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U.S. Department
of Transportation
**Federal Transit
Administration**

Evaluation of the Baltimore Guaranteed Ride Home Program

Research and Special Programs Administration
Volpe National Transportation Systems Center
Cambridge, MA 02142-1093

Final Report
December 1994

Service Assistance Division
Washington, DC 20590

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| 3. ABSTRACT (Maximum 200 words) This report evaluates the implementation of a guaranteed ride home (GRH) program in the Baltimore/Washington International (BWI) Airport employment area during its demonstration period from March 1992, to March 1993. The GRH program offered employees of member organizations, who use transit or rideshare at least three times per week and who register for the program, free rides home in the case of personal or family emergencies or unscheduled overtime, via taxicab or rental cars depending on the distance of their residences from their places of employment. The GRH program was well received by member employers and employees; program participation increased steadily throughout the demonstration. Minimal program abuse occurred. While there is no conclusive evidence that the GRH program directly increased high occupancy vehicle (HOV) usage in the BWI Airport employment area during the demonstration, the program may have helped to retain existing HOV users. As the 1990 Clean Air Act requirements for large employers to reduce single occupancy commuting become effective, interest in the GRH program may grow as a means to encourage increases in average vehicle occupancy. | | | | | |
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PREFACE

This report was prepared by KPMG Peat Marwick as subcontractor to Science Applications International Corporation under Contract Number DTRS-57-89-D-00090 with the Research and Special Programs Administration's John A. Volpe National Transportation Systems Center, Office of Research and Analysis, Service Assessment Division. The Federal Transit Administration (FTA), Office of Technical Assistance and Safety sponsored the work, with overall direction provided by the FTA sponsor, Joseph Goodman of the Service Assistance Division. The contract was arranged under Project Plan Agreement TT-27, Regional Mobility Support.

This report evaluates the experience of the Baltimore Metropolitan Council and the Baltimore/Washington International (BWI) Business Partnership, Inc. with a demonstration of a guaranteed ride home program initiated in 1992 in the BWI Airport employment area. As part of its Regional Mobility Program and in response to a 1989 report by the Office of Technical Assistance and Safety entitled "An Assessment of Travel Demand Approaches at Suburban Activity Centers," the FTA awarded a Section 8 grant to implement the guaranteed ride home program as a transportation management strategy.

The author would like to thank Neil Shpritz, Executive Director, Nancy Van Winter, former Executive Director, and all the staff of the Baltimore/Washington Business Partnership, Inc. for their enthusiastic support and assistance throughout the project.

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EXECUTIVE SUMMARY

In June 1991, the Federal Transit Administration (FTA) awarded a Section 8 grant to the Baltimore Metropolitan Council (BMC) to implement a guaranteed ride home (GRH) program in the Baltimore/Washington International (BWI) Airport employment area with the long term goal of increasing vanpool, carpool and transit use. The BMC, as the authorized metropolitan planning organization for the Baltimore region, applied for the grant on behalf of the BWI Business Partnership, Inc. (Partnership), a nonprofit transportation management association (TMA) created in 1985 to improve transportation for the businesses, agencies, employees, and residents of the BWI Airport area. The BMC and the Partnership executed a formal agreement on September 19, 1991, to implement the GRH program demonstration.

The Partnership officially kicked off the one-year demonstration on March 10, 1992. The GRH program offered employees of member organizations, who use transit or rideshare at least three times per week and who register for the program, free rides home in the case of personal or family emergencies or unscheduled overtime. The GRH service was available 24 hours a day, seven days a week. During the 12-month demonstration, each eligible, registered employee could use the guaranteed ride home program six times for personal or family emergency situations and four times for unscheduled overtime.

To use the GRH service, a registered program participant first informed his or her supervisor of the emergency or overtime requirement and then directly called one of the participating service providers (a taxi company and a rental car company). After verifying the caller's eligibility with an alphabetical listing of registered participants, the taxi or rental car picked up the program user within 30 minutes. Program users were permitted to make additional stops directly related to the emergency, such as stops at the doctor's office, school, or day care.

The program user received a receipt from the service provider but did not pay for the GRH service. The service providers directly billed the Partnership for the services provided. All taxes, tips and fuel charges were included as part of the free GRH service. The user did not incur any out-of-pocket expenses.

After utilizing the GRH service, the program user submitted a copy of the receipt and a completed reimbursement certification form, signed by an authorized company representative verifying that the employee had a personal emergency or unscheduled overtime, to the Partnership. The Partnership then sent a follow-up survey to the user to assess how the service worked. The program user was required to return both forms to the Partnership in order to remain eligible for the GRH program.

The GRH program was well received by member employers and employees. The program allowed participating employees to rideshare or use transit without worrying about how they would get home in the event of an emergency or unexpected requirement to work overtime. The program provided participants with a quick and easy solution for getting home in these

commute behavior before and after the GRH demonstration indicates that overall commute behavior remained virtually unchanged. There was a slight increase (less than one percent) in HOV commuting and a corresponding slight decrease in single occupancy vehicle (SOV) commuting during the demonstration period. The changes in commute behavior that did occur (6.2 percent of the survey respondents changed their commute mode over the demonstration period) reflected changes from SOV to HOV commute modes, as well as changes among HOV commute modes and changes from an HOV to SOV commute mode. Twenty-seven percent of the survey respondents who had changed their commute mode during the period indicated that the availability of the GRH program was important or very important in their decision to shift to an HOV commute mode.

The Partnership provides many valuable services for its members, including the GRH program. The GRH program is a low cost benefit that employers can provide as an incentive for employees to rideshare or use transit. Together with the rideshare matching services provided by the Partnership, the GRH program makes it easy for area employees to utilize HOV commute modes.

TMA membership did not increase significantly during the demonstration period. A small company which relocated its headquarters office, with ten employees, from Baltimore City to the BWI employment area in December 1992 indicated that the GRH program was the primary reason for joining the Partnership.

As the 1990 Clean Air Act (CAA) requirements become effective, interest in the GRH program on the part of larger employers (i.e., with 100 or more employees) in the BWI employment area trying to deal with CAA requirements may grow. Membership in the Partnership is likely to increase as employers look for low cost programs to increase average vehicle occupancy and assistance in developing Employer Trip Reduction Programs.

1. INTRODUCTION

In June 1991, the Federal Transit Administration (FTA) awarded a Section 8 grant to the Baltimore Metropolitan Council (BMC, formerly the Baltimore Regional Council of Governments) to implement a guaranteed ride home (GRH) program in the Baltimore/Washington International (BWI) Airport employment area with the long term goal of increasing vanpool, carpool and transit use. The BMC, as the authorized metropolitan planning organization for the Baltimore region, applied for the grant on behalf of the BWI Business Partnership, Inc. (Partnership), a nonprofit transportation management association (TMA) created in 1985 to improve transportation for the businesses, agencies, employees, and residents of the BWI Airport area. The BMC and the Partnership executed a formal agreement on September 19, 1991, to implement the GRH program demonstration.

In July 1989, the FTA Office of Technical Assistance and Safety issued a report entitled "An Assessment of Travel Demand Approaches at Suburban Activity Centers," which called for further testing of GRH programs as a transportation management strategy. With its proximity to the airport and extensive availability of on-call transportation services, the BWI Airport employment area presented an ideal area for testing a GRH program.

1.1 GUARANTEED RIDE HOME DESCRIPTION

GRH programs provide employees who regularly carpool, vanpool or take transit to work assurance of a reliable, backup ride home, at minimal or no cost, in the event they must leave work earlier or stay later than their normal time. The fear of being stranded at work in the event of a daytime emergency has frequently been cited as a major deterrent to ridesharing, particularly for employees with young children or elderly relatives living at home. GRH programs promote ridesharing by alleviating the fear of being stranded at work in the event of an emergency or an unexpected requirement to remain at work beyond the usual time.

Alternative transportation through a GRH program can be provided by taxi cab, short-term auto rental, company fleet vehicle, or a combination of these options. Most programs restrict use, either the number of times a person can utilize the GRH service or the dollar value of the GRH trips during a 12-month period.

Some GRH programs are provided free of charge to the user. Other programs require individual users or their employers to contribute a portion of the cost of the trip.

1.2 GRH PRIOR EXPERIENCE

GRH programs have been implemented across the country as a travel demand management technique. GRH programs are frequently administered on a cooperative basis by Transportation Management Associations. Individual employers and transit agencies have also developed GRH programs to promote transit and ridesharing.

directly related to the emergency were allowed, such as stops at the doctor's office, school, or day care.

After utilizing the GRH program, the employee was required to submit to the Partnership a copy of the receipt and a completed reimbursement certification form, signed by an authorized company representative, verifying that the employee had a personal emergency or unscheduled overtime. The Partnership sent a short follow-up survey to the user to assess the user's satisfaction with the service. In order to remain eligible to participate in the program, the user was required to return both the reimbursement certification form and the follow-up survey to the Partnership.

The FTA funded demonstration ended in March 1993. The Partnership is continuing the program with its own funds based on member interest.

1.4 EVALUATION OVERVIEW

In February 1993, the John A. Volpe National Transportation Systems Center (Volpe Center), under the Operations Research & Analysis omnibus contract, issued a task order to Science Applications International Corporation (SAIC) to conduct an evaluation of the GRH program demonstration. The SAIC team was led by KPMG Peat Marwick. The objective of the evaluation was to assess the effectiveness of the GRH demonstration in meeting its goals and objectives, specifically:

- to stimulate carpooling and public transportation, and thereby reduce single occupancy vehicle commuting
- to strengthen the profile and appeal of the Partnership

The evaluation plan included the following components:

- documentation and assessment of the program development and implementation processes
- analysis of program use over the 12-month demonstration period, including:
 - registration for the program
 - actual program use
- analysis of the cost of the program, including administrative costs and reimbursements to service providers
- analysis of GRH program abuse
- analysis of the attitudes and perceptions of program users and the employers participating in the program

The **Baltimore Metropolitan Council**, the authorized metropolitan planning organization for the Baltimore region, was the grant recipient. The BMC applied for the grant on behalf of, and contracted with, the Partnership to develop and implement the GRH program. In addition, the BMC provided support in various development, implementation and analysis tasks, specifically:

- developing the survey instrument to collect baseline data on commute behavior
- tabulating the results of the initial baseline survey
- tabulating the results of the post-demonstration survey
- retabulating the baseline survey results for the subset of respondents who also responded to the post-demonstration survey

The **Federal Transit Administration** provided funding and technical assistance for the GRH program demonstration through a cooperative agreement with the BMC under Section 8 of the Federal Transit Act. FTA staff participated in meetings, reviewed survey instruments, and reviewed the evaluation report.

The **John A. Volpe National Transportation Systems Center** was responsible for management of the demonstration evaluation project. Volpe Center staff participated in the evaluation of the demonstration by providing technical guidance, attending meetings, reviewing survey instruments, and reviewing the evaluation report.

2. SITE DESCRIPTION

2.1 THE BWI AIRPORT AREA

The BWI Airport employment area is a ten-square mile region surrounding the BWI Airport in Anne Arundel County, Maryland, approximately ten miles southwest of downtown Baltimore and 35 miles northeast of downtown Washington D.C. The area is bounded by the Baltimore Beltway (I-695) on the North, Maryland Route 3 (I-97) on the East, Maryland Route 32 on the South, and the Howard County line to the west. A map of the area is presented in Exhibit 2-1.

2.2 EMPLOYMENT

The BWI Airport area has experienced tremendous growth during the last ten years. Employment increased over 400 percent from approximately 20,200 in 1980 to over 105,000 in 1990. The BMC estimates employment in the year 2000 at 113,000. If all the development projects currently proposed are completed, employment could reach 140,000 by 2010.

As of April 1991, 480 businesses were located in the BWI Airport area. The largest employers include Westinghouse Electric Corporation, the U.S. Government Fort Meade complex (the National Security Agency), Ford Aerospace, and the BWI Airport and airlines.

The area's employment base (in 1990) was comprised of the following:

| | |
|--|-----|
| Retail/Service/Professional Services | 34% |
| Airport Related (Airlines, transportation) | 18% |
| Manufacturing/Distribution | 15% |
| Engineering/Research/Communications | 12% |
| Government | 9% |
| Real Estate/Construction | 7% |
| Other | 5% |

The majority of companies in the area have small operations. A confidential employer survey conducted by the Partnership in 1991 revealed that 69 percent of companies have fewer than 30 employees while only eight percent have 200 or more employees.

2.3 TRANSPORTATION

The BWI Airport area is served by bus, light rail, Maryland commuter rail, Amtrak, and an extensive national highway network.

The Mass Transit Administration (MTA) operates four bus routes in the area:

- **Route 17** connects the northeastern portion of the BWI employment area with downtown Baltimore, serving the Baltimore City, Westport, Linthicum, Glen Burnie, Marley, and Green Haven communities. Service is limited on Saturdays and Sundays, and in January 1993, weekday midday service was eliminated.
- **Route 230** is an express route operating on the Baltimore-Washington Parkway between Baltimore City and the Parkway Center. In January 1993, midday weekday service was eliminated.
- **Route 240** is an express route between Baltimore City and Pioneer City via National Security Agency (NSA) and Fort Meade. Service is primarily operated during peak periods with limited Saturday service.
- **Route 330** connects Columbia with the NSA and Fort Meade. Service is provided on weekdays only.

The MTA opened its Central Corridor Light Rail Line in May 1992, with service to BWI Airport beginning in August 1993. The line now connects Hunt Valley, downtown Baltimore, Glen Burnie and the BWI Airport employment area. The 27-mile line includes 31 stations with service every 15 minutes. In Anne Arundel County, six stations include: Baltimore Highlands, Nursery Road, North Linthicum, Linthicum, Ferndale and Cromwell Station/Glen Burnie. Park and ride lots are located at the Baltimore Highlands, Nursery Road, North Linthicum and Glen Burnie stations.

MARC provides rail service on two lines operating between Baltimore and Washington DC:

- **Camden Line (CSX Line)** - five southbound and five northbound trains per day with three stations in the area (Elkridge, Jessup, and Savage)
- **Penn Line (AMTRAK)** - 15 southbound and 15 northbound trains per day (including hourly off-peak service) with two stations in the area (BWI Airport, Odenton)

Amtrak operates Northeast Corridor trains that stop at the BWI station. Amtrak service is available from Penn and Union Stations to BWI Airport and New Carrollton stations.

The median travel time for area employees is approximately 25 minutes with 59 percent of trips 30 minutes or less. The Partnership estimated average commute times from the following areas to the BWI Airport area as:

- Washington, DC 60 minutes
- Annapolis 45 minutes
- Baltimore (downtown) 20 minutes
- Baltimore (NE and NW) 30 minutes
- Rockville 50 minutes

Parking in the BWI employment area is readily available and for most employees (99 percent) parking is free.

3. DEMONSTRATION HISTORY

3.1 THE BWI BUSINESS PARTNERSHIP, INC.

The BWI Business Partnership, Inc. is a nonprofit transportation management association operating in the area surrounding the BWI Airport. The Partnership was founded in 1985 as the Commuter Assistance Center (CAC) to address local transportation problems caused by rapid commercial, industrial and retail growth. The CAC was an outgrowth of the Airport Area Transportation Collaborative, a group of public agencies, private businesses and developers brought together in 1983 by the Regional Planning Council to address common transportation needs in the BWI Airport area. The CAC changed its name to the Greater BWI Commuter Transportation Center, and in 1993 changed again to the BWI Business Partnership, Inc.

The Partnership is a tax exempt nonprofit association organized under IRC Code 501(c)4. The Partnership is supported by area employers, developers, public authorities, and Anne Arundel County.

The Partnership's member organizations encompass approximately 75 percent of the area's workforce (over 70,000). A list of current member organizations is presented in Exhibit 3-1. The Partnership is governed by a Board of Directors which is drawn from the membership and includes representatives from both the public and private sectors.

The Partnership assists its members to promote and broker transportation facility and service improvements for the area. The Partnership:

- maintains a ridesharing database and provides free ridesharing matching services
- provides information on MTA bus and MARC commuter rail routes traveling through the BWI Airport area as well as on monthly passes
- monitors transportation improvements and publishes a monthly newsletter to keep members informed
- monitors employment, development and demographic trends in the area, including conducting a biannual employer survey on transportation and economic conditions
- supports specific transportation projects and improvements (e.g., testifies before appropriate legislative committees)
- supports individual employer's programs (i.e., conducts on-site transportation fairs, administers Discount Bus Pass Program)

The Partnership is positioning itself to assist area employers comply with the requirements of the 1990 Clean Air Act. Located in a severe ozone nonattainment area, employers in Anne Arundel County with 100 or more employees will be required to submit and implement plans, by November 1996, and November 1997, respectively, to increase average vehicle occupancy by 25 percent. The Partnership is prepared to assist employers by:

- conducting annual surveys
- developing trip reduction plans
- serving as the Employee Transportation Coordinator

The Partnership's annual budget is funded by membership dues and contracts. Private sector members frequently provide in-kind contributions to support Partnership activities.

Membership dues are subject to the executive director's discretion. Current annual dues are approximately:

| | |
|---------------------|--------------------|
| Employers | |
| 1 - 50 employees | \$ 150 |
| 50 - 100 employees | \$ 500 |
| 100 - 200 employees | \$1,000 |
| Over 200 employees | \$1,500 to \$2,500 |
| Developers | \$2,500 |

3.2 THE PARTNERSHIP STRATEGIC PLAN

The Partnership conducted a 12-month study, funded by the FTA, to develop a transportation related strategic plan for the BWI Airport area. The plan, completed in 1989, evaluated the area's transportation needs based on current and future development plans and scheduled highway and transit improvements and developed recommendations for the next two to five years.

Research for the plan included a survey of area employees in April 1989. Eighty-six percent of the survey respondents indicated that they drove alone to work, 13 percent carpooled or vanpooled, and one percent rode transit.

Thirty-five percent of the respondents indicated that they would consider switching from a single occupant vehicle (SOV) to an alternative high occupancy vehicle (HOV) commute mode, transit or ridesharing, if a guaranteed ride home were available in case of emergency. Forty percent indicated they would consider a change, if flexible work days or schedules were implemented. Neither of these policies would require major capital investment.

program and evaluation for other suburban activity centers. Specific objectives of the GRH demonstration in the BWI employment area were to:

- test the procedures of a GRH program for effectiveness
- determine the extent to which a GRH program increases HOV use
- determine the extent to which the GRH program helps to retain HOV users
- determine the extent to which the GRH program serves as an incentive for membership in the TMA

The proposed demonstration grant would provide funds for start-up, implementation and evaluation of the guaranteed ride home program over an 18-month period:

- **program development** (four months) - establishment of parameters and procedures for the program including eligibility, claims limitation, reimbursement and recordkeeping
- **program demonstration** (12 months) - program marketing, implementation, and monitoring, including documentation of program use and cost
- **program evaluation** (two months) - assessment of the effect of GRH demonstration on HOV usage and TMA membership

The BMC requested \$60,047 in Section 8 funds with proposed \$26,000 nonfederal matching funds. The nonfederal match included a \$14,400 in-kind contribution from Anne Arundel County and an \$11,600 in-kind contribution from the Partnership. The in-kind contributions represented the following:

| | Estimated Hours | Hourly Rate | Cost |
|-------------------------------------|--------------------|----------------|-----------------|
| Personnel | | | |
| Project Manager (12 months) | 210 | \$ 19.00 | \$ 3,990 |
| Project Assistant (18 months) | 900 | \$ 16.00 | \$ 14,400 |
| Administrative/Clerical (12 months) | 103 | \$ 9.75 | \$ 1,004 |
| Computer Equipment | | | \$ 1,600 |
| Additional Printing Costs | | | \$ 4,000 |
| Legal/Financial Services | | | <u>\$ 1,006</u> |
| Total In-Kind Contributions | | | \$ 26,000 |

The Partnership formed a GRH Advisory Committee from Partnership members and public transportation agency representatives to provide technical expertise and oversight to the GRH program. The Advisory Committee was initially comprised of representatives of:

- five employers (Aetna, GRAFCO, Guest Quarters Hotel, NSA, and Westinghouse Electric)
- Anne Arundel County
- the Baltimore Metropolitan Council
- the Maryland Department of Transportation
- the State Highway Administration
- the Maryland Aviation Administration
- the Partnership

The grant proposal to FTA had envisioned additional representation by developers and a taxi company.

The Partnership's Board of Directors provided policy oversight for the Executive Director and the Advisory Committee.

3.5 THE GRH ADVISORY COMMITTEE

The Partnership established the GRH Advisory Committee at the beginning of the program development process. At the first meeting with the GRH Advisory Committee, on September 26, 1991, the Partnership briefed the new committee on the GRH program goals and objectives. The committee discussed program details including registration, eligibility, valid uses, billing procedures, and usage restrictions. At the second meeting of the Advisory Committee in November 1991, most of the program parameters were finalized.

Throughout the demonstration, the Partnership held regular meetings with the Advisory Committee to keep members informed of GRH program progress and problems. The Advisory Committee actively participated in key program decisions such as marketing and survey design. In September 1992, after the first six months of the demonstration, the Partnership and Advisory Committee developed additional program procedures based on an assessment of the program to date.

EXHIBIT 3-2 GRH REGISTRATION FORM

GREATER BWI COMMUTER TRANSPORTATION CENTER, INC.



REGISTRATION FORM

GUARANTEED RIDE HOME PROGRAM

Please print or type.

APPLICANT NAME _____

HOME ADDRESS _____

City _____ State _____ Zip _____

EMPLOYER _____

WORK ADDRESS _____

WORK TELEPHONE _____

1. How many days per week do you use the following means to travel to and from work. (Check all that apply)

- Drive Alone _____ days per week
- Carpool * _____ days per week
- Vanpool * _____ days per week
- Bus _____ days per week
- Train _____ days per week
- Walk _____ days per week
- Bicycle _____ days per week
- Other _____ days per week

* Would you be interested in additional participants?

_____ Yes _____ No

2. What is the estimated one-way distance from your home to your work place?

_____ miles

3. What are your work hours?

Start _____ (Circle) a.m./p.m. End _____ (Circle) a.m./p.m.

EXHIBIT 3-3

GRH PROGRAM PROCEDURES

GUARANTEED RIDE HOME REQUEST FOR SERVICE

PROCEDURES

In the event of a personal emergency or unscheduled overtime you may request a Guaranteed Ride Home.

You may call a free taxi or rental car. Taxes, tips (maximum 15%) and fuel charges are all included. You should have no out of pocket expenses. If you do, you can submit a reimbursement request to CTC offices.

1. Inform your supervisor that you are leaving work. Our office will send monthly use reports to each company.
2. For Taxi Service - Call 859-1100.
For Rental Car - Call 787-9210 M-F 8-6, Sat 8-12, Sun Closed
 - * Identify yourself as a Guaranteed Ride Home participant.
 - * Give your employers name and your name. They will have a list of eligible employees.
 - * Give your location to be picked up. A taxi or the rental car shuttle will be dispatched to pick you up.
3. If using a taxi, please take note of the meter charge when the taxi arrives. In most cases, there will be a charge on the meter. You will need to report this on your reimbursement certification form.
4. You may make additional stops on your trip home if they are related to your emergency (doctors office, school, day care, etc.)
5. CTC will be billed directly by the provider. If for some reason, you encounter out of pocket expenses, let CTC offices know immediately and we will reimburse your expenses.
6. You should keep a copy of your receipt and send to CTC with your reimbursement certification form. These must be sent to CTC offices within 24 hours.
7. Your reimbursement certification form should include your supervisor's signature (authorized company representative). Mail or fax to CTC offices.
8. You must return the rental car within 24 hours. Take car to 502 Crain Highway (across from Empire Towers) Glen Burnie, MD. You will receive a ride back to the office.
9. You will be sent a survey after receipt of your verification form to assess how the service worked for you.

-OVER-

EXHIBIT 3-4

REIMBURSEMENT CERTIFICATION

Greater BWI Commuter Transportation Center, Inc.
GUARANTEED RIDE HOME (GRH)
REIMBURSEMENT CERTIFICATION

You must complete this form after you use the GRH service. Attach your transportation receipt. Completion of this report will insure that you will be eligible for another GRH service when needed.

Employee Name _____

Employer _____

Work Address _____

Work Telephone _____

1. Service Used: Rental Car _____ Taxi _____*

*If you used a taxi, did you record the meter amount when you first entered the cab? If so, what was the amount _____.

2. Date Used: _____

3. You ride at least 3 days a week in which of the following:
(Circle)

Carpool Vanpool MARC/Amtrak Train Bus

4. Reason for Guaranteed Ride Home use:

_____ Home Emergency

_____ Worked Unscheduled Overtime

_____ Other _____

I affirm the above information is true to the best of my knowledge.

Supervisor's Signature

Date

Employee

Date

Mail Completed Form: Greater BWI Commuter Transportation Center
1344 Ashton Road, Suite 101
Hanover, MD 21076
Or Fax To: (410) 859-5917

EXHIBIT 3-5 (continued)

GRH FOLLOW-UP SURVEY

Page Two
GRH Follow-up Survey

6. How would you rate the following for your ride home?
(Respond to questions for your mode of travel)

Taxi Riders

| | <u>Excellent</u> | <u>Satisfactory</u> | <u>Needs Improvement</u> |
|---------------------|------------------|---------------------|------------------------------|
| Driver Courtesy | _____ | _____ | _____ |
| Cleanliness of Auto | _____ | _____ | _____ |
| Pick-up Promptness | _____ | _____ | _____ |

Rental Car Drivers

| | | | |
|------------------------------|-------|-------|-------|
| Cleanliness of Auto | _____ | _____ | _____ |
| Delivery Time for Vehicle | _____ | _____ | _____ |
| Personnel Courtesy | _____ | _____ | _____ |

7. How did your experience with Guaranteed Ride Home compare
with your expectations?

_____ Exceeded _____ Satisfied _____ Fallen Short

8. Comments: _____

Thank you. Please mail in postage paid envelope to:
Greater BWI Commuter Transportation Center, Inc.
1344 Ashton Road, Suite 101
Hanover, MD 21076

Using the results of a survey conducted by the Partnership in 1989, Market Design International identified three categories of employees of current Partnership members with different attitudes and behavior regarding ridesharing and transit:

- current ridesharers - the 14 percent of survey respondents who regularly commuted to work by carpool, vanpool or transit
- receptive nonridesharers - the 35 percent of survey respondents that indicated that they would consider ridesharing if a guaranteed ride home were available
- undecided/unpersuaded - the remaining 51 percent of respondents that included persons who could not rideshare due to personal/work requirements as well as persons who could rideshare but had not yet been persuaded to do so

The marketing approach for each group was different. Employees of member companies who already used transit, carpooled or vanpooled needed only to be informed about the availability of the program. The primary target audience, receptive nonridesharers, needed to be made aware of the program and the ease of program registration and use. For the undecided/unpersuaded group, the marketing effort needed to focus on the benefits of ridesharing itself. Marketing for area employers not currently members of the Partnership needed to focus on the many benefits available through the Partnership, including the GRH program.

Marketing Designs International developed a complete marketing campaign centered around the theme "Don't Get Marooned at Work." The marketing techniques employed include:

- a **point of purchase display** with accompanying pamphlets for posting in a prominent, common area at each member worksite location. The display was designed as a pop easel to provide flexibility to use as a free standing counter display or a poster.
- a multi-purpose **pamphlet** which provides detailed information about the program and registration procedures. The pamphlet included a mail back request for more information. The pamphlet was distributed via the point of purchase display and also by mail.
- **public service announcements** which promoted the GRH program on a mass scale. The advertising time was provided free of charge by several radio stations.
- **public relations** activities, including press conferences and press releases, were used to create awareness of the GRH program in the general public. The public relations activities were primarily conducted in conjunction with the program kick off. Public relations activities reached employees of member organizations as well as other residents and employees of the region with information about the program and the benefits of ridesharing. Public relations activities also contributed to public awareness of the Partnership itself.

The kick off identified the beneficiaries of the GRH program which include:

- **commuters** who would save money by ridesharing or using transit rather than driving alone to work
- **employers** who can offer a free benefit to their employees
- **residents and employees** in Anne Arundel County who would benefit from reduced traffic congestion on roads and reduced hazardous vehicle emissions

Some member employers supplemented the Partnership's marketing materials with additional in-house efforts. For example, Westinghouse featured a write-up on the new GRH program in its employee newsletter in March 1992.

3.9 ADMINISTRATIVE CHANGES

In September 1992, after the first six months of the demonstration, the Partnership implemented additional GRH program policies and procedures designed to reduce costs and abuse. These included:

- sending monthly reports to each participating company identifying the name, date and reason for each use by an employee of the company (to improve usage verification)
- requiring employees who live 40 miles or more from the work site to use a rental car rather than a taxi to reduce program costs
- charging additional usage of rental cars beyond the 24-hour period provided by the GRH program to the individual
- requiring that the reimbursement certification and follow-up survey forms be returned to the Partnership prior to additional use of the service
- contacting participants after three uses of the service to provide an update on the number of GRH trips used and the number remaining
- requesting taxi users to record the amount on the meter when they are picked up

The Partnership sent letters to all GRH registered participants on September 14, 1992, explaining the administrative changes.

4. EVALUATION APPROACH

The objective of the evaluation was to assess the effectiveness of the GRH demonstration program in meeting its primary goals and objectives. The evaluation would:

- test the procedures of the GRH program for effectiveness
- determine the extent to which the GRH program increases HOV use
- determine the extent to which the GRH program helps to retain HOV users
- determine the extent to which the GRH program serves as an incentive for membership in the TMA

This section of the report documents the evaluation approach, specifically the data collected and analyses performed.

4.1 BACKGROUND

In February 1993, the Volpe Center issued a task order to Science Applications International Corporation/KPMG Peat Marwick to conduct an evaluation of the GRH program demonstration in the BWI Airport employment area. The evaluation was initiated just as the year long demonstration program was ending. The timing of the evaluation thus precluded defining the data collection requirements and methodologies prior to and during the demonstration. The evaluation plan was developed to make use of available data which were collected prior to and during the demonstration, supplemented by post-demonstration collection of data on commute behavior.

The evaluation included the following components:

- documentation and assessment of the program development and implementation processes
- analysis of program use over the 12-month demonstration period, including:
 - program participation (i.e., employees registering for the program)
 - actual program use
- analysis of the cost of the program, including administrative costs and reimbursements to service providers
- analysis of program abuse

EXHIBIT 4-1

BASELINE SURVEY

Code _____



Transportation Survey

The following survey was created to assist in the development of a Guaranteed Ride Home (GRH) program in the BWI Airport area. The program will offer employees who commute to work by carpool, vanpool, bus or train a free ride home in case of a personal/family emergency or unscheduled overtime. Your participation in this survey process is important to the development of an effective program.

1. How do you get to work each week? (Indicate all methods used.)

| | |
|---------------------------------|---------------------------|
| Drive alone _____ days per week | Bus _____ days per week |
| Carpool _____ days per week | Train _____ days per week |
| Vanpool _____ days per week | Other _____ days per week |

2. Over the past year, how many times have you had a personal/family emergency that required you to leave work early?

| | |
|------------|--------------------|
| None _____ | Three _____ |
| One _____ | Four _____ |
| Two _____ | Five or More _____ |

3. In the most recent emergency, how did you get home or to your destination to respond to the emergency?

| | |
|----------------------------|-----------------------|
| Drove own car _____ | Taxi _____ |
| Friend/family member _____ | Bus _____ |
| Coworker _____ | Other (specify) _____ |

4. How did you get home the last time you worked overtime? (Check appropriate travel mode in each column.)

| | Unscheduled Overtime (Didn't know until that day) | Scheduled Overtime (Knew in advance) |
|-----------------------|--|--|
| Drove own car | _____ | _____ |
| Friend/family member | _____ | _____ |
| Coworker | _____ | _____ |
| Taxi | _____ | _____ |
| Bus | _____ | _____ |
| Other (specify) _____ | _____ | _____ |

EXHIBIT 4-1 (continued)

BASELINE SURVEY

11. How many days per week do you have a vehicle available to drive to work? _____
12. What is the estimated distance from your home to your work place (one way)?
_____ miles
13. What is your age group?
Under 20 _____ 20-39 _____ 40-59 _____ 60+ _____
14. What is your sex?
Male _____ Female _____
15. What are your typical work hours?
Start time _____ a.m./p.m. End time _____ a.m./p.m.
16. What is your home ZIP Code? _____
17. Do you have children who live with you? _____
How many are under the age of 2? _____
How many are between the ages of 2-5? _____
How many are between the ages of 6-11? _____
How many are between the ages of 12-18? _____
18. Additional comments:

If you have any questions pertaining to this survey or need commuter information, please contact the Greater BWI Commuter Transportation Center at 859-1000.

Please return this survey in the enclosed postage-paid envelope to the Greater BWI Commuter Transportation Center, 1344 Ashton Road, Suite 101, Hanover, MD 21076.

Peat Marwick designed the post-demonstration questionnaire to collect information on current commute choice, changes in commute behavior since March 1992, when the GRH program was implemented, and the factors contributing to changes in commute mode. The questionnaire also addressed the extent of personal emergency situations and unscheduled overtime during the demonstration period that might be eligible for GRH.

Peat Marwick reviewed the draft questionnaire with the Partnership, the GRH Advisory Committee, FTA and the Volpe Center. A copy of the post-demonstration questionnaire is included in Exhibit 4-2.

To provide an effective basis for comparing before (baseline) and after (post-demonstration) commute behavior, Peat Marwick recommended that the post-demonstration questionnaire be distributed only to those employees (2,503) who had responded to the initial baseline survey early in 1992. The Partnership coded the post-demonstration questionnaires using the codes developed for the baseline survey. Employers distributed the questionnaires to employees in May 1993.

The BMC tabulated the results of the post-demonstration survey and retabulated the baseline survey responses for those employees who responded to the post-demonstration survey.

4.6 INTERVIEWS WITH MEMBER ORGANIZATIONS

Peat Marwick contacted representatives of selected member organizations to discuss the GRH demonstration program. The companies contacted included:

- NSA
- Westinghouse
- Aetna
- Heritage

These companies were selected on the following basis:

- the largest number of employees
- the greatest number of GRH program uses
- membership on the Advisory Committee
- new membership in the TMA

EXHIBIT 4-2 (continued)

POST-DEMONSTRATION SURVEY

5. If you are eligible (i.e. commute by carpool, vanpool, bus or train at least three days per week), did you register for the Guaranteed Ride Home program?

Yes _____ No _____ If no, why not?

Didn't think I was eligible _____
 Thought I would have to pay _____
 Didn't think I would need service _____
 Have other means to get home _____
 Too much trouble to register _____
 Didn't know about/understand program _____
 Other (specify) _____

6. Since March 1992, how many times have you had a personal/family emergency that required you to leave work early?

None _____ Three _____
 One _____ Four _____
 Two _____ Five or more _____

7. In the most recent emergency, how did you get home or to your destination to respond to the emergency?

Guaranteed Ride Home program _____ Drove own car _____
 Taxi _____ Friend/family member _____
 Bus _____ Coworker _____
 Train _____ Other _____

8. How did you get home the last time you worked overtime? (Check appropriate travel mode in each column.)

| | Unscheduled (Didn't know until that day) | Scheduled (Knew in advance) |
|------------------------------|--|-----------------------------------|
| Guaranteed Ride Home program | _____ | N/A |
| Drove own car | _____ | _____ |
| Friend/family member | _____ | _____ |
| Coworker | _____ | _____ |
| Taxi | _____ | _____ |
| Bus | _____ | _____ |
| Train | _____ | _____ |
| Other (specify) _____ | _____ | _____ |

5. DEMONSTRATION RESULTS

This section of the report presents the results of the evaluation of the GRH demonstration in the BWI Airport employment area.

5.1 GRH PROGRAM PARTICIPATION

Program registration increased steadily throughout the one-year demonstration, from 241 in March 1992, to 732 in March 1993. Exhibit 5-1 shows the number of participants in the GRH program by month. The Partnership adjusted the numbers each month to reflect new registrations as well as deletions from the program as a result of employment termination or program ineligibility.

Exhibit 5-2 shows the approximate number of employees and GRH program participants (as of March 1993) for each member organization. Not all member organizations had employees who participated in the GRH program. The two largest member organizations, the National Security Agency (NSA) and Westinghouse Electric, had the largest number of program participants, 542 and 111 respectively. However, this represented a small percentage (five percent or less) of total employees of these organizations. The Guest Quarters Hotel had the highest percentage of employee participation (approximately 17 percent of employees registered for the program).

5.2 GRH PROGRAM USE

During the demonstration period, eligible registered program participants used the program for 287 GRH trips. Exhibit 5-3 shows GRH program use by month. While registration for the program increased steadily during the demonstration period, actual program use fluctuated monthly. Program registration began in March 1992, but actual program use did not occur until April 1992. Program use peaked in June 1992 with 39 uses, dropped off significantly in November 1992 with only 13 uses, and increased again sharply in January 1993 with 35 uses. Average monthly program use was 24 trips.

Exhibit 5-4 shows program use by employees of each member organization. Not surprisingly, Westinghouse Electric and NSA with 10,000 or more employees each and the greatest number of program participants, had the highest percentage of program usage, 28.9 percent and 27.9 percent, respectively. The Guest Quarters Hotel, with fewer than 200 employees, accounted for 24.4 percent of program use.

The 287 GRH trips actually taken during the demonstration period represent less than four percent of the total number of trips available if each program participant used the maximum number of trips allowed (ten).

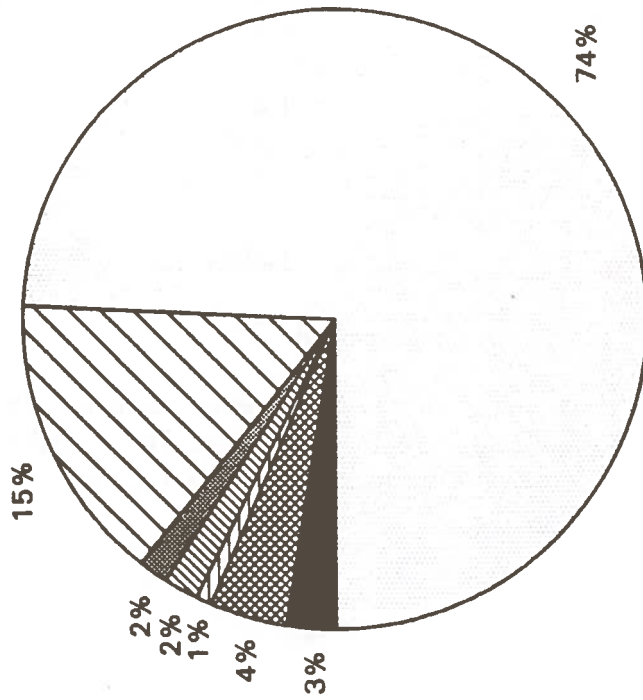
EXHIBIT 5-2

GRH PROGRAM PARTICIPATION BY MEMBER ORGANIZATION

| <u>Company</u> | <u>Number of Employees</u> | <u>Number of Participants</u> | <u>Percent Participation</u> |
|---------------------------------------|--------------------------------|-----------------------------------|----------------------------------|
| Aetna Casualty and Surety | 100 | 13 | 13.0% |
| Baltimore Gas & Electric Company | 120 | 4 | 3.3% |
| Delmarva Foundation for Medical Care | 12 | 1 | 8.3% |
| Guest Quarters Suite Hotel | 170 | 29 | 17.1% |
| Heritage Encon | 10 | 1 | 10.0% |
| Loral Western Development Labs | 650 | 8 | 1.2% |
| MDOT/SHA | 250 | 11 | 4.4% |
| National Security Agency | >10,000 | 542 | 5.4% |
| Signature Flight | 200 | 5 | 2.5% |
| Westinghouse Electric Corporation | 10,000 | 112 | 1.1% |
| Weyerhaeuser Paper Company | <u>45</u> | <u>6</u> | <u>13.3%</u> |
| Total All Participating Organizations | 21,557 | 732 | 3.4% |

EXHIBIT 5-4 GRH PROGRAM USE BY COMPANY

Participants by Company



Use By Company

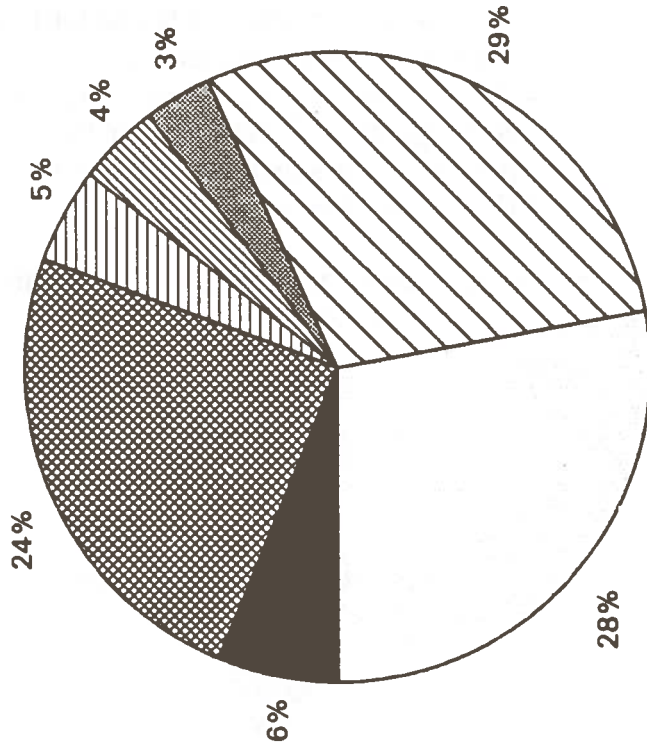
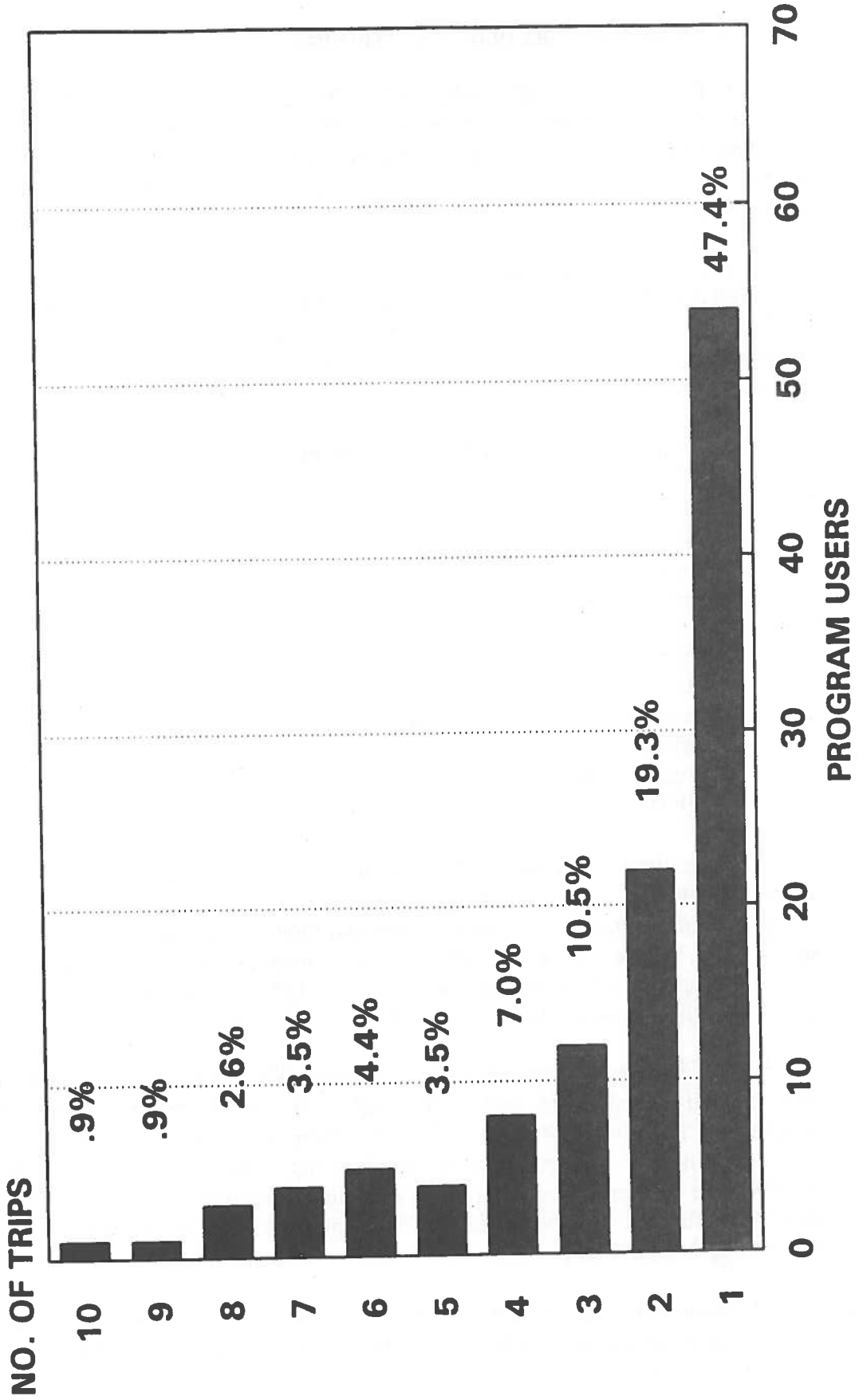


EXHIBIT 5-5 GRH PROGRAM TRIPS PER USER



to the user. However, the Partnership required the user to cover the cost of rental cars kept beyond the 24-hour period allowed in the GRH program.

5.4 GRH USER EVALUATION

After each use of the guaranteed ride home program, the Partnership mailed the user a Follow-up Survey to obtain information on the reason for the program use (i.e., personal or family emergency or unscheduled overtime) and the user's satisfaction with the service.

The Partnership received 159 follow-up survey questionnaires between March 1992 and March 1993, representing approximately 55 percent of program use. Peat Marwick tabulated the results of the follow-up surveys which are presented below.

Method of ride. Of the 159 surveys returned, 101 GRH trips (67 percent) were made by taxi and 52 trips (33 percent) were made with rental cars.

Reason for GRH use. Survey respondents cited unexpected overtime most frequently as the reason for using the GRH service (45 percent). Illness in the family accounted for 20 percent of the trips, while personal illness accounted for 13 percent of the trips. Other nonemergency reasons cited for program use included:

- the vanpool/carpool driver left work early or had to stay late
- the vanpool/carpool vehicle broke down
- the user was called in to work on his/her regular day off
- the user had a midday dental or doctor appointment
- the train or bus was late

Related stop on way home. The GRH program allowed users to make stops on the way home directly related to the emergency. Only 19 percent of the respondents made a related stop on the way home. Related stops were significantly more common for rental car users (42 percent) than for taxi users (eight percent).

Experience compared with expectations. Program users were generally very satisfied with the GRH service. About 62 percent of users indicated that their experience with the GRH service had exceeded their expectations. Another 28 percent indicated that they were satisfied with the service. Only four percent indicated that their experience had fallen short of their expectations.

In general, rental car users rated their GRH experience higher than taxi users. Seventy-nine percent of rental car users indicated that their expectations had been exceeded, 15 percent were satisfied, and four percent indicated that their experience fell short of their expectations. Of taxi users, 56 percent indicated that their expectations had been exceeded, 36 percent were satisfied, and five percent indicated that their experience fell short of their expectations.

EXHIBIT 5-6 GRH SERVICE RESPONSE TIME

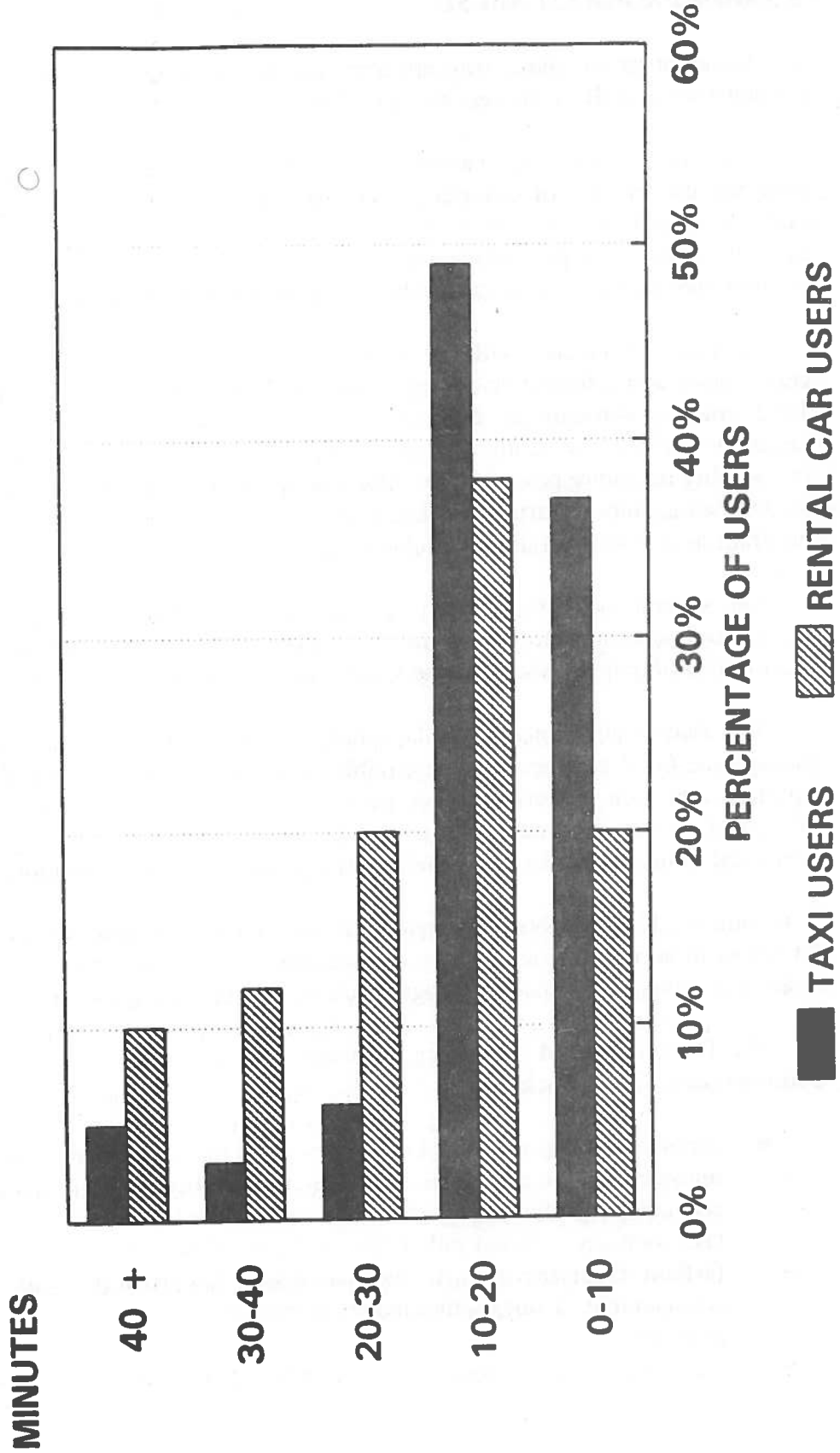
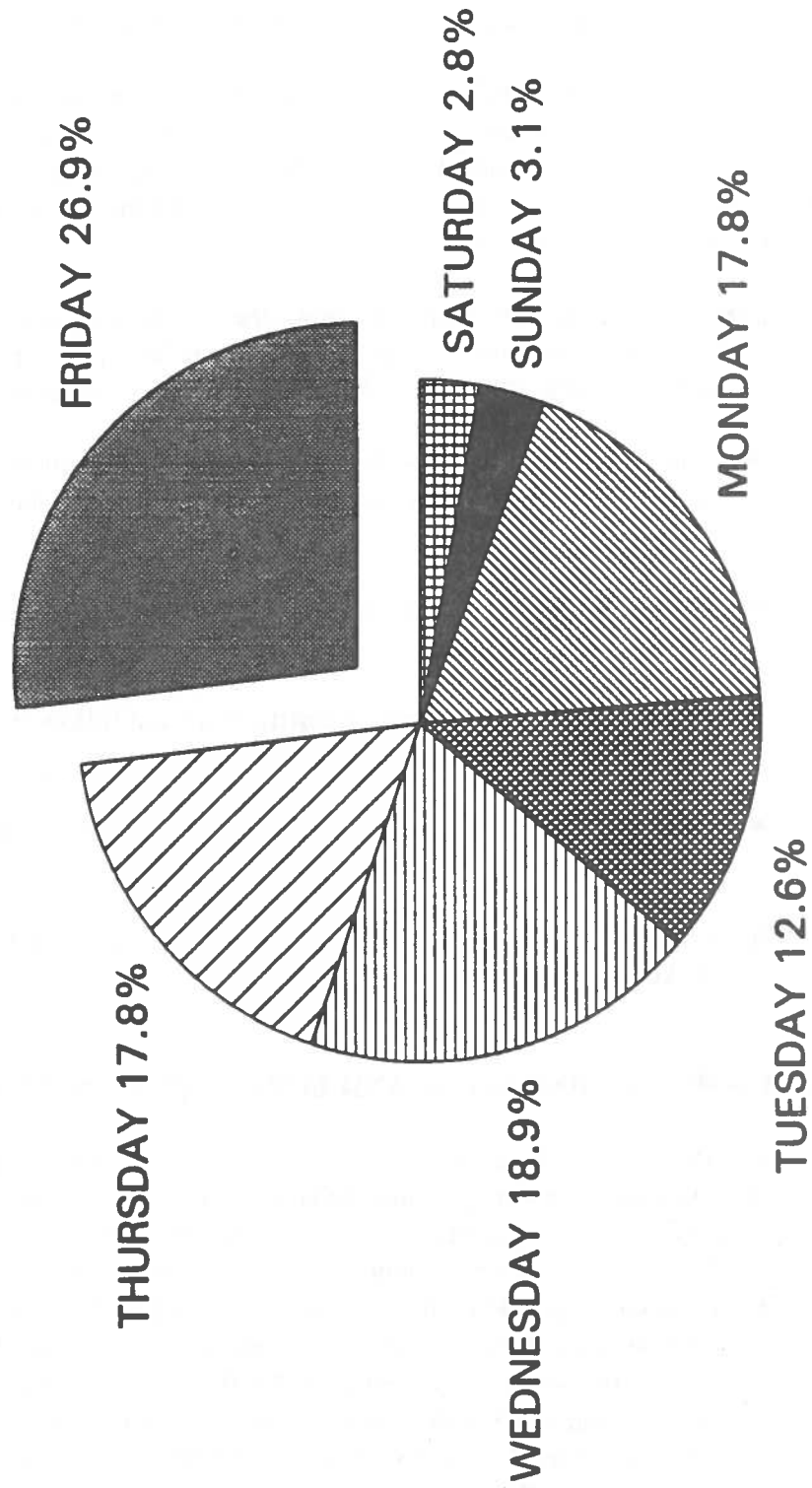


EXHIBIT 5-7 GRH PROGRAM TRIPS BY DAY OF WEEK



demonstration), and the factors contributing to the change, in particular the effect of the GRH program. The questionnaire also addressed the extent of personal emergency situations and unscheduled overtime during the demonstration period that might be eligible for GRH. To provide for effective comparison with the pre-demonstration baseline survey, the post-demonstration survey questionnaire was designed to collect comparable data in a comparable format, with additional questions related to GRH implementation and use.

Peat Marwick presented a draft of the questionnaire to the Partnership, the GRH Advisory Committee, the BMC, and FTA and Volpe Center staff at the April 20, 1993 Advisory Committee meeting. Minor revisions were incorporated and the questionnaire was approved.

Peat Marwick recommended that the post-demonstration questionnaire be distributed only to those employees (2,503) who had responded to the initial baseline survey early in 1992 and that the baseline survey results be reanalyzed for the subset of respondents who completed the post demonstration survey. This would permit effective comparison of commute behavior before and after implementation of the GRH program and analysis of the factors contributing to changes in commute mode, specifically the availability of the GRH program. The Partnership had coded the baseline survey questionnaires by employer and employee so it was possible to determine which employees had responded to the baseline survey, except for the Loral Western Development Lab employees, whose baseline survey instruments had not been properly coded.

The Partnership identified the employees who had responded to the initial baseline survey, coded the post-demonstration questionnaires and distributed them to the appropriate employers for distribution to employees. The employers distributed the questionnaires in May 1993.

The questionnaires were returned to the Partnership and forwarded to the BMC for tabulation. BMC received 958 responses, a 38 percent response rate. The BMC then retabulated the baseline survey responses for the employees who responded to the post-demonstration questionnaire.

The results of the analysis and comparison of the baseline survey responses and the post-demonstration survey responses are discussed below.

Commute mode. Overall commute behavior remained virtually unchanged from early 1992 to March 1993. There was a slight (less than one percent) decrease in single occupancy vehicle commuting and a corresponding slight increase (less than one percent) in ridesharing. Specifically:

- in March 1993, 77 percent of the respondents drove alone to work five days per week, compared to 78 percent in early 1992
- in March 1993, 11 percent of the respondents carpooled or vanpooled five days per week compared to ten percent in early 1992
- in both early 1992 and March 1993, only one percent of the respondents used transit

- change in job 14 percent
- change in transit service or employer shuttle service 3 percent

Commute Distance. Survey responses indicated a slight increase in the distance commuted by area employees over the demonstration period (note that the responses were for ranges of commute distance). The baseline data show that 33 percent of area employees commuted less than ten miles one-way, 41 percent commuted between ten and 20 miles one-way, 15 percent commuted between 20 and 30 miles one-way, and only ten percent commuted more than 30 miles one-way. The post-demonstration data show 30 percent of employees commuting less than ten miles, 40 percent commuting ten to 20 miles, 15 percent commuting 20 to 30 miles, and 11 percent commuting more than 30 miles. As noted above, changes in location of home and/or worksite contributed to changes in commute mode for some employees.

Personal or Family Emergencies. The reported incidence of personal or family emergency situations requiring the employee to leave work early decreased over the demonstration period. According to the baseline survey, 72 percent of the respondents had to leave work at least once and 34 percent had to leave work three or more times as the result of a personal or family emergency during the prior year. In contrast, according to the post-demonstration survey, only 62 percent had to leave work at least once and 29 percent three or more times during the one year demonstration period.

The overwhelming majority of respondents drove their own car home in the last emergency. Only three respondents (one percent) indicated they used the GRH service for the last emergency.

6. CONCLUSIONS

The Partnership developed and implemented an efficient and effective GRH program in the BWI Airport employment area. The GRH program allowed participating employees to rideshare or use transit without worrying about how they would get home in emergencies or if they were required to work unscheduled overtime. The GRH program provided users with a quick and easy solution for getting home in these situations. The program was well received by member organizations and participating employees.

This section of the report assesses the GRH demonstration, including:

- effectiveness of GRH program procedures
- extent to which the GRH program increased, or helped to retain, HOV users
- extent to which the GRH program served as an incentive for membership in the TMA

6.1 EFFECTIVENESS OF GRH PROCEDURES

6.1.1 Program Development and Management

The Partnership's Executive Director and staff and the GRH Advisory Committee worked together effectively to define the GRH program parameters and procedures and to monitor their effectiveness. The Partnership established the Advisory Committee at the start of the program development process in September 1991, and actively involved the committee throughout the demonstration in key decisions regarding program procedures. The Partnership met regularly with the Advisory Committee to discuss program progress and problems. The Partnership and the Committee assessed the program procedures during the first six months of the demonstration and developed and implemented specific procedural changes in September 1992, to reduce program cost and abuse.

Committee members expressed satisfaction with their role in the development, implementation and monitoring of the demonstration program.

6.1.2 Registration Process and Documentation Requirements

The Partnership developed a simple registration process in order to attract the greatest number of program participants. To register, interested eligible employees completed and submitted to the Partnership a two-page registration form with basic information about their employer and current commute mode. The Partnership sent a confirmation letter with detailed program procedures and a GRH Registration Card to the new program participant.

To remain eligible for the program, users were required to submit the reimbursement certification and follow-up survey to the Partnership after each program use. Many program

analysis suggests that the maximum benefit in terms of allowable number of uses per participant could be reduced significantly and still meet the needs of virtually all program users.

Analysis of the follow-up surveys indicated that 45 percent of the program uses were for unexpected overtime, 33 percent of program uses were for personal or family emergencies, and the remaining program uses were for personal, nonemergency situations. This suggests that the percentage of available program uses for overtime (40 percent) and emergencies (60 percent) is appropriate.

6.1.6 Program Documentation

The Partnership maintained program usage and cost data manually. The data base program developed as part of the FTA funded demonstration project to capture and manage program data proved to be unreliable. The Partnership intends to replace the custom designed data base program with off the shelf software.

6.2 IMPACT ON HOV USAGE

While there is no conclusive evidence that the GRH program directly increased HOV usage in the BWI Airport employment area during the one-year demonstration, the program may have helped to retain existing HOV users. Analysis of commute behavior before and after the GRH demonstration indicates that overall commute behavior remained virtually unchanged. There was a slight increase (less than one percent) in HOV commuting and a corresponding slight decrease in SOV commuting during the demonstration period.

The changes in commute behavior that did occur (6.2 percent of the survey respondents changed their commute mode over the demonstration period) reflected changes from SOV to HOV commute modes, as well as changes among HOV commute modes and changes from an HOV to SOV commute mode. Twenty-seven percent of survey respondents who had changed their commute mode during the period indicated that the availability of the GRH program was important or very important in their decision to shift to an HOV commute mode.

The GRH program was identified as a key factor in Aetna's ability to retain some employees who might otherwise have left the company when it moved from Baltimore to the BWI area. A number of Aetna employees live in Baltimore, do not drive and, therefore, are dependent on transit or ridesharing to get to and from work. Aetna recognized that the move to the BWI area would result in fewer transit options for these employees. Prior to the move, the Partnership was asked to meet with Aetna employees to explain transportation options in the area and the services, including the GRH, that the Partnership could provide. Aetna agreed to allow certain employees using mass transit to work flexible hours (i.e., other than core work hours from 8 a.m. to 4:15 p.m.) to accommodate the bus service that is available in the new location. Aetna believes that the GRH program and the provision of flexible hours have allowed the organization to retain these employees.