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APPENDIX A: METHODOLOGY USED TO CALCULATE TRAVEL BEHAVIOR CHANGES

There are a number of ways to look at the impact of introducing commuter benefits, and a variety of statistics reported in this report. The hypothetical example below shows how they were calculated:

Consider a survey of 100 employees, who collectively take 1,000 trips per week (100 employees times two trips per day times five days per week). Table A-1 reflects a typical set of before and after survey results from an employer, while A-2 shows further detail in how transit ridership can increase.

Table A-1: Sample Raw Data on Mode Split and Trips: Average Weekday

Mode Split	**Before**		**After**	
Mode	**Avg #/Day**	**%**	**Avg #/Day**	**%**
SOV	60	60%	55	55%
Transit	20	20%	30	30%
Car/Vanpool	15	15%	10	10%
Walk/Bike	5	5%	5	5%
Total	100	100%	100	100%

Table A-2: Sample Raw Data on Transit Mode Split and Trips: Occasional and Daily Riders

	Before			**After**		
Transit Trips	**# of Employees**	**Avg Trips/Week**	**Total Trips/Week**	**# of Employees**	**Avg Trips/Week**	**Total Trips/Week**
Ride every day	10	10	100	15	10	150
Ride occasionally	20	5	100	25	6	150
Never Ride	70	0	0	60	0	0
Total Transit Trips			200			300

In Table A-1, while the transit mode split was 20 percent, this reflected the average number of transit riders per day. Table A-2 shows more detail regarding transit ridership. There are two sources of increase in transit more share: the number of employees who ride twice daily increases from 100 to 150, and the number of people riding occasionally rises from 200 to 250. Their collective increase in the number of trips per week pushed overall transit mode share to 30 percent.

Table A-2 demonstrates that transit mode share can increase even when not all riders ride every day. It also shows that the overall mode split—which is the number generally reported in the survey results—can mask the fact that not all riders are daily riders. The calculations below generally assume that in most cases, only the first set of numbers would be available.

Table A-3 shows how the various measures of change in travel behavior were calculated.

Table A-3: Results Calculations

Metric	Result	Calculation Methodology
Change in Transit Mode Split	10 percentage points	30% - 20% =10%
Change in Transit Ridership	50% increase	(30 - 20) / 20 = 50%
% All recipients who are new riders	33%	Based on the average number of riders: (30 - 20) / 30 = 33%
% All recipients who are previous SOV commuters	16.5%	Decrease in SOV commuting: 60 – 55 = 50 Increase in Transit commuting: 30 – 20 = 100 50 / 100 = 50% of new riders are previous SOV commuters 50% x 33% = 16.5%
% All riders who ride transit more frequently	25%	Total current riders: 15 + 25 = 40 Daily riders who used to ride occasionally: 15 – 10 = 5 Occasional riders who never rode before: 25 – 20 = 5 (5 + 5) / 40 = 25%
# of New Trips/Week/ Current Rider	2.5	New Trips: 300 – 200 = 100 Current riders: 15 + 25 = 40 New trips per rider: 100 / 40 = 2.5

Change in Transit Mode Split. Transit mode split increases by 10 percentage points, from 20 percent ridership before to 30 percent after. This indicates an *absolute* change in transit use that more directly reflects the average number of new riders. A 10 percentage point increase means that for every 100 employees, on average 10 begin riding transit.

Change in Transit Ridership. Transit ridership increases by 50 percent, reflecting the increase from a 20 percent mode share to a 30 percent more share. This indicates a *relative* change in transit use: increases from two to three percent, 20 to 30 percent, and 50 to 75 percent all amount to a 50 percent increase in ridership. Very high increases in ridership are often associated with low starting mode shares, since is it possible to double transit ridership from five to 10 percent, whereas a starting mode share of 80 percent can increase by at most 25 percent (up to a mode share of 100 percent, where every employee is riding transit).

% All recipients who are new riders. This looks at how many employees did not previously ride transit, meaning that receiving commuter benefits compelled them to change their behavior. In this example, 33 percent of commuter benefits recipients are new riders, since there were previously on average 20 riders per day and now there are 30, meaning that 10 of 30 recipients are new riders. Note, however, that this is calculated based on the average. None of the surveys went into the level of detail that this hypothetical example does, looking at daily and occasional riders. So the calculations used in this report assume that the mode share reflects an average number of people riding twice per day.

% All recipients who are previous SOV commuters. This number reflects the absolute number of employees who switched from driving alone to riding transit. This will always be equal to or lower than the percent of recipients who are new riders, since it may be possible that some new recipients will have switched from carpooling, bicycling, or walking. In this example, there are 10 new riders and 5 fewer people commuting via SOV. So, one-half of the *new* recipients are previous SOV commuters. Only one-third of all recipients are new riders, as shown above, so 16.5 percent (50 percent of 33 percent) of all recipients are former SOV commuters.

% All riders who ride transit more frequently. This refers to the number of person who increase their ridership, whether from never riding to riding sometimes, or from riding sometimes to riding more often. Calculating this requires information on the number of employees who were previously riding transit. In this example, the number of people who ride transit occasionally rose from 20 to 25 and the number of people who ride transit every day rose from 10 to 15. Therefore 10 people increased their use of transit, amounting to 25 percent of the 40 who are current riders.

# of New Trips/Week/Current Rider. This is an average of the number of new trips made every week by current riders. In this example, the number of trips per week rose from 200 to 300, an increase of 100 trips. Since there are 40 riders (15 who ride daily and 25 who ride occasionally), this works out to an average of 2.5 new weekly trips per current rider. Note that this again assume information on the number of all current riders. Had only the average been available, the result would have been 3.3 new trips per rider (100 new trips divided among 30 riders).

APPENDIX B: SUMMARY TABLE OF TRAVEL IMPACTS FROM EMPLOYER SURVEYS

Table B-1: Summary of Survey Data

Region	Survey Date	Respon-dents	All Employees			Commuter Benefits Recipients Only				
			Transit Ridership		% Increase in Transit Ridership	% of Recipients Who			Avg # of Transit Trips/Week	
			Before	After		Are new riders	Previously commuted by SOV	Increased their transit ridership	Before	After
San Jose	1997	Avg for all	10.7 %	27.4%	156%	61%	59%	-	-	-
Portland, OR	2001	Avg for all	21%	36%	71%	42%	42%	-	-	-
	1999	Any benefit			34%					
		90-100% paid			46%					
		40-60% paid			31%					
		Pre-tax only			24%					
		Universal pass			57%					
Denver	2003 and ongoing	Avg for all	37.7%	49.4%	31%	24%	24% or less	-	-	-
		Urban	72.5%	88.7%	22%	18%	18% or less	-	-	-
		Urban fringe	63.0%	74.1%	18%	15%	15% or less	-	-	-
		Suburban	17.4%	26.5%	53%	35%	35% or less	-	-	-
	1993	Avg for all	46%	54%	17%	15%	15%	19.4%	6.6 (comm)	7.8 (comm)
Washington, DC, etc.	1993	Avg for all	23.5%	31.3%	33%	25%	15%	-	-	-
Los Angeles	2001	Avg for all	7.6	13.1%	72%	42%	13%			
Minneapolis/ St. Paul	2003	Avg for all	17%	18.8%	11%	10%	10% or less	-	-	-
Atlanta	2003	Avg for all	-	-	126%	48%	43%	-	-	9.4
Philadelphia	2000	Avg for all	-	-	9%	8.5%	8.5% or less	35%	-	-
		Employer-paid	-	-	15%	13.2%	-	42%	-	-
		Pre-tax	-	-	4%	3.8%	-	23%	-	-
	1996	Avg for all	-	-	18%	15%	15% or less	32%	-	-

Table B-1: Summary of Survey Data

Region	Survey Date	Respon-dents	All Employees			Commuter Benefits Recipients Only				
			Transit Ridership		% Increase in Transit Ridership	% of Recipients Who			Avg # of Transit Trips/Week	
			Before	After		Are new riders	Previously commuted by SOV	Increased their transit ridership	Before	After
Philadelphia, Pittsburgh, and Harrisburg	1993	Avg for all	-	-	34%	23%	19%	-	7.8	10.3
		Philadelphia	-	-	28/23%	19%	14/10%	-	8.6/8.7	10.3/10.9
		Pittsburgh	-	-	22%	18%	5%	-	8.2	10.0
		Harrisburg			68%	40%	39%		5.9	9.8
San Francisco	1994	Avg for all	-	-	21%	17%	17% or less	31%	Total increase: 3.24 trips	
		Urban	-	-	14%	13%	-	25%	Total increase: 3.03 trips	
		Suburban	-	-	40%	29%	-	48%	Total increase: 3.74 trips	
New York	2004	Avg for all	-	-	16%	14%	-	10% commute; 24% non-commute	-	
	1994	Avg for all	-	-	-	-	-	11% commute; 15% non-commute	Total increase: 0.76 trips	
	1990	Avg for all	-	-	-	-	-	22.7% commute; 21.8% non-commute	Total increase: 0.42 trips	
	1989	Avg for all	-	-	-	-	-	16.5% commute; 14% non-commute	Total increase: 0.45 trips	
Montgomery County (MD)	2001	Avg for all	-	-	-	29% or above	29%	-	-	-

Notes: A dash (-) means that data are not available on a particular question.

Philadelphia 1993 contains two sets of figures for Philadelphia - one is the pre-test and one is the actual survey.

APPENDIX C: DESCRIPTIONS OF EMPLOYER SURVEYS

SANTA CLARA VALLEY TRANSPORTATION AUTHORITY (VTA) (SAN JOSE, CA)

Type of Commuter Benefit: Universal pass program (Eco Pass). May be employer-paid or pre-tax.

Survey Date: May, 1997

Number of People Surveyed: Surveys were distributed at six employers in the San Jose area who participate in the Eco Pass program. While the total number of surveys distributed was not reported, based on the number of respondents and response rate below, approximately 8,360 employees were surveyed.

Responses: 920 responses, for a reported 11 percent response rate. The largest of these employers was the City of San Jose, which had over 800 employees respond.

Main Findings:

Table C-1: Summary of San Jose Survey Findings

% of Respondents	Before	After	Comments
Using transit to commute	23.5%	36.4%	According to staff, this first percentage ("using transit to commute") refers to all respondents who ride transit occasionally, while the mode splits refer to a one-day mode split.
Mode split: Drive alone	75.5%	59.9%	
Mode split: Transit	10.7%	27.4%	
Mode split: VTA-operated transit	8.9%	25.1%	Only VTA-operated transit was available to Eco Pass holders as the time of the survey.
% Increase in ridership		156%	27.4% minus 10.7% equals 16.7 percentage point increase in ridership; 16.7 divided by 10.7 equals 156%
% All recipients who are new riders		61%	27.4% minus 10.7% equals 16.7 percentage point increase in ridership; 16.7 divided by 27.4 equals 61%
% All recipients who are previous SOV commuters		59%	SOV commuting declined by 15.6 percentage points (75.5 minus 59.9) and Eco Pass transit commuting increased by 16.2 percentage points (25.1 minus 8.9), so 96% (15.6 divided by 16.2) of all recipients shifted from SOV.

Source: Eco Pass survey, May 1997; Communication with Scott Haywood, Senior Marketing Representative.

Comments: The discrepancy in transit share reflects the difference in the questions: Question 2 asked, "Do you currently use Eco Pass to take public transit to work?" (36.4 percent said yes) while Question 8 asked, "What is your primary means of commuting to work?" (27.4 percent said transit). Clearly Eco Pass captures some employees who while not able to commute on transit daily, still do so occasionally.

Note that the "before" response to Question 2 reflects reported previous behavior, while Question 8 compares these responses to a survey conducted in July 1996.

Of the people who were currently using their Eco Pass to take transit to work, 75 percent said that Eco Pass was very important or somewhat important in their decision to take bus or light rail to work.

LLOYD DISTRICT TRANSPORTATION MANAGEMENT ASSOCIATION (PORTLAND, OR)

Type of Commuter Benefit: Universal pass program (PASSport). May be employer-paid or pre-tax.

Survey Date: 2001

Number of People Surveyed: 5,993 employees at 42 TMA member employers who offer PASSports.

Responses: 63 percent response rate reported (implying 3,776 responses).

Main Findings:

Table C-2: Summary of Lloyd District Survey Findings

% of Respondents	Before (1997)	After (2001)	Comments
Mode split: Drive alone	60%	45%	
Mode split: Transit	21%	36%	
% Increase in ridership		71%	36% minus 21% equals 15% percentage point increase in ridership; 15 divided by 21 equals 71%
% All recipients who are new riders		42%	36% minus 21% equals 15 percentage point increase in ridership; 15 divided by 36 equals 42%
% All recipients who are previous SOV commuters		42%	SOV commuting declined by 15 percentage points (60 minus 45) and transit commuting increased by 15 percentage points (36 minus 21), so 100% of all recipients shifted from SOV.

Source: 2001 Survey Results, Lloyd District Transportation Management Association

Comments: Since 1997, the TMA has implemented a number of other employer programs in addition to PASSport, including carpool matching and bicycle programs. So the reductions in SOV commuting and the increase in transit ridership may not be due solely to commuter benefits, but to other programs as well. The survey is performed on an annual basis.

Note that while the 1997 is the "before" survey, new employers have since joined the TMA, so the "before" and "after" figures do not represent the same individual employers. The TMA estimates that the 1997 survey included 15 employers and 2,000 employees. Therefore, while these employers are all located in one business district, some of the difference in mode split could be due to difference in the employers being surveyed.

Percentages of commute modes did not add to 100 percent, presumably due to rounding.

TRIMET (PORTLAND, OR)

Type of Commuter Benefit: Monthly passes and universal pass program (PASSport). May be employer-paid or pre-tax.

Survey Date: 1998/1999 (baseline and follow-up survey, average 1.3 years between surveys)

Number of People Surveyed: 7,333 employees at 321 employers; 2523 employees at 49 employers with PASSport program.

Responses: Not reported.

Main Findings:

Table C-3: Summary of Portland Survey Findings

Benefit Level Paid by Employer	Percent increase in Transit Mode Share
"Any Subsidy"	34%
90-100%	46%
40-60%	31%
"No subsidy"	24%
PASSport	57%

Source: From information posted to Transp-TDM listsserv by Tony Mendoza, Planner IV, Tri-Met, on January 17, 2002. Listserv postings available through http://www.cutr.usf.edu/index2.htm.

Employers may or may not offer any subsidy for the passes, but the vast majority pay 100 percent of the PASSport costs.

Comments: It is difficult to determine what factor was most important in increasing transit ridership. Other factors, such as increases in transit service and the State mandated Employee Commute Options Rule, also play a role in the increases.

DENVER REGIONAL TRANSPORTATION DISTRICT (RTD), ONGOING SURVEY (2003)

Type of Commuter Benefit: Universal pass program (Eco Pass). May be employer-paid or pre-tax.

Survey Date: 2003 (on-going; reported as of April 23, 2003)

Number of People Surveyed: 5,497 employees at 37 employers who offer Eco Pass

Responses: Before: 29.3 percent; After: 28.4 percent. Approximately 1,580 responses received.

In mid-April 2003, Denver RTD provided ICF Consulting with unpublished data from their ongoing survey of employers participating in the Eco Pass program. Employers are routinely surveyed before implementing the program, and again after six months to assess any changes in transit ridership. Therefore the data discussed here reflect a different point in time for every employer (i.e., some employers may have been surveyed several years ago, while others within the past year), but all reflect the change from the period directly before adopting the Eco Pass program to six months after adoption.

These employers are further categorized by their service level area (SLA), with SLA A well outside the Denver CBD, SLA B just outside the Denver CBD (but including the Boulder CBD), and SLA C in the Denver CBD.

Main Findings:

Table C-4: Summary of Denver Survey Findings (2003)

% of Respondents	Before	After	Comments
Mode split: Transit	37.7%	49.4%	The survey asked only whether the respondent currently uses Eco Pass, not about other modes.
SLA A (Suburban)	17.4%	26.5%	
SLA B (Urban Fringe)	63.0%	74.1%	
SLA C (CBD)	72.5%	88.7%	
% Increase in ridership		31.0%	49.4% minus 37.7% equals 11.7% percentage point increase in ridership; 11.7 divided by 37.7 equals 31%
SLA A (Suburban)		52.7%	
SLA B (Urban Fringe)		17.6%	
SLA C (CBD)		22.2%	
% All recipients who are new riders		23.6%	49.4% minus 37.7% equals 11.7% percentage point increase in ridership; 11.7 divided by 49.4 equals 23.6%
SLA A (Suburban)		34.5%	
SLA B (Urban Fringe)		15.0%	
SLA C (CBD)		18.2%	

Source: Unpublished survey results provided by Denver RTD staff.

Comments: As shown in Table C-4, ridership increased regardless of employer location, although urban employers showed larger absolute gains while suburban employers showed larger percentage increases.

It is possible that the actual changes in ridership were lower, due to a tendency for the respondents to be skewed in favor of transit ridership (in other words, employees who do not ride transit are probably less likely to respond to the survey, especially at large employers). Response rates ranged from 19 to 100 percent. Response rates were higher at small employers, thus implying a more representative sample. For small employers (under 25 employees), SLA C employers increased their transit mode split from 58 to 69 percent, SLA B employers increased from 63 to 74 percent (there are only two employers in this category and both are under 25 employees), and SLA A employers increased from 28 to 49 percent. Therefore, at least for smaller employers, ridership gains appear to be significant. See Table C-5.

Table C-5: Change in Transit Use by Location, Denver Survey (2003)

Location	Transit Mode Split		Percent Increase in Number of Transit Users
	Before Eco Pass	After Eco Pass	
SLA A (Suburban): All	17%	27%	53%
Employers Under 25	28%	49%	72%
SLA B (Urban Fringe)	63%	74%	18%
Employers Under 25	Same	Same	Same
SLA C (CBD)	73%	89%	22%
Employers Under 25	58%	69%	20%
Total All Employers	38%	49%	31%

DENVER REGIONAL TRANSPORTATION DISTRICT (RTD), 1993 SURVEY

Type of Commuter Benefit: Universal pass program (Eco Pass). May be employer-paid or pre-tax.

Survey Date: November, 1993

Number of People Surveyed: 7,129 employees at employers who offer Eco Pass. While a simultaneous employer survey of 129 employers was conducted, it was not reported how many employers the respondents represented.

Responses: 577 responses (8.1 response rate).

Main Findings:

Table C-6: Summary of Denver Survey Findings (1993)

% of Respondents	Before	After	Comments
Using transit to commute	52%	67%	The first percentage refers to all respondents who ride transit at least once per week, while the mode splits refer general usage (derived from Table IV-5). Not every recipient rides transit every day.
Mode split: Drive alone	40%	32%	
Mode split: Transit	46%	54%	
% Increase in ridership		17%	54% minus 46% equals 8 percentage point increase in ridership; 8 divided by 46 equals 17%
% All recipients who are new riders		15%	54% minus 46% equals 8 percentage point increase in ridership; 8 divided by 54 equals 12%
% All recipients who are previous SOV commuters		15%	Based on Table IV-5, which shows that the 0.4 net increase in bus travel is matched exactly by the –0.4 decrease in driving alone.
% All recipients who increased their transit ridership		19.4%	Based on new riders and previous riders increasing their frequency.
Avg # transit trips/week	6.6	7.8	

Source: *Regional Air Quality Council Eco Pass Effectiveness Survey*, prepared by The Howell Research Group. November, 1993.

Comments: Mode splits were calculated based on a table in the report showing the average number of days per week each mode was used. Before Eco Pass the mode split was 46 percent transit (2.3 days/week), 40 percent SOV (2 days/week), 10 percent carpool/vanpool (0.5 days), and 10 percent walking (0.4 days). After the introduction of Eco Pass, the transit mode split increased to 54 percent and the SOV share declined to 32 percent, while the carpool/vanpool and walking shares remained constant. This implies that all new riders were previously SOV commuters. The 67 percent of employees using transit to commute is based on the total number of employees who have an Eco Pass, but since this may reflect only occasional transit ridership, the weekly mode splits were used instead.

In a one-day survey, 47.1 percent of employees commuted to work via bus, while 38.7 percent drove to work alone. Slightly more than 10 percent had carpooled or vanpooled to work, while four percent had biked or walked. Of the employees with an Eco Pass, 67.8 rode the bus to work, while only five percent of employees without a pass commuted to work on the bus. Of the employees without an Eco Pass, most drove to work alone (68.9 percent) or carpooled or vanpooled (19 percent). Only 23.8 percent of employees with an Eco Pass drove alone and 5.8 percent carpooled or vanpooled to work.

Although the study reports that transit ridership increased by 19.4 percent, this represents the percentage of riders who increased the frequency of riding. Of this 19.4 percent, 10 percent are previous riders who increased their frequency, while 9.4 percent are new riders). The actual increase in ridership, as measured in the number of new trips, is 17 percent, as calculated in Table C-6, above.

Almost 30 percent of Eco Pass holders reported using transit for non-commute trips for which they had previously used a car. However, these figures were calculated separately and the number of trips was not reported.

WASHINGTON DC AND OTHER REGIONS (SURVEY OF FEDERAL WORKERS BY GAO)

Type of Commuter Benefit: Various, depending on location. However, all are employer-paid.

Survey Date: September, 1993

Number of People Surveyed: The survey represents 59,000 eligible federal employees. The report also notes that 75 federal agencies out of a total of 150 provide commuter benefits. However, it is not reported how many employees received the survey.

Responses: Not reported.

Main Findings:

The General Accounting Office (GAO) published a survey about federal employee participation in commuter benefits programs.[1] At the time, the federal government was allowed but not required to provide commuter benefits, and the maximum allowable had recently (January 1993) increased from $21 to $60. (Of 75 federal employers providing benefits, only four provided $60; the rest provided $21.) GAO surveyed both federal employers and employees. While federal employees nationwide were surveyed, three-quarters of all participating employees were in the Washington, DC area.

Table C-7: Summary of GAO Survey Findings

% of Respondents	Before	After	Comments
Using transit to commute	23.5%	31.3%	Per report, 75% of current riders were previous riders. 75% of 18,500 riders is 13,875, divided by 59,000 total employees equals 23.5%
% Increase in ridership		33%	31.3% minus 23.5% equals 7.8 percentage point increase in ridership; 7.8 divided by 23.5% equals 34%
% All recipients who are new riders		25%	As reported. The survey found that 21% had switched modes because of the benefit, while 4% had switched for unrelated reasons.
% All recipients who are previous SOV commuters		15%	Per report, 60% of employees who switched because of benefit are previous SOV commuters. 60% of 25% of 18,500 transit riders is 2,775 former SOV commuters, or 15%.

Source: Testimony of Kenneth M. Mead, Director, Transportation Issues, Resources, Community, and Economic Development Division, before the House of Representatives Subcommittee of Compensation and Employee Benefits, Committee of Post Office and Civil Service, on September 23, 1993

Comments: GAO also speculated, based on survey responses to a hypothetical increase in benefits from $21 to $60, that the mode split for transit could increase to 49 percent.

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[1] *Mass Transit: Federal Participation in Transit Benefit Programs.* GAO/RCED-93-163, Sept. 1, 1993. The results of this study are also thoroughly detailed in the testimony of Kenneth M. Mead, Director, Transportation Issues, Resources, Community, and Economic Development Division, before the House of Representatives Subcommittee of Compensation and Employee Benefits, Committee of Post Office and Civil Service, on September 23, 1993.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES (UCLA)

Type of Commuter Benefit: BruinGO, a University of California at Los Angeles (UCLA) universal pass program.

Survey Date: 2001

Number of People Surveyed: UCLA had 21,149 employees (faculty and staff) during that period; it is not reported how many were surveyed.

Responses: Response rate and number of surveys not reported.

Table C-8: Summary of Los Angeles/UCLA Survey Findings

% of Respondents	Before (2000)	After (2001)	Comments
All employees: Mode split: Transit	7.6%	13.1%	This is the overall increase in the transit mode split for all UCLA employees.
Employees in service area: Mode split: Transit	9%	20%	These represent mode splits only for employees who live within the transit service area for BruinGo.
Employees in service area: Mode split: Drive alone	46%	42%	
% Increase in ridership		72%	13.1% minus 7.6% equals 5.5 percentage point increase in ridership; 5.5 divided by 7.6% equals 72%. Based on all employees.
% All recipients who are new riders		42%	13.1% minus 7.6% equals 5.5 percentage point increase in ridership; 5.5 divided by 13.1% equals 42%. Based on all employees
% All recipients who are previous SOV commuters		13%	SOV commuting declined by 4 percentage points (46 minus 42) and transit commuting increased by 13 percentage points (20 minus 9), so 31% (4 divided by 13) of all recipients shifted from SOV. 31% of 42% is 13%. Based on service area employees, as before-and-after mode split data not given for all employees.

Source: Jeffrey Brown, Daniel Baldwin Hess, and Donald Shoup. *Fare-Free Public Transit at Universities: An Evaluation.* Journal of Planning Education and Research, 2003.

Comments: The survey separates out employees who lives within the Santa Monica bus service area, because that is the only transit provider on which BruinGO passes can be used. The paper shows that the increase in transit ridership is likely attributable to the introduction of BruinGO, since employees outside the service area experienced a transit mode increase of only 0.4 percentage points, compared with an increase of 11.5 percentage points for employees in the service area.

While the paper reports on mode shifts within the student population, these are not reported here because of the differences in the employee and student populations.

METRO TRANSIT (MINNEAPOLIS/ST. PAUL)

Type of Commuter Benefit: Universal pass program (Metropass). May be employer-paid or pre-tax.

Survey Date: 2003

Number of People Surveyed: 37,500 employees represented, although the number surveyed is not reported.

Responses: Not reported.

Main Findings:

Metro staff provided ICF Consulting with the following figures on the six largest employers enrolled in the program. These compare current ridership (2003) with ridership when the employer first implemented the program, so they do not necessarily cover the same time period.

Table C-9: Summary of Minneapolis/St. Paul Findings for Six Largest Employers

Employer	Number of Employees	Transit Mode Split		Ridership Increase
		Before	After	
1	5,382	6.8%	7.0%	2.4%
2	5,535	56.2%	68.0%	21.0%
3	4,942	7.7%	8.0%	4.0%
4	4,815	4.0%	4.0%	-1.0%
5	14,123	10.6%	10.0%	-3.0%
6	2,712	30.0%	32.0%	6.6%
	Total: 37,509	**Average:** 17.0%	18.8%	10.8%
			% all Users who are New Riders: (1.8% divided by 18.8%)	9.6%

Source: E-mail communication from staff at Metro, Minneapolis/St. Paul

Comments: "Before" transit mode splits were calculated by ICF Consulting on the basis of the ridership increases provided by Metro. The overall ridership increase represents the average increase of all employees, not the average increase per employer. According to Metro staff, the average ridership increase for all employers enrolled in Metropass is seven percent. However, figures were not provided on other employers besides these six.

Note also that the economy has weakened in the early 2000s and that some employers have experienced layoffs.

MARTA PARTNERSHIP PROGRAM (ATLANTA, GA)

Type of Commuter Benefit: Monthly pass with volume discount. May be employer-paid or pre-tax.

Survey Date: January, 2003

Number of People Surveyed: 13,881 pass recipients at 87 employers who are members of the Partnership Program.

Responses: 3,340 responses (24.1 response rate).

Main Findings:

Table C-10: Summary of Atlanta Survey Findings

% of Respondents	After	Comments
% Increase in ridership	126%	Although the mode split is not available, the percentage increase can be calculated based on the percent of recipients who did not previously ride transit. 100% (current recipients) minus 44.2% (previous transit riders) equals 55.8 percentage point increase in ridership; 55.8 divided by 44.2 equals 126% From Figure 2 in report: 43.4% were previous SOV commuters, 3.9% carpooled, 1% biked/walked, and 44.2% rode transit (do not add to 100%)
% All recipients who are new riders	48.3%	
% All recipients who are previous SOV commuters	43.4%	
Avg # transit trips/week (commute)	8.4	
Avg # transit trips/week (non-commute)	1.0	Based on weighted averages from Table 10 in report; see below for discussion

Source: *Evaluation of the Effectiveness of Programs Contained in the "Framework for Cooperation to Reduce Traffic Congestion and Improve Air Quality," Phase 3. Discount Transit Pass Use Survey Final Report*. Center for Transportation and the Environment. February, 2003. Provided by CTE staff.

Comments: The increase in ridership is based on an assumption that all transit ridership is represented within the group surveyed; 44.2 percent of those pass recipients were previously riding transit as a "typical mode" (defined as three or more days per week).

Respondents were asked about which mode they used one or more days, and three or more days. These were converted from their "true value" to an "adjusted value," to account for the fact that some transit ridership did not account for the entire length of the trip. Finally, these percentages were then converted into the percentage of trips per week each mode was used.

The survey also asked respondents how long they had been riding transit. Roughly equal proportions (28 percent) have been riding either more than five years or less than one year. Figures on how long the benefits had been provided at individual employers were not available, so these figures cannot help answer how long employees remain with their programs. However, the survey found that 63 percent of respondents rated their receipt of a free or discounted pass as "very important" in their decision to begin riding transit, and 76 percent rated it "very important" in their decision to continue riding transit.

The survey found that 72 percent of respondents received their pass at a discounted rate (presumably these represent both pre-tax and combination payments, although the survey question does not specify that), while 23 percent received it free. However, the survey did not break down their responses along these lines.

Finally, respondents were asked about riding transit for non-commute trips. 62 percent said that they never use their pass for non-commute trips (i.e., they ride transit exclusively to and from work). 21 percent used it once or twice per week for non-commute trips, nine percent used it three or four times, and eight percent used it five or more times. Using a weighted average, this works out to an average of one non-commute trip per person per week.

DELAWARE VALLEY REGIONAL PLANNING COMMISSION (PHILADELPHIA, PA), 2000 SURVEY

Type of Commuter Benefit: Voucher (TransitChek). May be employer-paid or pre-tax.

Survey Date: 2000

Number of People Surveyed: While the number of employees to whom the survey was sent is not reported, based on the figures below it was sent to 2,275 TransitChek recipients. Although a simultaneous employer survey was sent to 340 employers, it was not reported whether the survey was sent to employees at all of those employers.

Responses: 865 (38 percent response rate).

Main Findings:

This survey was the only one to ask employees whether their employer was paying for their benefits, or whether they were paying with pre-tax income. In general, the survey found that employees whose employers were paying were more likely to switch modes and ride transit more often.

Table C-11: Summary of Philadelphia Survey Findings (2000)

% of All Users Who	Employer-Paid	Pre-Tax	All Users	Comments
% Increase in transit ridership	15%	4%	9%	Although the mode split is not available, the percentage increase can still be calculated based on the percent of recipients who did not previously ride transit. 100% (current recipients) minus 86.8% (previous transit riders) equals 13.2 percentage point increase in ridership; 13.2 divided by 86.8 equals 15% increase
% All recipients who are new riders	13.2%	3.8%	8.5%	
% Recipients who increased their transit use	42%	23%	35%	
% Recipients who increased their number of trips per week	12.6%	8.1%	N/A	

Source: TransitChek Research 2000, Summary Highlights, obtained from DVRPC staff.

Comments: The write-up indicates that 8.5 percent were new riders, at an average of 8.3 trips per week. It does not indicate whether the 8.3 trips per week is true of only new riders, or of all riders. The number of all employees increasing their trips on transit was not reported, and as the questions were not provided, it is not clear how "increased their transit use" differs from "increased their number of trips per week."

At the companies participating in TransitChek, an average of 16 percent of employees received the vouchers. Fifty-three percent of employees reported that their employer provided the commuter benefit, and 40 percent said their employer allowed employees to purchase vouchers using employee payroll deduction.

DELAWARE VALLEY REGIONAL PLANNING COMMISSION (PHILADELPHIA, PA), 1996 SURVEY

Type of Commuter Benefit: Voucher (TransitChek). May be employer-paid or pre-tax.

Survey Date: June/July 1996

Number of People Surveyed: 5,000 TransitChek recipients. Although a simultaneous employer survey was sent to 200 employers, it was not reported whether the survey was sent to employees at all of those employers.

Responses: 1,676 (34 percent response rate).

Main Findings:

Table C-12: Summary of Philadelphia Survey Findings (1996)

	% of Respondents	Comments
% All recipients who are new riders	15%	
% All recipients who increased their transit ridership	17%	These represent previously occasional riders who began riding transit every day.

Source: TransitChek User Survey: Summary of Results, obtained from DVRPC staff.

Comments: Within this report, 15 percent was added to 17 percent for a total who increased their transit ridership of 32 percent, since according to the survey write-up these represent two mutually exclusive groups of respondents.

DELAWARE VALLEY REGIONAL PLANNING COMMISSION (PHILADELPHIA, PA), 1993 SURVEY

Type of Commuter Benefit: Voucher (TransitChek). May be employer-paid or pre-tax.

Survey Date: 1993

Number of People Surveyed: Two surveys were done. The first, a test in spring 1993, surveyed 500 TransitChek recipients at two employers, and 314 responded (a response rate of 63 percent). The number of persons surveyed for the second survey in December 1993 is given in the appendix as 4,000, representing 43 employers in three regions (Philadelphia, Pittsburgh, and Harrisburg).

Responses: First survey: 314 responses (63 percent response rate). Second survey: 386 responses (10 percent response rate, based on 4,000 employees). For the two surveys combined, response rate is 16 percent (700 responses from 4,500 surveyed).

Main Findings:

In October 1995, FTA published a report on the TransitChek programs in New York City and Philadelphia. FTA conducted interviews with DVRPC and a cross-section of employers and transit operators participating in the TransitChek program.

Table C-13: Summary of Philadelphia, Pittsburgh, and Harrisburg Survey Findings (1993)

% of Respondents	Before	After	Comments
Number of trips/week	7.8	10.3	Increase of 2.5 trips per recipient.
First survey	8.6	10.3	Increase of 1.7 trips per recipient.
Second survey: Philadelphia	8.7	10.9	Increase of 2.2 trips per recipient.
Second survey: Pittsburgh	8.2	10.0	Increase of 1.8 trips per recipient.
Second survey: Harrisburg	5.9	9.8	Increase of 3.9 trips per recipient.
% Increase in ridership		34%	As reported (Table 3-6)
First survey		28%	246 previous riders of 314 current recipients
Second survey: Philadelphia		23%	118 pervious riders of 145 current recipients
Second survey: Pittsburgh		22%	32 previous riders of 39 current recipients
Second survey: Harrisburg		68%	120 previous riders of 201 current recipients
% All recipients who are new riders		23%	164 new riders of 700 recipients
First survey		19%	60 new riders of 314 recipients
Second survey: Philadelphia		19%	27 new riders of 145 recipients
Second survey: Pittsburgh		18%	7 new riders of 39 recipients
Second survey: Harrisburg		40%	81 new riders of 201 recipients
% All recipients who were previous SOV commuters		19%	SOV commuting declined by 19.9 percentage points (20.3 minus 0.4) and transit commuting increased by 25 percentage points (98.7 minus 73.7), so 80% (19.9 divided by 25) of all recipients shifted from SOV. 80% of 23% is 19%.

Table C-13: Summary of Philadelphia, Pittsburgh, and Harrisburg Survey Findings (1993)

% of Respondents	Before	After	Comments
First survey		14%	SOV commuting declined by 14 percentage points (15 minus 1) and transit commuting increased by 19.2 percentage points (97.5 minus 78.3), so 73% (14 divided by 19.2) of all recipients shifted from SOV. 73% of 19% is 14%.
Second survey: Philadelphia		10%	15 of new riders switched from SOV commuting, or 56%. 56% of 19% is 10%
Second survey: Pittsburgh		5%	2 of 7 new riders switched from SOV commuting, or 29%. 29% of 18% is 5%
Second survey: Harrisburg		39%	78 of 81 new riders switched from SOV commuting, or 96%. 96% of 40% is 39%

Source: U.S. Federal Transit Administration, 1995. *TransitChek® In The New York City And Philadelphia Areas*. Available online at www.fta.dot.gov/library/program/tchek/TransitChek.html.

Comments: Note that the calculations for the number of SOV commuters are more complex for some areas than others. This is because in those cases, not all of the TransitChek recipients reported using transit as their primary commute mode. For all 700 persons responding to the survey, 73.7 percent of recipients surveyed said that transit was their primary mode of transportation, while 20.3 percent drove alone prior to TransitChek. After TransitChek was implemented, 98.7 percent of the employees rode transit, while only 0.4 percent drove alone. Thus the percentage of recipients switching from SOV commuting is based on these figures, rather than on all recipients.

While this survey does not provide mode split figures, because only TransitChek recipients were surveyed, the percentage increase in ridership is calculated based on reported previous behavior (to use a simple example, if 32 of 39 recipients reported that they rode transit before TransitChek was introduced, that was calculated as a 22 percent increase in ridership: (39 minus 32) divided by 32). This assumes that all previous riders accepted TransitChek. While the survey does not provide this information, it seems a safe assumption that if transit riders at these employers were allowed to accept a transit benefit they would. Even if a few do not, it seems that this would represent a very small percentage and that the figures calculated above would be largely correct.

METROPOLITAN TRANSPORTATION COMMISSION (SAN FRANCISCO BAY AREA)

Type of Commuter Benefit: Commuter Check vouchers.

Survey Date: 1994

Number of People Surveyed: Approximately 3,600 to 4,500 Commuter Check recipients; surveys were sent to recipients at 239 employers. Because Commuter Check does not have records of the number of employees participating at individual employers, the exact number of employees surveyed is not available. Both the most recent and the most long-standing employers were eliminated, leaving employers who had been participating in Commuter Check for several years.

Responses: Response rate between 40 and 50 percent, or approximately 1,800 responses. Responses were received from recipients at 149 employers. Response rates were higher from smaller employers.

Main Findings:

Table C-14: Summary of San Francisco Survey Findings

	Urban employees	Suburban employees	All Users	Comments
% Increase in ridership	14%	40%	21%	Calculated based on responses reported in survey write-up: Total current recipients minus previous riders (all ridership levels except "hardly ever"), divided by previous riders.
% All recipients who are new riders	13%	29%	17%	Calculated based on responses reported in survey write-up: Divided previous "hardly ever" category by all recipients.
% of recipients who increased their transit ridership for commute trips	25%	48%	31%	These figures are not combined with non-commute trip figures; this assumes that any increase in non-commute trips would be made by recipients already increasing their commute trips.
% of recipients who increased their transit ridership for non-commute trips			29%	Figures for urban and suburban not provided
Avg number of new trips/recipient	3.03	3.74	3.24	See below.
Avg number of new trips/recipient receiving $20 benefit	3.15	4.00	3.40	Figures in these two categories estimated based on bar charts in report; actual figures not reported.
Avg number of new trips/recipient receiving $30 benefit	3.00	2.49	2.85	
% Recipients receiving $20 benefit who increased commute trips			35%	Note that earlier in the study the percentage of all recipients increasing their transit commute trips was 31%. These figures are based on page 10 of the report.

Table C-14: Summary of San Francisco Survey Findings

	Urban employees	Suburban employees	All Users	Comments
% Recipients receiving $30 benefit who increased commute trips			30%	based on page 10 of the report.
% Recipients receiving over $30 benefit who increased commute trips			38%	

Source: *Impact of the Bay Area Commuter Check Program: Results of Employee Survey. Prepared for Metropolitan Transportation Commission, Oakland, CA.* November, 1994.

Comments: Calculations regarding the increase in ridership and the percent of new riders were made based on information in the survey. These calculations assume that all current Commuter Check recipients are transit riders. Based on other surveys, it appears that this is not true for all recipients, although it is true for a high percentage. However, this provides a rough approximation of these two metrics, which allows comparisons with other surveys.

Although the report calculates the overall increase in transit commuting based on several questions, it is not clear how this figure was calculated. For Question 1 of the survey, "Since receiving Commuter Check, has your use of transit for work trips stayed the same or increased?" the percentage of respondents saying it had increased is 34 percent. However, the figure reported in the text is 31 percent. Presumably this represents the entire increase for transit, since it would be unusual for a recipient to increase his/her transit ridership only for non-commute trips.

The average increase for recipients who increased their ridership was 3.24 trips per week, which includes work and non-work trips. However, it should be noted that performing the calculations on the original data, which is contained in the report, resulted in a lower figure of 2.95 trips. The difference may lie in the assumed number of new trips in the "11 and above" category. It seems unlikely that the average would be much above 11, as this would imply that a non-transit rider began commuting not only every day by transit, but taking multiple weekend trips. As the write-up notes, most former non-riders increased their usage by several trips per week. However, the figures as reported in the text are used throughout this memo.

Another notable finding is that trip increases for employees receiving a $20 commuter benefit are larger than for employees receiving a $30 benefit. The report speculates that this surprising result is largely explained by the types of employees who are induced to switch modes by commuter benefits. Most of the employees increasing their number of trips per week were relatively infrequent riders before receiving the benefit. Because most recipients do not change from never riding transit to commuting by transit daily, these recipients shift just several trips per week, and the amount of the benefit has less impact than the fact that they are receiving a benefit at all. While the write-up implied that all recipients are receiving a "subsidy," recipients were not asked whether their employer pays for part or all of the benefit. The pertinent question reads, "What Commuter Check value do you receive?" The report does not analyze separately respondents receiving over $30, because they represent only 11 percent of all recipients.

TRANSIT CENTER (NEW YORK CITY), 2004 SURVEY

Type of Commuter Benefit: Voucher (TransitChek). May be employer-paid or pre-tax.

Survey Date: November 2003 to January 2004

Number of People Surveyed: 3,050 employees who commute to work in the greater New York City area were surveyed.

Responses: Not available.

Main Findings:

Table C-15: Summary of New York Area Survey Findings (2004)

% of Respondents	After	Comments
% Increase in transit ridership	16%	Although the mode split is not available, the percentage increase can still be calculated based on the percent of recipients who did not previously ride transit. 100% (current recipients) minus 86% (previous transit riders) equals 14 percentage point increase in ridership; 14 divided by 86 equals 16% increase.
% All recipients who are new riders	14%	From slide 14
% All recipients who increased their transit ridership	Over 24%	24% of respondents reporting increasing their weekend transit use; 10% and 15% reported increasing commuting and weekday evening use, implying the total may be greater than 24%.

Source: Commuter Benefits Impact on Transit Use: A TransitChek Study. Study performed for TransitChek by ORC Macro, August 2004.

Comments: TransitChek made only a PowerPoint presentation of its tabulated data available, which did not include the number of respondents.

Slide 17 contained hypothetical data on the number of current drive-alone commuters who would be persuaded to switch to transit given a certain level of commuter benefit.

Table C-16: Current Drive-Alone Commuters' Propensity to Switch to Transit

Potential Savings: % responding:	$400/year pre-tax	$1,200/year pre-tax	$50/month employer-paid benefit
Somewhat likely	23%	23%	22%
Very likely	13%	27%	18%
Total	37%	51%	40%

Source: Commuter Benefits Impact on Transit Use: A TransitChek Study. Study performed for TransitChek by ORC Macro, August 2004.

TRANSIT CENTER (NEW YORK CITY), 1994, 1990, AND 1989 SURVEYS

Type of Commuter Benefit: Voucher (TransitChek). May be employer-paid or pre-tax.

Survey Dates: 1994, 1990, and 1989. Because these surveys results are compiled in the same document, all of the results are discussed below.

Number of People Surveyed:

1994 survey: combines results from three surveys. First, 3,100 employees; second, employees as employers selected through work force size, and third, Port Authority employees. While the number of employees surveyed in surveys two and three was not reported, based on the response rate and surveys returned, the total number of employees for all three is 8,175.

1990 survey of 845 employees at the New York-New Jersey Port Authority that had been receiving TransitCheks since 1989

1989 survey: 4,600 employees (estimated based on response rate and surveys returned) who received the vouchers for at least six months. While surveys were sent to 513 employers, surveys were received from employees at only 193 employers.

Responses:

1994 survey: 4,170 surveys returned (51 percent response rate)

1990 survey: 526 surveys returned (62 percent response rate)

1989 survey: 2,320 surveys returned (50 percent response rate)

In an FTA report on the TransitChek programs in New York City and Philadelphia,[2] the New York City data were based on information from three previous surveys. Because the surveys were quite similar, the data are reported together in Table C-15, below. In addition, the report used information from individual interviews that FTA conducted with organizations involved in the administration of TransitChek programs, along with some interviews of employers and transit operators.

[2] Ibid.

Main Findings:

Table C-17: Summary of New York Area Survey Findings (1994, 1990, and 1989)

% of Respondents		1994	1990	1989	Comments
% All recipients who increased their transit ridership	Commute	11.0%	22.7%	16.5%	Average increase not reported; presumably; these two categories are not mutually exclusive, so figures cannot be added.
	Non-commute	15.0%	21.8%	14%	
Average increase in number of trips/month	Commute	1.29	1.13	1.23	While these figures were reported as new transit trips per $15 voucher, according to the write-up the average value in 1994 is $45, so the amount reported in table represents the 1994 figure multiplied by 3.
	Non-commute	1.74	0.55	0.55	
	Total	3.03	1.68	1.78	
Average increase in number of trips/week		0.76	0.42	0.45	Based on four weeks/month.

Source: U.S. Federal Transit Administration, 1995. *TransitChek® In The New York City And Philadelphia Areas*. Available online at www.fta.dot.gov/library/program/tchek/TransitChek.html.

Comments: Note that while the survey write-up gave the number of new transit trips per month per $15 TransitChek, a total new trips per week figure was calculated for the purposes of comparison with other studies. These calculations are based on the following explanation from the report:

> Although the table shows the number of new trips per $15 worth of TransitChek® vouchers has also declined, this should be interpreted considering the fact that the average value of TransitChek® vouchers received per recipient in 1994 is about three times that in 1990. An employee who received $15 in TransitChek® vouchers in 1990 would be receiving $45 in 1994, so for 1994 the number of new commuting trips per recipient would be 1.29 and of noncommuting trips, 1.74, or approximately three new transit trips per 1994 recipient compared to 1.75 new trips per recipient in 1989. It appears that the higher subsidy induces the recipient to take more additional transit trips.

Based on this discussion, it was assumed that the average transit benefit was $15 in 1989 and 1990, and $45 in 1994.

While figures were not provided, the report also offered that the amount of the benefit affected behavior: "Other data from the 1994 employee survey also bear out the effect of the subsidy amount on the number of additional trips taken. Employees receiving $31 or more per month took on average over three times as many additional trips than those receiving $30 or less per month."

MONTGOMERY COUNTY COMMUTER SERVICES (MD)

Type of Commuter Benefit: FareShare and Super Fare/Share. Both programs are employer-paid.

Survey Date: 2001/2002 (follow-up surveys)

Number of People Surveyed: The number of surveys sent to FareShare and Super FareShare partcipants was not reported. Survey were sent only to participants, not to all employees.

Responses: 959 FareShare respondents at 51 employers and 766 Super FareShare respondents at 43 employers.

Main Findings:

In Montgomery County, MD, the FareShare and Super FareShare programs offer employers up to $32.50 per employee, per month in matching funds if the employers contribute to their employees' public transportation costs to travel to and from work. (Super FareShare provides up to $64 per employee for the first year, then reverts to the regular program. It is available only to employers is certain areas with TMAs, generally with high employment density.) Employee surveys are conducted when new employers join the program. In addition, in February 2001, the county performed a follow-up survey to look at before and after travel patterns of employees participating in the two programs. A second follow-up survey was conducted in January 2002 of only Super FareShare employees.

Table C-18: Summary of Montgomery County Survey Findings

	FareShare	Super FareShare	All Users
% All recipients who are previous SOV commuters	29%	28%	28.6%

Source: Unpublished data, Montgomery County.

Comments: At the time of the survey, 90 percent of FareShare participants commuted by transit, while seven percent used transit plus park-and-ride and three percent used vanpool. Of those 51 employers, 85 percent had some mode shift from SOV to transit or vanpool among their participating employees. Almost forty percent experienced a mode shift of over 50 percent (i.e., more than one-half of their participating employees switched from driving alone).

The numbers were similar for Super FareShare participants. At the time of the survey, 80 percent commuted by transit, while 19 percent used transit plus park-and-ride and one percent used vanpool. Of the 43 employers, 75 percent had some mode shift from SOV to transit or vanpool. Thirty percent experienced a mode shift of over 50 percent.

METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS (WASHINGTON, DC)

Commuter Connections, the regional commuter assistance organization, commissioned a State of the Commute 2001 survey that was published in July 2002. It was a random telephone survey of 7,200 employed adults in the region. Of the respondents, 51 percent worked for employers that offered some type of alternate commuting incentive, and 29 percent worked for employers that offered Metrochek, the regional transit voucher. Metrochek was most common among federal employers (68 percent of federal employees had such services), large employers (51 percent), and employers in Washington DC (49 percent) as opposed to the suburban areas.

Of employers with Metrochek, 31 percent had used the service, and 48 percent of recipients said their commute behavior was "influenced" by Metrochek. (The survey instrument did not elaborate on the meaning of "influenced," so it is not clear if these recipients were new transit riders or increased their previous use of transit.) Employees with commuter incentives were less likely to drive alone to work than employees who did not have access to such incentives (61 vs. 74 percent) and more likely to use carpool, vanpool or transit as their primary commute mode (30 vs. 15 percent). However, these figures do not control for the fact that employers with commuter incentives are more likely to be in central locations. Also, the survey did not ask employees about their commute behavior before and after commuter benefits were introduced. In a separate question about the reasons why employees had tried non-SOV modes over the past two years, commuter benefits were not listed as a possible reason.

APPENDIX D: ANALYSIS APPROACH AND FINDINGS FROM MANDATORY COMMUTE TRIP REDUCTION REGIONS

This appendix explains the methodology used to analyze the data sets obtained from the three regions with commute trip reduction ordinances: Southern California (South Coast Air Quality Management District), Tucson, Arizona (Pima County Association of Governments), and Washington State (Department of Transportation).

REGRESSION ANALYSIS

Methodology

Using the Southern California database, the effects of financial incentives on vehicle trip rate (VTR) were tested through two regression analyses. VTR is the ratio of the number of vehicles arriving at a worksite to the number of employees arriving at a worksite, expressed as a number between 0 and 100. Zero means that no employees drive—not even to carpool—and 100 means that all employees drive alone.

The first analysis (results shown in Table D-1) used the full Southern California data set of 14,132 observations to test whether the presence of a financial incentive reduces VTR. All nine financial incentives available in the database were included in this regression. Given that the database provided information on the level of the financial incentive for certain incentives, the second analysis attempted to test the extent to which the monthly dollar amount of a financial incentive affects results. Due to lack of data on level of employer payment for certain financial incentives, the second analysis used a partial data set of 2,902 observations (results shown in Table D-2). Only five of the financial incentives were included in the second analysis.

Both regressions took advantage of the panel data in the Southern California database by using the fixed-effects model. For both regressions, the dependent variable is the measured VTR in the next plan year, while the independent variables are measured for the current year. Both regressions control for a number of factors other than the financial incentives:

- First, the use of a fixed-effects model provides control for factors that vary across worksites but are not already included in the model.
- Second, non-financial incentives are expected to reduce VTR and were included as control variables. These incentives were grouped into 11 categories and each is measured by the number of incentives present.
- Third, the size of a worksite may provide more opportunities for ridesharing. While the LA data do not have a variable that directly measure the size of a worksite, this analysis used one-fifth of the total number of employee trips as a proxy for the size of a worksite.
- Fourth, the duration of a plan and the plan year are used to control for temporal trends in VTR that are common for all worksites.
- Fifth, a dummy variable indicating worksites located in the downtown area is used. This variable serves as a proxy for several factors that impact VTR.
- Finally, the current VTR is used as an independent variable to control for factors that are expected to affect the baseline VTR for a given worksite.

Results

Table D-1: Results from the Full Data Set

(Dependent Variable=Log(Future VTR))

Variables	Fixed-Effects	
	Coeff.	**t-ratio**
DA Dummy (Transportation Allowances)	**-0.0180**	**-2.01**
DFI Dummy (Intro. Transit Passes/Subsidies)	**-0.0069**	**-2.00**
DFO Dummy (Other Direct Financial Subsidies)	-0.0028	-1.25
DFS Dummy (Subsidized Vanpool Seats)	0.0037	0.79
DFB Dummy (On-Going Bike-to-Work Subsidies)	0.0024	0.70
DFC Dummy (On-Going Carpooling Subsidies)	-0.0036	-1.35
DFT Dummy (On-Going Transit Subsidies)	0.0033	1.39
DFV Dummy (On-Going Vanpooling Subsidies)	**-0.0059**	**-2.28**
DFW Dummy (On-Going Walk-to-Work Subsidies)	-0.0040	-1.17
DP Sum (Parking Management)	**-0.0108**	**-3.60**
BG Sum (Guaranteed Ride Home)	**-0.0038**	**-5.27**
DT Sum (Telecommuting)	-0.0012	-0.43
DW Sum (Compressed Work Week)	**-0.0049**	**-3.46**
BH Sum (Flextime for Ridesharing)	0.0046	2.02
BR Sum (Rideshare Matching)	0.0005	0.30
BF Sum (Facilities and Amenities)	0.0008	0.77
DN Sum (Direct, Non-financial)	**-0.0052**	**-4.92**
IB Sum (Onsite Benefits)	-0.0007	-0.51
IS Sum (Other Onsite)	0.0018	1.56
BM Sum (Marketing)	-0.0010	-1.94
Plan Duration (months)	**0.0003**	**2.92**
Plan Year	**-0.0023**	**-3.60**
Log(Worksite Size)	**-0.0044**	**-2.31**
Downtown Dummy (0,1)	0.0214	1.81
Log(Current VTR)	-0.0135	-1.40
Constant	Site Specific	
Number of Observations	14,132	
Adjusted R^2	0.8176	
Adjusted R2 without Log(Current VTR)	0.8176	

Table D-2: Results from the Partial Data Set

(Dependent Variable=Log(Future VTR))

Variables	Fixed-Effects	
	Coeff.	**t-ratio**
Log(On-Going Bike-to-Work Subsidies)	0.0025	0.16
Log(On-Going Carpooling Subsidies)	-0.0083	-0.57
Log(On-Going Transit Subsidies)	-0.0043	-0.30
Log(On-Going Vanpooling Subsidies)	-0.0014	-0.12
Log(On-Going Walk-to-Work Subsidies)	0.0010	0.07
DP Sum (Parking Management)	**-0.0201**	**-2.25**
BG Sum (Guaranteed Ride Home)	**-0.0065**	**-3.77**
DT Sum (Telecommuting)	-0.0052	-0.75
DW Sum (Compressed Work Week)	**-0.0116**	**-3.24**
BH Sum (Flextime for Ridesharing)	0.0083	1.39
BR Sum (Rideshare Matching)	0.0008	0.18
BF Sum (Facilities and Amenities)	0.0019	0.74
DN Sum (Direct, Non-financial)	-0.0052	-1.75
IB Sum (Onsite Benefits)	-0.0018	-0.49
IS Sum (Other Onsite)	0.0010	0.31
BM Sum (Marketing)	-0.0003	-0.19
Plan Duration (months)	**0.0006**	**2.81**
Plan Year	-0.0016	-1.01
Log(Worksite Size)	-0.0019	-0.45
Downtown Dummy (0,1)	**0.0594**	**2.24**
Log(Previous VTR)	-0.0160	-0.76
Constant	Site Specific	
Number of Observations	2,902	
Adjusted R^2	0.8595	
Adjusted R2 without Log(Previous VTR)	0.8596	

The presence of several financial incentives does have some significance statistically, including Transportation Allowances, Introductory Transit Passes or Subsidies, and On-Going Vanpooling Subsidies (Table D-1). The statistical significance of these financial incentives, however, is far less than several groups of the non-financial incentives, including Parking Management, Guaranteed Ride Home, Compressed Work Week, Direct/Non-Financial, and Marketing. In terms of the amount of monthly incentives, on the other hand, none of the five financial incentives show any statistical significance (Table D-2).

The existence of some financial incentives and non-financial incentives showing an unexpected positive sign represents a problem. While it may not be serious because with the exception of Flextime for Ridesharing, none of the incentives with a positive sign is statistically different from zero, it is a problem. It is possible that this problem results from the exclusion of several ideal determinants. It is also possible that this problem results from errors in the data.

Given the problems with the data and model specifications, these results on the limited effect of the financial incentives on VTR do not necessarily lead one to conclude that these financial incentives do not affect VTR in any meaningful way.

DESCRIPTIVE ANALYSIS

Methodology

To perform the analysis, individual records were combined into "observations." Each observation consisted of records from three years, to study as a group those years in which benefits were introduced or removed. Each observation therefore consisted of Year 1, a baseline year used to determine prior benefits; Year 2, the year in which benefits were introduced or removed in the plan, and the year for baseline mode share; and Year 3, the year in which the results of that change should show up in mode share data. This methodology allows for the fact that the Year 2 plan indicates a future action, the results of which should be apparent by Year 3. (While no mode split data from Year 1 was used, it is included because it marks whether there was a change in benefits in Year 2.) Note that the analysis always considered three consecutive records regardless of the amount of time between them.

Two types of observations were identified:

Benefits Introduced. There is no benefit in Year 1, but a benefit is introduced in the Year 2.

Benefits Removed. There is a benefit in Year 1, but it is removed in Year 2.

This allows the analysis to focus on whether there was a change in travel behavior due to the introduction or removal of a particular benefit. Note that the presence or absence of the benefit in Year 3 does not matter. The important measure in Year 3 is how the mode split changed from Year 2, since this reflects the introduction or removal of the benefit in Year 2.

Based on the overall pool of records, observations were isolated for three types of benefits: transit, vanpool, and other financial incentives (carpool, bike and walk). A separate analysis was carried out based on each benefit type.

For transit benefits, the two groups were further disaggregated depending on whether the other benefits provided by the employer remained the same or changed. This controlled for whether a particular benefit was introduced or removed on its own, or as part of a broader change in benefits. For vanpool and financial benefits (which resulted in far fewer observations), only observations where other benefits remained equal were analyzed. Only transit benefits were analyzed both controlling for other benefits and without controls. Using the Southern California data, since there were so many observations, employers who introduced transit benefits with and without supporting benefits were separated out.

For each of these groups of observations, the primary dependent variable in the analysis was the vehicle trip rate (VTR). Transit and vanpool mode shares are also discussed. All "before" and "after" VTR and mode share information compares the second year to the third year.

RESULTS FROM SOUTHERN CALIFORNIA

Impacts of Introducing Transit Benefits. Table D-3, below, presents two sets of observations: a set where other benefits did change, and a set with no other changes in benefits levels (i.e., the first group does not control for the effect of other benefits, where the second one does). This analysis showed that where transit benefits were introduced, and all other benefits held constant, VTR remained the same and transit mode share decreased—a unexpected and disappointing result. While VTR decreased slightly for transit benefits introduced in conjunction with other benefits, the extremely small increase in transit share from 3.5 to 3.6 percent is not very significant.

The observations were then analyzed to determine if there were individual cases where transit mode share increased, to see if there were any obvious factors that could help explain why responses varied from employer to employer. Table D-3 shows these results in seven rows: those that decreased transit mode split more than five percentage points, those that decreased between one and five percentage points, those that decreased between zero and one percentage point, those with no change, those that increased between zero and one percentage point, those that increased between one and five percentage points, and those that decreased by more than five percentage points. For the no control group, roughly equal percentages of worksites saw their transit mode share increase and decrease, while the control group saw more worksites decrease than increase.

Table D-3: Impacts of Introducing Transit Benefits Sorted by Change in Transit Mode Split in the Southern California Region

Employers Introducing Transit Benefits		**With or Without Other Transportation Programs**		**Without Supporting Programs**		**With Supporting Programs**	
Number of Observations		943		57		23	
VTR	Before	80.3		76.9		77.7	
	After	79.1		79.4		76.1	
Transit Mode Split	Before	3.5%		4.5%		4.9%	
	After	3.6%		3.4%		5.4%	
Transit Mode Split %age Point Change		0.1%		-1.1%		0.5%	
Transit Mode Split % Change		3%		-24%		10%	
Number of Employers with %age Point Change in Transit/ Starting Transit Mode Share	<-5	37	17.9%	6	20.0%	0	-
	-5 to -1	141	6.5%	7	4.7%	6	3.5%
	-1 to 0	199	1.9%	19	3.3%	0	-
	0	154	0.0%	7	0.2%	6	0.0%
	0 to 1	195	1.5%	8	2.1%	2	0.8%
	1 to 5	167	3.1%	8	1.7%	8	10.2%
	> 5	50	10.0%	2	6.1%	1	9.0%

Table D-3 shows that none of these employer groups showed a large increase in transit mode split, but that the largest increase was among those employers who also implemented supporting benefits (defined as guaranteed ride home and internal marketing), where transit ridership increased by 0.5 percentage points, or 10 percent. The group of employers also contained the highest percentage of employers who experienced increases in transit ridership; 11 out of 23 (48 percent), as opposed to 18 out of 57 (32 percent) for the group without supporting programs. None of the groupings show a substantial impact on VTR.

Impacts of Removing Transit Benefits. Table D-4, below, compares two groups of observations when transit benefits were eliminated. Here it was expected that the transit mode share would decrease (since the benefit was taken away) and that VTR would increase (because those employees switched to driving). However, when controlling for other programs, removing transit benefits decreased both VTR and transit

mode share. Without controlling for other programs, VTR fell and transit ridership rose when the benefits was removed—the opposite of our prediction. Overall, the changes were very small. In the control group, roughly equal numbers of worksites saw their transit mode share increase and decrease, but for the control groups a larger proportion of worksites (54 percent, or 26 of 48) experienced a decline in transit mode share.

Table D-4: Impacts of Removing Transit Benefits in the Southern California Region

		With or Without Other Transportation Programs		**Without Other Transportation Programs**	
Total number of observations		820		48	
VTR	Before	77.9		79.5	
	After	77.4		78.7	
Transit Mode Share	Before	6.0%		4.2%	
	After	5.2%		4.3%	
Number of Employers with %age Point Change in Transit/ Starting Transit Mode Share	<-5	35	22.6%	3	40.5%
	-5 to -1	141	6.8%	10	5.4%
	-1 to 0	159	1.9%	13	2.3%
	0	121	0.0%	6	0.0%
	0 to 1	173	2.2%	8	1.1%
	1 to 5	146	6.9%	6	20.0%
	> 5	45	8.9%	2	6.6%

Impacts of Introducing and Removing Vanpool and Financial Benefits. Table D-5 shows the impacts of both introducing and removing vanpool and financial benefits. Financial benefits include transportation allowances; ongoing walking, bicycle or carpool subsidies; and "other direct financial subsidies." Again, the overall results are disappointing: when vanpool benefits were introduced, the average VTR rose and the mode share for vanpooling declined. VTR and mode share stayed fairly constant when vanpool benefits were eliminated.

The overall effects of implementing and eliminating financial benefits were virtually identical, showing a decrease in VTR of between one and two vehicle trips per 100 employees.

Table D-5: Impacts of Introducing and Removing Vanpool and Financial Benefits in the Southern California Region

		Vanpool Benefits		Financial Benefits	
		Introduce	**Remove**	**Introduce**	**Remove**
Total number of observations		51	50	104	85
VTR	Before	81.3	79.6	80.8	80.6
	After	82.1	79.5	79.0	79.0
Transit Mode Split	Before	-	-	3.4%	3.1%
	After	-	-	3.6%	3.3%
Car/Vanpool Mode Split[1]	Before	1.9%	1.0%	20.6%	21.7%
	After	1.0%	0.9%	23.3%	24.3%
Walk/Bike Mode Split	Before	-	-	3.6%	2.5%
	After	-	-	3.3%	2.5%

Note: For vanpool benefits, the figures reflect vanpool mode split only; for financial benefits, they combine carpool and vanpool mode split.

RESULTS FROM TUCSON

Tucson had the smallest data set of the three mandatory trip reduction regions. For the worksites that introduced transit benefits, VTR rose in both the control and non-control group, although transit mode share also increased slightly (just over one percentage point) for the control group. When transit benefits were removed from the no control group, both VTR and transit mode share fell. For the one worksite that removed transit benefits and kept all other benefits constant, transit mode share increased from 5.2 to 8.2 percent. See Table D-6.

Table D-6: Impacts of Introducing or Removing Transit Benefits Sorted by Change in Transit Mode Split in Tucson

		Introducing		Removing	
		With or Without Other Transportation Programs	**Without Other Transportation Programs**	**With or Without Other Transportation Programs**	**Without Other Transportation Programs**
Number of Observations		21	3	10	1
VTR	Before	81.9	83.8	84.1	83.6
	After	83.9	85.2	82.5	75.9
Transit Mode Split	Before	4.6%	3.6%	4.5%	5.2%
	After	4.0%	4.5%	4.1%	8.2%
Transit Mode Split %age Point Change		-0.6%	1.1%	-0.4%	3.0%
Transit Mode Split		-15%	25%	-10%	58%

Table D-6: Impacts of Introducing or Removing Transit Benefits Sorted by Change in Transit Mode Split in Tucson

		Introducing			Removing		
		With or Without Other Transportation Programs		Without Other Transportation Programs	With or Without Other Transportation Programs		Without Other Transportation Programs
% Change							
Number of Employers with %age Point Change in Transit/ Starting Transit Mode Share	<-5	2	11.1%		0	-	
	-5 to -1	6	6.7%		4	7.9%	
	-1 to 0	6	1.6%		3	0.6%	
	0	0	-		0	-	
	0 to 1	3	1.0%		1	0.2%	
	1 to 5	4	5.4%		2	5.2%	
	> 5	0	-		0	-	

As shown in Table D-7, relatively few worksites in Tucson introduced or removed vanpool or financial benefits. Both introducing and removing financial benefits results in very slight changes in VTR and mode share for transit, carpooling and vanpooling, and walking/bicycling.

Table D-7: Impacts of Introducing and Removing Vanpool and Financial Benefits in Tucson

		Vanpool Benefits		Financial Benefits	
		Introduce	Remove	Introduce	Remove
Total number of observations		1	0	6	4
VTR	Before	90.0		81.4	77.0
	After	90.3		79.8	75.7
Transit Mode Split	Before			5.4%	6.4%
	After			5.6%	7.4%
Car/Vanpool Mode Split[1]	Before	11.5%		11.4%	24.2%
	After	11.0%		11.9%	24.0%
Walk/Bike Mode Split	Before			5.6%	2.3%
	After			6.7%	2.6%

Note: The figures combine carpool and vanpool mode share; separate mode shares were not available.

RESULTS FROM WASHINGTON STATE

In Washington State, 137 employers added transit benefits, but only one who added them without changing any other benefits. (While the original analysis of this data set showed six such employers, staff in Washington State determined that only one of these constituted a true such case; the others proved to contain errors in data coding that made them invalid.) The 137 worksites showed fairly high average transit mode shares, and increased by nearly one percentage point. Just over half (56 percent) of all worksites showed increases in transit share. As in Southern California, removing benefits had essentially no impact on the use of non-SOV modes. See Table D-8.

Table D-8: Impacts of Introducing or Removing Transit Benefits Sorted by Change in Transit Mode Split in Washington State

		Introducing			Removing		
		With or Without Other Transportation Programs		Without Other Transportation Programs	With or Without Other Transportation Programs		Without Other Transportation Programs
Number of Observations		137		1	70		0
VTR	Before	72.3		87.7	65.6		-
	After	71.2		92.3	64.5		-
Transit Mode Split	Before	14.0%		0.5%	20.6		-
	After	14.9%		0.1%	20.9		-
Transit Mode Split %age Point Change		0.9%		-0.4%	0.3		-
Transit Mode Split % Change		6.4%		-80%	1%		-
Number of Employers with %age Point Change in Transit/ Starting Transit Mode Share	<-5	5	43.8%	-	7	49.9%	-
	-5 to -1	21	15.3%	-	16	21.0%	-
	-1 to 0	29	6.3%	1	9	6.7%	-
	0	5	0.4%	-	2	0.0%	-
	0 to 1	30	7.2%	-	11	3.0%	-
	1 to 5	31	13.1%	-	15	22.1%	-
	> 5	16	35.3%	-	10	27.5%	-

Only one worksite had any instance of adding or removing a vanpool or financial benefit. That case is shown in Figure D-9.

Table D-9: Impacts of Introducing Financial Benefits in Washington State

		Carpool Benefits (Financial)	
		Intro.	**Rem.**
Number of observations		1	0
VTR	Before	90.4	-
	After	91.6	-
Transit Mode Share	Before	1.2%	-
	After	2.5%	-
Vanpool Mode Share	Before	0.0%	-
	After	0.0%	-

APPENDIX E: TRANSIT AGENCY INTERVIEW GUIDE

Dear _____:

Thank you for agreeing to participate in this research project. The purpose of this study is to assess the effects of commuter benefits programs on transit agencies (in terms of ridership, revenues, and costs) and on broader goals like traffic reduction. This study is funded through the Transit Cooperative Research Program (TCRP), which is part of the National Academy of Sciences. Your agency has been selected as one of eight across the nation for in-depth interviews, which will be used to compile case studies and statistics documenting the effects of commuter benefit programs. The information you provide will be used to develop a report for TCRP on "Analyzing the Effectiveness of Commuter Benefits Programs."

The following questionnaire is designed as a guide for a phone interview that will be scheduled to collect information about your agency's commuter benefits program and its effects. Please review the questionnaire to familiarize yourself with the information we are seeking. Some of the questions ask for data (for example, on employer participation in a program), and you may need to consult with other people within your agency to be able to answer some of the questions. Prior to our phone interview, we encourage you to fill in as many responses as possible on the questionnaire and fax or e-mail this back to us. We encourage you to attach supporting data, reports, or other documents that respond to the questions. Your responses will be reviewed prior to our phone interview so that we may use that time most productively.

While the length of the questionnaire may appear imposing, many of the questions are multiple choice, and we plan to discuss the more complex questions in our phone interview. We appreciate the time you spend on this. Ultimately, this research will be used to help transit agencies better understand the costs and benefits of employer-based programs and ways to get the most benefit out of these programs.

If you need clarification on a specific question, please feel free to contact me at 202-862-1106. Or, you may leave your response blank and we will discuss in our phone interview.

Sincerely,

TCRP research team member

Note: For simplicity, this questionnaire sometimes refers to employer "pass programs" or "commuter benefits" programs. We recognize that your commuter benefits program may involve sales to employers of passes, tickets, farecards, vouchers, or other options. Please respond based on the appropriate program or programs in your area. If multiple employer programs are offered (for example, sales to employers of monthly passes and annual passes), please provide information on each program.

Name of Transit Agency: _____

Location: _____

Person Completing Questionnaire: _____

Telephone: _____

E-mail: _____

Other Contacts: _____

_____

Overview of Commuter Benefits Program

1. Please list the name of each type of pass offered for sale to employers (if multiple programs, please list each), and date program was initiated.

Name of employer pass or program:	Date program began:
_____	_____
_____	_____
_____	_____

2. Does the program involve any fees for employers or delivery charges?

   - ❑ Yes – Explain:
   - ❑ No

3. Does the program involve any discounts for employers (e.g., discounted passes)?

   - ❑ Yes – Explain:
   - ❑ No

4. Are there any eligibility requirements (e.g., minimum orders, minimum number of employees)?

   - ❑ Yes – Explain:
   - ❑ No

5. How do employers order passes (check as many as apply)?

   - ❑ Phone
   - ❑ Fax
   - ❑ E-mail
   - ❑ Web site
   - ❑ Automatic re-enrollment
   - ❑ Other: _____

6. How often do employers order passes (check as many as apply)?

   - ❑ On a monthly basis – Specific dates each month: _____
   - ❑ On a quarterly basis – Specific dates: _____
   - ❑ Once per year – Specific dates: _____
   - ❑ Other: _____

Program Participation

7. What is the current participation in the commuter benefits program? Please list participation for each type of employer pass/voucher program if multiple programs are offered (attach additional sheets if necessary):

	Program #1:	Program #2:	
Name	_____	_____	
Number of employers enrolled	_____	_____	(as of date: _____)
Number of employees enrolled	_____	_____	(as of date: _____)
Number of passes sold	_____	_____	(time period: _____)
Value of passes sold	_____	_____	(time period: _____)
Revenue from passes sold	_____	_____	(time period: _____)

8. How has participation in the commuter benefits program changed over time? Please provide figures (e.g., number of employers participating, vouchers/passes sold, etc.) on a yearly basis for as far back as tracked for each program offered. Attach additional sheets, if available.

9. If you have information available, please fill in approximate:

   Percent of total riders using employer passes: _____%

   Percent of transit fare revenue coming from employer pass sales _____%

10. How many employers offer the following types of programs (Provide number, if known, or estimated percentage, if numbers are not known):

    Employer-subsidized program: _____
    (employer pays money toward cost of pass)

    Employee-paid pre-tax program: _____
    (employer does not contribute toward cost of pass; employees pay through payroll deduction)

    Combination of both: _____
    (employer pays portion, allows employees to pay for remainder using pre-tax income)

11. Do you have any information regarding types of employers participating? If yes, please provide a breakdown by the following categories. Please provide supporting information, if available.

    By employer size?

    By industry?

    By geographic area/location?

12. Do you have any information regarding what types of services are used by participating employees? If yes, please describe. Please provide supporting information, if available.

    By mode (e.g., heavy rail / light rail / bus / vanpools)?

    By service provider (i.e., if pass is good for use by different transit agencies' services)?

Other Programs

13. What other types of passes are offered for sale directly to customers? How many are sold directly to customers (not through an employer commuter benefits program)?

    - ❑ Monthly passes
      # of sales: _____ (month: _____)
    - ❑ Annual passes
      # of sales: _____ (year: _____)
    - ❑ Other (please specify): _____
      # of sales: _____ (period: _____)
    - ❑ Other (please specify): _____
      # of sales: _____ (period: _____)
    - ❑ Other (please specify): _____
      # of sales: _____ (period: _____)

14. Are any commercial vouchers (e.g., Commuter Checks, TransitChek) valid in your transit system?

    - ❑ Yes. Please identify: _____
    - ❑ No

    If Yes, what is the value of vouchers redeemed on a monthly basis? _____

15. Do any third party benefits administrators (TPAs) or other entities (e.g., transportation management associations) purchase transit passes from your agency in bulk to distribute to employers?

    - ❑ Yes. Please identify: _____
    - ❑ No

    If Yes, what is the value of passes purchased on a monthly basis? _____

System Ridership and Revenues

16. To what extent do you believe the commuter benefits program has increased ridership or helped maintain existing riders?

Overall Ridership	Peak Period Ridership	Non-peak Period Ridership
❑ Significant effect	❑ Significant effect	❑ Significant effect
❑ Moderate effect	❑ Moderate effect	❑ Moderate effect
❑ Minor effect	❑ Minor effect	❑ Minor effect
❑ No measurable effect	❑ No measurable effect	❑ No measurable effect
❑ Detrimental effect	❑ Detrimental effect	❑ Detrimental effect

If available, please attach supporting information.

17. What other factors may have affected overall ridership since implementation of the commuter benefits program?

- ❑ Change in fares - Please specify date(s) and change(s): _____
  _____
- ❑ Change in service – Please specify: _____
  _____
- ❑ Economic factors – Please explain: _____
  _____
- ❑ Other: _____
- ❑ Other: _____

18. What effect has the commuter benefits program had on transit revenues?

- ❑ Increase in revenues (i.e., due to increased sales)
- ❑ Neutral
- ❑ Decrease in revenues (i.e., due to employer discounts)
- ❑ Don't know

Please explain. If available, attach supporting information.

Staff Time and Resources:

19. How much agency staff time goes toward managing and administering the commuter benefits program (in terms of full-time equivalent employees/FTEs)? If possible, please divide by function; for example, administration vs. marketing and outreach to employers.

20. What other resources are utilized by the agency? Please list as many additional resources or costs associated with the commuter benefits program as possible.

21. How much agency budget goes toward managing and administering the commuter benefits program? If available, attach supporting information.

    What is the marketing budget for the program? $_____

    What is the fulfillment budget? $_____

22. Do other agencies (e.g., metropolitan planning organizations, transportation management associations, etc.) participate in employer sales efforts to promote the commuter benefits program?

    - ❑ Yes. Please name:
      _____
      _____
    - ❑ No.

Potential Cost Savings and Other Benefits

23. To what extent does the commuter benefits program reduce fare transactions and cash handling within the system?

    - ❑ To a high degree
    - ❑ To a moderate degree
    - ❑ To a low degree
    - ❑ Not at all

24. Could you provide an estimate of how much it costs to handle cash transactions within the system – in terms of total time and resources, or cost per transaction, to collect and transport cash and farecards? *Note: This may be a difficult question to answer. Please provide a contact in finance or operating department who may be able to discuss with us on follow-up interview:*

    Name: _____

    Phone: _____

25. Are there other ways that the agency saves money as a result of the program?

    - ❑ Yes – Explain:
    - ❑ No

Overall Impact of Program

26. Has the agency made any changes in fares, routes, or services as a result of customer response to the commuter benefits program?

    - ❑ Yes – Explain:
    - ❑ No

27. Has the program solved any problems for the agency?

    - ❑ Yes – Explain:
    - ❑ No

28. Has the program caused any problems for the agency?

- ❑ Yes – Explain:
- ❑ No

29. Overall, how successful does the agency consider the commuter benefits program?

- ❑ Very successful
- ❑ Somewhat successful
- ❑ Not successful

Why?

Thank you for completing this questionnaire. Please return it via e-mail to: lecola@icfconsulting.com or via fax to: 202-862-1144, attention: Liisa Ecola.

APPENDIX F: TRANSIT AGENCY CASE STUDIES

Case study write-ups of the eight transit agencies interviewed. Note that all figures on the annual fare revenue and farebox collections are from the 2001 National Transit Database.

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY, WASHINGTON, DC

Interview conducted on July 24, 2003

Contact: Lorraine Taylor, Manager, Sales Program

Agency Profile

The Washington Metropolitan Area Transit Authority (WMATA) provides bus (Metrobus) and heavy rail (Metrorail) service within the Washington, DC metropolitan region. It is the largest provider in the region. There are a number of smaller, suburban providers as well: Maryland's MARC train (Maryland Area Rail Commuter) and Virginia Railway Express (commuter rail); DASH, Ride-On, and Fairfax Connector (bus); and various smaller commuter bus and vanpool services, including VPSI, a private company. Average weekday ridership on WMATA bus and rail is 1.3 million in a service area population of 3.3 million people.

Fare Structure. Metrorail fares are time- and distance-based, ranging from $1.20 to $3.60. There are no monthly unlimited ride passes for Metrorail; however, there are a variety of shorter passes, such as one-day and weekly passes. Metrobus fares are $1.20 for one-way regular service and $2.50 for one-way express service. WMATA also sells a stored value card called SmarTrip®. This touchless technology fare media costs $5 initially, but can store up to $200, and can be refunded if the rider loses the card. Currently, the SmarTrip® card only is valid on Metrorail and approximately 200 buses in WMATA's fleet, with plans to expand to the entire bus fleet.

Annual fare revenue in 2001 was $375 million while total operating funds were $872 million, for a total farebox recovery ratio of 43 percent.

Commuter Benefits Program Details

WMATA has two related commuter benefits programs:

Metrochek. Metrochek functions as both fare media and a voucher. It resembles a Metrorail fare card and can be used directly as fare media on Metrorail. However, it can also be exchanged for fare media for Metrobus, as well as for other regional providers, including VPSI. Only employers can purchase Metrochek, which is available in various denominations ($1, $5, $10, $20 and $30). Employees can do one of three things with their Metrocheks: 1) Use them as fare media on Metrorail, 2) Transfer them to a SmarTrip® card, or 3) Exchange them for fare media for Metrobus or other providers. There are no discounts, fees, or minimum number of employees required to participate. Metrochek was introduced in 1993.

SmartBenefits. SmartBenefits is an outgrowth of Metrochek that began in 2000. Instead of giving employees paper Metrocheks, SmartBenefits transfers the employers' funds electronically to employees, who can use them to download money onto their SmarTrip card via the pass/farecard machines in each Metrorail station.

Both programs allow the employer to order via phone, fax, e-mail, or online, and re-enroll automatically. However, employers that participate in SmartBenefits may still need Metrocheks for employees to exchange for bus fares; they may use a credit card to pay for their SmartBenefits order and any Metrocheks needed. Customers can only use a credit card to purchase Metrocheks through the SmartBenefits program. They cannot call the fulfillment center and place an order for Metrocheks and pay with a credit card.

Program Participation

Current Participation. Current participation is shown in the table below:

Table F-1: Participation in WMATA Programs

	Metrochek	SmartBenefits	Total
Time Period:	July 2003 for enrollment; FY 2003 (July 2002 to June 2003) for passes and revenues		
Number of Employers Enrolled	3,349	623	3,972
Number of Employees Enrolled	189,067	18,933	208,000
Number of Passes Sold	6.7 million	171,985	6.9 million
Value of Passes Sold	$177 million	$13.8 million	$190.8 million
Revenue from Passes Sold	$177 million	$13.8 million	$190.8 million

Revenue figures provided by WMATA staff were given an on annual basis. The number of passes sold for Metrochek includes all five denominations. For SmartBenefits, the 171,985 figure counts all electronic transactions. The ratio between the number of employees enrolled and the number of passes sold is very different because of the method of distribution. If two employees each receive $60 in commuter benefits, one through Metrochek and one through SmartBenefits, one may receive three $20 Metrocheks, which would be counted above as three passes, while the other makes one electronic transaction.

Changes in participation. Although figures for the number of employees participating were not available since the inception of the program in 1993, participation has nearly doubled from 107,000 employees in 2000 to 208,000 in 2003. Revenues have grown from $3.2 million in 1993 to $177 million in 2003. With only one exception, every year has seen double-digit increases in sales. Assuming that the per-employee expenditure was $35 per month when the program began, that implies approximately 7,500 recipients in the first year.

Table F-2: Changes in Participation in WMATA Programs

Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Metrochek Annual revenues ($ millions)	$3.2	$9.9	$14.3	$15.7	$18.8	$25.5	$37.1	$53.3	$116	$138	$177
% annual increase		212%	45%	9%	20%	35%	46%	43%	118%	19%	28%
# of employees (000)	7.5	23.5	34.1	37.3	44.9	60.7	88.4	107	172	190	208
% annual increase		212%	45%	9%	20%	35%	46%	21%	61%	10%	9%
Spending per employee per month	$35	$35	$35	$35	$35	$35	$35	$41.48	$56.20	$60.53	$70.91
SmartBenefits Annual revenues ($ millions)									$1.3	$7.6	$13.8
% increase										485%	82%

Note: Shaded areas represent estimates. Figures for number of employees are estimated based on reported revenues and an assumed average expenditure per employee of $35/month for 1993 through 1999, or on derived per employee figures for Metrochek for 2001 through 2003.

Participation and overall ridership/revenues

WMATA staff reported that approximately 30 percent of all passenger revenue comes from employer pass sales. In 2001, for example, WMATA received $117 million of total fare revenue of $375 million from Metrochek and SmartBenefits. Although WMATA staff did not provide a percentage of all riders using commuter benefits, according to the American Public Transit Association, 2001 weekday ridership was 1.3 million, and in 2001 172,000 employees received commuter benefits. Assuming that each employee represents two boardings per day, this implies that approximately 25 percent of all riders were using commuter benefits.

Employer Profiles. According to WMATA staff, 75 percent of recipients are Federal employees (140,000). By an Executive Order issued in October 2000, all executive branch federal agencies in the Washington, DC area are required to provide employer-paid commuter benefits to their employees. Given Washington's large Federal employee pool, this has a significant impact on the use of commuter benefits. For the private sector participants, most have between 10 and 25 employees. At least half of recipients are located in Washington (as opposed to suburban locations).

Employer-paid or pre-tax. Fifty-five percent of employers cover the entire cost of the benefit. As noted above, Federal agencies are required to pay the entire cost. Another 10 percent of employers cover part of the cost, and 35 percent allow employee-paid pre-tax.

Use by mode and agency. Of $191 million received in revenue from the two programs in 2003, just over nine percent ($17.3 million) was redeemed for fare media on non-Metrorail modes. (A breakdown by number of employees was not available.) Of this figure, $3.4 million was spent on Metrobus, $500,000 on the region's two commuter rail systems, and $120,000 on vanpool programs. The remaining $13.9 million went to various local bus providers.

Other Programs

Individual passes. WMATA sells a variety of passes to individuals: weekly and multi-day rail passes, and reduced-rate passes for seniors, students, and disabled persons. Between these various passes, annual sales were 2.7 million units in 2003, for $30.5 million in revenues. This represents a decline from 2001 levels of 3.3 million units and $33.9 million in revenues. The difference is explained largely by the popularity of Metrochek and SmartBenefits, which as noted above grew during the same period. Total revenue from fare media grew over this period from $158 million to $229 million.

Commercial vendors. There are no commercial vouchers used in the region. WageWorks®, EBS and Sodexho PASS operate as third-party administrators. WMATA staff estimated that less than five percent of all Metrochek and SmartBenefits sales were to these vendors.

System Ridership and Revenues

Ridership. WMATA staff reported that commuter benefits have increased overall and peak period ridership to a "moderate" degree, with "no measurable effect" on off-peak ridership.

Revenues. The programs have helped increase revenues, but specific information was not available.

For both ridership and revenues, two significant factors affected the use of commuter benefits during the past ten-year period. First, in October 2000 all executive branch federal agencies began paying the full amount of employees' commuter benefits up to the legal limit. Second, the legal limit increased from $65 to $100 in January 2002. This helps explain the sharp increases from FY 2000 to FY 2001, when the number of employees receiving Metrochek jumped from 107,000 to 172,000, an increase of 61 percent,

and revenues more than doubled from $53.3 to $116 million. The disparity between the percentage increase in riders and revenue is explained by the jump in per-employee spending from $41 in 2000 to $70 in 2003

There were no fare increases for eight years until June, 2003. While the fiscal year figures for 2003 include June, the overall impacts are not captured in these figures.

Staff Time and Resources

WMATA has 4 full time equivalents working in its commuter benefits program, one manager and three full-time employees.

Marketing. WMATA's marketing budget for the commuter benefits program is $300,000 annually. This is separate from the $700,000 budget for general transit advertising, which is used for an outside advertising agency.

Other agencies. Within the Washington DC region, the Washington Metropolitan Council of Governments (MWCOG), the MPO for the region, promotes commuter benefits. MWCOG serves as the umbrella agency for a number of smaller, targeted programs that work with individual counties to do employer outreach and marketing.

Effects of program

WMATA staff indicated that the SmartBenefits program reduces fare transactions and cash handling to a high degree, and Metrochek to a moderate degree, but could not supply any dollar figures in terms of cost savings. SmartBenefits eliminates the costs associated with distributing paper Metrocheks to employers.

Staff said that they anticipate a greater cost savings when more employers change from Metrochek to SmartBenefits. To date, many employers have been hesitant to switch because the SmarTrip card is valid only for rail transit, not bus. They anticipate that many employers will change to SmartBenefits when SmarTrip can be used on the bus network.

WMATA has made two changes to the programs in reaction to employer requests and response. They have eliminated the $15 and $21 Metrochek denominations, since there was low demand for them, and they have added American Express to the list of approved credit cards.

Overall impact of program

The program is considered “very successful.” It generates a good deal of revenue—30 percent of total passenger revenues—and helps in planning because Metrochek and SmartBenefits sales are an early indication of ridership.

METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY (MARTA)

Interview conducted on September 5, 2003

Contact: Tanya Mayfield, Partnership Program—Marketing Specialist

Agency Profile

The Metropolitan Atlanta Rapid Transit Authority (MARTA) provides bus and heavy rail service throughout the Atlanta region. There are a number of smaller suburban bus agencies in the surrounding counties. Average weekday ridership is 530,450 in a service area population of 1.3 million.

Fare Structure. Fares are $1.75 for a single ride. Tokens are available for $17.50 (10 tokens) or $30 (20 tokens). There are both weekly and monthly passes for unlimited rides; weekly passes are $13 and monthly passes (known as TransCards) are $52.50.

Annual fare revenue in 2001 was $101.3 million, while total operating funds were $352.9 million, for a total farebox recovery ratio of 28.7 percent.

Commuter Benefits Program Details

The MARTA Partnership Program for employers began in 1992. The program allows employers to purchase monthly passes for their employees. Passes are discounted only if the employer purchases a minimum amount of 1,000. The discount rises with the number of passes purchased:

Table F-3: Discount Levels for MARTA Partnership Program

0-999	0%
1000-1999	5%
2000-2999	6%
3000-5999	7%
6000 +	8%

There are no fees or delivery charges. Once employers have enrolled, they receive the same number of passes per month unless they change their order (any changes must be received by the 15th). The original enrollment must be in writing, but changes can be made by phone, e-mail, or fax. There is no online enrollment.

Program Participation

Current Participation. Current participation is shown in the table below:

Table F-4: Participation in MARTA Program

	Partnership Program
Time Period:	July, 2003
Number of Employers Enrolled	43
Number of Employees Enrolled	30,707
Number of Passes Sold	30,707
Value of Passes Sold	$1,612,117
Revenue from Passes Sold	$1,499,932

While MARTA officially counts only 43 Partners, eight of these are TMAs who in turn distribute passes to their member employers. The total number of participating employers is estimated to be more than 300.

Changes in participation. According to MARTA figures, usage and revenues have increased over the past several years:

Table F-5: Increases in Participation and Revenues, FY 2001-03

	FY 2001	FY 2002	FY 2003
Number of Cards	250,000 +	350,000 +	N/A
Annual Revenues	$11 million +	$17 million +	$20 million +

There are two main reasons that growth was slower from FY 2002 to 2003 than in the preceding interval. The first reason is the recent economic downturn, which was especially pronounced after the attacks of September 11, 2001. MARTA staff noted that several employers left the program due to layoffs. Second, the discount structure changed in April 2002; previously the minimum number of passes needed to qualify for a discount was 50 (instead of the current 1,000) and the top discount was 20 percent (instead of the current eight percent). After these changes were implemented, the number of participating employees declined but revenues increased (because the discount was less).

Participation and overall ridership/revenues. MARTA did not share the percentage of ridership or revenue obtained through the Partnership Program. Based on a comparison to 2001 revenues, it appears that approximately 11 percent of revenues ($11 million of $101.3 million) are obtained through the Partnership program, and probably no more than 10 percent of ridership (30,000 participants, if each rides twice daily, of a total 530,450 boardings is 11 percent, and based on the survey discussed in Appendix B on average participants ride eight to nine times per week for commute trips).

Employer Profiles

Employer types. MARTA staff indicated that the Partnership Program attracts a wide variety of employers; their Web site notes some of the major ones, including Coca-Cola, Emory University and Hospital, BellSouth, and Georgia Pacific. While employers throughout the region participate, the greatest concentrations are in neighborhoods with high concentrations of employment within metropolitan Atlanta. The largest participants have more than 4,000 employees enrolled, and large employers provide most of the revenues.

Employer-paid or pre-tax. An estimated 20 percent of employers pay for the benefit outright, 30 percent are pre-tax, and 20 percent are a combination of both. The breakdown for the remaining 30 percent of employer participants is unknown.

Use by mode and agency. All ridership is on MARTA. Although rail was thought to have more riders than bus, no specific figures were available. Three suburban bus agencies (Clayton County Transit, Gwinnett County Transit, Cobb County Transit) and MARTA buses allow free transfers with a TransCard or paid fare.

Other Programs

Individual passes. MARTA sells tokens and both weekly and monthly passes to the public. The number of passes sold was not available.

Commercial vendors. There are no commercial vouchers used in the region. Eight TMAs (Perimeter Transportation Coalition, Buckhead Area TMA, Midtown Transportation Solutions, Hartsfield TMA (airport area), Central Atlanta Progress, Clifton Corridor (Emory University), Federal Transportation Management Association, and State Employees Commuter Assistance Program) purchase passes for their member employers.

System Ridership and Revenues

Ridership. MARTA staff indicated that the commuter benefits program has had a significant effect on overall ridership and peak period ridership, and a moderate effect on non-peak period ridership.

Revenues. The program has helped increase revenues, but specific financial information was not available.

Staff Time and Resources

The Partnership Program has only one employee, who works on it full-time. Her duties include program administration, marketing and outreach coordination, and implementation.

Marketing. MARTA's marketing budget for the Partnership Program is a part of MARTA's office of marketing budget.

Other agencies. The Atlanta Regional Council, the region's MPO, does general marketing of the program. The Clean Air Council and the TMAs work with individual employers.

Effects of program

Staff indicated that the commuter benefits program reduces fare transactions and cash handling to a moderate degree, but could not supply any figures. The other main benefit is that because employers

advertise the program internally, MARTA's marketing budget can remain low.

MARTA has made minor changes such as adding stops or slightly changing existing routes in response to employer and employee demand. On a few occasions, they have added more service.

Overall impact of program

The program is considered "very successful" for a number of reasons. First, it has fulfilled its general goal of bringing in revenues, increasing ridership, and reducing traffic congestion and air pollution. Internal studies indicate that the program is getting commuters off the roads and onto transit through offering employees alternative commute options. Second, it creates a valuable mechanism for obtaining rider feedback, since employer transportation coordinators can tell MARTA about their employees' reactions to the service. Third, it builds customer loyalty because commuter benefits are seen as valuable. Finally, it has enabled MARTA to build partnerships with the business community.

KING COUNTY METRO, SEATTLE, WA

Interviews conducted:

Jeff Wong, Market Development Planner and FlexPass Program Manager, July 12, 2003

Lois Watt, Lead Customer Service Coordinator, July 18, 2003

Caleb Swift, Program Manager, Voucher Program, August 19, 2003

Agency Profile

King County Metro provides bus service within the Seattle metropolitan area. It is the largest of the region's transit providers; other service providers include Everett Transit, Community Transit in Snohomish County, Intercity Transit in Olympia, Pierce Transit in Pierce County, Sound Transit (express bus and commuter rail), and Washington State Ferries (ferry service). Average weekday ridership is 340,000 in a service area population of 1.75 million.

Fare Structure. Off peak fares are $1.25. Peak fares are $1.50 to travel one zone, and $2 for two zones. There are over 35 unlimited ride passes (known as Puget Passes) available: monthly, three-month, and annual; Metro-only or in combination with other transit providers; and various denominations depending on distance. Prices range from $18 to $180 for monthly passes, and up to $1,584 for annual passes. Annual fare revenue in 2001 was $78.4 million while total operating funds were $346.2 million, for a total farebox recovery ratio of 22.6 percent.

Commuter Benefits Program Details

King County Metro has seven employer programs:

Consignment Retail Pass. These passes, exactly the same as those offered to individuals, are sold to employers on consignment, allowing employers to order more than they need and pay only for what they sell. There are two stipulations: 1) Employers must subsidize each pass at least $5. However, King County Metro is considering changing this requirement to not require a subsidy. 2) Employers must order at least 10 passes per month. This program has been in place since 1977.

Two types of organizations use the consignment retail program. Employers use it to purchase passes to give or sell to their employees. Drug and grocery stores use it to purchase passes for sale to the general public. All of the unlimited ride passes described above are available through this program.

Phone and Mail Program. Under this program, employers purchase passes for employees at the same face value as individuals. Unlike the consignment retail program, employers purchase the passes outright without the option of selling unused passes back to Metro. Since there are no restrictions on the number of passes an employer can purchase per month, this program is open to small employers. While Metro requests that employers subsidize the pass at least $5 for each employee, they do not track compliance.

Flex Pass. FlexPass, a universal pass program, started in late 1993, and was aggressively marketed beginning in January 1994. It requires the employer to purchase an annual pass for every eligible employee (exceptions discussed below). There are two types of prices: fixed-price and site-specific. Fixed-price agreements are for employers located in certain geographic zones. Site-specific prices are for employers outside those zones, or with over 500 employees. The most expensive passes are in downtown Seattle, at nearly $400/person/year. In outlying zones, prices are only about $50/person/year.

For the first year or two, FlexPasses are heavily discounted to the employer. (Note that Metro does not

use the term “discount;” they prefer the term “incentive.” A key difference is that most incentives are one-time offers; discounts are presumed to be ongoing.) The incentive varies from employer to employer, depending on how long the employer has been in the FlexPass program, their location in King County, and available funding. Funds may come through King County Metro (these could be federal or local funds) or private sources (for example, a property manager might put money toward an incentive for building tenants). By the fourth year, the employer pays the full amount. Despite the cost increase to the employer, 95 percent renew. Metro tries to keep the percentage incentive similar across employers, meaning that the dollar amount varies. Currently they try to discount one-third of the face value (e.g., if the pass price is $300, they provide a $100 incentive).

Employers must pay at least 50 percent of the pass cost for their employees (i.e., the most they can pass on to employees is 50 percent).

Employers must purchase a pass for all eligible employees. There are infrequent exceptions: employees who are not subject to the statewide Commute Trip Reduction regulations (generally this would exclude part-time employees and people who do not commute during peak hours), and employees who are required by the employer to have access to their own car during work hours (sales forces, etc.). Most employers use the rule of thumb that they buy FlexPasses for all employees who receive benefits.

FlexPass employers must have at least 25 employees. Employers agree to a one-year contract. The terms of the following year are described to the employer two to three months in advance. If they want to add employees during the year, they can do so by e-mail or fax.

UPass. This was the first universal pass program in the U.S. designed specifically for a university, in this case the University of Washington. The program started in the fall quarter of 1991. Students pay $35 per quarter for a UPass, which is approximately 50 percent of the cost. The university covers the rest, 35 percent from parking fees and 15 percent from their general fund. Faculty and staff pay $48.96 per quarter, and university covers the rest of the cost.

GoPass. GoPass, a program for the Seattle Community College District, is based on the same concept as UPass, but on a smaller scale. Students pay $65 to $110 per quarter (depending on the number of hours they are enrolled) for a GoPass. Faculty and staff pay $10 per quarter of the total cost of $33.38 per pass. The program began in the fall quarter of 1997.

Commuter Bonus Voucher. Vouchers are issued in any whole-dollar denominations from $5 to $250 and are valid on all transit providers and vanpools in the region. Vouchers can be used to purchase fare media at Metro, all other transit providers in the region and at retail sales outlets throughout the region (a number estimated at 200 in 2003).

Bonus Plus Vouchers. Bonus Plus vouchers reward employees using alternative transportation such as walking, bicycling, or carpooling, but not transit or vanpools. They can be redeemed at six retailers throughout the Seattle area: “76” gas stations, REI, a local car wash, AAA, YMCA, and Flexcar. Because they are not transit/vanpool vouchers, they do not offer the same tax benefits as the Commuter Bonus vouchers, and the two are not interchangeable. This allows the employer to track money spent on both types of vouchers separately.

For both voucher programs, vouchers must be pre-paid. Employees cannot keep any money left on the vouchers after their purchase; it goes back to King County Metro or the vendor. There are no fees, discounts, or minimum order sizes.

Table F-6: Participation in King County Metro Commuter Benefits Programs

	Consignment Retail Program	Phone/Mail Program	FlexPass	UPass	GoPass	Commuter Bonus Voucher	Bonus Plus Voucher	Total
Number of Employers Enrolled	200 (approx.)	500-600	200+	1 (Univ. of Washington)	1 district with 7 campuses (community colleges)	390 (approx.)	300 (estimated 150 employers also purchase Commuter Bonus vouchers)	1,450-1,550
Number of Employees Enrolled	Approx. 10,000 to 14,000 (assuming 80 percent of all passes are through employers)[1]		85,000 to 90,000	Approx. 36,000 students and 8,000 to 10,000 faculty/staff	2,600 (Approx. 1,650 students and 950 faculty/staff)	N/A – A single employees can receive more than one voucher, so no way to track		141,600 to 152,600
Number of Passes/ Vouchers Sold (Month)	25,000-30,000 (includes sales to drug and grocery stores for re-sale to general public)	N/A	85,000 to 90,000	46,000 during fall, winter and spring quarters; 26,000 in summer quarter.	2,600 during fall, winter and spring quarters, lower in summer	Approx. 19,400	Approx. 11,500	160,000-170,000[2]
Value of Passes Sold	Same as revenue	Same as revenue	N/A	N/A	N/A	Same as revenue	Same as revenue	N/A
Revenue from Passes Sold (Annual)	Estimated $9 to $12 million[3]		$7 million	$10 million	$680,000	$5.8 million	$954,000	$26 to $30 million
	$24-30 million, but this includes non-employer sales	$4 million, not including Internet sales				Revenue figures for vouchers not included in total because there would be double-counting with pass revenue, and Bonus Plus not spent on transit		

Notes:

1) Based on information provided by King County Metro that 80 percent of all passes are obtained through employers. If the number of all passes equals all FlexPasses (85,000 to 90,000), UPasses (46,000), GoPasses (2,600), and consignment/phone and mail passes (46,000), the low and high calculations are 10,000 and 14,000. While this does not take into account passes *not* sold through one of those four outlets, given that there are between 141,000 to 152,000 passes in circulation and daily ridership of approximately 340,000, and some number of persons paying in cash, this does not seem unrealistic.

2) Vouchers not included in this total.

3) This is based on two assumptions: 1) Retail pass sales total $40 million with Internet and in-house sales, and 2) The proportion of revenue for employer pass sales is the same as the 10,000-14,000 to 46,000 ratio for pass sales (i.e., $40 million times (10,000 divided by 46,000) equals $9 million).

Program Participation

Current Participation. Current participation is shown in Table F-6 on the preceding page.

Total figures from Metro's program were derived from the three separate interviews, because responsibilities for program administration are divided between the Market Development Group (which handles the UPass, FlexPass, and GoPass programs) and the Sales and Customer Service Group (which handles the retail, phone/mail programs, and voucher programs). Additional ridership and revenue information is managed in the MITT (Research) Group. All of the FlexPass, UPass, GoPass, and Commuter Bonus purchases represent employer commuter benefits, while only a portion of the retail sales and none of the Bonus Plus are commuter benefits. The rest of the retail passes are purchased by individuals either directly from Metro or at grocery and drug stores that are allowed to consign passes. The figures in Table F-6 were derived based on a statement from Metro staff that 80 percent of all pass holders receive them through an employer. Complete figures for retail pass revenues were not available.

It should be noted that not all FlexPass holders are active transit riders. Staff estimated that transit mode split for all employees receiving a FlexPass ranges from less than 10 percent in outlying suburbs to over 65 percent in downtown Seattle. However, since students, faculty, and staff served by UPass and GoPass can opt out, passholder figures are assumed to reflect ridership for these two campus-based programs.

In addition, many employees use vouchers to purchase passes, but figures on the number of such purchases were unavailable. Because of this potential for double-counting, these figures are not included in the totals, except for the number of employers.

Changes in participation. Participation has been rising in all programs since inception. For FlexPass, participation has been rising in spurts, rather than gradually. In some cases this was prompted by fare hikes; employers signed up to "lock in" their prices (the two most recent fare increases were in 1998 and 2000). The large increases in voucher sales from 1999 through 2001 are primarily due to participation and expansion by federal agencies. Table F-7 shows the number of employers enrolled in FlexPass and the dollar value of Commuter Bonus voucher sales by year:

For FlexPass, the 2003 figure in Table F-7 is lower than the total estimate in the earlier table because some employers are enrolled through the Downtown Seattle Association, a transportation management association. While the association is counted as one client in the details figures, in reality they supply FlexPasses to approximately 75 small employers, thus pushing the collective total above 200.

The Consignment Retail Program grew steadily since its inception in 1977, and had reached 160 employers by 1984. Some of those employers later switched to FlexPass when it was introduced.

Participation and overall ridership/revenues

Table F-8 shows the estimated percent and number of riders and revenue through employer programs. Note that the table below does not include voucher recipients, for two reasons: 1) Figures on the number of employees receiving vouchers were not available, and 2) Many voucher recipients purchase passes, which would result in double-counting.

Metro staff estimated that of all farebox revenues, eight to ten percent are derived from FlexPass, and 14 percent from UPass. Other percentages in the table below are proportional estimates based on figure from FlexPass and UPass.

Table F-7: Change in Participation for FlexPass, UPass, and Vouchers

	Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003[1]
FlexPass	# of Employers	2	5	12	25	34	74	107	122	130	145	156[2]
	% annual increase		150%	140%	108%	36%	118%	45%	14%	7%	12%	8%
UPass	# of Employees[3]	Data not available					41,432	42,575	43,828	45,454	46,737	46,000
	% annual increase							3%	3%	4%	3%	NA
Comm. Bonus	Annual sales ($000)	Data not available				$730	$753	$1,387	$2,746	$5,229	$5,715	$3,894
	% annual increase						3%	84%	98%	90%	9%	–18% Est.
Bonus Plus	Annual sales ($000)	Data not available				$364	$535	$626	$661	$891	$917	$852
	% annual increase						47%	17%	6%	35%	3%	11% Est.

Notes:

1) For Commuter Bonus and Bonus Plus Vouchers, 2003 sales figures represent sales through Oct. 31, 2003. Percentage increase based on full year estimate, assuming that January through October sales represent 83% (10 divided by 12) of potential 2003 revenues.

2) While total number of employers is over 200, due to the involvement of third-party administrators, the official number of participating entities is 156.

3) Figures for fall semester UPass enrollment. The percentage increase from 2002 to 2003 is not calculated because 2002 represents exact sales while 2003 is an estimate.

Table F-8: Estimated Percent of Ridership and Revenues Through Commuter Benefits

	Number in Circulation	Number of Employee Passes	Number in Active Use	Percent of Total Ridership	Annual Revenue	Percent of Farebox Revenues
Retail – Employer	46,000	10,000 to 14,000 (est.)	10,000 to 14,000 (est.)	4% (est.)	$9 to $12 million (est.)	13 to 17% (est.)
Retail – Individual		32,000 to 36,000 (est.)	32,000 to 36,000 (est.)	5% to 7% (est.)	$28 to $31 million (est.)	40% to 44% (est.)
FlexPass	85,000 to 90,000	85,000 to 90,000	38,000 to 40,000	6% to 8%	$6 to $7 million	8% to 10%
UPass	46,000 during fall, winter and spring quarters; 26,000 during summer quarter. Of these, 8,000 to 10,000 are faculty and staff (rest are student passes)			10%	$10 million	14%
GoPass	2,600; of these, 900 to 1,000 per quarter are faculty and staff			< 1%	$680,000	< 1%
Total for *Employer* Passes		141,600 to 152,600	94,600 to 102,600	20% to 22%	$25.7 to $29.7 million	35% to 41%

Employer Profiles

Employer types. All industries are represented in the various commuter benefits programs, with participation higher in urban centers. Metro has been surprised by how popular the FlexPass program has become among suburban employers.

In terms of employer size, there are 500 to 600 employers with 10 or fewer employees participating in the phone/mail program. Presumably these employers would participate in the consignment retail program if they were larger. Metro does not have size breakdowns of the consignment retail employers, except that anecdotally there are employers with thousands of employees. FlexPass employers must have at least 25 employees. The average size is between 50 and 300 employees. The largest employer has over 25,000 employees.

Employer-paid or pre-tax. For the pass programs, the employer is required to subsidize at least a portion of the benefit. For the consignment retail and phone/mail programs, the minimum per employee is $5, although staff acknowledged they do not track subsidy levels for the phone/mail program. For FlexPass, employers must pay at least 50 percent of the cost. Three-quarters of FlexPass employers pay the full cost, and one-quarter charge their employees a co-payment. However, Metro staff do not track whether the co-payment is paid with pre-tax income. For the voucher programs, there is no subsidy requirement and they do not track whether employers pay for the benefit.

Use by mode and agency. The retail programs do not have information on the use of their passes by mode and agency. For FlexPass, the majority of ridership (90 percent) is on Metro bus, with only 10 percent on bus and commuter rail services of other regional transit agencies. In some cases, large employers have negotiated separately to allow their employees to ride on other suburban bus systems. However, normally FlexPass recipients can ride only on Metro local and regional, and Sound Transit express bus and commuter rail services; other regional transit agencies generally do not make such arrangements with employers unless there is a substantial number of potential riders for their systems.

FlexPasses cannot be used on the regional ferry service, because King County Metro and Washington State have not come to an agreement about fare apportionment between the two systems. There appears to be demand from FlexPass recipients to ride the ferries, but thus far the fare structures have proven to be incompatible. Initially, some employers are upset to learn that FlexPass does not function as a true regional pass, and cannot be used on the same variety of other transit operators as the regular Puget Pass. But employers continue to buy the FlexPass program due to its favorable pricing structure versus PugetPass when offered on a company-wide basis. Vouchers can be used to purchase fare media on any area transit provider. According to the most recent survey, in 1997, 80 percent of all Commuter Bonus vouchers were redeemed for fare media on Metro. The other 20 percent was divided between vanpools and other transit providers (no further breakdown available).

Other Programs

Individual passes. As noted in Table F-8 above, approximately 35,000 individual passes are purchased each month.

Commercial vendors. There are no commercial vouchers used in the region. WageWorks® operates as a third-party administrator for retail passes. WageWorks® currently purchases approximately 5,600 passes per month at an estimated value of $396,000.

For the vouchers, there are three commercial third-party vendors: WageWorks®($3,588 average per month), Sodexho PASS ($1,370 average per month), and FlexBen Corp. ($532 average per month). In

addition, the U.S. Department of Transportation serves as a third-party administrator for Federal agencies ($113,920 average per month). Three transit agencies purchase vouchers for their respective service areas: Intercity Transit ($17, 406 average per month), Kitsap Transit ($22,241 average per month), and Community Transit ($10,000 average per month). Average figures are based on 2003 Commuter Bonus voucher sales. Among the regional transit agencies, only Community Transit ($500 average per month) and Pierce Transit ($1,186 average per month) order Bonus Plus vouchers.

System Ridership and Revenues

Ridership. Both the retail and FlexPass/UPass programs were said to have had a "significant" effect on overall and peak period ridership. The retail program had the same effect on off-peak ridership, while the FlexPass and UPass programs had a "minor" to "moderate" effect on off-peak ridership. The voucher programs were said to be effective in both attracting new riders and maintaining existing riders.

Ridership also has been affected by fare increases in 1998 and 2000, as well as service cuts that took place after voter approval in November 1999 of Initiative 695, which cut taxes. These service cuts have since been restored. In addition, the economic downturn since 2001 has affected Seattle employers quite significantly.

Revenues. All of the programs have helped increase revenues, but specific financial information was not available.

Staff Time and Resources

For the retail program, administration requires two FTEs. However, this is divided among more than one staff person. One person works with administration and contracts, and spends half her time on the consignment retail program. A second person works on distribution, and a third person works on marketing the program.

For FlexPass, administration requires 2 to 3 FTEs on average, but it varies by time of year. Program managers pull in extra staff during busy months, when more employers are up for annual renewal.

UPass administration is handled by one person, at about 0.2 FTE.

Voucher administration for both programs is handled by one FTE dedicated to the program. During the course of the year another 0.3 to 0.4 FTE is used on a variable basis from other departments. Two external vendors, software administration and printer maintenance, both support the program, but costs are lumped together with other uses and not split out specifically for the voucher programs.

Marketing. There is no separate marketing budget for the retail programs. In its early years, FlexPass had a marketing budget in the tens of thousands of dollars annually. Now that the program is considered mature, Metro spends only a few thousand dollars per year on marketing. The biggest expense is to sponsor kick-off events for major new clients, but there would probably be only one or two such events per year. The University of Washington has a large marketing and promotions budget for the UPass program. There is no separate marketing budget for vouchers.

Other agencies. The Downtown Seattle Association, a TMO, works with its member employers to market FlexPass to its downtown membership. Other transit agencies in the region market vouchers.

Effects of program

Staff indicated that the retail program reduces fare transactions and cash handling to a high degree, but could not supply any figures.

Guaranteed Revenues. FlexPass and UPass have the important benefit of providing guaranteed revenue contracts for one year. The annual nature of these programs reduces costs over implementing monthly programs.

Operations Changes. During the first five years of the UPass program, the University of Washington shared in the cost of providing extra transit service to the University District. The UPass program in particular has boosted ridership to the point of causing overcrowding on some routes. In response, many routes entering the area have been changed, or more capacity added on existing routes. While no further major changes are anticipated, Metro still does a lot of fine-tuning in response to overcrowding and changes in the university calendar. Metro is responsive to the university because they have a significant impact on ridership and revenue.

However, Metro has not responded in a similar fashion for FlexPass customers. While Metro as a whole is very responsive to customers' requests and needs, in general they view their riders as individuals, as opposed to employees of particular organizations. Generally, changes are made in response to increased ridership, which might prompt more service to relieve overcrowding. An adjustment such as moving a bus stop to be closer to an employer's entrance would be unlikely. With recent tax cuts and the local economic downturn, there is little available money to respond to other than heavy service overloads.

Relationships with Business Community. Both the FlexPass and UPass have created "partners" in transit who contribute major revenue streams to Metro. FlexPass in particular has solved the problem of how to involve employers in transit and opened up the employer market to new riders with employers who had never previously subsidized ridership. Many of these participants are major employers and influential in their own right. However, disagreements sometimes arise because these employers have their opinions about how Metro should operate that do not always agree with Metro's policies.

Pass Confusion. Although it is not necessarily perceived as a problem, Metro produces a large number of passes, which can create confusion internally (teaching bus operators about new passes) as well as for employers. The large number of passes has evolved over a number of years in response to employer and Metro needs. One staff person summed up their philosophy as, "If a customer offers you money, take it."

Voucher Program. The voucher program helps save money in that Metro does not have to absorb credit and debit card fees for purchases made with vouchers. The voucher program also "fills gaps" that exist between Metro and other systems. For example, the FlexPass is generally valid only on Metro and Sound Transit, but an employer may purchase vouchers for employees who use other systems.

The voucher program also creates several minor problems for the transit agency to deal with:

1) Overage. If an employee brings a $30 voucher to redeem for a $28 pass, this leaves a $2 overage. While this is money that Metro takes in, they needed to develop a system to account for it. The same is true for retail sales outlets—the drug or grocery store must track overages, although they also get to keep the excess.

2) Employers are sometimes confused by the existence of two different vouchers. They expect the Commuter Bonus vouchers to be interchangeable with the Bonus Plus vouchers, but they are not and they

have very different tax implications. Only occasionally, Metro will exchange Bonus Plus vouchers for regular Commuter Bonus vouchers on an exception basis.

3) Each voucher is processed like a check, so it requires more time if an employee pays for a single pass with many vouchers (for example, the employee wants a $50 pass for ten $5 vouchers).

However, none of the above items are significant enough to track a comparison of the relative cost of cash handing, credit cards, and vouchers.

Overall impact of program

All of the programs are considered "very successful." The retail program was once the largest of its kind in the country, and has spun off other programs at Metro. The pre-paid program evolved into the phone and mail program, in response to employers' needs. The FlexPass and UPass programs are considered successful because of their revenue contributions—the two programs bring in over $16 million annually and are highly supported by the region's employers and their employees.

The voucher program is successful in filling the gap between Metro and other area transit agencies. It is also employer-friendly, for several reasons: quick turnaround time (vouchers are custom-printed within five business days), flexibility in ordering (vouchers are valid for 13 months, so employers can purchase them monthly or in advance), and ease of use, which makes it simple for employers to start a program because they do not need information on the exact transit needs of their employees. The voucher program has grown since its inception. Finally, the Bonus Plus program is unique and fills the gap for employees who walk, bike, or carpool.

DENVER REGIONAL TRANSPORTATION DISTRICT (RTD), DENVER, CO

Interview conducted on July 18, 2003

Contact: Susanne Henry, Senior Research Analyst

Agency Profile

Denver RTD is the public transportation system for the seven-county service area near Denver, CO, which includes 38 municipalities in all of Boulder, Broomfield, Denver and Jefferson Counties, and parts of Adams, Arapahoe and Douglas Counties.

Average weekday ridership in 2002 was 273,924, which includes boardings on buses, light rail, and paratransit. The service area population is 2.3 million.

Fare Structure

The fares below are for 2003; the fare structure will change in 2004.

Table F-9: Denver RTD Fare Structure

	Type of Fare	Local Bus and Light Rail	Express Bus and Light Rail	Regional Bus
Regular Fares	One-Way	$1.15	$2.50	$3.50
	Ten-Ride Ticketbook	$9.25	$20.00	$28.00
	Monthly Pass	$35.00	$75.00	$105.00
Discounted Fares (Seniors, Disabled, Medicare patients, Youth/Student)	One-Way	$0.55	$1.25	$1.75
	Monthly Pass	$21.00	$45.00	$63.00

Some discounted fares are available only during certain days and times. In addition, there are separate fare structures for skyRide (bus service to Denver International Airport), Metro Circulator and Longmont Local buses.

Annual fare revenue in 2001 was $47.1 million while total annual operating funds were $226 million, for a total farebox recovery ratio of 20.9 percent.

Commuter Benefits Program Details

Denver RTD's one employer program, Eco Pass, began in 1991. It is an annual transit pass purchased by employers for employees. Employees with an Eco Pass photo ID card can ride on all RTD services (excluding special services), seven days a week. This includes local, express, or regional buses; skyRide; light rail; and call-n-Ride service.

The pass program does not involve any fees for employers or delivery charges. The passes purchased by employers are highly discounted. There are only two eligibility requirements for the program: 1)

participating employers must purchase Eco Passes for all of their employees; 2) small companies that want to be part of the program are subject to minimum contract amounts, depending on the service level area of the company. The basic idea of the RTD Eco Pass program is that employers purchase passes at highly discounted rates for all their employees, putting passes into the hands of nonriders, therefore increasing ridership while maintaining a revenue base for RTD.

Employers sign an annual contract during the annual enrollment period, which lasts from October to December, or any time of the year at pro-rated amounts. Denver RTD does not offer rolling enrollment or automatic re-enrollment. Each year, employers must re-enroll during the annual enrollment period. During the year, if an employer chooses to add a new employee to its program, it must make a written request to Denver RTD.

Eco Pass prices are determined by the total number of eligible full-time and part-time employees and the Service Level Area (SLA) of the employer site. The SLA is determined by either the bus trips available to the business location between the peak hours of 7 to 8 a.m., or the geographic location of the business. There are four categories of SLAs:

A. Outer suburban areas
B. Downtown Boulder CBD, fringe Denver CBD, Denver Tech Center and major transfer centers
C. Downtown Denver CBD
D. Denver International Airport (DIA) and home businesses

The table below shows the price per employee/per year with the minimum contract amount for each SLA.

Table F-10: Denver RTD Eco Pass Pricing, 2004

SLA	Contract Minimum Per Year		Cost Per Employee/Per Year				
	Employees	Amount	1-24	25-249	250-999	1,000-1,999	2,000+
A 1-24 Transit Trips	1-10 11-20 21+	$540 $1,080 $1,620	$50	$44	$38	$33	$31
B 25-64 Transit Trips	1-10 11-20 21+	$1,188 $2,376 $3,564	$107	$96	$88	$82	$78
C CBD Denver	1-10 11-20 21+	$1,620 $3,240 $4,860	$273	$254	$241	$235	$223
D DIA & Home Businesses	1-10 11-20 21+	$1,620 $3,240 $4,860	$279	$267	$247	$241	$228

The contract amount is equal to either the number of employees times the cost per employee or the contract minimum, whichever is greater. Employees added during the year are pro-rated based on the above pricing.

Program Participation

Current Participation. Current participation is shown in the table below:

Table F-11: Participation in Eco Pass

	Eco Pass
Time Period:	July 2003
Number of Employers Enrolled	1,041
Number of Employees Enrolled	78,614
Number of Passes Sold	78,614
Value of Passes Sold	$82,544,700
Revenue from Passes Sold	$8,052,030

The value of the passes sold refers to the amount that companies would have paid if they sold all of these passes as Regional Valupasses, which cost $1,050 per year. This is a hypothetical figure, since not all employees actually use their Eco Passes, and those who do ride a variety of RTD services, including lower priced ones such as Local and Express. The revenue is the amount the employers actually paid.

Changes in participation. Since the program's inception, the number of employers has increased from 365 in 1992 to 1,059 in 2002. The table below illustrates this growth.

Table F-12: Change in Employer Participation over Time

	Number of Companies Enrolled	Change over Previous Year	Change over Base Year (1992)
1992	365	n/a	n/a
1993	548	50.1%	50.1%
1994	723	31.9%	98.1%
1995	1,089	50.6%	198.4%
1996	1,178	8.2%	222.7%
1997	1,033	-12.3%	183.0%
1998	960	-7.1%	163.0%
1999	1,040	8.3%	184.9%
2000	1,035	-0.5%	183.6%
2001	988	-4.5%	170.7%
2002	1,059	7.2%	190.1%

The reduction in the number of employers joining the program in 1997 and 1998 was caused by changes in the contract minimums for small employers. Denver RTD increased the minimum dollar amount for contracts with small companies because, prior to the change, companies with only one employee could join the program and receive a significantly discounted pass.

The number of employees in the Eco Pass program also has grown since the program began, as is illustrated in the following table.

Table F-13: Change in Employee Participation Over Time

	Number of Eligible Employees	Change over Previous Year	Change over Base Year (1992)
1992	19,269	n/a	n/a
1993	17,490	-9.2%	-9.2%
1994	32,401	85.3%	68.2%
1995	31,550	-2.6%	63.7%
1996	32,976	4.5%	71.1%
1997	39,640	20.2%	105.7%
1998	46,598	17.6%	141.8%
1999	55,429	19.0%	187.7%
2000	67,673	22.1%	251.2%
2001	77,512	14.5%	302.3%
2002	76,577	-1.2%	297.4%

Note that the number of employers in the program declined from 1997 and 1998, while the number of employees increased. This is because a number of small companies dropped out of the program during those years in response to the change in contract minimum requirements, while several large companies joined the program. This led to a net increase in the number of employees eligible for Eco Pass.

Participation and overall ridership/revenues. Denver RTD estimates that 14 percent of its bus riders, 12 percent of light rail riders, and 21 percent of skyRide riders use Eco Pass. In addition, Denver RTD estimates that 17 percent of farebox revenue comes from Eco Pass sales.

Employer Profiles

Employer types. Many types of employers participate in the Eco Pass program. In 2002, 63 percent of employers had 1-24 employees, 33 percent had 25-249 employees, three percent had 250-999 employees, one percent had 1,000 to 1,999 employees, and one percent had more than 2,000 employees. In addition, in 2002, 35 percent of companies in the Eco Pass program were located in suburban areas, 28 percent were in the central business district in downtown Denver, and three percent of companies were at Denver International Airport.

Employer-paid or pre-tax. Denver RTD does not track whether employers provide the benefit free of cost to their employees, pay for a portion of the benefit, or allow employees to pay for the passes using a pre-tax deduction.

Use by mode and agency. Approximately 46 percent of all Eco Pass boardings are on local buses, while 15 percent are on express buses, 13 percent are on regional buses, seven percent on skyRide, and 20 percent are on light rail. Eco Pass is not accepted on other service providers in the region.

Other Programs

Individual passes. In 2002, an average of 41,656 monthly passes were sold each month to individual riders. In addition, Denver RTD sold 4,600 annual passes and 226,327 ten-ride ticketbooks in 2002.

Commercial vendors. Commuter Checks are valid in the Denver RTD transit system. In 2002, an average of $132,000 in Commuter Checks were redeemed each month. No third-party benefits administrators operate in the region.

Pass outlets. Businesses can provide passes to employees at their office location. RTD delivers the passes on a monthly basis and charges the business at the end of the month for the passes sold.

System Ridership and Revenues

Ridership. Denver RTD indicated that the Eco Pass program has had a moderate effect on overall and non-peak period ridership, and a significant effect on peak-period ridership. In 2002, Eco Pass boardings represented approximately 10 percent of total revenue boardings (as opposed to riders).

Since the implementation of the Eco Pass program, several factors have affected overall ridership on Denver RTD services. First, Denver RTD has experienced several fare increases. In 1997, Denver RTD had a general fare increase, with the amount of the increase varying from product to product. Also in 1997, Eco Pass prices were increased by 18 percent across the board. In 2002 and 2003, Denver RTD had varying increases in prices again on its general fare, and increased the price of Eco Pass by 6 percent.

Second, Denver RTD services have changed since the implementation of the Eco Pass program. Prior to 1994, Denver RTD only operated bus service. In October 1994, it opened its first light rail line. In July 2000, the Southwest Rail Line extension opened, and in April 2002, the C line light rail line opened. Other factors affecting ridership include the economic boom in the mid-1990s and the recent downturn in the economy, as well as various smaller service improvements.

Revenues. Denver RTD is concerned that Eco Pass program is underpriced, and that for small companies, they might not be recovering the farebox revenue that was earned prior to the company joining the program. This is because of the program's deep discounts. While they may have had fewer riders previously, those riders were paying the full fare. Now they have more riders, but at deeply discounted rates. The revenue generated by the fewer full fare riders may in some cases be higher than the revenues under Eco Pass. Denver RTD believes that they will not be able to collect accurate revenue data until they implement a smart card system.

Staff Time and Resources:

Denver RTD has approximately 3.6 FTE employees working on the Eco Pass program—3 FTEs on sales and administration, 0.1 FTE on marketing, and 0.5 FTE on accounting.

Employers participating in the Eco Pass program also are able to participate in the Denver Regional Council of Government's Guaranteed Ride Home Program. The cost of this service to Denver RTD is $3 per Eco Pass, except for Eco Passes used by employers at the airport. The cost of the service for Eco Passes sold to employers at the airport is $6 per Eco Pass.

Marketing. In 2002, Denver RTD's marketing budget for the program was approximately $25,000. The budget for administration, including salaries, was approximately $250,000, and the fulfillment/materials budget was approximately $18,500.

Other agencies. Several other agencies participate in the employer sales effort to promote the Eco Pass program, including the Downtown Denver Partnership, Southeast Business Partnership, U.S. 36 TMO, Stapleton TMO, Transportation Solutions, Transit Alliance, the Denver Regional Council of Governments, and GO Boulder.

These agencies help promote Eco Pass to employers in the region by visiting employers, holding transportation fairs, etc. When an employer expresses an interest in joining Eco Pass, these agencies write the contract and then forward it to RTD for approval and processing.

Effects of program

Denver RTD indicated that the Eco Pass program has had a moderate effect on reducing fare transactions and cash handling within their system. Their collection team consists of one full-time employee and one security guard. The sole responsibility of the collection team is to collect and transport cash, tokens, and fare tickets. The annual budget for ticketing and fare collection is $117,828. This covers salaries, security services, materials, supplies, and other outside services.

Overall impact of program

The Eco Pass program has led to some increased ridership and, consequently, increases in service, especially on express and regional routes. On the other hand, the staff said that because they do not have a smart card program, they are unsure if Eco Passes are priced correctly, and if Denver RTD is collecting sufficient revenues. For the past few years, they have been looking into moving to a smart card system. However, with the downturn in the economy, smart cards have been prohibitively expensive. Denver RTD hopes to keep moving toward this type of system. In the next two to three years, they hope to have at least a bar card system or radio frequency ID card system for Eco Passes so they can better track ridership and more accurately price the passes. The bar card system would enable Denver RTD to set up individual pricing structures for each employer based on the ridership numbers.

Denver RTD notes that Eco Pass is a well-recognized and well-liked program, and they believe it creates good will in the business community.

METRO TRANSIT, MINNEAPOLIS/ST. PAUL, MN

Interview conducted on July 23, 2003

Contact: Robert Gibbons, Director of Customer Services and Marketing

Agency Profile

Metro Transit is the public transportation service for the Minneapolis/St. Paul-metropolitan region. It provides approximately 95 percent of the 73 million bus trips taken annually in the Twin Cities. Metro Transit is a bus-only system. The service area population is 1.6 million, and average weekday ridership is 244,000.

Fare Structure. Fares for local service are $1.25 during off-peak hours and $1.75 during peak hours. Fares for express service are $1.75 during off-peak hours and $2.50 during peak hours. Discounts are available during off-peak hours for seniors, youth from six to 12 years of age, and Medicare card holders. In addition discounts fares are available during all hours for persons with disabilities, children under age five, and young adults. Monthly passes range in price from $42 to $95, depending on whether service is express or local. Metro's monthly pass is called a 31-day pass because it can be used for any consecutive 31-day period; it is not linked to the calendar month.

Riders can also purchase stored value cards that deduct the cost of each ride. There are three values: $10, $20, and $40. Riders pay the face value, but receive a slight discount; a $10 face value card provides $11 worth of bus rides.

Annual fare revenue in 2001 was $65 million, while total operating funds were $181.3 million, for a total farebox recovery ratio of 35.8 percent.

Commuter Benefits Program Details

Metro Transit has two employer programs. Neither program has any fees or delivery charges.

Metropass. Metropass, which began in 1998, is Metro Transit's annual bus pass program for employers. Employers purchase the annual passes for all of the employees that request them; the company does not have to offer the passes to all employees. To determine the annual cost for the individual employers, Metro Transit surveys each employer to determine current bus ridership levels. Metro Transit then calculates the annual cost for all the passes, based on current ridership, using an average fare of $63 per month per rider. This is a discount from the regular 31-Day pass cost of $95 per month.

The program works as a five-year partnership. Under the terms of the program, employers "lock in" the initial annual cost for the first two years, and do not have to increase it when new riders are added. For example, an employer signs a contract to purchase 75 annual passes at a cost of $63 per month per pass, for an annual cost of $56,700. If that employer adds 25 new riders during the course of the year, the annual cost remains the same, meaning that the per-employee cost decreases to $47.25. (Note that this fixed cost is determined on a percentage basis, not on the number of riders. If the employer adds or loses employees during the year, the price may change. In this example, if the employer has 300 employees, 75 employees represent 25 percent. If employment declines to 200 employees, the employer's contract price changes to $37,800, or 50 employees (25 percent) times $63 per month times 12 months.)

The price of the passes remains the same for two years, after which actual ridership is assessed. If there is an increase in ridership, the cost increase is spread over the next three years. In the above example,

suppose ridership increases to 35 percent by the end of the second year. The price rises gradually from 25 percent to 35 percent of employees over the three-year period (for example, year 3 would be based on 28 percent ridership, year 4 on 32 percent, and year 5 on 35 percent). According to Metro Transit staff, after an initial increase, ridership usually stabilizes in the third year. The $63 for the per-rider monthly fee remains the basis of calculation.

TransitWorks! TransitWorks! provides employees at participating companies with an automatic five percent discount off stored value cards and a 10 percent discount off the retail price of 31-day passes. Company representatives order the quantity of passes they need for employees each month. The employer must then agree to pass these savings along to their employees.

Program Participation

Current Participation. Current participation is shown in the table below:

Table F-14: Participation in Metro Transit Programs

	Metropass	TransitWorks!
Time Period:	July 2003	July 2003
Number of Employers Enrolled	72	515
Number of Employees Enrolled	15,000	12,000
Number of Passes Sold	15,000	383,500
Value of Passes Sold	$17.1 million	N/A
Revenue from Passes Sold	$15.1 million	$10 million

The value of the passes sold refers to the amount that companies would have paid if the passes were not discounted from $95 per month to $63 per month. The revenue is the amount the companies actually paid. In the example above, the value of the pass would be $95, but the revenue is only $63.

Changes in participation. The first year of sales for Metropass was 1998. By the end of 1999, nine companies had enrolled in the program, and by the end of 2000, 25 companies had enrolled. In 2001, the program had 47 participants; in 2002, 48 companies were participating, and in 2003, there were 72 companies enrolled. Note that from 2001 to 2002, some companies dropped out of the program, which explains why total participation only increased by one employer during that time. In terms of employees participation, the 15,000 participating employees noted in the table above represent approximately 20 percent of all eligible employees at the 72 participating employers (approximately 72,000 employees are eligible). Participation rates at individual employers vary from two to 70 percent.

TransitWorks! began in 1978. In that year, Metro Transit had 250 companies enrolled in the program. Metro Transit then received a CMAQ grant and offered companies not currently enrolled in TransitWorks! the opportunity to enroll and have half of the cost of their passes subsidized for the first three months of participation if the company agreed to recruit new bus riders. This led to a large increase in participation, up to the current level of 500 companies.

Participation and overall ridership/revenues. Metro Transit estimates that 6.9 percent of its total riders use Metropass. They do not track ridership using passes purchased through the TransitWorks! program

because the program uses the same type of fare cards that are sold at retail outlets. However, based on the Metropass experience, it is estimated that ridership from TransitWorks! is approximately five percent,.

Metro Transit reports the percentage of transit fare revenue from Metropass sales is approximately 25 percent. Once again, they do not track this data for the TransitWorks! program. Based on the Metropass figures, it is estimated that $10 million in revenue represents 17 percent of all revenues.

Employer Profiles

Employer types. All types of employers participate in the Metropass and TransitWorks! programs, including two hospitals, 11 state agencies, and 13 law firms. Metro Transit did not share any other information on the size or types of employers enrolled in its programs.

Employer-paid or pre-tax. Metro Transit did not share information on all of the companies enrolled in the Metropass program, but did indicate that at least nine provide Metropasses free of charge to their employees, 50 companies allow employees to pay for the passes using a pre-tax deduction, and 13 companies pay for a portion of the passes. Metro Transit did not share similar information for TransitWorks!

Use by mode and agency. Metro Transit only offers bus service. However, it is currently building a light rail line, which is scheduled to open in April 2004, and will accept Metropass.

In addition to Metro Transit, there are several other fixed-route service providers in the Minneapolis/St. Paul-area, all of which accept Metropass. However, Metro Transit operates 95 percent of transit service in the area. Therefore, only a small percent of rides taken by employees are on service providers other than Metro Transit.

Other Programs

Individual passes. Metro Transit offers three types/values of 31-day passes, and three denominations of stored value cards.

Commercial vendors. Metro Commuter Services offers Commuter Checks. The agency does not have information on the value of these passes. In addition, WageWorks and Sodexho Pass have bulk TransitWorks! contracts with Metro Transit. They purchase passes in mass quantities at a discounted price and then pass these discounts onto employers. Metro Transit also did not share information on the value of these passes.

System Ridership and Revenues

Ridership. Metro Transit indicated that the commuter benefits programs have had a significant effect on overall ridership and peak period ridership, and a moderate effect on non-peak period ridership. The significant effect on peak period ridership is explained by the fact that of the people riding Metro Transit buses, nearly 80 percent are traveling to and from work.

In recent years, ridership on Metro Transit buses has been affected primarily by the economy. Although the unemployment rate in the Minneapolis/St. Paul-area is below the national average, it is currently at a 10-year high, which has led to a decrease in ridership. Ridership in the future also is expected to decrease. In 2003, Metro Transit reduced service by five percent three times, in March, June, and September. In addition, in August 2003 rush-hour express fares increased by $0.25. Metro Transit recognizes that these factors will lead to a reduction in future ridership.

Revenues. Metro Transit is unsure about the impact of its employer programs on revenues. The formula for calculating the cost of Metropasses when employers sign up is revenue neutral. If the employer recruits more riders, Metro Transit loses potential revenue (the employer adds more riders while the revenue remains constant). However, when contracts are renewed, the per-month cost of passes charged to all employers is renegotiated based on the new level of ridership, making the formula revenue neutral again.

Staff Time and Resources:

Metro Transit has 4.25 full-time employees working with employers: 2.25 for Metropass and two on TransitWorks!. For Metropass, one employee works specifically on administrative tasks, while another works on financial tasks, and the remaining work is split among various people.

Marketing. Metro Transit's marketing budget for Metropass is $87,500 annually, while there is no marketing budget for TransitWorks!. The fulfillment budget for Metropass is $225,000 per year. The TransitWorks! fulfillment budget is $150,000 per year.

Other agencies. Metro Commuter Services and four transportation management organizations help market Metro Transit's commuter benefits programs.

Effects of program

Staff indicated that the Metropass program has had a moderate effect on reducing fare transactions and cash handling with the system. The TransitWorks! program has had no effect on fare transactions and cash handling. Because the Metropasses provide one annual pass to employers, rather than forcing employers to deal with 12 monthly passes, the number of passes that Metro Transit and the employers has to process is greatly reduced, which reduces fare transaction and cash handling costs.

Overall impact of program

Although the program has had significant effects on ridership, it has not solved any problems for Metro Transit. However, the agency has helped employers solve their transportation problems. When Best Buy moved their headquarters to Richfield, MN, a suburb of Minneapolis, Metro Transit increased bus service and frequency to the work site and Best Buy became part of the Metropass program.

Some employees have misused their MetroPasses. For example, a husband working at a company that provide MetroPasses but doesn't ride the bus may give his pass to his wife to ride the bus, even though the picture on the back of the pass is of the husband and not the wife. As a precaution, Metro Transit has implemented MetroPass Awareness Days. On those days, the bus operators take time to match the picture on the pass with the rider. If the pictures do not match, the operator confiscates the card. Metro Transit then reports these abuses to the employer and lets the employer handle the situation as they see fit.

SANTA CLARA VALLEY TRANSPORTATION AUTHORITY, SAN JOSE, CA

Interview conducted on July 28, 2003

Contact: Scott Haywood, Sales Program Manager

Agency Profile

Santa Clara Valley Transportation Authority (VTA) provides transit service throughout Santa Clara County, and partners with other systems for bus and rail service between Santa Clara County and the counties of Alameda, Santa Cruz, San Mateo and San Francisco. Average weekday ridership on VTA's buses in FY 2003 was 126,030 in a service area population of 1.7 million.

Fare Structure. Regular single fares on VTA's buses and light rail are $1.50 for adults, $1.25 for youth aged 5 to 17, and $0.75 for seniors and the disabled. Express rides cost $3.00 for adults, $1.25 for youth, and $0.75 for seniors and the disabled. Day passes are $4.50 for adults, $3.75 for youth, and $1.75 for seniors and the disabled. Express day passes are $9 and monthly passes cost $52.50 to $90.

Annual fares totaled $35.7 million and operating expenses totaled $264.8 million in 2001, implying a farebox recovery ratio of 13.5 percent.

Commuter Benefits Program Details

Eco Pass is VTA's only employer program. It is an annual transit pass that allows employees unlimited rides on VTA buses, light rail, and a one-way fare credit for paratransit service. For an additional fee, Eco Passes also are good on regional bus service provided by VTA and transit agencies in surrounding counties. Employers purchase annual Eco Pass stickers for all full-time employees at a given worksite, paying one low cost. Pricing levels are based on proximity to VTA services and the number of employees. Employers located farther away from downtown pay less than those located in downtown San Jose. Eco Passes cost a fraction of standard annual passes, which cost $990. Annual prices for Eco Passes are as follows:

Table F-15: VTA Eco Pass Pricing

Number of Employees	Downtown San Jose	Areas served by bus and light rail	Areas served by bus only
1 - 99	$120	$90	$60
100 - 2,999	$90	$60	$30
3,000 -14,999	$60	$30	$15
15,000+	$30	$15	$7.50

The only eligibility requirement for the Eco Pass program is that the minimum contract must be at least $1,495 per year. Employers that do not have enough employees to meet this minimum can simply pay the contract minimum. Should the company grow in size and add new employees throughout the year, they are eligible to receive additional Eco Passes from VTA until the value of the passes equals the contract minimum. For most of the smaller employers, paying the contract minimum is still a less expensive option than purchasing individual annual passes for employees. Extra passes can be used to accommodate employees who join during the year.

To join the program, employers sign an annual agreement. The program operates on a calendar year. Employers who join mid-year sign a pro-rated agreement, and then sign a new agreement on January 1 of the following year.

Employers order additional passes during the year for new employees by faxing requests to VTA. These passes then are added to the annual agreement.

Program Participation

Current Participation. Current participation is shown in the table below:

Table F-16: Participation in VTA Program

	Eco Pass
Time Period:	2003
Number of Employers Enrolled	87
Number of Employees Enrolled	117,600
Number of Passes Sold	117,600
Value of Passes Sold	$116.4 million
Revenue from Passes Sold	$1.7 million

The value of the passes sold refers to the total amount that companies would have paid for all employees if the cost of the Eco Pass was equal to the cost of a regular annual pass ($990). The revenue is the amount the companies actually paid.

Changes in participation. Since its inception in 1996, the number of employees participating has continued to grow, although the number of employers has declined, as illustrated in the table below.

Table F-17: Change in Employer and Employee Participation

	1996	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
Employees	18,819	42,429	52,389	94,537	102,734	114,831	115,960	117,617
Employers	6	19	37	59	102	132	122	87

Participation and overall ridership/revenues. VTA does not collect exact figures on the percent of its total ridership that uses Eco Pass. However, according to VTA's 2000 On-board Survey, approximately five percent of all VTA customers used their Eco Pass for their ride. VTA does not require employers to conduct surveys of their employees regarding Eco Pass.

In FY2003, which runs from July 2002 to June 2003, approximately 5.4 percent of VTA's revenue came from Eco Pass sales.

Employer Profiles

Employer types. VTA also does not collect information on the types of employers participating in the Eco Pass program, although they do know that some of the biggest participants are high-tech companies, hotels, city governments, and the county government.

Employer-paid or pre-tax. VTA does not track information on whether employers provide the benefit free of cost to their employees, pay for a portion of the benefit, or allow employees to pay for the passes using a pre-tax deduction. There is no requirement in the Trip Reduction regulations that employers subsidize commuter benefits. Based on conversations between VTA staff and employers, it appears that most employers do not charge a fee to their employees for Eco Pass. Because the price is so low per employee, many employers have indicated that charging employees for the cost of the pass represents an administrative burden that would not be offset by the amount of revenues that would be collected from employees. This is simply anecdotal information, as VTA has not conducted a survey regarding these questions.

Use by mode and agency. VTA does not collect information on the types of services used by participating Eco Pass holders.

Other Programs

Individual passes. In June 2003, VTA sold 21,500 monthly passes, 1,160 annual passes, and 4,200 day pass tokens.

Commercial vendors. The only commercial vendor in the region is Commuter Check, which, according to VTA, is used by quite a few employers. VTA does not have data on the value of the vouchers sold by Commuter Check.

In addition, CommuteSmart, and the Moffett Park Business and Transportation Association serve as third-party benefits administrators (TPAs) in the region. On a monthly basis, these two TPAs purchase approximately $342,000 in passes. However, this program soon will change. In the past, TPAs could pool employees together and get discounts on passes. For example, a company with 50 employees and a company with 100 employees represented by a TPA could pool together and pay for Eco Passes at the same rate as a company with 150 employees. Beginning in 2004, TPAs will no longer be able to do this.

System Ridership and Revenues

Ridership. VTA staff indicated that the Eco Pass program has had a moderate effect on overall ridership. They were not sure of the impact on peak-period versus off-peak ridership because they do not collect daily ridership numbers for the Eco Pass program. Although fares have increased in recent years, VTA does not believe this has significantly impacted ridership. The severe economic decline and job loss experienced by Santa Clara County has resulted in significant ridership losses. VTA believes that most employers subsidize the cost of the Eco Passes; therefore, employees are not impacted by the increasing price of transit. Factors that have impacted ridership recently, however, include service reductions over the past two to three years and the downturn in the economy.

Revenues. The program has had a neutral effect on VTA's revenues.

Staff Time and Resources:

VTA has 2.5 full-time employee equivalents for their Eco Pass program, who perform administrative, marketing, and finance-related tasks. In addition to the resources and services provided in-house at VTA, the agency contracts with another agency to provide paratransit services. VTA also contracts with a local taxicab company to provide guaranteed rides home to employees with Eco Passes. Finally, VTA outsources its printing, although graphics are done in-house.

Marketing. VTA's marketing budget for Eco Pass is $26,550 annually, most of which is spent on advertisements. Its fulfillment budget is $240,000, which includes salaries.

Other agencies. Several other agencies market the Eco Pass program in the region, including the Moffett Park Business and Transportation Association, CommuteSmart, Hoyt Company, and the Silicon Valley Manufacturing Group.

Effects of program

VTA indicated that the commuter benefits program has reduced fare transactions and cash handling to a small degree, but could not supply any figures because Eco Pass riders constitute such a small portion of total ridership.

Overall impact of program

Overall, the program is considered a success. Ridership has increased, and approximately 12 percent of all employees in the county currently receive Eco Passes.

VTA has made several changes as a result of the Eco Pass program. For example, they added the Express Option upgrade, which enables Eco Pass holders to use their passes on two multi-county express bus routes. In addition, VTA started a pilot program that allowed Eco Pass holders to use their passes on Caltrain, the rail service that runs between San Francisco and Gilroy. However, the program was later discontinued.

The program has become very popular with local employers and helps VTA develop valuable partnerships with the business community. Through Eco Pass, VTA is able to distribute over 117,000 passes to employees in Santa Clara County. One potential area of concern is Eco Pass fraud. They have had cases where people have attached the Eco Pass sticker to employer identification cards for employers not participating in the program. VTA currently is trying to combat this by requiring employers new to the program to obtain VTA identification cards for their employees, rather than allowing employers to use their own identification cards. Additionally, operators and fare inspectors confiscate fraudulent Eco Passes.

VALLEY METRO, PHOENIX, AZ

Interview conducted on July 23, 2003

Contacts: Talaya Sapp, Business Development Supervisor
Alex Potter, Business Outreach Coordinator

Agency Profile

Valley Metro is the umbrella service for the Phoenix metropolitan region, with approximately 12 participating municipalities. Each of those jurisdictions funds a separate transit service, so they receive the amount of service that they pay for (i.e., it is not funded regionally).

Average weekday ridership is 107,000 in a service area population of 1.35 million. Valley Metro is a bus-only system, but a light rail line is under construction. (Note: All transit agency figures are derived from the 2001 National Transit Database for the City of Phoenix Public Transit Department, as well as the Regional Public Transportation Authority, both of which do business as Valley Metro.)

Fare Structure. Fares are $1.25 for a single ride, $1.75 for express ride, or $0.60 for discounted fares. Monthly passes for unlimited rides are available for $34 for regular service or $51 for express service. Annual fare revenue in 2001 was $28.6 million while total operating funds were $110.9 million, for a total farebox recovery ratio of 25.7 percent.

Commuter Benefits Program Details

Valley Metro has two main employer programs:

Bus Card Plus. Bus Card Plus began in 1991. Staff describe it as a "credit card for the bus"—it automatically adds up a rider's account on a per-ride basis. The employer is billed monthly only for the amount of service used. Once the rider reaches the monthly fare amount, the card does not charge any more money for the month. Thus, the most that Valley Metro will charge an employer is $34 or $51 (depending on the type of pass), but employees can ride as much or as little as they like. For example, if an employee takes five regular trips per month, the charge is $7.50 (five rides times $1.50 per ride). If the employee takes 25 trips, instead of $37.50 (25 times $1.50), the charge is only $34 (the cost of a monthly pass).

There is a 50-cent charge per card. The cards last about two years, and then have to be replaced, triggering another 50-cent fee. Employers must have at least five participants to be eligible.

Technically, this is not a discount, because the employee is paying the same amount s/he would pay anyway, presuming s/he would pay on a per-ride basis for riding only a few times per month, or with a monthly pass for riding frequently. However, Bus Card Plus charges the employer less than buying a full-cost pass for each participant. Employers can pay for their monthly charge using purchase orders, electronic funds transfer, credit cards, or checks.

Private Outlet. The Private Outlet program allows employers to purchase monthly passes for employees. Passes are not discounted. Employers order passes on a monthly basis. There is no minimum order size; employers can purchase passes for as many employees as want to participate.

Both programs allow ordering via phone, fax, e-mail, and automatic re-enrollment. Valley Metro is starting up an online ordering system, but it is not currently available.

Program Participation

Current Participation. Current participation is shown in the table below:

Table F-18: Participation in Valley Metro Programs

	Bus Card Plus	Private Outlet
Time Period:	June, 2003	June, 2003
Number of Employers Enrolled	331	198
Number of Employees Enrolled	12,189	12,000 (estimated)
Number of Passes Sold	N/A	N/A
Value of Passes Sold	$313,350	N/A
Monthly Revenue from Passes Sold	$251,695	N/A
Annual Revenue from Passes Sold	$3.6 million	N/A

N/A: Not available.

Note: The 12,000 employees using Private Outlet is estimated based on the information below, that approximately 22 percent of all riders on Valley Metro use some type of employer pass. Staff estimated that one-half use Bus Card Plus, and one-half use Private Outlet. Since these are equivalent figures, it seems that the number of card-holders should be similar. Other information on Private Outlet was not available.

During June 2003, 12,189 Bus Card Plus passes were used in the system. This information is collected through card swipes at the farebox. This would be lower than the number of passes sold, since in any given month an employee may not use the pass.

The value of the passes sold refers to the amount that companies would have paid if the fares were not capped at $34 and $51 per month. The revenue is the amount the companies actually paid. In the example above of an employee taking 25 trips per month, the value of the pass would be $37.50, but the revenue is only $34. This varies by month, since people are more likely to ride transit in the fall and winter and less likely to ride in the summer, when it is extremely hot in Phoenix. The average revenue throughout the year is approximately $300,000 per month, for an annual total of $3.6 million.

Changes in participation. Anecdotally, there has been a steady increase in participation because of the county's commuter trip reduction requirement (which applies to employers with more than 50 employees). However, Valley Metro has not been tracking participation over time.

Participation and overall ridership/revenues. Valley Metro estimates that 22 percent of its total riders use employer passes, 11 percent through Bus Card Plus and 11 percent through Private Outlet. Information on the percentage of transit fare revenue from employer pass sales was not available.

Employer Profiles

Employer types. All types of employers participate in the commuter benefits programs, including those in the high-tech, hospitality, medical, administrative, legal and industrial sectors. Most have more than 50 employees. Unlike other areas, Phoenix is a very spread-out region and does not have a focused downtown. Therefore, employers are located throughout the area. Several large employers on the fringes of Phoenix use Bus Card Plus (for example, Intel in Chandler, AZ), and the second largest service is in Tempe, where Arizona State University is located. The State of Arizona is another major participant, and their buildings are scattered throughout Phoenix.

Employer-paid or pre-tax. Valley Metro does not track information on whether employers provide the benefit free of cost to their employees, pay for a portion of the benefit, or allow employees to pay for the passes using a pre-tax deduction. Based on conversations with participating employers, Valley Metro suspects that most employers subsidize the program for three to six months, then switch to employee-paid. Employers pay initially to encourage ridership, but do not have funding to sustain the program over the long term. There is no requirement in the Trip Reduction regulations that employers pay for commuter benefits.

Use by mode and agency. All use of Bus Card Plus and Private Outlet is exclusively on buses with Valley Metro as the service provider. There are no other providers in the region.

Other Programs

Individual passes. Monthly passes to individual riders account for 23 percent of total sales.

Commercial vendors. There are no commercial vouchers used in the region. WageWorks® and Sodexho PASS operate as third-party administrators. While Valley Metro staff did not have exact figures for the number of employer clients they have, they indicated it was extremely small. Both vendors are new to the Phoenix market.

System Ridership and Revenues

Ridership. Valley Metro staff indicated that the commuter benefits programs have had a moderate effect on overall ridership and peak period ridership, and a minor effect on non-peak period ridership. One factor that may have affected ridership is recent service increases. Tempe passed a transit tax in 1998 and Phoenix passed one in 2000, and both led to major service increases. There have been no fare increases in 10 years.

Revenues. The programs have helped increase revenues, but specific information was not available.

Staff Time and Resources:

Valley Metro has 20 employees working with employers: ten in Rideshare, six in Finance, and four in Marketing. Rideshare is the section of Valley Metro devoted to employer outreach. They promote all modes of alternative transportation, not just the commuter benefits programs. The six FTEs in finance deal with various aspects of billing and tracking revenue. The marketing department for Bus Card Plus consists of the Business Development Supervisor, the Business Outreach Coordinator, plus two people who deal with distribution, delivering fare media orders (including monthly passes), Bus Books, and Valley Metro program materials throughout the Phoenix metro area for corporate accounts, schools, and non-profits. The fulfillment budget is covered in the staff time.

Marketing. Valley Metro's marketing budget is $650,000 annually, which includes $500,000 for Rideshare and $150,000 for general transit advertising. There is no specific advertising for Bus Card Plus; rather, the agency promotes its Rideshare program as an overall employer outreach program to help employers meet the trip reduction regulations, of which Bus Card Plus is one element. Most new Bus Card Plus members come from either Rideshare referrals or word of mouth.

Other agencies. There are no other agencies marketing commuter benefits in the region.

Effects of program

Staff indicated that the commuter benefits program reduces fare transactions and cash handling to a moderate degree, but could not supply any figures. They cited no other financial benefits.

When a major employer comes on board, the Planning division has on occasion made route changes to better serve their facilities (for example, extending a route to their location). They have not made service changes in terms of adding more vehicles, but think that the Planning division would be amenable to such changes if they were needed.

Overall impact of program

The program is considered "somewhat successful," mostly because of the difficult time they have convincing people to ride transit. "People are so attached to their cars," said staff. "People look at us in horror" when they suggest employees try using the bus, because many assume bus service is largely for poor people or those without cars. Because of the lack of a strong downtown, there is no concentration of employers.

However, there also are satisfied customers using the program. Anecdotally, Valley Metro has heard of employees leaving employers who provide Bus Card Plus to change jobs and demanding that the new employers provide Bus Card Plus passes.

CAPITAL METRO, AUSTIN, TX

Interview conducted on August 14, 2003

Contacts: Dolly Camachol-Watson

Agency Profile

Capital Metro operates within the Austin, TX metropolitan area. Average weekday ridership is 117,000 in a service area with a population of 600,000 people. Capital Metro provides bus and vanpool service.

Fare Structure. Fares are $0.50 for a single ride. Monthly passes for unlimited rides are available for $10 for regular service or $17 for express service (including park-and-ride). Monthly vanpool fares are $25, or slightly higher for long routes due to a per-mile surcharge. Annual fare revenue in 2001 was $9.1 million while total operating funds were $96.4 million, for a total farebox recovery ratio of 9.4 percent.

Commuter Benefits Program Details

Capital Metro has two main employer programs:

Commute Solutions. Commute Solutions, dating from 1998, allows employers to purchase monthly passes for employees. If the employer purchases more than 15 passes per month, they are entitled to be considered an outlet and eligible for a discount of five percent. There are no minimum enrollments or fees.

Vanpools. In addition to bus service, Capital Metro operates vanpools. Average occupancy is six riders per vanpool. Employers can choose to subsidize employee vanpool fares.

Program Participation

Current Participation. Current participation is shown in the table below:

Table F-19: Participation in Capital Metro Programs

	Commute Solutions	Vanpools
Time Period:	(Current)	(Current)
Number of Employers Enrolled	7	Over 50
Number of Employees Enrolled	438	650-700
Number of Passes Sold	5,250	N/A
Value of Passes Sold	N/A	N/A
Revenue from Passes Sold	$49,000	N/A

N/A: Not available.

Changes in participation. Participation in Commute Solutions has remained steady, with only one new employer joining in the past few years. The number of vanpools has been dropping from a high of 150 vanpools in 1997, to 127 in 1999/2000, to 113 today.

Participation and overall ridership/revenues. Capital Metro did not have figures on the percent of ridership or revenues derived from the Commute Solutions program.

Employer Profiles

Employer types. Of the seven employers enrolled in Commute Solutions, four are public sector—two federal agencies, the City of Austin, and one local public agency. Three are in the high-tech sector.

Employer-paid or pre-tax. The Federal employers pay 100 percent of costs. The City pays two-thirds. Two of the high-tech employers and the other public agency pay a portion of costs. The other employer provided no information. Capital Metro does not track whether employees are allowed to pay the rest with pre-tax income.

Use by mode and agency. Commute Solutions is exclusively for bus riders, and the vanpool program is limited to vanpool riders. There are no other transit providers in the region.

Other Programs

Individual passes. The number of monthly pass sales were not available.

Commercial vendors. There are no commercial vouchers or third-party administrators active in the region.

System Ridership and Revenues

Ridership. Capital Metro staff indicated that the commuter benefits programs have had a moderate effect on overall ridership. However, vanpool ridership has been declining, due to two factors: an increase in the monthly fee from $10 to $25 in 1997, and a general economic downturn over the past few years.

Revenues. The program has had no noticeable impact on revenues.

Staff Time and Resources:

Capital Metro has three employees in the employer outreach division dealing with Commute Solutions and vanpools. Of those, the marketing/outreach coordinator spends 20 percent of the time working for Commute Solutions, while an administrator uses 10 percent of her time for Commute Solutions. Therefore, the total FTE is 0.3.

Marketing. There is no marketing budget for Commute Solutions.

Other agencies. Within the region, the only other entity marketing Commute Solutions is the City of Austin, which has become a Clean Air Partner with the Clean Air Force of Central Texas. The City does marketing and outreach in regards to air quality, and can receive emissions credits for Commute Solutions participation. Capital Metro did not have information on the City's outreach program.

Effects of program

The program, because of its small size, has had no impact on the transit agency, either positive or negative. Staff reported that it has had a low degree of impact on cash handling, and that they have made no changes in service in response to the program. As indicated earlier, Commute Solutions has not increased revenues, and the vanpool program, although it has added new vans, has seen a net loss in the number of vanpools.

The Business Development Department has considered introducing a discounted commuter pass, but thus far this proposal has not been implemented. Capital Metro is not actively pursuing it at this time.

Overall impact of program

The program is considered only "somewhat successful," because of the low participation. Staff indicated that reaching 20 employers would be considered "very successful." However, the fact that many employers have laid off staff in response to economic conditions and retained the Commute Solutions program is seen as a positive impact.

APPENDIX G: TRANSIT AGENCY DATA TABLES: PARTICIPATION, REVENUES, AND COSTS

The following pages contain tables of the data used in comparing the transit agency programs.

Table G-1: General Background

Transit Agency	Program Type	Description	Staff Time (FTE)	Comments
WMATA	Metrochek	Stored value card/voucher	4	1 manager, 3 regular staff
	Smart Benefits	Electronic version		
	Total for WMATA		4	
MARTA	MARTA Partnership Program	Monthly pass with volume discount	1	
King County Metro	Flex Pass	Universal pass	2 to 3	Depends on time of year
	UPass	Universal pass	0.2	
	GoPass	Universal pass		
	Consignment Retail Pass	Monthly pass	2	
	Phone/Mail Program	Monthly pass		
	Commuter Bonus Voucher	Voucher	1 to 1.4	may add .3 to .4 depending on time of year
	Bonus Plus Vouchers	Rewards program		
	Total for King County (low est)		**5.2**	
	(high est)		**6.6**	
RTD	(RTD) Eco Pass	Universal pass	3.6	3 for sales, .1 mktg, .5 accounting
Metro Transit	Metro Pass	Individually discounted pass	2.25	
	TransitWorks!	Standard discounted pass	2	
	Total for Metro Transit		**4.25**	
VTA	(VTA) Eco Pass	Universal Pass	2.5	
Valley Metro	Bus Card Plus	"Credit card" for bus	4	20 total, mostly in Rideshare
	Private Outlet	Monthly pass		
	Total for Valley Metro		**4**	

Table G-2: Employer and Employee Participation

Transit Agency	Program Type	Participating Employers	Participating Employees	1 Staff per X employers	1 Staff per X employees	Comments	Employees per Employer
		2003	**2003**	**(rounded to nearest 10)**			**(rounded to nearest 10)**
WMATA	Metrochek	3,349	189,067	990	52,000		60
	Smart Benefits	623	18,933				30
	Total for WMATA	**3,972**	**208,000**	**990**	**52,000**		50
MARTA	MARTA Partnership Program	300	30,707	300	30,710		100
King County Metro	Flex Pass	200	39,000	70	14,180		200
	UPass	1	46,000	5	124,320		46000
	GoPass	7	2,600				6080
	Consignment Retail Pass	200	12,000	380	6,000		20
	Phone/Mail Program	500 to 600					
	Commuter Bonus Voucher	390	N/A	450		300 participating employers in Bonus Plus, with 150 overlapping with Commuter Bonus participants	NA
	Bonus Plus Vouchers	150	N/A				
	Total for King County (low	**1450**	**141,600**	**280**	**26,920**		**100**
	(high est)	**1550**	**152,600**	**230**	**22,120**		
RTD	(RTD) Eco Pass	1,041	52,671	290	14,630	Participating employees calculated based on 67% of 78,614 eligible riders	50
Metro Transit	Metro Pass	72	15,000	30	6,670		210
	TransitWorks!	515	12,000	260	6,000		20
	Total for Metro Transit	**587**	**27,000**	**140**	**6,350**		**50**
VTA	(VTA) Eco Pass	87	42,806	30	17,120	Participating employees calculated based on 36.4% of 117,000 eligible riders	180
Valley Metro	Bus Card Plus	331	12,189	80	3,050		40
	Private Outlet	198	(est) 12,000	NA	NA		
	Total for Valley Metro	**529**	**Over 12,189**	**NA**	**NA**		

Table G-3: Revenues

Program Type	Annual Revenue	Value of Passes	Revenue as % of Value	% Ridership from Employer Programs	% Revenue from Employer Programs	Monthly Revenues per CB Rider	Annual Revenues per CB Rider
Metrochek	$177,000,000	same	100%			$78	$936
Smart Benefits	$13,800,000	same	100%			$61	$729
Total for WMATA	**$190,800,000**	**same**	100%	**25%**	**30%**	**$76**	**$917**
MARTA Partnership Program	$20,000,000	$21,496,000	93%		11%	$54	$651
Flex Pass	$6,500,000	NA		6 to 8%	8 to 10%	$14	$167
UPass	$10,000,000	NA		10%	14%	$18	$217
GoPass	$680,000	NA		0.5%	0.50%		
Consignment Retail Pass Phone/Mail Program	$10,500,000	same	100%	4%	13 to 17%	$73	$875
Commuter Bonus Voucher	$5,800,000	NA		Not included because			
Bonus Plus Vouchers	$954,000	NA		of double-counting			
Total for King County (low est)	**$27,000,000**	**NA**		**20%**	**35%**	**$16**	**$193**
(high est)	**$30,000,000**	**NA**		**22%**	**41%**	**$17**	**$205**
(RTD) Eco Pass	$8,100,000	$82,544,700	10%	14% bus, 12% LRT, 21% skyRide	17%	$13	$154
Metro Pass	$15,100,000	$17,100,000	88%	6.9%	25%	$84	$1,007
TransitWorks!	$10,000,000	NA		5.5%	17%	$69	$833
Total for Metro Transit	**$25,100,000**	**NA**		**12.4%**	**42%**	**$77**	**$930**
(VTA) Eco Pass	$1,700,000	$116,424,000	1%	5%	5.4%	$3	$40
Bus Card Plus	$3,600,000	$313,350	96%	11%	12.6%	$25	$295
Private Outlet	NA	NA		11%	N/A	NA	NA
Total for Valley Metro	**NA**	**NA**		**22%**	**Over 12.6%**	**NA**	**NA**

Table G-4: Costs

Transit Agency	Program Type	Estimated Staff Costs	Marketing	Other Resources	Comments	Total costs (estimated)	Costs as % of Revenue
WMATA	Metrochek				$700,000 for general transit ads is separate		
	Smart Benefits						
	Total for WMATA	**$210,000**	**$300,000**	**$0**		**$510,000**	0.3%
MARTA	MARTA Partnership Program	$68,000	$0	$0		$68,000	0.3%
King County Metro	Flex Pass	$115,000 to $162,000	$3,000	$0		$118,000 to $165,000	2.2%
	UPass	$14,000	$0	$0		$14,000	0.1%
	GoPass			$0			0.0%
	Consignment Retail Pass	$115,000	$0	$0		$115,000	1.1%
	Phone/Mail Program		$0	$0			
	Commuter Bonus Voucher	$68,000 to $95,000	$0	print/		$68,000 to $95,000	1.4%
	Bonus Plus Vouchers		$0	software			0.0%
	Total for King County (low est)	**$312,000**				**$315,000**	**1.2%**
	(high est)	**$386,000**				**$389,000**	**1.3%**
RTD	(RTD) Eco Pass	$250,000	$25,000	$18,500	Fulfillment, plus another $150,000 admin (salaries, etc.)	$293,500	3.6%
Metro Transit	Metro Pass		$87,500	$225,000	Fulfillment (includes salaries)	$312,500	2.1%
	TransitWorks!		$0	$150,000	Fulfillment (includes salaries)	$150,000	1.5%
	Total for Metro Transit		**$87,500**	**$375,000**		**$462,500**	**1.8%**
VTA	(VTA) Eco Pass	$240,000	$26,550	$0	$240K includes salaries; $26,550 is fulfillment	$26,550	1.6%
Valley Metro	Bus Card Plus	$210,000	$150,000	$0	$650,000 for ALL transit marketing, including Rideshare programs; $150K is for transit only	$360,000	10.0%
	Private Outlet	NA	NA	$0			NA
	Total for Valley Metro	**NA**	**Over $150,000**				**NA**

Staff costs based on a salary range from $35,000 (staff) to $50,000 (manager), with benefits estimated at 35%, for a total cost of $47,350 to $67,500. Assumed that each prorgram requires one manager.