

# VANPOOL

## Description

Vanpools provide registered users (usually living or working in a similar area) with an organized transit service. These programs have many benefits for urban areas, some of which include:

- Reduced congestion, vehicle travel, and emissions.
- Cheaper than a personal vehicle.
- Providing a service to residents with no personal vehicle.

Vanpools usually consist of 5 to 15 riders that pay to commute for long distances into a city or to a transit facility. The services also allow patrons to ride for free or at a discount. Employers and local governments sponsor vanpools by providing incentives to employees for riding (e.g., vouchers for transit, subsidized costs, discounted parking). Third-party vanpool operators may also be used to provide vans and administer the vanpool program.

Vanpools reduce the number of single-occupant vehicles on the road and improve the operation of the roadway segment due to the decreased volume. The lower demand and congestion levels reduce emissions in the area.

Vanpools are particularly valuable in supplying commuting services to people that may not have access to a personal vehicle or where established public transit service has not reached a job center. Vanpools have the potential to offer a less expensive option to driving alone and reduce costs to employers by improving tardiness and lowering the amount of parking required to serve an office or building complex.

## Target Market

Vanpooling works best in areas with little transit service and inadequate parking. This service is best paired with managed lanes that offer a price savings for vanpools and in areas with park-and-ride lots.



<b>Cost:</b>	●●○○○
<b>Time:</b>	Short
<b>Impact:</b>	Region
<b>Who:</b>	City/Private
<b>Hurdles:</b>	None

### *Congested Corridors where Trip Lengths Are Longer than 20 Miles*

Freeways and streets can become congested with commuters traveling from suburbs into the city or from one suburb to another. Vanpools traveling long distances to the city provide transportation options to the suburban population and remove vehicles from the road. The decrease in vehicles leads to reduced congestion, fuel use, and overall travel time on that road.

### *Downtown or Other Activity Centers*

Parking and congestion are major problems in the central city area and other large activity centers. Vanpools reduce the number of automobiles on the roadways, which in turn reduces congestion and parking demand.

## How Will This Help?

Vanpool programs reduce congestion by eliminating cars from the road. Consolidating people that would be traveling individually into

one large vehicle can remove more than 10 cars and increases the available capacity of the road.

Encouraging and implementing vanpool programs can be done at relatively low cost for all involved: user, employer, and the vanpool sponsor. The cost of using a vanpool service is typically lower than operating a personal car every work day, reducing the overall cost to the employee. To help employers, the businesses can receive subsidies from the local government for encouraging the use of vanpool services. The employer requires fewer parking spaces, and trip time is reduced for vanpools using managed lanes. The city's costs are reduced with fewer cars using the road, lowering maintenance, extending the lifespan of the road, and in the best cases, delaying major capacity increasing construction projects that can cost millions of dollars.

Vanpool programs lower auto emissions by removing cars from the road and allowing more efficient speeds. Consolidating a large number of people into one vehicle reduces the number of vehicle miles of travel and the emissions produced by vehicles on that road segment. Less congestion reduces vehicle idling time and rapid accelerations in stop-and-go traffic and decreases travel time.

### **Implementation Examples**

The cost to a vanpool customer is typically lower than that required to operate a personal vehicle. Vanpool passengers pay a monthly fare that covers the cost of the van lease and associated expenses such as maintenance and insurance. The vanpool passengers also divide the cost of fuel. The total amount per passenger is typically less than that of operating a personal auto. Vanpool passenger's overall travel time can be decreased when traveling on managed lanes with improved flow conditions.

**Dallas, Texas:** Dallas Area Rapid Transit (DART) has a vanpool program consisting of 174 leased vans resulting in a reduction of about

35 million miles traveled. The total annual cost of the program is about \$16,000 per vanpool.

**Phoenix, Arizona:** Valley Metro has a vanpool program consisting of 380 vans owned in-house. The program results in a reduction of about 55 million miles traveled. The total annual cost is about \$9,000 per vanpool.

### **Application Techniques and Principles**

Promoting and providing adequate information regarding how vanpools benefit the employers and employees are the important principles needed to implement a program. The initial push for pursuing these programs is typically done by the local government, but employers can also highlight the benefit to their workers. Promoters should display the numerous benefits of not driving, including the option of one fewer household vehicle and how the programs help the community with fewer cars on the road.

The city and employers can enact programs to help promote vanpool use. The city government can offer subsidies for businesses that use vanpools, or enact a pay-for-parking plan that increases personal vehicle parking costs. Employers can also offer incentives to increase or maintain involvement.

The overall management of the vanpool program depends on the available budget and preference of the local government. The local government can administer the vanpool program in-house while maintaining ownership of the vans, or local government can use a third-party company to provide vans and administer the program.

Vanpools require a support system to maintain adequate operations for the service area. Typically, this system includes collecting fares, purchasing or leasing new vans, finding room for new riders, scheduling and conducting van maintenance, paying for tolls and gas, and acquiring the necessary insurance. These programs are usually prevalent in trip patterns with an inadequate public transit option; commuters have the benefits of cheaper

transportation without requiring the city to serve relatively small travel demands.

### **Issues**

Vanpools can be implemented quickly and inexpensively by employers or third-party operators. The motivation for employers to provide vanpool services, however, is typically based on the level of interest from the employees. Employers are more apt to provide vanpools if employee interest is high. Public agencies should encourage and facilitate vanpool services through incentives, subsidies, marketing, and regulation.

### **Who Is Responsible?**

A local government or regional planning agency bears a majority of the responsibility for overseeing vanpool programs. It is the local government's responsibility to promote and encourage businesses to use the program and market to the general public. Because these programs typically exist in areas where there is limited or no public transit service, the public may be unaware of the vanpool option.

### **Project Timeframe**

Implementing a vanpool program has a relatively short timeframe when compared to other mitigation techniques. The time needed for vanpools includes promotion, scheduling, administrating, and acquiring the necessary vehicles to fulfill the needs of the plan. A typical vanpool program takes between six months and one and a half years to develop and implement. The timeframe is dependent on the program structure. A local government can more quickly contract out a vanpool program to a third-party, than to purchase, implement, and administer the program in-house.

### **Cost**

Vanpool programs have a lower cost than many other congestion mitigation techniques. The primary costs come from purchasing/leasing the necessary vehicles, funding basic operating costs (i.e., gas and maintenance), and ensuring adequate administration for the program. Fuel is about 40 to 60 percent of the required cost. Most vanpool programs are a pay-to-use service and also receive some additional funding from the government to help reduce the overall monetary impact from program initialization and maintenance. The vehicle is often assigned to a primary driver who is given a price break on their subscription fee and sometimes allowed to use the vehicle for personal travel. A vanpool study conducted by TTI in 2010 found that total annual cost per van ranged from about \$9,000 to \$15,000 for vanpool programs owned and administered in-house by the local government. Programs owned and administered by third-party contractors ranged from \$15,000 to \$19,000 annually per van.

### **Data Needs**

Vanpool programs do not require large amounts of data for evaluation. The information required on the level of average commuter trip distance, annual ridership, average daily ridership, and passengers per van is relatively stable. Other useful information includes traffic volumes on major roadway segments, and typical travel times for each participating area. Practitioners can also use information regarding the number of vanpools, the number of participants in each area, and the schedules of the riders for logistical purposes and to ensure the vanpools meet the travel needs of current and potential users.

## Vanpool Best Practices

- Type of Location: Activity centers attracting many suburban commuters.
- Agency Practices: Strong program support from administrators and policy makers.
- Frequency of Reanalysis: Annually.
- Supporting Policies or Actions Needed: Incentives or subsidies to vanpool sponsors.
- Complementary Strategies: Managed lanes, park and ride transit service, and telework options.

## For More Information

Crawford, J.A., T.B. Carlson, W.L. Eisele, B.T. Kuhn. *A Michigan Toolbox for Mitigating Traffic Congestion*, Texas Transportation Institute, Texas A&M University, College Station, TX, September 2011.

*H-GAC Commute Solutions: An Evaluation of Selected Elements*. Texas Transportation Institute, College Station, TX, January 2011.

*Mobility Improvement Checklist: Managing Demand: Vol. 1*. Texas Transportation Institute, Texas A&M University, College Station, TX, September 2004.