Catalog of Vanpooling Information

This catalog and accompanying CD are a collection of notable studies, papers, surveys, and other documents regarding vanpooling, vans, commuting, vanpool programs, vanpool statistics and facts. It was compiled by Greg McFarland of Northern Virginia Transportation Commission.

Each document listing contains the document title, keywords, the file name or web URL, a summary of key facts, and sometimes the table of contents, interesting snippets or graphics copied from the original document.

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A.1 FTA 5307 Formula Earnings Potential from Vanpools in the DC Metropolitan Region. Published by NVTC (2009)

Key Words: FTA, 5307, DC metropolitan region, WMATA, NVTC

5307 Subsidy Potential from Vanpools_3_.pdf

Key facts:

Table 13

Potential Gross § 5307 Earnings from Vanpools

Number of Participating Vans	Revenue Mile Subsidy	Incentive Subsidy	Total 5307 Earnings
A	В	С	D
	(See note*)	(See note**)	(B + C)
200	\$2,183,300	\$825,794	\$3,009,094
400	\$4,366,600	\$1,686,561	\$8,053,161
600	\$6,549,900	\$2,581,577	\$9,131,477
800	\$8,733,200	\$3,510,137	\$12,243,337
1,000	\$10,916,500	\$4,471,558	\$15,388,058
1,800	\$19,649,700	\$8,632,777	\$28,282,477
3,600	\$39,299,400	\$19,679,847	\$58,979,247

<u>Assumptions</u>

 Average daily van ridership:
 8
 passengers

 Average trip length:
 50
 miles

 Driving days per year:
 250
 days

 Operating cost per van:
 \$22,400
 per year

 Bus revenue mile subsidy factor:
 \$0.43666
 RM

 Bus incentive subsidy factor:
 \$0.00936
 PM^2/OC

FY 2007 Data for FY 2009 Apportionment

	Passenger Miles (PM)	Operating Cost (OC)	
Il Washington, DC UZA (UZA 8) Bus Tier	733,635,977	\$835,911,555	

* Revenue Mile Subsidy Calculation:

Bus revenue mile subsidy factor x vanpool revenue miles

** Incentive Subsidy Calculation:

(All Washington, DC UZA bus tier PM + vanpool PM)*2 x Bus Incentive subsidy factor All Washington, DC UZA bus tier OC + vanpool OC

minus

All Washington, DC UZA bus tier PM'2 x Bus Incentive subsidy factor

All Washington, DC UZA bus tier OC

A.2 Vanpools in the Puget Sound Region – The Case for Expanding Vanpool Programs to Move the Most People for the Least Cost, Washington Policy Center (2010)

Key Words: regional, market potential, Washington State, Puget Sound

Washington Policy Center Vanpool Brief.pdf

Key facts:

The following table compares the expenditures per passenger trip of vanpools in the Puget Sound region with other transit modes.²⁴

Expenditure per Passenger Trip

	Total Trips 2000-2007	Total Operating Costs 2000-2007	Total Capital Costs 2000-2007	Operating Cost per Trip	Capital Cost per Trip	Total Cost per Trip
Six Regional Vanpool Agencies	31,910,606	\$114,164,626	\$49,943,566	\$3.58	\$1.57	\$5.14
Six Regional Bus Agencies	832,843,635	\$3,467,047,646	\$881,597,374	\$4.16	\$1.06	\$5.22
Light Rail*	581,548,515	\$1,644,015,891	\$2,505,854,548	\$2.83	\$4.31	\$7.14
Sound Transit Buses**	44,510,293	\$203,106,268	\$599,522,606	\$4.56	\$13.47	\$18.03
Sounder Commuter Rail	8,236,408	\$123,927,177	\$997,072,837	\$15.05	\$121.06	\$136.10

Source: National Transit Database

A.3 Puget Sound Vanpool Market Action Plan (MAP)

Key Words: cooperation, regional, market potential, budget, Washington State, Puget Sound

Puget Sound Vanpool Market Action Plan.pdf

Key facts: With aggressive marketing and outreach, to "capture" market interest, vanpooling could serve up to 14% of long-distance commuters. The vanpool market potential for the region was estimated at 90,000 commuters – or nearly 11,000 vanpools – if all interested commuters could be matched into a vanpool. With a combination of new strategies, including public policy, financial incentives and affinity products (referred to as a package of market enhancements), vanpooling could be attractive to 25% of long distance auto commuters resulting in a maximum possible market of 19,500 vanpools, based on 8.55 persons per van. Again, this estimate assumed that all interested commuters could be placed in vanpools.

^{*}Data totaled from light rail systems in San Jose, Los Angeles, and Portland

^{**}Excludes data for purchased transportation

20.1% of the regions vanpools disbanded each year.

A Regional Vanpool Coordinating Team (RVCT) was formed to:

RVCT Objectives

Define new opportunities for coordination

Remove barriers to coordination

Develop measurable and deliverable outcomes

Respond to legislative concerns

Vanpool MAP Goals

identify ways and means to increase vanpooling, to the maximum extent possible;

Improve the region's ability to capture and manage market demand;

Develop practical strategies and mechanisms to enhance delivery of customer-oriented services and efficient operations; and

Assess new, non-traditional vanpool markets and services.

MAP Mission Statement

The Vanpool MAP will be a guide for expanding vanpooling in the Puget Sound region.

The MAP should be a multi-purpose arrangement – including a variety of concepts, activities and services – and t should be structured to produce a "win-win" situation for all jurisdictions and organizations involved in its development.

The Vanpool MAP will provide guidance on a regional basis – with a focus on common issues, opportunities for coordination, and prospects for promising advances in vanpooling.

Issues Addressed By Vanpool Planning Efforts

Key Elements	1999 Vanpool Market Study	RVCT 1998- 2000	RVCT 2013 Plan	Vanpool MAP	Significant Unresolved Issues
Marketing & Promotions					
Promotional Campaigns	•		•	•	
Service Image	•		•	•	
Branding	•		•	•	
Incentives	•		•	•	
Affinity Products	•		•	•	
Shared Materials		•	•	•	
Market Research	•			•	
Electronic Signage			•		
Targeted Customer Markets					
Smaller Employers	•	•		•	
Home End Markets				•	
Ferry Travel	•	•	•		
VanShare			•		
HOV/HERO funding			•		
Customer Service					
Market Service Areas		•			•
Staffing Needs			•	•	
Personalized Assistance			•	•	
Vanpool Formation				•	
Rider Retention				•	
Rideshare Online.com		•	•		•
Consistent Requirements	•	•			
Vanpool Fares and Funding					
Fare Setting Policy		•	•		•
Capital Recovery			•		•
Capital Reinvestment			•		•
Subsidy Requirements		•			
Fare Collection		•	•	•	
Vanpool Fleet Expansion					
Fleet Size			•	•	
Fleet Acquisition			•	•	
Short Term Van Needs	•		•	•	
Fleet and Van Storage			•	•	
Vanpool Operational Enhance	ements				
Maintenance Contracts				•	
Common Loaner Fleet				•	
Emergency Assistance		•		•	
Records Management		•	•	•	•
Consistent Procedures	•	•			
Wireless Communication			•		•
Measurement / Evaluation			•		

Vanpool MAP PRELIMINARY Recommended Budget and Expenditure Plan

	MAP Start-Up		Phase 1: Testing & Development	Phase 2: Aggressive Expansion	Total Budget
Strategies and Work Tasks	2004	2005	2006-2009	2010 - 2014	2004-2014
Vanpool Marketing	Initiatives				
Regional Communications Campaign	\$120,000	\$4,750,000	\$1,050,000	\$1,050,000	\$8,970,000
Employer Marketing	\$20,000	\$40,000	\$400,000	\$800,000	\$1,080,000
Home End Marketing	\$35,000	\$45,000	\$400,000	\$800,000	\$1,080,000
Consolidated Customer Support System	\$45,000	\$85,000	\$400,000	\$800,000	\$1,130,000
Incentives		\$75,000	\$800,000	\$1,200,000	\$2,075,000
Sub-Total	\$220,000	\$4,995,000	\$3,050,000	\$4,050,000	\$12,315,000
Operational Enhan	cements				
Collaborative Fleet Acquisition	\$25,000				\$25,000
Electronic Fare Payment Systems	\$5,000	\$60,000	\$150,000	\$250,000	\$485,000
Operational Partnerships	\$5,000	\$20,000			\$25,000
New Technology	\$35,000	\$40,000			\$75,000
Sub-Total	\$70,000	\$120,000	\$150,000	\$250,000	\$590,000
MAP Deployment	Plan				
Funding Plan	\$25,000				\$25,000
Developing Political Support and Agreements	\$40,000				\$40,000
Other MAP Implementation Needs	\$115,000	\$65,000			\$180,000
Sub-Total	\$180,000	\$65,000			\$245,000
Proposed MAP Budget Total	\$470,000	\$5,180,000	\$3,200,000	\$4,300,000	\$13,150,000

A.4 South Florida Vanpool Program - Transition Report - September 2006

Key Words: Florida, vanpool survey, budget, operating costs

Florida Vanpool Cost and Revenue study.pdf

Key facts: This is a very thorough and important study to identify management, financial, and operational improvements to SF vanpool program as it transitions into a more mature form. Included is

a SWOT analysis of the different organizational forms that the vanpool program could become. Included is a peer review of 26 vanpool operating agencies including common and best practices. Excerpts below:

Financial Assessment

A financial analysis was performed to understand the historical evolution of the program, its current operational capacity, and the consequences and costs of the different operational models. The financial analysis considered ridership trends, revenues, cost factors, and potential Section 5307 funding.

The following table offers operational and funding estimates based on current trends. A growth rate of approximately 15 percent was selected by program stakeholders during the period of 2007 to 2011. These estimates do not include potential Section 5307 revenue.

	SFVP Revenue Nee	ds Project	ions			
Vanpool Ridership	2006	2007	2008	2009	2010	2011
7 passenger	124	142	164	188	217	249
9 passenger	23	26	30	34	39	45
15 passenger	14	16	18	22	25	29
Total Number of Vans	161	184	212	244	281	323
Total Number of Riders	1127	1288	1484	1708	1967	2261
Α	verage Monthly Operational L	ease Costs P	er Vehicle ¹			
7 passenger	\$1,025	\$1,076	\$1,130	\$1,187	\$1,246	\$1,308
9 passenger	\$1,165	\$1,223	\$1,284	\$1,349	\$1,416	\$1,487
15 passenger	\$1,280	\$1,344	\$1,411	\$1,482	\$1,556	\$1,634
A	verage Annual Operational Le	ease Costs fo	r the Fleet			
7passenger	\$1,525,200	\$1,833,930	\$2,223,963	\$2,676,892	\$3,244,308	\$3,908,868
9 passenger	\$321,540	\$381,654	\$462,389	\$550,242	\$662,718	\$802,909
15 passenger	\$215,040	\$258,048	\$304,819	\$391,185	\$466,754	\$568,507
Total Annual Operational Lease Costs	\$2,061,780	\$2,473,632	\$2,991,171	\$3,618,319	\$4,373,780	\$5,280,283
	Administration	Costs ²				
Contract	\$225,371	\$236,613	\$248,444	\$260,866	\$273,911	\$287,609
Coordinator	\$130,998	\$137,548	\$255,376	\$379,115	\$398,070	\$417,975
Total Administrative Costs	\$356,369	\$374,161	\$503,820	\$639,981	\$671,981	\$705,584
	Total Cost	ls ³				
Total Program Cost	\$2,418,149	\$2,847,793	\$3,494,991	\$4,258,300	\$5,045,761	\$5,985,867
Total Cost Per Van	\$15,020	\$15,477	\$16,486	\$17,452	\$17,956	\$18,532
Total Cost Per Rider	\$2,146	\$2,211	\$2,355	\$2,493	\$2,565	\$2,647
Total Cost Per Passenger Mile	\$0.136	\$0.140	\$0.150	\$0.158	\$0.163	\$0.168
	Farebox Reco	overy ⁴				
7passenger	\$930,000	\$1,152,330	\$1,436,763	\$1,774,492	\$2,202,708	\$2,713,668
9 passenger	\$211,140	\$256,854	\$318,389	\$387,042	\$475,518	\$586,909
15 passenger	\$147,840	\$181,248	\$218,419	\$285,585	\$346,754	\$429,307
Total Farebox Recovery	\$1,288,980	\$1,590,432	\$1,973,571	\$2,447,119	\$3,024,980	\$3,729,883
	Net Public Fundin	g Needed ⁵				
Total Net Public Funding Needed	\$1,129,169	\$1,257,361	\$1,521,420	\$1,811,181	\$2,020,781	\$2,255,984
Broward Net Revenue Needs	\$444,268	\$520,325	\$606,877	\$737,635	\$824,926	\$926,060
Miami-Dade Net Revenue Needs	\$414,641	\$400,499	\$506,099	\$544,692	\$591,456	\$643,565
Palm Beach Net Revenue Needs	\$270,261	\$336,537	\$408,445	\$528,856	\$604,400	\$686,360
	Revenue by Fundi					
Farebox Revenue	53%	56%	56%	57%	60%	62%
Remaining Revenue Needs (1) Represents the average monthly cost charged to	47%	44%	44%	43%	40%	38%

⁽¹⁾ Represents the average monthly cost charged to riders based on their mileage traveled

^{(2) 2006} costs are based on current data. In subsequent years costs are increased by 5% annually.

⁽³⁾ Total costs = operational costs + administrative costs

⁽⁴⁾ Farebox recovery is equal to operational lease costs less a \$400 per month subsidy

⁽⁵⁾ Includes operational and administrative costs less farebox recovery

Recommendations

The development of these analyses allowed the stakeholders to develop four operational models for further discussion. A strengths, weaknesses, opportunities, and threats (SWOT) analysis was developed for each alternative and considered by the stakeholders. The analysis resulted in the following recommendations:

<u>Recommendation A:</u> House the management and oversight of SFVP with the South Florida Regional Transit Authority (SFRTA) for the purpose of continued regional growth, coordination with transit services, and NTD reporting.

<u>Recommendation B</u>: Continue the existing operational lease model and release a new request for proposal that seeks responses from third-party vanpool operators.

<u>Recommendation C</u>: The SFVP program should remain focused on the primary product of longer distance, point-to-point travel for groups of individuals. Transit feeder and other related short-distance vanpool services may be considered in the future based on need and vehicle availability.

<u>Recommendation D</u>: Begin reporting the SFVP mileage and costs to the National Transit Database. All net gains in Section 5307 funding resulting directly from the SFVP NTD reporting should be invested by the SFRTA in the vanpool program. This investment may replace an equivalent amount of public funding committed by each MPO for the period in which the gain in Section 5307 funding is received. (Net gain refers to all new funding generated by the vanpool reporting and does not take away any funding from SFRTA's Section 5307 revenue generated by reporting for other services. All services will likely see a diminishing return from NTD reporting for Section 5307 revenue. Net gain does not imply that vanpool related revenue will be used to offset the decrease in revenue for other SFRTA services should the return from NTD reporting continue to decrease.)

<u>Recommendation E</u>: Each funding partner will provide a five-year commitment to its share of program costs based on an agreed on distribution of remaining revenue needs. Currently, these remaining revenue needs are distributed based on the county of origin or destination of all vanpools; however, this distribution methodology can be altered through future policy discussions and/or once a more accurate, on-line reporting system can efficiently track mileage by county.

Recommendation F: Maintain the stakeholder group as a vanpool working group.

<u>Recommendation G</u>: Establish FDOT, District 6 as a contingency location for housing the program. District 6 will go out to obtain new contractual services to avoid service interruption while all elements of the transition plan are put in place. Existing consultant resources controlled by District 6 would assist in the management of this short-term arrangement. It would end when SFRTA begins management and oversight. Each District would be responsible for programming funding for this purpose for its area.

Best Practices:

- Vanpool programs need to be flexible and it should not be assumed that there is one "perfect" vanpool program or model.
- Regional commute services programs, regardless of accountability structure, that assist with marketing and outreach have been shown to be helpful and are a growing trend.
- Employer subsidies increase participation and an employer's level of commitment to the program.
- Flat-rate pricing can greatly simplify marketing and, in particular, communication. Flat-rate pricing charges a single price to riders regardless of the number of riders in a van or the type of van used; prices may be tiered based on distance traveled. Flat-rate pricing allows potential riders to more easily determine the costs of participation and allows for the simplification of marketing materials. This type of pricing helps assure that vanpool prices are stable and will not fluctuate when a new van is delivered to an existing vanpool; unstable vanpool prices can cause vanpools to fall apart. This pricing structure does have some negatives that are listed below in the Challenges section.

Challenges:

- Flat-rate pricing reduces the riders' desire to fill the seats; riders will maintain the empty seats to have more room.
- One-rate pricing can encourage shorter distance vanpools.
- Use of third party vanpool operators is common, but comes with some caveats:
 - Costs may be inflated or the vendor may be less flexible with program modifications when no competition exists.
 - Vehicle turnover is more frequent and costly.
 - Mixed messages may be sent when marketing.
 - Use of several operators and van types can cause irregular pricing.

A.5 South Florida Vanpool Program – Update Report – June 2008

Key Words: Florida, budget, operating costs

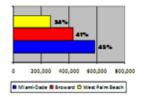
Florida Vanpool report 2008.pdf

Key facts: As of summer 2008, SFVP has grown to 174 vanpools.

CONTRACT COST

Description	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	
Contract (\$)	190,950	199,548	209,475	219,899	230,842	230,842	
Coordinators (\$)	58,700	57,960	60,858	63,902	67,096	67,096	
Comments	Every County provides their own funding. Contract costs are split among the three countles.						

TOTAL PROGRAM EXPENSES



Expenses include all capital, operating and marketing expenses for the 3-county area. This includes also groups coming from Key West, \$t. Lucle and Martin Counties.

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A.6 Greater Toronto Area and Hamilton Vanpool Program Feasibility Study (2007)

Key Words: Canada, case studies, best practices

vanpool feasibility report Toronto.pdf

Key facts: The most cost-effective methods of promotion are the use of "van wraps" with the vanpool operator logo prominently displayed across the van and direct advertisement to the target audience by employer contacts and downtown street displays.

This report contains eight case studies.

A.7 Vanpooling in North Dakota: Feasibility and Operating Scenarios (2006)

Key Words: case studies, financing, legal guide

Vanpooling in North Dakota - Feasibility Report.pdf

Key facts: Contains analysis of ADA regulations and vanpooling, drug testing of drivers, and CDL requirements. Contains case studies. Contains recommendations.

A.8 Implementing a Statewide Rideshare and Vanpool Program in Arizona

Key Words: Arizona, program objectives

Implementing a Statewide Vanpool Program in Arizona.pdf

Key facts: Chapter 2 has a good literature review, and Chapter 3 has a good review of State DOT vanpool programs.

A.9 Washington State DOT – Freewheeling Vanpool Promotion and Incentive Program

Key Words: marketing, education, incentives, cooperation

http://www.wsdot.wa.gov/NR/rdonlyres/997B9766-791B-418D-8113-FD5906A362A2/0/05ACTConf FreewheelingPaper.pdf

<u>Keys facts:</u> In 2004 WSDOT and regional Freewheeling is the first-ever statewide vanpool education campaign sponsored by the Washington State Department of Transportation with support from transit agencies throughout the state. This campaign is designed to create new vanpool ridership and sustain

existing ridership by promoting the financial and environmental benefits of vanpooling as well as the concept of vanpooling as a chosen lifestyle. No surprise then, that Washington State leads the nation in the number of vanpools used for commuting. Many public transit agencies, both large and small, around the state include vanpool operations in their mix of services.

Drivers are eligible for \$100 signing bonus, bookkeepers \$75 bonus, for each recruited new rider \$50, up to \$500 maximum, riders are eligible for one-time \$75 bonus.

B.1 MWCOG 2002 Vanpool Survey

Key Words: DC region, MWCOG, commute survey, vanpool survey

2002 TPB van pool survey.pptx

Key facts: 80% of vanpool originate in Virginia, 79% of vans had seating for 12-15 passengers, 13% were minivans, line-haul portion of trip averaged 39 miles, but 48 miles from drivers home to final destination.

B.2 MWCOG 2008 Vanpool Driver Survey

Key Words: DC region, MWCOG, commute survey, vanpool survey

COG 2008 Vanpool Driver Survey.pdf

Key facts: 10.5 average passenger count, 50 miles one way trip distance for Virginia based vanpools, 44 miles for MD based vanpools.

B.3 2008 Pierce Transit Vanpool Rider Survey Report - August 2008

Key Words: vanpool survey, Washington State

NTD Tool for Vanpools.pdf

Key facts: The number one reason given for not becoming a vanpool driver was "just want to ride" by 49% or respondents, and "don't want stress" and "don't like to drive were also cited by many respondents. Van comfort was the lowest rated part of the whole vanpool experience.

B.4 San Francisco Bay Area Vanpool Driver Satisfaction Survey - April 2004

Key Words: SF region, commute survey, vanpool survey, driver survey,

Bay Area Vanpool Driver Survey.pdf

Key facts: personal use of van is a weak incentive to become a vanpool driver, recruiting back-up drivers is the number one vanpool driver problem. Excerpts below:

 ${\it Table~18} \\ {\it Most Difficult Aspects by Vehicle Type}$

	Owner- operated	Employer- operated	Leased
Recruiting back-up drivers	19%	24%	27%
Obtaining new riders	20%	17%	24%
Driving every day	17%	14%	12%
Maintaining the vehicle	25%	12%	4%
Collecting fares	3%	14%	11%
Balancing rider needs	7%	7%	9%
Retaining existing riders	6%	10%	5%
Lease obligation	0%	0%	6%
Other	4%	2%	3%
n=	53	28	74

 ${\it Table~15} \\ {\it Factors~that~Influenced~Decision~to~Become~a~Driver~or~Coordinator}$

Factor	Percent
Reduced cost of commute	20%
Reduced need to use personal vehicle	18%
Use carpool lanes (save time)	13%
Reducing commute stress	12%
Environmental concerns	11%
Vanpool needed a driver	10%
Financial incentives	10%
Personal use of van	5%
Other	2%
Total	100%
	n=162

B.5 Rappahannock-Rapidan PDC Northern Virginia HOV System Western Feeder Market Study – January 2006

Key Words: DC region, TDM, I-66, incentives, marketing, rideshare survey

Rappahannock Regional_2005_Rideshare_Research.pptx

Key facts: Very thorough study that uncovers attitudes and problems with ride sharing. Only 39% of current ride sharers used ride matching service

C. 1 TCRP Guide to Vans and Small Buses

Key Words: vans, small buses, vehicle characteristics

Ch3-Vehicles.pdf

Key facts:

C.2 TCRP - Innovative Suburb-to-Suburb Transit Practices (1995)

Key Words: TCRP, long distance commuting

TCRP Innovative Suburb to Suburb Transit Practices.pdf

Key facts: rather old study.

C.3 TCRP - The Use of Small Buses in Transit Service: A Synthesis of Transit Practice (2002)

Key Words: TCRP, long distance commuting

TCRP Small Buses.pdf

Key facts: 44% of transit agencies reported "very good" experience with small transit buses, while 15% reported "poor" experiences with small transit buses. Reliability was the biggest problem. Slightly out-of-date study involved many small buses that are no longer manufactured. Small buses used in a line-haul mode of operation would probably have different frequency of repair and break downs.

C.4 TCRP - Vanpools and Buspools: Traveler Response to Transportation System Changes (2005)

Key Words: TCRP, economics, demand

Key	fa	cts	•

C.5 Price Elasticity of Rideshare: Commuter Fringe Benefits for Vanpools (2004)

Key Words: economics, elasticity, incentives,

vanpool price elasticity.pdf

Key facts: The goal of this research project was to determine the price elasticity of rideshare with specific objectives of helping to assess what the effect on ridership would be if the effective price paid by the traveler was substantially reduced (i.e., increase in employer co-pay) or increased (i.e., decrease in employer co-pay). While there are multiple modes for providing rideshare, this research was limited to the study of vanpools. The quantitative analysis used the Puget Sound data set and applied the regression and Logit models to analyze the impact of fares and other factors on mode choice. Further qualitative analysis was done using simple elasticity and tabular analyses using data sets from several Florida agencies and others from other states to provide an overview of vanpool elasticities and operations in general. While the study found only a limited interpretation of the elasticity, it generated a significant interest in the role of employer subsidies

C.6 FTA - Useful Life of Transit Buses and Vans (2007)

Key Words: FTA, small buses, service life, maintenance, safety

Useful_Life_of_Buses_Final_Report_4-26-07_rv1.pdf

Key facts: Service environment seriously affects vehicle service life. Extreme urban environments vs. line-haul operations affect service life. Useful vehicle life is ultimately determined by vehicle structure.

Figure 7-14 Condition At Which Minimum Life-Cycle Cost is Attained 5.0 Excellent Condition at Which Minimum Life-Cycle Cost is Attained For: = Low annual milage vehicle = Average annual milage vehicle Good 4.0 = High an nual milage vehicle Light-DutySmall Bus / Van (4 year) Physical Condition 3.5 3.0 Adequate 2.5 2.0 Substandard 1.5 Poor 1.0

Life-to-Date Miles

400,000

500,000

600,000

700,000

300,000

C.7 Vanpool Pricing and Financing Guide

100,000

200,000

Key Words: economics, finance, elasticity

Vanpool pricing guide.pdf

Key facts: Contains analysis of ADA regulations and vanpooling, drug testing of drivers, and CDL requirements.

D. 1 TCRP Guide to Vans and Small Buses

Key Words: vans, small buses, vehicle characteristics

Ch3-Vehicles.pdf

Key facts:

D.2 TCRP - The Use of Small Buses in Transit Service: A Synthesis of Transit Practice (2002)

Key Words: TCRP, long distance commuting

TCRP Small Buses.pdf

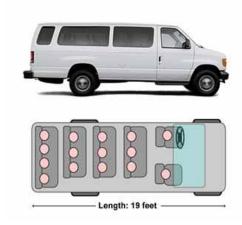
Key facts: 44% of transit agencies reported "very good" experience with small transit buses, while 15% reported "poor" experiences with small transit buses. Reliability was the biggest problem. Slightly out-of-date study involved many small buses that are no longer manufactured. Small buses used in a line-haul mode of operation would probably have different frequency of repair and break downs.

D.3 Field Guide to Vans and Small Buses – by Greg McFarland, NVTC Staff

Key words: van, Sprinter, small bus, ADA, minivan, safety,

Field Guide to Vans.docx

Key facts: vans come in many sizes and types, from minivans to commuter shuttle buses, to ADA vans.

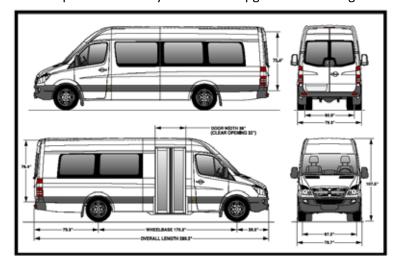


D.4 Dodge Sprinter Shuttle Bus Overview Presentation

Key Words: Sprinter

Sprinter Product Overview Presentation Q1 2008.pdf

Key facts: Sprinter Shuttle Bus (11,300 lbs.GVW) gets 16 mpg versus 6.5 mpg for Ford F350/450 van. Smaller Sprinter vans may achieve 20 mpg. This is the largest and heaviest of all Dodge Sprinter models.



D.5 VPSI Commuter Chronicles

Key Words: Sprinter, gas mileage

VPSI tries Dodge Sprinters.pdf

Key facts: Dodge Sprinter gets 18.5 mpg in real-world use. Drivers find Sprinter to have superior drivability and comfort, and passengers also find superior comfort. Loading and unloading through the sliding side door is also easier than Ford or GM vans.

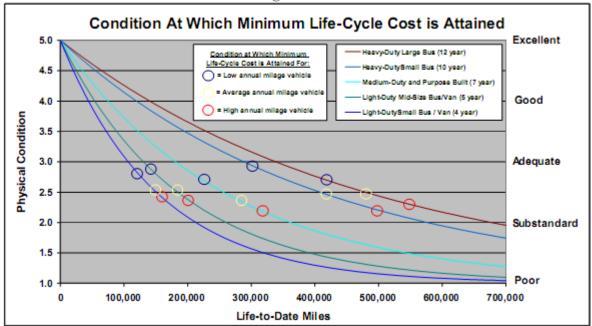
D.6 FTA - Useful Life of Transit Buses and Vans (2007)

Key Words: FTA, small buses, service life, maintenance, safety

Useful_Life_of_Buses_Final_Report_4-26-07_rv1.pdf

Key facts: Service environment seriously affects vehicle service life. Extreme urban environments vs. line-haul operations affect service life. Useful vehicle life is ultimately determined by vehicle structure.

Figure 7-14



D.7 NHTSA 15-Passenger Van Rollover Alert

Key Words: NHTSA, safety, rollover accidents

NHTSA Rollover Bulletin.pdf

Key facts: Fully loaded 15-passenger vans have alarmingly high incidences of catastrophic rollovers in accidents leading to serious bodily injury and death to multiple passengers.

E.1 Transit-Operated Vanpools in the United States: Selected Case Studies (2002)

Key Words: case studies

Transit-operated Van Pools.pdf

Key facts: Do not start with or retain inferior equipment. Spend the money to build Customer Comfort into your vans so you can effectively compete with the SOV. — Ben Franklin Transit

Make the Customer Service Attitude the center of your universe. Be flexible in the way you provide your services. (BFT)

Obstacles to vanpool programs include: lack of awareness, difficulty recruiting drivers, and lack of vanpool funding and promotion.

F.1 Vanpooling Made Easy: An Informational Guide Published By: VDRPT Third Edition May 2008

Key Words: Virginia, DRPT, law, licensing, insurance, leasing, taxes, CDL

Vanpooling Made Easy - A Virginia Guide.pdf

<u>Key facts:</u> Different rules for non-profit and for-profit vanpools, different rules for 15 passenger vans and over-15 passenger vans, different rules for intrastate and interstate vanpools.

TABLE OF CONTENTS Page Introduction 1 What is A Vanpool? 2 How To Determine What Rules Would Apply To A Vanpool 3 Categories Of Vanpools 3 Non-Profit Vanpools: What You Need To Know 5 For-Profit Vanpools: What You Need To Know 9 Vanpool Requirements Chart 14 Leasing of Vanpool Vans 15 Financial Assistance Available For Vanpools 15 Tax-Free Fringe Benefits For Vanpoolers 17 Guaranteed Ride Home Program 18 Where To Get Additional Information 19

Vanpool Requirements Chart

(All Passenger Numbers Include the Driver)

	Titing of Van at DMV	USDOT	Commercial Driver's License	Intra-State Op. Authority	Single State Regis, System
NTRASTATE:					
INTRASTATE: Non-Profit Vanpool 15 or Less Passengers	X				
INTRASTATE: Non-Profit Vanpool 16 or More Passengers	X		X		
INTRASTATE: For-profit Varipool 15 or Less Passengers	X			X	
INTRASTATE: For-profit Vanpool 16 or More Passengers	X		Х	X	

INTERSTATE:				
INTERSTATE: Non-Profit Vanpool 8 or Less Passengers	Х			
INTERSTATE: Non-Profit Vanpool 9 to 15 Passengers	X			
INTERSTATE: Non-Profit Vanpool 16 or More Passengers	Х	X	X	
INTERSTATE: For-profit Vanpool 8 or Less Passengers	Х			
INTERSTATE: For-profit Vanpool 9 to 15 Passengers	Х	X		
INTERSTATE: For-profit Vanpool 16 or More Passengers	Х	Х	X	X

F.2 Buckhead Area Transportation Management Association (BATMA) Vanpool Guide

Key Words: Atlanta, forms, rules

Buckhead Atlanta Vanpool Guide.pdf

Key facts: BATMA subsidizes vanpools up to \$600 per month. \$50 referral bonus if new rider rides for at least 3 consecutive months. Guide includes rules, regulations, fares, and forms.

Daily Roundtrip Mileage* Monthly Cost (Gas included)

0-60 Miles \$ 75 Per Month 61-90 Miles \$ 90 Per Month 91-105 Miles \$100 Per Month

*based on the route provided by the primary driver, and mapped through Google maps, as indicated in the vendor

Your van's approximate cost per month:

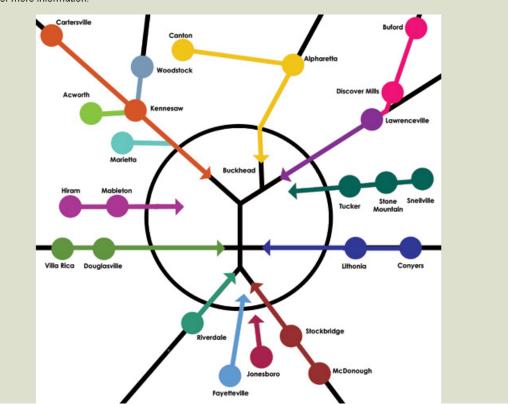
Lease rate: \$1,300.00 Estimated Monthly fuel: \$400.00

Total: \$1,700.00

Your minimum contribution: \$ 900.00 Subsidies: \$ 800.00

Vanpool

Click on your area of the map below to see what vanpools are near you. Contact Calvin at calvin@batma.org or (404) 842-2684 for more information.



F.3 King County Vanpool Orientation Course and Reference Guide

Key Words: Washington State, King County, users manual

King County Vanpool Orientation Course.pdf

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F.4 King County Vanpool Program Manual

Key Words: Washington State, King County, operations manual

King County Vanpool Manual.pdf

Key facts:

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F.5 Pierce Transit Schedule of Vanpool Fares

Key Words: Washington State, Pierce Transit, fares

http://www.piercetransit.org/rideshare/vpfares.html

Key facts:

MONTHLY COMMUTER FARES

This page last updated 01/09/06

Fare Per Rider Based on Number of Monthly Riders

Maximu	Number of Monthly Passengers Paying a Monthly Fare									
m Daily Round Trip Miles	5	6	7	8	9	10	11	12	13	14
20	\$57.00	\$48.00	\$45.00	\$41.00	\$40.00	\$39.00	\$37.00	\$34.00	\$32.00	\$30.00
25	\$59.00	\$50.00	\$47.00	\$43.00	\$42.00	\$41.00	\$39.00	\$36.00	\$34.00	\$32.00
30	\$64.00	\$54.00	\$51.00	\$47.00	\$46.00	\$43.00	\$41.00	\$37.00	\$35.00	\$33.00
35	\$70.00	\$59.00	\$56.00	\$51.00	\$49.00	\$46.00	\$44.00	\$39.00	\$37.00	\$35.00
40	\$75.00	\$63.00	\$60.00	\$55.00	\$53.00	\$50.00	\$46.00	\$42.00	\$40.00	\$38.00
45	\$78.00	\$66.00	\$63.00	\$58.00	\$56.00	\$52.00	\$49.00	\$44.00	\$41.00	\$39.00
50	\$83.00	\$70.00	\$67.00	\$62.00	\$60.00	\$56.00	\$53.00	\$48.00	\$45.00	\$43.00
55	\$88.00	\$74.00	\$71.00	\$65.00	\$63.00	\$60.00	\$55.00	\$50.00	\$47.00	\$45.00
60	\$94.00	\$79.00	\$75.00	\$70.00	\$68.00	\$63.00	\$58.00	\$54.00	\$52.00	\$49.00
65	\$98.00	\$82.00	\$77.00	\$72.00	\$70.00	\$66.00	\$61.00	\$57.00	\$53.00	\$50.00
70	\$100.0 0	\$84.00	\$79.00	\$74.00	\$72.00	\$69.00	\$63.00	\$59.00	\$56.00	\$53.00
75	\$106.0 0	\$89.00	\$84.00	\$79.00	\$77.00	\$72.00	\$66.00	\$61.00	\$57.00	\$54.00
80	\$110.0 0	\$92.00	\$87.00	\$82.00	\$80.00	\$74.00	\$69.00	\$63.00	\$59.00	\$56.00
85	\$114.0 0	\$96.00	\$91.00	\$86.00	\$83.00	\$77.00	\$71.00	\$66.00	\$62.00	\$59.00
90	\$118.0 0	\$99.00	\$94.00	\$89.00	\$87.00	\$79.00	\$75.00	\$69.00	\$65.00	\$61.00
95	\$122.0 0	\$102.0 0	\$97.00	\$92.00	\$90.00	\$83.00	\$78.00	\$72.00	\$67.00	\$63.00
100	\$126.0 0	\$106.0 0	\$101.0 0	\$96.00	\$94.00	\$87.00	\$80.00	\$73.00	\$68.00	\$64.00

105	\$130.0 0	\$109.0 0	\$104.0 0	\$99.00	\$97.00	\$90.00	\$83.00	\$76.00	\$71.00	\$67.00
110	\$132.0 0	\$111.0 0	\$106.0 0	\$101.0 0	\$99.00	\$92.00	\$86.00	\$79.00	\$74.00	\$71.00
115	\$138.0 0	\$116.0 0	\$111.0 0	\$106.0 0	\$104.0 0	\$95.00	\$88.00	\$82.00	\$77.00	\$73.00
120	\$142.0 0	\$119.0 0	\$114.0 0	\$109.0 0	\$107.0 0	\$99.00	\$91.00	\$84.00	\$79.00	\$75.00
125	\$146.0 0	\$122.0 0	\$117.0 0	\$112.0 0	\$110.0 0	\$102.0 0	\$94.00	\$86.00	\$82.00	\$78.00
130	\$149.0 0	\$125.0 0	\$120.0 0	\$115.0 0	\$112.0 0	\$105.0 0	\$97.00	\$90.00	\$86.00	\$82.00
135	\$153.0 0	\$128.0 0	\$123.0 0	\$118.0 0	\$117.0 0	\$108.0 0	\$100.0 0	\$92.00	\$88.00	\$84.00
140	\$158.0 0	\$132.0 0	\$127.0 0	\$122.0 0	\$121.0 0	\$112.0 0	\$103.0 0	\$95.00	\$90.00	\$86.00
145	\$161.0 0	\$135.0 0	\$130.0 0	\$125.0 0	\$124.0 0	\$115.0 0	\$106.0 0	\$97.00	\$93.00	\$88.00
150	\$166.0 0	\$139.0 0	\$134.0 0	\$129.0 0	\$128.0 0	\$118.0 0	\$108.0 0	\$100.0 0	\$95.00	\$90.00
155	\$170.0 0	\$142.0 0	\$137.0 0	\$132.0 0	\$131.0 0	\$122.0 0	\$112.0 0	\$102.0 0	\$97.00	\$92.00
160	\$172.0 0	\$144.0 0	\$139.0 0	\$135.0 0	\$134.0 0	\$124.0 0	\$114.0 0	\$105.0 0	\$99.00	\$94.00
165	\$174.0 0	\$146.0 0	\$141.0 0	\$137.0 0	\$135.0 0	\$126.0 0	\$116.0 0	\$107.0 0	\$101.0 0	\$96.00
170	\$177.0 0	\$148.0 0	\$143.0 0	\$139.0 0	\$138.0 0	\$128.0 0	\$117.0 0	\$109.0 0	\$103.0 0	\$98.00
175	\$179.0 0	\$150.0 0	\$145.0 0	\$141.0 0	\$140.0 0	\$130.0 0	\$119.0 0	\$111.0 0	\$105.0 0	\$100.0 0

F.6 Douglas County Rideshare Manual

Key Words: Washington State, Pierce Transit, fares

Douglas County Rideshare Manual.pdf

G.4 MWOG 2007 State of the Commute Report

Key Words: DC region, MWCOG, commute survey

COG 2007 State of Commute.pdf

Key facts:

G.5 2006 CENTRAL EMPLOYMENT CORE CORDON COUNT OF VEHICULAR AND PASSENGER VOLUMES March 2, 2007

Key Words: DC region, MWCOG, commute survey, cordon count

2006 Core Cordon Count Study.pdf

Key facts: 1,000 vanpools were counted traveling into Arlington and Washington, DC employment cores.

G.6 MWCOG 2002 Vanpool Survey

Key Words: DC region, MWCOG, commute survey, vanpool survey

2002 TPB van pool survey.pptx

Key facts: 80% of vanpool originate in Virginia, 79% of vans had seating for 12-15 passengers, 13% were minivans, line-haul portion of trip averaged 39 miles, but 48 miles from drivers home to final destination.

G.7 MWCOG 2008 Vanpool Driver Survey

Key Words: DC region, MWCOG, commute survey, vanpool survey

COG 2008 Vanpool Driver Survey.pdf

Key facts: 10.5 average passenger count, 50 miles one way trip distance for Virginia based vanpools, 44 miles for MD based vanpools .

G.8 2035 George Washington Regional (GWRC) Long Range Transportation Plan

Key Words: GWRC, park and ride, DC region

GW Region FAMPO Transit Study.pdf

Key facts: GWRC long range plan says vanpools need extra financial incentives.

G.9 COMMUTER CONNECTIONS TRANSPORTATION DEMAND MANAGEMENT EVALUATION PROJECT – MAY 2005

Key Words: MWCOG, TDM, DC region, Commuter Connections, GRH

MWCOG TDM Evaluation.pdf

Key facts: Commuter Connections has a 27% placement rate among survey participants who contacted CC for assistance in finding a car/vanpool.

G.10 Northern Virginia Vanpool AdVantage Program Product Development Research Study – June 2004

Key Words: vanpool survey, VDOT, WMATA

NOVA vanpool advantage program WHITE BACKGROUND.pptx

NOVA vanpool advantage program.pptx (full color original version)

Key facts: low interest in participating in a vanpool incentive program given the low subsidy proposed and the high paperwork required.

G.11 MWCOG Round 7.1 Cooperative Forecasts

Key Words: MWCOG, population forecasts, DC region

Key facts: Includes forecasts of external commuters to the DC region out to 2030.

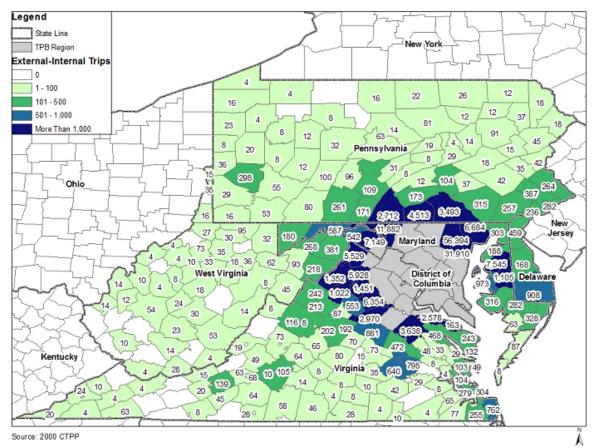
G.12 MWCOG Estimating the Impact of Exurban Commuters on Travel Demand - June 30, 2008

Key Words: MWCOG, population forecasts, DC region, long distance commuters

Study of Exurban Commuters in DC region.pdf

Key facts:

Figure 1: Year 2000 External Travel for COG/TPB



G.13 Virginia Van Start and Van Save Assistance Programs for Vanpools

Key Words: Virginia, DRPT, subsidy

Van Start Van Save Program Guide.pdf

Key facts:



Table of Contents	Page
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G.14 Commuter Connections Transportations Emissions Reductions Measures (TERM) Report, FY 2006-2008

Key Words: MWCOG, Washington, DC region, emissions reductions

Commuter Connections Emissions Reductions Report.pdf

 $\label{eq:Table B} \mbox{Summary of TERM and COC Results } (7/05-6/08) \mbox{ and Comparison to Goals}$

TERM	Participation 1)	Daily Vehicle Trips Reduced	Daily VMT Reduced	Daily Tons NOx Reduced	Daily Tons VOC Reduced					
TERMS (all TERMs collectively)										
2008 Goal		98,603	1,850,180	0.943	0.569					
Impacts (7/05 - 6/08)		95,126	1,732,217	0.819	0.481					
Net Credit or (Deficit)		(3,477)	(117,963)	(0.124)	(0.088)					
Commuter Operations Co	nter – Basic Servic	ees 2)								
2008 Goal	152,356	10,399	296,635	0.147	0.081					
Impacts (7/05 - 6/08)	185,639	17,951	575,237	0.256	0.126					
Net Credit or (Deficit)	33,283	7,552	278,602	0.109	0.045					
Commuter Operations Ce	nter – Software U	pgrades ²⁾								
2008 Goal		2,370	62,339	0.031	0.017					
Impacts (7/05 - 6/08)		4,523	146,441	0.064	0.032					
Net Credit or (Deficit)		2,153	84,102	0.033	0.015					

All TERMS plus COC				
2008 Goal	111,372	2,209,154	1.121	0.667
Impacts (7/05 - 6/058)	117,600	2,453,895	1.139	0.639
Net Credit or (Deficit)	6,228	244,741	0.018	(0.028)

Participation refers to number of commuters participating, except for the Employer Outreach TERM. For this TERM, participation equals the number of employers participating.

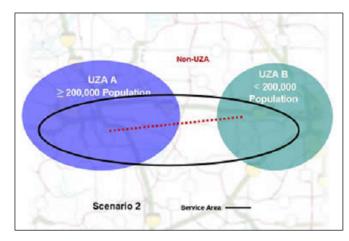
H.1 Federal Transit Administration – FTA Formula Funds Manual

Key Words: FTA, 5307, UZA,

 $2008_Federal_Funding_Allocation_Statistics_Module.pdf$

Key facts: Reporting Rules for More than One Urbanized Area and Other than Urbanized Areas

Impacts for Commuter Operations Center – software Upgrades are in <u>addition</u> to the impacts for the Commuter Operations Center – Basic Services. This project was part of the Integrated Rideshare TERM.



Scenario 2: One end of the vehicle trip is in UZA B with fewer than 200,000 population and the other trip end is in UZA A with 200,000 or more population.

Solution 2: All statistics for the formula allocations can be reported for the larger UZA A with 200,000 or more population because one trip end is located in UZA A.

H.2 Development of an NTD Tool for Vanpool Services – November 2008

Key Words: NTD

NTD Tool for Vanpools.pdf

Key facts:

H.3 APTA Vanpool Statistics from NTD FY 2006

Key Words: APTA, NTD

APTA vanpool statistics 2008.pdf

Key facts:

TABLE 76: Vanpool National Totals, Fiscal Y	TABLE 76: Vanpool National Totals, Fiscal Year 2006				
Agencies, Number of	69				
Fares Collected, Passenger (Millions)	\$45.4				
Fare per Unlinked Trip, Average	\$2.15				
Expense, Operating Total (Millions)	\$84.7				
Operating Expense by Object Class:					
Salaries and Wages (Millions)	\$12.8				
Fringe Benefits (Millions)	\$7.3				
Services (Millions)	\$11.7				
Materials and Supplies (Millions)	\$15.1				
Utilities (Millions)	\$0.7				
Casualty and Liability (Millions)	\$6.2				
Purchased Transportation (Millions)	\$24.8				
Other (Millions)	\$6.2				
Operating Expense by Function Class:					
Vehicle Operations (Millions)	\$21.0				
Vehicle Maintenance (Millions)	\$10.1				
Non-vehicle Maintenance (Millions)	\$0.9				
General Administration (Millions)	\$27.9				
Purchased Transportation (Millions)	\$24.8				
Expense, Capital Total (Millions)	\$31.1				
Rolling Stock (Millions)	\$29.1				
Facilities, Guideway, Stations, Admin Buildings	\$0.8				
Other (Millions)	\$1.2				
Trips, Unlinked Passenger, Annual (Millions)	21.1				
Miles, Passenger (Millions)	711.6				
Trip Length, Average (miles)	33.7				
Miles, Vehicle Total (Millions)	115.6				
Miles, Vehicle Revenue (Millions)	114.0				
Hours, Vehicle Total (Millions)	3.0				
Hours, Vehicle Revenue (Millions)	3.0				
Speed, Vehicle in Revenue Service, Average (m.p.h.)	38.3				
Revenue Vehicles Available for Maximum Service	8,235				
Revenue Vehicles Operated at Maximum Service	7,345				
Age, Average (years)	3.8				
Employees, Operating	324				
Vehicle Operations	45				
Vehicle Maintenance	34				
Non-vehicle Maintenance	6				
General Administration	238				
Employees, Capital	3				
Diesel Fuel Consumed (Gallons, Millions)	0.2				
Other Fuel Consumed (Gallons, Millions)	6.9				
Electricity Consumed (kwh, Millions)	0.0				

I.1 RFP from GRTC Seeking Services of Statistician With Experience in NTD Data Reporting and Vanpools – September 2007

Key Words: NTD, GWRC,

RFP for vanpool NTD data collection.pdf

Key facts:

1.2 Request For Proposals For SAN DIEGO REGIONAL VANPOOL PROGRAM

Key Words: SANDAG, RFP

SANDAG RFP.pdf

Key facts: RFP dated 2006 seeking vanpool services contractor

I.3 METRO VANPOOL PROGRAM ACTION: AWARD CONTRACTS FOR VAN POOL SERVICES

Key Words: LA METRO, RFP

LA METRO RFP.pdf

Key facts: RFP dated 2007 seeking vanpool services contractor.

National Transit Database (NTD) revenue mileage reported will generate new Federal Section 5307 formula funds to the region at a 2 to 1 ratio compared to program expenditures. In its first full year of implementation, the Metro Vanpool Program is projected to deliver more than 17 million revenue miles and over 137 passenger miles of service. These services will allow Metro to add vanpooling to its family of services while fulfilling the 2001 motion (Roberts) directive by the Board to capture new NTD reporting sources, and will help the county work towards meeting Long Range Transportation Plan and air quality goals.

Staff provided the Board an overview of quantifiable goals for increasing vanpool ridership through the proposed Metro Vanpool Program in an August 2006 Board Box report. The standards established included:

- · Identify, capture, and register 600 public vanpool groups in the first year of service;
- · Subsidize vanpool lease costs at 20% 30%; reducing cost and increasing benefit to commuters; and
- · Provide expanded ride-matching services to achieve an optimal vehicle occupancy rate of 80%.

J.1 Vanpools: a Viable Alternative in Rural Regions

Ben Franklin Transit, Washington State Tri-Cities, Kennewick, Pasco, and Richland

Key Words: rural, Washington State, CDL, customer service,

Ben_Franklin_Rural_Vanpool_10_08.pdf

<u>Key facts</u>: Ben Franklin transit found that customer service is key to retaining vanpools and growing their service. Vanpool growth has been phenomenal and there is a waiting list of 224 vans. Riders to Hanford Nuclear Reservation needed a transportation option and they asked BFT for a bus if they would supply the CDL-licensed drivers. BFT supplied a 25-passenger mini-bus and the riders found four CDL-licensed drivers amongst themselves who would serve as the bus drivers.

J.2 Contra Costa \$1,000 Vanpool Driver Incentive Payment

Key Words: incentives, driver incentive

Contra Costa \$1000 vanpool incentive payment.pdf

Key facts: Conta Costa county provides passenger incentives of half-fare for the first three months of vanpool participation, and \$1,000 payment to the driver for successfully keeping a vanpool in operation for one year.

J.3 Kitsap Transit Worker/Driver Program

Key Words: Kitsap, Washington State, driver

WorkerDriverBusProgram.html

Key facts: Kitsap Transit in Washington State has 26 bus routes operated by individuals who work at Naval Installations in the Puget Sound region, and who are also part-time Kitsap Transit drivers.

These buses are driven by full time employees ("worker") of the military facilities and are also part time employees of Kitsap Transit ("drivers").

Our ridership today is made up of both civilian and military personnel. We design and alter Worker/Driver routes to meet the needs of our passengers whenever feasible. Our current service area extends from Port Gamble to Burley in Kitsap County. (See the area map).

J.4 Regional Vanpool Program Interagency Agreement

Key Words: cooperation, regional, agreement

Interagency Vanpool Agreement.pdf

Key facts: This is an agreements between several jurisdictions on the allocation of 5307 earnings from vanpool operations.

J.5 Washington State Vanpool Investment Program

Key Words: Washington State, incentives, legislation

Washington State Vanpool Program.pdf

Key facts: Washington State leads the nation in vanpool investments, and has seen a 41% increase in vanpool riders from 2003 to 2007.

In 2003, the state legislature developed a 10-year transportation plan allocating \$30 million in grant funds to expand the vanpool program statewide. The funds are designated for public transit agencies and can only be used for capital costs associated with placing new vans on the road, or incentives for employers to increase employee vanpool use. Since 2003 over \$12 million has been invested to purchase 577 vans for 20 transit agencies.