FDOT RESEARCH CENTER

Vanpool Pricing and Financing Guide

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Chapter 1

Introduction

"Price is what you pay. Value is what you get." Warren E. Buffett

No discussion of vanpool financing and pricing can begin without understanding the vanpool business and the myriad of factors that influence the financing and pricing of those programs.

OVERVIEW

- The Vanpooling Business
- Financing vanpooling
- Pricing options
- Building customer equity in vanpooling

The development and expansion of vanpooling isn't only a matter of setting a price but helping establish the perceived value received for that price. Examples abound where essentially the same service is provided at different pricing points for different market segments. For example, automakers provide similarly equipped vehicles (e.g., Ford Taurus and Mercury Sable) under different nameplates with cosmetic or image branding differences to appeal to different markets. The markets for these products are targeted partially by pricing but also by using advertising to establish the value in terms of features and benefits received.

The purpose of this guide is to help transit agencies and others starting a vanpool program understand the process of building value in vanpooling as well as develop effective financing and pricing strategies. More precisely, the guide shows how various vanpool operators are not in the "vanpool business" but the "people business." The successful commuter vanpool programs have learned that vanpooling is more than buying vehicles for 8 to 14 passengers. They've discovered what it takes to move people safely and cost-effectively in moderate to large groups. Their customer-focus recognizes that there is a niche of commuters who are tired of the hassle, wear and tear, and expense of driving their own cars to work each day. They have also discovered that vanpooling makes sound business sense in terms of generating ridership to support other forms of public transit.

Chapter 2 will give you an overview of vanpooling and why successful vanpool programs seek to build value in vanpooling.

Chapter 3 highlights traditional and creative sources of financing vanpool programs.

Chapter 4 addresses the impact of pricing on the demand for vanpooling, and includes two models that were developed to forecast demand based on price. It also identifies 17 methods of pricing components of the vanpool program.

Chapter 5 focuses on the importance of growing vanpool programs by building customer equity. The emphasis is on investing in customer retention programs and demonstrating a method for determining how much should be invested in such programs.

Chapter 6 discusses other important factors that have a direct bearing on vanpool operations including applicability of FTA's drug and alcohol testing requirements, commercial drivers license requirements, and vanpooling's responsibilities under the Americans with Disabilities Act.

We would like to acknowledge the tremendous help we have received from the vanpool community, including Jon Martz and Steve Wright with VPSI and Byron York with 2Plus.

Chapter 2

Vanpooling Overview

"It is not necessary to change. Survival is not mandatory." W. Edward Deming

Vanpooling Defined

There are numerous definitions of *vanpooling*, with most operators describing vanpooling in terms of the program's relationship with the driver and the long distance market. How programs choose to define or describe vanpooling is often reflected in how they decide to deliver the service.

In San Diego, vanpooling is described as the "ride of choice" for commuters who want both the convenience of a private vehicle and the cost savings of public transit. Clearly, this agency positions vanpooling as a hybrid form of transit. Vanpools are described as offering "a comfortable, reasonably priced and convenient way to work for groups of seven to 15 people who share similar commute patterns. A commuter van is driven by one of the members of the group. Riders are picked up at agreed upon locations. Expenses are shared. It's that simple!"[1]

A private operator, Enterprise Vanpool of California, describes vanpooling based on the benefits to the individual and its perceived hot buttons. "If you live more than 20 miles from your work site, your commute is probably costing you more than you think, as well as significantly adding to your daily stress level. What is vanpooling? Basically it is similar to carpooling, but you travel with co-workers in a 7 to 15-passenger commuter van. Vanpooling provides a number of unique benefits: Everyone travels in a roomy, comfortable, specially equipped commuter van. Nobody has to "take a turn" driving their own car. You won't need to worry about maintenance, insurance or gas for your own car. You have access to all carpool lanes. All costs related to commuting are divided by the 7-15 people in the van."

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[1] San Diego Commute http://www.sdcommute.com/van_pool.html

Regardless of how vanpooling is positioned in the market, most vanpool programs offer similar benefits and features. Typically, vanpool drivers get a free ride to work. Vanpool riders pay a low (usually) monthly fare that covers most, if not all, the following expenses of commuting:

Gasoline used for commuting

Vehicle maintenance

Repair bills

Liability and personal injury insurance

Vehicle leasing or purchase

License fees and safety inspection stickers

Loaner vehicles and roadside service

The value of vanpooling to commuters and the community is a function of how the vanpool provider responds to a wide range of questions that consumers seek to have answered about the vanpooling program's features and services.

How many people do I need to start a vanpool?

What are the responsibilities of a vanpool driver?

Do I need a special license to be a vanpool driver?

As a driver, am I permitted personal use of the van?

How will driving affect my insurance rates?

Can our group have more than one driver?

How do I find riders?

How long do I have to wait for a rider?

Where will I be picked up?

Who and how do I pay for a ride?

What if I have to leave work early?

Who owns the vans?

What happens if the van breaks down?

What about insurance?

What happens when a driver is sick or goes on vacation?

What happens if I'm sick or on vacation?

What if I want to stop vanpooling?

What if a vanpool needs to disband?

Can vanpools use the bus lanes?

What fuel will my van use?

Who funds the vanpool program?

What are the environmental and economic benefits of vanpooling?

Types of Vanpool Programs

There are four basic types of vanpool programs in operation today:

1) **Owner/operators** (individuals who buy/lease a vehicle for vanpooling). Most of these vanpools are concentrated in the Washington, DC and the San Francisco Bay areas; two urban areas with extensive high occupancy vehicle lanes and severe congestion. One vanpool expert says there were as many as 600 owner-operators about ten years ago but probably only 200-300 today.[2] Affordable insurance and adequate coverage are major issues with this group. Changes in the insurance industry contributed to discontinuation of many vanpools in the 1980s.

2) **Employers** (companies who buy/lease vehicles for use by their employees). Twenty years ago there were as many as 20,000 employer vanpools across the country. Most employer vanpool programs formed in response to the oil embargos in the 1970s. Today, there are probably as few as 2,500 of this type across the U.S. Typically, companies discontinued funding the programs as the effects of the embargo receded and ridership diminished. Costs to employers only increased, while employee participation decreased. Most companies refused to recapitalize and ran older vans into the ground. The remaining companies let their programs continue but were not focused on growing the program. Very few employers are proactive in promoting and growing these efforts.

3) **Private operators** (once commonly referred to as third-party vanpool providers). There are several private operators in the country: VPSI, Van Pool of New Jersey (New Jersey and Philadelphia), Drummond Transportation (Boston), EasyStreet (Connecticut), Enterprise Vanpool (Los Angeles, San Diego) and a half dozen failed companies (People Ridesharing System, Ford Vanpool) over the last 20 years. These are private organizations (either for-profit or non-profit) who operate vanpool services for commuters, companies, and government agencies. These operators manage approximately 5,000 vans across the U.S., with VPSI the predominant provider with approximately 3,500 vehicles across 60 cities.

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[2] Personal communication with Jon Martz, Director of Marketing for VPSI

4) **Public transit.** Transit systems have used various capital and operating subsidies to stimulate participation in vanpooling as part of the mobility manager approach, to expand service areas or fill areas with demand not justified by traditional forms of transit. Some transit systems built their own vanpool operation (Seattle, PACE in Chicago) or bought the market by teaming with a private operator (many regional examples exist in areas such as Orlando, Tampa Bay, and Phoenix). For example, VPSI provides services on behalf of more than two dozen government agencies across the U.S.

There are many issues that have a bearing on the size of the vanpool market and its growth (or the lack thereof) over the past couple of decades. These issues range from institutional shifts from employer vanpool programs that started due to the gas crises in the late 1970's to corporate outsourcing or abandonment of vanpool programs in the 1990's. The industry also faced liability concerns with insurability problems in the 1980's and weathered renewed corporate interest when employers were looking at trip reduction requirements. Finally, there is the natural evolution of the market that coped with mergers and massive layoffs at large companies that, in turn, put sizable holes in some vanpool fleets. As the economy thrived and gas prices fell to their lowest levels in years, interest in vanpooling declined. At the same time, changes in welfare policy moved vanpooling to center stage as a potential solution for the spatial and temporal mismatches welfare recipients faced relative to public transit service. Still, the industry is finding vanpooling to be a potential solution but, in practice, very difficult to finance and operate successfully (mostly due to the "transient" nature of the W2W client where the client seeks to acquire their own vehicle after working).

Regardless of the conditions, vanpooling has found its niche by delivering benefits to commuters, employers and society.

Benefits of Vanpooling

The primary benefits of vanpooling depend on the market segment. In areas with high occupancy vehicle lanes such as Washington, DC, vanpools are touted for their ability to bypass traffic jams, giving commuters potentially significant time savings. For long-distance commuters, vanpools also claim to provide a relaxing way to travel, since the passengers have time to read, catch up on work, or sleep. For employers facing a parking shortage, vanpooling can reduce the cost of building additional parking facilities. In fact, 3M in Minneapolis, the acknowledged "father of vanpooling", started its program in the 1970's in response to a parking shortage, not the energy crisis.

The reported benefits of vanpooling that accrue to commuters, employers, and society:

Vanpool Driver Benefits:

- Reduces need to purchase a personal vehicle
- Receives use of vehicle for personal trips
- Obtains lower vehicle insurance rates
- Reduces household's vehicle maintenance costs
- Requires no long term commitment (typically 30-day lease)

Vanpool Rider Benefits:

- Reduces stress as employees arrive refreshed, relaxed and ready to work
- Increases access to job markets
- Reduces walking distance from parking lot to worksite (vanpools often enjoy preferential parking at employer sites)
- Saves money on commute costs such as gasoline, and wear-and-tear on personal vehicles
- Encourages new friendships

Employer Benefits:

- Reduces the need for additional parking
- Increases access to labor markets
- Improves employee morale and employee relations
- Increases productivity, reduces absenteeism and tardiness
- Provides an effective, low-cost recruitment tool
- Enhances employee benefits packages (tax-free subsidies allowed up to $65 per month)

Community Benefits:

- Serves communities not served by transit (bus and rail)
- Requires fewer passengers than a bus
- Increases federal and state funds to transit
- Provides a lower cost alternative of serving mid-range and long-distance commuters than transit
- Provides most, if not all, operating costs from "fare-box" thus lowering need for local government subsidies
- Reduces rush-hour congestion – each 15-passenger van can reduce up to 14 vehicles. FHWA estimates vanpool programs reduces work trip vehicle miles of travel by 1 percent to 8 percent.
- Improves air quality - The average car emits a quarter-pound of pollutants each mile it is driven. On a one hundred-mile commute, a single car can release 25 pounds of pollutants into the air.
- Reduces dependence on fossil fuels
- Provides option for other groups (e.g., Welfare to Work)

Concerns with Vanpooling

At the same time, vanpool programs must address issues or concerns associated with each of those groups.

Vanpool Driver Concerns:

- Locating riders and back-up drivers
- Collecting payments from riders
- Maintaining list of back-up riders

Vanpool Rider Concerns:

- Increases travel time (pick-up and drop-off) in areas without high occupancy facilities
- Requires a fixed schedule (guaranteed ride home programs help overcome this concern)

- Involves perceived high costs at the shorter trip (e.g., 15 to 20 miles) relative to what they perceive are their costs (out-of-pocket)

Employer Concerns:

- Increases cost and administrative burden if employer runs own vanpool program
- Impacts of employee adherence to van's schedule
- Raises the potential loss of employees or proprietary information through networking with other riders

Community Concerns:

- Locating source of start-up funds and marketing
- Continuing turnover in ridership
- Reconciling vanpool pricing structure with transit fares to avoid unintentional cannibalization

Vanpool Supporting Strategies

The following supporting strategies can be offered to support vanpooling. Examples of many of these supporting strategies will be found in subsequent sections of this guide.

- Priority HOV facilities
- Preferential parking
- Flexible work hours
- Guaranteed Ride Home
- Reduced parking charges/subsidies
- Insurance (for owner-operators)
- New start vanpools subsidies (e.g., empty seat subsidies)
- Employer-subsidies

Traditional Vanpool Market

The market for vanpools has typically served the mid-range to long distance commute market. Based on national estimates and given standard fare structures, nearly eight percent of commuters who live more than fifteen miles from work and work for employers with 100+ employees are potential candidates for vanpooling (See the shaded cell in Table 1). The market potential increases to 15 percent if the market is redefined as those who live more than 10 miles from work and are employed by organizations with 50 or more employees (national estimate).[3]

TABLE 1
MARKET POTENTIAL FOR VANPOOLING BASED ON EMPLOYER SIZE AND ONE-WAY TRIP DISTANCE

		Percent of Workforce by Commute Distance					
Employer Size	Cumulative Distribution by Employer Size	Over 30 miles	Over 20 miles	Over 15 miles	Over 10 miles	Over 5 miles	All
Over 500 employees	25.0%	0.8%	2.1%	3.7%	6.3%	11.6%	25.0%
Over 100 employees	50.0%	1.7%	4.2%	7.5%	12.5%	23.2%	50.0%
Over 50 employees	61.6%	2.1%	5.2%	9.2%	15.4%	28.5%	61.6%
All	100.0%	3.4%	8.4%	14.9%	25.0%	46.3%	100.0%

Source: Institute of Transportation Engineers 1993

Vanpooling also is experiencing a growth in ridership. Based on data collected by the American Public Transit Association (APTA) from the larger transit agencies (Table 2), the number of vanpool passenger trips is growing, on average, at nearly four times the rate of motorbus passenger trips.

For many transit agencies, vanpool passengers are often many times more valuable that the average rider, yet transit managers make decisions based on the typical motorbus rider. The cost recovered from the vanpool "farebox" is usually quite higher than from a transit rider (e.g., 15 to 25%). On average, the growth rate in ridership is higher and the cost per unlinked passenger is

[3] Institute of Transportation Engineers. Implementing Effective Travel Demand Management Measures. Section II-A Page 3-21, June 1993.

also much lower than for a transit rider. Among those transit agencies operating vanpool programs, vanpools contribute about three percent of the vanpool and motorbus passenger trips. However, as a group, vanpools accounted for over 10 percent of the growth in ridership among these agencies. Furthermore, the cost per vanpool rider is a fraction of the cost per motorbus rider. For the 17 systems operating transit and vanpool programs in 1996, the average cost per unlinked passenger trip was $1.95 per vanpool rider and $2.89 per motorbus rider.

TABLE 2

CHANGE IN PASSENGER TRIPS FOR MOTORBUS AND VANPOOLS

1995-1996

State	Transit System	1996 Motorbus Trips (000)	1996 Vanpool Trips (000)	1995 Motorbus Trips (000)	1995 Vanpool Trips (000)	Pct Change Motorbus Trips (000)	Pct Change Vanpool Trips (000)
AK	Anchorage	3,069.7	44.7	3,018.3	29.6	1.7%	51.0%
TX	Austin-Capital Metro	28,603.4	462.5	26,575.1	398.1	7.6%	16.2%
AL	Birmingham-Max	2,851.0	113.9	4,102.8	115.2	-30.5%	-1.1%
WA	Bremerton-Kitsap Transit	4,331.1	369.8	3,798.6	204.5	14.0%	80.8%
IL	Chicago-RTA-Pace	33,550.8	977.5	34,832.2	773.5	-3.7%	26.4%
CO	Fort Collins-Transfort	1,231.8	98.6	1,197.9	60.6	2.8%	62.7%
TN	Nashville	6,588.3	125.8	6,640.0	97.3	-0.8%	29.3%
VA	Norfolk-TRT	8,214.3	72.3	7,532.8	106.1	9.0%	-31.9%
FL	Orlando-LYNX	15,194.2	160.3	13,572.8	186.0	11.9%	-13.8%
AZ	Phoenix-RPTA	2,526.4	426.1	2,508.9	351.4	0.7%	21.3%
OR	Portland	4,936.3	18.3	4,193.4	16.9	17.7%	8.3%
WA	Richland-Ben Franklin	3,727.6	564.8	3,356.5	467.2	11.1%	20.9%
WA	Seattle-Metro	59,424.9	1,917.4	57,466.8	1,840.2	3.4%	4.2%
WA	Snohomish County	6,786.1	378.0	5,672.0	216.6	19.6%	74.5%
WA	Spokane-STA	7,832.0	78.2	7,467.1	77.5	4.9%	0.9%
WA	Tacoma-Pierce Transit	11,493.3	309.5	10,734.4	272.0	7.1%	13.8%
NC	Winston-Salem-WSTA	2,958.4	365.6	3,218.7	333.7	-8.1%	9.6%
	TOTAL	224,439.3	6,797.8	213,637.2	5,546.4	5.1%	22.6%

Source: APTA

Knowing how much vanpool customers are worth to a transit agency is the first step in understanding their value to the total system. Otherwise, transit agencies may under-invest in riders who are of high value to the transit agency.

Market for Vanpool Programs

The purpose of this section was to review other vanpool programs to provide a frame of reference on the diversity of markets served by vanpool programs (e.g., large cities versus small urban areas) and performance (less than $3,000 per vehicle in operating expense per vehicle operated in maximum services to over $45,000). Examples of vanpool programs with a special emphasis on the unique or innovative approaches of the various vanpool programs, including various fare structures, are included throughout subsequent sections.

Table 3 shows how transit systems use different delivery approaches (i.e., directly operated versus purchased transportation) for vanpooling. Though most of the programs that report the data through the National Transit Database (NTD) operate their own vanpool programs, many systems purchase their transportation services. It should be noted that revenues from vanpooling are not required to be identified in the NTD reporting process and, therefore, are not available for estimating the fare box cost recovery ratio for each system. Furthermore, some vanpool programs to appear to be significantly more or less efficient than their peers when reviewing Table 3. However, the differences may be due to how the transit system allocated some of the common operating costs (e.g., marketing) among the various modes.

TABLE 3

1995 VEHICLE OPERATING EXPENSES FOR VANPOOLS

	Transit Agency Name	Veh. Oper. in Max Service	Vehicle Operating Expenses (in thousands)						
			Vehicle Oper.	Vehicle Main.	Non-Vehicle Main.	Gen. Admin	Purch. Trans.	Total	Operating Expense per VOMS
WA	Seattle-Metro	513	1988.6	0.3	1.4	5130.4	0.0	7120.8	$ 13.88
IL	Chicago-RTA-Pace	205	544.9	255.8	0.0	2398.6	0.0	3199.3	$ 5.61
WA	Bremerton-Kitsap Transit	113	89.3	128.3	0.0	104.1	0.0	321.7	$ 2.85
TX	Austin-Capital Metro	99	0.0	0.0	0.0	0.0	1047.4	1047.4	$ 10.58
WA	Richland-Ben Franklin	94	352.1	221.6	169.9	202.6	0.0	946.2	$ 10.07
AZ	Phoenix-RPTA	85	0.0	0.0	0.0	0.0	693.5	693.5	$ 8.16
WA	Tacoma-Pierce Transit	78	452.3	67.8	7.0	93.0	0.0	620.2	$ 7.95
NC	Winston-Salem-WSTA	62	176.3	92.3	0.0	136.4	0.0	405.0	$ 6.53
FL	Orlando-LYNX	49	0.0	0.0	0.0	0.0	364.0	364.0	$ 7.43
UT	Salt Lake City-UTA	37	0.0	0.0	0.0	0.0	320.7	320.7	$ 8.67
NC	Durham-Triangle Transit	30	233.5	51.0	0.0	0.0	0.0	284.5	$ 9.48
IL	St. Louis-MCT	26	0.0	0.0	0.0	0.0	494.5	494.5	$ 19.02
WA	Spokane-STA	25	45.4	18.7	0.9	70.3	0.0	135.2	$ 5.41

	Transit Agency Name	Veh. Oper. in Max Service	Vehicle Operating Expenses (in thousands)						
			Vehicle Oper.	Vehicle Main.	Non-Vehicle Main.	Gen. Admin	Purch. Trans.	Total	Operating Expense per VOMS
GA	Atlanta-CCT	24	0.0	0.0	0.0	0.0	303.4	303.4	$ 12.64
WA	Olympia-IT	24	83.5	17.5	0.0	19.8	0.0	120.9	$ 5.04
NC	Charlotte-CTS	21	13.9	14.4	0.0	82.2	0.0	110.4	$ 5.26
AL	Birmingham-Max	18	49.6	19.1	0.0	44.5	0.0	113.2	$ 6.29
CO	Fort Collins-Transfort	17	22.4	7.7	0.0	42.1	0.0	72.2	$ 4.25
GA	Atlanta-Douglas Co.	13	16.0	26.4	0.0	58.7	0.0	101.2	$ 7.78
VA	Norfolk-TRT	10	22.6	27.3	0.0	37.4	0.0	87.2	$ 8.72
WA	Vancouver-C-Tran	6	10.7	21.7	0.0	2.8	0.0	35.1	$ 5.85
WA	Bellingham-WTA	2	0.0	0.0	0.0	0.0	91.5	91.5	$ 45.75
AL	Huntsville	1	9.1	3.8	0.0	19.0	0.0	31.8	$ 31.80

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Chapter 3

Traditional and Creative Financing Techniques To Start or Expand a Vanpool Program

"Never underestimate the value of cold cash." Gregory Nunn

This chapter will highlight a variety of financing techniques available for public vanpool programs. The intent of this section is to demonstrate the diversity and ingenuity as well as the "traditional" options that exist in funding this transportation option in our communities.

CAPITAL COST OF CONTRACTING

Under the Capital Cost of Contracting Policy (Circular C 7010.1), a grantee can allocate more federal resources for vanpooling than previously permitted by separating the capital and operating components of the transit service contracts. The transit agency may use capital funds to pay a percentage of the service representing the capital consumed in the contract. Eligible capital costs for vanpooling include the vehicle and the capital portion of costs for service or maintenance provided under contract. Such costs commonly include depreciation, interest on facilities and equipment, as well as those allowable capital costs that might be incurred directly by the grant recipient.

In an effort to simplify the accounting process, FTA considers 35 percent of leased commuter vanpool service to be capital costs without further explanation. A grant applicant may apply for a higher percentage than shown, but must provide appropriate written cost information and documentation to justify to FTA a higher percentage. FTA must approve all leases for vanpool vehicles when section 5307 funds represent more than 35 percent of the lease cost.. The policy applies to grant funds under Section 5307 and 5311 of the Transportation Equity Act for the 21st Century (TEA-21).

In addition, the capital costs of overhead are eligible. These expenses are assumed to be 2 percent of the total contract costs excluding public sector contract management costs.

Under this program, federal assistance is given to the grantee, not directly to the private service provider.

Transit agency may retain ownership of the vehicles at the end of their useful life, at which point the transit agency can reinvest the residual value of the vehicle into a replacement vehicle. Some transit agencies also may seek to distribute the depreciation costs over a longer period than a private service provider, thus lowering the operational cost per mile for customers.

CAPITAL LEASING

Under the capital leasing rule under 49 CFR 639, recipients may acquire tangible assets by lease, and all eligible lease costs may be reimbursed as capital expenses According to the FTA, *Capital lease* means "any transaction whereby the recipient acquires the right to use a capital asset without obtaining full ownership regardless of the tax status of the transaction.". Transit agencies can use capital grants for leasing facilities or equipment if a "lease is more cost effective than purchase or construction of such items." FTA believes that leasing arrangements can also provide transit authorities with flexibility that is needed, for example, to respond to changing market conditions. They allow the reimbursement as capital expenses of maintenance costs included in lease payments. However, FTA does not permit maintenance costs incurred outside of a lease agreement to be treated as capital expenses.

There are differences between the Capital Cost of Contracting Policy and the capital leasing rule. Under the Capital Cost of Contracting Policy, the federal grant recipient that contracts with a private carrier to provide mass transit service may pay for this service with capital funds for the percentage of the service representing the "capital consumed in the contract". Under the capital leasing rule, recipients may acquire tangible assets by lease, and all eligible lease costs may be reimbursed as capital expenses. FTA has used industry studies and other objective data to determine which percentage of the service under a Capital Cost of Contracting arrangement should be eligible for capital reimbursement (see Table 4 below). FTA reserves the right to review all contracts in which reimbursement with section 5307 capital funds exceeds that percentage.

TABLE 4

PERCENT OF CONTRACT ALLOWED FOR CAPITAL ASSISTANCE WITHOUT FURTHER JUSTIFICATION*(*BASED ON ASSUMPTION THAT CONTRACTOR PROVIDES THE ASSETS)

Type of Contract	Percent of Contract Eligible for 80 Percent Federal Share
1. Service Contract (contractor provides maintenance and transit service; grantee provides vehicles)	40 percent
2. Service Contract (contractor provides transit service only; grantee provides vehicles and maintenance)	0 percent
3. Vehicle Maintenance Contract (contractor provides maintenance; grantee provides vehicles and transit service)	100 percent
4. Vehicle Lease Contract (contractor provides vehicles; grantee provides maintenance and transit service)	100 percent
5. Maintenance/Lease Contract (contractor provides vehicles and maintenance; grantee provides transit service)	100 percent
6. Turnkey Contract (contractor provides vehicles, maintenance, and transit service)	50 percent
7. Vehicle/Service Contract (contractor provides vehicles and transit service; grantee provides maintenance)	10 percent

FTA defines lease costs that are eligible for capital assistance as all costs directly attributable to making a capital asset available to the lessee, including, but not limited to--

(1) Finance charges, including interest;

(2) Ancillary costs such as delivery and installation charges; and

(3) Maintenance costs.

For some agencies, capital leasing may be preferred over Capital Cost of Contracting because of the larger allowable federal share. Please see the following example for a 100 vanpool fleet system that shows the differences where the contractor's lease price includes all insurance and maintenance costs.

The example in Table 5 shows how the capital limitation of the Capital Cost of Contracting works against a vanpool program. Approximately, 43 percent of eligible costs represent capital costs (i.e., depreciation, interest and maintenance). However, due to regulatory limits established by the Capital Cost of Contracting policy (35% of eligible capital expenses and 2% of the administrative costs) the transit agency may offset a total of only 28 percent of the total capital and operating costs under the Capital Cost of Contracting policy. After applying the 80/20 federal/local matching ratio is applied, only $433,920 or 66 percent of the $660,000 in capital expenses can be offset with federal funds. However, the capital cost of leasing can increase the percentage. In this example, $528,000 or 80 percent of the $660,000 in capital expenses can be offset with federal funds.

Another benefit associated with leasing the vehicles is the ability to match fluctuations in demand for vehicles with supply. Acquiring more vanpool vehicles than the can be put in service will still incur costs such as depreciation while out of service. In addition, the amount of running time under the vehicle's warranty period coverage is decreasing. Under some vendors, the transit agency also may have better leverage in acquiring new vehicles based on the volume purchased by the vendor. Finally, converting from a large single expense to a periodic payment will free up capital resources that the transit agency could use in investments (i.e., no lost opportunity). The primary disadvantage is the lack of ownership in the vehicle at the end of the lease term.

TABLE 5

COMPARISON OF CAPITAL COST OF CONTRACTING WITH CAPITAL LEASING

			Capital Cost of Contracting					Capital Leasing				
	Contract Mo. Expense Fleet of 100	Est. Annual Expense Fleet of 100	Billed Amount	Percent of Total	Eligible Capital	Eligible Percent	Federal Share @ 80%	Billed Amount	Percent of Total	Eligible Capital	Eligible Percent	Federal Share@ 80%
Capital Expenses												
Depreciation, Interest & Maintenance	$ 55,000	$ 660,000	$ 660,000	43%	$533,400	35%	$426,720	$ 660,000	43%	$660,000	43%	$528,000
Operating Expenses												
Insurance, Tax/Title/Registration, Profit	$ 21,000	$ 252,000	$ 252,000	17%				$ 252,000				
Administrative Contract	30,000	360,000	360,000	24%	360,000	2%	$ 7,200	360,000				
Sales Tax (Est. of 6.0%) on Rate (not including Administrative costs)	5,000	60,000	60,000	4%				60,000				
Gasoline (Est @ 15mpg, $1.50/gal, 1,600 mi/mo)	16,000	192,000	192,000	13%				192,000				
Total	$127,000	$1,524,000	$1,524,000	100%				$1,524,000				
			Federal Capital as % of Total =			28%		Federal Capital as % of Total =			35%	

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TOLL REVENUE CREDITS FOR LOCAL MATCH

TEA-21 provides that toll revenues on public roads and bridges expended for capital investment may count as local match (soft match) for Federal grant funds in a specific year. This capability allows the transit agency to use the local matching share, which would otherwise be required to match a transit grant, for other projects.

TEA-21 allows transit agencies to use the revenues from toll facilities as local match under the following specific circumstances:

(1) The toll revenues must be used for transportation capital investment, not operating expenses;

(2) The soft match in one year is counted as the amount of toll revenue used for transportation capital investment in that year. That is, there is no carryover.

For example, if 20 vanpool vehicles were estimated to cost $500,000 to purchase, the transit agency would request $625,000. Federal capital funds would pay 80% or $500,000. The agency would request from their state that toll revenue credits of $125,000 provide the nonfederal match. In Florida, the request is made from the grant recipient to the FDOT District office to the Central Office. If approved, a letter is sent to FHWA issuing a credit (no dollars are actually sent to the transit agency).

Depending upon local conditions and requirements, transit agencies that do not have a dedicated source of revenue for capital dollars (e.g., local real estate taxes) should exercise caution with this method. Though a project's local (non-toll) match could be banked, or used as matching funds for a discretionary grant, or used to facilitate the early completion of other transit capital project, etc. , there is the possibility that the toll match funds will be viewed as replacement funds rather than supplemental resources. In other words, toll revenue credits may reduce the need for local (non-toll) match funds. This "relief" could result in the public body reallocating those funds to other non-transit related purposes rather than using the funds to support other transit expenses such as operating expenses.

CONGESTION MITIGATION AIR QUALITY FUNDS

Congestion Mitigation Air Quality (CMAQ) provides specific guidance regarding fare subsidies. CMAQ allows the funds to be used to subsidize regular vanpool fares, but only if the reduced or free fare is part of an overall program for preventing exceedance of a national air quality standard during periods of high pollutant levels. Examples include metropolitan areas that have implemented voluntary mobile source emission reduction programs that promote a range of measures individuals can take to reduce ozone-forming emissions. "Ozone-action" programs, designed to avoid exceedances when ozone concentrations are high, are bolstered by more permanent measures aimed at discouraging single occupant vehicle (SOV) driving.

According to the guidance provided by FHWA, "The implementation of a vanpool operation entails purchasing or leasing vehicles and providing a transportation service. Therefore, proposals for vanpool activities such as these must be for new or expanded service to be eligible and are subject to the 3-year limitation on operating costs [paid by CMAQ funding]".

The purchase price of a publicly-owned vanpool vehicle does not have to be paid back to the Federal Government.

Furthermore, the guidance states "CMAQ funds should not be used to buy or lease vans that would be in direct competition with and impede private sector initiatives." States and metropolitan planning organizations (MPOs) are advised to consult with the private sector prior to using CMAQ funds to purchase vans. If local private firms have "definite plans to provide adequate vanpool services" then CMAQ funds should not be used to "supplant that service".

The CMAQ program also allows funding for user fare or fee subsidies in order to encourage greater use of alternative travel modes (e.g., carpool, vanpool, transit, bicycling and walking). This policy has been established to encourage areas to take a more comprehensive approach--including both supply and demand measures--in reducing transportation emissions. CMAQ funds to subsidize fares or fees for vanpools were explicitly identified in the guidance as an eligible use. These uses include a program subsidizing empty seats during the formation of a new vanpool and reduced fares for shuttle services within a defined area, such as a flat-fare taxi program.

The intent of the fare/fee subsidies under the CMAQ program is to provide short-term incentives so there is a time limit. The intent of this time limit provision is to support experimentation but always with the goal of identifying projects that are viable without the short-term funding assistance provided by the CMAQ program. Thus, the subsidy must be used in conjunction with reasonable fares or fees to allow the greatest chance of holding on to "trial" users. While the fare/fee subsidy program itself is not limited in time, specific groups or locales targeted under the program must be rotated and the subsidized fare/fee must be limited to any one entity or location for a period not to exceed 3 years.

CONDITIONAL SALE

A "conditional sale" is a transaction where the vehicle provider retains a security interest in the vehicle. In effect, the transit agency would pre-pay the vehicle lease to avoid paying interest charges. Under the "conditional sale", the transit agency can sell the vehicle at the end of the vehicle life and retain the residual value of the vehicle (assuming the value is less than $5,000). If the residual value exceeds that amount, the proportioned federal share of the value must be returned to the FTA.

MUNICIPAL LEASE PURCHASE

A municipal lease purchase is a financing method that allows transit agencies to purchase equipment on an installment basis at tax-exempt interest rates. The municipal lease purchase agreement is structured like an installment purchase or conditional sale. It provides for the transit agency's use of the vehicles while achieving ownership. When assessing the financial impact of the options, the transit agency should consider the cost of not investing cash reserves (i.e., lost opportunity cost).

TAKE OVER AN EXISTING EMPLOYER-OPERATED VANPOOL PROGRAM

There is an advantage to acquiring employer-operated vanpool programs instead of buying the market through the use of subsidies. Using this method, the public agency would have an established customer base and would begin recording passenger data to report as part of the National Transit Database (NTD) reporting requirements. Normally, there is a 2 to 3 year lag between the time the data is collected until the impact of a change in ridership would "appear" in the form of a larger share of federal funds (assuming all other recipients remain the same). Therefore, this method offers a quicker way of growing cash-flow rather than starting a program from scratch. It would provide time, for example, to initiate a vanpool program using CMAQ funds and provide a revenue stream to continue to support the vanpool program with "new" money after the CMAQ funds are exhausted.

In Hartford, The Rideshare Company (TRC) helped create a new non-profit corporation (2Plus, Inc.) and a new vanpool system, EasyStreet™, in response to downsizing by corporate vanpool fleets. TRC acquired and consolidated corporate vanpool fleets and provides administrative, marketing, and customer service support for these groups. Corporations helped finance the transfer, saving hundreds of thousands on dollars in the start-up phase. According to Byron York, 2Plus president, 2Plus' non-profit status was "able to justify our requests for below market-rate financing, factor in adequate maintenance and replacement costs [to the price paid by the rider], and more important, we were able to leverage our position to overcome a serious insurance obstacle." The State of Connecticut became an investor, rather than simply a grantor of funds. The State, as an investor, would get a return on its investment paid back over 3 to 5 years based on the generation of the replacement costs from rider fares.

CUSTOMER FINANCING - STATE TAX INCENTIVES - INDIVIDUAL

While the aforementioned options exist for financing the vanpool vehicles, some groups have sought methods of financing the customer. Tax incentives are used by some states to spur investments in vanpools. The following summarizes the programs in three states. Until the legislation sunsetted, the State of California used to allow vanpool riders to claim 40% of their vanpool fares (up to $480/year) as a state tax credit, among other tax credits for commuters. Commuters were eligible if they met the following criteria: (1) vanpool was not employer sponsored, (2) the employee worked at least 10 hours per week, (3) the vanpool had seven or more passengers, and (4) the individual rode in the vanpool at least three days a week or 15 days per month for at least six months of the year. The law that allowed this tax credit expired at the end of the 1995 tax year.

For example, if the commuter's monthly fare was $60 for an annual total of $720, 40 percent of that total - or $288 - could have been used as a tax credit. The credit was allowed for tax years 1989 through 1995. If the credit exceeded the net tax for the current year, it could have been carried over to following years. In 1996, the state reported only 64 tax returns claiming the credit had been filed and about $25,000 was claimed.

In New Jersey, NJ TRANSIT offers a statewide Vanpool Sponsorship Program, which provides a financial incentive for vanpooling in areas where public transportation is neither available nor feasible. Each vanpool group may be eligible for $150 per month of sponsorship support. Those vanpool groups that take advantage of one of New Jersey's High Occupancy Vehicle (HOV)

lanes, during hours of operation, can qualify for an additional $150 of monthly sponsorship support. Newly forming or existing vanpool groups that obtain their vehicles from a participating vanpool provider can apply for NJ TRANSIT sponsorship through a Transportation Management Association (TMA). There is an application process, along with other reporting requirements to ensure that the vanpool group meets eligibility standards. To be eligible for sponsorship, the vehicle must be from a vanpool provider that participates in NJTRANSIT's program. The vehicle must have a seating capacity of 7-15 passengers, including the driver who is an unpaid commuter. The vanpool group must have a New Jersey work site as its final destination. To avoid skimming ridership from existing transit service, vanpool groups that duplicate an existing public transit route may not be qualified.

The process requires coordination with the local group responsible for assisting in the formation of the vanpool. The group must complete a Vanpool Application form and each participant, including the driver, must complete an Individual Application form. The forms are submitted, as a package, to the Transportation Management Association (TMA) for the county in which the vanpool group works.

CUSTOMER FINANCING - STATE TAX INCENTIVES - EMPLOYER

Financing the customer also includes strategies for financing the employer-customer. In Oregon, employers can get a tax credit for purchasing vehicles for vanpooling or carpooling. The vanpool or carpool must consist of three or more employees and reduce vehicle miles traveled for the work commute at least 150 days per year. The Oregon Legislature made vanpool and carpool projects eligible for the state Business Energy Tax Credit to encourage alternatives to drive-alone commuting. The stated purpose of the Business Energy Tax Credit is to "encourage investments in energy conservation, recycling, renewable energy resources and less-polluting transportation fuels." The tax credit is 35 percent of eligible project costs, taken over five years: 10 percent in the first and second years and 5 percent each remaining year. Any business that pays Oregon income taxes is eligible for the tax credit. The Oregon Office of Energy administers the tax credit program. Businesses must apply and receive approval for the tax credit before starting the program or project.

In Washington State, the state government provides tax credits to major employers who participate in a commute trip reduction program and provide financial incentives to their employees to ride-share. This credit is an incentive for employers to encourage their employees to reduce the number of single passenger vehicles on Washington State's roads by carpooling or vanpooling.

The credit is equal to one half (50%) of the financial incentive paid to each participating employee. It is limited to $60 per employee and $200,000 per calendar year per business. The credit is limited to $2 million per calendar year statewide.

To qualify for the tax credit, the employer must have a commute trip reduction program for a worksite(s) in one or more of the eight counties subject to the Commute Trip Reduction law. The employer must have 100 or more employees working at the same location (worksite) starting work Monday through Friday between 6:00 AM and 9:00 AM. in one or more of those counties. However, smaller sites in a qualified county may be included in the program as long as one site in any qualifying county has 100 or more employees.

Employees must carpool or vanpool in vehicles containing four or more passengers and receive a financial incentive from their employer. The employee must directly receive the financial incentive or the employee must be named when payment is made on behalf of the employee. For example: if ten parking places are purchased, employee names must be recorded to show who will use each parking place. A blanket statement of "employee parking places for ride-sharing" will not meet the criteria. The employer is eligible for credits only for incentives paid to employees who carpool or vanpool at least 50% of the time.

CUSTOMER FINANCING - FEDERAL TAX INCENTIVES - EMPLOYER

At the federal level, a provision of the Internal Revenue Code (IRC), Section 132 (f), permits employers to subsidize their employees' cost of commuting to work by transit and vanpools up to $65 per month. Up to $175/month can be provided by employers to employees for parking at or near an employer's worksite, or at a facility from which employee commutes via transit, vanpool, or carpool. It also allows employees to use pre-tax dollars to pay for their qualified transportation fringe benefits such as transit passes, vanpool fares, and qualified parking. Section 132(f), Qualified Transportation Fringes, is permissive. This transportation commute benefit program does not require employers to provide a transit pass benefit. How and under what circumstances an employer provides these benefits to its employees is entirely within the employer's discretion. The employer may provide only one kind of benefit or all types of transportation fringe benefits, at its sole discretion.

Any type of transit service, publicly or privately owned or operated, including bus, rail, subway, ferry, subscription bus, shuttle bus, and commuter highway vehicles under contract which provides general or special service on a regular and continuing basis to the public and/or employees are eligible uses under Section 132. In addition, transportation in a commuter highway vehicle (vanpool) which is provided "by-and-for" (on behalf of) the employer is eligible for the Transportation Commute Benefit. These types of vanpool arrangements are: employer-owned; employer-leased; employee-owned; employee-leased, and public transit operated.

An employer can provide the parking benefit (tax free up to $175 per month) in addition to the commuter highway vehicle benefit (tax free up to $65 per month) to employees who travel in vanpools that use commercial parking. The designated employee "prime member" (often the driver or the person assigned the parking space) who travels in a commuter highway vehicle that uses commercial parking is eligible for the parking benefit (up to $175/month), and at the same time is entitled to the commuter highway vehicle benefit (up to $65/month). All other employees commuting in a highway vehicle who are not the "prime member" are only eligible for the vanpool benefit, not the parking benefit.

For the first time, employers can also allow employees to use pre-tax income to pay for qualified transportation fringes. Employers will save on payroll taxes (at least 7.65% savings) and other salary-based benefits (e.g., pension contributions defined as a percent of salary). Finally, employers can offer both the commute benefit and the pre-tax option up to statutory limits.

In addition to providing flexibility on how to offer the program, TEA-21 provided more flexibility with regards to whom and for what purposes may the qualified transit benefit be offered. Now, an employer can offer the benefit to any employee or group of employees within the work force. The amount can vary among employees, it can be provided on a regular basis or once a year instead of a bonus, or it can be provided as a recruitment incentive or financial reward

to address a problem such as recurring lateness. It can also be used only for a limited group of employees or available to all employees, at the employer's discretion. It must, however, be provided for commuting expenses--not for personal travel.

While an employee can buy transit passes without going through the employer, there is no way that the employee can obtain the tax savings. These qualified transportation fringes are employer-provided benefits that allow employers to treat benefits provided to employees in a tax-preferred way. The employee cannot deduct the amount when they file their personal income tax forms. However, the employer can treat the amount they provide to their employees in the form of qualified transportation fringes as tax free and excludible from gross income of the employee thereby giving employees a financial saving.

The following example is provided to show the savings that could accrue to one individual. Joel is married, earns $25,000 per year, and is a dedicated transit rider. The first column shows that last year, before his employer offered the pre-tax commute benefit program, his net pay was $21,168 after deducting social security taxes and income taxes. If Joel had state or local income taxes then the net amount would be less. After paying for his transit pass, Joel was left with $20,388 in disposable income. However, under the employer's new pre-tax commute benefit option, Joel has chosen to deduct $65 per month ($780 per year) from his gross pay before taxes to buy the transit pass. As a result, his disposable income increased by $177 to $20,564.

It should be noted that while his FICA contribution also decreased by $60 per year so did his employer's matching contribution.

As a result of this new program, Joel saved $177 per year and his employer saved $60 per year.

	Without Pretax Commute Benefits	With Pretax Commute Benefits
Gross pay	$ 25,000	$ 25,000
Pretax Commute Benefits	-	780
Taxable Gross	25,000	24,220
FICA & Medicare	1,913	1,853
Withholding	1,920	1,803
Net Pay	21,168	20,564
Non-Pretaxed Expenses (After Net Payouts)	780	-
Spendable income	$ 20,388	$ 20,564
	Savings:	$ 177

Assumes married employee w/2 exemptions and is receiving $65 per month transit benefit

Employers can reap significant savings as well. The pre-tax deduction could result in the following benefits to employers:

- Tax Savings
- Payroll savings
- Savings on payroll taxes
- Reduced disability insurance
- Lower contributions to 401k accounts
- Benefits Administration
- May offer transit passes in lieu of compensation
- May use similar payroll deduction mechanisms to cafeteria plans
- May require annual election (not required)
- No plan filings required
- No irrevocable elections
- No "use it or lose it" rule
- Methods of Payment Options
- Transit pass
- Voucher
- Cash reimbursement - if pass/voucher unavailable

TRANSPORTATION COMMUTE BENEFITS FACT SHEET [4]
TEA 21 MODIFICATIONS TO THE INTERNAL REVENUE CODE 132(F)

The maximum tax-free Transportation Commute Benefit for transit (bus, rail or ferry) and commuter highway vehicles (vanpool) is $65 per month.

The maximum tax-free Transportation Commute Benefit for qualified parking is $175 per month.

Vanpools that are employer-owned, employee-owned, employer-leased or public transit operated qualify for the Transportation Commute Benefit.

Bicyclists, walkers and carpoolers are not covered under the Transportation Commute Benefit.

Employers can offer the benefit to any employee or group of employees within the work force.

The amount of the benefit can vary among employees of a particular company.

Employees can use up to $65 per month of their gross income before taxes to pay for transit and vanpooling, or up to $175 per month for qualified parking.

The qualified transit benefit can be provided on a regular basis or once a year instead of a bonus.

An employee may not require employers to provide a transit pass benefit.

Employer makes the decision if and when to increase the benefit.

Employers can obtain a tax deduction for subsidizing transit and vanpools.

An employer can save on payroll taxes, FICA, disability insurance, and payments into 401k accounts by providing the Transportation Commute Benefit to an employee rather than increasing the employees' gross income by the same amount.

Employers may provide transit passes in lieu of compensation.

Employers may use payroll deduction mechanisms similar to cafeteria plans.

Acceptable payment methods are passes, vouchers and cash reimbursement (if a pass/voucher is unavailable).

An employee may receive a qualified parking benefit and a transit or commuter highway vehicle benefit.

Partners and self-employed individuals may receive only $21 per month tax-free benefit for transit. Vanpool benefits are not eligible and any amount over $21 per month makes the full amount taxable.

In 2002, the maximum for transit and vanpools will be increased from $65 to $100 per month.

Qualified parking can be "cashed out" without penalty and used as taxable cash or tax-free benefit for transit or a combination of transit, vanpool, and parking.

Employers may have to increase pay if they allow cash out.

4 Transportation Demand Management Tool Kit. Association for Commuter Transportation. 1998

ADVERTISING REVENUE. Vanpools are moving billboards. The opportunity exists to use the exposure of the van as a method to finance a portion of the operations. One private company, AdVans, touts vanpool advertising as the only outdoor medium that guarantees exposure along fixed routes, on high density highways, during rush hours, every weekday - every month - every year. AdVans has an agreement with VPSI, the nation's largest vanpool provider, to sell specific routes. According to AdVans, the use of advanced "wrap" technology allows for reproduction from high-quality photos. The wraps are applied directly to vehicles. Windows are covered in a perforated material that allows riders to see out, without impacting the graphic image. AdVans provides a rebate to the rider of a leased van to lower the monthly fare.

TIMESHARING The concept of timesharing, the joint use of a property, can be applied to vanpooling as well as vacation spots. In San Luis Obispo, California, the Ride-On TMA, a private non-profit corporation, operates a fleet of 35 passenger vans, two buses and double-decker trolley. The TMA provides the drivers, fuel, maintenance, insurance and radio dispatching. Payment for the services is on either a per-mile basis or fares. The TMA developed a Patient Shuttle Program for a local hospital with the shuttle vehicles coming from the vanpool fleet of Cal Poly State University and other TMA members.[5] Cal Poly earns 25 cents per mile on each van. This revenue pays for subsidized seats in the vanpools and contributes to the vehicle replacement fund. The concept of cooperative fleet management helped keep the program operational without increases to users by making better use of vehicles that previously sat idle during most of the workday.

RESOURCE SHARING Another form of sharing is making use of existing resources. In Richland, Washington, Ben Franklin Transit has 100 Ford vanpool vans and 30 paratransit vehicles that are on Ford chassis. The transit agency obtained designation as a Ford Authorized Warranty Center to raise revenue and improve productivity. Ben Franklin Transit now performs all the warranty work required on their fleet and are paid by Ford at a negotiated hourly rate ($34.80) that is higher than the agency's labor costs. Ford also pays Ben Franklin Transit 20 percent above each part's cost as administrative fees. Furthermore, Ford provides training to the agency's mechanics for free. Prior to this arrangement, local Ford dealers were unable to quickly turn around warranty service. As a result of this technique, the transit agency is experiencing less down time for their fleet. According to the report, Ford is now interested in using BFT as a test center for new vehicles, and would provide the agency with free test vehicles and pay for necessary repairs at the rates noted above. [6]

Another way to lower the costs of starting a program is to examine other types of capital costs and seek to lower them. In Boulder, Colorado, warranty work was sent to a local dealer but the

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[5] Fulks, Tom. "A California TMA Entices Local Organizations to Lend Passenger Vans for Transit Use". TMA Clearinghouse Quarterly. Winter 1994

[6] Volinski, Joel. Lessons Learned in Transit. Center for Urban Transportation Research 199?

local paratransit operator provided routine and emergency maintenance at about half the commercial rate.

USE STATE CONTRACTS TO PURCHASE

Ben Franklin Transit also uses state contracts to obtain vehicles, other equipment, and office supplies. This saves up to $7,000 on a 15-passenger vanpool van, and $2,000 to $3,000 on a 7-passenger vehicle. This process saves time as well as money since the full bid process is not necessary. BFT also gets reductions of 25-40 percent off wholesale and 50-60 percent off retail for batteries, electrical equipment such as lights, tires, ribbons for computers, etc., by purchasing through state contracts. In Hartford, for example, conventional van insurance would have cost 2Plus approximately $1,300 per vehicle. By successfully arguing the common public service mission to the State Insurance Purchasing Board, 2Plus obtained van insurance under the state policy. Insurance costs decreased to $400 to $500 per vehicle. They estimate they saved $160,000 annually over 200 vans. There were no subsidies involved.

FINANCIAL MATCHING PROGRAM

One method of obtaining financial support for the vanpool program is through matching programs. In other words, attempts are made to induce employer subsidies by leveraging those dollars with public sector dollars. The Commuter Bonus program in Seattle area was developed to increase corporate investments in vanpool and transit subsidies. Under this program, employer transit subsidies are matched by the local transit agency up to a certain level. According to Metro, employers with favorable characteristics or conditions for Commuter Bonus are those that currently reimburse employees for pass purchases and whose employees use several Puget Sound area transportation systems. Vouchers are provided in any whole dollar denominations ($5 minimum) and are valid for 13 months from date of issue. Employers select the denominations and the quantity purchased. Employees take vouchers to one of over 200 customer service or retail sales pass outlets in the Puget Sound area and use it as full or partial payment for passes or tickets. Vanpoolers give vouchers to their vanpool bookkeeper.

RENT IT

Vanpool demand may fluctuate in nearby communities. Rent or lease vehicles from another transit agency programs is an option.

PREPAYMENT INDUCEMENTS

Transit check or commuter check programs actually pre-sell transit or vanpool passes. In Tampa, the University North Transportation Initiative (UNTI) uses VPSI's CommuterBucks program to help vanpools that have lost riders. UNTI purchases the CommuterBucks in anticipation that some vanpools may lose riders and they will need additional time to find replacements. This program helps keep the vanpool fares constant for the remaining passengers when vanpools lose a few riders so the vanpool remains in service. It provides a lifeline to the vanpool group and buys time to find replacement riders. Otherwise,

the total cost of the vanpool is split among the remaining riders – raising the cost and the potential for additional lost ridership.

Summary

This chapter has identified 17 potential sources or methods of financing all or a portion of a vanpool program. These methods range from financing the vehicles to financing the customer.

TABLE 6

SUMMARY OF TRADITIONAL AND CREATIVE FINANCING TECHNIQUES TO START OR EXPAND A VANPOOL PROGRAM

1. Capital Cost of Contracting
2. Capital Leasing
3. Toll Revenue Credits for Local Match
4. Congestion Mitigation Air Quality Funds
5. Conditional Sale
6. Municipal Lease Purchase
7. Take Over Existing Employer-Operated Vanpool Program
8. Customer Financing – State Tax Incentives: Individual
9. Customer Financing – State Tax Incentives: Employer
10. Customer Financing – Federal Tax Incentives: Employer
11. Advertising Revenue
12. Timesharing
13. Resource Sharing
14. Use State Contracts to Purchase
15. Financial Matching Program
16. Rent it
17. Prepayment Inducements

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Chapter

Vanpool Pricing

"Nowadays we know the price of everything and the value of nothing." Oscar Wilde

Pricing Effects on Stated Intentions

TDM practitioners and others often consider pricing to be the crucial determinant for determining vanpool market potential. This chapter provides two assessments on how much (or little) pricing affects demand for vanpooling. A stated preference approach was used to identify how the Florida commuters in Tampa, Miami-Ft. Lauderdale, and Jacksonville react to different pricing and service combinations, including vanpooling. The second approach is a revealed preference examination using the records over 200,000 commuter records in Puget Sound area of Washington and various vanpool providers. The Puget Sound area has the largest number of vanpools in the country.

Results from the stated preference surveys conducted for the *Market-based Approach to Cost-Effective TDM Program Design* project were used to estimate price elasticity for vanpool fares to demonstrate market potential. The estimation procedure involved enumerating all survey results for three scenarios: (1) vanpool prices are $50, (2) vanpool prices are $25, and (3) vanpools are free. Other assumptions include vanpool pick-up points located 1 or more miles from the home and transit fares of approximately $50 per month, as well as general non-availability of compressed work weeks and telecommuting as incentives to participate in alternative ridesharing programs.

The model indicates that a reduction of vanpool fares from $50 to $25 (2 mile pick-up, no other incentives tested) would cause an increase in vanpool use from about zero to nearly 5 percent of the market. In effect, there is about 22 percent maximum market share for vanpooling if provided for free.

Commuter levels of awareness of vanpool programs must temper these estimates. If a large promotional campaign is launched at the same time as the vanpool fare reductions are put in

place, it is likely that increases would be greater than if no effort was made to increase awareness of the vanpool program. If, on the other hand, little or no promotional activity occurs, results may be less dramatic than indicated by these models. The models assume a steady, uninterrupted flow of promotional material at levels similar to prior periods (i.e., what was done to create current vanpool ridership.)

Also, it is clear from the models that re-routing vanpools to customer's homes rather than to central pick-up points can have substantial impacts on customer demand. Where door-to-door pickup is not practiced, its use should be investigated.

TABLE 6

COEFFICIENT VALUES FOR BASE REGRESSION MODELS

Model:	Carpool		Vanpool		Transit		Drive alone	
Parameter	Estimate	T	Estimate	T	Estimate	T	Estimate	T
Intercept (Overall)	.121	13.8	.215	34.7	.069	12.7	.595	52.0
Compressed Work Week	.075	9.9	-.014	-2.5	.016	3.5	-.078	-7.8
Telecommuting	.021	2.7	-.042	-7.7	.011	2.5	.009	0.9
Vanpool Cost	.0008	5.3	-.002	-18.6	.00028	2.9	.00092	4.6
Vanpool pick-up ¼ mile	.017	2.2	-.064	-12.0	.007	1.6	.041	4.1
VP pickup 2 miles	.0011	3.6	-.086	-16.1	.009	1.8	.051	5.1
Transit cost	.018	4.6	-.00068	-6.4	-.00132	-14	.000132	6.6
Model R-squared	.019		.079		.026		.022	
Model R-squared *	.594		.397		.503		.725	
Model R-squared **	.427		.377		.412		.547	

* – intercepts allowed to vary by respondent (adjusted for # of parameters)

** – intercepts allowed to vary by respondent and only respondents who vary responses used

Source: Cleland, Francis and Philip Winters. "A Market-Based Approach to Customized Trip Reduction". Florida Department of Transportation Research Center. 2000

Pricing Effects on Revealed Choices

The second approach was to estimate the impact of pricing changes based on existing pricing data available in the Puget Sound area of Washington, the nation's vanpool capital with over 1,500 vanpools in service. CUTR's model for the Puget Sound area was based on the price variations that respondents to the CTR survey would face. The model would be based on the relationship of adoption of vanpooling to the price of vanpooling.

To build the model, CUTR was given access to both the 1999 employer and employee data. In addition, CUTR obtained vanpool rider pricing for operators in King, Kitsap, and Pierce Counties through their respective websites. Vanpool pricing is generally a function of the number of the riders in the vanpool and the distance traveled. Operators in the counties can serve riders who have either trip origins or trip destinations in the operator's home county. The 1999 employer survey contains records on 360 employers. The employee survey has 229,000 commuter responses.

The independent variables available for the model were operator price, commute distance, and company subsidy. The vanpool price was calculated using the following steps. First, the origin and destination counties for each respondent, from survey data were determined based on zip codes. Based on this combination, a determination was made which vanpool operators could serve the respondent. If no operators could serve the respondent, that respondent was eliminated from the model. The respondent's distance traveled (reported from employee surveys' database) was the remaining variable.

The determination of vanpool operator price was based on a lookup table for price by commute distance by number of passengers. Vanpool pricing was based on a minimum of eight passengers. Since there is no way to determine what size vanpool current non-vanpool users would be in, the 8-passenger price was used for all respondents. Since some operators offered daily prices, this was calculated as a daily price. Where only monthly prices were available, the price was calculated by dividing the monthly price by 22 days per month. Where multiple operators were available for the respondent, the lowest price available was assigned.

It is generally assumed that commute distance is a major factor in adoption of vanpooling. Since the price of the vanpool ride is also based on distance, it was necessary to take the distance into account in modeling vanpool demand. Price and distance are highly correlated, as would be expected since price is generally set based on distance. To eliminate this correlation, a price per mile ratio was calculated, using the calculated price and the reported commute distance. The distribution of this variable was highly skewed. To reduce the skewness, the variable was further transformed by taking the natural log of the price/mile ratio. This transformation became the fundamental price variable.

Furthermore, the modeling of the probability of vanpooling was limited to respondents that commuted at least 5 miles each way. This was done because it is neither highly likely that vanpool services are of great interest to those with shorter commutes, nor is it likely (for those who indicate they are vanpooling) that the service is being provided by a commercial operator.

Some employees worked at companies that offered vanpool subsidies. One approach would be to calculate a net vanpool cost by subtracting the subsidy from the calculated operator vanpool fare. However, this would assume 100 percent awareness and use of the subsidy. It is more reasonable to model the company subsidy as a separate independent variable. Since for many companies the value of the subsidy was $0, taking the natural log was not an option. Thus, the subsidy was left as an independent variable with an untransformed value.

The dependent variable was the adoption of vanpooling as a commute mode. The survey data asks respondents the commute mode used for the entire past week. Options for modeling included allowing only 100% use of vanpooling, calculating the proportion of trips taken by vanpool, and modeling vanpool users (i.e. used at least once versus not used) versus non-users. Since the penetration of vanpooling is very limited in the area (1.6% of respondents indicated they used vanpooling), it was determined that the most reasonable approach would be to model prices that encouraged trial of vanpooling. Thus respondents were categorized into those that used vanpooling in the last week versus those that did not.

Since the dependent variable was binary, it was advisable to use some form of binomial modeling approach. Logistic regression is well-suited for this type of problem. Logistic regression in this application essentially calculates the probability that a respondent either vanpools or does not vanpool based on the independent variables. The form of the model is

P (Probability of vanpooling) $= e^{x} / (1 + e^{x})$

Where x is a linear combination of the independent variables. From the data, P is 1 if the respondent did vanpool and 0 if he or she did not.

A logistic regression was applied using the variables specified above.

The model operates by tying together variance (from the mean) in the independent variables to variance in the dependent variable. It is important to keep in mind what is the actual source of this variance. In the case of the price/distance ratio, variance occurred for two reasons:

Differences between operators in fare/mile ratios (e.g. the King County operator charges more per mile than the Kitsap County operator)

Differences in fare/mile ratios by commute distance (e.g., the 30-mile commute has a lower fare/mile ratio than the 20-mile commute).

The model explains 8.2% of the variance, as calculated from the –2 log l statistics (Chi-square value divided by Intercept only value). **This means that many other factors besides price are involved in the adoption of vanpooling as a commute mode.** Care should be taken in applying the model as a means to justify growth in vanpooling based solely on price reductions.

The pricing curve is shown in the following chart:

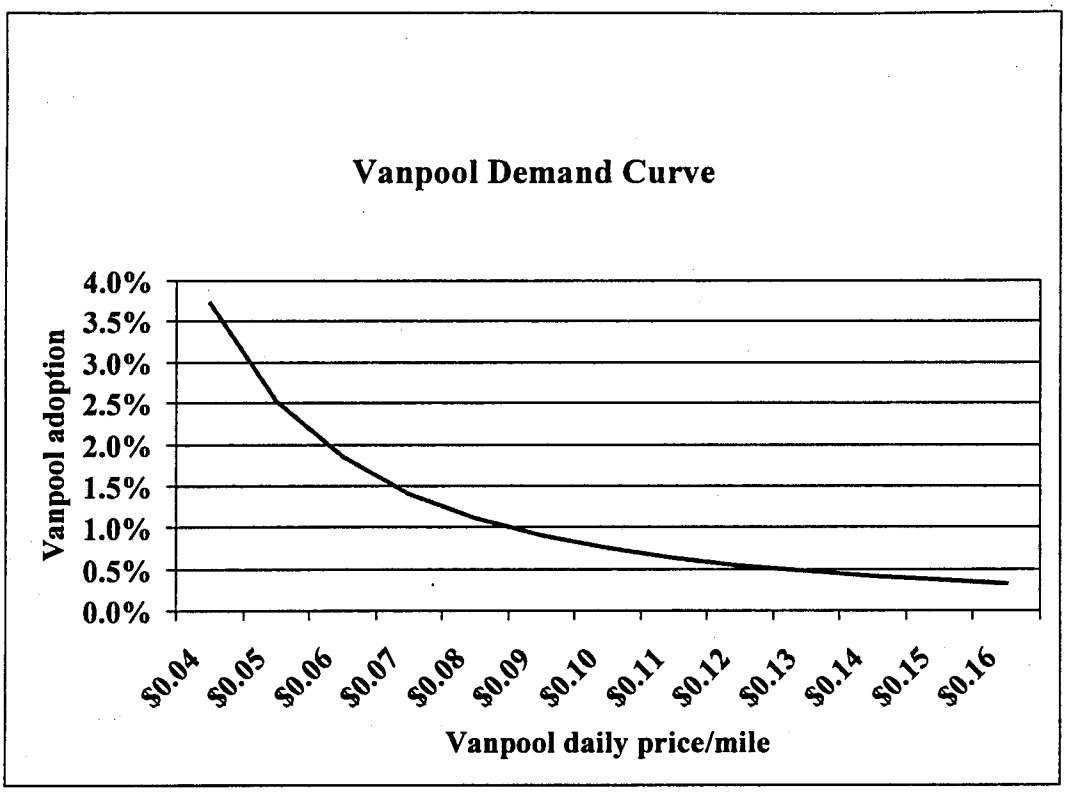

Figure 1 Vanpool Demand Curve relating vanpool daily price per mile variations with vanpool market share levels

The modeled price ranges, for a monthly vanpool fare for a 20-mile ride, range from $17.60 ($0.04/mile/day) to $70.40 ($0.16/mile/day). This suggests that substantial increases in vanpool demand can be achieved by lowering vanpool fares. The extent to which this makes sense depends on the operating characteristics of the individual vanpool operators.

The calculated elasticity of the fares is approximately –1.5, meaning that there is a 15 percent increase in demand for every 10 percent price reduction, within the range of prices modeled.

The employer subsidy also has a direct impact on vanpool demand. Vanpool ridership increases 0.02 percentage points for every $1 dollar increase in monthly subsidy (i.e. net $1 price reduction). For example, with a base demand of 1 percent and a subsidy of $40, increasing the subsidy to $50 would increase demand to 1.2 percent.

Future enhancements to the model could include adding other independent variables such as demographics. Since the employee data only includes job occupation and lacks income, age and other demographic variables, this demographic component of the revised model would need to be imputed from zip code averages.

Assuming the employees could be matched to the appropriate vanpool operator, another enhancement would be to measure and use more operator-related variables such as special incentives or features of their system (e.g., back-up vanpools, frequent rider programs, etc.).

The model's dependent variable was whether vanpool was used once in past week. Potential alternatives for future modeling include modeling the number of days the person vanpooled, how it relates to the response to likelihood of potential vanpooling

The model structure was in the form of a logistic regression equation to predict whether vanpool was used once in past week. There are two primary sources of the price variance: (1) difference in operator-to-operator fare/mile ratios and (2) difference in fare/mile ratio by commute distance.

Probability of vanpooling modeled as

$$p = e^x / (1 + e^x)$$

Where x is a linear combination of the independent variables

Modeling results found that the R-squared (calculated using –2 log likelihood values) was .082. In other words, the other non-price related factors (features, demographics, commute trip, etc.) explain 92% of variance in mode choice.

Independent variable coefficients:

Intercept	= -8.97
Log (daily price/distance ratio)	= -1.78
Amount of company subsidy	= .0226

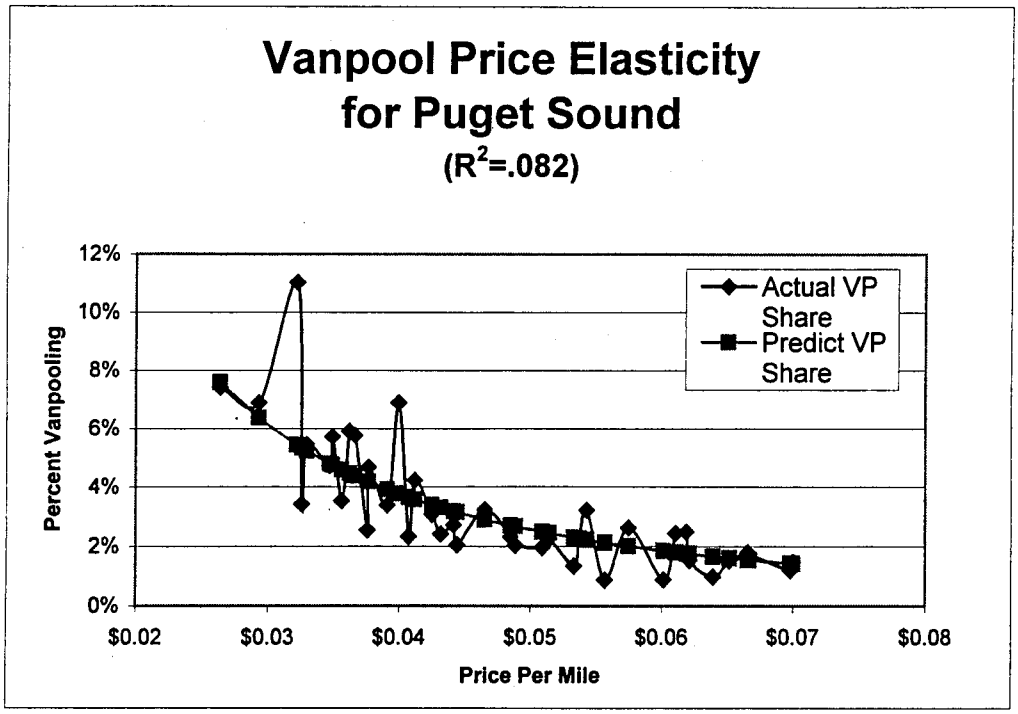

Figure 2 Vanpool Price Elasticity for Puget Sound

The fare elasticity is about –1.5 or that there is a 15% drop in demand for every 10% increase in price.

The company subsidy elasticity is a function of base subsidy amount. Every 10% increase in subsidy causes (-.02*base subsidy amount) percent increase in demand.

An examination of other survey findings found that:

- 24% of all commuters would be 'likely' to try vanpooling as an alternative
- 1.6% of commuters used a vanpool in the last week
- 38% say financial incentive would be major motivator to switch modes
- 33% say guaranteed ride home (GRH) program is a major motivator for switching modes
- No higher than 20% for other incentives

Vanpooling Pricing Techniques

The purpose of this section is to describe pricing strategies used in vanpooling and other TDM programs, provide real-life examples of those strategies, and describe how to calculate the optimal level of acquisition spending.

There are at least 17 different pricing strategies used by vanpool programs. Many vanpool programs use more than one of these strategies to price its vanpool program.

1. BUNDLING OR UNBUNDLING PRODUCTS AND SERVICES

This pricing strategy could be described as selling products or services together or breaking them apart and pricing accordingly. For example, the RTD and RideArrangers in Denver allow employers to subscribe to guaranteed ride home as part of voucher program. Employers can pay an additional fee to enlist all their employers. In Phoenix, each vanpool rider is allotted two guaranteed rides home per year with Valley Metro reimbursing riders for 100% of the tab.

2. TRIAL PRICING

Trial pricing strategies seek to make it easy and lower the risk for a customer to try the product or service. Caravan, the regional TDM program in Boston, provides new vanpool sign-on subsidies. They provide $50 for months one and two, $35 for months three and four, and $25 for months five and six for a total savings of $220.00 for the van. Southern California Association of Governments (SCAG) provides a one-time rebate to vanpoolers. They offered a $100 rebate to the first 500 commuters who joined a vanpool before June 1, 1999. The vanpool must have traveled on a carpool lane in Los Angeles County for at least 3 miles. Once the vanpool has operated for three consecutive months, the vanpool group was entered into a drawing for $500 to be used toward the monthly costs of the van. In Virginia, the VanStart program is available to State of Virginia residents who operate a vanpool on a non-for-profit basis. The vanpool must have a seating capacity of 6 to 15 people and have special Pool Vehicle (PV) license plates. The vanpool must apply within first three months of operation and have at least 50% of the passenger capacity already filled.

3. TIME-PERIOD PRICING

Time period pricing involves adjusting the price (up or down) during specific times to spur or acknowledge changes in demand. In Virginia, the VanSave Program funds existing vanpools that are experiencing problems in their passenger levels due to the loss of riders. The program requires that the vanpool has been in operation for at least six months and that at least 25% of the paying passenger capacity must have been empty for more than 30 days at time of application. Rather than a fixed dollar amount, the amount of funding is based on the average cost per seat of the vanpool and the average cost per seat of similar vanpools traveling the same distance.

4. ACCOUNTING-SYSTEM PRICING

The accounting-system pricing strategy focuses on changing the payment structure to make it fit the customers' buying constraints. For the commuter, this may require the introduction of a payroll deduction method of paying monthly fares. For employers, this pricing strategy may take into account employer subsidies. In Washington, employers subject to CTR were allowed a tax credit not to exceed $60 per employee per year. A credit of 50 percent the amount paid but not to exceed $60 per year is available for vanpools. In California, employers were once able to deduct expenses involved in various ridesharing programs/services. Eligible activities include subsidizing employees commuting in vanpools, providing company commuter van to its employees and to others. Capital costs not eligible deduction under that section of the State code. The deduction was eligible for vehicles that have at least 7 or more persons commuting on a daily basis to and from work, where at least 50 percent of the mileage can be reasonably expected to be used for commuting, and vehicle acquired after the enactment of that section of the code. In Connecticut, large employers subject to trip reduction requirements were allowed a tax credit not to exceed $250 per employee participating in alternative means of commuting.

5. VALUE-ADDED PACKAGES

Value-added packages provide more services to appeal to bargain shoppers without lowering prices. For example, VPSI arranges for discounts or directly billing from local service stations for vanpool maintenance. In Boston, Vanpool Boarding Zones are conveniently located on major commuting routes throughout the city to provide more personalized service. They also have located free or discounted parking reserved exclusively for vanpools by making use of temporarily vacant properties (e.g., property subject to development). In Chicago, the PACE vanpool program's pricing includes a cell phone for emergency purposes for the vanpool group, tollway cards and I-Pass transponder units for convenience of paying tolls. They also allow for the electronic payment of fares (e.g., automatic payment). In fact, PACE handles the collection of fares, removing the burden from the drivers. In Massachusetts, vanpool drivers receive free registration and free license plates. Vanpool passengers in Massachusetts can also claim a 10 percent discount (up to $75) on property damage and collision coverage at the beginning of a policy year.

6. PAY-ONE-PRICE

A common policy is the pay-one-price strategy that allows unlimited use or unlimited amount of a service or product for one set fee. Most vanpool programs offer the driver some level of personal use of the vanpool in exchange for driving. For example, in Phoenix, the vanpool driver receives 300 free miles per month for personal use of van. In Chicago, the multimodal nature of the organization providing the vanpool becomes evident with the Pace Commuter Club Card, which is valid on vanpool and fixed routes. Vanpool riders may also purchase a CTA/Pace Everyday Monthly Pass at a discounted rate. PACE guards against abuse of the pass program by applying surcharges for failure to have the above passes with the surcharge equal to the monthly price of the pass.

7. CONSTANT PROMO PRICING

Consumers are familiar with the constant promotional pricing program - although a "regular" price exists, no one ever pays it (e.g., buy one – get one free). In Houston, METRO and Houston-Galveston Area Council pay $35 per participant for part of the capital costs of each METROVan passenger's monthly fare. They provide payment in the form of a $35 voucher that is given to area employee transportation coordinators to distribute to vanpool riders.

8. PAY FOR PERFORMANCE

The pay for performance pricing strategy amounts to customers paying based on the performance or value they receive or provide in return. In Chicago, back-up driver receives a monthly $8.00 fare credit or two or more back-up drivers per vanpool receive a $4.00 fare credit each month for serving as back-up drivers.

9. CHANGE THE STANDARD

Rather than adjusting the price, the vanpool program can adjust the standard to make the price seem different (and better). For example, a vanpool seat that is sold at $80 per month could be promoted at four weekly payments of $20. This may make a difference to individuals who are paid weekly. Another method of changing the standard is to switch from monthly passes to allowing single ride tickets like a transit system. In Kitsap (WA), vanpool fares are based on the number of miles the rider actually occupies a seat in the vehicle. The tickets are sold in blocks with a surcharge on tickets used for out-of-county riders. The vanpool driver sells tickets and turns in ticket funds to Kitsap Transit. The driver can also accept reduced fare passes for persons with disabilities, group pass programs, and cash fares for one-way rides. Another change in the standard practice is to shift the fare collection responsibility from the driver or another member of the vanpool to the vanpool provider. In Chicago, Pace invoices vanpool passengers on a monthly basis payable by check, money order or certified check.

10. SHIFT COSTS TO THE CUSTOMER

By shifting some of the costs to the customer, the vanpool program can pass on ancillary costs to the customer and do not include those costs in the price. For the commuter, many guaranteed ride home programs promote the provision of a "free ride home" but the commuter is responsible for the driver's tip or minimum co-payment. The Interest Free Vanpool Loan Program in Vermont is another example of shifting some of the costs to the customer. A vanpool group or business is responsible for, 10% of the total cost of the vehicle with the balance will be paid off in equal payments over 48 months with no interest. In Connecticut, the owner-operator market is supported through low financing terms: full-sized vans at 2.5% for up to 60 months with a 10% down payment and mini-vans at 5% for up to 60 months with 20% down. These drivers also pay no sales tax or property tax.

11. VARIABLE PRICING TIED TO A RELATED VARIABLE

This strategy involves setting up a "price per" pricing scheduled tied to a related variable. For example, New Jersey Transit offers a financial incentive for vanpooling in areas where public transportation is neither available nor feasible. Each vanpool group may be eligible for $150 per month but groups using New Jersey's High Occupancy Vehicle (HOV) lanes can qualify for up to $300 per month.

12. DIFFERENT OPTIONS FOR DIFFERENT SEGMENTS

Sell essentially the same services, under different names, to appeal to different price segments. In Seattle, King County Metro provides four options for the vanpool program. Under Option One, vanpool riders whose employers participate in the King County Metro FlexPass Program will continue to apply their FlexPass toward vanpool fares, if the FlexPass agreement includes a vanpool element. Under Option Two, King County Metro will continue to promote Commuter Bonus vouchers to employers as an incentive to employees applicable toward the payment of vanpool fares for King County Metro, Pierce Transit and Community Transit vanpool programs. For Option Three, King County Metro will produce and sell a monthly Metro-only VanPool/Transit pass that is not transferable. This pass may be used only by the vanpool rider buying it for partial vanpool fare subsidy and for travel on Metro Transit. The pass will be available in the familiar $45 and $63 denominations and will be valid for one-zone peak or two-zone peak travel on Metro buses, enabling vanpool riders to travel to their vanpool. And under Option Four, King County Metro vanpoolers using the bus and ferry during their commute may apply the Puget Ship-to-Shore Passes toward their vanpool fare payment, as they do now with Metro Ship-to-Shore passes.

13. PRODUCT-LINE PRICING

Under product-line pricing strategies, the vanpool program establishes a range of price points within the product line. The prices are then structured to encourage customers to buy the higher-margin product or service. For example, the vanpool program may offer different size vehicles for different groups. The capital cost differences between minivans and full sized vehicles are not huge, but the cost per seat can be 25 percent higher. However, if the transit agency is reporting the passenger revenue miles to the National Transit Database for future allocations, significantly more carrying capacity in the larger vehicle will result in additional revenue for the miles operated.

14. DIFFERENTIAL PRICING

Charge each customer or each customer segment what each will pay. In Denver, each employer pays for ECO passes based on the distribution of employee residences around the transit system. A more typical strategy is the Eastern Contra Costa County Incentive Program. In the San Francisco Bay Area, residents of Eastern Contra Costa County or San Ramon can qualify for incentives if their commute destination is outside Contra Costa County. They are entitled to a 50% percent discount of fare for the first 3 months and those who begin and maintain vanpools are entitled to $1,000 at the conclusion of the vanpool's first year of operation. In Kitsap, Washington, there is a $3 surcharge for 10-trip ticket booklet for out-of-county vanpools.

15. QUANTITY DISCOUNT

A traditional pricing strategy in many businesses is to offer a discount for larger quantities. Vanpool programs can set up a standard pricing practice, which can be done several ways such as a tiered pricing based on volume. In Washington, VanPool Plus provides employers with matching funds from Metro in the form of Commuter Bonus checks. Employees apply Commuter Bonus checks toward their vanpool fares. For any King County employer affected by the state Commute Trip Reduction Law, METRO will match the employer's subsidy up to $15 per month per person. However, employers with current subsidy programs must increase the current vanpool subsidy or be willing to offer a new vanpool subsidy to employees.

16. FIXED THEN VARIABLE

The fixed then variable price structure offers a "just to get started" charge followed by a variable charge. In San Diego, groups of commuters can try vanpooling together for two weeks for FREE. Only cost for the vanpoolers is the gas they buy for the vehicle.

17. DON'T BREAK THAT PRICE POINT

Price just below important thresholds for the buyer to give a perception of a lower price. Charging $59 per month rather than $60 per month per seat.

Summary

This chapter identified 17 pricing techniques used in pricing various aspects of the vanpool program. The tactics ranged from providing incentives to start a new vanpool and how to support an existing vanpool.

1. Bundling or Unbundling Products and Services
2. Trial Pricing
3. Time-Period Pricing
4. Accounting System Pricing
5. Value Added Packages
6. Pay-One-Price
7. Constant Promo Pricing
8. Pay for Performance
9. Change the Standard
10. Shift Costs to the Customer
11. Variable Pricing Tied to Related Factor
12. Different Options for Different Segments
13. Product Line Pricing
14. Differential Pricing
15. Quantity Discount
16. Fixed Then Variable
17. Don't Break That Price Point

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Chapter

5

Building Vanpool Equity

The average business spends six times more to attract new customers than it does to keep old ones. Yet customer loyalty is in most cases worth ten times the price of a single purchase.
Michael LeBoeuf, author "How to Win Customers and Keep Them for Life"

Attracting and retaining vanpool riders is the foundation of any successful vanpool marketing program whether you measure success in terms of vehicle trips reduced or revenue raised. For a public transit system that reports the vanpool performance statistics as part of their annual reporting, a vanpool will increase its share of federal and state revenues returned to the agency based on system performance. For example, Lynx, the Orlando-area transit system, estimates the vanpool yields nearly $700,000 in revenue.

Despite vanpooling's contribution to these bottom line benefits for transit agencies, most business decisions involved with vanpooling subsidies seem to be based on what other agencies have tried. The preferred approach would be to examine the vanpool program's costs for acquiring enough customers to put a vanpool on the road. Understanding its "acquisition spending" is the first step for evaluating the basis for determining the optimal investments of finite resources in areas such as subsidies.

Calculating the Cost of New Vanpools Groups

A review of the literature finds that most of the discussion around how programs choose to price their vanpool programs is based on one principle: Riders will be charged a price based on recoup the "full" operating cost of the vanpool and a portion of the capital costs. Administrative and marketing costs are borne by another source. It is common to find that the "full" cost actually excludes program administration and marketing costs. The prices are solely based on the capital and operating costs of the vanpool.

The determination of the subsidy levels for new vanpools and the duration of those subsidies are usually based on available budget and peer comparisons with other vanpool programs in the country. While the budget is certainly a real concern in the short term, the reliance on what others have done presupposes that the rationale used by those other vanpool programs for determining the amount and/or duration of the subsidy is sound.

What is needed is a method for assessing the appropriate, if not, optimal level of acquisition spending for the vanpool program. To this end, we looked to the business world for a simplified model to apply.

On many levels, operating a vanpooling program is like running a small business. Vanpool "customers" pay prices that typically cover most, if not all, the fixed and variable costs such as insurance and maintenance, associated with the service. One difference, as noted above, is the "cost of sales" such as advertising and customer service staff is not usually allocated to the price that the customer pays.

However, the similarity between a vanpool program and a small business doesn't stop at pricing policies. Like many small businesses, but unlike most TDM programs, the vanpool program is heavily dependent on cash flow. If the customers don't generate enough cash in the form of fares to cover these allocated costs then the vanpool is "repossessed" by the vanpool agency.

There are subtle differences regarding cash flow streams, however, between a vanpool program and a typical small business. Vanpool programs operated by or on behalf of a transit system that receives federal transit funds actually will have portion of its revenue from the vanpool program (or any other transit operation) appear several years downstream. This delay is because transit system allocations in the future are based on performance factors and costs for the current year. As a result, vanpool programs often have required start-up grants. In effect, this increment of federal funding is a form of "dealer rebates" whereby federal and state revenues in the future are tied to today's performance. This additional revenue to support the vanpool programs operated by the transit system amounts to a three year cash-flow lag from when these public transit agencies report vanpool operating statistics to when the incremental benefit of the vanpool program to federal and state revenues shows up.

As discussed earlier, vanpool programs offer transit operators a means to generate larger shares of federal and state dollars through no or low cost methods of expanding passenger trips and revenue miles. Understanding the cost to acquire and retain a customer is central to developing and expanding the vanpool program.

The business side of vanpooling requires a method for determining the optimal level of acquisition spending. In other words, the question to be asked by vanpool program administrators should shift from "How many months should we subsidize the vanpool?" to "How much can we afford to spend to keep the vehicle on the road before we lose money?"

Applying a technique discussed in Harvard Business Review aimed at helping businesses answer a similar question, we find that we can get the answer to the optimal level of acquisition spending by answering two simple questions:

1. How much do you spend now to acquire a new vanpool?

2. What is the practical limit to your vanpool program's attraction of new customers (i.e, most would agree that the vanpool option isn't for everyone, or even most commuters)?

Though the questions are simple, most vanpool programs may have never asked the question or may not know the answers. To determine how much they are spending now begins with determining the steps to form a vanpool (i.e., what is our cost of vanpool sales?). See Table XX for an example on the typical steps identified to form a vanpool for a regional commuter assistance program in Tampa.

Once the steps have been determined, the vanpool program should assign associated labor costs, new start subsidies, other direct costs, and overhead costs. Using the elements identified below and the loaded hourly rates of staff shown in the table below, the total costs of acquiring a new vanpool were estimated at $4,500.

TABLE 7

VANPOOL FORMATION AND RETENTION PROCESS

	VANPOOL FORMATION AND RETENTION PROCESS
1.00	**Pre-formation via Employers**
1.01	Meet with employer
1.02	Obtain zipcode data of all employees from employer
1.03	Prepare density plot and analyze for vanpools
1.04	Meet with employer to present density plot and convince employer to arrange meetings of clusters of employees
1.05	Conduct meeting with employees
1.06	Collect rideshare applications from people at meeting
1.07	Process rideshare applications
1.08	Review and sort matchlists to identify good vanpool candidate groups (>4 names on matchlist)
1.09	Make follow-up calls to each person in these candidate groups to ascertain interest and identify potential drivers
1.10	Run a "hot leads" list for TMAs
1.11	TMAs send blast fax to ETCs
1.12	Candidate Groups are sent posters and list of ideas how to find more riders
1.13	Employers and TMAs are encouraged to set up T-days to attract riders for this vanpool group
1.14	Initiate driver check (assuming potential driver known at this point)
2.00	**Pre-formation**
2.01	Collect rideshare applications from people CALLING/FAXING application
2.02	Process rideshare applications
2.03	Review and sort matchlists to identify good vanpool candidate groups (>4 names on matchlist)
2.04	Make follow-up calls to each person in these candidate groups to ascertain interest and identify potential drivers
2.05	Run a HOT list for TMAs
2.06	TMAs send blast fax to ETCs
2.07	Candidate Groups are sent posters and list of ideas how to find more riders
2.08	Employers and TMAs are encouraged to set up Transportation events at employer sites to attract riders for this vanpool group
2.09	Initiate driver check (assuming potential driver known at this point)
3.00	**Vanpool Formation**
3.01	Invite candidate group to formation meeting
3.02	Print sample driver/rider agreements to vanpool group
3.03	Prepare map showing where everyone lives and works
3.04	Conduct formation meeting - e.g., find a driver, help group set rules
3.05	Initiate driver check (assuming potential driver known at this point)
3.06	Conduct credit check on driver/vanpool treasurer
3.07	Meet with driver to sign agreements and review reporting requirements
3.08	Establish records/file
3.09	If necessary, contact other Florida offices to obtain a vehicle.
3.10	Complete a condition report on the vehicle
3.11	Deliver the vehicle and conduct driver/safety orientation
4.00	**Vanpool Maintenance and Rescue**
4.01	Arrange conference call with maintenance server providers
4.02	Review coupon booklet, towing procedures, and emergency procedures
4.03	Provide back-up vehicle
4.04	Assist with the processing of insurance claims
4.05	Assess eligibility for financial assistance for floundering vanpools (case by case)
4.06	Run a zipcode listing or density plot for vanpool to identify potential riders
4.07	Run a HOT list for TMAs
4.08	TMAs send blast fax to ETCs
4.09	Candidate Groups are sent posters and list of ideas how to find more riders
4.10	Employers and TMAs are encouraged to set up T-days to attract riders for this vanpool group
4.11	Purchase vouchers to retain vanpool
4.12	Process data for National Transit Database for PSTA and HART
4.13	Process reporting data for TMAs
5.00	**Vanpool Termination**
5.01	Pickup terminated van
5.02	Call everyone in terminating vanpool to determine how they plan on commuting now
5.03	Change records in database, including GRH
5.04	Complete condition report on vehicle
5.05	Drop from insurance/ cancel credit cards
6.00	**Vanpool Idling**
6.01	Arrange to store the vehicle
6.02	Arrange for routine maintenance (clean/oil change)
6.03	Ship vehicle to another vanpool office

A key variable in the process of determining the cost of acquisition of a vanpool is the ratio of vanpool prospects associated with those costs to form a new vanpool. In other words, if one van is formed per 100 qualified prospects then the acquisition expenditure per prospect is $45 per prospect. In this example, we assume that every person who applies for ridematching assistance is a qualified prospect. We don't assume that a full van will come from these 100 prospects themselves only that a vanpool will materialize from one of these prospects or 15 of these prospects.

The second question perhaps is the most difficult to estimate: What is the limit to your attraction of new customers for the vanpool program? For all practical purposes, what proportions of the prospects that you target over the course of the last year could the vanpool program were reasonably converted into a new vanpool (as currently provided)? For example, it is highly unlikely that any short distance commuters would opt to vanpool. For this example, let us assume 8 out of 100 could be the best we could do.

Estimating Optimal Level of Acquisition Spending

Assuming the adoption of vanpooling follows a logarithmic pattern (the rate of growth slows as the market increases and we approach market saturation), we can use the above responses to estimate the optimal level of acquisition spending using the following equation.

$$\text{Acquisition Rate} = \text{maximum market share} \times (1 - e^{(-k \times \$\text{Acquisition Cost})})$$

Knowing the current acquisition rate (1%), current cost ($45), and the maximum market share (i.e., practical ceiling rate) (8%), we can solve the equation to find the constant k (k= -0.0029674) which helps define the curve. Now we use this value of *k* but vary Acquisition Costs to find the point on curve where the acquisition budget is optimal. In other words, we can find the point where the acquisition rate is the highest.

Using the example plotted in Figure 3, the maximum point on the curve suggests an average of $130 per prospect (up from $45) would provide the optimal level of revenue (i.e., maximize net revenue). This revenue would help boost the acquisition rate from 1% to about 2.6% AND yield the maximum return. Under this scenario, the program would net $28 per prospect (up from $17) in additional revenue from NTD sources.

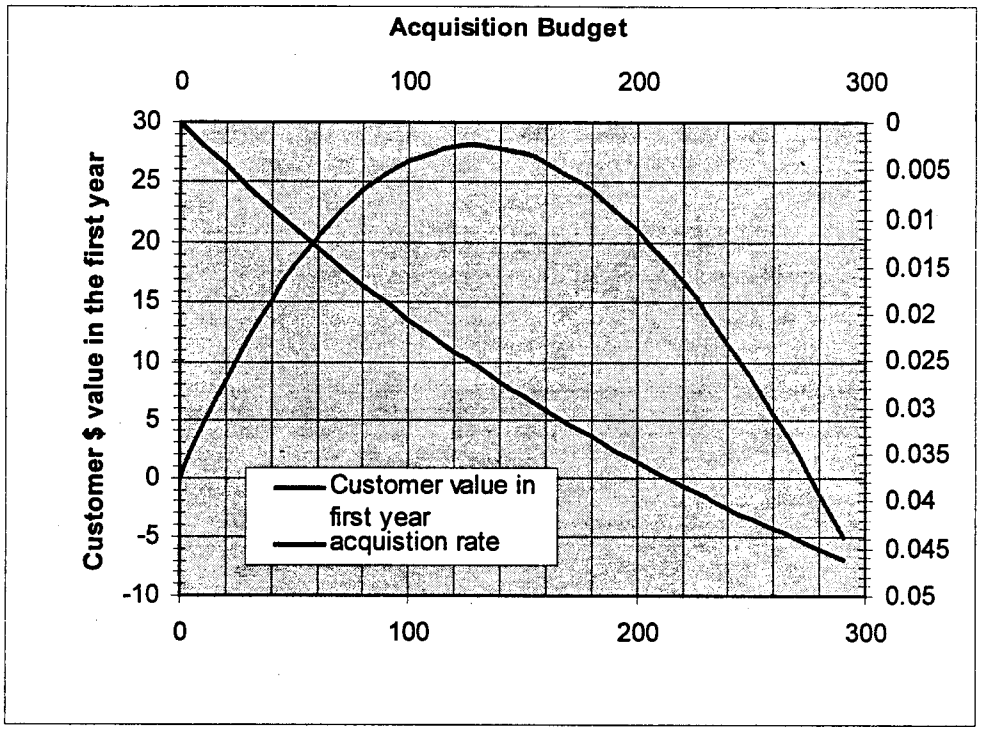

Figure 2 Optimal Level of Acquisition Spending

Unlike a small business, a vanpool program's goal may to be to maximize the net revenue. The vanpool program may seek to closely match revenues and expenses while growing the program. If the goal is not to spend more money (without considering the time value of money due to two-three year lag), then the program could spend slightly less than $280 per prospect.

Remember, the expenses could come in several forms to attract and retain new vanpools: increased advertising, additional staff to market vanpooling, and/or extended periods of subsidies for new start vanpools or vanpools that risk becoming "repossessed" because ridership has fallen off.

Growing the Program Via Customer Retention

The discussion about the cost of acquisition would be incomplete without a discussion of customer retention. Though there is little literature available on the issue of customer retention in vanpooling, a review of literature on customer loyalty in business drives home the point of its importance. One often-cited study found that a 5-percent increase in customer retention resulted in a 25 to 125 percent increase in profits.7 In a business such as vanpooling, the value could be equally impressive.

Assuming 1,000 new customers per year and 1 percent conversion rate (prospects to number of vanpools), different retention rates can have significant impact on the growth of the program. With 20 vanpools, a program without any attrition among the vanpools in service would grow to

7 Fredrick F. Reichheld and W. Earl Sasser, Jr., "Zero Defections: Quality Comes to Services," *Harvard Business Review*, Vol. 68, September-October 1990, p105-111.

110 vanpools over ten years. However, if 25 percent of the vanpools are returned each year, the growth would be limited to nearly 40 vanpools.

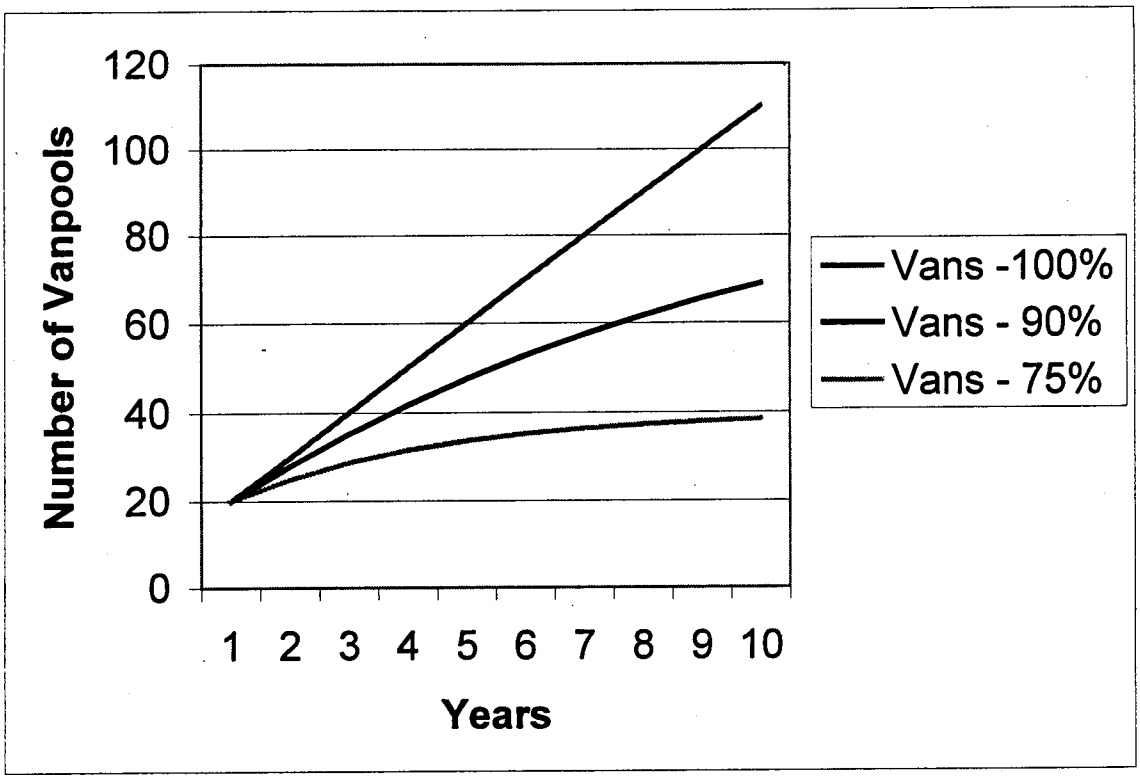

Figure 3 Impact of retention rates on growth

Given the method for allocating costs of operation among the riders, the loss of even a single rider can mean the difference between a functioning vanpool and a defunct vanpool. This loss can occur because the costs that were borne by the lost rider usually must be reallocated among remaining passengers.

Other studies point to the fact that customer satisfaction is not the same as customer loyalty. Bowen and Shoemaker make the following distinction between the two measures. They suggested "Customer satisfaction measures how well a customer's expectations are met by a given transaction." However, they describe customer loyalty as measuring "how likely a customer is to return and also gauges how willing that person is to perform-partner like activities." These partner-like activities begin with recommendations to friends.8

8 John T. Bowen and Stowe Shoemaker, "Loyalty: A Strategic Commitment," *Cornell Hotel and Restaurant Administration Quarterly*, February 1998, p12-24.

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Chapter 6

Regulatory Issues Affecting Vanpooling

"Life is what happens while you are making other plans." – John Lennon

The following summarizes other major regulatory-related considerations that must be made when planning a vanpool program.

Drug Testing

Because vanpool is sometimes perceived or represented as another form of public transit, it is natural to consider how federal policies that apply to the operation of transit such as Federal Transit Administration's (FTA) drug and alcohol testing regulations apply to vanpool programs. The following summarizes the regulations and the current interpretation. Vanpool program managers are advised to consult with the appropriate officials because regulations may be revised and what wasn't applicable before, may now be.

Federal Transit Administration's (FTA) drug and alcohol testing regulations. 59 FR 7531 (1994) (to be codified at 49 CFR Parts 653 and 654 rules require that a recipient of funds under FTA's discretionary capital grant program, formula grant programs for urbanized and nonurbanized areas, or interstate transfer program, implement a program requiring safety-sensitive employees to be tested for five controlled substances and for the misuse of alcohol.

In a letter issued to Pace, a suburban transit agency serving a six-county area in Chicago Connecticut, FTA succinctly responded to whether FTA's drug and alcohol testing rules apply to van pool members who volunteer to drive these vehicles. FTA responded that the vanpool programs used by Pace and other transit systems have certain characteristics in common. The transit agency usually purchases the van, but does not provide drivers. Who drives the van

depends on the arrangements each vanpool agrees to: in some, the responsibility rotates among all of the passengers; in others, one passenger is the primary driver, with a few others serving as substitutes as necessary. No employer-employee relationship exists between the transit agency and vanpool members. The van's route is not determined by the transit agency, but rather is affected by the location of the passengers' residences and worksites. Depending on the number of van pools operating in a particular metropolitan area, vans could be located in dozens or hundreds of places during the workday. Passengers in a given vanpool may change frequently, as they move residences or change jobs. Finally, most vans used in the programs carry fewer than 16 passengers, and the drivers thus are not required to hold a Commercial Driver's License (CDL). (Under Federal Highway Administration regulations (49 CFR Part 382), a CDL is required for drivers operating a vehicle designed to carry 16 or more passengers, including the driver; in excess of 26,000 pounds gross vehicle weight; or of any size vehicle used in the transportation of a placardable amount of hazardous material.)

FTA ruled that their drug and alcohol testing regulations apply to "covered employees" who operate or maintain revenue service vehicles, or who, in operating non-revenue service vehicles, are required to have a CDL. The rules define "covered employees" to include volunteers (49 CFR 653.7). The rules do not define "revenue service vehicle," but define "vehicle" to include vans (49 CFR 653.7). At issue is whether vanpool drivers who volunteer their services in connection with a program operated by an FTA recipient are subject to drug and alcohol testing.

FTA determined, with but one exception, vanpool drivers are not subject to drug and alcohol testing. They reasoned that the van pool characteristics discussed above, taken together, should be distinguished from the more traditional type of mass transportation service that we believe is embodied in the term "revenue service" used in the rules. Vanpool drivers are volunteers, not employees of a transit system; they determine the van's daily route, and generally have no day-to-day contact with the sponsoring transit system. No revenues are turned over to the transit system on a regular basis. The drivers begin their driving duties at their homes and end at their individual worksites, and there may be a different driver each day.

Moreover, the "volunteers" the rules intend to cover are those who act in essentially the same capacity as paid drivers, but who volunteer their services. In contrast, members of a vanpool who drive the van, whether regularly or occasionally, are principally engaged in commuting to and from work. They are "commuters," not "volunteers" subject to the testing requirements.

In short, FTA ruled that vanpool programs operated by FTA recipients are not considered to be "revenue service" activities within the meaning of their rules on drug and alcohol testing, nor are the drivers for such programs considered to be volunteers under the rules.

FTA further notes, however, that FTA's rules apply in certain instances to those who operate non-revenue service vehicles. In this connection, FHWA and FTA have agreed that the FTA rules cover certain transit workers who otherwise would be subject to FHWA's rules, i.e., operators of non-revenue service vehicles who are required to hold a CDL. Thus, for purposes of the issue under discussion, if a vehicle in an FTA recipient's vanpool program is capable of carrying sixteen or more passengers (or otherwise is a commercial motor vehicle), the volunteer driver would be subject to FTA's drug and alcohol testing rules.

FTA concluded that its drug and alcohol testing procedures do not apply to a volunteer who acts as a driver for the vanpool program. They cite the reasoning that vanpooling's non-revenue service nature and the fact that the drivers are not volunteers within the meaning of the rules. However, FTA's drug and alcohol testing regulations may apply if the driver is required to hold a CDL for that purpose.9[10]

Applicability of the Commercial Drivers License Requirement

Vanpool drivers share the responsibility of operating the vanpool in a safe and prudent manner. Since TEA-21 there have been proposed changes that could significantly affect the vanpool program's ability to attract and retain qualified vanpool drivers. The following summarizes the proposed change to lower the minimum vehicle capacity level and what it means to vanpooling. The final rule has yet to be issued.

The Federal Highway Administration (FHWA) considered amending the Federal Motor Carrier Safety Regulations (FMCSRs) in response to TEA-21 because Section 4008(a) amends the definition of the term "commercial motor vehicle" (CMV) in 49 U.S.C. 31132(1) to cover vehicles ``designed or used to transport more than 8 passengers (including the driver) for compensation." The change could make the FMCSRs applicable to a considerable number of entities, including operators of small commuter vans, not now subject to them.

The Motor Carrier Safety Act of 1984 (MCSA) defined a ``commercial motor vehicle" as one having a gross vehicle weight rating (GVWR) of 10,001 pounds or more; designed to transport more than 15 passengers, including the driver; or transporting hazardous materials in quantities requiring the vehicle to be placarded. This definition was the basis for the regulatory definition of a CMV, which determines the jurisdictional limits and applicability of most of the FMCSRs.

The Senate Committee on Commerce, Science and Transportation, in a report which accompanied the MCSA stated: ``The 10,000-pound limit, which is in the current BMCS (Bureau of Motor Carrier Safety, now the FHWA's Office of Motor Carriers) regulations, is proposed to focus enforcement efforts and because small vans and pickup trucks are more analogous to automobiles than to medium and heavy commercial vehicles, and can best be regulated under State automobile licensing, inspection, and traffic surveillance procedures.

Although the MCSA demonstrated congressional intent to focus the applicability of the FMCSRs on larger vehicles, Congress did not repeal Sec. 204 of the Motor Carrier Act of 1935. This statute authorizes the FHWA to regulate the safety of all for-hire motor carriers of passengers and property, and private carriers of property without respect to the weight or passenger capacity of the vehicles they operate.

According to the Federal Register, when the Congress enacted the Commercial Motor Vehicle Safety Act of 1986 to require implementation of a single, classified commercial driver's license

9 Letter to Joseph DiJohn, Executive Director, Pace from Berle M. Schiller, Chief Counsel, FTA dated August 25, 1994

program, it also limited the motor vehicles subject to the program to those designed to transport more than 15 passengers, including the driver. This, too, revealed the congressional policy of applying available Federal motor carrier safety resources to larger vehicles.

The ICC Termination Act of 1995 (ICCTA) changed the MCSA definition of a commercial motor vehicle. As amended, section 31132(1) defined a commercial motor vehicle, in part, as a vehicle that is "designed or used to transport passengers for compensation, but exclud(es) vehicles providing taxicab service and having a capacity of not more than 6 passengers and not operated on a regular route or between specified places; (or) is designed or used to transport more than 15 passengers, including the driver, and is not used to transport passengers for compensation." The ICCTA authorized, but did not require, the FHWA to change the FMCSRs accordingly; the agency did not incorporate the amended language into the CMV definition in Sec. 390.5.

Section 4008(a)(2) of TEA-21 again amended the passenger-vehicle component of the CMV definition in 49 U.S.C. 31132(1). Commercial motor vehicle is now defined to mean a self-propelled or towed vehicle used on the highways in interstate commerce to transport passengers or property, if the vehicle-- (1) Has a gross vehicle weight rating or gross vehicle weight of at least 10,001 pounds, whichever is greater; (2) Is designed or used to transport more than 8 passengers (including the driver) for compensation; (3) Is designed or used to transport more than 15 passengers, including the driver, and is not used to transport passengers for compensation; or (4) Is used in transporting material found by the Secretary of Transportation to be hazardous under section 5103 of this title and transported in a quantity requiring placarding under regulations prescribed by the Secretary under section 5103. Under Sec. 4008(b), operators of the CMVs defined by section 31132(1)(B) will automatically become subject to the FMCSRs one year after the date of enactment of TEA-21, if they are not already covered,``except to the extent that the Secretary (of Transportation) determines, through a rulemaking proceeding, that it is appropriate to exempt such operators of commercial motor vehicles from the application of those regulations."

The FHWA viewed section 4008 of TEA-21 as a mandate to impose the FMCSRs on previously unregulated smaller capacity vehicles such as commuter vanpools. Although the House Conference Report on the ICCTA definitional change directed the agency not to impose on the States (as grant conditions under the Motor Carrier Safety Assistance Program (MCSAP)) the burden of regulating a new population of carriers covered by the definition, no such restriction is included in TEA-21 or its legislative history. The mandate of TEA-21 is thus stricter than that of the ICCTA. Still, the FHWA is authorized to undertake rulemaking to exempt some of these passenger vehicles from the FMCSRs.

If the FHWA made the FMCSRs applicable to drivers of small passenger carrying commercial motor vehicles, the drivers of these vehicles (unless an exception was provided), would be required to:

Demonstrate that he or she is capable of operating safely the vehicle they are assigned, and they have a valid drivers license. According to FHWA, "the determination of the driver's ability may be based upon experience, training, or both."

Successfully complete a road test, or present an operator's license (or a certificate of road test) to the motor carrier for acceptance as an equivalent to a road test. The carrier can accept a CDL in

lieu of administering a road test if the driver was required to successfully complete a road test to obtain the license. Small passenger carrying vehicles could be allowed to accept a license other than a CDL, if that license required a road test. Since the operating characteristics of vehicles designed to used to transport 9 to 15 passengers, including the driver, are similar to vehicles most drivers are capable of driving (i.e., vans, full-sized sport utility vehicles, and commuter vans), and the amount of time and effort needed to conduct the road test would be reasonable.

Be subject to drug and alcohol testing, which includes pre-screen, reasonable suspicion, random post-accident and follow-up testing

Based on an interim final rulemaking released in the Federal Register on September 3, 1999, not for hire vanpool programs and/or individuals operating vanpools are exempt from pending federal regulations. FHWA issued the following statement in that Federal Register concerning vanpools: "An example of transportation that would not be covered by this rulemaking is commuter vanpools. The FHWA understands that passengers in vanpools pay a monthly fee to an individual who either owns or leases the van. The FHWA does not believe this is a business. The individual uses this money not as a source of income or in the furtherance of a commercial enterprise, but to pay for the van, insurance premiums, fuel and maintenance. There may be surplus funds each month that are put into reserve to cover unexpected costs or losses of revenue during periods in which vanpool membership decreases. The FHWA, however, does not believe that this type of arrangement should be considered "for compensation" and does not intend to regulate such operations. The agency requests comments on the nature of these operations."

The interim final rule means that an exemption from the proposed new requirement for purposes of expanding commercial drivers license has been tentatively been rescinded. However, FHWA has released an interim rulemaking with this vanpool exemption. Since there are other, yet to be determined, regulatory affects for other parties; the rulemaking continues until a "final rule" is announced.

Vanpooling and the Americans with Disability Act

According to the Preamble to the Americans with Disability Act (ADA): "Transportation services offered by employers (e.g., motor pool vehicles, employer-sponsored van pools or shuttle services which are limited to employees) are . . . covered by Title I of the ADA (and, with respect to public entities, Title II as well) since it is a term, condition, or benefit of employment. The EEOC and DOJ Title I ADA rules cover such services." Thus, vanpools (and employee shuttles) operated or subsidized by private employers with 15 or more employees or public employers of any are regulated under Title I of the ADA. An employer that provides (i.e., leases, purchases or otherwise subsidizes) a vanpool or shuttle program for its employees, must ensure that the service is available to all employees, including persons with disabilities as defined by the ADA. However, privately operated vanpools (or carpools) receiving no government or employer subsidies are not included in the provisions for equivalent service under the ADA.

ADA requirements as they apply to public vanpool systems are similar to the requirements for public entities operating demand responsive systems for the public. ADA defines a public vanpool system as one operated by a public entity, or in which a public entity owns, purchases, or leases the vehicles. At the same time, lesser degrees of public involvement with an otherwise

private ridesharing arrangement (e.g., provision of preferential parking, ridematching assistance, and high occupancy vehicle lanes) do not convert a private system into a public system.

The requirements for a public vanpool system are that the public entity purchase or lease an accessible vehicle unless it can demonstrate that the public entity provides *equivalent* service to individuals with disabilities, as it provides to individuals without disabilities. For a public vanpool system, a public entity meets the equivalency requirement if the public entity provides an accessible vehicle to an individual with a disability when he or she needs such a vehicle to participate. However, the purchase of accessible vehicles is not required if the public entity can respond promptly to requests for participation in the vanpool. Of course, a public vanpool system may meet this requirement through obtaining a percentage of accessible vehicles that is reasonable based on demand. There is no requirement for private vanpools, defined as a voluntary arrangement in where riders compensate the driver only for expenses.

According to a white paper prepared for Ohio Department of Transportation 11, "Equivalency is defined in terms of seven criteria, including: (1) response time; (2) fares; (3) geographic area of service; (4) hours and days of service; (5) restrictions or priorities based on trip purpose; (6) availability of information and reservations capability; and (7) any constraints on capacity or service availability." Therefore, a public entity must consider whether it could provide equivalent service for persons with disabilities according to these seven criteria when purchasing or leasing new vehicles for its vanpool program. If the answer is no, then either the vehicles to be purchased or leased must be accessible or other arrangements in the program structure must be made to provide for equivalency. According to the interpretative appendix to the regulations, "the equivalency requirement would be met if an accessible vehicle is made available to and used by a vanpool when an individual with a disability needs such a vehicle to participate." The ADA does not require a public vanpool system to have a percentage of vehicles equipped with lifts; however, it must be able to respond "promptly" to requests for accessible vans when needed. Still, the interpretation of "equivalency" can pose some challenges to the vanpool program.

Response time: The public agency vanpool program can consider the response time equivalency test to be the elapsed time from when a person calls and asks to be part of the program until the vanpool is formed. Typically, this will depend on the availability of existing vanpools (i.e., are there vacancies on existing vanpools making the same travel pattern.) If the vanpool program has no vacancies or existing services that serve the trip, then equivalency would depend on the ability of the public vanpool program to start another vanpool with similar origins, destinations, and schedules. Given the range of time it can take to form a vanpool, depending on the number of riders, etc., this could be a highly variable time.

However, the availability of an accessible vehicle should not be a significant factor in the response time to arrange for a disabled person to join a vanpool. Vehicles should be readily available that can be switched to serve the specific vanpool "routes" as needed. Vanpool programs should consider either reserving of one or more vehicles that are accessible or making prior arrangements with a vehicle supplier that has access to accessible vehicles. For example, vanpool services could enter into contracts with private operators that can provide accessible vehicles on short notice.

11 Multisystems. Providing Non-Discriminatory Vanpool Transportation Services: Requirements of the Americans with Disabilities Act A White Paper. Ohio Department of Transportation 1999

The vanpool vehicle size and occupancy also could affect the "equivalency" determination. Assume the standard vanpool vehicles seats 12 passengers and the same sized vehicle made accessible can accommodate a maximum of 8 riders. Therefore, placing a disabled person in the program by providing an accessible vehicle on that vanpool would mean displacing four existing riders.

If the disabled person was told to wait for the next group, then the transit agency's policy when to place new vanpools into service affects this equivalency determination. How the public vanpool program approaches the situation should be just as if the potential rider did not have a disability. The answer probably would depend on the particular process regarding the formation of new routes and support for existing vanpools. For example, if new vanpools are put into service once at least five riders are identified, then a reasonable course of action could be to attempt to split the existing vanpool into two groups.

Fares: Usually vanpool fares are based on a prorated share of fixed and variable costs. The vanpool group divides the cost equally among the riders based on the actual cost for vanpool. The "equivalent" fare for a disabled customer would be the fare that the person would pay if he or she were not disabled. At the same time, the vanpool program should not allocate the marginal cost of providing the accessible vehicle to that particular vanpool group or the person with a disability. Allocating the cost among only a limited group would likely have the effect of dissolving the vanpool group and discourage the formation of vanpools that include people with disabilities. This could be construed as a violation of the criteria concerning "any constraints on capacity or service availability" noted below. One option would be to include a small surcharge on all customers or the vanpool program could budget additional subsidies to cover the cost of accessibility.

Service Area: Unlike fixed route transit service, vanpool programs describe their the service area as serving commuters who have an origin and/or destination within a particular geographic area (county, planning district, etc.). This definition has implications with respect to equivalency for disabled persons who want to access its service. Vanpool programs that plan on absorbing the marginal cost of providing accessible service may face significant costs for the longer distance commutes. Similarly, vanpool programs should consider the coverage if it is to collect a surcharge on all customers. For example, assume the per rider cost for a full 12 passenger van is $100 per month. If the fares are to pass the equivalency test then decreasing the ridership to 8 passengers to accommodate a disabled rider would mean that $300 per month would have to come from other sources. Since the costs are usually based on travel distance, long distance disabled riders will result in the need to increase the subsidy. The broader the service area then the higher the potential cost.

Period of service: Vanpools groups accommodate the work schedule of commuters traveling to a particular work site or location. As with the geographic area, the potential customer with a disability should be able to receive the same level of access to vanpool assistance during all of the days and hours that are available for other customers.

Trip purpose restrictions: Most vanpool programs limit vanpool service to work trips and therefore, vanpool service providers could direct that such services are limited to work trips for the disabled, too.

Availability of information and reservations capability: Vanpool programs should include information about serving persons with disabilities in through their communication channels such as newsletters and advertising. The agency should make this information available in accessible formats on request. These agencies should also use TTY/TDD or equivalent services to help persons with hearing or speech disabilities to get information and place requests for service. Access numbers for these services should be included in public information.

Any constraints on capacity or service availability: Vanpool programs should change policies or procedures that make receiving services more difficult for people with disabilities. A vanpool agency would be prudent to examine issues that block the development of accessible vanpools, by individuals who may have a wide variety of disabilities.

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