

Appendix K

**Truck Traffic and
Vehicle Occupancy Counts**

Source:
2004 Transportation Monitoring Report, SCCRTC

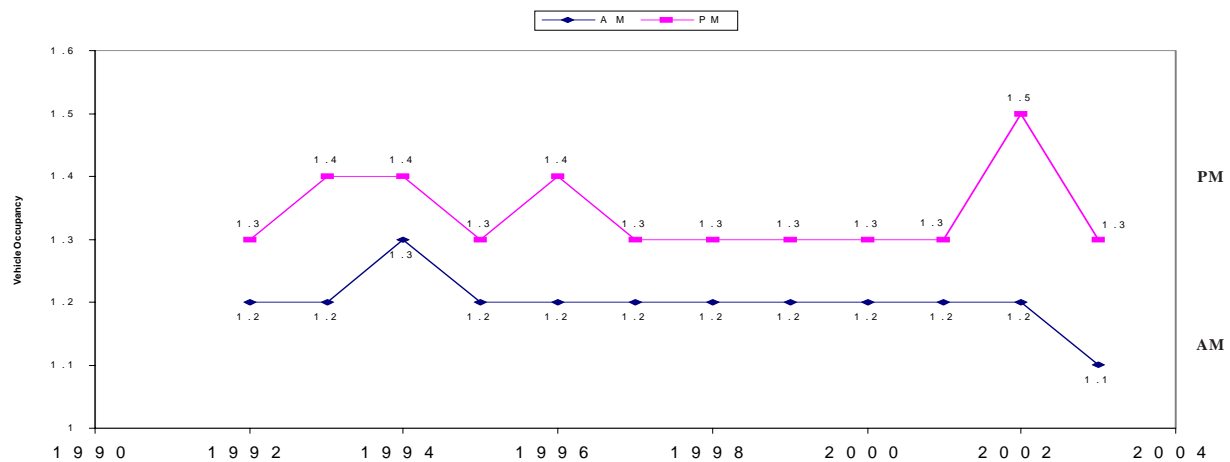
Vehicle Occupancy Counts

Definition: Vehicle occupancy represents the average number of persons per vehicle and indicates the number of “person trips” per “vehicle trip.”

In May 2003, vehicle occupancy and truck counts were taken during peak morning and evening periods for Highway 1 north of 41st Avenue and Highway 17 at the summit. Vehicle occupancy counts provide a means for monitoring the rate of ridesharing (carpooling, vanpooling or riding the bus) in a corridor. **A significant rise in vehicle occupancy increases the efficiency of the existing transportation system**, as well as affects the planning of road system improvements. Increased auto occupancy and, therefore, increased passenger miles traveled per vehicle, is a source of substantial fuel savings, cost savings, and reduction in air pollution and congestion. Any significant increase in auto occupancy reduces the need for costly improvements to the road system by increasing the number of people who can travel on the existing system.

Appendix E shows the totals calculated from May 2003 Vehicle Occupancy Counts. Prior to 2000, morning count data were collected in October from 6:30 to 9:30 a.m. Count data are now collected in May from 5:45 to 9:00 a.m. and 3:00 to 6:30 p.m., since commute hours have expanded as more commuters leave earlier to travel to work. Comparisons of the last eleven years of vehicle occupancy data on Highway 17 and Highway 1 are presented in **Figures 5 and 6**, and recent results suggest a decline in overall vehicle occupancy. Although this survey is conducted only one day at each location, it provides baseline information for those segments of highway. On average, vehicle occupancy is higher during the evening commute. One possible reason for this difference is the increased number of people running errands and traveling to various activities together. Therefore, the morning vehicle occupancy is often considered more representative of patterns among the commuter population.

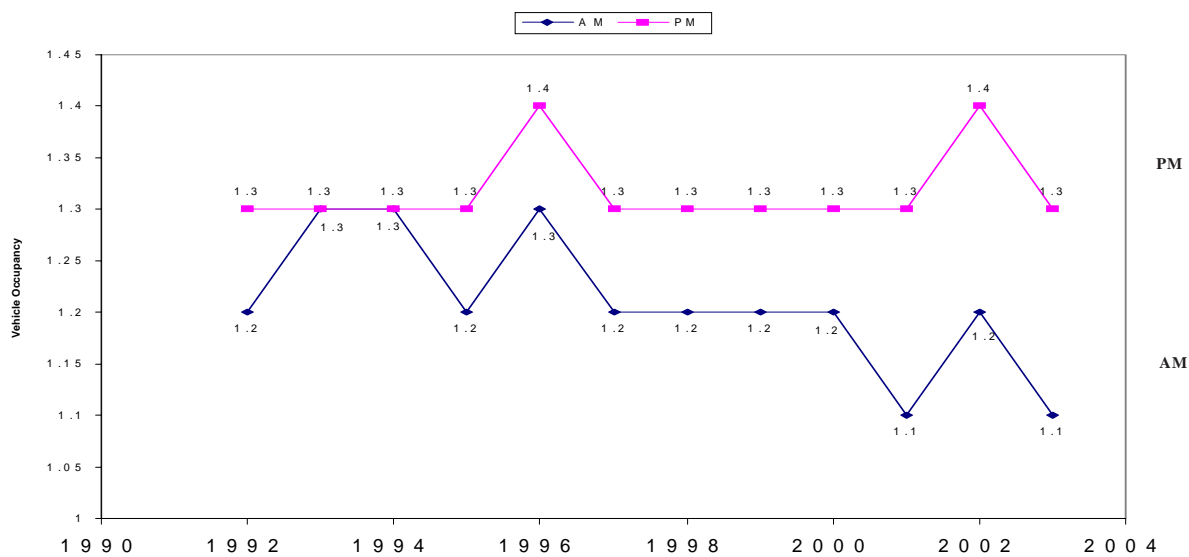
Figure 5: Vehicle Occupancy Data for Hwy 17, Average 1992 to 2003



Source: SCCRTC

- On Highway 17, vehicle occupancy counts show that 21% of morning commuters traveling over the hill to the San Francisco/San Jose Bay Area between the hours of 5:45 and 9:00 a.m. rideshare (carpool, vanpool, or ride the bus).
- Vehicle occupancy counts show that 88% of automobiles traveling on Highways 1 and 17 during the a.m. peak hours are occupied by just one person; 79% are single occupant vehicles during the p.m. peak.

Figure 6: Vehicle Occupancy Data for Hwy 1, Average 1992 to 2003



Source: SCCRTC



Truck Counts

The number of trucks on Highway 1 north of 41st Avenue and on Highway 17 at the summit is shown with the vehicle occupancy counts in **Appendix E**. Truck volumes on Santa Cruz County's highways are highest in the morning hours. Highway 17 southbound in the morning had the highest overall percentage of truck traffic in May of 2003, approximately 9% of all vehicles. Trucks constitute 3% of morning traffic on Highway 1 in both directions. For the purposes of these truck counts, only commercial trucks with more than two axles are counted. Pickups and other small trucks are not counted.

According to Caltrans, trucks of all types (including those with two axles) travel an average of 134,025 miles (1999) on Santa Cruz County highways every day, representing five percent of all daily vehicle miles traveled. **Appendix E-3** shows details of truck VMT on Santa Cruz by axle type from 1990 through 1999.