

# Analysis Brief Congestion



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Continuing our series of briefs on congestion, this brief looks at the trends, amount, and characteristics of non-work vehicle trips during the peak periods. Looking at an average weekday, non-work travel now constitutes 56 percent of trips during the AM peak and 69 percent of trips during the PM peak.

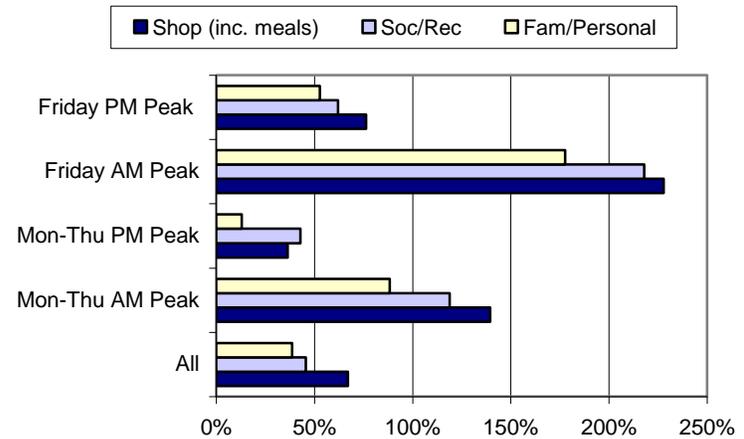
Understanding who is making these trips and for what purposes is important as the transportation community explores several congestion mitigation strategies in large urban areas and throughout the U.S. transportation system.

Travelers know that Friday peaks are the worst. According to the NHTS, the level of non-work travel during Friday AM peak grew by almost 200 percent between 1990 and 2001. Surprisingly, typical workday peak periods are also experiencing increased non-work travel. As shown in Exhibit 1, Monday through Thursday peak period non-work vehicle trips have increased by 100 percent in the AM and 35 percent in the PM.

Besides commuting to work, people travel during the peak to take their child to school, run out to buy milk before work, go to the gym, arrive at the doctor's office early to avoid a wait, or pick up their dry cleaning. Exhibit 2 shows the relative proportion of these kinds of vehicle trips during the AM peak that are not incidental stops during a commute. Such incidental stops are defined as stops of 30 minutes or less. Hence, most trips to the doctor's office or gym are included in Exhibit 2, while a short stop to drop a child at school while the driver continues on to work would not.

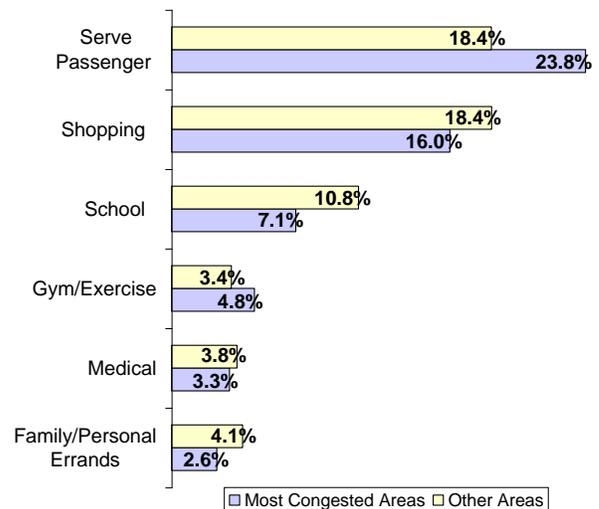
A note on Exhibit 2: About 44 percent of all vehicle trips in both congested and other areas made during the am peak are not to work or part of a work trip. The graph shows the most common purposes adding up to about 60 percent of all non-work trips, miscellaneous other purposes account for the remaining 40 percent.

**Exhibit 1 – Percent Growth in Peak Period Vehicle Trips for Non-Work Purposes, 1990-2001**



Source: National Household Travel Survey Data Series  
Time Periods:  
AM Peak: 6:00-9:00 AM  
PM Peak: 4:00-7:00 PM

**Exhibit 2 – Percent of AM Peak Period Vehicle Trips Not Related to a Commute by Purpose**



Source: National Household Travel Survey Data Series

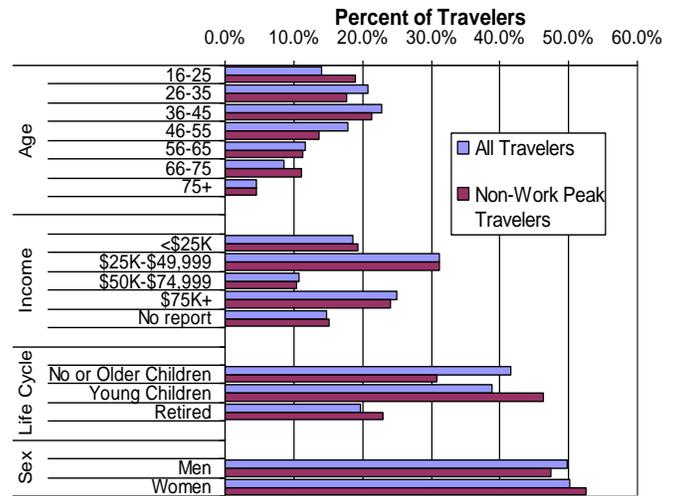
Also shown in Exhibit 2 is a comparison of these AM peak trip purpose distributions for the 13 most highly congested areas (as defined by TTI) and all other geographic areas. About 44 percent of all vehicle trips in both congested areas and other areas made during the AM peak are not to work or related to a work trip. However, the 13 areas with the worst congestion had slight shifts in the relative purposes of non-work trips. In the most congested areas, travelers are less likely to make school and shopping trips during peak periods and more likely to drive a passenger somewhere and go to the gym.

Exhibit 3 shows the traveler characteristics of people making non-work trips during the peak as compared to all travelers. While persons between the ages of 36 and 45 make up 23 percent of all non-work peak travelers, persons 16-25 and over the age of 65 are more likely to make non-work trips during peak periods as compared to their total travel.

Income has little effect on the propensity to make non-work trips during peak periods; however, lifecycle is an important factor. People with young children at home make up 39 percent of all travelers and over 46 percent of people making non-work trips during peak periods. In comparison, 31 percent of non-work peak travelers have no children in the home and 23 percent are retired. Women are slightly more likely than men to make non-work travel during the peak.

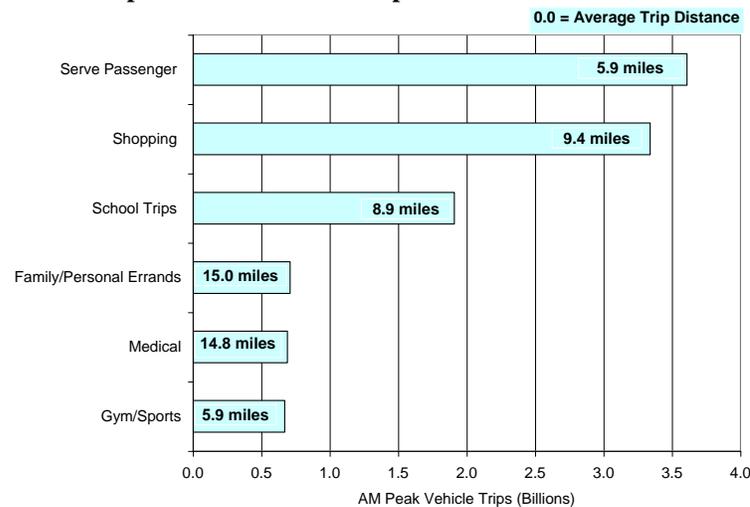
The number of non-work trips during the AM peak for all areas, large and small, along with the average trip distance, is shown in Exhibit 4. Dropping off a passenger is the driver's purpose for 3.6 billion vehicle trips, adding 21.2 billion vehicle miles of travel to the AM peak. Over 78 percent of the trips to drop someone off (serve passenger) are driving children to school. The remaining 12 percent of serve passenger trips are to drop someone at work.

**Exhibit 3 – Percent of Traveler: All Travel and Peak Period Travel**



Source: National Household Travel Survey

**Exhibit 4 – Number of AM Peak Vehicle Trips and Average Trip Distance that are not part of Commutes**



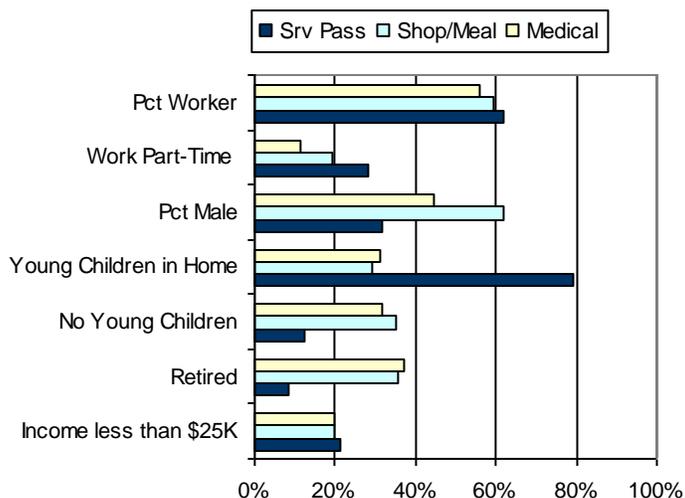
Source: National Household Travel Survey

The average American is taking approximately four more trips a week than a decade ago for non-work purposes; travel for eating out, recreational activities, and shopping have all increased. Shopping (including getting a meal) is the driver’s purpose for 3.3 billion vehicle trips, adding 31 billion vehicle miles of travel to AM peak volumes.

The characteristics of people who make non-work trips in the AM peak vary by the type of trip (Exhibit 5). While most are workers, a larger portion of the people dropping passengers are women, a larger portion of the people shopping (including getting a meal) are men. Nearly 80 percent of the people who drop a passenger during the AM peak live in households with young children. Retired people are more likely to shop or go to the doctor’s office.

The demand side of congestion begins with people — who they are, what they need to accomplish in a day, and when they choose (or have time) to travel. In dealing with daily congestion, people may change the route they travel, or the times they travel. Some

**Exhibit 5 – Characteristics of People Making AM Peak Vehicle Trips by Purpose**



Source: National Household Travel Survey

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