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# **Connecting People to Employment and Enhancing Mobility for People with Disabilities**

## **An Evaluation of Job Access and Reverse Commute (JARC) and New Freedom Program Services Provided in 2007 and 2008.**

**Final Report**

**November 2009**

**FTA-VA-26-5035**

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<ul style="list-style-type: none"> <li>• <b>ABSTRACT:</b> The Job Access Reverse Commute (JARC) program was established to address the unique transportation challenges that welfare recipients and low-income individuals face in finding and keeping jobs. The New Freedom program was established to provide new public transportation services and new alternatives to public transportation for people with disabilities beyond the requirements of the Americans with Disabilities Act of 1990 (ADA). This study analyzed the JARC and New Freedom funded services provided in FY 2007 and 2008 and provides information on the number of jobs that can be accessed and the number of rides provided by JARC services. The study also provides information on the number of rides provided by New Freedom funded services. The report also includes detailed profiles of services funded under both programs.</li> </ul>		
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November, 2009

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## Acronyms

COTR	Contracting Office's Technical Representative
CTAA	Community Transportation Association of America
FTA	Federal Transit Administration
FY	Fiscal Year
GPRA	Government Performance Results Act
JARC	Job Access and Reverse Commute
LED	Local Employment Dynamics
LEHD	Longitudinal Employment-Household Dynamics
NAICS	North American Industry Classification System
NF	New Freedom
OMB	Office of Management and Budget
PART	Performance Assessment Rating Tool
PPE	Program Performance Evaluation
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
TEA-21	Transportation Equity Act for the 21st Century
USDOT	U.S. Department of Transportation

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## Executive Summary

Under the Government Performance Results Act (GPRA), the Federal Transit Administration (FTA) is required to “establish performance goals to define the level of performance” and to also “establish performance indicators to be used in measuring relevant outputs, service levels, and outcomes” for each of its programs. Toward that end, the FTA contracted with CES, Inc., and its subcontractor TranSystems, to manage data collection and analysis for the FY 2007 / FY 2008 Job Access and Reverse Commute (JARC) / New Freedom (NF) Program Performance Evaluation. Individuals from both firms have been key evaluators of the JARC program since 2002 and developed the JARC / NF Program Performance Evaluation matrix currently being used to evaluate the JARC and New Freedom programs.

The final database includes 952 services from the 158 grantees that reported active JARC- or New Freedom-funded service during FY 2007 and/or FY 2008. Although the current data collection effort covered two years, results for each year should be considered a snapshot of the JARC and New Freedom programs at the end of each fiscal year.

When making year-to-year comparisons, therefore, it is important to recognize that **annual fluctuations in service provision may not necessarily reflect trends in program performance.** Instead, several factors may influence these annual changes. First, JARC has evolved over time from a national competitive grants program to a congressionally directed grant program to a formula-based grant program with a local selection process. As a result, the list of grant recipients and particularly the subrecipients have changed and will continue to change over time as individual programs mature. Second, New Freedom reports are being collected for the first time and very few services were operating during FY 2007. Exponential growth will occur in that program until Federal obligations begin to balance with actual annual authorizations.

### **JARC Outcomes**

Grantees reported a total of 587 active JARC-funded services for FY 2007 and 681 services in FY 2008.

- Out of the active JARC-funded services, the vast majority were trip-based, at approximately 85% for both FY 2007 and FY 2008. Together, these traditional transit services accounted for more than two out of three JARC-funded programs. The remaining 15% of programs were split fairly evenly between information-based and capital investment programs for both years.
- About half of all JARC-supported services operated in large urbanized areas (population over 200,000) for both FY 2007 and FY 2008. The rest were evenly split between small-urban localities (population 50,000-199,000) and non-urbanized or rural areas (population less than 50,000).
- For FY 2007, it is estimated that JARC-supported services provided 19.6 million one-way trips.
- For FY 2008, it is estimated that JARC-supported services provided 23.5 million one-way trips.

- For FY 2007, JARC-supported services were estimated to provide access to a maximum of 35.9 million jobs, of which 18.0 million were categorized as low-wage. It is further estimated that JARC services could provide access to approximately 4.0 million jobs based on vehicle capacity constraints.
- For FY 2008, JARC-supported services were estimated to provide access to a maximum of 51.8 million jobs, of which 25.1 million were categorized as low-wage. It is further estimated that JARC services could provide access to approximately 4.2 million jobs based on vehicle capacity constraints.
- Mobility manager was the most commonly reported program for information-based services, with a typical goal of improved access/connections. In FY 2007, more than 60,000 customer contacts and 218,000 one-way trips were attributed to mobility manager programs. In FY 2008, more than 59,000 customer contacts and 550,000 one-way trips were reported for this type of program.
- In FY 2007, most of the capital investment programs provided more than 750 vehicles to individuals (usually through loans) and 250 vehicles were added to car-sharing programs. In FY 2008, grant recipients reported more than 300 vehicles or loans were provided for individuals, 250 vehicles were added to car-sharing programs, and more than 100 vehicles added to transit agencies.

### ***New Freedom Outcomes***

A total of 57 grant recipients submitted complete reports for one or both years reporting on 60 active NF-funded services for FY 2007 and 203 active NF-funded services for FY 2008. Note that the start-up of the New Freedom program was slower than expected and FY 2007 was the first year for which grantees reported on New Freedom projects; hence, the relatively small number of projects reported on for FY 2007. Finally, because NF projects may be awarded for various periods of time, which means the mix of projects is ever-changing, the data from year to year should be viewed independently, not as a trend over time.

- For both FY 2007 and FY 2008, more than half of the New Freedom-funded services were trip-based (58% for FY 2007 and 54% for FY 2008). Information-based services accounted for about one-quarter of the services (25% for FY 2007 and 28% for FY 2008). Capital investment programs accounted for 17% of projects in FY 2007 and 18% of projects in FY 2008.
- The most commonly reported project for both years was expanded ADA paratransit service (32% of all New Freedom projects in FY 2007 and 20% in FY 2008). Shuttle/feeder services were also high on the list of trip-based projects, with 8% of all New Freedom projects reported in FY 2007 and 9% in FY 2008. Door-to-door/door-through-door projects were the next most common trip-based projects, with 7% of all New Freedom projects in FY 2007 and 9% in FY 2008.
- For FY 2007 – the first year of reporting – New Freedom-supported services provided 767,275 one-way trips.
- For FY 2008, New Freedom-supported services provided 1.27 million one-way trips.

- In both FY 2007 and FY 2008, the vast majority of trips were provided as expanded ADA paratransit service (711,414 in FY 2007 and 721,143 in FY 2008), most of which were provided in small urban areas (702,430 in FY 2007 and 667,541 in FY 2008). In FY 2007, most of the remaining trips were provided via user-side subsidy/voucher programs (34,699) and shuttle/feeder services (16,940). In FY 2008 the remaining trips were distributed somewhat differently with 158,038 for shuttle/feeder services, 70,675 for door-to-door or door-through-door services, and 52,359 for user-side subsidies/vouchers.
- In both FY 2007 and FY 2008, mobility manager projects (categorized as information-based services) were the second most common activity for grantees, comprising 10% of all New Freedom projects in FY 2007 and nearly double that percentage (18%) in FY 2008.
- For FY 2007, 17% of New Freedom services were capital-investment projects; for FY 2008, 18% of New Freedom services were capital-investment projects.
- The percentage of capital investment projects is relatively small (17% in FY 2007 and 18% in FY 2008). The most common projects reported for FY 2007, were vehicles for transit agencies and other infrastructure improvements (each representing 7% of all New Freedom projects). The most common projects reported for FY 2008 were vehicles for transit agencies and vehicles for other agencies (each representing 5% of all New Freedom projects).
- In FY 2007 NF services were divided fairly evenly among large urban areas with populations 200,000 and greater (28%), small urban areas with populations from 50,000 to 199,999 (33%), and non-urbanized/rural areas (38%). In FY 2008, the split of services shifted slightly toward the large urban and non-urbanized/rural areas with 35% of projects in large urban areas, 42% of services in non-urban/rural, and 23% in small urban areas.
- For both years (38% in FY 2007 and 51% in FY 2008), New Freedom services had a primary goal of improved access and connections. In FY 2007, 25% and in FY 2008, 20% of NF services had a primary goal of expanded geographic coverage.

## **Profiles**

In addition to providing the basic reporting elements required for the JARC and New Freedom evaluations, grant recipients and subrecipients were asked to complete brief profiles describing each service. A total of 745 JARC and 207 New Freedom profiles were submitted for the FY 2007 / FY 2008 reporting periods. The profiles include a short description of the service, lessons learned, how the local service is evaluated, and major accomplishments of the program.

This information helps to illustrate the breadth and depth of the projects funded by these two programs and provides particularly useful information about the nature of the information-based and capital investment projects that do not lend themselves to traditional FTA data reporting.

## **1.0 Overview**

### **1.1 JARC / New Freedom Overview**

The Job Access Reverse Commute (JARC) program was established in 1999 under Section 3037 of the Transportation Equity Act for the 21st Century (TEA-21). JARC was developed to address the unique transportation challenges that welfare recipients and low-income individuals face in finding and keeping jobs. It also addresses issues related to accessing jobs located in suburban areas, which are difficult to reach from urban and rural areas.

Initially, Section 3037 required that JARC projects selection be made through a national competition based on statutorily specified criteria. The Federal Transit Administration (FTA) competitively selected projects for funding appropriated in FY 1999 through FY 2002. However, beginning in FY 2000, Congress also began designating specific projects and recipients to receive JARC funding in the conference reports accompanying the annual appropriations acts, and directed FTA to honor those designations. Each year more projects were Congressionally designated until finally, by FY 2003, all JARC project funding was allocated through directives.

Enacted in 2005, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) repealed Section 3037 and JARC was transitioned into a formula-based program under Section 5316 of the new Act. At the same time SAFETEA-LU established the New Freedom (NF) program, also a formula-based program, under Section 5317 of the new Act.

The New Freedom program provides funding for projects designed to reduce transportation barriers and to expand the transportation mobility options available to people with disabilities beyond the requirements of the Americans with Disabilities Act (ADA) of 1990.

These two formula-based programs are intended to provide an equitable funding distribution to states and communities as well as a stable and reliable funding source. States and public bodies are eligible designated recipients for both programs. Designated recipients may distribute JARC or NF grants to subrecipients through a competitive selection process. Eligible subrecipients are private non-profit organizations, state or local governments, and operators of public transportation services including private operators of public transportation services.

Funds for both programs are allocated among large urban, small urban, and non-urbanized/rural areas as follows:

- 60% of funds go to designated recipients in large urban areas with populations 200,000 and more
- 20% of funds go to states for small urban areas under 200,000
- 20% of funds go to states for non-urbanized/rural areas
- States may transfer funds between urbanized and non-urbanized area programs

The JARC formula is based on the number of eligible low-income and welfare recipients. SAFETEA-LU authorized a total of \$562 million for JARC grants from FY 2005 through FY 2008 (see Table 1-1). A total of \$442 million for JARC grants have been obligated from FY 2005 through FY 2008.

Table 1-1  
JARC Authorizations and Obligations

	FY 2005	FY 2006	FY 2007	FY 2008	Total
<b>Authorization</b>					
JARC Mass Transit Account	\$108 M	\$138 M	\$144 M	\$156 M	\$546 M
JARC General Fund	\$16 M	-	-	-	\$16 M
<b>Total</b>	<b>\$124 M</b>	<b>\$138 M</b>	<b>\$144 M</b>	<b>\$156 M</b>	<b>\$562 M</b>
<b>Obligation</b>					
<b>Total</b>	<b>\$127 M</b>	<b>\$78 M</b>	<b>\$73 M</b>	<b>\$165 M</b>	<b>\$442 M</b>
Note: Amounts are rounded to nearest \$100,000.					

The New Freedom formula is based on the population of people with disabilities in states and large urbanized areas. SAFETEA-LU authorized a total of \$339 million for NF grants from FY 2006 through FY 2008 (see Table 1-2). New Freedom funds that were appropriated in FY 2006 but not obligated by the end of FY 2008 were included in FTA's FY 2009 apportionment to states and large urbanized areas. A total of \$110 million for New Freedom grants have been obligated from FY 2006 through FY 2008.

Table 1-2  
New Freedom Authorizations and Obligations

	FY 2006	FY 2007	FY 2008	Total
<b>Total Authorization</b>	\$77 M	\$81 M	\$88 M	\$246 M
<b>Total Obligation</b>	\$1 M	\$9 M	\$100 M	\$110 M
Note: Amounts are rounded to nearest \$100,000				

## 1.2 JARC / New Freedom Program Performance Evaluation

The FTA contracted with CES, Inc., and its subcontractor TranSystems, to manage data collection and analysis for the FY 2007 / FY 2008 JARC / New Freedom Program Performance Evaluation. Individuals from both firms have been key evaluators of the JARC program since 2002 and developed the JARC / NF Program Performance Evaluation system currently being used to evaluate the JARC and New Freedom programs. (The CES and TranSystems report on JARC Services in operation in FY 2006 can be found on the JARC program page of the FTA website at [http://www.fta.dot.gov/funding/grants/grants\\_financing\\_7175.html](http://www.fta.dot.gov/funding/grants/grants_financing_7175.html).) The protocol used for the report on FY 2006 JARC services was developed with the assistance of the JARC / NF Advisory Committee, which is composed of representatives from transit agencies and state DOTs. The FY 2007 / FY 2008 evaluation marks the full implementation of the new JARC / New Freedom Program Performance Evaluation system. For convenience,

data for both years was collected at the same time; however, the results have been analyzed and reported separately.

Under the Government Performance Results Act (GPRA), FTA is required to “establish performance goals to define the level of performance” and to also “establish performance indicators to be used in measuring relevant outputs, service levels, and outcomes” for each of its programs. In addition, FTA is capturing overall program measures to be used with the GPRA and the Performance Assessment Rating Tool (PART) process for the U.S. Office of Management and Budget (OMB).

FTA has established the following two key performance measures for JARC program:

- Jobs accessed
- One-way trips provided

FTA has established the following three key performance measures for the New Freedom program:

- Increases or enhancements related to geographic coverage, service quality and/or service times that impact availability of transportation services for individuals with disabilities as a result of the New Freedom projects implemented in the current reporting year.
- Additions or changes to environmental infrastructure (e.g., transportation facilities, sidewalks, etc), technology, and vehicles that impact availability of transportation services as a result of the New Freedom projects implemented in the current reporting year.
- Actual or estimated number of rides (as measured by one-way trips) provided for individuals with disabilities as a result of the New Freedom projects implemented in the current reporting year.

With the assistance of the JARC / NF Advisory Committee, the consultant team developed a JARC / New Freedom service reporting matrix to provide a relatively simple way to categorize projects and enter data for both JARC and NF projects (see Appendix A). The reporting matrix includes three basic categories of service:

- I. Trip-based services, which provide transportation directly to individuals.
- II. Information-based services, which provide information about transportation services to individuals but do not provide direct transportation services.
- III. Capital investment projects, which include facilities and infrastructure to support transportation services.

In keeping with Federal reporting requirements, the five primary JARC / NF program goals are:

- A. Expanded geographic coverage, which includes increasing the coverage area for a service (typically for trip-based or capital investment projects).
- B. Extended hours or days of service, which includes adding hours and/or days to existing services (typically for trip-based or capital investment projects).

- C. Improved system capacity, which includes adding resources that result in additional quantities of service (typically for trip-based or capital investment projects).
- D. Improved access or improved connections, which include projects that improve an individual's ability to travel (typically trip-based services but also some information-based services such as mobility managers or capital investment projects such as vehicle loan programs).
- E. Improved customer knowledge, which provides additional resources for information-based services especially customer information and training programs.

Based on the combination of service type and primary goal, the cells in the matrix identify the type of service output data to be provided by the reporting grantee. The output measures typically include the number of one-way trips for trip-based programs, the number of customer contacts for information-based services, and the number of units provided for capital investment projects. The JARC service matrix also captures information from grant recipients used to develop the jobs accessed key performance measure<sup>1</sup>. A more detailed description of the service reporting matrix is included in Appendix A.

In addition to providing the basic reporting elements required for the JARC and New Freedom evaluations, grant recipients and subrecipients were asked to complete brief profiles describing each service. A total of 745 JARC and 207 New Freedom profiles were submitted for the FY 2007 / FY 2008 reporting periods (and can be found in Appendix C and Appendix D, included under separate cover). The profiles include a description of the service, lessons learned, how the local service is evaluated, and major accomplishments of the program. This information helps to illustrate the breadth and depth of the projects funded by these two programs and provides particularly useful information about the nature of the information-based and capital investment projects that do not lend themselves to traditional FTA data reporting.

### ***1.3 Interpreting the Data***

As noted above, the JARC / NF evaluation matrix was first developed for the FY 2006 JARC data collection effort and refined for FY 2007 / FY 2008.

#### **1.3.1 Summary of FY 2006 analysis**

A total of 155 grant recipients reported on 645 JARC-funded services in FY 2006. The New Freedom program was not yet in operation. Key findings from FY 2006 included:

- JARC-funded services were estimated to provide access to approximately 43.4 million jobs, including 21.2 million low-wage jobs.
- JARC-funded services were estimated to provide 22.9 million one-way trips in FY 2006.

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<sup>1</sup> For FY 2007 / FY 2008, these additional data elements service area description, number of revenue hours, and vehicle capacity.

- About three out of four JARC-funded services were traditional transit services – either fixed route (44%) or demand response (28%). Information-based services accounted for 8% of the programs and capital investment programs made up 7%.
- Fixed route services accounted for 44% of the services and 82% of the one-way trips. Demand response programs comprised 28% of the services and 11% of the trips.

### 1.3.2 Year-to-year comparisons

The current data collection effort, conducted in 2009, covered two years of service for the JARC program and the New Freedom program. Therefore, findings are presented for FY 2007 / FY 2008 throughout this report and may be considered a snapshot of the JARC and New Freedom programs at the end of each fiscal year. When relevant, this analysis will make comparisons between the information reported for each of these years. When making year-to-year comparisons, it is important to recognize that **annual fluctuations in service provision may not necessarily reflect trends in program performance**. Instead, several factors may influence these annual changes.

First, as noted above, JARC has evolved over time from a national competitive grants program to a congressionally directed grant program to a formula-based grant program with a local selection process. As a result, the list of grant recipients and particularly the subrecipients have changed and will continue to change over time as individual programs mature.

Table 1-3  
JARC and New Freedom Services by Fiscal Year

Years	JARC Services		New Freedom Services	
	Number	Percent	Number	Percent
FY 2006 services				
All services	645	100%	N/A	N/A
FY 2007 services				
2007 Only	64	11%	4	7%
Both years	523	89%	56	93%
All services	587	100%	60	100%
FY 2008 services				
2008 Only	158	23%	147	72%
Both years	523	77%	56	28%
All services	681	100%	203	100%

Table 1-3 illustrates the change in the number of grant recipients reporting in FY 2006 through FY 2008. It is likely that many of the JARC grants ending in FY 2007 were funded under TEA-21, while the JARC and New Freedom services starting in FY 2008 probably received funding through SAFETEA-LU<sup>2</sup>. As the table shows, the number of JARC-supported services dropped in FY 2007 and then increased for FY 2008. In contrast, the number of New Freedom programs more than tripled between FY 2007 and FY 2008. The change in JARC services demonstrates the transition from earmark to

<sup>2</sup> The current analysis did not track the number of JARC services active in FY 2006 that continued into subsequent fiscal years.

formula, as older service ended and newer ones got started. The rapid growth in NF services is more consistent with a new program. In both cases, growth can be expected to level off in future years as the programs mature and the number of recipients stabilizes.

Second, both the JARC and New Freedom programs are designed to support a broad range of services. These include services that provide transportation directly (such as fixed route or user-side subsidies) as well as programs that provide information and investments in capital improvements. As the mix of services changes from year to year, the number of one-way trips and jobs accessed (for JARC) will change accordingly. For example, if the number of capital investment programs increases, the number of one-way trips and/or jobs accessed may well decrease. In the aggregate, it may not be possible to determine whether this kind of change reflects a decline in program performance or simply a new mix of services offered. This is why the matrix approach, introduced for FY 2006 and refined for this data cycle, is especially important. The service matrix captures performance information for all JARC and New Freedom services and reflects the range of choices made at the local level.

While acknowledging these considerations, the data collected still presents a picture of the changing face of the JARC and New Freedom programs. Therefore, this analysis will present the following:

- Compare the mix of programs from year-to-year, including service type and primary goals.
- Compare the mix of grantees and subrecipients from year to year, including type of operating setting.
- Incorporate information from the profiles into the analysis to show the diversity of the JARC and NF programs, along with lessons learned and elements of success.

Documentation of the changes in the programs over time, especially changes in JARC from competitive to formula will continue to illustrate the diversity of the JARC and NF programs.

### **1.3.3 Data presentation**

Most of the tables and charts included in Sections 3.0 and 4.0 present data in percentage terms rather than raw numbers. Because the number of services and one-way trips varies by service type, percentages provide a better opportunity to represent the differences among programs. In most cases, the percentages are presented in two ways – summed by table row (usually service type) and summed by table column (e.g., size of urbanized area). The accompanying charts represent the data in the tables, but are sorted by percentage, rather than program type.

## **1.4 Document Overview**

The remainder of this document provides information about the process and results of the JARC and New Freedom service evaluations for FY 2007 and FY 2008. Section 2.0 includes an overview of the data collection process. Section 3.0 presents the results of the JARC evaluation and Section 4.0 presents the results of the New Freedom evaluation. Finally, Section 5 is a summary of the evaluation findings. Appendix A summarizes the

service matrix approach and Appendix B provides an overview of the methodology used to estimate jobs accessed for JARC programs. Given the length of the JARC and New Freedom profiles, they are provided in separate companion documents (Appendix C and D).

## **2.0 Data Collection**

Grantees with active JARC- or New Freedom-funded grants in FY 2007 / FY 2008 were required to file an annual report using an on-line system. The on-line system was originally developed for the JARC program in FY 2003 and refined in subsequent years. The system was modified to include the New Freedom program starting with FY 2007. This section provides an overview of data collection process.

### **2.1 Reporting Period**

The reporting site initially opened to recipients for testing early in January 2009. At that time, the schedule called for the reporting period to open on February 1. However, when the testing period ended on January 30, FTA instructed the team to suspend reporting in order to allow recipients to focus on requirements for the American Recovery and Reinvestment Act (ARRA). The site reopened for reporting on June 1, 2009 with a scheduled closing date of July 22. In mid-July, in response to recipient and FTA requests, and to maximize the response rate, we announced that we would keep the reporting system on-line through August 8.

### **2.2 Universe of Recipients Required To Report**

FTA required recipients to report for the FY 2007 / FY 2008 reporting cycle if they provided JARC- or New Freedom-funded services at any time during one or both of those fiscal years. In other words, reporting eligibility was based on actual service dates rather than the year the funds was awarded, obligated, or spent. However, FTA tracks funding status and does not directly track which agencies provided JARC- or New Freedom-funded services in any particular period. Therefore, before data collection begins, there is no definitive list of agencies that are required to report for that period.

To define the complete list of agencies required to report, the JARC/NF Evaluation Team:

- Asked FTA to provide a list of all recipients which, based on award date and status, could have provided JARC or New Freedom services during FY 2007 or FY 2008
- Contacted all of these recipients via email and asked them to indicate whether or not they provided services during FY 2007 / FY 2008 and, if so, requested that they report.

FTA provided lists of reporting candidates, which the team consolidated into a single list of 293 organizations and provided it to FTA for review and confirmation.

Since the evaluation team's primary means of contact with recipients is via email, we have used FTA's TEAM grant-reporting system and other methods to identify and confirm email and phone contact information for each recipient organization.

To improve the completeness of the evaluation, the team also prioritized recipients for additional follow-up based on the level of obligated funding or number of jobs accessed for FY 2006, which was the prior reporting cycle.

## **2.3 Recipient Outreach and Follow-Up**

The JARC/NF Evaluation Team used several methods to contact grant recipients and provide them with up-to-date information about the reporting process.

### **2.3.1 FTA contact with stakeholders**

In conjunction with project staff at FTA headquarters, the evaluation team worked with the FTA regional offices to coordinate communication with the recipients. The team prepared several emails for FTA to send to recipients with information about the reporting schedule and data requirements.

FTA also announced the reporting period via the United We Ride mailing list in early June 2009 and via its GovDelivery list of JARC and New Freedom contacts later that month.

“Advisory councils are great support for match dollars and in-kind services.”

Harris County Community Services Department (TX)  
New Freedom One-Stop Center

### **2.3.2 Direct email**

In addition to recipient outreach via FTA regions, the team sent out 346 individual email reminders to specific recipients during the reporting process, to encourage reporting and to ask individual recipients if they intended to use the extended reporting period to complete their reports.

### **2.3.3 Web outreach**

FTA also announced reporting requirements and schedule via the New Freedom and JARC program pages on the FTA website.

### **2.3.4 Phone contact**

In late July, the team contacted 70 recipients by phone to follow up on reporting. We also requested that FTA HQ follow-up directly with six recipients whom we had not been able to contact by phone or email after repeated attempts.

### **2.3.5 Tracking**

The team used real-time access to the reporting database, in combination with a flexible reporting capability, to identify non-reporters as well as recipients who had provided data but had not completed their submissions for follow-up.

## **2.4 Technical Changes**

For the FY 2007 / FY 2008 reporting cycle, the team made substantial changes in the reporting website to incorporate the service matrix more thoroughly into the forms and database and to allow recipients to delegate data entry to subrecipients.

### **2.4.1 Service matrix interface**

The database and forms-handling code was substantially modified to permit the analytical team to specify different questions, as desired, for each matrix cell.

The matrix was incorporated directly into the interface. When recipients created a new form for service data entry, the system presented the matrix to allow the recipient to select service type (e.g. trip-based), subtype (e.g. demand response), and goal (e.g. extended service hours). Based on these choices, recipients were directed to a page with questions tailored to these options.

#### **2.4.2 Delegated data collection**

Some organizations, especially state DOTs, were responsible for reporting services on behalf of multiple subrecipients. An informal survey of some of these recipients revealed that many of those agencies would prefer to allow subrecipients to enter contact and service information directly. Therefore, we modified the website to allow subrecipients to:

- Log in using the email address provided by their recipient, and
- Enter data and check for completeness.

Recipients could also enter subrecipient and service information directly and edit any data entered by their subrecipients. Recipients retained formal responsibility for providing data to FTA and only they could submit the final report to FTA.

The system also accommodated the 46 agencies that had subrecipient relationships with two different recipients.

#### **2.4.3 Other modifications**

In this cycle, we substantially expanded the software testing built in to the website, creating 430 tests for recipient data entry and 300 tests for subrecipient data entry to be performed automatically whenever website programming was modified.

During the reporting period, we modified the database to respond to one state DOT's request for two logins, one for JARC and one for New Freedom reporting.

### **2.5 Testing**

Individuals from the following organizations assisted the team with pre-testing the data entry process in January 2009: Connecticut Department of Transportation, Centro (Syracuse, New York), Iowa Department of Transportation, King County Metro, Oregon DOT, West Virginia DOT, City of Brownsville (Texas), Ohio-Kentucky-Indiana Regional Council of Governments, and Tucson DOT.

### **2.6 Data Responses**

The evaluation team invited 293 recipients to submit FY 2007 / FY 2008 data reports on JARC or New Freedom services. In response:

- 59 recipients indicated that they did not provide service in FY 2007 / FY 2008,
- 158 recipients indicated that they did provide service in FY 2007 / FY 2008 and filed reports, and
- 75 recipients did not complete reporting within the reporting period, although several contacted the team after the reporting deadline had passed.

This yielded a response rate of 74%.

The final database includes 952 services from the 158 grantees that reported active JARC- or New Freedom-funded service during FY 2007 / FY 2008. For analysis purposes, the dataset was divided into four subsets:

- FY 2007 JARC services
- FY 2008 JARC services
- FY 2007 New Freedom services
- FY 2008 New Freedom services

The data analysis presented in this report reflects this structure.

## **2.7 Technical Assistance**

The team provided support to the recipients during the reporting process via an on-line support site, webinars, and email and telephone contact.

### **2.7.1 Support site**

As in previous years, our support effort relied on the FTA JARC & New Freedom Reporting Support Center website (<http://ftajarcnf.cesnn.com/>)<sup>3</sup>.

For this reporting cycle, the team substantially enhanced the site:

- Quadrupled content to 84 pages, including specific New Freedom information, and
- Reorganized the site and updated graphics and interface.
- Added new features, including the ability for users to post questions for the evaluation team and to follow comments threads.

From May 1 to August 15, the support site handled 2,495 visits, consisting of 10,065 page views, from 868 visitors, as counted by Google Analytics.

### **2.7.2 Webinars**

In this reporting cycle, we also enhanced and expanded the effort to support recipients via Internet-based and telephone conferences, also known as webinars.

Two one-hour webinars were conducted, on June 24 and July 8; both provided participants with the same background information on the JARC and New Freedom programs and offered technical assistance for reporting. The webinars were hosted at FTA headquarters in Washington, D.C., and included participation from FTA staff and the evaluation team.

We used a screen sharing capability to broadcast a 33-slide presentation to each participant and handled presentation and interaction via on-line chat and a toll-free number for teleconferencing.

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<sup>3</sup> Note that this support site is only available on-line during the reporting period.

Individuals from 74 organizations registered for the June webinar. There were 69 dial-in connections, and the team fielded approximately 35 questions submitted via the phone line or text chat. For the July webinar, 115 individuals from 90 organizations registered. There were 82 dial-in connections of which 76 also participated via the web. We fielded approximately 35 questions submitted via the phone or text chat and followed up off-line with several grantees.

After both webinars, we added or modified information on the support website to address recipient questions and concerns.

### **2.7.3 Email and phone contact**

Lauren Miller, the team's lead technical assistance staff member, responded to approximately 410 email threads from June 2 through August 13. She also assisted grantees and subrecipients via telephone during the reporting process. Evaluation team members Susan Bregman and Rosemary Gerty also provided support to grantees and subrecipients during the reporting period. In addition, as part of the quality assurance process, they contacted about three dozen grantees after the reporting period closed to clarify questions about specific data elements in the service reports.

### 3.0 Analysis of JARC Services

This section reports on the characteristics of JARC grantees and their services for FY 2007 / FY 2008. The section also includes JARC performance measures, including one-way trips, jobs accessed, and measures for non-trip-based services.

The information is based on data collected from the 151 JARC grant recipients that submitted complete reports for one or both fiscal years; together these grantees reported on 745 services. The collected data presents snapshots of activity for JARC-funded services as of the last day of each fiscal year – September 30, 2007, which was the last day of FY 2007, and September 30, 2008, which was the last day of FY 2008.

“It was a win-win situation for both the employees and for the employer who was having difficulty filling positions from the available employee pool in the metro area.”

Colonias of Frio for Education and Employment (TX)  
JARC Demand Response Service

#### 3.1 Service Types

Grantees reported a total of 587 active JARC-funded services for FY 2007 and 681 services in FY 2008.<sup>4</sup> This analysis continued the practice started in FY 2006, when grantees were asked to classify services in one of three ways:

- I. Trip-based services**, which provide transportation directly to individuals. These include fixed routes, flexible routes, shuttles, demand response, and user-side subsidy programs (e.g., vouchers, ridesharing, and guaranteed ride home).
- II. Information-based services**, which provide information about transportation services to individuals but do not provide direct transportation services. These include mobility managers/brokerages, trip or itinerary planning, Internet-based travel information, informational materials, and one-on-one training.
- III. Capital investment programs**, including facilities and infrastructure to support transportation services. These include vehicle based programs (such as those making automobiles available to individuals or organizations), facility or amenity improvements, and technology to support transportation services.

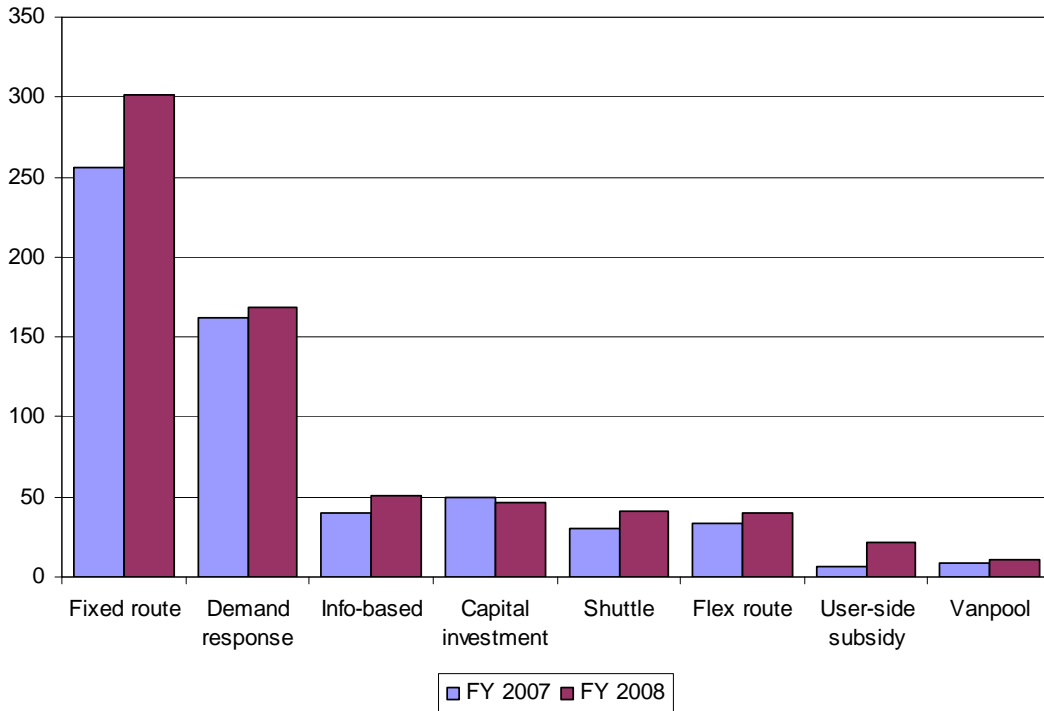
Out of the active JARC-funded services, the vast majority were trip-based, at approximately 85% for both FY 2007 and FY 2008. The remaining 15% of programs were split fairly evenly between information-based and capital investment programs. As Table 3-1 and Figure 3-1 show, the most commonly reported programs were fixed route and demand response for both years. Together, these traditional transit services accounted for more than two out of three JARC-funded programs. Information-based services comprised about 7% of JARC services for both years.

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<sup>4</sup> A JARC-supported service that was in operation during FY 2007 and FY 2008 was included in the analysis for each fiscal year.

**Table 3-1**  
**Distribution of JARC-Funded Services by Type**  
**FY 2007 / FY 2008**

Service Type	FY 2007 Services		FY 2008 Services	
	#	%	#	%
<b>Trip-based</b>				
Fixed route	256	44%	301	44%
Flexible route	34	6%	40	6%
Shuttle	30	5%	41	6%
Demand response	162	28%	169	25%
Vanpool	9	2%	11	2%
User-side subsidy	6	1%	22	3%
<b>Trip-based</b>	<b>497</b>	<b>85%</b>	<b>584</b>	<b>86%</b>
<b>Information-based</b>	<b>40</b>	<b>7%</b>	<b>51</b>	<b>7%</b>
<b>Capital investment</b>	<b>50</b>	<b>9%</b>	<b>46</b>	<b>7%</b>
<i>All programs</i>	<i>587</i>	<i>100%</i>	<i>681</i>	<i>100%</i>



**Figure 3-1**  
**Distribution of JARC-Funded Services by Type**  
**FY 2007 / FY 2008**

About 9% of JARC-supported programs were categorized as capital investment projects in FY 2007 and 7% in FY 2008. Most of these were vehicle-related.<sup>5</sup> Because the information-based and capital investment categories each comprised about 50 services each in each year, the distribution by service type is not broken down for more detailed statistical analysis.

### 3.2 Size of Urbanized Area

About half of all JARC-supported services operated in large urbanized areas (population over 200,000) for both FY 2007 and FY 2008. The rest were evenly split between small-urban localities (population 50,000-199,000) and non-urbanized or rural areas (population less than 50,000).<sup>6</sup> Just over half (approximately 55%) of fixed route

“One local measure of success would be to ask the question, ‘Would JARC be missed if our presence disappeared from our community?’ The answer on the West End would be a resounding ‘YES!’”

Olympic Community Action Program (WA)  
JARC Demand Response

programs were located in large urban areas for FY 2007 and FY 2008, and fewer than 15% were in rural areas. In contrast, demand response programs were more likely to operate in non-urbanized localities (50% in FY 2007 and 45% in FY 2008) than in large cities (30% and 31%, respectively). Both information-based and capital investment services were primarily big-city programs. In FY 2007, about 70% of information-based services and 78% of capital-investment programs were situated

in large urbanized areas. In FY 2008, about 61% of programs in each category were located in major metropolitan areas. (This distribution is summarized in Table 3-2 and illustrated in Figure 3-2.)

Fixed route services made up the greatest share of programs in the larger urbanized settings, comprising 48% of the services in large urbanized areas and 54% in smaller cities in FY 2007. In rural localities, demand response was the major service type, with 56% of all JARC-supported services in FY 2007, while fixed route made up only 24% of rural services. The breakdown was similar for FY 2008, where just over half of JARC-funded services in large and small cities were fixed route versus 23% in rural settings. In contrast, nearly half (46%) of all services in rural areas – but only 16% in large urbanized areas – were demand response. In large urban areas, capital investments made up 13% of all JARC services in FY 2007 and 8% in FY 2008; information-based services accounted for 9% of all programs for each year. In rural localities, capital investments were 5% of JARC services in FY 2007 and 7% in FY 2008. Information-based services made up 3% of services in rural areas in FY 2007 and 7% in FY 2008. (See Table 3-3 and Figure 3-3.)

<sup>5</sup> Many of the capital investment projects were sponsored by a single recipient, Ways to Work, which reported 26 separate subrecipients with vehicle loan programs in FY 2007 and 11 programs in FY 2008.

<sup>6</sup> Grantees reported on the size of the service area for each individual program, not for the grantee agency itself. For example, a state DOT that submitted a report for multiple services was asked to characterize the operating setting for each service separately.

Table 3-2  
 JARC Services by Type and Urbanized Area Size  
 FY 2007 / FY 2008  
 (Row Percent)

Service	#	Size of Urbanized Area			Total
		Large Urban	Small Urban	Non-Urban/Rural	
<i>FY 2007</i>					
Fixed route	256	56%	30%	14%	100%
Flexible route	34	38%	29%	32%	100%
Shuttle	30	60%	23%	17%	100%
Demand response	162	30%	20%	51%	100%
Vanpool	9	78%	11%	11%	100%
User-side subsidy	6	33%	50%	17%	100%
Information-based	40	70%	20%	10%	100%
Capital investment	50	78%	8%	14%	100%
<b>All programs</b>	<b>587</b>	<b>51%</b>	<b>24%</b>	<b>25%</b>	<b>100%</b>
<i>FY 2008</i>					
Fixed route	301	55%	32%	13%	100%
Flexible route	40	35%	28%	38%	100%
Shuttle	41	61%	20%	20%	100%
Demand response	169	31%	24%	46%	100%
Vanpool	11	64%	18%	18%	100%
User-side subsidy	22	27%	55%	18%	100%
Information-based	51	61%	18%	22%	100%
Capital investment	46	61%	13%	26%	100%
<b>All programs</b>	<b>681</b>	<b>48%</b>	<b>27%</b>	<b>25%</b>	<b>100%</b>

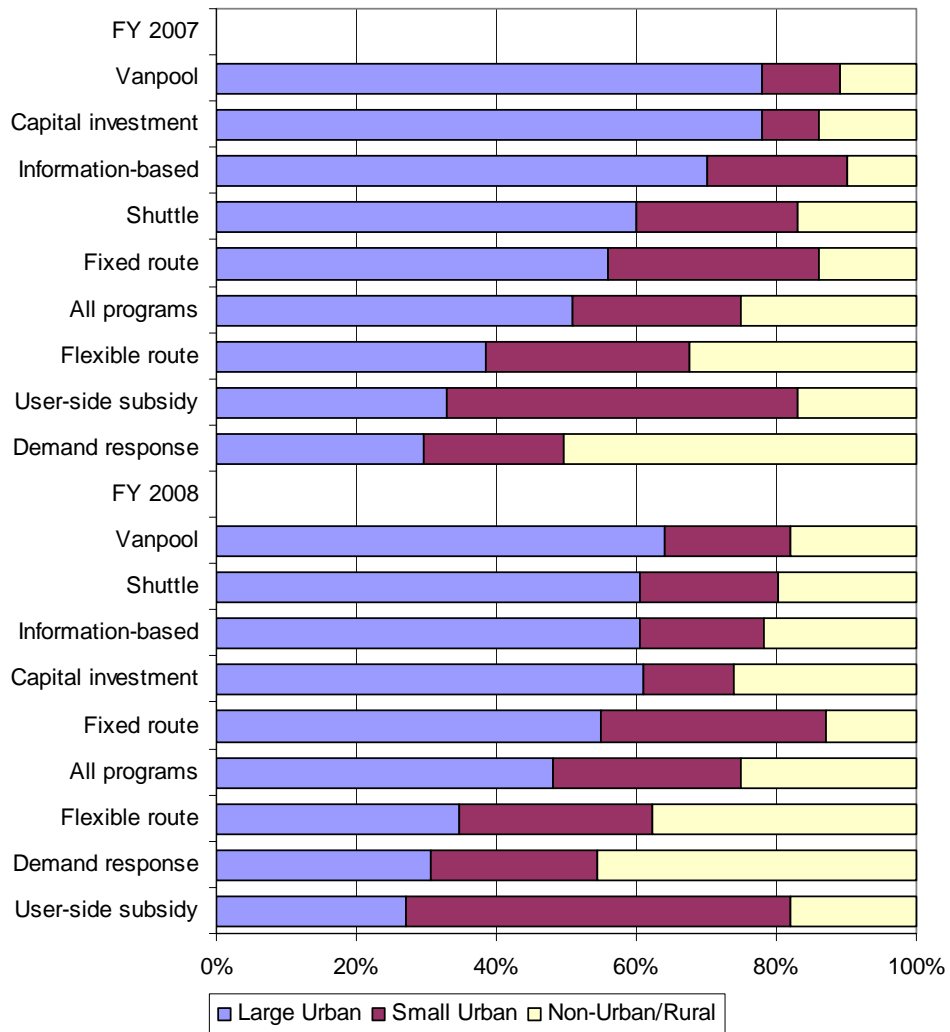


Figure 3-2  
 JARC Services by Type and Urbanized Area Size  
 FY 2007 / FY 2008  
 (Row Percent)

Table 3-3  
 JARC Services by Type and Urbanized Area Size  
 FY 2007 / FY 2008  
 (Column Percent)

Service	#	Size of Urbanized Area			Total
		Large Urban	Small Urban	Non-Urban / Rural	
<b>FY 2007</b>					
Fixed route	256	48%	54%	24%	44%
Flexible route	34	4%	7%	7%	6%
Shuttle	30	6%	5%	3%	5%
Demand response	162	16%	23%	56%	28%
Vanpool	9	2%	1%	1%	2%
User-side subsidy	6	1%	2%	1%	1%
Information-based	40	9%	6%	3%	7%
Capital investment	50	13%	3%	5%	9%
<b>All programs</b>	<b>587</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>FY 2008</b>					
Fixed route	301	51%	52%	23%	44%
Flexible routing	40	4%	6%	9%	6%
Shuttle/feeder services	41	8%	4%	5%	6%
Demand response	169	16%	22%	46%	25%
Vanpool	11	2%	1%	1%	2%
User-side subsidy	22	2%	7%	4%	2%
Information-based	51	9%	5%	7%	7%
Capital investment	46	8%	3%	7%	7%
<b>All programs</b>	<b>681</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

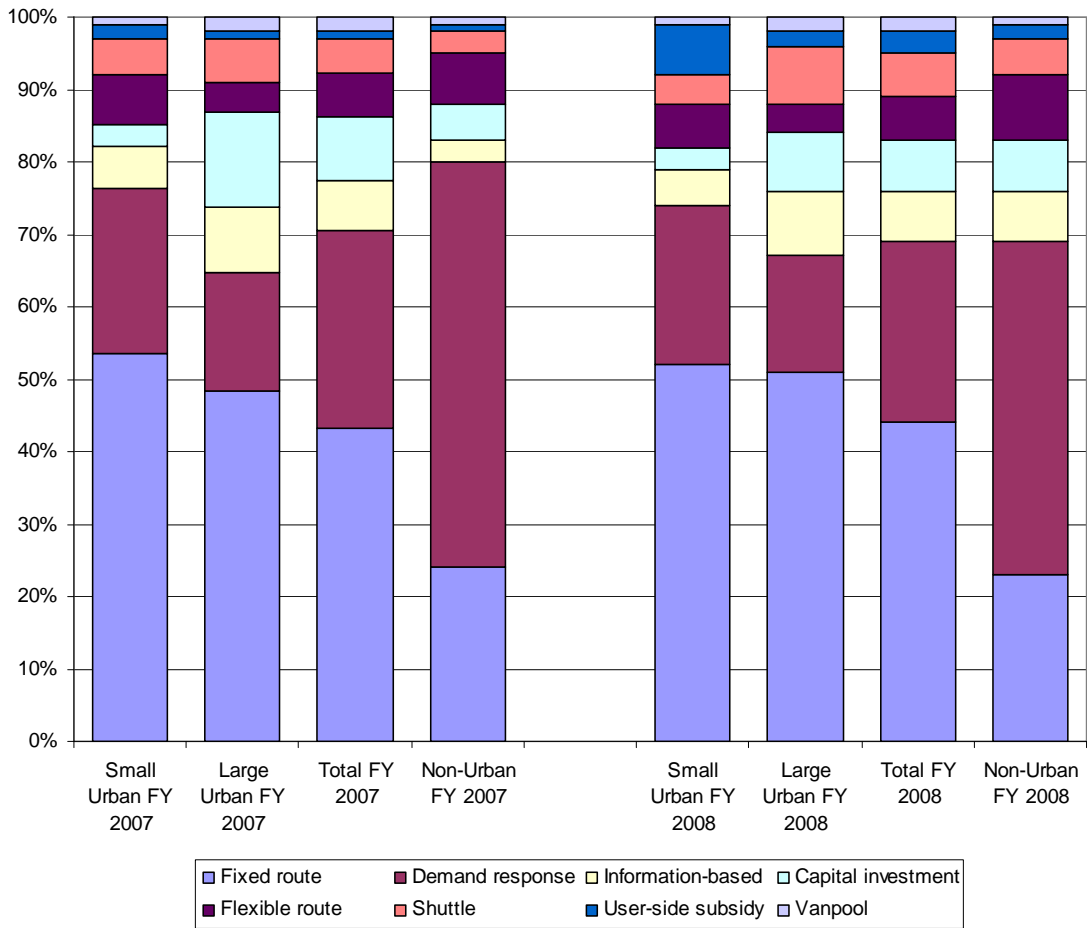


Figure 3-3  
 JARC Services by Type and Urbanized Area Size  
 (Column Percent)

### **3.3 Geographic Coverage**

JARC grant recipients were asked to indicate the geographical boundaries of their service area. Overall, more than half of JARC services served counties (about 29% in FY 2007 and FY 2008) or cities and towns (26% in FY 2007 and 27% in FY 2008). Another 21% of programs were regional. About 12% served multiple jurisdictions and 8% were neighborhood-based. Finally, a handful of programs were statewide, served tribal areas, or covered areas that the grantees did not define further. (See Table 3-4 and Figure 3-4.)

In FY 2007, trip-based services were most likely to cover cities and towns (29%) or counties (27%). Information-based programs generally served counties (35%) or regions (25%). Capital-investment programs showed a similar pattern, with 44% of investments on a county level and 40% serving a region. In FY 2008, more than half of trip-based services were located in municipalities (30%) or in counties (27%). Almost two-thirds of information-based services could be found at the county level (39%) or regional level (24%), while almost three-quarters of capital investments were made in counties (41%) or regions (33%).

### **3.4 One-Way Trips**

As in previous years, JARC grant recipients were asked to report annual one-way trips. Almost all grantees with trip-based services were able to provide this information. In addition, many grantees with information-based services or capital-investment programs reported on one-way trips as well. This included information-based programs like mobility managers and capital investments where agencies acquired vehicles for passenger service.

***For FY 2007, it is estimated that JARC-supported services provided 19.6 million one-way trips***

***For FY 2008, it is estimated that JARC-supported services provided 23.5 million one-way trips***

As might be expected, most one-way trips were recorded on fixed route services. Two factors account for this. First, fixed route was the single largest JARC service type reported for FY 2007 / FY 2008 and, second, fixed route services often use larger vehicles than other types of JARC-supported services. In FY 2007, fixed routes accounted for 79% of reported trips, followed by demand response (10%). No other services accounted for more than 5% of the total trips. Findings were similar for FY 2008. Fixed route carried 73% of all one-way trips and demand response carried 9%. While other trip-based services increased their mode shares, no other service type carried more than 5% of one-way trips. Table 3-5 and Figure 3-5 show this distribution.

Table 3-4  
 JARC Service Type by Geographic Coverage  
 FY 2007 / FY 2008  
 (Row Percent)

Service Category	#	State	County	Region	Multiple	City/Town	Other	Total
<b>FY 2007</b>								
Trip-based	497	4%	27%	18%	11%	29%	11%	100%
Info-based	40	3%	35%	25%	23%	10%	6%	100%
Capital investment	50	0%	41%	33%	9%	15%	2%	100%
<b>Total</b>	<b>587</b>	<b>3%</b>	<b>29%</b>	<b>20%</b>	<b>11%</b>	<b>26%</b>	<b>10%</b>	<b>100%</b>
<b>FY 2008</b>								
Trip-based	584	1%	27%	20%	12%	30%	8%	100%
Info-based	51	4%	39%	24%	22%	8%	2%	100%
Capital investment	46	0%	41%	33%	9%	15%	2%	100%
<b>Total</b>	<b>681</b>	<b>1%</b>	<b>29%</b>	<b>21%</b>	<b>12%</b>	<b>27%</b>	<b>2%</b>	<b>100%</b>

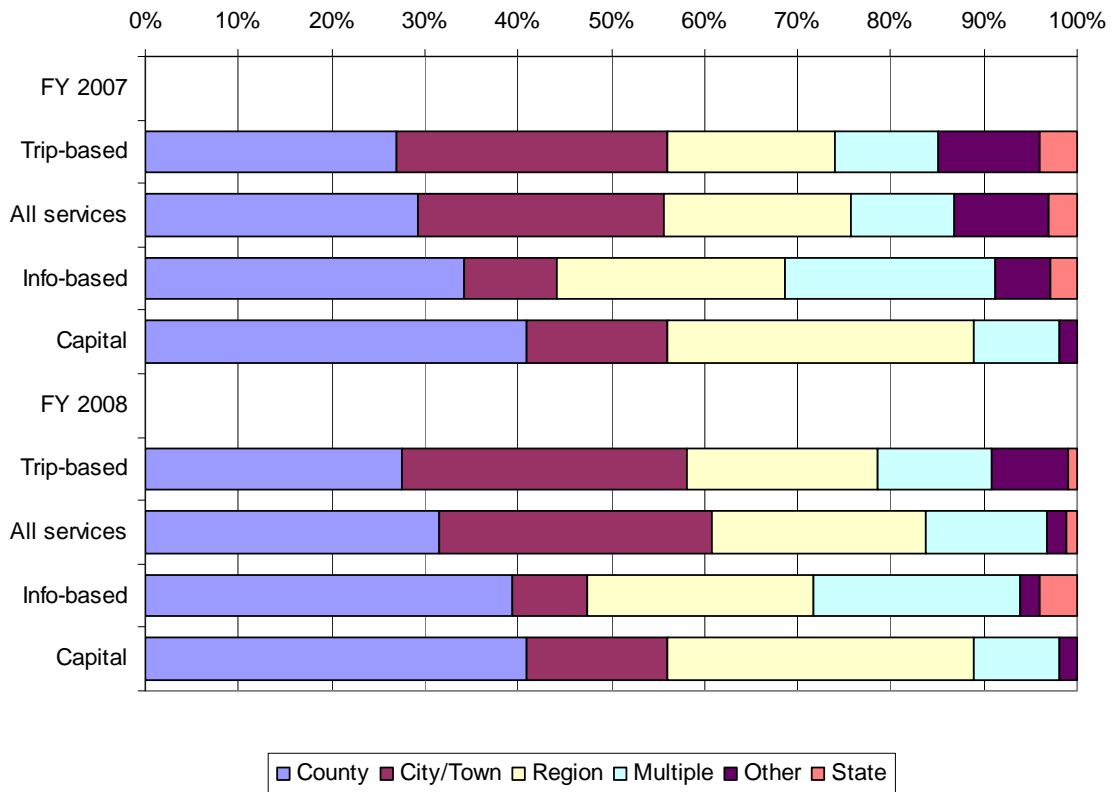
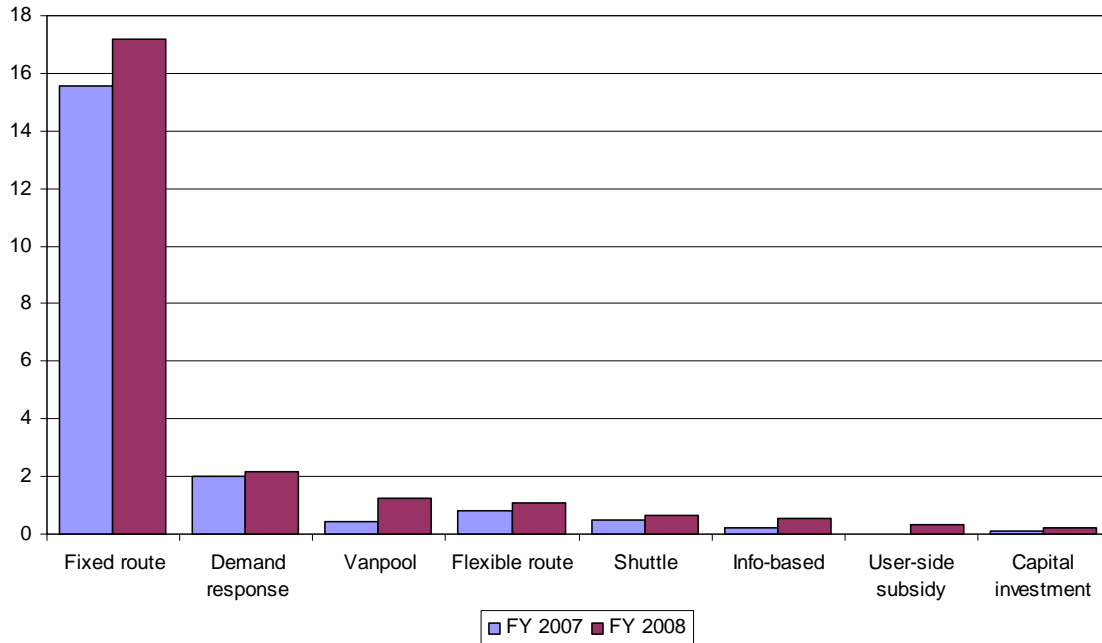


Figure 3-4  
 JARC Service Type by Geographic Coverage  
 FY 2007 / FY 2008  
 (Row Percent)

**Table 3-5**  
**Distribution of One-Way Trips by JARC Service Type**  
**FY 2007 / FY 2008**

Service Type	FY 2007 One-Way Trips		FY 2008 One-Way Trips	
	#	%	#	%
<b>Trip-based</b>				
Fixed route	15,555,053	79%	17,213,451	73%
Flexible route	799,906	4%	1,066,011	5%
Shuttle	477,810	2%	677,676	3%
Demand response	2,030,880	10%	2,195,783	9%
Vanpool	413,196	2%	1,244,467	5%
User-side subsidy	24,394	0%	328,770	1%
<b>Trip-based</b>	<b>19,301,239</b>	<b>98%</b>	<b>22,726,158</b>	<b>97%</b>
<b>Information-based</b>	<b>218,461</b>	<b>1%</b>	<b>550,750</b>	<b>2%</b>
<b>Capital investment</b>	<b>111,104</b>	<b>1%</b>	<b>191,897</b>	<b>1%</b>
<b>All programs</b>	<b>19,630,804</b>	<b>100%</b>	<b>23,468,805</b>	<b>100%</b>



**Figure 3-5**  
**Distribution of One-Way Trips by JARC Service Type**  
**FY 2007 / FY 2008**  
**(Millions of trips)**

Clear differences were apparent among geographic settings. For one-way trips on fixed route services, two thirds (67%) were reported in large urbanized areas in FY 2007, 30% in small urban areas, and only 3% in rural communities. Since fixed route services tend to operate in high-density communities, this finding comes as no surprise. Demand response shows a very different pattern: only 30% of demand response trips were reported in large urban areas compared with 43% in rural areas. As Table 3-6 and Figure 3-6 show, the pattern was similar in FY 2008.

In large urbanized areas, fixed route services captured 85% of one-way trips in FY 2007 and 77% in FY 2008. For both years, demand response accounted for 5%. In contrast, demand response served half of the trips in rural areas in FY 2007 and 38% in FY 2008 while the fixed route share fell to 25% and 32%, respectively. (See Table 3-7 and Figure 3-7.)

### **3.5 Jobs Accessed**

Because most transportation organizations do not have ready access to employment data, JARC recipients were not asked to report jobs accessed directly. Instead, the evaluation team asked grantees to provide information about service coverage and then used external data sources to develop estimates of jobs accessed.

The methodology for estimating jobs accessed was initially developed for the FY 2006 data analysis and refined for the FY 2007 / FY 2008 effort. Because of the different characteristics of demand response and fixed route transportation, a combination of approaches was used. The elements of the methodology are described briefly below.

- For demand response, jobs in the overall service area were counted using external data sources.
- For fixed route, a factor was developed to estimate jobs per linear route mile using external data sources.<sup>7</sup>
- For all trip-based services, grantees were asked to indicate the number of targeted jobs if that information was available.
- Two estimates were developed for all trip-based service – all jobs potentially accessible and low-wage jobs potentially accessible.
- Finally, to place the measure of jobs accessed in context, the team calculated a capacity constraint factor to better convey the impact of level of service provided.

Using these multiple approaches, the evaluation team developed estimates of jobs accessed for JARC trip-based services.

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<sup>7</sup> Grant recipients were asked to estimate the one-way length of the route in miles from start to finish.

Table 3-6  
 One-Way Trips by JARC Service Type and Urbanized Area Size  
 FY 2007 / FY 2008  
 (Row Percent)

Service Type	Size of Urbanized Area			Total
	Large Urban	Small Urban	Non-Urban/Rural	
<i>FY 2007</i>				
Fixed route	67%	30%	3%	100%
Flexible route	40%	26%	35%	100%
Shuttle	74%	18%	8%	100%
Demand response	30%	27%	43%	100%
Vanpool	99%	0%	1%	100%
User-side subsidy	5%	95%	0%	100%
All trip-based services	62%	29%	8%	100%
All info-based services	50%	50%	0%	100%
All capital investments	3%	1%	96%	100%
<b>Total</b>	<b>62%</b>	<b>29%</b>	<b>9%</b>	<b>100%</b>
<i>FY 2008</i>				
Fixed route	65%	31%	5%	100%
Flexible route	41%	26%	33%	100%
Shuttle	76%	13%	11%	100%
Demand response	31%	26%	43%	100%
Vanpool	96%	1%	3%	100%
User-side subsidy	39%	32%	30%	100%
All trip-based services	62%	28%	10%	100%
All info-based services	80%	18%	1%	100%
All capital investments	1%	5%	94%	100%
<b>Total</b>	<b>62%</b>	<b>27%</b>	<b>11%</b>	<b>100%</b>

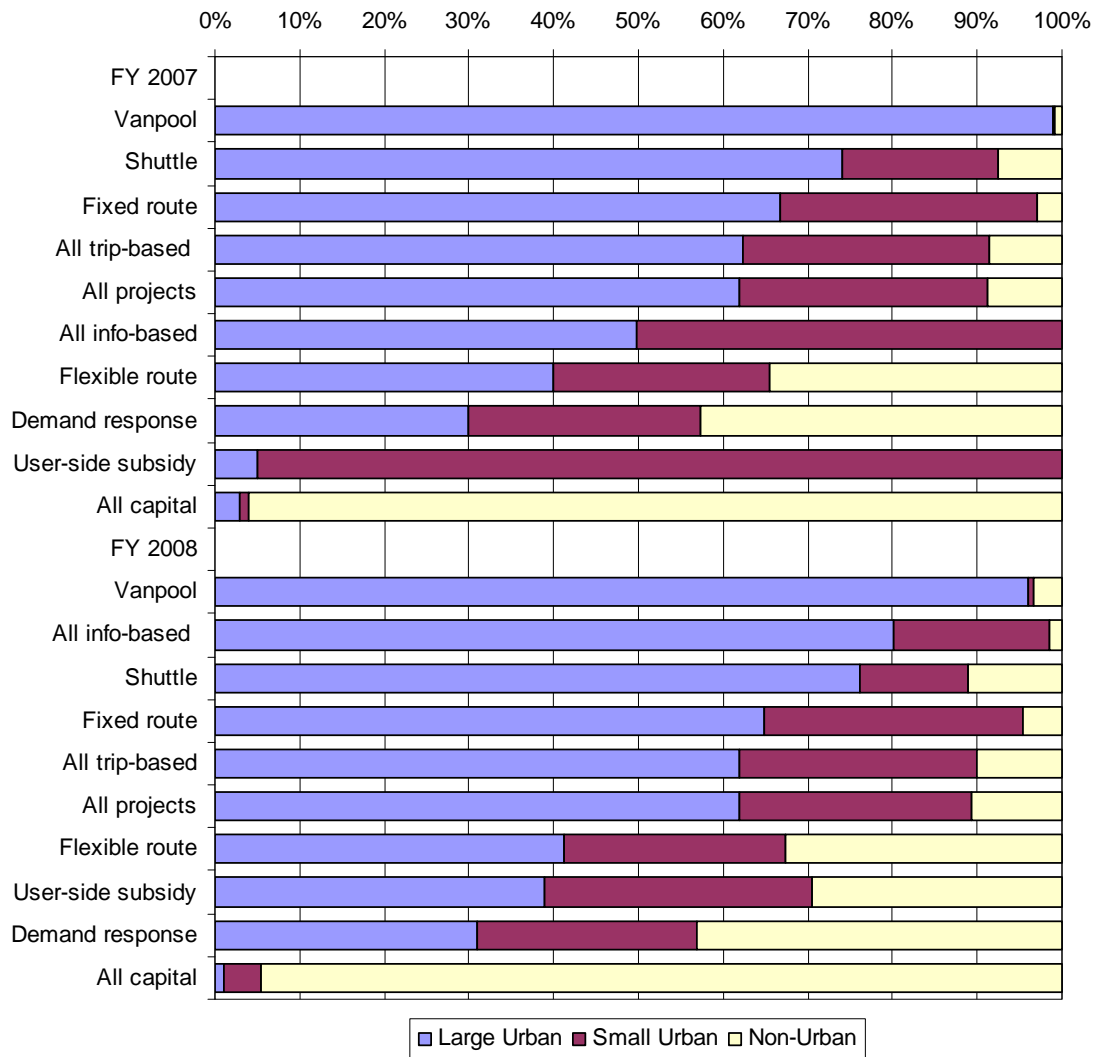


Figure 3-6  
 One-Way Trips by JARC Service Type and Urbanized Area Size  
 FY 2007 / FY 2008  
 (Row Percent)

**Table 3-7**  
**One-Way Trips by JARC Service Type and Urbanized Area Size**  
**(Column Percent)**

Service Type	Size of Urbanized Area			
	Large Urban	Small Urban	Non-Urban/Rural	Total
<i>FY 2007</i>				
Fixed route	85%	83%	25%	79%
Flexible route	3%	4%	16%	4%
Shuttle	3%	2%	2%	2%
Demand response	5%	10%	50%	10%
Vanpool	3%	0%	0%	2%
User-side subsidy	0%	0%	0%	0%
All trip-based services	99%	98%	94%	98%
All info-based services	1%	2%	0%	1%
All capital investments	0%	0%	6%	1%
Total	100%	100%	100%	100%
<i>FY 2008</i>				
Fixed route	77%	82%	32%	73%
Flexible route	3%	4%	14%	5%
Shuttle	4%	1%	3%	3%
Demand response	5%	9%	38%	9%
Vanpool	8%	0%	2%	5%
User-side subsidy	1%	2%	4%	1%
All trip-based services	97%	98%	92%	97%
All info-based services	3%	2%	0%	2%
All capital investments	0%	0%	7%	1%
Total	100%	100%	100%	100%

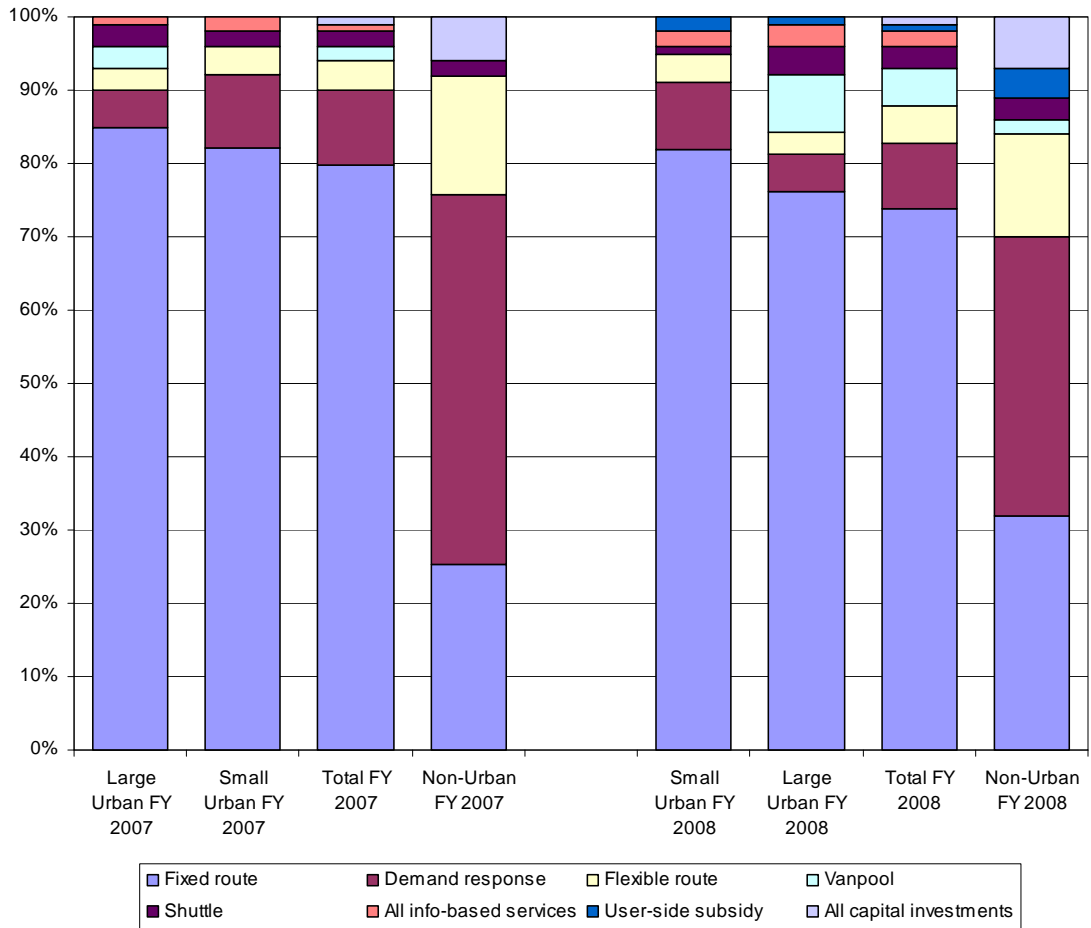


Figure 3-7  
 One-Way Trips by JARC Service Type and Urbanized Area Size  
 (Column Percent)

### 3.5.1 Define assumptions

Several assumptions about employment characteristics and travel patterns were made to support this analysis. These assumptions were initially developed for the FY 2006 analysis and refined or updated as necessary.

- **We counted every job – whether full-time or part-time – as one job.** The distinction between full-time and part-time employment was not considered relevant for the purposes of the JARC evaluation.
- **Jobs were classified as “low-wage” if they paid \$14.42 per hour or less.** This is consistent with the 2006 federal poverty guidelines for the 48 contiguous states and the District of Columbia, which was set at \$20,000 a year for a family/household of four.<sup>8</sup> The JARC program was developed to provide transportation targeted for persons at or below 150% of the Federal poverty guidelines, which would translate to \$30,000 a year or \$14.42 an hour.
- **The Longitudinal Employer-Household Dynamics (LEHD) program was the primary source for jobs data.** Developed by the U.S. Census, LEHD combines federal and state administrative data on employers and employees with core Census Bureau censuses and surveys.
- **Factors were developed for the analysis based on jobs data from 2006.** When quarterly data was available, the second quarter of the calendar year was used. When the project team initiated the analysis late in 2008, data from 2006 was the most recent available.
- **Low-wage jobs were estimated based on national averages.** Using the North American Industry Classification System (NAICS), the team estimated the percentage of jobs that fell below \$30,000 by job category.

### 3.5.2 Data sources

As indicated above, the evaluation team used the data from the LEHD program to estimate jobs data. LEHD was developed by the U.S. Census and combines federal and

“Dennis found a job and is now a tax-paying citizen and with the help of the JARC funding, all of this was possible!”

City of Jackson Transportation Authority (MS)  
JARC Demand Response

state administrative data on employers and employees with core Census Bureau censuses and surveys. For some components of the analysis, the team used OnTheMap, which is an on-line interactive application using LEHD data. OnTheMap enables analysts to define a transit service and estimate the jobs available within a defined corridor or service area.

To estimate low-wage jobs, the evaluation team developed a factor based on two-digit NAICS codes and applied it to the jobs data derived from LEHD. For each two-digit NAICS code, the team estimated the percentage of jobs that fell below the \$30,000 salary threshold used in this analysis to represent low-

<sup>8</sup> For Alaska, the poverty guideline was set at \$25,000 and for Hawaii that figure was set at \$23,000.

wage jobs.<sup>9</sup> For example, NAICS code 72 is assigned to jobs in the accommodations and food services industry. Using Census data from 2006, the team estimated that approximately 93% of the jobs in this category could be categorized as low-wage. This information was aggregated for all industries and used to estimate low-wage jobs accessed by JARC-supported services.

### 3.5.3 Fixed route services

A different approach was used for estimating jobs made accessible by fixed route services. To support the FY 2006 analysis, the evaluation team developed a *jobs density factor* for fixed route services. That analysis began with the assumption that fixed route services provided access to jobs located within one-quarter mile of the route in each direction. Based this assumption, the team calculated the average number of jobs per linear route mile for a sample of routes and then applied that figure to the number of route miles reported for all JARC routes.<sup>10</sup>

A factor was developed for the FY 2006 analysis and subsequently refined for FY 2007 / FY 2008. For FY 2006, the team used the weighted average from 96 routes (including a mix of JARC-supported services and general services and limited geographic coverage) to develop an estimate of total jobs and low-wage jobs per mile. To make this factor more robust for FY 2007 / FY 2008, the team increased the number of JARC-supported routes in the sample and expanded the sample to include service in additional parts of the country. In both cases, the factors were based on “convenience” samples. In other words, the factors incorporated routes based on their availability rather than a random selection process. A complementary factor was developed to estimate low-wage jobs per linear route mile, based on NAICS codes. (See Appendix B for more information.)

The FY 2007 / FY 2008 analysis used the following jobs density factors:

- For all jobs, 1,939 jobs per linear route mile
- For low-wage jobs, 1,047 jobs per linear route mile

This factor was applied to the total mileage reported for fixed route, flexible route, and shuttle services. Table 3-8 summarizes the mileage factors and total mileage reported for FY 2007 and FY 2008.

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<sup>9</sup> Wage estimates were based on national quartile data for each two-digit NAICS code and assumed a straight-line distribution of wages within each quartile.

<sup>10</sup> One linear route mile with a one-quarter mile buffer in each direction provides access to jobs within one-half square mile.

Table 3-8  
Jobs Density Factors and Reported Mileage  
FY 2007 / FY 2008

Service Type	Miles	Factor	Jobs
<b>FY 2007</b>			
Fixed route	8,549	1938.5	16,571,641
Flexible route	722	1938.5	1,399,597
Shuttle/Feeder	426	1938.5	826,053
<b>Total</b>	<b>9,697</b>	<b>1938.5</b>	<b>18,797,291</b>
<b>FY 2008</b>			
Fixed route	14,990	1938.5	29,057,186
Flexible route	1,081	1938.5	2,095,519
Shuttle/Feeder	525	1938.5	1,018,061
<b>Total</b>	<b>16,596</b>	<b>1938.5</b>	<b>32,170,766</b>

### 3.5.4 Demand response services

To measure jobs accessed by demand response services, FTA made a policy decision to include every job in the service area. This calculation identified the theoretical maximum number of jobs made accessible by JARC-supported services. The analysis considered these “potential” jobs accessed.

For each demand response service, grantees were asked to identify the county or counties served. For FY 2006, recipients did not have the option to indicate whether a demand response service covered an entire county or a smaller area. Starting with the FY 2007 / FY 2008 data collection effort, grantees were asked to indicate the approximate percentage of the county served from a drop-down menu with the following choices:

- 1% - 24%
- 25% - 49%
- 50% - 74%
- 75% - 99%
- 100%

Using an automated process, the evaluation team accessed jobs information from LEHD for each county with demand response service. This analysis yielded a dataset with the following information for each service:

- Counties served
- Total jobs based on FY 2006 data from LEHD
- Low-wage jobs based on the distribution by NAICS two-digit industry code
- Percentage of the county included in the service area

The team adjusted the findings based on the percentage of coverage, using the mid-point of each range, and then eliminated duplicates. We then summed the records by year, which yielded estimates of all jobs and low-wage jobs made accessible by demand response services for FY 2007 and for FY 2008. (See Appendix B.)

### 3.5.5 Targeted jobs

Recipients had the option to indicate the number of jobs that their JARC-supported services targeted. The question was originally intended for grantees with specialized services, such as routes that served a particular factory or night-owl services that accessed the night shift at a shipping facility. For FY 2007 / FY 2008, recipients provided information about targeted jobs for about 30% of the trip-based programs. When the information was available, the evaluation team incorporated the data about targeted jobs into the estimate of low-wage jobs accessed. For these cases, the targeted job information replaced the estimated job information.

“When the lone manufacturing plant closed its doors after 30 years of operations, we were able to provide work routes to the nearest job market (30 miles away) and keep families in a community where they have lived for generations.”

Big Five Community Services, Inc./Southern Oklahoma Rural Transportation System  
JARC Demand Response

### 3.5.6 Estimate capacity constraint

The approach described above provides an estimate of the number of jobs that JARC services made accessible based on the geographic coverage of the route. This approach is consistent with FTA’s policy decision to measure the performance of most trip-based JARC programs based on the total number of jobs and low-wage jobs in the service region – in other words, the jobs that a customer could in principle reach using the service. This measure highlights the capability of JARC services to make jobs in a particular service region accessible to low-income earners.

However, this measure may overstate the impact of a service. A service might be expected to reach *any* job in its service area but, under normal circumstances, no transit service could be expected to provide transportation to *every* job in its service region simultaneously. Consider, for example, a county with 10,000 jobs and a demand response service with the following characteristics:

- Five vehicles
- 10 seats per vehicle
- Eight weekday revenue hours per vehicle
- 30-minute average trip time

This scenario yields into a maximum of 400 seat-hours per day:

$$5 \text{ vehicles} \times 10 \text{ seats/vehicle} \times 8 \text{ hours/day} = 400 \text{ seat-hours per day}$$

Using the average trip duration of 30 minutes (or .5 hour), we can translate seat-hours into seats per day. Further assuming that every seat on every trip is taken lets us further redefine seats per day as one-way trips per day:

$$400 \text{ seat-hours} / .5 \text{ hours} = 800 \text{ seats}$$

Finally, assuming that each individual is making a round trip for work purposes, we divide the number of one-way trips by two to represent jobs.

800 one-way trips / 2 = 400 jobs

Using the methodology summarized in Section 3.5.4 above, a county-wide demand response service with a five-van fleet would account for 10,000 jobs accessed in the analysis. But as the example shows, the service could transport no more than 400 people on any given day, making the actual number of jobs accessed closer to 400 per day. So while it may be correct that a demand response service can reach *any* job within its service area, it is also true that a single demand response program cannot reach *every* job within its service area on any given day.

“One worker was able to save \$15.00 per work night by using our paratransit service in place of paying a taxi to pick her up from her night job.”

City of Shreveport (LA)  
JARC Demand Response

For both fixed route and demand response, the measures of jobs accessed described above can be more accurately defined as measures of *potential* accessibility; these measures are independent of transit capacity and instead estimate the maximum number of jobs accessible via JARC-supported services.

To complement this calculation, the team refined the FY 2007 / FY 2008 analysis to incorporate the *theoretical capacity* of trip-based services. As the above example shows, this estimate of capacity

provides a reality check by placing the jobs-accessed measure in the context of actual transit service provision. To develop this calculation, grantees providing fixed route and demand response services were asked to report the following for FY 2007 / FY 2008:

- Number of vehicles operated
- Average number of seats per vehicle
- Number of revenue hours those vehicles are operated
- Months in operation for each year

Using this information, the team estimated the total capacity of fixed route JARC services in operation during FY 2007 / FY 2008. This estimate of capacity puts a constraint on the number of jobs accessed within a broad geographic region to better reflect the access that a JARC-funded service could provide. (Table 3-9 shows the capacity estimation, and Appendix B presents the detailed calculations.)

### 3.5.7 Jobs accessed calculation

Based on these calculations, we estimate that JARC-supported services made 35.9 million jobs accessible in FY 2007 and 51.8 million jobs in FY 2008. (See Table 3-9.)

As the table shows, fixed route made up a little less than half (46%) of all jobs in FY 2007 but more than half (56%) in FY 2008. The difference was even more pronounced for low-wage jobs, where fixed route accounted for half (50%) the low-wage jobs in FY 2007 but 63% in FY 2008. The capacity constraint calculation further illustrates the differences in service coverage between fixed route and demand response services.

The findings reflect the data reported by grantees and do not incorporate any expansion factors or other efforts to interpret missing records. The capacity constraint, in particular,

is likely to be conservative since about 32% of the records used for that calculation did not include usable information about vehicle capacity or annual revenue hours. However, it was not possible to determine whether the missing records had the same characteristics as the reported information.

Table 3-9  
Jobs Accessed Estimate for FY 2007 / FY 2008

Service type	All jobs		Low-wage jobs		Capacity constraint	
	#	%	#	%	#	%
FY 2007						
Fixed route	16,571,641	46%	8,946,207	50%	3,142,891	78%
Flex route	1,399,597	4%	755,573	4%	25,346	1%
Shuttle feeder	826,053	2%	445,945	2%	33,732	1%
Demand response	17,133,060	48%	7,830,070	44%	806,505	20%
Total jobs	35,930,351	100%	17,977,795	100%	4,008,475	100%
FY 2008						
Fixed route	29,057,186	56%	15,686,534	63%	2,743,927	66%
Flex route	2,095,519	4%	1,131,267	5%	30,723	1%
Shuttle feeder	1,018,061	2%	549,601	2%	43,844	1%
Demand response	19,663,268	38%	7,687,935	31%	1,340,958	32%
Total jobs	51,834,034	100%	25,055,336	100%	4,159,452	100%

***For FY 2007, JARC-supported services were estimated to provide access to a maximum of 35.9 million jobs, of which 18.0 million were categorized as low-wage. It is further estimated that JARC services could provide access to approximately 4.0 million jobs based on vehicle capacity constraints.***

***For FY 2008, JARC-supported services were estimated to provide access to a maximum of 51.8 million jobs, of which 25.1 million were categorized as low-wage. It is further estimated that JARC services could provide access to approximately 4.2 million jobs based on vehicle capacity constraints.***

### 3.6 Primary Goals

As described in Section 1.0, the JARC and New Freedom service matrices were developed to provide a user-friendly way to summarize JARC- and NF-funded services according to the primary goal. The five goals are:

- Expanded geographic coverage
- Extended service hours or days
- Improved system capacity
- Improved access/connections
- Improved customer knowledge

The next four tables present information about JARC-supported programs in relation to these goals. Tables 3-10 and 3-11 show the distribution of JARC **services** for FY 2007 and FY 2008. Tables 3-12 and 3-13 summarize the **performance measures** by goal for FY 2007 and FY 2008, including one-way trips and customer contacts. It should be noted that not every goal was considered applicable to every type of service. For example, grantees were not allowed to select “Improved customer knowledge” as a goal for demand response services.

For FY 2007, services were evenly split among three major goals: providing expanded geographic coverage (29%), providing expanded days and hours of service (29%), and improved access/connections (27%). For FY 2008, the findings were similar: expanded geographic coverage (30%), expanded days and hours of service (27%), and improved access/connections (27%). This distribution likely reflects the large number of trip-based services in the dataset.

### **3.6.1 Trip-based services**

For trip-based services, the most commonly selected goals were expanded geographic coverage and expanded days and hours of service. Together these goals accounted for more than 60% of the fixed route services in both FY 2007 and FY 2008.

In FY 2007, grantees reported the following:

- Expanded geographic coverage was the major goal, with 44% of reported one-way trips.
- Other major goals were extended hours or days of service (29% of trips) and improved access/connections (20%).

In FY 2008, grantees reported the following performance measures for trip-based services:

- About 40% of reported one-way trips were associated with services to expand geographic coverage.
- Other major goals were extended hours or days of service (28% of trips) and improved access/connections (25%).

The breakdown varied by mode. In FY 2007, respondents reported a primary goal of expanded days and hours of service for 38% of fixed route services; this goal applied to only 32% of demand response services. The difference was more pronounced in FY 2008, when 39% of fixed route services had a goal of extending service span, compared to 26% of demand response.

### **3.6.2 Information-based services**

Mobility manager was the most commonly reported program for information-based services, with a typical goal of improved access/connections. Virtually every other program in this category showed the goal of improved customer knowledge, which was the only other goal available.

In FY 2007, the following performance measures were reported for information-based services:

- More than 60,000 customer contacts and 218,000 one-way trips for mobility managers
- About 2,500 customer contacts for one-stop centers
- About 2,500 people participated in one-on-one transit training and nearly 800 in group training.

In FY 2008, grant recipients reported the following number for information-based services:

- More than 59,000 customer contacts and 550,000 one-way trips for mobility managers
- About 3,600 customer contacts for one-stop centers
- More than 6,000 hits for Internet-based services
- More than 3,000 people trained in one-on-one training and nearly 1,400 participating in group training

### **3.6.3 Capital investment programs**

In FY 2007, most of the capital investment programs provided vehicles to individuals (usually through loans), with a goal of improved access/connections. In FY 2008, programs providing vehicles to individuals and to agencies were equally represented. Most indicated a primary goal of improve access/connections or improved system capacity. The change from FY 2007 to FY 2008 may reflect the influence of a single grantee, Ways To Work, which reported 26 separate subrecipients with vehicle loan programs for individuals in FY 2007 but only 11 programs in FY 2008.

In FY 2007, the following performance measures were reported for capital investment programs:

- More than 750 vehicles or vehicle loans were made available
- Fifteen vehicles were acquired for agencies, which generated more than 100,000 one-way trips
- About 250 vehicles were added to car-sharing programs, which created more than 2,300 one-way trips.

In FY 2008, grant recipients reported the following number for capital investment programs:

- More than 300 vehicles or loans were provided for individuals
- More than 100 vehicles were provided for transit agencies
- Vehicles for transit agencies yielded nearly 200,000 one-way trips
- About 250 vehicles were added to car-sharing programs, which created more than 1,000 one-way trips.

While the numbers associated with non-trip-based services are small in relation to one-way trips and jobs accessed, they represent very real mobility benefits at a local level.

The matrix approach allows FTA to capture this information and ensure that the benefits of these non-traditional programs are not overshadowed by the measures of one-way trips.

Table 3-10  
FY 2007 JARC Service Matrix – Distribution of Services by Primary Goal

JARC-FUNDED SERVICE	PRIMARY SERVICE GOAL				
	(A) Expanded Geographic Coverage	(B) Extended Service Hours/Days	(C) Improved System Capacity	(D) Improved Access / Connections	(E) Improved Customer Knowledge
<b>I. Trip-Based</b>	<b>34%</b>	<b>34%</b>	<b>9%</b>	<b>23%</b>	
1. Fixed route	34%	39%	8%	20%	
2. Flexible routing	47%	29%	0%	24%	
3. Shuttle service	50%	20%	0%	30%	
4. Demand response	30%	32%	12%	25%	
5. Vanpool			33%	67%	
6. User-side subsidy	50%	17%	17%	17%	
<b>II. Information-Based</b>				<b>28%</b>	<b>73%</b>
1. Mobility manager**				100%	
2. One-stop center					100%
3. Trip/itinerary planning					100%
4. On-on-one training					100%
5. Internet-based information					100%
6. Information materials/ marketing					100%
7. Transportation resource training					100%
<b>III. Capital Investment</b>	<b>6%</b>	<b>2%</b>	<b>22%</b>	<b>70%</b>	<b>0%</b>
1. Vehicle for individual*				100%	
2. Vehicle for agency*	25%	13%	63%		
3. Car-sharing*	50%		50%		
4. ITS hardware / software investment			100%	0%	0%
5. Other capital projects	0%	0%	40%	60%	0%
<b>All Projects</b>	<b>29%</b>	<b>29%</b>	<b>9%</b>	<b>27%</b>	<b>5%</b>

Note that matrix rows add up to 100%.

\* For these categories, grantees also were asked to report the number of one-way trips provided, if applicable.

\*\*Although FTA funds "mobility managers" as an eligible capital expense, with an 80/20 federal to local match, they are categorized here as "information-based services" for reporting purposes.

Table 3-11  
FY 2008 JARC Service Matrix – Distribution of Services by Primary Goal

JARC-FUNDED SERVICE	PRIMARY SERVICE GOAL				
	(A) Expanded Geographic Coverage	(B) Extended Service Hours/Days	(C) Improved System Capacity	(D) Improved Access / Connections	(E) Improved Customer Knowledge
<b>I. Trip-Based</b>	<b>35%</b>	<b>31%</b>	<b>10%</b>	<b>25%</b>	
1. Fixed route	36%	39%	8%	18%	
2. Flexible routing	45%	28%	0%	28%	
3. Shuttle service	44%	20%	0%	37%	
4. Demand response	31%	26%	14%	29%	
5. Vanpool			36%	64%	
6. User-side subsidy	27%	14%	23%	36%	
<b>II. Information-Based</b>				<b>29%</b>	<b>71%</b>
1. Mobility manager**				100%	
2. One-stop center					100%
3. Trip/itinerary planning					100%
4. On-on-one training					100%
5. Internet-based information					100%
6. Information materials / marketing					100%
7. Transportation resource training					100%
<b>III. Capital Investment</b>	<b>9%</b>	<b>7%</b>	<b>35%</b>	<b>50%</b>	<b>0%</b>
1. Vehicle for individual*				100%	
2. Vehicle for agency*	19%	19%	63%		
3. Car-sharing*	50%		50%		
4. ITS hardware / software investment			75%	25%	0%
5. Other capital projects	0%	0%	33%	67%	0%
<b>All services</b>	<b>30%</b>	<b>27%</b>	<b>11%</b>	<b>27%</b>	<b>5%</b>

Note that matrix rows add up to 100%.

\* For these categories, grantees also were asked to report the number of one-way trips provided, if applicable.

+Although FTA funds "mobility managers" as an eligible capital expense, with an 80/20 federal to local match, they are categorized here as "information-based services" for reporting purposes.

**Table 3-12**  
**FY 2007 JARC Service Matrix – Service Outputs by Primary Goal**

<b>PRIMARY SERVICE GOAL</b>					
<b>JARC-FUNDED SERVICE</b>	<b>(A) Expanded Geographic Coverage</b>	<b>(B) Extended Service Hours/Days</b>	<b>(C) Improved System Capacity</b>	<b>(D) Improved Access / Connections</b>	<b>(E) Improved Customer Knowledge</b>
<b>I. Trip-Based</b>					
1. Fixed route	6,881,498 one-way trips	4,657,357 one-way trips	1,044,397 one-way trips	2,971,801 one-way trips	
2. Flexible routing	540,000 one-way trips	214,952 one-way trips	0	44,954 one-way trips	
3. Shuttle service	200,548 one-way trips	57,193 one-way trips	0	220,069 one-way trips	
4. Demand response	936,651 one-way trips	667,149 one-way trips	180,942 one-way trips	246,138 one-way trips	
5. Vanpool			66,706 one-way trips	346,490 one-way trips	
6. User-side subsidy	876 one-way trips	9,152 one-way trips	13,238 one-way trips	1,128 one-way trips	
<b>II. Information-Based</b>					
1. Mobility manager**				60,419 contacts 218,461 one-way trips	
2. One-stop center					2,575 contacts
3. Trip/itinerary planning					4,802 contacts
4. On-on-one training					2,486 trained
5. Internet-based information					0
6. Information materials/ marketing					0
7. Transportation resource training					792 trained
<b>III. Capital Investments</b>					
1. Vehicle for individual*				757 vehicles 130 one-way trips	
2. Vehicle for agency*	3 vehicles 3,047 one-way trips	1,200 one-way trips	12 vehicles 103,658 one-way trips		
3. Car-sharing*	250 vehicles 2,389 one-way trips		680 vehicles		
..4. ITS hardware / software investment			0	0	0
5. Other capital projects	0	0	0	0	0

\* For these categories, grantees also were asked to report the number of one-way trips provided, if applicable.  
+Although FTA funds "mobility managers" as an eligible capital expense, with an 80/20 federal to local match, they are categorized here as "information-based services" for reporting purposes.

**Table 3-13**  
**FY 2008 JARC Service Matrix – Service Outputs by Primary Goal**

<b>PRIMARY SERVICE GOAL AND OUTPUT MEASURE</b>					
<b>JARC-FUNDED SERVICE</b>	<b>(A) Expanded Geographic Coverage</b>	<b>(B) Extended Service Hours/Days</b>	<b>(C) Improved System Capacity</b>	<b>(D) Improved Access / Connections</b>	<b>(E) Improved Customer Knowledge</b>
<b>I. Trip-Based</b>					
1. Fixed route	6,843,740 one-way trips	5,531,594 one-way trips	1,265,638 one-way trips	3,572,479 one-way trips	
2. Flexible routing	696,580 one-way trips	260,537 one-way trips	0	108,894 one-way trips	
3. Shuttle service	292,055 one-way trips	115,514 one-way trips	0	270,107 one-way trips	
4. Demand response	1,106,936 one-way trips	467,156 one-way trips	230,299 one-way trips	391,392 one-way trips	
5. Vanpool			100,848 one-way trips	1,143,619 one-way trips	
6. User-side subsidy	20,176 one-way trips	18,658 one-way trips	131,108 one-way trips	158,828 one-way trips	
<b>II. Information-Based</b>					
1. Mobility manager**				59,438 contacts 550,750 one-way trips	
2. One-stop center					3,636 contacts
3. Trip/itinerary planning					5,242 contacts
4. On-on-one training					3,128 trained
5. Internet-based information					6,049 hits
6. Information materials/ marketing					N/A
7. Transportation resource training					1,398 trained
<b>III. Capital Investment</b>					
1. Vehicle for individual*				336 vehicles 524 one-way trips	
2. Vehicle for agency*	67 vehicles 3,342 one way trips	4 vehicles 19,764 one-way trips	47 vehicles 167,253 one-way trips		
3. Car-sharing*	250 vehicles 1,014 one-way trips		2 vehicles		
..4. ITS hardware / software investment			0	0	0
5. Other capital projects	0	0	0	0	0

\* For these categories, grantees also were asked to report the number of one-way trips provided, if applicable.  
+Although FTA funds "mobility managers" as an eligible capital expense, with an 80/20 federal to local match, they are categorized here as "information-based services" for reporting purposes.

## 4.0 Analysis of New Freedom Services

As described in Section 1.0, FTA has established the following three key performance measures for the New Freedom program:

- Actual or estimated number of rides (as measured by one-way trips) provided for individuals with disabilities as a result of the New Freedom projects implemented in the current reporting year.
- Increases or enhancements related to geographic coverage, service quality and/or service times that impact availability of transportation services for individuals with disabilities as a result of the New Freedom projects implemented in the current reporting year.
- Additions or changes to environmental infrastructure (e.g., transportation facilities, sidewalks, etc), technology, and vehicles that impact availability of transportation services as a result of the New Freedom projects implemented in the current reporting year.

This section provides (1) an overview of the characteristics of New Freedom grant recipients that reported for the FY 2007 / FY 2008 reporting period and (2) a description of the New Freedom accomplishments toward meeting the stated program goals.

The information is based on data collected from the 57 New Freedom grant recipients that submitted complete reports for one or both years. The collected data presents snapshots of activity for New Freedom-funded services as of the last day of each fiscal year – September 30, 2007, the last day of FY 2007, and September 30, 2008, the last day of FY 2008. Note that the start-up of the New Freedom program was slower than expected and FY 2007 was the first year for which grantees reported on New Freedom projects; hence, the relatively small number of projects reported on for FY 2007. Finally, because NF projects may be awarded for various periods of time, which means the mix of projects is ever-changing, the data from year to year should be viewed independently, not as a trend over time.

### 4.1 Service Types

Grantees reported a total of 60 active New Freedom-funded services for FY 2007 and 203 active New Freedom-funded services in FY 2008. Given the relatively small number of projects included in the dataset, caution should be exercised when looking at percentages of projects by category, particularly for FY 2007.

Similar to the JARC service matrix, we used the New Freedom service matrix to collect data on New Freedom-eligible services including:

- I. **Trip-based services**, which provide transportation directly to individuals. These services include flexible routing, shuttle/feeder service, expanded ADA paratransit service, same-day ADA paratransit service, door-to-door/door-through door service, volunteer driver programs, user-side subsidies/vouchers, vanpool, and aide/escort assistance.
- II. **Information-based services**, which provide information about transportation services to individuals but do not provide direct transportation services. These

III. **Capital investment programs**, which include facilities and infrastructure to support transportation services. These services include vehicle-based programs (such as those making automobiles available to individuals, transit agencies, other agencies), accessible taxis, vanpool vehicles, car-sharing, ITS-related software/hardware improvements, infrastructure improvements beyond those required by the ADA (such as elevators, large capacity wheelchair lifts, additional wheelchair securement areas, and other infrastructure improvements).

Out of the active New Freedom-funded services, more than half were trip-based (58% for FY 2007 and 54% for FY 2008). Information-based services accounted for about one-quarter of the services (25% for FY 2007 and 28% for FY 2008). Capital investment

“Our biggest accomplishment was providing access to transportation to a person who may not have left the house in years. One woman was able to visit her husband in a nearby assisted living center after not seeing him for two years.”

Wyoming Services for Independent Living  
New Freedom User-Side Subsidy/Voucher

programs accounted for 17% of projects in FY 2007 and 18% of projects in FY 2008.

As shown in Table 4-1 and Figure 4-1, the most commonly reported project for both years was expanded ADA paratransit service (32% of all New Freedom projects in FY 2007 and 20% in FY 2008). Shuttle/feeder services were also high on the list of trip-based

projects, with 8% of all New Freedom projects reported in FY 2007 and 9% in FY 2008. Door-to-door/door-through-door projects were the next most common trip-based projects, with 7% of all New Freedom projects in FY 2007 and 9% in FY 2008.

In both FY 2007 and FY 2008, mobility manager projects (categorized as information-based services) were the second most common activity for grantees, comprising 10% of all New Freedom projects in FY 2007 and nearly double that percentage (18%) in FY 2008. One-on-one transit training (travel training) was the second most common information-based service for both reporting years, with that project type comprising 7% of all New Freedom services reported for FY 2007 and 4% for FY 2008.

The percentage of capital investment projects is relatively small (17% in FY 2007 and 18% in FY 2008). The most common projects reported for FY 2007, were vehicles for transit agencies and other infrastructure improvements (each representing 7% of all New Freedom projects). The most common projects reported for FY 2008 were vehicles for transit agencies and vehicles for other agencies (each representing 5% of all New Freedom projects).

Table 4-1  
Distribution of New Freedom-Funded Services by Service Type  
FY 2007 / FY 2008

Service Type	FY 2007 Services		FY 2008 Services	
	#	%	#	%
Shuttle feeder services	6	10%	23	11%
Expanded ADA paratransit service	19	32%	40	20%
Door-to-door or door-through-door	4	7%	19	9%
Other trip-based services	6	9%	27	14%
<b>Total trip-based</b>	<b>35</b>	<b>58%</b>	<b>109</b>	<b>54%</b>
Mobility manager	6	10%	36	18%
Other information-based	9	15%	21	10%
<b>Total information-based</b>	<b>15</b>	<b>25%</b>	<b>57</b>	<b>28%</b>
<b>Total capital investment</b>	<b>10</b>	<b>17%</b>	<b>37</b>	<b>18%</b>
<b>All programs</b>	<b>60</b>	<b>100%</b>	<b>203</b>	<b>100%</b>

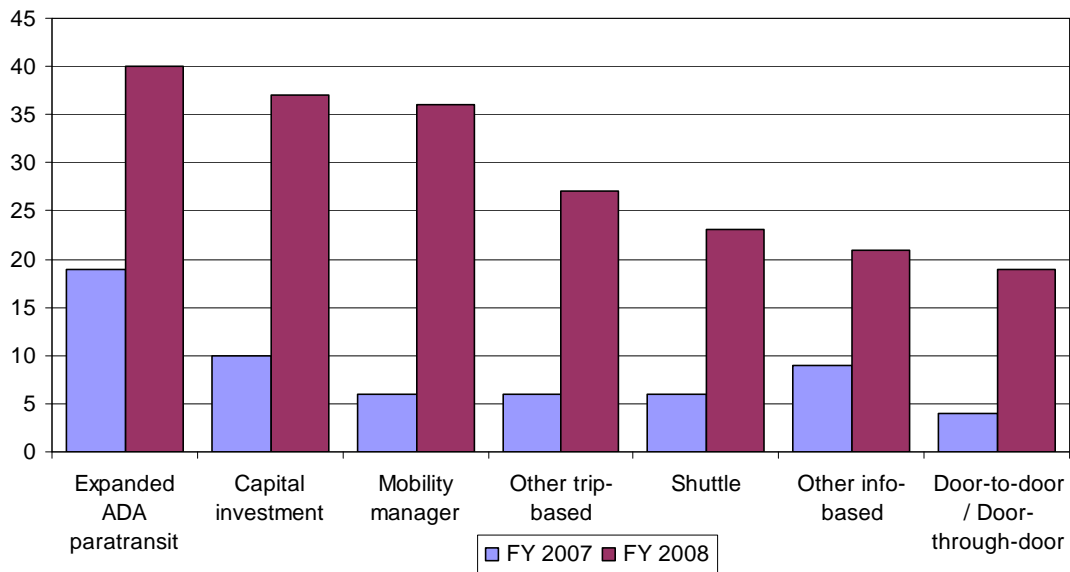


Figure 4-1  
Distribution of New Freedom-Funded Services by Service Type  
FY 2007 / FY 2008

## 4.2 Size of Urbanized Area

For each individual service, grantees were asked to report on the size of the service area. Service area size was based on the location of the service, not the location of the grant recipient. For example, state agencies may fund projects in both small urban and rural areas; large urban grantees may fund service in the large urban area and also may fund projects located in smaller jurisdiction located within their service area.

New Freedom-supported services in FY 2007 were divided fairly evenly among large urban areas with populations 200,000 and greater (28%), small urban areas with populations from 50,000 to 199,999 (33%), and non-urbanized/rural areas (38%). In FY 2008, the split of services shifted slightly toward the large urban and non-urbanized/rural areas with 35% of projects in large urban areas, 42% of services in non-urban/rural, and 23% in small urban areas (see Table 4-2 and Figure 4-2).

As shown in the table and graphic chart, in FY 2007, 51% of trip-based services were located in non-urban/rural areas, 31% in small urban, and only 17% in large urban areas. In contrast, during the FY 2007 reporting year, 60% of information-based services were found in large urban areas. During the same reporting period, 50% of the capital investment projects were funded in small urban areas.

In FY 2007, 83% of shuttle/feeder services were located in non-urban/rural areas in FY 2007 and expanded ADA service projects were most commonly found in the non-urban/rural areas (53%). In FY 2007, 50% of the door-to-door or door-through-door paratransit service enhancements were provided in small urban areas. It should be remembered that only 60 services were reported on for FY 2007 so the distribution of services can be overly influenced by these small numbers.

“The mobility manager has been training others (teachers, agencies, etc.) to be able to teach people how to use all aspects of public transportation. This multiplies the effect of travel training in the community.”

City of Lubbock (TX)  
New Freedom Mobility Manager

In FY 2008, 50% of trip-based services were located in non-urban/rural areas, with the remaining trip-based services evenly split between large urban and non-urban/rural areas. Information based services were more commonly found in large urban areas (42%), followed by non-urban/rural areas at 37%, and then small urban areas at 21%; capital investments projects were more likely to be found in large urban areas (52%) with the remaining projects split somewhat evenly between non-urban/rural areas (27%) and small urban areas (22%).

In FY 2008, 64% of shuttle/feeder services were based in non-urban/rural areas, with 27% based in large urban areas and 9% in small urban areas. Again, expanded ADA paratransit service was most often funded in non-urban/rural areas (45%), with 33% funded in small urban and 23% in large urban areas. Door-to-door or door-through-door services were also most often funded in non-urban/rural areas (53%), with 26% in small urban and 21% in large urban areas.

Table 4-3 and Figure 4-3 show the distribution of projects within each type of service area. In FY 2007, more than half the New Freedom services provided in large urban areas were for information-based services (53%), another 35% were for trip-based

“Acquiring and maintaining a dependable group of volunteers is critical to this program. This past year the original three volunteers became a group of 34 and began to establish that volunteer culture which nurtures and creates greater commitment to the program.”

Special Transit (CO)  
New Freedom Volunteer Driver Program

services, and 12% were for capital investment projects. In contrast, trip-based services accounted for 55% of small urban and 78% of non-urban/rural projects. Capital investment projects accounted for 25% of small urban and 13% of non-urban/rural projects, and information-based services comprised 20% of small urban services and 9% of non-urban/rural areas.

In FY 2008, New Freedom services were allocated more evenly in large urban areas, with 39% for trip-based services, 34% for information-based services, and 27% for capital investment projects. More than half

(57%) of the small urban projects were trip-based services, 26% were for information-based services, and 17% for capital-investment projects. Nearly two-thirds (64%) of the non-urban/rural projects were trip based, 25% were for information-based services, and 12% were for capital-investment projects.

### 4.3 Geographic Coverage

New Freedom grant recipients were asked to indicate the geographical boundaries of their service areas. The results of this analysis are shown in Table 4-4 and Figure 4-4.

Overall, in FY 2007, 37% of New Freedom projects were located in county service areas, followed by 23% each in regional and city/town jurisdictions. Trip-based services were most commonly found in county jurisdictions (34%), followed by city/town (26%) and regional service areas (23%). One-third (33%) of information-based services were located both in county and regional areas, with 13% located in both multiple jurisdictions and city/town jurisdiction. Finally, 50% of the capital investment projects were located in county jurisdictions, followed by 30% in city/town locales. These results are not surprising given that county and city/town jurisdictions represent common geographical and governmental boundaries.

Similarly, in FY 2008, 38% of New Freedom projects were located in county jurisdictions, 20% in city/town jurisdictions, and 18% in regional service areas. Trip-based services were most often found in counties (36%), followed by 23% located in cities/towns and 17% in regional service areas. Information-based services also were found most often in counties (39%), with 22% located in regional areas, and 19% in multiple jurisdictions. Finally, capital investment programs were again most commonly found in counties (43%), followed by cities/towns (24%) and regional areas (14%).

Table 4-2  
 New Freedom Services by Type and Urbanized Area Size  
 FY 2007 / FY 2008  
 (Row Percent)

Service	#	Size of Urbanized Area			Total
		Large Urban	Small Urban	Non-Urban/Rural	
<i><b>FY 2007</b></i>					
Shuttle/feeder	6	17%	0%	83%	100%
Expanded ADA paratransit	19	11%	37%	53%	100%
Door-to-door / door-through door	4	25%	50%	25%	100%
Other trip-based	6	33%	33%	33%	100%
<b>All trip-based</b>	<b>35</b>	<b>17%</b>	<b>31%</b>	<b>51%</b>	<b>100%</b>
Mobility manager	6	33%	50%	17%	100%
Other information based	9	78%	11%	11%	100%
<b>All information-based</b>	<b>15</b>	<b>60%</b>	<b>27%</b>	<b>13%</b>	<b>100%</b>
<b>All capital investment</b>	<b>10</b>	<b>20%</b>	<b>50%</b>	<b>30%</b>	<b>100%</b>
<b>All programs</b>	<b>60</b>	<b>28%</b>	<b>33%</b>	<b>38%</b>	<b>100%</b>
<i><b>FY 2008</b></i>					
Shuttle/feeder	23	27%	9%	64%	100%
Expanded ADA paratransit	40	23%	33%	45%	100%
Door-to-door / door-through door	19	21%	26%	53%	100%
Other trip-based	27	33%	26%	41%	100%
<b>All trip-based</b>	<b>109</b>	<b>26%</b>	<b>25%</b>	<b>50%</b>	<b>100%</b>
Mobility manager	36	22%	25%	53%	100%
Other information-based	21	76%	14%	10%	100%
<b>All information-based</b>	<b>57</b>	<b>42%</b>	<b>21%</b>	<b>37%</b>	<b>100%</b>
<b>All capital investment</b>	<b>37</b>	<b>51%</b>	<b>22%</b>	<b>27%</b>	<b>100%</b>
<b>All programs</b>	<b>203</b>	<b>35%</b>	<b>23%</b>	<b>42%</b>	<b>100%</b>

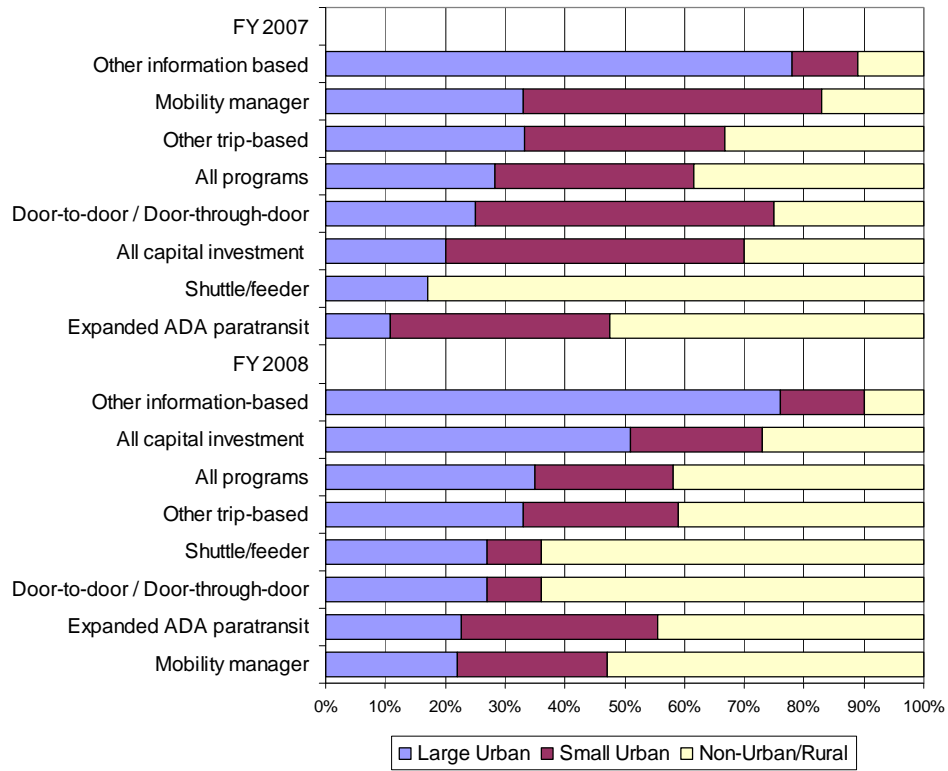


Figure 4-2  
 New Freedom Services by Type and Urbanized Area Size  
 FY 2007 / FY 2008  
 (Row Percent)

Table 4-3  
 New Freedom Services by Type and Urbanized Area Size  
 FY 2007 / FY 2008  
 (Column Percent)

Service	#	Size of Urbanized Area			Total
		Large Urban	Small Urban	Non-Urban/Rural	
<b>FY 2007</b>					
Shuttle/feeder	6	6%	0%	22%	10%
Expanded ADA paratransit	19	12%	35%	43%	32%
Door-to-door / door-through door	4	6%	10%	4%	7%
Other trip-based	6	12%	10%	9%	10%
<b>All trip-based</b>	<b>35</b>	<b>35%</b>	<b>55%</b>	<b>78%</b>	<b>58%</b>
Mobility manager	6	12%	15%	4%	10%
Other information-based	9	41%	5%	4%	15%
<b>All information-based</b>	<b>15</b>	<b>53%</b>	<b>20%</b>	<b>9%</b>	<b>25%</b>
<b>All capital investment</b>	<b>10</b>	<b>12%</b>	<b>25%</b>	<b>13%</b>	<b>17%</b>
<b>All programs</b>	<b>60</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>FY 2008</b>					
Shuttle/feeder	23	8%	4%	16%	11%
Expanded ADA paratransit	40	13%	28%	21%	20%
Door-to-door / door-through door	19	6%	11%	12%	9%
Other trip-based	27	12%	14%	18%	16%
<b>All trip-based</b>	<b>109</b>	<b>39%</b>	<b>57%</b>	<b>64%</b>	<b>54%</b>
Mobility manager	36	11%	19%	22%	18%
Other information-based	21	23%	6%	2%	10%
<b>All information-based</b>	<b>57</b>	<b>34%</b>	<b>26%</b>	<b>25%</b>	<b>28%</b>
<b>All capital investment</b>	<b>37</b>	<b>27%</b>	<b>17%</b>	<b>12%</b>	<b>18%</b>
<b>All programs</b>	<b>203</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

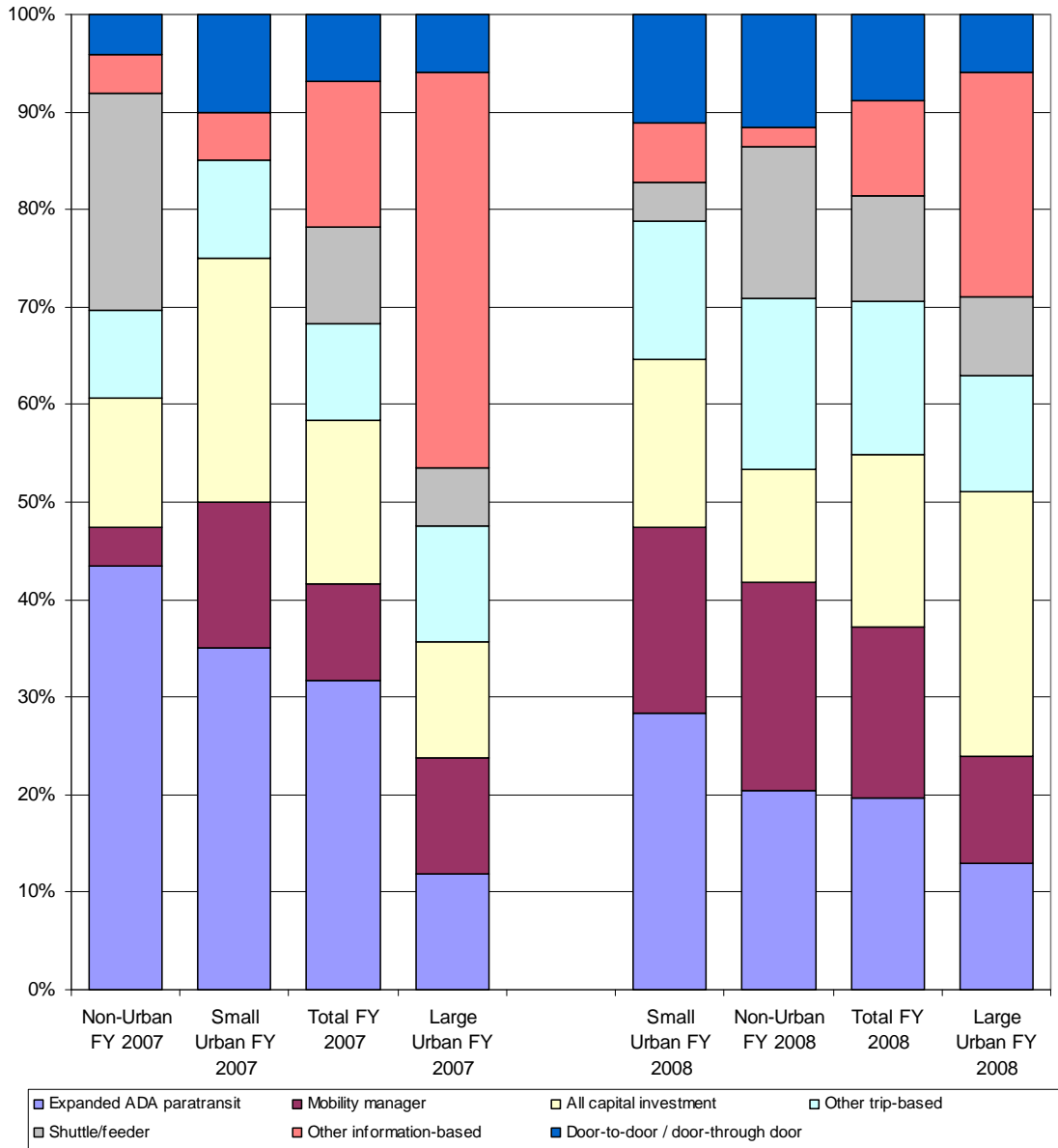


Figure 4-3  
 New Freedom Services by Type and Urbanized Area Size  
 FY 2007 / FY 2008  
 (Column Percent)

Table 4-4  
 New Freedom Service Type by Geographic Coverage  
 FY 2007 / FY 2008  
 (Row Percent)

Service Category	#	State	County	Region	Multiple	City/Town	Other	Total
<b>FY 2007</b>								
Trip-based	35	0%	34%	23%	9%	26%	9%	100%
Information-based	15	0%	33%	33%	13%	13%	7%	100%
Capital investment	10	10%	50%	10%	0%	30%	0%	100%
<b>Total</b>	<b>60</b>	<b>2%</b>	<b>37%</b>	<b>23%</b>	<b>8%</b>	<b>23%</b>	<b>7%</b>	<b>100%</b>
<b>FY 2008</b>								
Trip-based	109	1%	36%	17%	14%	23%	9%	100%
Information-based	57	5%	39%	22%	19%	12%	2%	100%
Capital investment	37	2%	43%	14%	11%	24%	5%	100%
<b>Total</b>	<b>103</b>	<b>2%</b>	<b>38%</b>	<b>18%</b>	<b>15%</b>	<b>20%</b>	<b>6%</b>	<b>100%</b>

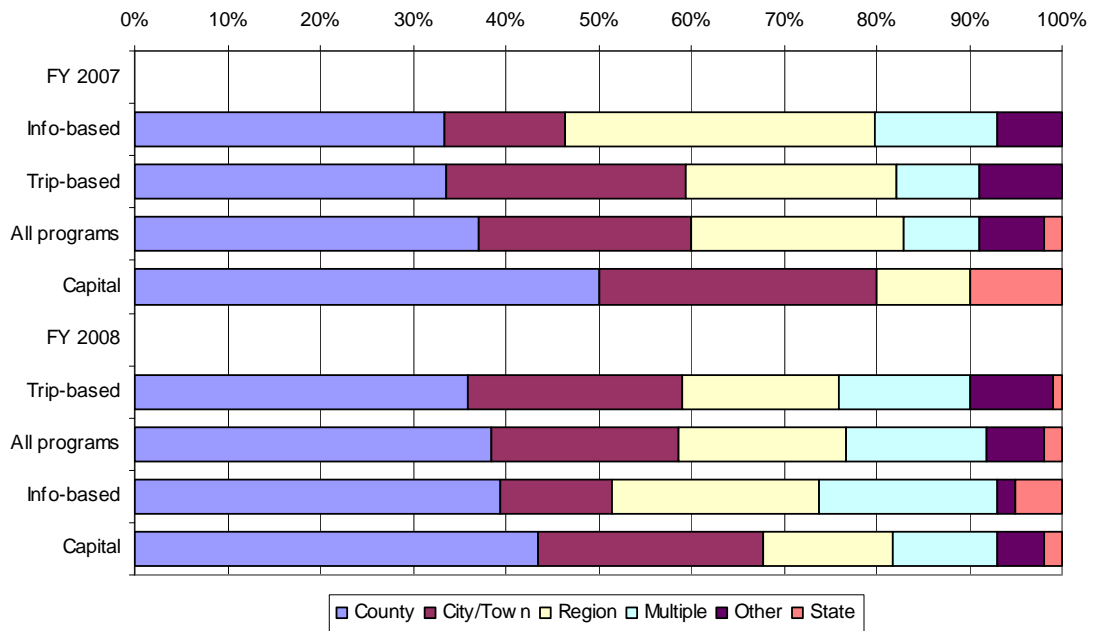


Figure 4-4  
 New Freedom Service Type by Geographic Coverage  
 FY 2007 / FY 2008  
 (Row Percent)

#### **4.4 Key New Freedom Performance Measure: One-Way Trips**

The first key performance measure for the New Freedom Program is:

- Actual or estimated number of rides (as measured by one-way trips) provided for individuals with disabilities as a result of the New Freedom projects implemented in the current reporting year.

As has been the case for JARC reporting in previous years, New Freedom grant recipients were asked to report annual one-way trips for trip-based services. In FY 2008, some grant recipients with information-based services or capital-investment projects also reported on one-way trips for projects like mobility managers and capital-investment projects where vehicles were provided to agencies.

***For FY 2007 – the first year of reporting – New Freedom-supported services provided 767,275 one-way trips***

***For FY 2008, New Freedom-supported services provided 1.27 million one-way trips***

With only 60 services operating in FY 2007, 94% of the trips provided in the first year of operation for New Freedom were in small urban areas, followed by 6% in non-urban/rural areas. With fewer than 2,000 trips reported, large urban areas accounted for less than 1% of trips. In FY 2008, with 203 services operating, 56% of trips were provided in small urban areas, 27% in large urban areas, and 17% in non-urban/rural communities. (See Table 4-5 and Figure 4-5.)

In both FY 2007 and FY 2008, the vast majority of trips were provided as expanded ADA paratransit service (711,414 in FY 2007 and 721,143 in FY 2008), most of which were provided in small urban areas (702,430 in FY 2007 and 667,541 in FY 2008). In FY 2007, most of the remaining trips were provided via user-side subsidy/voucher programs (34,699) and shuttle/feeder services (16,940). In FY 2008 the remaining trips were distributed somewhat differently with 158,038 for shuttle/feeder services, 70,675 for door-to-door or door-through-door services, and 52,359 for user-side subsidies/vouchers.

Clear differences were apparent among geographic settings. As noted above, during FY 2007, 99% of the one-way trips on expanded ADA paratransit services were provided in small urban areas; in FY 2008 that percentage was 93%. Similarly, in FY 2007, 92% of door-to-door or door-through-door trips were provided in small urban areas. At the same time, 99% of shuttle/feeder services were provided in non-urban/rural communities. In FY 2008, 207,180 mobility manager trips were reported (representing all of the information-based service trips), with 72% in large urban, 25% in non-urban/rural areas, and 3% in small urban areas. Also in FY 2008, another 13,340 trips were provided through capital investment projects including vehicles purchased by transit and other transportation agencies, along with accessible taxis (see Table 4-5 and Figure 4-5).

As shown in Table 4-6 and Figure 4-6, in FY 2007, expanded ADA paratransit service accounted for 98% of all trips in small urban areas but only 28% of trips in large urban

areas. Also in FY 2007, 36% of non-urban/rural trips were for shuttle/feeder service, 18% for expanded ADA paratransit service, and – not shown in the table – 45% of the trips were for user-side subsidies/vouchers. Again, only 60 services were reported on for FY 2007 and no trips were provided as part of the information-based services or capital-investment projects.

During FY 2008, with 203 services operating, 44% of the large urban trips were provided through mobility manager projects (all of the trips provided in the information-based service category). Most of the rest of the trips were reported in trip-based categories, most notably shuttle/feeder service representing 37% of all trips in large urban areas. In contrast, at 95%, expanded ADA paratransit service continued to dominate trips for the small urban areas. Trips provided in non-urban/rural areas were more spread among trip-based services (73%), including shuttle feeder service, expanded ADA service, and door-to-door service or door-through-door service, as well as mobility manager trips provided under the information-based services category (24% of all trips).

Table 4-5  
 One-Way Trips by New Freedom Service Type and Urbanized Area Size  
 FY 2007 / FY 2008  
 (Row Percent)

Service Type	Size of Urbanized Area			Total
	Large Urban	Small Urban	Non-Urban/Rural	
<b>FY 2007</b>				
Shuttle/feeder services	1%	0%	99%	100%
Expanded ADA paratransit service	0%	99%	1%	100%
Door-to-door or door-through-door	1%	92%	7%	100%
Other trip-based services	4%	38%	59%	100%
<b>All trip-based services</b>	<b>0%</b>	<b>94%</b>	<b>6%</b>	<b>100%</b>
<b>All info-based services</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
<b>All capital investments</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
<b>Total</b>	<b>0%</b>	<b>94%</b>	<b>6%</b>	<b>100%</b>
<b>FY 2008</b>				
Shuttle/feeder services	80%	0%	20%	100%
Expanded ADA paratransit service	3%	93%	4%	100%
Door-to-door / Door-through-door	12%	24%	65%	100%
Other trip-based services	30%	16%	54%	100%
<b>All trip-based services</b>	<b>18%</b>	<b>67%</b>	<b>15%</b>	<b>100%</b>
<b>All info-based services</b>	<b>72%</b>	<b>3%</b>	<b>25%</b>	<b>100%</b>
<b>All capital investments</b>	<b>46%</b>	<b>6%</b>	<b>48%</b>	<b>100%</b>
<b>Total</b>	<b>27%</b>	<b>56%</b>	<b>17%</b>	<b>100%</b>

Notes:

There were no trips reported for information-based or capital investment projects in FY 2007.

In FY 2008, mobility manager was the only program reporting trips in the Information-Based Services category.

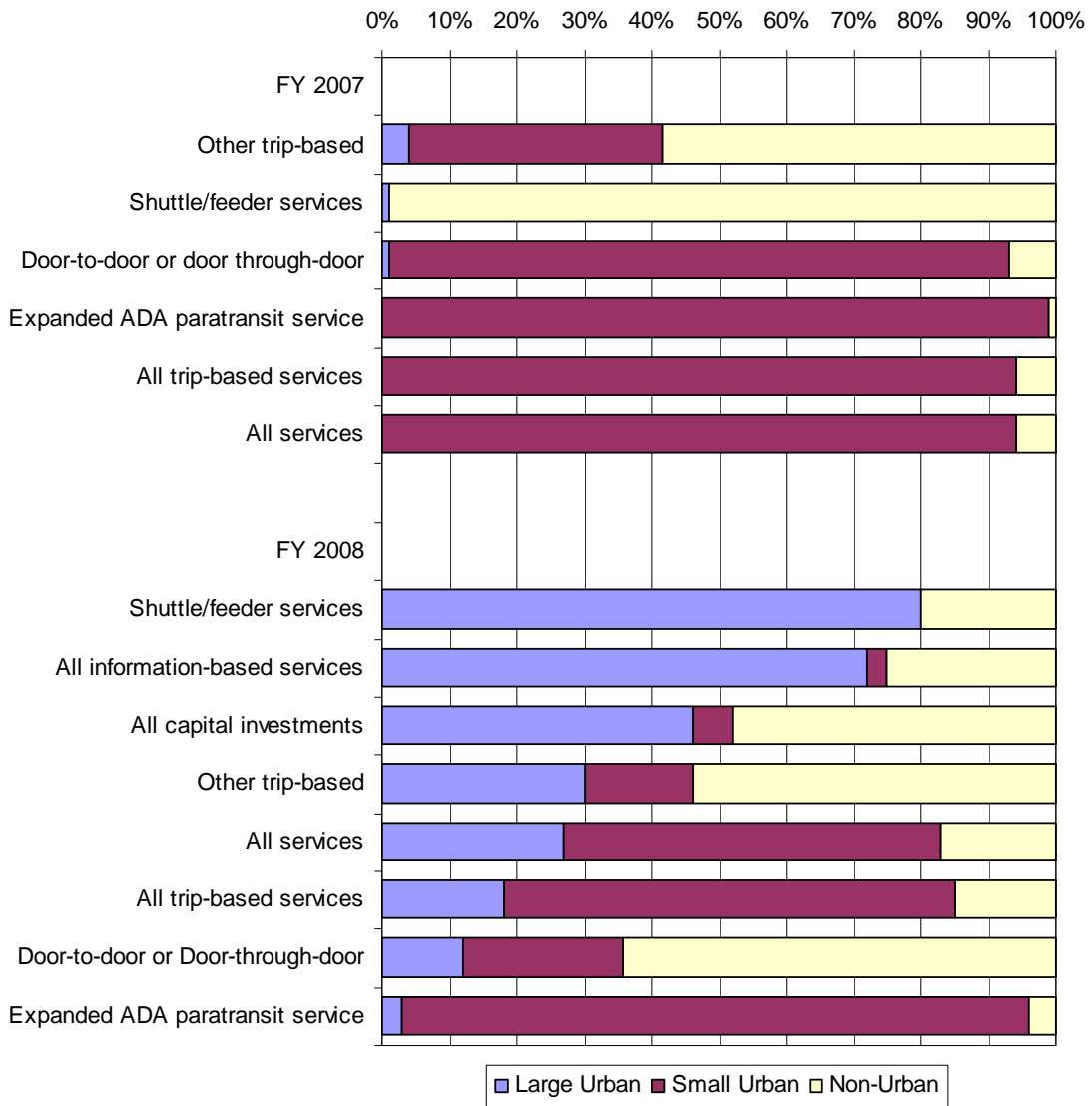


Figure 4-5  
 One-Way Trips by New Freedom Service Type and Urbanized Area Size  
 FY 2007 / FY 2008  
 (Row Percent)

Table 4-6  
 One-Way Trips by New Freedom Service Type and Urbanized Area Size  
 FY 2007 / FY 2008  
 (Column Percent)

Service Type	Size of Urbanized Area			
	Large Urban	Small Urban	Non-Urban/Rural	Total
<i>FY 2007</i>				
Shuttle / feeder services	5%	0%	36%	2%
Expanded ADA paratransit service	28%	98%	18%	93%
Door-to-door / door-through-door	1%	0%	0%	0%
Other trip-based services	65%	2%	45%	5%
<b>All trip-based services</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>All information-based services</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
<b>All capital investment projects</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
<b>All services</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<i>FY 2008</i>				
Shuttle/feeder services	37%	0%	15%	13%
Expanded ADA paratransit service	7%	95%	14%	57%
Door-to-door or door through-door	2%	2%	21%	6%
Other trip-based services	8%	2%	23%	7%
<b>All trip-based services</b>	<b>54%</b>	<b>99%</b>	<b>73%</b>	<b>83%</b>
<b>All information-based services</b>	<b>44%</b>	<b>1%</b>	<b>24%</b>	<b>16%</b>
<b>All capital investment projects</b>	<b>2%</b>	<b>0%</b>	<b>3%</b>	<b>1%</b>
<b>All services</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

NOTES:

There were no trips reported for information-based or capital investment projects in FY 2007.

In FY 2008, mobility manager was the only program reporting trips in the Information-Based Services category.

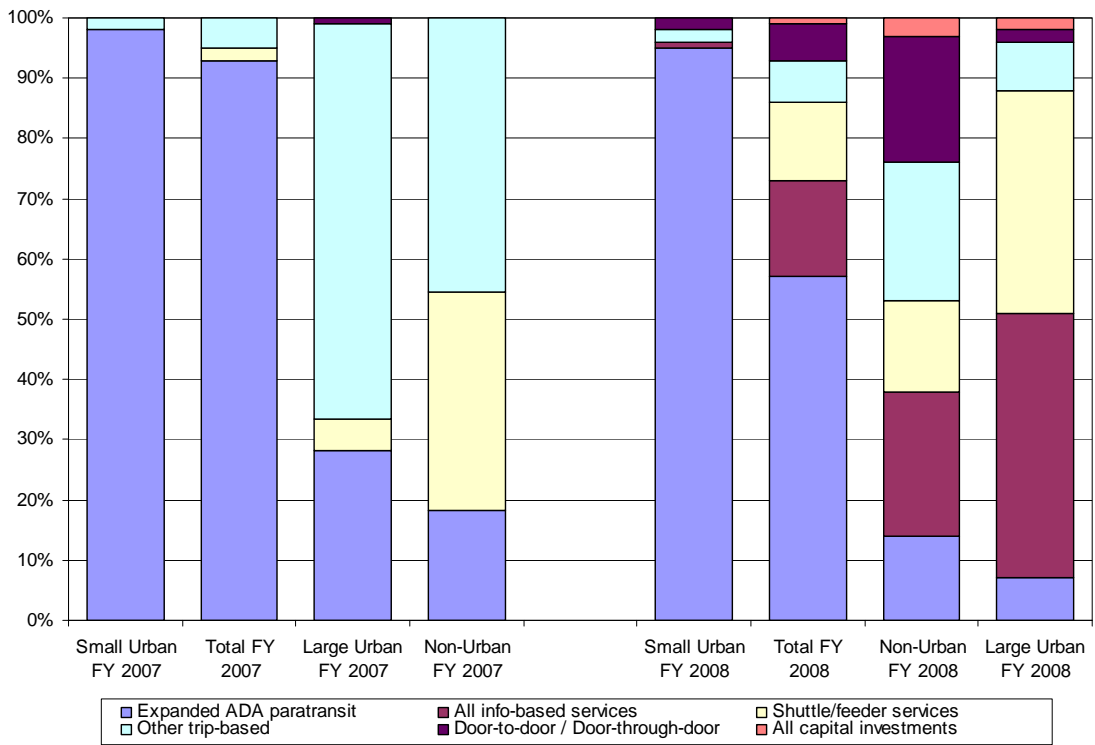


Figure 4-6  
 One-Way Trips by New Freedom Service Type and Urbanized Area Size  
 FY 2007 / FY 2008  
 (Column Percent)

## **4.5 Other Key Performance Measures**

In addition to the number of trips provided, the New Freedom program seeks to review more qualitative project performance measures related to:

- Increases or enhancements related to geographic coverage, service quality and/or service times that impact availability of transportation services for individuals with disabilities as a result of the New Freedom projects implemented in the current reporting year.
- Additions or changes to environmental infrastructure (e.g., transportation facilities, sidewalks, etc), technology, and vehicles that impact availability of transportation services as a result of the New Freedom projects implemented in the current reporting year.

***For FY 2007, 38% of New Freedom services had a primary goal of improved access and connections; 25% of services had a primary goal of expanded geographic coverage.***

***For FY 2008, 51% of New Freedom services had a primary goal of improved access and connections; 20% of services had a primary goal of expanded geographic coverage.***

***For FY 2007, 17% of New Freedom services were capital-investment projects.***

***For FY 2008, 18% of New Freedom services were capital-investment projects.***

As described in Section 1.0, the JARC and New Freedom service matrices were developed to provide a user-friendly way to summarize JARC- and NF-funded services according to the primary goal of the service. The five goals are:

- Expanded geographic coverage
- Extended service hours or days
- Improved system capacity
- Improved access/connections
- Improved customer knowledge

Tables 4-7 and 4-8 show the distribution of New Freedom **services** by goal for FY 2007 and FY 2008. Tables 4-9 and 4-10 summarize the **performance measures** by goal for FY 2007 and FY 2008, including one-way trips and customer contacts. The tables show the percentage distribution of New Freedom-funded services by primary goal. It should be noted that not every goal was considered applicable to every type of service. For example, grantees were not allowed to pick a goal of expanded system capacity for Internet-based information and marketing.

As shown at the bottom of the matrix in Table 4-7, for FY 2007 38% of New Freedom services had a primary goal of improved access and connections; 25% of services had a primary goal of expanded geographic coverage, 15% improved customer knowledge, 12% extended hours/days of service, and 10% improved system capacity.

As shown at the bottom of the matrix in Table 4-8, for FY 2008, 51% of New Freedom services had a primary goal of improved access and connections; 20% of services had a primary goal of expanded geographic coverage, 10% each improved system capacity and improved customer knowledge, and 9% extended hours/days of service.

#### **4.5.1 Trip-based services**

As shown in Tables 4-7 and 4-8, for trip-based services, the most commonly selected goals were improved access/connections and expanded geographic coverage, accounting for more than three-quarters of the services.

For FY 2007:

- Improved access/connections: 53%
- Expanded geographic coverage: 30%
- Enhanced days/hours of service: 16%
- Improved system capacity: 1%

For FY 2008:

- Expanded geographic coverage: 40%
- Improved access/connections: 37%
- Enhanced days/hours of service: 20%
- Improved system capacity: 3%

#### **4.5.2 Information-based services**

As shown in Tables 4-7 and 4-8, for information-based services, the most commonly selected goals were improved access/connections and increased customer knowledge.

For FY 2007:

- Improved access/connections: 60%
- Increased customer knowledge: 40%

For FY 2008:

- Improved access/connections: 63%
- Increased customer knowledge: 37%

These goals are consistent with the fact most of the service provided in the information-based projects were for mobility managers, all of which expressed a goal of improved access/connections, while the others (e.g., one-stop center/referral, trip-based planning, one-on-one transit planning, Internet-based information, and information materials/marketing) selected improved customer knowledge.

During FY 2007, grant recipients reported

- 20,592 customer contacts for mobility managers
- 9,200 web hits for Internet-based information
- 506 individuals travel trained
- 75 people given group transportation resources training.

During FY 2008, grant recipients reported

- 43,181 customer contacts and 207,180 trips for mobility managers
- 54,750 web hits for Internet-based information
- 12,245 customer contacts for one-stop centers
- 488 people given group transportation resources training
- 1,313 individuals travel trained.

### **4.5.3 Capital investment programs**

No capital investment programs were reported for FY 2007. As shown in Table 4-8, for capital investment programs, the most commonly selected goals for FY 2008 were improved system capacity and improved access/connections.

- Improved system capacity: 51%
- Improved access/connections: 27%
- Expanded geographic coverage: 19%
- Extended days/hours of service: 3%

In FY 2008, grant recipients reported adding four vehicles.

In FY 2008, grant recipients reported the following number for capital investment programs:

- 30 vehicles and 1,474 one-way trips for accessible taxis
- 12 vehicles and 4,667 one-way trips for vehicles for transit agencies
- 5 vehicles and 7,199 one-way trips for vehicles for other agencies

Table 4-7  
 FY 2007 New Freedom Service Matrix – Distribution of Services by Primary Goal

NEW FREEDOM-FUNDED SERVICE	PRIMARY SERVICE GOAL				
	(A) Expanded Geographic Coverage	(B) Extended Hours/Days of Service	(C) Improved System Capacity	(D) Improved Access / Connections	(E) Improved Customer Knowledge
<b>I. Trip-Based</b>	<b>40%</b>	<b>20%</b>	<b>3%</b>	<b>37%</b>	<b>0%</b>
1. Fixed route					
2. Flexible routing					
3. Shuttle/feeder service	83%	0%		17%	
4a. Expanded ADA paratransit service <sup>o</sup>	47%	37%	0%	11%	
4b. Same-day ADA paratransit service <sup>o</sup>				0%	
4c. Door-to-door or door-through-door <sup>o</sup>				100%	
4d. Volunteer driver program				100%	
5. User-side subsidy/ vouchers <sup>o</sup> (e.g., taxis)				100%	
6. Vanpool*			0%	0%	
7. Aide/escort assistance <sup>o</sup>				100%	
<b>II. Information-Based</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>40%</b>	<b>60%</b>
1. Mobility manager* <sup>+</sup>				100%	
2. One Stop Center/referral					100%
3. Trip/itinerary planning					100%
4a. One-on-one transit training (travel training)					0%
4b. Transportation resource training (group training)					0%
5. Internet-based information					0%
6. Information materials/marketing					0%
7. Driver training (for individuals)					0%
<b>III Capital Investments</b>	<b>10%</b>	<b>0%</b>	<b>50%</b>	<b>40%</b>	<b>0%</b>
1. Vehicle for individual				0%	
2a. Vehicle for transit agency <sup>o</sup>	25%	0%	75%		
2b. Vehicle for other agency <sup>o</sup>	0%	0%	100%	0%	
2c. Accessible taxis <sup>o</sup>	0%	0%	0%		
3. Vanpool vehicles*			0%	0%	
4. Car-sharing	0%		0%		
5. ITS-related software/hardware improvements			0%	100%	0%
6a. Elevators <sup>o</sup>				0%	

	PRIMARY SERVICE GOAL				
NEW FREEDOM-FUNDED SERVICE	(A) Expanded Geographic Coverage	(B) Extended Hours/Days of Service	(C) Improved System Capacity	(D) Improved Access / Connections	(E) Improved Customer Knowledge
6b. Large capacity WC lifts added to vehicles <sup>o</sup>				0%	
6c. WC securement areas added to vehicles <sup>o</sup>				0%	
6d. Other infrastructure improvements <sup>o</sup>	0%	0%	25%	75%	0%
<b>All projects</b>	<b>25%</b>	<b>12%</b>	<b>10%</b>	<b>38%</b>	<b>15%</b>

Note that matrix table rows add up to 100%

<sup>o</sup> Beyond service required by the ADA.

\* If vanpool vehicles were purchased during the report year, report under Category III capital investment. If vanpool vehicles were not purchased, report under Category I trip-based.

Table 4-8  
FY 2008 New Freedom Service Matrix – Distribution of Services by Primary Goal

NEW FREEDOM-FUNDED SERVICE	PRIMARY SERVICE GOAL				
	(A) Expanded Geographic Coverage	(B) Extended Hours/Days of Service	(C) Improved System Capacity	(D) Improved Access / Connections	(E) Improved Customer Knowledge
<b>I. Trip-Based</b>	<b>30%</b>	<b>16%</b>	<b>1%</b>	<b>53%</b>	<b>0%</b>
1. Fixed route					
2. Flexible routing					
3. Shuttle/feeder service	64%	14%		23%	
4a. Expanded ADA paratransit service <sup>o</sup>	48%	35%	3%	3%	
4b. Same-day ADA paratransit service <sup>o</sup>				100%	
4c. Door-to-door or door-through-door <sup>o</sup>				100%	
4d. Volunteer driver program				100%	
5. User-side subsidy/ vouchers <sup>o</sup> (e.g., taxis)				100%	
6. Vanpool*			0%	100%	
7. Aide/escort assistance <sup>o</sup>				100%	
<b>II. Information-Based</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>63%</b>	<b>37%</b>
1. Mobility manager*+				100%	
2. One Stop Center/referral					100%
3. Trip/itinerary planning					100%
4a. One-on-one transit training (travel training)					100%
4b. Transportation resource training (group training)					0%
5. Internet-based information					100%
6. Information materials/marketing					100%
7. Driver training (for individuals)					0%
<b>III Capital Investments</b>	<b>19%</b>	<b>3%</b>	<b>51%</b>	<b>27%</b>	<b>0%</b>
1. Vehicle for individual				0%	
2a. Vehicle for transit agency <sup>o</sup>	30%	0%	70%		
2b. Vehicle for other agency <sup>o</sup>	27%	0%	55%	18%	
2c. Accessible taxis <sup>o</sup>	33%	33%	33%		
3. Vanpool vehicles*			0%	0%	
4. Car-sharing	0%		0%		
5. ITS-related software/hardware improvements			67%	33%	0%
6a. Elevators <sup>o</sup>				0%	
6b. Large capacity WC lifts added to vehicles <sup>o</sup>				0%	

	PRIMARY SERVICE GOAL				
NEW FREEDOM-FUNDED SERVICE	(A) Expanded Geographic Coverage	(B) Extended Hours/Days of Service	(C) Improved System Capacity	(D) Improved Access / Connections	(E) Improved Customer Knowledge
6c. WC securement areas added to vehicles <sup>o</sup>				0%	
6d. Other infrastructure improvements <sup>o</sup>	0%	0%	14%	86%	0%
<b>All services</b>	<b>20%</b>	<b>9%</b>	<b>10%</b>	<b>51%</b>	<b>10%</b>

Note that matrix rows add up to 100%

<sup>o</sup> Beyond service required by the ADA.

\* If vanpool vehicles were purchased during the report year, report under Category III capital investment. If vanpool vehicles were not purchased, report under Category I trip-based.

Table 4-9  
FY 2007 New Freedom Service Matrix – Service Outputs by Primary Goal

NEW FREEDOM-FUNDED SERVICE	PRIMARY SERVICE GOAL				
	(A) Expanded Geographic Coverage	(B) Extended Hours/Days of Service	(C) Improved System Capacity	(D) Improved Access / Connections	(E) Improved Customer Knowledge
<b>I. Trip-Based</b>					
1. Fixed route					
2. Flexible routing					
3. Shuttle/feeder service	1,869 one-way trips			15,083 one-way trips	
4a. Expanded ADA paratransit service <sup>o</sup>	700,933 one-way trips	10,287 one-way trips	13 one-way trips	181 one-way trips	
4b. Same-day ADA paratransit service <sup>o</sup>					
4c. Door-to-door or door-through-door <sup>o</sup>				2,888 one-way trips	
4d. Volunteer driver program				92 one-way trips	
5. User-side subsidy/vouchers <sup>o</sup> (e.g., taxis)				34,699 one-way trips	
6. Vanpool*			0	0	
7. Aide/escort assistance <sup>o</sup>				1,230 one-way trips	
<b>II. Information-Based Services</b>					
1. Mobility manager*+				20,592 customer contacts	
2. One Stop Center/referral					
3. Trip/itinerary planning					
4a. One-on-one transit training (travel training)					506 persons trained
4b. Transportation resource training (group training)					75 persons trained
5. Internet-based information					9,200 web hits,
6. Information materials/marketing					0
7. Driver training (for individuals)					0
<b>III Capital Investment Projects</b>					
1. Vehicle for individual				0	
2a. Vehicle for transit agency <sup>o</sup>	1 vehicle added	0	3 vehicles added		
2b. Vehicle for other agency <sup>o</sup>	0	0	0		
2c. Accessible taxis <sup>o</sup>	0	0	0		
3. Vanpool vehicles*			0	0	

	PRIMARY SERVICE GOAL				
NEW FREEDOM-FUNDED SERVICE	(A) Expanded Geographic Coverage	(B) Extended Hours/Days of Service	(C) Improved System Capacity	(D) Improved Access / Connections	(E) Improved Customer Knowledge
4. Car-sharing	0		0		
5. ITS-related software/hardware improvements			0	0	0
6a. Elevators <sup>o</sup>				0	
6b. Large capacity WC lifts added to vehicles <sup>o</sup>				0	
6c. WC securement areas added to vehicles <sup>o</sup>				0	
6d. Other infrastructure improvements <sup>o</sup>	0	0	0	0	0

<sup>o</sup> Beyond service required by the ADA.

\* If vanpool vehicles were purchased during the report year, report under Category III capital investment. If vanpool vehicles were not purchased, report under Category I trip-based.

Table 4-10  
 FY 2008 New Freedom Service Matrix – Service Outputs by Primary Goal

NEW FREEDOM-FUNDED SERVICE	PRIMARY SERVICE GOAL				
	(A) Expanded Geographic Coverage	(B) Extended Hours/Days of Service	(C) Improved System Capacity	(D) Improved Access / Connections	(E) Improved Customer Knowledge
<b>I. Trip-Based Services</b>					
1. Fixed route					
2. Flexible routing					
3. Shuttle/feeder service	23,581 one-way trips	110,188 one-way trips		25,488 one-way trips	
4a. Expanded ADA paratransit service <sup>o</sup>	686,347 one-way trips	26,217 one-way trips	5 one-way trips	8,574 one-way trips	
4b. Same-day ADA paratransit service <sup>o</sup>				19,174 one-way trips	
4c. Door-to-door or door-through-door <sup>o</sup>				70,675 one-way trips	
4d. Volunteer driver program				7,243 one-way trips	
5. User-side subsidy/ vouchers <sup>o</sup> (e.g., taxis)				52,359 one-way trips	
6. Vanpool*			0	9,152 one-way trips	
7. Aide/escort assistance <sup>o</sup>				6,192 one-way trips	
<b>II. Information-Based Services</b>					
1. Mobility manager**				43,181 customer contacts 207,180 one-way trips	
2. One Stop Center/referral					12,245 customer contacts
3. Trip/itinerary planning					186 customer contacts
4a. One-on-one transit training (travel training)					1,313 persons trained
4b. Transportation resource training (group training)					488 persons trained
5. Internet-based information					54,750 web hits
6. Information materials/marketing					0
7. Driver training (for individuals)					0
<b>III Capital Investments</b>					
1. Vehicle for individual				0	

	PRIMARY SERVICE GOAL				
NEW FREEDOM-FUNDED SERVICE	(A) Expanded Geographic Coverage	(B) Extended Hours/Days of Service	(C) Improved System Capacity	(D) Improved Access / Connections	(E) Improved Customer Knowledge
2a. Vehicle for transit agency	2 vehicles added / 742 trips	0	10 vehicles added / 3,925 trips		
2b. Vehicle for other agency <sup>o</sup>	0	0	5 vehicles added / 1,960 one-way trips	5,239 one-way trips	
2c. Accessible taxis <sup>o</sup>	30 vehicles added / 1,474 one-way trips	0	0		
3. Vanpool vehicles*			0	0	
4. Car-sharing	0		0		
5. ITS-related software/ hardware improvements			0	0	0
6a. Elevators <sup>o</sup>				0	
6b. Large capacity WC lifts added to vehicles <sup>o</sup>				0	
6c. WC securement areas added to vehicles <sup>o</sup>				0	
6d. Other infrastructure improvements <sup>o</sup>	0	0	0	0	0

<sup>o</sup> Beyond service required by the ADA.

\* If vanpool vehicles were purchased during the report year, report under Category III capital investment. If vanpool vehicles were not purchased, report under Category I trip-based.

## 5.0 Conclusions

This report includes the results of the data analysis for both the JARC and New Freedom programs for the FY 2007 and FY 2008 reporting periods, which correspond to the Federal fiscal year beginning on October 1 and ending on September 30. The program goals correspond to Federal performance measurements required by the respective regulations.

As described in this report, for the FY 2007 / FY 2008 reporting cycle, the team made substantial changes:

- **FTA collected data for the New Freedom program for the first time.** The on-line data collection system, originally developed for the JARC program, was successfully adapted to the New Freedom program. Grantees reported on 60 New Freedom services for FY 2007 and 203 services in FY 2008.
- **The evaluation team integrated the service matrix into the data collection process and the analysis.** For the first time, grant recipients were directed to data entry forms that were tailored to a specific service and goal. This matrix-based approach allows a great deal of flexibility in the reporting process. Service categories and goals can be added or deleted, as necessary, and questions can be matched to the specific characteristics of each service type.
- **Additional support options were available to grant recipients.** FTA and the JARC/NF Evaluation Team responded to requests from grant recipients for additional training opportunities and sponsored two webinars to present information with guidance on the reporting process. In addition, the team improved the on-line support system by making more information available and incorporating a more user-friendly interface.

“It is difficult to quantify the pride and the look on a person's face along with their proud smile after a job well done. We have been able to assist many to move to this goal. They have realized that hard work and dedication is vital to success and they practice the old saying of an honest day's work for an honest day's pay. We feel much pride when the people we serve complete their task and look back proudly at what they have accomplished.”

Cochise County Association for the Handicapped (AZ)

### 5.1 JARC Highlights

Grantees reported a total of 587 active JARC-funded services for FY 2007 and 681 services in FY 2008.

- Out of the active JARC-funded services, the vast majority were trip-based, at approximately 85% for both FY 2007 and FY 2008. Together, these traditional transit services accounted for more than two out of three JARC-funded programs. The remaining 15% of programs were split fairly evenly between information-based and capital investment programs for both years.

- About half of all JARC-supported services operated in large urbanized areas (population over 200,000) for both FY 2007 and FY 2008. The rest were evenly split between small-urban localities (population 50,000-199,000) and non-urbanized or rural areas (population less than 50,000).
- For FY 2007, it is estimated that JARC-supported services provided 19.6 million one-way trips.
- For FY 2008, it is estimated that JARC-supported services provided 23.5 million one-way trips.
- For FY 2007, JARC-supported services were estimated to provide access to a maximum of 35.9 million jobs, of which 18.0 million were categorized as low-wage. It is further estimated that JARC services could provide access to approximately 4.0 million jobs based on vehicle capacity constraints.
- For FY 2008, JARC-supported services were estimated to provide access to a maximum of 51.8 million jobs, of which 25.1 million were categorized as low-wage. It is further estimated that JARC services could provide access to approximately 4.2 million jobs based on vehicle capacity constraints.

## **5.2 New Freedom Highlights**

A total of 57 grant recipients submitted complete reports for one or both years reporting on 60 active NF-funded services for FY 2007 and 203 active NF-funded services for FY 2008.

- For both FY 2007 and FY 2008, more than half of the New Freedom-funded services were trip-based (58% for FY 2007 and 54% for FY 2008). Information-based services accounted for about one-quarter of the services (25% for FY 2007 and 28% for FY 2008). Capital investment programs accounted for 17% of projects in FY 2007 and 18% of projects in FY 2008.
- The most commonly reported project for both years was expanded ADA paratransit service (32% of all New Freedom projects in FY 2007 and 20% in FY 2008). Shuttle/feeder services were also high on the list of trip-based projects, with 8% of all New Freedom projects reported in FY 2007 and 9% in FY 2008. Door-to-door/door-through-door projects were the next most common trip-based projects, with 7% of all New Freedom projects in FY 2007 and 9% in FY 2008.
- For FY 2007 – the first year of reporting – New Freedom-supported services provided 767,275 one-way trips.
- For FY 2008, New Freedom-supported services provided 1.27 million one-way trips.

## **5.3 Program Profiles**

Finally, FTA continued to collect program profiles, or summaries, for each JARC and New Freedom service. While ridership and jobs-accessed statistics allow FTA to provide a national summary of the JARC and New Freedom programs, the profiles allow the grantees to represent the human side of these transportation programs. These qualitative

descriptions complement the data collection and provide an additional avenue for understanding the impacts and benefits of both grant programs.

The profiles provide a rich source of detailed information about the JARC and New Freedom programs and are provided in their entirety under separate cover. In addition, relevant excerpts have been incorporated throughout this summary report. As the program profiles made abundantly clear, **the JARC and New Freedom programs connect with riders and customers on a personal level.**

## **Appendix A**

### **Program Performance Evaluation Service Matrices**

The following information describes in more detail how the JARC and New Freedom service matrices were developed and how they are used by JARC and New Freedom grant recipients for annual Program Performance Evaluation (PPE) reporting purposes.

A JARC service matrix was initially developed through a collaborative effort between the JARC evaluation team and the Community Transportation Association of America's Joblinks Advisory Committee. The matrix was later refined working with the JARC and New Freedom Advisory Committee, formed to assist the evaluation team with refinement of the JARC and later New Freedom reporting process.

The intent of the matrix reporting approach was to make it easier for JARC grantees to identify service priorities and report on services provided through the annual JARC reporting process. At the same time, by organizing JARC-funded projects according to their primary service type (i.e., trip-based service, information-based service or capital investment program), the JARC Evaluation Team would be better able to calculate the number of low-wage jobs made accessible by JARC-funded services and to more accurately describe the information-based and capital-investment projects undertaken by JARC grantees.

A copy of the JARC reporting matrix is included as Table A-1. The matrix includes five primary goals (columns A-E) that were identified to be core elements of JARC-funded services. The rows are grouped by the three categories of projects – (I) trip-based services, (II) information-based services, and (III) capital investment projects. Each category includes a list of services or projects that are commonly provided in each category and supported by the JARC program. The cells within the table indicate the primary reporting information to be provided by each type of service, according to the primary goal related to the service. The JARC matrix was first implemented with the FY 2006 reporting period.

Beginning with the FY 2007 / FY 2008 reporting period, with the assistance of the JARC/New Freedom Advisory Committee the JARC matrix reporting approach was expanded to include a companion matrix for the New Freedom program. The NF matrix is similarly organized with the same three categories of projects and the same set of five project goals as the JARC reporting matrix. However, the list of projects was modified to reflect allowable projects for New Freedom funding as outlined in FTA Circular 9045.1 and subsequent guidance. A copy of the JARC reporting matrix is included as Table A-2.

For PPE reporting purposes, the matrices are used to identify the primary goal for each JARC- and NF-funded service operated during the reporting year and to report output and outcome information related to the services provided as required to complete the federal Program Performance Evaluation.

In addition to the measures shown in the table (i.e., # one-way trips, # customer contacts, # units, # vehicles added, and so on), for JARC reporting only grantees also are asked to provide additional descriptive information about the service area, length of fixed route, and the number of jobs accessed (if known). The JARC/NF Evaluation Team uses this

information in combination with Census data to develop an aggregated national estimate of potential low-wage jobs accessed.

To facilitate completion of the PPE forms, grant recipients were provided specific information via the on-line support site, e-mail and phone support, and webinar training on how to use the reporting tools. Definitions were provided to help guide grantees in their choice of service and goal combinations. For example, by definition, trip-based services that are categorized as “flexible routing” include route deviation, point deviation, and other community circulators that may go off route to pick up individuals on a request basis. A “user-side subsidy” refers to individuals whose trip costs are subsidized by JARC or NF funds including taxi vouchers, mileage reimbursements, underwriting the cost of vanpool seats, and so on. In contrast, trips provided through a “demand response” service would involve payment to an agency to subsidize the cost of running the vehicle, and not provide a direct subsidy to the individual user.

“Mobility managers” are an emerging service approach with a variety of responsibilities. For example, in some cases, a mobility manager is a clearinghouse of information about transportation services provided locally. Other mobility managers may schedule trips, but have nothing to do with the responsibility of providing (or paying for a trip). In these two cases, it would be most appropriate to report the number of customer contacts as a performance measure. However, some mobility managers also oversee the actual provision of service either by contracting with a provider or directly operating service themselves. In the latter case, it would be appropriate for the mobility manager service to report both the number of customer contacts enabled by the JARC or NF program, as well as the number of one-way trips provided. Note that a “brokerage” that is primarily responsible for allocating trips among demand response providers would be directed to report only the number of JARC- or NF-related trips provided under the demand response category in the trip-based services, not as a mobility manager. It also should be noted that although FTA allows for “mobility managers” to be funded as a capital program, given the nature of the service for JARC and New Freedom reporting purposes they are considered information-based services.

Another example that requires additional explanation is “one-on-one training,” included under the category of information-based services. “One-on-one training” could include teaching an individual on how to use fixed route bus service or providing instruction on how to care for and maintain a vehicle. “Trip/itinerary planning” is another specific form of assistance that provides individual assistance.

Finally, capital investment projects could range from providing vehicles to individuals through low-interest loan programs, providing a vehicle for an agency to provide transportation for its customers, or vanpool vehicles if the cost of the vehicle lease is underwritten. In these cases, grantees would be asked to report the number of units (vehicles) provided and if available the number of one-way trips taken by JARC- or NF-supported participants. Other capital investments could include providing amenities to make services more usable, such as adding bus shelters to waiting areas, bicycle racks on buses to allow access to a transit system, and providing additional access features beyond the minimums required by the Americans with Disabilities Act.

**Table A-1  
JARC Service Matrix**

<b>PRIMARY SERVICE GOAL AND OUTPUT MEASURE</b> (select one per JARC-funded service)					
<b>JARC-FUNDED SERVICE</b>	<b>(A) Expanded Geographic Coverage</b>	<b>(B) Extended Hours/Days of Service</b>	<b>(C) Improved System Capacity</b>	<b>(D) Improved Access / Connections</b>	<b>(E) Improved Customer Knowledge</b>
<b>I. Trip-Based Services</b>					
1. Fixed route	# one-way trips	# one-way trips	# one-way trips	# one-way trips	
2. Flexible routing	# one-way trips	# one-way trips	# one-way trips	# one-way trips	
3. Shuttle / feeder services	# one-way trips	# one-way trips	# one-way trips	# one-way trips	
4. Demand response	# one-way trips	# one-way trips	# one-way trips	# one-way trips	
5. User-side subsidy / vouchers	# one-way trips	# one-way trips	# one-way trips	# one-way trips	
6. Vanpool*			# one-way trips	# one-way trips	
<b>II. Information-Based Services</b>					
1. Mobility manager				# customer contacts	
2. One Stop Center / referral					# customer contacts
3. Trip / itinerary planning					# customer contacts
4a. One-on-one transit training (travel training)					# persons trained
4b. Transportation resource training (group training)					# persons trained
5. Internet-based information					# customer contacts
6. Information materials / marketing					descriptive
<b>III. Capital Investment Projects</b>					
1. Vehicle for individual				# vehicles / # trips	
2. Vehicle for agency	# vehicles added / # trips	# vehicles added / # trips	# vehicles added / # trips		
3. Vanpool*			# vehicles added / # trips	# vehicles added / # trips	
4. Car-sharing	# vehicles added / # trips		# vehicles added / # trips		
5. ITS-related hardware /software improvements			descriptive	descriptive	descriptive
6. Other capital projects	descriptive	descriptive	descriptive	descriptive	descriptive

\* If vanpool vehicles were purchased during the report year, report under Category III capital investment. If vanpool vehicles were not purchased, report under Category I trip-based.

Table A-2  
New Freedom Service Matrix

<b>PRIMARY SERVICE GOAL AND OUTPUT MEASURE</b> (select one per New Freedom-funded service)					
NEW FREEDOM-FUNDED SERVICE	(A) Expanded Geographic Coverage	(B) Extended Hours/Days of Service	(C) Improved System Capacity	(D) Improved Access / Connections	(E) Improved Customer Knowledge
<b>I. Trip-Based Services</b>					
1. Fixed route					
2. Flexible routing					
3. Shuttle/feeder service	# one-way trips	# one-way trips		# one-way trips	
4a. Expanded ADA paratransit service <sup>o</sup>	# one-way trips	# one-way trips		# one-way trips	
4b. Same-day ADA paratransit service <sup>o</sup>				# one-way trips	
4c. Door-to-door or door-through-door <sup>o</sup>				# one-way trips	
4d. Volunteer driver program				# one-way trips	
5. User-side subsidy/ vouchers <sup>o</sup> (e.g., taxis)				# one-way trips	
6. Vanpool*			# one-way trips	# one-way trips	
7. Aide/escort assistance <sup>o</sup>				# one-way trips	
<b>II. Information-Based Services</b>					
1. Mobility manager*+				# customer contacts/# trips	
2. One Stop Center/referral					# customer contacts
3. Trip/itinerary planning					# customer contacts
4a. One-on-one transit training (travel training)					# persons trained
4b. Transportation resource training (group training)					# persons trained
5. Internet-based information					# customer contacts
6. Information materials/marketing					descriptive
7. Driver training (for individuals)					# persons trained

NEW FREEDOM-FUNDED SERVICE	(A) Expanded Geographic Coverage	(B) Extended Hours/Days of Service	(C) Improved System Capacity	(D) Improved Access / Connections	(E) Improved Customer Knowledge
<b>III. Capital Investment Projects</b>					
1. Vehicle for individual				# vehicles / # trips	
2a. Vehicle for transit agency <sup>o</sup>	# vehicles added / # trips	# vehicles added / # trips	# vehicles added / # trips		
2b. Vehicle for other agency <sup>o</sup>	# vehicles added / # trips	# vehicles added / # trips	# vehicles added / # trips		
2c. Accessible taxis <sup>o</sup>	# vehicles added / # trips	# vehicles added / # trips	# vehicles added / # trips		
3. Vanpool vehicles*			# vehicles added / # trips	# vehicles added / # trips	
4. Car-sharing	# vehicles added / # trips		# vehicles added / # trips		
5. ITS-related software/hardware improvements			descriptive	descriptive	descriptive
6a. Elevators <sup>o</sup>				# added / descriptive	
6b. Large capacity WC lifts added to vehicles <sup>o</sup>				# added / descriptive	
6c. WC securement areas added to vehicles <sup>o</sup>				# added / descriptive	
6d. Other infrastructure improvements <sup>o</sup>	descriptive	descriptive	descriptive	descriptive	descriptive

<sup>o</sup> Beyond service required by the ADA.

\* If vanpool vehicles were purchased during the report year, report under Category III capital investment. If vanpool vehicles were not purchased, report under Category I trip-based

## Appendix B Jobs Estimation Methodology

This appendix provides background information on the elements of the methodology used to estimate jobs accessed for JARC services.

### ***B.1 Information on the Longitudinal Employment-Household Dynamics (LEHD) Program***

The information in this section is reproduced verbatim from a description provided by the U.S. Census Bureau. This information was originally accessed at the following link, which is no longer active: <http://lehd.dsd.census.gov/led/about-us/FAQ.html#lehd>

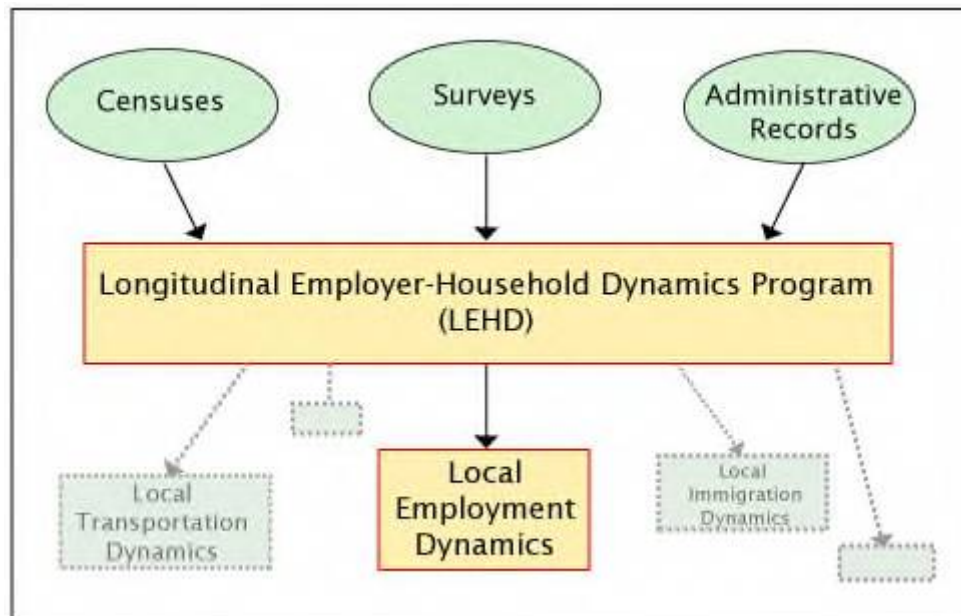
#### **What is LEHD?**

Longitudinal Employer-Household Dynamics (LEHD) is an innovative program within the U.S. Census Bureau. We use modern statistical and computing techniques to combine federal and state administrative data on employers and employees with core Census Bureau censuses and surveys while protecting the confidentiality of people and firms that provide the data.

#### **What is LED?**

Local Employment Dynamics (LED) is a voluntary partnership between state labor market information agencies and the U.S. Census Bureau to develop new information about local labor market conditions at low cost, with no added respondent burden, and with the same confidentiality protections afforded census and survey data.

The following graphic illustrates the difference between LEHD and LED.



## **What are the QWI?**

The Quarterly Workforce Indicators (QWI) are a set of economic indicators -- including employment, job creation, wages, and worker turnover -- that can be queried by different levels of geography -- state, county, metro, and workforce investment area -- as well as by detailed industry, gender, and age of workers. You can query the data directly by using the QWI on-line tool on this site.

## **Why aren't QWI data available for all states?**

QWI data are available for all states that are LED-state partners; however, not every state is currently a LED-state partner. A list of LED state partners can be found [here](#). New partner states with data currently in production will have data available on the website as soon as production is complete.

## **What types of employment are included in the QWI?**

The QWI are built upon wage records in the Unemployment Insurance (UI) system and information from state ES-202 data. The universe of QWI data is UI-covered earnings. UI coverage is broad, covering over 90% of total wage and salary civilian jobs.

When QWI private industry employment numbers are compared with other employment data, exclusions to UI coverage should be taken into account. Federal government employment is not generally included. Exempted employment varies slightly from state to state due to variations in state unemployment laws, but generally also excludes many farmers and agricultural employees, domestic workers, self-employed non-agricultural workers, members of the Armed Services, some state and local government employees as well as certain types of nonprofit employers and religious organizations (which are given a choice of coverage or non-coverage in a number of states).

## ***B.2 Estimating Jobs for Fixed Route Services***

To estimate jobs accessed by fixed route services, the JARC / NF Evaluation Team developed a job density factor, which estimated jobs per mile. Grantees were asked to indicate the length (in miles) for each fixed route funded through JARC. The team used the factor to estimate the total number of jobs located within one-half mile (measured as one-quarter mile in each direction) of the route. The factor was first developed for the FY 2006 analysis and updated for FY 2007 / FY 2008.

To develop the factor for FY 2006, the team used ArcView Geographic Information Systems (GIS) software in combination with a proprietary database purchased from Dun & Bradstreet. The team acquired GIS files for JARC-supported routes from selected transit agencies; routes were plotted on a GIS base map and the number of jobs within a quarter-mile buffer was extracted from the Dun & Bradstreet database. Using the weighted average from 96 routes (including a mix of JARC-supported services and general services but only limited geographic coverage), the team developed an estimate of total jobs and low-wage jobs per mile. Low-wage jobs were defined as those jobs paying \$14.42 an hour or less; this corresponded to 150% of Federal poverty guidelines or \$30,000 per year. (See Section B.5, below.) While this approach yielded usable results, the GIS analysis was extremely labor-intensive, and the team determined that the Dun & Bradstreet dataset was too expensive to acquire for a national-level analysis.

To make this factor more robust for FY 2007 / FY 2008, the team increased the number of JARC-supported routes in the sample and expanded the sample to include additional parts of the country. To update the fixed route job density factor, the JARC/NF evaluation team selected candidate routes from the FY 2006 JARC database. Routes were selected for analysis from the FY 2006 JARC database based on the following factors:

- Geographic diversity
- Representation in LEHD/OnTheMap
- Availability of a route map (to facilitate drawing the route for further analysis)

This selection of routes is considered a “convenience” sample, rather than a random sample.

The team also tested a more cost-effective approach that took advantage of the free job information data available from OnTheMap, an on-line mapping tool from the U.S. Census Bureau. OnTheMap allows analysts to define a geographic area and to extract the number of jobs located within that service area or corridor. Analysts may define the service area in several ways: using standard geography (such as ZIP codes), drawing a line OnTheMap and choosing a buffer (appropriate for fixed route services), by drawing a freeform shape on a map (appropriate for demand response services), or by choosing a center point and a buffer. The application uses LEHD data.

Once the routes were identified, the following methodology was used to develop the job density factor:

- Draw each route and convert to a GIS shape file using ArcView. (As shape files, the routes could be saved for future adjustments and modifications.)
- Draw a quarter-mile buffer on both sides of each route.
- Calculate the square mileage within the buffer.
- Use OnTheMap to redraw each route with the buffer tool.
- Calculate the number of jobs within the quarter-mile buffer.
- Using square mileage and job estimations, calculate jobs per square mile factor.
- Adjust to jobs per linear mile.

Based on this analysis, a new job density factor was calculated. Using 27 JARC routes from ten states around the country, a factor of 3,877 jobs per square mile was calculated. A factor of 2,093 low-wage jobs was also calculated, using estimates of the number of jobs per NAICS code below the threshold of \$14.42 per hour. The methodology for estimating low-wage jobs is presented later in this appendix.

### ***B.3 Estimating Jobs for Demand Response Services***

To measure jobs accessed by demand response services, FTA made a policy decision to include every job in the service area. To calculate this number, for each demand response service, the reporting organization was asked to identify the county or counties served.

For FY 2006, recipients did not have the option to indicate whether a demand response service covered an entire county or a smaller area. Starting with the FY 2007 / FY 2008 data collection effort, grantees were asked to indicate the approximate percentage of the county served from a drop-down list with the following choices:

- 1% - 24%
- 25% - 49%
- 50% - 74%
- 75% - 99%
- 100%

Using the automated process described in Section B.4, below, the evaluation team accessed jobs information from LEHD for each county with demand response service. This analysis yielded a dataset with the following information for each service:

- Counties served
- Total jobs based on FY 2006 data from LEHD
- Low-wage jobs based on the distribution by NAICS two-digit industry code
- Percentage of the county included in the service area

The team adjusted the findings based on the percentage of coverage, using the mid-point of each range, and then eliminated duplicates. We then summed the records by year, which yielded estimates of all jobs and low-wage jobs made accessible by demand response services for FY 2007 and for FY 2008.

#### ***B.4 Automated Process for Accessing County-Based Jobs Information***

For FY 2007 / FY 2008, the Census LEHD data aspects of the JARC evaluation were substantially the same as for the work performed for FY 2006.

LEHD provides total employment data by calendar quarter and industry for each covered county. LEHD county-level total employment by industry data are available from a U.S. Census website: <http://lehd.did.census.gov/led/datatools/qwiapp.html>.

##### **Automated Census data retrieval overview**

CES staff revised the automated data retrieval system to increase the number of “self-checks” and to permit multiple years of data to be retrieved for each U.S. county that was covered in whole or part by JARC demand response services.

We determined that the URL to retrieve a particular county and year of LEHD data could be generated programmatically. For instance: the following URL provides access to *Total Employment* data for Calhoun County (FIPS code 013) in the state of Florida (abbreviated *fl*) for the year of 2006.

[http://lehd.did.census.gov/cgi-bin/lehdpivot/lehd/pvt/pivot\\_county.hsql?xpivot=Industry&xdata=Total\\_Employment&xyear=2005&head=ZZZZ&xstate=fl&xstyle=lehd&xfixed=Year&xgeofx=xcounty&xco](http://lehd.did.census.gov/cgi-bin/lehdpivot/lehd/pvt/pivot_county.hsql?xpivot=Industry&xdata=Total_Employment&xyear=2005&head=ZZZZ&xstate=fl&xstyle=lehd&xfixed=Year&xgeofx=xcounty&xco)

[http://lehd.did.census.gov/lehd/cache/lehd/pvt/pivot\\_county/fl-c/1e-aecn-dt-fy-1lehd-pi-v013-xe-y2006-xownere.xls](http://lehd.did.census.gov/lehd/cache/lehd/pvt/pivot_county/fl-c/1e-aecn-dt-fy-1lehd-pi-v013-xe-y2006-xownere.xls)

A portion of the web page retrieved is shown below:

**QWI Florida County Pivot Reports**  
Calhoun - Quarterly Workforce Indicators

**Pivot Column**

- County (All Florida)
- Industry
- Sex
- AgeGroup
- OwnerCode
- Year

**Data Row(s)**

- Total Employment
- Net Job Flows
- Job Creation
- New Hires
- Separations
- Turnover
- Avg Monthly Earnings

**Year(s)**

- 2002
- 2003
- 2004
- 2005
- 2006
- 2007
- 2008

Pivot reports display the **numeric** values of one or more Data fields mapped against the **textual** values of a Pivot Field.

The grid below is automatically updated as you select from the lists on the left. Select individual indicators by combining the ctrl key with a left click of the mouse button. Select all

[Download Dataset](#) [Print Table](#)

Year	QWI Quickfacts	11 Agriculture, Forestry, Fishing and Hunting	21 Mining, Quarrying, and Oil and Gas Extraction	22 Utilities	23 Construction M
2006 1	Total Employment	254	N/A	0	185
2006 2	Total Employment	268	N/A	0	197
2006 3	Total Employment	268	N/A	0	225
2006 4	Total Employment	262	N/A	0	241

Each of these Quarterly Workforce Indicator (QWI) County Pivot report pages contains a link, labeled “Download Dataset”, that provides access to the data in spreadsheet format. A sample URL: [http://lehd.did.census.gov/lehd/cache/lehd/pvt/pivot\\_county/fl-c/1e-aecn-dt-fy-1lehd-pi-v013-xe-y2006-xownere.xls](http://lehd.did.census.gov/lehd/cache/lehd/pvt/pivot_county/fl-c/1e-aecn-dt-fy-1lehd-pi-v013-xe-y2006-xownere.xls).

### County FIPS codes

County FIPS codes were retrieved from the Census website:

<http://www.census.gov/geo/www/fips/fips65/data/national.txt> Excerpts of this table are shown below:

State	FIPS	Code	County
AL	01	001	Autauga
AL	01	003	Baldwin
AL	01	005	Barbour
AL	01	007	Bibb
AL	01	009	Blount
AL	01	011	Bullock
AL	01	013	Butler

This table can be used to determine, for instance, that the FIPS code for Bullock County in Alabama is 011.

## NA handling in LEHD data

We discovered that in some cases LEHD contained NAs for particular industries and counties for 2006:02, similar to what is shown below for 2005:02 for Utilities and Management for Vernon County in Wisconsin.

QWI Quickfacts	Total Employment
11 Agriculture, Forestry, Fishing and Hunting	135
21 Mining	0
22 Utilities	N/A
23 Construction	212
31-33 Manufacturing	797
42 Wholesale Trade	657
44-45 Retail Trade	1,092
48-49 Transportation and Warehousing	157
51 Information	104
52 Finance and Insurance	298
53 Real Estate and Rental and Leasing	41
54 Professional, Scientific, and Technical Services	128
55 Management of Companies and Enterprises	N/A

NAs were treated as 0 for calculated total employment and JARC employment for each county.

### Excluded states

As of July 20, 2009, LEHD did not provide county level total employment data for the following localities:

- Connecticut
- District of Columbia
- Massachusetts
- New Hampshire
- Puerto Rico
- Virgin Islands

### Calculation steps

CES software performed seven steps:

1. Identified, based on recipient inputs, counties that were served by demand response services.
2. Filtered out states not included in LEHD, as provided in Census documentation (see above).
3. Converted county names, as provided by recipients, to three-digit FIPS codes, based on the FIPS code table provided by Census.

4. Generated a URL based on the year and quarter required (e.g. 2006), the state, the FIPS code for the county, and the total employment variable.
5. Extracted the cached spreadsheet URL, and used it to retrieve the data and integrate it into an LEHD county data table.
6. Summed the raw total employment figures for 2006:02 by industry to generate an overall “Total Employment” for the county, and summed the weighted industry figures to generate a low-wage employment figure.
7. Integrated these totals into spreadsheets provided to the analysts.

Using this automated process, 495 spreadsheets were retrieved from the LEHD website.

### **Verification and quality control**

We reviewed each county name provided by Recipients to ensure that it could be mapped to a valid FIPS code. We performed edits as appropriate on these data. Generally, edits involved either fixing typographical errors (e.g. “Carroll” for “Carol”, or “Prince George’s” for “Prince Georges”), eliding “County” or “Parish” at the end of the term, or separating multiple counties across multiple lines (e.g. one field containing “Wayne, Oakland” into two rows, one for “Oakland” county and one for “Wayne” county).

### ***B.5 Estimating Low-Wage Jobs***

A methodology for estimating low-wage jobs was developed to support the approaches for estimating jobs accessed by fixed route and demand response services. For the purposes of this analysis, low-wage was defined as 150% of the federal poverty level for a family of four, or \$30,000 per year.

As indicated in the section on developing the jobs density factor for fixed route services, above, two databases were initially compared for the pilot testing: Dun & Bradstreet and LEHD. While both datasets yielded enough information to develop the job-density factor, neither source included readily available salary information. To estimate the number of low-wage jobs, the research team developed an additional factor to estimate the number of low-wage jobs accessed based on industry classifications.

Both datasets classified jobs by NAICS code. NAICS, or the North American Industry Classification System, assigns a six-digit code to each industry. This analysis reviewed codes at the two- and three-digit summary level, and determined that the two-digit level provided an acceptable level of detail for this effort.

The federal Bureau of Labor Statistics compiles the Occupational Employment Statistics (OES) survey. This survey presents average wage information by NAICS code. Using May 2005 data (which was the most recent available on-line when the initial analysis was conducted) of median wages, the researchers estimated the percentage of jobs in each NAICS category that fell below the \$30,000 target. Estimates were based on national quartile data for each two-digit NAICS code and assumed a straight-line distribution of wages within each quartile.

The following table shows the estimated proportion of low-wage jobs in each NAICS category at the two-digit summary level.

NAICS Industry	Weight
11 Agriculture, Forestry, Fishing, and Hunting	0.70
21 Mining	0.20
22 Utilities	0.05
23 Construction	0.45
31-33 Manufacturing	0.40
42 Wholesale Trade	0.30
44-45 Retail Trade	0.80
48-49 Transportation and Warehousing	0.55
51 Information	0.20
52 Finance and Insurance	0.10
53 Real Estate, Rental, and Leasing	0.55
54 Professional, Scientific, and Technical Services	0.20
55 Management of Companies and Enterprises	0.02
56 Admin Support, Waste Management, Remediation Services	0.75
61 Educational Services	0.75
62 Health Care and Social Assistance	0.55
71 Arts, Entertainment, and Recreation	0.75
72 Accommodation and Food Services	0.95
81 Other Services (except Public Administration)	0.80
92 Public Administration	0.40

These weights were used to estimate the proportion of total employment in each industry could be considered low-wage jobs for both the fixed-route and demand-response components of the analysis.

Recipients also had the option to indicate the number of jobs that their JARC-supported services targeted. The question was originally intended for grantees with specialized services, such as routes that served a particular factory or night-owl services that accessed the night shift at a shipping facility. For FY 2007 / FY 2008, recipients provided information about targeted jobs for about 30% of the trip-based programs. When the information was available, the evaluation team incorporated the data about targeted jobs into the estimate of low-wage jobs accessed. For these cases, the targeted job information was considered the preferred option and used in place of the estimated job information.

## ***B.6 Estimating Capacity Constraints***

The approach described above provides an estimate of the number of jobs that JARC services made accessible based on the geographic coverage of the route. This approach is consistent with FTA’s policy decision to measure the performance of most trip-based JARC programs based on the total number of jobs and low-wage jobs in the service region – in other words, the jobs that a customer could reach using the service on any given day. This measure highlights the capability of JARC services to make jobs in a particular service region accessible to low-income earners.

However, this measure may overstate the impact of a service. A service might be expected to reach *any* job in its service area. But under normal circumstances, no transit

service could be expected to provide transportation to *every* job in its service region simultaneously. Consider, for example, a county with 10,000 jobs and a demand response service with the following characteristics:

- Five vehicles
- 10 seats per vehicle
- Eight weekday revenue hours per vehicle
- 30-minute average trip time

We can use this information to estimate a more realistic estimate of the number of jobs accessed based on actual service levels.

The first step is to estimate seat-hours per day:

$$5 \text{ vehicles} \times 10 \text{ seats/vehicle} \times 8 \text{ hours/day} = 400 \text{ seat-hours per day}$$

Using the average trip duration of 30 minutes (or .5 hour), we can translate seat-hours into seats per day. Further assuming that every seat on every trip is taken, seats per day can be considered the equivalent of one-way trips per day:

$$400 \text{ seat-hours} / .5 \text{ hours} = 800 \text{ seats} = 800 \text{ one-way trips per day}$$

Finally, assuming that each individual is making a round trip for work purposes, we divide the number of one-way trips by two to represent jobs.

$$800 \text{ one-way trips} / 2 = 400 \text{ jobs}$$

Using the methodology described above, a county-wide demand response service with a five-van fleet would account for 10,000 jobs accessed in the analysis. But as the example shows, the actual capacity of the service would be closer to 400 jobs accessed on a particular day. So while it may be correct that a demand response service can reach *any* job within its service area, it is also true that a single demand response program cannot reach *every* job within its service area on any given day.

For both fixed route and demand response, the measures of jobs accessed described above can be more accurately defined as measures of *potential* accessibility; these measures are independent of transit capacity and instead estimate the maximum number of jobs accessible via JARC-supported services.

To complement this calculation, the team refined the FY 2007 / FY 2008 analysis to incorporate the *theoretical capacity* of trip-based services. As the above example shows, this estimate of capacity places the jobs-accessed measure in the context of actual transit service provision, providing a reality check. To develop this calculation, grantees providing fixed route and demand response services were asked to report the following for FY 2007 / FY 2008:

- Number of vehicles operated
- Average number of seats per vehicle
- Number of revenue hours those vehicles are operated
- Months in operation for each year

This information was used to generate an estimate of jobs accessed, based on the average capacity of vehicles providing JARC-funded services in FY 2007 and FY 2008. The methodology is summarized below.

The first step was to convert total annual revenue hours into average daily revenue hours. Grantees were asked to indicate the number of months each service was in operation for each fiscal year. We converted the number of months into days (using an average of 30.4 days/month) and divided annual revenue hours by service days to yield an average estimate of daily revenue hours for each service.

The next step was to estimate daily vehicle-seats. Grantees were asked to indicate the number of vehicles by size. Size was defined as number of seats, using a set of ranges based on standard transit vehicle sizes. The evaluation team took the mid-point of each range and multiplied the number of vehicles in each size class by the average number of seats per vehicle. The following table shows the categories and mid-points used.

Range	Mid-point
1-5 seats	3.0 seats
6-10	8.0 seats
11-15	13.0 seats
16-25	20.5 seats
26-35	30.5 seats
36 or more	40 seats

This yielded an estimate of total daily seat-hours for each fixed route, flexible route, shuttle, or demand response JARC service.

- For FY 2008: 4,008,475 daily seat-hours
- For FY 2007: 4,159,452 daily seat-hours

As described above, the final step in the analysis was use the information about seat-hours to estimate jobs.

Assuming an average trip duration of 30 minutes (or 0.5 hour), we translated daily seat hours into the number of available seats per day:

- For FY 2008: 4,008,475 seat-hours / .5 hours = 8,016,949 seats per day
- For FY 2008: 4,159,452 seat-hours / .5 hours = 8,318,903 seats per day

Assuming that every seat was filled for every trip, this estimate of daily vehicle-seats was considered equivalent to daily one-way trips.

Finally, assuming that each individual was making a round trip for work purposes, we divided the number of one-way trips by two to represent jobs.

- For FY 2008: 8,016,949 one-way trips / 2 = 4,008,475 jobs
- For FY 2008: 8,318,903 one-way trips / 2 = 4,159,452 jobs

Using this information, the team estimated the total capacity of fixed route JARC services in operation during FY 2007 / FY 2008.

This estimate of capacity puts a constraint on the number of jobs accessed within a broad geographic region to better reflect the access that a JARC-funded service could provide. The following table shows the estimated number of jobs reached by service type:

Service type	Capacity constraint	
	#	%
FY 2007		
Fixed route	3,142,891	78%
Flex route	25,346	1%
Shuttle feeder	33,732	1%
Demand response	806,505	20%
Total jobs	4,008,475	100%
FY 2008		
Fixed route	2,743,927	66%
Flex route	30,723	1%
Shuttle feeder	43,844	1%
Demand response	1,340,958	32%
Total jobs	4,159,452	100%

About 68% of the trip-based service reports provided information that could be used in this analysis. This analysis did not incorporate any efforts to expand the reported data, primarily because there was no way to know whether the missing information had the same characteristics as the reported data. Therefore, the capacity constraint can be expected to be extremely conservative, since it reflects information provided by just over two-thirds of the reporting universe.

# **Appendix C**

## **JARC Service Profiles**

Under separate cover

# **Appendix D**

## **New Freedom Service Profiles**

Under separate cover