to lower than anticipated billings. In 1980, service under the Title XX contract approximated the projected demand level. For JOBS, the 1980 contract budget includes $20,000 for the purchase of new vehicles; the purchase of service amount of $14,875 is expected to be exceeded, despite the low ridership (see Chapter 6).* The service provided for Hightstown/E. Windsor in 1980 fell somewhat short of the projected level. The 1980 budget for Voc. Rehab. proved to be far in excess of the actual expenses; part of this difference is explained by the funds allocated for vehicle replacement ($13,233).

The largest discrepancy between budget and amount expended for service occurred with Title III/Nutrition.** This service was budgeted at $86,000 for 1979 and $106,510 for 1980; the expenses (i.e., revenue received by TRADE) came to over $117,000 for 1979 and over $118,000 for 1980.

The major discrepancy between allocated and actual expenditures for a funding source occurred with UMTA funds. The original two-year UMTA grant of $195,960 (issued in 1977) was intended to cover administrative salaries/benefits, as well as consulting contracts and funding for a taxi demonstration. TRADE expended only $55,429 during 1977 and 1978, considerably below the projected level of spending. This was basically due to delays in establishing an operational system. The level of spending was also quite low during 1979 and 1980; TRADE has not had a program analyst since early in the demonstration (the position was never filled once the original analyst quit), and has had only a single dispatcher (though not always the same person) for much of the time; furthermore, TRADE had, as of December 1980, used only a portion of the funds designated for consultants and none of the funds allotted for the taxi demonstration.*** Thus, at the time of this evaluation, TRADE still had nearly $60,000 remaining in its demonstration budget. (This grant was due to expire on December 31, 1980 - after two extensions - but it was subsequently extended through

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* The JOBS contract runs through June 1981; thus the expenses associated with it had to be extrapolated, based on the costs available at the time of this report.

** TRADE did not establish the Title III/Nutrition transportation budgets for these years; they were worked out by the directors of the Nutrition Program and the Division on Aging.

*** It was apparently felt that the project was having enough difficulties without attempting a taxi demonstration. Furthermore, TRADE's original director was reluctant to implement such a service using demonstration funds, fearing that a significant demand would be generated and that TRADE would be unable to fund the service on a continuing basis.

June 1981.) This ensured that TRADE's director's salary would be covered until the next round of service contracts would allow that cost item to be shifted to the service recipients).

7.2.3 Unit Cost Ratios

In order to place the operating costs in perspective, it is necessary to determine unit cost ratios (i.e., cost per specified unit of service). The primary cost ratios analyzed in this section are the following:

- o cost per passenger-trip
- o cost per vehicle-mile
- o cost per hour*

These are used to compare the efficiencies of the various TRADE services to each other, to the overall system, and to other similar systems. The unit cost ratios for the individual TRADE participants are shown in Table 7-11.

As shown in Table 7-11, the overall unit costs improved (i.e., decreased) slightly in 1980 over the 1979 totals, which signifies an improvement in the efficiency of service provision.

Table 7-11 shows that the individual programs fared quite differently in terms of cost efficiency during the two years. Nutrition and Hightstown/E. Windsor, with the lowest unit costs overall, both showed marked improvement in all three measures.** Title XX lowered its cost per trip and cost per mile, but experienced a higher hourly cost in 1980. Voc. Rehab. experienced an improvement in cost per trip, but declined in terms of the other trip measures. The JOBS cost per trip rose tremendously in 1980, but this basically reflects the fact that many of the types of trips considered to be part of the JOBS program in 1979 were reclassified as Voc. Rehab. in 1980; thus, JOBS ridership dropped precipitously in 1980, although administrative costs were not yet adjusted to account for this change.

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* Driver pay hours are used for this evaluation, since they are the basic service unit reported by TRADE. Vehicle service hours are not reported but the two figures should be fairly close for this system.

** Pre-TRADE Nutrition figures (for 1978) show unit cost ratios of $1.08 per trip, $0.63 per mile, and $6.60 per driver pay hour. However, what these cost totals include could not be determined because documentation of the cost components was not available; they may not reflect exactly the same cost items as those reported for 1979 and 1980. Thus, it may be misleading to compare these ratios to the 1979 and 1980 figures.

TABLE 7-11.

TRADE UNIT COST RATIOS - 1979, 1980

AGENCY/ PROGRAM	COST PER TRIP		COST PER MILE		COST PER DRIVER PAY HOUR	
	1979	1980	1979	1980	1979	1980
Nutrition	$ 1.59	$ 1.34	$0.95	$0.88	$11.33	$ 9.74
Title XX	$ 4.94	$ 3.79	$1.19	$1.06	$12.96	$13.16
Voc. Rehab.	$ 4.46	$ 4.18	$0.45	$0.51	$12.12	$16.33
JOBS	$ 3.83	$31.36*	$0.44	N/A	$ 6.50	N/A
Hightstown/ E. Windsor	$ 3.62	$ 2.83	$0.89	$0.52	$10.01	$ 8.29
Total	$ 2.28	$ 2.00	$0.90	$0.86**	$11.32	$10.93**

* See text, p. 7-23, for an explanation of this figure.

** These totals do not include JOBS due to incomplete data.

Note: These are total operating costs, including allocated administrative costs.

Unfortunately, overall, the changes in individual agency unit cost measures from 1979 to 1980 do not reveal any significant conclusions concerning changes in the efficiencies of TRADE's component services. Most of the changes are probably attributable to differences in the relative percentages of administrative costs between the two years (i.e., because the agency services began at different times during 1979; see Table 7-7).

Tables 7-12 and 7-13 show the actual unit costs (per trip and mile) compared to the amount paid by the agency/program for each trip and mile. Table 7-12 indicates that the level of subsidy for 1980 (through the UMTA and County grants) on a unit basis was approximately 40¢ per trip and 17¢ per mile. However, for the Nutrition trips, the 1980 subsidy was only 20¢ per trip, down from 49¢ per trip in 1979. Besides JOBS, the largest difference (for 1980) between actual unit costs and unit amounts paid was in the Hightstown/E. Windsor service, with a 25% deficit per trip.

TRADE was subsidized (through 1980) from outside grants not tied to the service provided. This kept perceived cost to the participating agencies lower than the actual cost of the service. For this reason, TRADE must be concerned about improving its overall efficiency, in an effort to lower the actual unit costs for low-volume services. Unless it continues to be substantially subsidized, TRADE will have to charge participating agencies/programs the full cost of service; if this purchase of service rate is too high, TRADE may have trouble securing participants.

Although it has been found that coordination/consolidation efforts often do not produce overall cost savings for participating agencies,* savings may be obtainable in certain specific cost areas.** The major areas of potential savings are in activities such as maintenance, purchasing, and insurance. By centralizing these activities, certain economies of scale may be achievable, e.g., through bulk purchase of parts or fuel, or perhaps by allowing for the hiring of a mechanic (i.e., sharing the expense) to do preventive maintenance (and thereby reduce maintenance expenditures).

It is unlikely, however, that TRADE's participants have benefited in these areas. Purchases have not been in sufficient quantity to reduce the cost. Moreover, the centralized (i.e., County) maintenance operation has not done any preventative maintenance, which has contributed to the constant vehicle problems. TRADE's vehicles are insured through the County, and the participating agencies are paying less than they would have to on their own. However, that is a function of TRADE's institutional setting, rather than of consolidation.

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* This has been documented, for instance, for the OHDS demonstrations; see Burkhardt et al., Coordination Transportation Demonstration Results - Evaluation of the OHDS Transportation Demonstration Program; prepared for U.S. DHEW; February 1980.

** As mentioned earlier, specific cost changes resulting from coordination cannot be determined for TRADE, but it is useful to review the nature of potential savings, nevertheless.

TABLE 7-12.

ACTUAL UNIT COST VS. UNIT AMOUNT PAID

BY EACH AGENCY/PROGRAM - 1979

AGENCY/ PROGRAM	COST PER TRIP		COST PER MILE		TOTAL COST	
	ACTUAL	AMOUNT PAID	ACTUAL	AMOUNT PAID	ACTUAL	AMOUNT PAID
Nutrition	$ 1.59	$ 1.10	$0.95	$0.66	$157,288	$108,975
Title XX	$ 4.94	$ 3.47	$1.19	$0.84	$ 70,820	$ 49,700
Voc. Rehab.	$ 4.46	$ 3.16	$0.45	$0.32	$ 11,232	$ 7,712
JOBS	$ 3.83	$ 1.61	$0.44	$0.19	$ 14,447	$ 6,087
Hightstown/ E. Windsor	$ 3.62	$ 1.98	$0.89	$0.50	$ 3,725	$ 2,045
Total	$ 2.28	$ 1.45	$0.90	$0.61	$257,512	$174,519
UMTA	-	-	-	-	-	$ 49,905
Mercer Co.	-	-	-	-	-	$ 33,088

Note: These figures do not include capital costs.

TABLE 7-13.

ACTUAL UNIT COST VS. UNIT AMOUNT PAID

BY EACH AGENCY/PROGRAM - 1980

AGENCY/ PROGRAM	COST PER TRIP		COST PER MILE		TOTAL COST	
	ACTUAL	AMOUNT PAID	ACTUAL	AMOUNT PAID	ACTUAL	AMOUNT PAID
Nutrition	$ 1.34	$ 1.04	$0.88	$0.69	$140,513	$109,213
Title XX	$ 3.79	$ 3.16	$1.06	$0.88	$ 79,520	$ 66,375
Voc. Rehab.	$ 4.18	$ 3.61	$0.51	$0.44	$ 19,599	$ 16,959
JOBS	$31.36	$27.34	N/A	N/A	$ 20,699	$ 18,099
Hightstown/ E. Windsor	$ 2.83	$ 2.11	$0.52	$0.39	$ 7,785	$ 5,784
Total	$ 2.00*	$ 1.62	$0.86*	$0.69*	$268,116	$216,430
UMTA	-	-	-	-	-	$ 26,044
Mercer Co.	-	-	-	-	-	$ 25,643

Note: These figures do not include capital costs.

* These totals do not include JOBS figures due to incomplete data.

Some of the agencies may be benefiting from sharing in the administrative costs, but this is unclear. The larger TRADE programs (Nutrition and Title XX) may actually be experiencing increased costs due to the large administrative staff (over their previous administrations) and the fact that they are paying a substantial share of its cost. The extent of cost savings for two of the program - Hightstown/E. Windsor and JOBS - is a moot point, obviously, since they did not exist before TRADE.

7.3 Productivity

In addition to assessing unit operating costs, it is important in evaluating any transportation system to examine the system's productivity - in this case defined as the number of trips being provided within a specified unit of time (or distance). In this section, the productivity of TRADE's overall operation is assessed, as well as those of the participating agencies. The measures of passenger-trips per driver pay hour and passenger trips per vehicle-mile have been determined from TRADE's statistical records (i.e., compiled from trip logs) and TRADE driver schedules (i.e., number of scheduled hours).*

Tables 7-14 and 7-15 provide summaries of TRADE's average monthly operating statistics.** The productivity measures for TRADE are shown in Table 7-16. As indicated by this table, the overall 1980 system productivity increased from 1979 levels: by 12% for trips per hour and 9% for trips per mile. These figures simply reflect greater demand during 1980, since the supply of service changed very little.

TRADE's increase in productivity reflects greater success on the part of participating agencies in attracting patrons and the elimination of "out of town" service (for Title XX clients), as well as improved skill in grouping rides

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* These records were fairly complete for 1979, but those for 1980 had significant gaps; in cases of incomplete information, the data were extrapolated based on average available figures and past trends. The extrapolations give us a good idea of the relative relationships of the different totals, but they should not be taken as being exact figures. The numbers of months for which data were available is shown in Table 7-4.

** The figures in Tables 7-14 and 7-15 are slightly different from those presented in Tables 7-4 and 6-2. Those in 7-4 and 6-2 represent comparable months for the two years; those in 7-14 and 7-15 represent all months during which all five services were in operation. Thus, the 1979 average figures (7-14) are only for September through December, since one of the services did not begin until September; the 1980 figures represent the entire year.

TABLE 7-14.

AVERAGE MONTHLY OPERATING STATISTICS (1979)

	Nutrition	JOBS	Title XX	Voc. Rehab.	H./E.W.	Total*
Passenger Trips	8,251	343	1,592	280	257	10,723
Gross Mileage	13,837	2,976	6,609	2,780	1,044	27,246
Driver Pay Hrs.	1,157	202	607	103	93	2,162
Passengers/ Driver Pay Hour	7.13	1.69	2.62	2.72	2.76	4.96
Avg. Miles per Passenger	1.67	8.67	4.15	9.92	4.06	2.54
Operating Cost	$13,107	$1,313	$7,869	$1,248	$ 931	$24,468
Operating Cost per Trip	$ 1.59	$ 3.83	$ 4.94	$ 4.46	$3.62	$ 2.28
Operating Cost per Driver Pay Hour	$11.33	$ 6.50	$12.96	$12.12	$10.01	$11.32
Operating Cost per Mi.	$ 0.95	$ 0.44	$ 1.19	$ 0.45	$0.89	$ 0.90
Avg. Speed	11.96	14.72	10.88	26.88	11.29	12.55
Unduplicated Individuals	450	171	288	22	64	995

[1] service began 1/22/79
[2] service began 4/2/79
[3] service began 4/9/79
[4] service began 9/4/79
* Averages for four months only (i.e., September - December, when all programs in operation).

TABLE 7-15.

AVERAGE MONTHLY OPERATING STATISTICS (1980)

	Nutrition	JOBS	Title XX	Voc. Rehab.	H./E.W.*	Total
Passenger Trips	8,745	55	1,750	391	275	11,216
Gross Mileage	13,246	N/A	6,282	3,218	1,495	24,241**
Driver Pay Hrs.	1,202	N/A	504	100	94	1,900**
Passengers/ Driver Pay Hour	7.28	-	3.47	3.91	2.92	5.87**
Avg. Miles per Passenger	1.51	-	3.59	8.23	5.44	2.17**
Operating Cost	$11,709	$1,725	$6,631	$1,633	$ 779	$22,477
Operating Cost per Trip	$ 1.34	$31.36	$ 3.79	$ 4.18	$2.83	$ 2.00
Operating Cost per Driver Pay Hour	$ 9.74	-	$13.16	$16.33	$ 8.29	$10.93
Operating Cost per Mi.	$ 0.88	-	$ 1.06	$ 0.51	$0.52	$ 0.86**
Avg. Speed	11.02	-	12.46	32.18	15.90	12.76**
Unduplicated Individuals	432	N/A	292	N/A	N/A	-

* Hightstown/E. Windsor data for 10 months only (no service in July and August).

** Total does not include JOBS.

TABLE 7-16.

TRADE PRODUCTIVITIES

PROGRAM/AGENCY	1979 PASSENGER TRIPS PER DR. PAY HR.	1979 PASSENGER TRIPS PER VEH.-MI.	1980 (% CHANGE) PASSENGER TRIPS PER DR. PAY HR.	1980 (% CHANGE) PASSENGER TRIPS PER VEH.-MI.
Nutrition	7.13	0.60	7.28 (+2%)	0.66 (+10%)
Title XX	2.62	0.24	3.47 (+32%)	0.28 (+17%)
Voc. Rehab.	2.71	0.10	3.91 (+44%)	0.12 (+20%)
JOBS	1.69	0.12	N/A	N/A
Hightstown/ E. Windsor	2.78	0.25	2.92 (+5%)	0.18 (-28%)
Overall System	5.28	0.42	5.89* (+12%)	0.46*(+9%)

* Does not include JOBS.

(especially on demand-responsive services) on the part of TRADE. As shown in Table 7-15, the number of trips per hour for each of the different services increased.* Voc. Rehab.'s productivity increased the most (44%), while Nutrition's rose by the smallest margin (2%); the Hightstown/E. Windsor service produced 5% more trips per hour in 1980. The most significant change was in Title XX, considering the nature of that service. The 1980 productivity of nearly 3.5 trips per hour is quite good for a demand-responsive service (see section 7.4); this represents an increase of 32% over 1979. This change can partially be attributed to a 17% decrease in hours (resulting partially from the aforementioned elimination of service outside of Mercer County). Since ridership grew by 10%, the lower level of supply also indicates greater efficiency in scheduling trips - the real key to improving demand-responsive service productivity. Some improvement in scheduling is to be expected as dispatchers/schedulers gain experience. However, TRADE's improvement is impressive nonetheless, especially considering its high rate of turnover among dispatchers.

* JOBS' productivity figures for 1980 could not be determined, due to the unavailability of mileage and hours data.

In the future, TRADE's productivity will be partially affected by the types of new service that it adds; i.e., Nutrition trips represent a fairly high productivity service, while the productivity of demand-responsive service is inherently low. TRADE is intending to expand its service to wheelchair-bound persons (minimal service was provided in this market as of this report); this type of service is generally very low in productivity. Thus, the introduction of demand-responsive service to the handicapped can be expected to lower TRADE's overall productivity.*

7.4 Comparison of TRADE with Other Systems

The previous sections have examined TRADE's overall economics and productivity, and have compared the attributes of the different service components within TRADE. It is also instructive, however, to assess TRADE's performance in comparison with that of similar systems in other locations. In this section, various operational and performance features of several specialized transportation systems (i.e., serving the transportation handicapped) which have specific similarities (and differences) to TRADE are examined. It should be kept in mind, though, that such comparisons must be approached cautiously: each system has its own unique combination of characteristics (e.g., institutional and physical setting, type of service, type of operator, eligibility requirements, fare policy, degree and type of coordination, etc.), making clear comparisons of any individual measure difficult. Furthermore, and perhaps more important, each system has its own methods of compiling and reporting statistics (e.g., allocating costs), and one system's "operating cost" may not include all of the same elements as another's. Thus, although a comparison of the different institutional and operational characteristics provides useful information, care must be taken in attempting to evaluate one system's performance in terms of others.

The following systems were selected for comparison with TRADE:

- Roanoke Area Dial-a-Ride (RADAR) - Roanoke, VA
- Community Responsive Transit (CRT) - Cleveland, OH
- Metro Mobility (MM) - Minneapolis/St. Paul, MN
- METROVAN - Grand Rapids, MI
- Urban Rural Transportation Alliance (URTA) - Howard Co., MD

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* Of course, this should not be interpreted as being critical of such expansion; it will improve the mobility of these people, which is one of TRADE's primary objectives. Productivity is simply one aspect of measuring a system's efficiency.

The operational and performance characteristics of these systems are summarized in Tables 7-17, 7-18, and 7-19. These systems all serve the elderly and transportation handicapped, although it must be kept in mind that they represent different types of services and operators.* Except for CRT, which is zonal in nature, they all provide service on an areawide basis. Finally, only Metro Mobility charges a fare (35¢). Two of the systems - METROVAN and URTA - were OHDS demonstrations; since TRADE applied for inclusion in this program (see Chapter 4), it is appropriate to compare them here.

These systems represent a range of types of coordination and consolidation; three of them are (or were) consolidated systems, while the other three basically involve centralized scheduling and various other coordinated functions (see Table 7-18). TRADE is the only county-organized system; the lead organizations for the others are public transit providers private non-profit organizations, and a state Department of Transportation. Each of the consolidated systems involves at least four participating agencies/programs; the number of participants is as high as 20 (RADAR).

Reimbursement of the consolidation agency/provider is on a per hour basis (the definition of service "hour" varies from system to system), except in TRADE, in which reimbursement is on a per trip (per mile for Hightstown/E. Windsor) basis. Two of the coordinated systems (CRT and MM) utilize contract providers, and these are paid on an hourly basis in CRT, and a per trip basis in MM. In the final system - METROVAN - participating agencies reimburse the central coordination agency (Kent CAP) on a per trip basis.

As shown in Table 7-18, two of the systems (CRT and MM) operate demand-responsive service only; the remainder, like TRADE, provide both subscription (or fixed route) and demand-responsive service. As shown in Table 7-19, the unit operating costs generally reflect the type of service provided: TRADE and RADAR - both predominantly fixed schedule - exhibit the lowest costs per trip, while the others have costs more than twice as high. The hourly costs follow a similar pattern: TRADE and RADAR are the lowest. TRADE's cost per vehicle hour is actually the lowest of those systems included here.

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* However, only three (RADAR, METROVAN and URTA) provide extensive service for persons in wheelchairs. MM includes a separate component - Project Mobility - which provides wheelchair service, but this component was not included in this analysis. The MM data reported here refer only to the non-wheelchair components. As of this report, TRADE served a few wheelchair-bound clients, but this aspect of the service has been minimal.

TABLE 7-17. COMPARATIVE INSTITUTIONAL CHARACTERISTICS

SYSTEM	TRADE	RADAR	CRT	METRO MOBILITY	METROVAN	URTA
Lead Organization	Mercer Co. Department of Human Services	Unified Human Services Transportation Systems, Inc. (non-profit organization)	Greater Cleveland Regional Transit Authority (GCRTA)	Metropolitan Transit Commission (MTC)	Grand Rapids Transit Authority (GRATA)	CAA of Howard Co. (non-profit organization)
Provider	TRADE (Trans. Resources to Aid the Disadvantaged and Elderly)	RADAR (Roanoke Area Dial-a-Ride)	GCRTA and a taxi co.	MTC, 3 taxi cos., and 2 non-profit providers	GRATA and Kend CAP	URTA (Urban Rural Transportation Alliance, Inc.)
Type of Coordination	consolidated system (5 agencies)	consolidated system (with vehicles leased from agencies), (20 agencies)	centralized scheduling	centralized scheduling and program management	administrative coordination; outreach, centralized maintenance, purchasing and dispatching; service contracts with 8 agencies	consolidated system (4 agencies)
Source of Funds	UMTA, county, state, U.S. DHEW, participating agencies	sponsoring agencies, state, county, city, U.S. DHEW	UMTA	Minnesota DOT, UMTA	OHDS, UMTA, participating agencies	OHDS, participating agencies
Type of Subsidy/ Payment	reimbursement for costs of service or on a per trip basis	reimbursement on a per hour basis	reimbursement of private operator on a per hour basis	reimbursement of private operators on a per trip basis	reimbursement on a per trip basis	reimbursement on unit cost of service

TABLE 7-18. COMPARATIVE OPERATIONAL STATISTICS

SYSTEM	TRADE	RADAR	CRT	METRO MOBILITY	METROVAN	URTA
Location	Mercer Co., NJ	Roanoke, VA	Cleveland, OH	Minn./ St. Paul, MN	Grand Rapids, MI	Howard Co., MD
Service Area (sq. mi.)	226	1,640	456	100	857	200
Population	317,000	240,000	2 million	2 million	411,000	111,000
Target Pop.	40,000+	60,000	160,000	70,000	75,000+	130,000+
Service Type	fixed route, subscription, demand-responsive	fixed route	demand-responsive	demand-responsive	demand-responsive	demand-responsive and fixed route and fixed route
Scheduling Procedure	fixed sched., 24-hour advance notice	fixed sched.	24-hr. advance notice	2-hr. advance notice	fixed sched. and advance notice	fixed sched. and 3 day advance notice
Service Coverage	areawide	areawide	zonal	areawide (6 mi. limit for trips)	areawide	areawide
Hrs. of Service per Day	10	10	8	19	N/A	N/A
Fare Policy	$0	$0	$0	$0.35	N/A	$0
Eligibility	elderly, low income, unemployed	agency clients	all elderly and handicapped	certified trans. handicapped	elderly and handicapped	elderly, handicapped, and low imcome
No. of Vehicles	18	28	70	as needed	18	12

Sources: RADAR Annual Report, 1980
Community Responsive Transit, telephone conversation with Gloria D'Fantis, July 1980
Multisystems, Inc., Metro Mobility - First Year Review; prepared for Minnesota Department of Transportation; October 1980
Ecosometrics, Inc., Coordinated Transportation Demonstration Results; prepared for OHDS/U.S. DHEW; February 1980

TABLE 7-19.

COMPARATIVE PERFORMANCE CHARACTERISTICS

SYSTEM	TRADE	RADAR	CRT	METRO MOBILITY*	METROVAN	URTA
Ridership (per mo.)	11,216	16,000	32,000	14,504	6,588	3,420
Operating Cost (per mo.)	$20,242	$31,700	$153,000	$86,155	$43,749	$16,938
Cost per Trip	$2.00	$1.98	$4.80	$5.94	$6.64	$4.95
Cost per Veh. Hr.	$10.93	($12.51)**	$16.00	N/A	$19.77	$13.92
Pax per Veh. Hr.	5.87	(6.32)**	3.30	N/A	2.98	3.11

* For taxis and non-profit providers only
** Per passenger service hour

Note: Costs for most of these systems are reported costs, and likely do not include "hidden" costs, such as facility rental. Cost comparisons must be considered with this in mind.

TRADE's individual components also fare quite well in this comparison. The Nutrition service's cost per trip of $1.34 is quite impressive when it is compared to RADAR, which provides a similar type of service (i.e., fixed schedule/subscription). The Title XX cost per trip of $3.79 is considerably lower than those of the demand-responsive services included here (CRT & MM). The Hightstown/E. Windsor and Voc. Rehab. services (at $2.83 and $4.18, respectively) also compare favorably with the systems considered here.

In terms of productivity, TRADE experiences one of the highest levels. RADAR's productivity is given here (in Table 7-19) in terms of passenger service hours, rather than vehicle hours, which are used for the others; RADAR's productivity in terms of vehicle hours may, therefore, be lower than the 6.32 listed - and thus lower than TRADE's 5.87.* Among TRADE's component services, Nutrition's productivity of 7.28 passengers per hour is considerably higher than that of the predominantly fixed route RADAR service, although Voc. Rehab. and Hightstown/E. Windsor, at 3.91 and 2.92, respectively are considerably lower. Title XX's 3.59 is higher than the productivities of CRT (3.30), METROVAN (2.98), and URTA (3.11); no per hour productivity was available for MM, since there is no fixed vehicle fleet.

Thus, TRADE's performance statistics fare quite well when compared to those of other coordinated/consolidated systems. The fact that the high-productivity Nutrition trips comprise the bulk of TRADE's service has kept the overall costs quite low and the system productivity high. However, the demand-responsive Title XX service has also been quite efficient when compared to other demand-responsive services. TRADE's monthly ridership (as discussed in Chapter 6) has not been as high as most of the systems examined, but its target population is considerably lower than that of those systems with higher ridership. TRADE has developed into a cost-efficient, high productivity system.

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* The number of passenger service hours may be greater than the number of vehicle hours: when clients of more than one agency are sharing a vehicle, passenger service hours are counted separately for each agency.

CHAPTER 8

8.0 CONCLUSIONS/IMPLICATIONS

This chapter summarizes the key findings of the evaluation. The first two sections review the most important project results, in terms of the extent to which the project met its original objectives and major project accomplishments/failures. The third section discusses the most important implications in terms of transferability to other sites considering designing and implementing coordinated/consolidated systems.

8.1 Extent to which the Demonstration Met its Objectives

One of the indications of the "success" of any demonstration project is the extent to which the project meets its original objectives and expectations. TRADE's success is mixed in this respect. Only one of the objectives and expectations established by TRADE in its application for demonstration funds have been completely met, although several has been partially achieved; on several counts, TRADE has been basically unsuccessful. (The objectives and the extent to which they have been achieved are summarized in Table 8-1.)

TRADE can be said to have been successful in improving the mobility of the transit dependent, in that it has provided service to clients of agencies/programs which did not previously provide any transportation (i.e., the JOBS program and the Hightstown/E. Windsor service). On the other hand, TRADE has been unsuccessful in "expanding service to transit dependent not associated with particular agencies;" virtually all TRADE users have been clients of agencies/programs participating in the project, with a few trips provided to clients of agencies which have expressed interest in possibly joining TRADE (i.e., ECHO and AAMH).

TRADE has been partially successful in reaching several objectives. It has demonstrated that certain types of barriers to coordination/consolidation can be overcome (e.g., perceived funding restriction and insurance issues). However, other types of barriers (e.g., client mix, scheduling, and turf issues) were not successfully overcome, in that they caused several agencies to decline participation in TRADE. TRADE was also partially successful at "developing training and instruments for project personnel..." Although no training programs were developed,* guidelines for drivers were implemented; it has not been proven that these guidelines have

* Two of the drivers did, however, participate in a Red Cross driver training program.

TABLE 8-1.

EXTENT TO WHICH TRADE MET ITS ORIGINAL OBJECTIVES/EXPECTATIONS

Objective	Met?	Comments
improve mobility of transit dependent	yes	provides service to clients of agencies which did not previously have service
expand service to transit dependent not associated with particular agency	no	no such trips have been reported
improve service delivery capacity of existing Mercer County human service programs without increasing their costs	unclear	has increased overall capacity of each program by having larger fleet available, but changes in costs could not be determined
demonstrate that perceived barriers of client mix, insurance, restrictive usage as mandated by funding sources, scheduling, and other impediments to develop a coord/consol. system can be overcome	partially	some of barriers were overcome, while others caused agencies not to participate (e.g., client mix)
improve delivery of human service through coordination of existing trans. resources, including bus & taxi operations	partially	coordination did occur, but involved only three existing services (Nutrition, Title XX, NJDVRS); no coordination of bus or taxis
develop data base for agency trans. operations which will better allow them to assess their real cost and efficiency	no	lack of administrative analyst and inadequate statistical recording prevented development of good data base
develop training programs and instruments for project personnel which will improve the quality of trans. service provided to agency clients	partially	no training program, but guidelines for drivers
contribute to development of an efficient social service network	partially	has produced some improvements (e.g., voc. counselors talking amongst themselves)
develop strong interagency relationship between the project administration and the providers of human services to strengthen the linkages between the two	partially	originally weak, but improved over course of project

"improved the quality of service provided to agency clients," but the guidelines are expected to upgrade TRADE's service over the long run.

TRADE has been somewhat successful at developing "strong inter-agency relationships between the project administration and the providers of human services..." Relationships with some providers were apparently somewhat strained under TRADE's original director, as reported by representatives of both participating and non-participating agencies/programs;* these relationships were reportedly improved under the second director. Finally, TRADE has achieved a small measure of success in "contributing to the development of an efficient social service network," as indicated by the transportation representative of the JOBS program who reported that "vocational counselors at different employment centers have begun to communicate with each other because of TRADE."

Regarding the objective of "improving delivery of transportation through coordination of existing transportation resources, including bus and taxi operations," TRADE has been partially successful. The consolidated system has coordinated certain existing resources, but only three existing services (Nutrition, Title XX, NJDVRS) were involved, as compared to a projection in the original TRADE application (to OHDS) that "fifteen agencies would be participating by the end of the first year, and at least twenty-two by the end of the demonstration period."** In fact, eight agencies were originally slated to participate.*** Similarly, the hoped-for coordination with bus and taxi operations never transpired. There was major discussion with the transit operator, but nothing ever developed; the proposed taxi demonstration was never pursued.

In terms of "improving the service delivery capacity of existing human service programs without increasing their costs," TRADE's overall success is unclear. By making a larger fleet of vehicles available for each participating agency/

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* The original director contends that any difficulties he may have experienced in dealing with agency representatives were due primarily to operational problems connected with the delivery of service to agency clients (e.g., vehicle breakdowns, poor driver performance, limited availability of fuel, etc.).

** Mercer Co. Department of Human Services, Division on Aging, Transportation Resources to Aid the Disadvantaged and Elderly. February 1977.

*** One of the original eight agencies was dissolved before TRADE's grant was approved by UMTA; hence only seven "original" agencies have been referred to in this report.

program than it had prior to joining TRADE (two of the agencies did not have transportation programs before TRADE), the project essentially increased the service delivery capacity of each program. However, whether this was accomplished without increasing each agency's costs could not be determined due to lack of pre-TRADE data. In light of the significant administrative costs created by TRADE and passed on to the participants, though, it is likely that each agency's costs actually increased.

A variety of problems/barriers prevented TRADE from living up to all of its advance expectations. Some of these expections were simply too high for a new system depending so much on the cooperation of other parties; other expectations were not met due to inexperience on the part of TRADE's administrators, others were caused by the political/institutional environment, while others were the products of unavoidable operational difficulties. As the demonstration period was coming to an end, TRADE was still making progress toward several of its objectives, but it was unclear whether the remaining serious problems could be overcome.

8.2 Summary of Project Results

8.2.1 Accomplishments and Failures

Despite the mixed results regarding the specific project objectives, the TRADE demonstration did produce a number of significant accomplishments. (It should be pointed out that the bulk of these accomplishments, as well as most of the disappointments, occured under the original director, as they are related primarily to the implementation and initial operation of TRADE.)

Key Accomplishments/Positive Impacts

- Despite significant barriers/problems (notably the departure of five of the original seven agencies), TRADE developed into a consolidated specialized transportation system, involving 5 different agencies/programs.

- TRADE had a substantial ridership: over 11,000 passenger trips per month, including 1000 unduplicated users.

- TRADE was operating with a fleet of 18 vehicles, 4 of which were acquired by TRADE (or the agencies for which it provided service) once the project began.

- TRADE built up funds for vehicle replacement by figuring vehicle depreciation into service contracts.

- o TRADE provided for coordination through provisions in the various contracts allowing the vehicles purchased by any agency to be used for clients of other agencies, as well.

- o TRADE instituted time-sharing of 4 TRADE vehicles (i.e., vehicles designated for use for one program/agency are used to transport clients of another program/agency during vehicle downtime).

- o TRADE is viewed as providing a valuable and often necessary service by its users; of those User Survey respondents who supplied "comments" on the survey 55% gave TRADE "very favorable" comments (i.e., they considered the service essential for their mobility and/or they were pleased with the service quality), while 26% gave unfavorable comments (e.g., lateness of pickups, rude drivers, or dissatisfaction with the condition of the vehicle on which they were traveling); 19% gave "neutral" comments (i.e., favorable, but critical of some aspect).

- o TRADE is viewed by four of the five participating agencies/programs as being generally successful in efficiently providing transportation to those without real alternatives; the representative of the fifth program expressed disappointment with TRADE's service.

TRADE also experienced certain disappointments, some of which are mentioned above in the discussion of objectives. The major shortcomings are summarized below.

Major Disappointments

- o TRADE was unable to secure participation from most of the "original" agencies;* related to this is TRADE's inability to develop coordinated functions, as was called for in the original project plan.

- o TRADE was unable to secure participation from any private agencies or municipalities (other than the Hightstown/E. Windsor contract); this was related to TRADE's general inability to expand its operations due to operational problems such as vehicle breakdowns and limits on fuel availability.

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* This should not be considered a failure, however, since the transportation operations of several of the original agencies were not really appropriate for inclusion in a consolidated system.

- o TRADE did not achieve any significant "ride-sharing" (i.e., use of a vehicle by clients of more than one agency/program at a time). Thus, in this respect at least, TRADE did not achieve full consolidation.

- o TRADE failed to develop an accurate and comprehensive data base for agency transportation operations, which prevented the assessment of true costs and system efficiency.

8.2.2 User Characteristics and Travel Patterns

The major findings concerning TRADE user characteristics and travel patterns are as follows:

- o 78% of all trips were for the Nutrition project

- o 16% of all trips were made on the Title XX service; of these, 55% were for health care, and 32% for social/recreational purposes

- o 53% of the respondents to the User Survey reported using TRADE on a daily basis; 31% reported using TRADE "once every few days"

- o 27% of the User Survey respondents reported making trips by other modes, as well: 11% by public transit, 8% as auto drivers

- o TRADE served approximately 1000 unduplicated users

- o 80% of TRADE users are female; 70% are age 65 or over, 14% are under age 15

- o less than 2% of TRADE users are employed full-time; less than 2% are employed part-time; 69% are retired

- o 60% of TRADE users have annual household incomes under $5000; only 19% have incomes over $7000

- o less than 18% of TRADE users have driver's licenses; over 68% of TRADE users do not have an automobile in their household; 57% "never" have access to an auto (as a passenger), while 31% "seldom" have access to an auto

- o nearly 64% of the Survey respondents reported at least "some difficulty" getting on and off a transit bus

8.2.3 Operating and Cost Characteristics

The major findings concerning TRADE's operating and cost characteristics are as follows:

- o 82% of all TRADE trips were fixed schedule/ subscription in nature; 16% were demand-responsive; 2% were fixed route

- o TRADE had a vehicle utilization ratio of 51%; the ratio for the individual programs varied from 36% (Title XX) to 80% (Voc. Rehab.); the utilization ratio for the Nutrition vehicles rose from 45% before the formation of TRADE to 55% in 1980

- o TRADE did not increase its supply of service during its first two years (1979, 1980), but average monthly ridership grew by nearly 5% during that period

- o TRADE's demand-responsive service was rather erratic in terms of promised and actual pickup times: 81% of the pickups were earlier than the promised time (33% were more than 30 minutes early), while 13% were later than promised (although only 4% were more than 15 minutes late)

- o TRADE had operating costs of approximately $257,500 and $268,000, respectively, during 1979 and 1980; for the two years, approximately 48% of the total was attributable to direct hourly costs, 14% to mileage-related costs, and 38% to fixed (i.e., fleet and administrative) costs; in 1980, the Nutrition service accounted for 52% of the total system operating costs, Title XX 30%, Voc. Rehab. 7%, JOBS 8%, and Hightstown/E. Windsor 3%

- o TRADE's overall unit cost ratios (i.e., cost per trip, cost per mile, and cost per hour) improved slightly in 1980 over the 1979 totals; the cost per passenger trip in 1980 was $2.00, the cost per vehicle-mile (1980) was $0.89, and the cost per hour (1980) was $10.93

- o TRADE's productivity (in terms of trips per hour) improved by 12% from 1979 to 1980 (from 5.28 to 5.89); the trips per mile increased by 9% (from 0.42 to 0.46)

- o the productivity of the individual services (for 1980) ranged from 7.28 trips per hour (Nutrition) to 2.92 (Hightstown/E. Windsor); Title XX's productivity of 3.47 (1980) is fairly high for a demand-responsive service

- o in terms of both unit cost and productivity, TRADE's results compare very favorably to other similar systems.

8.3 Transferable Findings

One of the most important objectives of this evaluation is the identification of findings which may prove useful to other coordination efforts. Many of the lessons learned from TRADE's development and operation are rather site-specific, dealing primarily with the particular personalities and political situation within Mercer County. A number of findings, however, apply generally to any similar effort. TRADE's development provides insights into the types of problems that can impede progress in such a project, as well as procedures which can prove effective; several key findings can be isolated as having definite implications for other sites:

Consolidation may be, in some instances, easier to achieve than "lower" levels of coordination. Once a base vehicle fleet is secured (i.e., through participation of at least one fairly large provider) it may be easier to build a specialized system through purchase of service agreements with agencies having transportation budgets, but not directly operating their own service, than through coordination or consolidation of the operations of agencies providing their own services. By building through agencies which do not directly provide service (i.e., they contract for service), it is possible to avoid certain barriers which typically face coordination efforts (e.g., turfism/loss of control, fear of lowering service quality, concerns over vehicle depreciation/replacement, etc.). As in TRADE's development, "purchase of service" agencies may simply be more willing to participate than those with their own transportation operations, who often fear losing more than they might gain from coordination. (Once any type of coordinated or consolidated system has been in operation for a while, however, it may be easier to attract agencies whose concerns deal with the ability of the new system to serve their clients' needs.)

It is unrealistic to expect that all agencies in an area will benefit from participating in a coordinated/consolidated system. Certain types of agencies will not benefit from such a system. For instance, an agency operating one or two vehicles may experience greater operating costs by having to absorb some of the administrative cost of a larger system, and may have to give up control of its vehicle(s) (e.g., have it stationed away from the agency). If this agency is already able to effectively transport its clients, it may not realize any real benefit from coordination.

In developing a consolidated system through purchase of service contracts, in addition to normal operating costs (i.e., fuel, maintenance, driver and dispatcher salaries), it is

important to provide for vehicle depreciation (i.e., to build up funds for vehicle replacement) and administrative salaries. Since agencies may not be using their own vehicles (and since use by their clients' is accelerating the deterioration of the consolidated systems' vehicles), it is important that they contribute to the eventual replacement of the system's vehicles. It is also important to insure that the salary of the consolidated system's director (and other personnel, such as clerk/bookkeeper) is covered through the various on-going service contracts.

Vehicle and maintenance problems can be among the most serious barriers to successful operation/expansion of a coordinated/consolidated system. One of the theoretical advantages offered by coordination/consolidation is the availability of backup vehicles (i.e., one agency's idle vehicle can be substituted for another agency's vehicle when the latter breaks down). However, when a number of vehicles are frequently down - and for extended periods of time (due to slow maintenance) - the backup capability is neutralized. This can lead to poor service reliability and a resulting negative image, which may discourage interested agencies from participating in the project.

Various barriers (both perceived and real) can prevent the development of extensive trip-sharing (referring, in this case, to clients of more than one agency being transported in a vehicle at the same time) in a coordinated/consolidated system. Incompatible travel patterns can present a significant barrier, especially on subscription-type fixed schedule trips (e.g., to a nutrition site). Such trips permit the carrying of riders for trip purposes other than the primary one only where their desired travel times, origins, and destinations coincide with the scheduled trips. Thus, if a coordinated/consolidated system is comprised largely of subscription service, the potential for trip-sharing may be quite limited. A second barrier to trip-sharing, which applies to all types of service, is the perception that different types of agency clients should not be mixed on the same vehicle (e.g., emotionally-disturbed children and the elderly). Whether or not such "client-mixing" presents real problems, an agency's perceptions that it does will hamper ride-sharing efforts.

A strong (i.e., energetic and organized) director is crucial to the successful implementation and operation of a coordinated system. Due to the complexity of the situation (e.g., various actors, all having different aims and concerns; multiple funding sources; diverse client needs), the project director must be able to maintain control over all aspects of the development process. She/he must be able to effectively deal with agency directors and government officials, as well as to manage all personnel and handle everyday operating problems. It is helpful in those regards if the director has some experience/background in the management of specialized

transportation operations; otherwise, considerable time and effort can be expended "on the job" in gaining the necessary experience.

Effective marketing and good interagency relations are important elements in the development of a coordinated/consolidated system. In attempting to establish a coordinated system, it is necessary to contact a wide variety of agencies, determine their transportation needs (and what they have to offer), and show them how they might benefit from participating. It is important to develop good working relationships with agency directors and transportation coordinators, and to maintain these relationships throughout the implementation and operation of the system.

The institutional setting of a specialized transportation program can be a significant factor in the development, operation and expansion of that program. The particular type of institutional framework (e.g., a branch of the county government, part of a public transportation authority, or a private non-profit operation) largely determines the nature of local support (both financial and administrative/political), and can have a substantial impact on how the transportation service is operated and marketed. The lack of clear support from the relevant institutional authority (e.g., county administration) can produce (or at least exacerbate) day-to-day operational problems (e.g., limited fuel availability, inadequate maintenance, and personnel problems) and can create uncertainty over the future of the program; these problems/uncertainties can, in turn, hamper the program's efforts to recruit new participants. For these reasons, a political environment, such as county government, may not be the most appropriate setting for a specialized transportation program. The political nature of governmental bodies suggests: 1) that support for certain programs (e.g., a coordinated transportation service) can vary depending on the feelings of the administration in power; and/or 2) that support at any given time can be fragmented due to rivalries among governmental department heads. Related to the latter point, the specialized program must compete with other governmental (i.e., county) agencies for generally scarce resources (e.g., fuel, office space, maintenance facilities, etc.). In addition, location within a governmental agency means that the program must work through a civil service system to hire personnel; this can present barriers to attracting and maintaining a qualified staff, especially where civil service salaries are relatively low. Thus, though a governmental setting does offer certain advantages, including (often) provision of "in-kind" office space and other equipment and facilities, a specialized transportation service may be better off in a non-governmental setting.

An accurate reporting and accounting/billing system is necessary for effective system operation and contract negotiation. In a coordinated/consolidated system involving

multiple funding sources, accounting and statistical reporting procedures can be quite complex, and they must be carried out in an accurate manner. A full-time program analyst charged with statistical reporting is very helpful, as is accurate completion of trip logs by drivers. Accurate reporting and accounting are needed for the following reasons:

a) participating agencies/programs must be able to document proper expenditure of transportation funds to their funding sources/parent agencies

b) the consolidated project itself must be able to justify its use of supplies and personpower to both its parent agency and the project participants

c) an inaccurate system can lead to cash flow problems in the short run, and insufficient project funding in the long run; these result from an inability to determine the true costs of providing service

d) an inaccurate system can prevent determination of the cost-effectiveness of the project's component services, which hampers project marketing efforts (i.e., in showing potential project participants benefits).

8.4 Concluding Remarks

The Mercer County Coordination/Consolidation Demonstration Project has provided an excellent case study of the problems and processes involved in developing a coordinated specialized transportation system. Despite a myriad of operational and institutional difficulties - hindering both implementation and operation - TRADE developed into a consolidated system serving the clients of five agencies/programs. TRADE's management successfully shifted directions from the original project design when it became obvious that the original plan could not be implemented. As most of the originally designated participants began to withdraw from the project, TRADE sought out new participants - an effort which led to the current configuration. As of the completion of this report, TRADE was operating 18 vehicles and providing over 11,000 trips per month. Although serious problems are continuing to plague the system, TRADE has provided a valuable and cost-efficient service to the elderly and disadvantaged of Mercer County.

APPENDIX A: SUMMARY OF DATA COLLECTION ACTIVITIES

ARI undertook the first round of data collection (i.e., pre-coordination data) in February - April 1978; two more "rounds" were planned to assess the impacts of, first, agency coordination, and second, consolidation. The initial activities were as follows:

- o participating agency interviews - Completed in March 1978, this survey was intended to provide pre-coordination cost and ridership figures, and indicate what agencies hoped to gain from joining the project. It also provided indications of why certain agencies would later withdraw.

- o on-board survey - This survey was performed in March and April 1978, and was intended to provide pre-coordination user characteristics for clients of four agencies (Nutrition, Trenton Office on Aging, Ewing Township, and Hamilton Township).

- o detailed driver trip logs - Data were collected on detailed driver trip logs in March 1978. The logs provide data on travel time components of individual passenger trips and service time components for agency-operated vehicles, as well as data on service coverage, time reliability, and vehicle reliability.

Multisystems then supervised a second round of data collection in August - November 1980. These activities were as follows:

- o participating agency interviews - The director and/or transportation coordinator of each TRADE agency was interviewed between September 18 and 22, 1980. These interviews elicited each agency's views of TRADE's impact on the agency's overall operation. The interviews revealed why these agencies/program joined TRADE, and their level of satisfaction with TRADE's service.

- o non-participating agency interview - Interviews of agencies not participating in TRADE were also conducted between September 18 and 22. Discussions were held with the director and/or transportation coordinator of several of the original TRADE agencies (i.e., those no longer participating) in an effort to document reasons for withdrawing, as well

as to determine these agencies' current assessments of TRADE. In addition, interviews here held with the directors of agencies considering joining TRADE, to find out their reasons for a) wanting to join, and b) not having joined earlier.

- o user survey - TRADE administered a mail-back user survey to determine user characteristics (i.e., socio-demographic), trip purposes, and impact of TRADE on travel habits. This survey was distributed to 500 TRADE users on-board the vehicles serving each of the TRADE programs (a stamped return envelope was provided with each survey); 214 surveys were returned.

- o detailed driver trip logs - TRADE drivers maintained detailed trip logs for a two-week period from August 27 through September 10, 1980. These logs were intended to provide information on travel time components of individual passenger trips and service time components for agency-operated vehicles.

The instruments used in the second data collection round are included in this Appendix. Exhibit A-1 is the User Survey; Exhibit A-2 is the Detailed Driver Trip Log; Exhibit A-3 is the Participating Agency Interview form; Exhibit A-4 is the Non-participating Agency Interview form.

TRADE User Survey

Dear TRADE passenger:

In an effort to help us determine how well TRADE is doing in serving the elderly and handicapped residents of Mercer County, we would greatly appreciate it if you would fill out this questionnaire and return it as soon as possible (an addressed envelope is included). Please circle your answers or fill in the blanks as indicated.

Part A

1. Use of Aid(s):

   (1) Wheelchair
   (2) Walker
   (3) Hearing Aid
   (4) Braces and/or Crutches
   (5) Cane (Support)
   (6) Cane (Blindness)
   (7) Guide Dog
   (8) Personal Escort
   (9) Other _____
   (0) None

2. What is the purpose of the trip on which you received this survey?

   (1) Work
   (2) Workshop/Rehabilitation
   (3) School
   (4) Shopping
   (5) Health Care Treatment
   (6) Church/Synagogue
   (7) Social or Recreational
   (8) Nutrition Program
   (9) Counseling
   (10) Home (From Where _____)
   (11) Other _____

3. What is the location of the place you are traveling from?

   _____

4. What is the location of the place you are traveling to?

   _____

5. On the average, how often do you use this service to travel?

   (1) Daily (2) Every Few Days (3) Once a Week

   (4) Once or Twice a Month (5) Rarely

DO NOT WRITE IN THIS SPACE

1. _____ 1

2. _____ 2-3

3. _____ 4-8

4. _____ 9-13

5. _____ 14

6. How far in advance did you make a reservation for this trip?

_____ hours

_____ day(s)

This is a regularly scheduled trip _____

6. _____ 15-16

7. What was your scheduled pick-up time for this trip?

_____

7. _____ 17-20

8. What time were you actually picked-up?

_____

9. Would you have made this trip if this service did not exist?

(1) yes (2) No

8. _____ 21-24

IF NO, WHY NOT?

_____

_____

_____

9. _____ 25

(IF NO, SKIP TO QUESTION 11)

10. _____ 26

10. IF YES to Question 9, How would you have made this trip?

(1) Car Passenger
(2) Car Driver
(3) Walk
(4) Taxi
(5) Public Bus
(6) Chair Car Carrier
(7) Other _____

11. _____ 27

11. Who requested this trip?

(1) Arranged for self
(2) Arranged by agency
(3) Arranged by doctor

12a. _____ 28

12. Driver Assistance

b. _____ 29

a. Does the driver know you? (1) Yes (2) No

b. Is it important that the driver know you? (1) Yes (2) No

c. _____ 30

c. Does the driver assist you with packages? (1) Yes (2) No

d. _____ 31

d. Does the driver provide you with door-to-door assistance? (1) Yes (2) No

13. How many trips did you make last week for the following activities. (Record total one-way trips for the last seven day period. To an activity and back home is two trips.) In the second column, record how you traveled to each activity.

Activities	Number of Trips	Mode Used
a. Work	_____	_____
b. Workshop/Rehabilitation	_____	_____
c. Shopping	_____	_____
d. Health Care	_____	_____
e. Social or Recreational	_____	_____
f. Nutrition	_____	_____
g. Personal Business	_____	_____

Modes

(1) car driver (4) taxi (7) TRADE

(2) car rider (5) walk (8) other

(3) bus (6) chair-carrier

13a. ___,___ (32, 33)

b. ___,___ (34, 35)

c. ___,___ (36, 37)

d. ___,___ (38, 39)

e. ___,___ (40, 41)

f. ___,___ (42, 43)

g. ___,___ (44, 45)

Part B - For statistical purposes only, please answer the following questions (note that these responses will remain completely anonymous, since we are not requesting name or address):

14. Sex: (1) Male (2) Female

14. _____ (46)

15. Do you have a valid driver's license?

(1) Yes (2) No

15. _____ (47)

16. How many cars are owned by your household?

(1) 1 (2) 2 (3) 3 or more (4) 0

16. _____ (48)

17. Is there a car available to you for your trip-making?

a. As a passenger:
(1) Frequently (2) Seldom (3) Never

17a. _____ (49)

b. As a driver:
(1) Frequently (2) Seldom (3) Never (4) Does not apply

b. _____ (50)

18. What is your current employment status?

(1) Employed Full-Time
(2) Employed Part-Time
(3) Unemployed, looking for work
(4) Student
(5) Homemaker
(6) Retired
(7) Other _____

19. Which of the following best describes your yearly household income?

(1) $0 - $4,999
(2) $5,000 - $6,999
(3) $7,000 - $9,999
(4) $10,000 - $14,999
(5) $15,000 or higher

20. What is your age?

_____

21. How well are you able to do the following activities?

	Easily 1	With some difficulty 2	With great difficulty 3	Not at all 4
a. getting on or off a public transit bus	____	____	____	____
b. walking more than two or three blocks	____	____	____	____
c. waiting (standing), for more than ten minutes	____	____	____	____
d. keeping your balance while standing in a moving transit vehicle	____	____	____	____
e. moving in crowds	____	____	____	____

22. We welcome any comments you may have concerning TRADE or public transportation in general:

_____

_____

_____

_____

_____

Thank you very much for your time and cooperation!

18. _____ 51

19. _____ 52

20. _____ 53-54

21a. _____ 55

b. _____ 56

c. _____ 57

d. _____ 58

e _____ 59

22. _____ 60

I.D. _____ 72-76

TRADE DRIVER TRIP LOG

AGENCY NAME: _____ DATE: _____ TYPE OF SERVICE (DEM. RESP. OR FIX.-RT.): ____

DRIVER: _____ START TIME: _____ START MILEAGE: _____

VEHICLE: _____ FINISH TIME: _____ FINISH MILEAGE: _____

SCHED'D PICK-UP TIME	PASSENGER NAME ADDRESS PHONE NO. (/IF NOT AGENCY CLIENT)	TIME PICK-UP		MILEAGE	DESTINATION ADDRESS	TIME DROP-OFF		MILEAGE	TRIP PURPOSE	SPECIAL ASST'NCE	RIDE SHARING	TIME SHARING
		ARR.	LVE.			ARR.	LVE.					

PROJECT TRADE
Participating Agency
Interview

Date: _____
Time: _____
Interviewer: _____

1. Agency Name: _____

Address: _____

_____

Telephone No.: _____

2. Name and Title of Respondent: _____

_____

3. Primary Purpose(s) of the Agency: _____

_____

_____

_____

_____

4. What do you see as the primary objective of Project TRADE? (If the answer is "to provide transportation", probe to determine the agency's view of coordination and consolidation.)

_____

_____

_____

_____

_____

_____

5. Do you feel that this objective has been met?
____(1) Yes ____(2) No

6. Who is eligible to use the services offered by your agency? (i.e. eligibility criteria such as age, disability, geographic location, etc.)

_____

_____

_____

_____

7. How many individual (unduplicated) clients are served by your agency in an average month (or an average year, whichever is appropriate)? _____

8. Is there a state agency/organization that has jurisdiction over your program(s)? ____ (1) Yes
____ (2) No
____ (3) Dont' Know

9. (IF YES TO QUESTION 8) What is the name of that organization or agency? _____

10. What type(s) of transportation service(s) did your agency offer to your clients before joining TRADE? (Check services offered.)

____ (1) Scheduled Fixed-Route
____ (2) Demand-Responsive
____ (3) Purchase of Service
____ (4) User Subsidy for their choice of mode.
____ (5) Volunteer drivers using personal car
____ (6) Staff using personal car
____ (7) None
____ (8) Other _____
_____
_____

11. Describe the procedures used by your agency for organizing and providing transportation for client trips before you joined TRADE.

12. Special Assistance Client Requirements.

a) What percentage of your clients require a ramp or lift to enter or leave the vehicle? _____

b) What percentage of your clients require door-to-door assistance? _____

c) What percentage of your clients require assistance with packages? _____

d) What percentage of your clients can be mixed on vehicles with clients from other agencies? _____

e) What percentage of your clients will only travel with drivers they know? _____

Additional Comments

_____

_____

_____

_____

_____

13. Do you have a formal record-keeping procedure which keeps track of the following?

a) Number of trip requests (daily or weekly) ___(1) Yes ___(2) NO

b) Number of trips served (daily or weekly) ___(1) Yes ___(2) NO

c) Transportation costs (Weekly, monthly or yearly) ___(1) Yes ___(2) NO

d) Service miles (daily or weekly) ___(1) Yes ___(2) NO

e) Trip denials (daily or weekly) ___(1) Yes ___(2) NO

14. Operating Statistics (Agency-Sponsored Vehicles)

a) Average weekly ridership (one-way trips) _____ trips/week

b) Days and weeks of operation _____

c) Operating hours per day _____

d) Average total weekly mileage (all vehicles)_____ miles/week

e) Average number of trips denied per week _____ trips/week

f) Aount of advanced notice required for transportation service _____

15. How many trips per week are made by your clients for agency related activities on vehicles other than those sponsored by your agency? _____ trips/week

_____ (mode(s) used)

16. What is the total number of unduplicated clients sponsored by your agency who use TRADE?

_____

17. What barriers, if any, prevent your agency from achieving its primary function?

_____

_____

_____

_____

_____

18. Do you feel that the transportation services sponsored by your agency (and provided by TRADE) are duplicated by any other human service agency(ies) in Mercer County (i.e., among those not particpating in TRADE)?

____(1)Yes ____(2) No

If YES, by which agencies, and in what way?

_____

_____

_____

_____

_____

19. Why did your agency choose to participate in Project TRADE? What benefits has your agency received from its participation?

_____

_____

_____

_____

_____

_____

_____

20. Would you say that the demonstration project has been successful? It is:

____(1) Excellent ____(3) Fair _____(5) Don't Know

____(2) Good ____(4) Poor

Why do you feel this way?

_____

_____

_____

_____

_____

21. What have been the major problems/drawbacks with TRADE?

_____

_____

_____

_____

_____

22. Are your clients satisifed with TRADE?

23. Are you satisified with TRADE?

24. Total funding for agency operation.

Source	Amount

25. Can you describe the type of insurance coverage your agency-sponsored vehicles carry?

24. Does your agency have a transportation budget?

____(1) Yes ____(2) No

Details of Transportation Budget (Year _____)

Source	Amount
_____	_____
_____	_____
_____	_____
_____	_____

25. Total funding for agency operation.

Source	Amount
_____	_____
_____	_____
_____	_____
_____	_____

26. Can you describe the type of insurance coverage your agency vehicles carry?

_____

_____

_____

_____

_____

_____

PROJECT TRADE
Non-Participating Agency
Interview

Date: _____
Time: _____
Interviewer: _____

1. Agency Name: _____

Address: _____

_____

Telephone No.: _____

2. Name and Title of Respondent: _____

_____

3. Primary Purpose(s) of the Agency: _____

_____

_____

_____

_____

4. What do you see as the primary objective of Project TRADE? (If the answer is "to provide transportation", probe to determine the agency's view of coordination and consolidation.)

_____

_____

_____

_____

_____

_____

5. Who is eligible to use the services offered by your agency? (i.e. eligibility criteria such as age, disability, geographic location, etc.)

_____

_____

_____

_____

6. How many individual (unduplicated) clients are served by your agency in an average month (or an average year, whichever is appropriate)? _____

7. Is there a state agency/organization that has jurisdiction over your program(s)? ____ (1) Yes
____ (2) No
____ (3) Dont' Know

8. (IF YES TO QUESTION 7) What is the name of that organization or agency? _____

9. What type(s) of transportation service(s) does your agency offer to your clients? (Check services offered.)

____ (1) Scheduled Fixed-Route
____ (2) Demand-Responsive
____ (3) Purchase of Service
____ (4) User Subsidy for their choice of mode.
____ (5) Volunteer drivers using personal car
____ (6) Staff using personal car
____ (7) None
____ (8) Other _____
_____
_____

10. Describe in detail the procedures used by your agency for organizing and providing transportation for client trips.

11. Vehicle Inventory

Number of Vehicles	Make and Model	Year	Capacity

12. Special Assistance Passenger Requirements.

a) What percentage of your passengers require a ramp or lift to enter or leave the vehicle? _____

b) What percentage of your passengers require door-to-door assistance? _____

c) What percentage of your passengers require assistance with packages? _____

d) What percentage of your passengers can be mixed on vehicles with clients from other agencies? _____

e) What percentage of your passengers will only travel with drivers they know? _____

f) How many of your vehicles carry an aide to assist the drivers? _____

Additional Comments

_____

_____

_____

_____

_____

13. Do you have a formal record-keeping procedure for your transportation service which records the following?

a) Number of trip requests (daily or weekly) ___(1) Yes ___(2) NO

b) Number of trips served (daily or weekly) ___(1) Yes ___(2) NO

c) Transportation costs (Weekly, monthly or yearly) ___(1) Yes ___(2) NO

d) Service miles (daily or weekly) ___(1) Yes ___(2) NO

e) Trip denials (daily or weekly) ___(1) Yes ___(2) NO

14. Operating Statistics (Agency Vehicles)

a) Average weekly ridership (one-way trips) _____ trips/week

b) Days and weeks of operation _____

c) Operating hours per day _____

d) Average total weekly mileage (all vehicles)_____ miles/week

e) Average number of trips denied per week _____ trips/week

f) Aount of advanced notice required for transportation service _____

15. How many trips per week are made by your clients for agency related activities on vehicles other than those operated by your agency? _____ trips/week

_____ (mode(s) used)

16. Does your agency use its vehicles to transport supplies or materials related to agency business? (i.e. Meals-On-Wheels, etc.) ____(1) Yes ____(2) No

If YES, what type of supplies or materials are transported and how often does this occur?

_____

_____

_____

_____

_____

17. What is the total number of unduplicated individuals who actually use your agency's transportation service?

_____

18. Can you describe the relationship, if one exists, between your agency's transportation program and its primary function? (i.e. Do the drivers and/or travel aides serve any other function besides providing transportation while transporting agency clients?)

19. What barriers, if any, prevent your agency from achieving its primary function?

20. Do you feel that the transportation services provided by your agency are duplicated by any other human service agency(ies) in Mercer County? ____(1)Yes ____(2) No

If YES, by which agencies, and in what way?

21. Why did your agency choose not to participate in (or withdraw from) Project TRADE?

_____

_____

_____

_____

_____

_____

_____

22. Would you say that the demonstration project has been successful? It is:

____(1) Excellent ____(3) Fair _____(5) Don't Know

____(2) Good ____(4) Poor

Why do you feel this way?

_____

_____

_____

_____

_____

23. What do you see as the major problems/disadvantages with TRADE?

_____

_____

_____

_____

_____

APPENDIX B: BILLING AND ACCOUNTING FORMS

Exhibits:

B-1 Title XX Reporting Form

B-2 Title XX Certification Form

B-3 Title XX Service Application

B-4 JOBS Invoice

B-5 JOBS Reporting Form

B-6 Voc. Rehab. Invoice

B-7 Hightstown/East Windsor Invoice

B-8 TRADE Monthly Statistical Recording Form (used for all programs)

B-1

DYFS 13-16
(new 2/76)

STATE OF NEW JERSEY
DEPARTMENT OF HUMAN SERVICES
DIVISION OF YOUTH AND FAMILY SERVICES
TRANSPORTATION
TITLE XX MONTHLY PROGRAM REPORT

Agency TRADE Month of AUGUST, 1980

County MERCER

I. Enrollment Data

	Unduplicated Number Of Clients Served
A. New clients this month	29
B. New clients, contract year to date	293
C. Total clients this month	247

II. Program Activity

A. Number of rides provided this month 1650 (=Actual LOS) (one way) round trip (circle one)

B. Total rides required this month by contract 1500 (=Contract LOS)

C. Total mileage of rides provided this month 5319 miles

III. Destination - rides this month

Type of Agency	Number of Rides
A. Health/medical	1450
B. Public Assistance (AFDC, Social Security, etc.)	8
C. Social Service Agencies	148
D. Senior Citizens' Programs	44
E. Other, List _____	
F. _____	
G. Total	1650 (= II A.)

B-1 (cont.)

IV. Referral Sources - new clients this month

	Referrals Received	Referrals for Whom Service Initiated	
A. Division of Youth & Family Services			
B. County Welfare Board	5	5	
C. County Office on Aging			
D. Other Social Service Agency	10	10	
E. Medical Facilities	4	4	
F. Self-referral	9	9	
G. Other, list City Welfare	1	1	
H. Total	29	29	(= I.A.)

V. Comments

I certify that this information is accurate and true.

Date September 26, 1980 Signature of Program Director James R. Hobson

Transmittal Instructions

Complete original and two (2) copies. Retain one (1) copy in files; mail original and one copy with fiscal report by 10th of each month to:

B-2

SERVICE STATUS & NOTIFICATION

Applicant's Name _____ (Last / First / Middle)

Provider Agency TRADE

Agency Address 2300 Hamilton Ave.

I. Your status for transportation service has been determined to be:

A. For Prospective Client:

1. ☐ Eligible under following category: ☐ AFDC ☐ Income Eligible ☐ SSI ☐ Medicaid Only

a. ☐ Service will begin _____ (Month) _____ (Day), 1980 (Year)

at _____ (time) at TRADE, 2300 Hamilton Ave. (Agency / Address), Trenton (City)

989-6019 (Phone) There will be ☐ no fee. ☐ fee of _____ per _____

b. ☐ No service can be offered at this time, as agency is filled to capacity.

2. ☐ Not eligible for service for the following reasons:

_____

B. For Current Client:

1. ☐ Terminated, effective date _____ (Month) _____ (Day), 197__ (Year)

for the following reason: _____

2. ☐ Reduced, effective date _____ (Month) _____ (Day), 197__ (Year)

as follows: _____

for the following reason: _____

If you do not agree with the decision listed above, you have the right to request a hearing to present your reason why the decision should be changed. You may also request a hearing if you feel that your application for service has not been acted upon promptly by this agency. This request must be made in writing to:

DIVISION OF YOUTH AND FAMILY SERVICES
ADMINISTRATIVE HEARINGS UNIT
POST OFFICE BOX 510
ONE SOUTH MONTGOMERY STREET
TRENTON, NEW JERSEY 08625

No special form is needed for the request, but be sure to include your return address. You will be mailed a notice of the time, date and place to appear for a hearing. You may present your case yourself, or you may be represented by a lawyer, relative, friend, or other spokesman. YOUR REQUEST MUST BE MADE WITHIN 90 DAYS OF THE DATE ABOVE IN ORDER TO RECEIVE A HEARING.

If you are receiving services, and any change occurs in your income or income maintenance status, you must promptly and fully report and provide proof of this change to this agency. You must also provide this information to appropriate State or Federal officials if requested to do so.

_____ (Date) _____ (Signature of Provider Agency Staff Member)

B-3

State of New Jersey
Department of Human Services
Division of Youth and Family Services

SERVICE APPLICATION AND CLIENT RECORD SUMMARY

Form DYFS 13-4 Rev. 4/78

(1) TRANSACTION TYPE ☐ (1)

1. Initiate Service 3. Correct
2. Terminate Service 4. Update/Redetermination

(2) EFFECTIVE DATE ☐☐ DAY ☐☐ MONTH ☐☐ YEAR (2-7)

(3) SERVICE PROVIDER NAME: _____

Identification Number: ☐☐☐☐☐☐☐☐ (8-16)

(4) CLIENT INFORMATION

Last Name ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ First Name ☐☐☐☐☐☐☐☐☐☐ Middle Initial ☐ (17-37)

Date of Birth: ☐☐☐☐☐☐ (38-43)

Client Is: ☐ (44) 1. Adult 2. Child

For Child Day Care Services Only, Enter County of Residence _____
A copy of this form will be sent by DYFS to the County Welfare Agency in client's county of residence

(5) SERVICE INFORMATION

Enter code number of service provided from list below ☐☐ (47-48)

If service provided is Day Care (Codes 07, 31, 32, 33), enter Full-time/Part-time below ☐ (53) 1. Full-time 2. Part-time

CODE NUMBER

- 02 Case Management
- 03 Chore Services
- 30 Community Mental Health (cluster)
- 04 Companionship Services
- 06 Counseling Services
- 07 Day Care – Children – Day Care Center
- 31 Day Care – Children – Developmentally Disabled
- 32 Day Care – Adults – General
- 33 Day Care – Adults – Developmentally Disabled

} Complete Full-Time/Part-time Block Above

- 08 Education and Training Services
- 09 Employment Related Services – General
- 23 Employment Related Services – Developmentally Disabled
- 10 Family Planning Services
- 11 Health Related Services
- 12 Home Delivered Meals
- 13 Homemaker Health Services
- 14 Housing Related Services
- 16 Legal Services
- 34 Multi – Service – Program – Aged (cluster)
- 35 Parole Supervision
- 36 Protective – Adults – General (cluster)
- 37 Protective – Adults – Battered Women (cluster)
- 19 Protective – Children
- 20 Recreational Services
- 38 Services for Alcohol Abuser (cluster)
- 39 Social Services – Corrections (cluster)
- 40 Social Services for Mentally Retarded – Case Management & Placement
- 41 Social Services for Mentally Retarded – Community Living
- 22 Transportation Services
- 01 Youth Services (cluster) Big Brother/Big Sister

(6) ELIGIBILITY STATUS ☐ (55-56)

AFDC, SSI or Medicaid Number ☐☐☐☐☐☐☐☐☐☐ (57-66)

For Code 10 only, if service requires a fee enter amount of Title XX fee assessed: _____

02 AFDC-training/job related
03 AFDC only, AFDC-F
04 SSI-aged
05 SSI-blind
06 SSI-disabled
07 Medicaid only, AFDC-N children
09 Without regard to income
10 Income eligible with fee, AFDC-N adult
11 Income eligible without fee, AFDC-N adult
12 Not eligible

Complete this section for Eligibility Status 07, 10, 11, or 12

(7) INCOME ELIGIBLE INFORMATION

Obtain the following family income information from the applicant. Enter family income "rounded off" in dollars where applicable or zero "0", where no income is claimed.

	PER MONTH	HOW VERIFIED
A. Total gross wages and salaries		
B. Net income from self-employment and/or landlord		
C. Gross income from interest dividends, trusts		
D. Gross income from pensions (including veterans)		
E. Social Security payments (all types)		
F. Unemployment and/or workmen compensation		
G. Alimony		
H. Child support		
I. Other income		

TOTAL FAMILY INCOME PER MONTH _____ X 12 = _____ PER YEAR

FAMILY SIZE: ☐ (49-50) (44-48) ☐☐☐☐☐

(8) GOAL: For each goal established during quarter, enter number to indicate status of goal at end of current quarter:

1. ☐ Achieving or maintaining economic self-support
2. ☐ Achieving or maintaining self-sufficiency
3. ☐ Preventing neglect, abuse or exploitation of children or adults
4. ☐ Providing community-based or home-based care to prevent or reduce institutionalization
5. ☐ Securing referral or admission for institutional care, services in institution

GOAL STATUS
1. Efforts continue toward achievement of goal
2. Initiated and achieved
3. Achieved
4. Initiated and discontinued
5. Discontinued

(9) SPECIAL AREA IDENTIFIERS (62-64)

Enter appropriate number only if any of the following problems have been identified by the client:

☐☐☐

1 Aged 4 Child Abuse 7 Alcohol Abuse
2 Blind 5 Child Neglect 8 Drug Abuse
3 Disabled 6 Runaway Child 9 Ment. Retarded

This service provider does not discriminate because of race, color, or national origin, or physical handicap. This policy is in accordance with the Federal Civil Rights Act of 1964 and 45 CFR, Part 84. Appeals regarding the above should be directed to the Equal Employment Opportunity Office of the Department of Human Services.

(10) CERTIFICATION AND VERIFICATION

I certify that I have completely and accurately given the information above. I understand that if I am receiving services, I am required to promptly report any changes in this information to the service agency. I understand that this information will be available only to service agency staff and public officials who may require such information in connection with their official duties. I further understand that if I am applying for Child Day Care Services that a copy of this form will be provided to the County Welfare Agency in my county of residence. I understand that it is my right to have my eligibility for services determined within thirty (30) days of the date of this application.

Applicant has been informed of and understands his/her right of access to the fair hearing process and has provided documentary evidence when necessary to support his/her eligibility.

Signature of Applicant or Representative _____ Date _____

DAY MONTH YEAR

Signature of Provider Representative _____ Date (65-70) ☐☐☐☐☐☐

D-1

STATE OF NEW JERSEY
INVOICE

BATCH NUMBER 1-7 | TRANSACTION CODE PA 30 UA 34 8-9 | DATE (MONTH, DAY, YEAR) 10-15 | FISCAL YEAR 16-17

ACCOUNT NUMBER 18-31: PROGRAM | ORGANIZATION | FUND | OBJECT

EXTENDED ACCOUNT NUMBER 32-37

INVOICE NUMBER 38-43

OBLIGATION NO. (TRANS. CODE 30 ONLY) 44-49

PAYEE – SEE INSTRUCTIONS ON REVERSE SIDE • INSERT CARBON AND COMPLETE ITEMS BELOW

(1) PAYEE NAME AND ADDRESS (NAME, STREET, CITY, STATE, ZIP) 50-148

T.R.A.D.E.
2300 Hamilton Avenue
Trenton, New Jersey 08619

(2) SEND COMPLETED INVOICE TO: DEPARTMENT/AGENCY

Department of Labor and Industry
Div. of Employment Services, Rm.1013
John Fitch Plaza
Trenton, New Jersey 08625 Jobs Transp.

(3) PAYEE REFERENCE NUMBER 149-158 | COMMODITY CODE 159-162 | (4) PAYEE IDENTIFICATION NUMBER 163-175: 21 6000 856 | (5) TERMS | (6) BILLING DATE MONTH DAY YEAR

ITEM NO.	QUANTITY	UNIT	DELIVERY IS ☐ F.O.B. DESTINATION ☐ F.O.B. SHIPPING POINT DESCRIPTION	UNIT PRICE	AMOUNT
			Reimbursement for services rendered under the Jobs Transportation Act.		
			Contract # JTDA 8008		
			Reimbursement earned to date		
	1861	one-way trips		$1.22 per trip	$2,270.42
	294	one-way trips		$5.60 per trip	1,646.40
	744	service hours		$12.28 per srv. hr.	9,136.32
					13,053.14
			Less payments received		3,502.42
			Less payments in progress		6,456.16
			June request for payment (252 hrs.@ $12.28)		$3,094.56

(7) PAYEE DECLARATION:
I certify that the within invoice is correct in all its particulars, that the described goods or services have been furnished or rendered, and that no bonus has been given or received on account of said invoice.

James R. Erlanson
PAYEE SIGNATURE

Director — TITLE
July 17, 1980 — DATE

PAYMENT DUE DATE: MONTH | DAY | YEAR

ANNUAL CONTRACT NO. 176-181

(8) TOTAL AMOUNT PA 182-190 • UA 179-190

ALLOW EXCESS 191 | LAST INV. 192

FOR ACCOUNTING BUREAU USE ONLY

SERIES 193 | CHECK NUMBER 194-199 | FOR ACCOUNTING BUREAU ONLY 200-204

CERTIFICATION BY RECEIVING AGENCY
I certify that the above articles have been received or services rendered as stated herein.

SIGNATURE | TITLE | DATE

CERTIFICATION BY FISCAL OFFICER
I certify that this Voucher is correct and just, and payment is approved.

AUTHORIZED SIGNATURE | TITLE | DATE

STD 1 (7-78)

JOBS TRANSPORTATION MONTHLY REPORT

GRANTEE: T.R.A.D.E. REPORT PERIOD: June 1980

ACTIVITY	CURRENT MONTH	CUMULATIVE
Employment		
Individuals (New)	0	10
Received Unemployment		
Received Public Assistance		
Total Trips	19	622
Average Starting Wage Rate		
Job Interviews		
Individuals (New)	0	12
Total Interviews	0	16
Total Trips	0	32
Training		
Individuals (New)	0	63
Total Trips	0	1592
Referral Source		
Job Service	0	
WIN	0	
CETA	0	36
GAEP	0	
Vocational Rehabilitation	0	10
Other (Specify) MCCAC	0	35

Signature [signature] Telephone 989-6432

Title Director Date July 17, 1980

UES:SP 012302 (1-79)

B-6

TYPEWRITE OR USE A BALLPOINT PEN SO THAT ALL COPIES WILL BE LEGIBLE-DO NOT DETACH CARBONS OR THIS STRIP. DETACH ONLY YOUR OWN COPY AS INDICATED AT BOTTOM.

STATE OF NEW JERSEY

INVOICE

(1) Transaction Code S/C	(2) Batch Number	(3) New/ Match	(4) Fiscal Year	(5) Transaction Date	(6) DOC TYP	(7) Document Number	(8) Reject Indicator
Trans Code 50 = PA 54 = UA (B) 0				(C)		038312 (G)	

(9) Vendor Status: BLANK = NO CHANGE; 1 = NEW VENDOR; 2 = ADDRESS CHANGE; 3 = LOCATION CODE; 4 = NEW VENDOR AND LOCATION; 5 = VENDOR NO. CORRECTION

(10) Account Number: Organization	Fund	Program	Object	(11) Cost Center	(12) Project Activity	(13) (F) Extended Number	(A) (14) Total Amount	(15) Agency P.O. No.	(16) (17) Obligation No.
1535	000	07022-2	63						

(B) PAYEE NAME AND ADDRESS

(18) Name (19) (20) Street (21) City (22) State (23) Zip Code

(I) [illegible]

(D) PAYEE DECLARATION:

I certify that the within invoice is correct in all its particulars, that the described goods or services have been furnished or rendered, and that no bonus has been given or received on account of said invoice.

Payee Signature

Title Date

(C) N. J. Division of Vocational Rehabilitation

[illegible]

Client Name and Address

[illegible]

(B) Counselor Code	(E) Local Office Code	(J) Payee Type	(H) Client SS #
[illegible]	14	[illegible]	[illegible]

(24) Commodity Code	(25) 1099 Indicator	(E) (26) Payee Reference — (Limit 34 Characters)	(F) (27) (K) (28) Payee Identification Number	(29) (30) Contract Number
			TP [illegible]	

(31) Last Invoice	(32) Check Series	Number	(33) Accounting Use Only (34) Error Suspense No.	(35) Del Repl	(G) Terms	(H) Billing Date Month	Day	Year	Payment Due Date Month	Day	Year

• PAYEE – SEE INSTRUCTIONS ON REVERSE SIDE •

AUTHORIZATION: SERVICE TYPE (L)	SB CODE (M)	TOTAL MAX. CHARGE FOR SERVICE TYPE (N)	SERVICE: ITEMIZE SPECIFIC SERVICES/SUPPLIES FOR EACH DATE GIVEN	PAYEE'S: DATE DONE OR PERIOD (O)	INVOICE: AMOUNT BILLED (P)	SIMILAR BENEFITS (S)
[illegible]	--	168.00	12 weeks transportation @ 7.00 /wk			0

SER. ACTION (Q): 1 AUTHOR. 3 AUTHOR. INVOICE (Combined) 2 INVOICE 4 CANCELLATION

FUND TYPE (R): ☐ REG. ☐ TRUST ☐ SSI

COUNSELOR SIGNATURE: Matthew R Feuerman	DATE: 10/14/80		
SUPERVISOR: Donald A Lovell	10/14/80		
MEDICAL CONSULTANT		TOTAL	
DISTRICT SUPERVISOR			SIMILAR BENEFITS TOTAL

CERTIFICATION BY RECEIVING AGENCY

I CERTIFY THAT THE ABOVE ARTICLES HAVE BEEN RECEIVED OR SERVICES RENDERED AS STATED HEREIN.

Signature

Title Date

CERTIFICATION BY APPROVAL OFFICER

I CERTIFY THAT THIS INVOICE IS CORRECT AND JUST, AND PAYMENT IS APPROVED.

Authorized Signature

Title Date

B-7

VOUCHER

TOWNSHIP OF EAST WINDSOR
MERCER COUNTY, NEW JERSEY

ADDRESS VOUCHER:
ATTENTION:, Dept. _____
Township of East Windsor, Ward Street
East Windsor, New Jersey 08520
TEL.: 443-4000

SHOW ORDER NO. ON ALL INVOICES, DELIVERY SLIPS, CASES, PACKAGES, ETC.

Vendor # 3742

Vendor Name & Mailing Address: County of Mercer T.R.A.D.E.
2300 Hamilton Ave.
Trenton, New Jersey 08619

Purchase Order # _____
Date _____
Invoice # _____
Dept. _____
State Contract # _____
Expiration Date _____

SHIPPING CHARGES: To be prepaid by vendor and included on voucher.
N. J. SALES TAX: Township of East Windsor is exempt by Chapter 30, Section 6A of Law of 1966.
FEDERAL EXCISE TAXES: Township of East Windsor is exempt.
PRICE CHANGES: Must be approved in advance by Finance Dept.

DESCRIPTION	APPROPRIATION CHARGED	UNIT PRICE	AMOUNT
Senior Citizen Transportation Service September 1980	3301b546		$1199.78
	TOTAL		

FOR FINANCE DEPARTMENT USE ONLY

TOTAL		

MUNICIPAL CERTIFICATION

I hereby certify that the claim specified herein is for articles received, personal services actually rendered or amounts expended for the Township of East Windsor, and that the articles received, personal services actually rendered or accounts expended for the Township of East Windsor, N.J. were in accordance with the specifications and amounts appearing on the purchase requisition.

_____
SIGNATURE

DATE _____ TITLE _____

VENDOR SIGN BELOW!
CLAIMANT'S (VENDOR) CERTIFICATION

I do solemnly declare and certify under the penalties of the law that the within bill is correct in all its particulars; that the articles have been furnished or services rendered as stated therein; that no bonus has been given or received by any person or persons with the knowledge of this claimant in connection with the above claim; that the amount therein stated is justly due and owing; and that the amount charged is a reasonable one.

X _____
SIGNATURE

DATE Oct. 7, 1980 TITLE Director

APPROVED

_____ _____
SIGNATURE/DATE

CHECK DATE _____

CHECK NO. _____

TALLY SHEET – FOR MANAGEMENT STATISTICS

Month: Sept 1980

Agency: Highlstown-E.Windsor Site: _____

DATE	PASS. TRIPS	GROSS MILES	PASS. SERVICE HOURS	DRIVER PAY HOURS	DRIVER	VAN #	E.W. Residents	Highlst. Residents	
1									
2	3	84			McCauley	V-986	2		
3	4	86			"	"	2		
4	15	103			"	"	12	1	
5	22	75			"	"	4	7	
6									
7									
8	14	86			"	"	6	2	
9	4	91			"	"		2	
10	3	86			"	"	2	1	
11	30	77			"	"	15		
12	14	65			"	"	2	5	
13									
14									
15	7	110			"	"	4	1	
16	5	92			"	"	3	1	
17	4	90(a)			"	"	3		
18	5	85			"	"	3		
19	16	74			"	"	6	2	
20									
21									
22	9	102			"	"	5		
23	2	87			"	"	1		
24	8	96			"	"	7		
25	2	90			"	"		2	
26	20	99			"	"	6	4	
27									
28									
29	15	85			"	"	8	1	
30	4	119			"	"	2	1	
31									
TOTALS	206	1882					93	30	

(a) = awaaad

APPENDIX C: DRIVER GUIDELINES AND REPORTING FORMS

Exhibits:

C-1 Driver Guidelines

C-2 Daily Inspection Report Form

C-3 Warning Notice Form

C-4 Appeal Form

DRIVER GUIDLINES

1. Drivers must sign their vehicles in and out with the dispatcher daily.
2. A maintenance and safety check must be completed daily.
3. Drivers are responsible for keeping their vehicles clean inside and out. Wash tickets will be supplied by the dispatcher as they are needed.
4. All drivers must obey all traffic regulations. You will personally be responsible for all traffic violations and fines except when the cause of the violation was due to mechanical failure. However for this exception to apply you must complete the appropriate maintenance and safety checks.
5. At Donnelly Hospital, the speed limit is 10 MPH. This must be obeyed at all times. All parking must be in the designated lot. No vehicles are to be parked in the access ways.
6. It is necessary that all drivers maintain a good driving record both on and off the job. Any motor vehicle violations which adversely impact on your ability to perform your duties as a clerk driver may be cause for disciplinary action which may result in your dismissal.
7. Each drivers license will be checked periodically to ensure that it has not expired or has not been suspended.
8. All TRADE drivers must adhere to the following procedures in the event of an accident. Failure to comply with this procedure could result in disciplinary action:
    a. Stop to investigate
    b. Call an ambulance or doctor if someone is injured
    c. Call the local police—do not move the vehicle until the police tell you to do so
    d. Make no comments and give no information except what is requested by the investigating authorities. Do not sign any statements for anyone other than the authorized representative of the county insurance and property management agency

e. Do not become involved in controversies at the scene of the accident

f. Telephone the TRADE dispatcher as soon as possible at:

989-6019
989-6021
989-6022

g. Report all accidents--no matter how small you may think they are

h. On the same day of an accident, you the driver must complete an accident report and give it to the TRADE dispatcher before you go home for the day

9. Because we are transportating the elderly and handicapped, it is vital that drivers be both helpful and patient. All drivers are required to wait patiently for clients.

10. Drivers must offer door to door assistance, help with packages and any other assistance a client may require. Drivers are not permitted to enter clients homes unless in the performance of normally assigned duties, such as home delivered meals.

11. Drivers must offer assistance to all TRADE clientele when they are entering or exiting Mercer County vehicles. When using a TRADE van, drivers are to place a foot stool at the side doors in a secure manner to assist entering and exiting. To assure the safety of all TRADE clientele each driver must help each client in the use of the foot stool.

12. All drivers must ensure that all passengers are safely seated and all seat belts are properly worn before starting, moving or driving a TRADE vehicle. If a vehicle is equiped with seat belts they must be used.

13. No tips or gratuities are to be accepted or solicited at any time.

14. Drinking, drunkeness or the use of drugs while on duty are grounds for dismissal. Possession of alcohol, marijuana, drugs or narcotics on you or found in the vehicle you are assigned may result in dismissal. You as the driver of the vehicle are responsible for what goes on inside of it.

15. If you notice clients with personal problems or should a client pose a problem to others, the dispatcher should be notified at the end of the day.

16. Drivers are required to sign in and out of work with the dispatcher. No driver is authorized to sign in or out for anyone other then himself.

17. If you are going to be late for work you are required to call the dispatchers office at least fifteen (15) minutes prior to your assigned starting time. Failure to comply with this may result in the loss of that day's pay. A consistent failure to comply with this will result in disciplinary action.

18. If you will be absent from work due to illness or unexpected causes, you are required to notify the dispatcher at least on half hour prior to your assigned starting time. This must be done for each day you are absent unless you know in advance that you will be absent for an extended and specified amount of days. If you have been absent from work due to personal illness for five (5) consecutive work days or more, you will be required to submit a doctors certificate prior to your anticipated date of return to work. You will also be required to be examined by the County Medical Examiner to establish whether or not you are capable of performing your assigned duties without limitation and that your return to work will not jeopardize the health of other employees or TRADE clients.

19. If You should require prescribed medication under a doc ors supervision, immediately notify the dispatcher who may require you to obtain a statement from your doctor stating the medication will not affect your driving

20. All drivers hours will be scheduled in advance by the dispatcher. Your vacation, and personal days will be determined by county personnel guidelines and scheduled by the dispatcher. Before vacation and personal days will be granted they must be approved by the TRADE Director.

Any questions regarding these guidelines should be brought to the attention of the dispatcher who will consult with the Director of TRADE in formulating a resolution to the matter. Drivers will be informed by the dispatcher of any amendments to these guidelines.
Consistant disregard of these guidelines will be grounds for instituting proceedings to determine your continued eligibility for employment.

I have read, understand and received a copy of these responsibilities and requirements for TRADE drivers.

Signature_____

Date_____

DRIVERS DAILY INSPECTION REPORT

THIS REPORT MUST BE COMPLETED DAILY AND KEPT WITH THE VEHICLE WHILE IT IS IN USE. AT THE END OF EACH WORKDAY THIS REPORT MUST BE SIGNED AND TURNED IN TO THE TRADE DISPATCHER.

CHECK ANY DEFECTIVE ITEMS WITH AN X AND GIVE DETAILS OF DEFECT.

_____
Signature of driver making report

VEHICLE NUMBER_____ DATE_____

_____ BATTERY	_____ HEADLIGHTS	___ TIRES
_____ FUEL	_____ PARKING LIGHTS	___ SPARE TIRE
_____ OIL LEVEL	_____ BRAKE LIGHTS	___ JACK
_____ RADIATOR	_____ TURN SIGNALS	___ WHEELS/RIMS
_____ LEAKS	_____ DASH INDICATORS	___ PARKING BRAKE
_____ DRIVE BELT	_____ HORN	___ SERVICE BRAKES
_____ HEATER	_____ WINDOWS	___ BRAKE PEDAL
_____ DEFROSTER	_____ WINDSHIELD WIPER	___ ENGINE NOISES
_____ AIR CONDITIONER	_____ REAR VISION MIRROR	___ INTERIOR CLEANLINESS

_____ BODY DAMAGE(old or new)

REMARKS:_____

_____

_____

_____

_____

_____

AMOUNT OF FUEL RECEIVED THIS DATE:_____

LOCATION OF FUEL PUMP:_____

_____
Signature of dispatcher reviewing this report

COUNTY OF MERCER
T.R.A.D.E.
2300 HAMILTON AVENUE
TRENTON, N.J. 08619

KATHRYN A. CLARK
DIRECTOR
DEPT. OF HUMAN SERVICES

JAMES R. HOLMAN
DIRECTOR, TRADE

TRADE WARNING NOTICE

DRIVER_____ DATE_____

I have been advised by_____that on_____ you were assigned vehicle_____for picking up clientele of the_____project. You reported to work at_____ and during the course of this day_____you completed only_____pickups of a scheduled_____. You returned to TRADE at_____and at no time during this day _____did you report any unusual delays or breakdowns to your supervisor. Also, on this day_____you drove_____ miles. Furthermore in checking your drivers log for_____ it is observed that you made a total of_____stops of a scheduled_____. You also drove a total of_____ miles leaving TRADE at_____and returning at_____. Obviously, your productivity on_____was very poor and totally unacceptable. In light of the fact that you made_____pickups on_____and could only make_____on_____ it is the opinion of this office that you have committed a theft of time and falsified records which is considered dishonest. As you know falsification of office records and theft of time are very serious matters which must be corrected immediately.

The purpose of sending you this warning notice is to advise you that poor productivity, the theft of time, the falsification of office records (which this office considers to be dishonest) are totally unacceptable. This office expects a fair days work for a fair days pay.

This is a warning that should this occur again, within a 6 month period,I, the director of TRADE, will have no alternative but to take more severe disciplinary action which may result in your discharge. I sincerely hope this will not be necessary.

JAMES R. HOLMAN
Director TRADE

cc: Kathryn A. Clark, Director Human Services
Jack Klemmer, Union Representive

Should you wish to appeal this warning notice fill out the bottom portion of this letter and return it to the TRADE dispatcher. An appeal must be filed with the dispatcher no later then 5 working days after the date of the warning notice. All appeals must be in writing. If your would like a conference, concerning this warning notice, with the director of TRADE be certain you check the appropriate spot below. If this form is not returned to the TRADE dispatcher within 5 working days it will be the opinion of this office that you will not appeal. No appeal will be accepted after 5 days.

DRIVER ____________________ DATE ____________________

DATE OF WARNING LETTER ____________________

REASON FOR WARNING LETTER ____________________

I WOULD LIKE A CONFERENCE WITH THE DIRECTOR OF TRADE ____________________

____

SIGNATURE OF DRIVER

APPENDIX D: GLOSSARY

CETA - Comprehensive Employment Training Act of 1973; U.S. Department of Labor program which provides funds for public manpower programs.

consolidation - a form of coordination of human service agency transportation services in which participating agencies transfer control of their transportation programs (i.e., vehicles and drivers) to a central organization in exchange for the provision of transportation service for their clients; although a consolidated system is based on bringing together agencies having vehicles, non-provider agencies can also participate through purchase of service contracts with the central provider.

coordination - any type of cooperative arrangement among transportation providers aimed at producing benefits through joint administration and/or operation of transportation-related activities; potential benefits include: 1) eliminating duplication of transportation services, 2) making better use of underutilized resources, 3) matching service providers with service users, and 4) achieving economies of scale through joint purchases; "coordination" can take a range of forms - from simple cooperation to consolidation (in TRADE's case, "coordination" implied centralizing certain activities - dispatching, maintenance, and purchasing - with the participating agencies retaining control of their own operations).

time-sharing - the use of a vehicle by more than one agency (i.e., during different parts of the day).

Title III - a section of the Older Americans Act of 1965 (administered by the U.S. Department of Health and Human Services); provides funds for state and local programs for the aging.

Title XIX - a section of the Social Security Act of 1935 (administered by the U.S. Department of Health and Human Services); provides funds for the Medicaid program; transportation provisions vary from state to state, but, in general, eligible users are reimbursed for Medicaid-related trips.

Title XX - a section of the Social Security Act of 1935 (administered by the U.S. Department of Health and Human Services); provides funds for various programs for needy individuals and families (i.e., those qualifying for AFDC or SSI* aid); covers purchase of transportation service for eligible persons.

trip-sharing - the use of a vehicle by clients of two or more agencies at the same time.

---

* Aid to Families with Dependent Children and Social Security Insurance.

APPENDIX E

REPORT OF NEW TECHNOLOGY

The work performed under this contract, while not leading to any significant inventions, discoveries, or innovations, has made use of state-of-the-art methodologies to complete an analysis of findings available on the implementation and operation of the demonstration project. These findings will be useful to other communities throughout the United States in the planning and design of improved coordinated transportation services.

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