Parking and Transportation Study Report
Fall 2002 Update

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Summary

- Despite higher enrollments, Fall 2002 student parking demand was lower than Spring 2002
- Student demand declined during Fall 2002 with a surplus halfway through the semester
- Solo driving comprised 79% to 89% of car trips in Fall 2002
- Solo driving to carpool ratios were statistically equivalent between Fall and Spring 2002
- Ridership was 1.2 people per car for Fall and Spring 2002
- Currently there appears to be adequate staff, disabled, and motorcycle parking
- Student parking demand could be reduced further by promoting carpooling and alternative transit and striping or chalking overflow parking areas to increase parking efficiency

Introduction and Methods

This report is a follow up of efforts undertaken in Spring 2002 to improve access to the campus. Efforts included adding a 147 space parking lot and beginning to promote alternative transit. This report compares unmet student demand, staff parking, and mode of transit between Fall 2002 and Spring 2002.

Gavilan Research and Parking Enforcement personnel collected data on parking lot utilization using the attached form. Prior research has found Wednesday from 10:15 am to 10:45 am to be the most impacted time for parking which became time during which personnel surveyed parking lots for empty spaces. Student parking space demand is defined as the number of vehicles parked in the 3 overflow areas (along the Athletic Field, the lot near Mesa Road by the North Entrance, and the lawn around the Occupational Education building when open for parking) minus the number of empty student spaces. Research and Parking Enforcement personnel determined ridership by mode of transportation by observing vehicles at the North entrance before and after the 10:10 am Wednesday class start time. The Fall 2002 ridership observation occurred September 18th 2002 and was compared to the Spring 2002 February 6th observation. The Santa Clara Valley Transit Authority provided data on bus and paratransit ridership to Gavilan College.
Results and Discussion

Student demand for parking fell by an average of 14 spaces per week during the semester ($R^2 = 0.85$, $p = 0.0002$, Figure 1). Student parking demand became negative halfway through the semester indicating surplus student parking for the second half of the semester. Fall 2002 student demand was less than Spring 2002 demand (Figure 2). This decrease in demand is despite a 7% increase in enrollments at the main campus between 8 am and 12 pm and probably due to the addition of 147 additional student parking spaces for Fall 2002.

Total empty staff parking spaces fluctuated between about 10 and 35 spaces (Figure 3). In general, there were more empty staff parking spots in Fall 2002 than Spring 2002 (Figure 4).

The vast majority of vehicles observed both semesters contained single occupants (Figure 5) with an average ridership of 1.2 people per car. Only 2 bicycles were observed on the observation date in Fall 2002.

Conclusions and Recommendations

Staff, handicapped persons, and motorcycle riders have consistent surplus parking. In addition, student parking has definitely improved. This improvement cannot be explained by more students carpooling, bussing, or biking as there was no indication of a change in student transit behavior. It is more likely that this improvement is due to the additional parking installed prior to the Fall semester. However, the student experience of parking varies greatly as the semester progresses with a shortage at the beginning of the semester and a surplus at the end. This may result in a perception of inadequate student parking by some especially during the first few weeks of a term. Such a perception could be improved by promoting an understanding of the change in parking during a term and the impact of solo commuting on parking. Student parking demand could be reduced further by promoting carpooling and alternative transit as well as striping or chalking overflow parking areas to increase parking efficiency.
Figure 1. Fall 2002 unmet student parking demand at peak hour. Red is negative demand.

Figure 2. Average number of student parking spaces demanded during peak hours from Fall 2002 to Spring 2002. Note that main campus enrollments between 8 am and 12 pm were 7% higher in Fall 2002 than Spring 2002 and 147 parking spaces were added for Fall 2002.
Figure 3. Fall 2002 empty staff parking at peak hour

Figure 4. Average number of empty staff parking spaces between Fall and Spring 2002.
Figure 5. Private Vehicle Occupancy at Gavilan College during morning peak hours at the beginning of the semester at the North Entrance. Red bars represent 95% confidence intervals. Their overlap indicates no significant difference between semesters.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Percent of trips by all modes</th>
<th>Percent of trips by car</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Spring 2002</td>
<td>Fall 2002</td>
</tr>
<tr>
<td>Solo Driver</td>
<td>69%</td>
<td>68%</td>
</tr>
<tr>
<td>2 person Carpool</td>
<td>20%</td>
<td>25%</td>
</tr>
<tr>
<td>3 person Carpool</td>
<td>6%</td>
<td>0%</td>
</tr>
<tr>
<td>4+ person Carpool</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Bus/ Paratransit</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Bicycle</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Walk</td>
<td>0%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Note: Error is about ± 5%.