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Executive Summary

After fifteen years of operation, the Husky Stadium Expansion Parking Plan and Transportation Management Program (TMP) continued to fulfill its primary goal of "accommodating a sellout crowd of 72,200 with less reliance on parking in the residential areas near campus."

This year, data were collected by conducting a random intercept survey of game attendees as they entered the gates at Husky Stadium on October 5th. 1,035 surveys were attempted, with 171 refusals and 861 usable responses. Reported game attendance was 71,337 on the survey date. Results are estimated within a confidence interval of +/- 3.3% at 95% confidence.

Key findings of this report are presented below:

- Game attendees traveled to the stadium using these modes (rounded to nearest hundred):
  - 2,600 (3.6%) drove alone. 33,000 (46.2%) carpooled. The average auto occupancy was 3.0 persons.
  - 23,000 people (32.3%) arrived by transit and charter buses.
  - 9,300 people (13.0%) walked to the game.
  - 2,300 people (3.3%) arrived by boat.
  - 700 people (0.9%) arrived by bicycle.

- Parking price incentives increased the number of 3+ carpools on campus. Average auto occupancy was highest on campus parking lots and lowest in surrounding areas.

- More than 70% of attendees who arrived in autos parked on campus. However, it is estimated that more than 2,000 autos parked in surrounding neighborhood parking impact areas.

- The City of Seattle Transportation Department identified 133 parking violations in the Montlake Special Event Restricted Parking Zone on November 9th compared to 91 violations reported in 1986, and 220 violations in 2001.
Introduction

The University of Washington hosted seven football games at Husky Stadium during the 2002 season, listed in Table 1:

Table 1. 2002 Husky Football Games

<table>
<thead>
<tr>
<th>Date</th>
<th>Kickoff Time</th>
<th>Opponent</th>
<th>Reported Game Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 7th</td>
<td>12:30 pm</td>
<td>San Jose State</td>
<td>70,147</td>
</tr>
<tr>
<td>September 21st</td>
<td>7:00 pm</td>
<td>Wyoming</td>
<td>72,898</td>
</tr>
<tr>
<td>September 28th</td>
<td>12:30 pm</td>
<td>Idaho</td>
<td>70,070</td>
</tr>
<tr>
<td>October 5th</td>
<td>12:30 pm</td>
<td>California</td>
<td>71,337</td>
</tr>
<tr>
<td>October 12th</td>
<td>12:30 pm</td>
<td>Arizona</td>
<td>71,016</td>
</tr>
<tr>
<td>November 2nd</td>
<td>12:30 pm</td>
<td>UCLA</td>
<td>72,017</td>
</tr>
<tr>
<td>November 9th</td>
<td>12:30 pm</td>
<td>Oregon State</td>
<td>72,557</td>
</tr>
<tr>
<td><strong>Season Average</strong></td>
<td></td>
<td></td>
<td><strong>71,435</strong></td>
</tr>
</tbody>
</table>

During the 2002 season, the Husky Stadium Expansion Parking Plan and Transportation Management Program (TMP) was executed to provide transportation options and to discourage guests from driving alone. Alternative modes of transportation were fostered and encouraged, including:

- carpools
- transit
- charter buses
- boats
- bicycles

The purpose of this document is to monitor the effectiveness of the TMP during the 2002 season. To monitor TMP effectiveness, the University uses several indicators:

- transportation mode choice
- average auto occupancy
- parking violations in the Montlake Special Events Restricted Parking Zone
- neighborhood parking impacts

This report explains the TMP efforts in 2002. Secondly, it details the methodology used to collect the data related to performance indicators and discusses the results. It illustrates travel mode choice in 2002 and draws comparisons to previous years. Lastly, it draws conclusions and makes recommendations for improving the data collection.
Background

In 1987, Husky Stadium was enlarged to accommodate 72,200 spectators. The TMP was first implemented in 1987 to mitigate the additional impacts of traffic on the surrounding community. Due to the nature of the football games, large volumes of people travel to and from Husky Stadium over short time periods. The TMP is in place to reduce the volume of vehicles in the area before and after football games and reduce parking impacts on surrounding neighborhoods.

The Seattle City Council Resolution 27435, relative to the TMP, requires the University and City of Seattle to collect data during each football season. The data are used to monitor the performance of the TMP. The 1986 data collection is a baseline for comparing impacts after the stadium expansion in 1987. This document summarizes the data collected for the 2002 season and compares them to the past data.

Limitations of Past Studies

Prior to 2002, data were collected by various counting and estimation methods used to measure the average number of attendees arriving at the games by several modes:

- auto (parking on campus)
- transit bus
- charter bus
- boat

The limitations of these counting and estimation methods are presented in Table 2.

Table 2. Past Estimation Method Limitations

<table>
<thead>
<tr>
<th>Mode</th>
<th>Estimation Method Limitation</th>
<th>Possible Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>auto</td>
<td>All autos parked on campus lots were counted, including those carrying people who did not attend the games. Autos parked off campus were not counted.</td>
<td>overestimated the attendees who arrived by autos parked on campus</td>
</tr>
<tr>
<td>transit bus</td>
<td>Passengers who rode regular transit and Husky Special transit service but alighted at bus stops before reaching the stadium (including stops at Montlake, UW Med Center, Stevens Way, Campus Pkwy and 15th Ave) were not counted. Many passengers may have alighted buses before arriving at the stadium when the buses were caught in congestion.</td>
<td>underestimated attendees who arrived by transit bus</td>
</tr>
<tr>
<td>boat</td>
<td>Estimates of passengers in moored boats were based on boat size, not the actual number of passengers.</td>
<td>overestimated attendees who arrived by boat</td>
</tr>
</tbody>
</table>
The Department of Intercollegiate Athletics (ICA) provided paid attendance numbers used to estimate the number of attendees who arrived by *Other Modes*. Auto, bus and boat riders were deducted from the paid attendance, and the remaining group was assumed to have arrived at the stadium by *Other Modes*:

- auto (parking off campus or in surrounding neighborhoods)
- walking
- bicycle
- auto (dropped off)

In 2001 these modes accounted for 22,283 people, or 31.1% of game attendance. This large group made it difficult to draw conclusions about TMP performance and impacts on parking in surrounding neighborhoods.

This group was estimated based on paid attendance, rather than actual attendance. Paid attendance may have been greater than actual attendance if the weather was poor or if the Huskies were playing an unpopular opponent. Therefore, the *Other Modes* group may also have been overestimated.

The Transportation Office also used game day aerial photographs to determine parking impacts in surrounding neighborhoods. The aerial photographs were studied and compared to a 1986 non-game day photograph to make general conclusions about game day neighborhood parking impacts, but there was no counting method to determine the actual parking impacts. Trees and other obstructions made it difficult to analyze the photographs and make conclusions. Also, the photographs did not distinguish between autos for people attending Husky games and other autos, including those resulting from sixteen years of development in the area.

**Change in Data Collection Method**

Due to these limitations, the Transportation Office used a different data collection method in 2002. A random face-to-face intercept survey was conducted as attendees entered the Husky Stadium gates for the October 5th game. This method was modeled on a transportation survey conducted in 2001 by Transportation Solutions, Inc. that analyzed the parking impacts resulting from the Seattle Seahawks’ temporary use of Husky Stadium.

The Transportation Office modified the survey method to estimate the number of people arriving at Husky football games by various modes:

- auto
- bus (transit and charter)
- walking
- boat
- bicycle
- other

Additionally, the survey was designed to determine auto occupancy levels and parking location choices for those who arrived by auto.
TMP Elements

Carpool Incentives
The TMP used a pricing system to provide incentives for carpooling. During the 2002 season, parking on campus cost $10.00 for vehicles with three or more persons, $15.00 for vehicles with less than three persons, and $25.00 for motor homes and buses. All prices increased from 2001 prices ($7.00, $10.00 and $20.00 respectively). Also, the TMP used marketing information to encourage carpooling. The 2002 Husky Football Transportation Guide included the message “When you share the ride you’ll save time and money and have a lot more fun than going alone.”

Transit

Free Regular Service
One of the goals of the TMP is to encourage football game attendees to ride public transit to the stadium. All ticket-holders may ride King County Metro buses free to the stadium. Sound Transit Express route 550 is also free between Bellevue and downtown Seattle, where passengers can transfer to buses headed to the stadium.

Free Park and Ride Service
King County Metro provided special game day bus service from eight Park & Ride lots in the region, shown in Figure 1. Fans parked free at the Park & Ride lots and rode free on Metro buses to Husky Stadium. Buses began boarding at the lots two hours before the kickoff, and left every 20 minutes. Following the games, fans boarded the buses at special locations to return to the designated lots, as shown in Figure 2.

On average, Metro provided 187 inbound trips and 146 outbound Park and Ride bus trips each game.
Free Husky Special Service

King County Metro added four special bus routes from downtown Seattle and Ballard to Husky Stadium during each game. The service started one hour and forty minutes before each kickoff. Figure 3 illustrates these special routes.

King County Metro also added Husky Special service on Route 75 between Lake City and Husky Stadium. One trip left Lake City 65 minutes before kickoff during each home game. Figure 4 illustrates this special route.

On average, Metro provided 27 inbound and 31 outbound Husky Special bus trips each game.
**Boats**
For private vessels, boat moorage was available on a season or single game basis. The price of the permit was dependent on the length of the vessel. Single game permits were available through the Tyee Office by the Thursday before each home game. Private charter boat companies also offered boat tours to the game.

Passengers in boats anchored off shore could flag down a boat shuttle service. For $4.00, the shuttle took the fans to the Husky Stadium boat dock. After the game, the shuttle returned the fans to their boats.

**Bicycles**
The University of Washington Transportation Office continued its program to provide additional bike lock-up space by adding additional bicycle racks near stadium entrances during the football season.

**Restricted Parking Zone**
In some surrounding neighborhoods, Special Event Restricted Parking Zones (RPZ) limited game day parking to neighborhood residents. Seattle’s parking enforcement officers gave citations to non-residents who parked in the restricted zones.

**Marketing**
The Transportation Office produces and distributes a Husky Football Transportation Guide every year. 21,500 brochures were printed in 2002 and mailed to all season ticket holders and to individuals who requested the information. The guide provided contact information as well as information about TMP elements, parking and post-game traffic routing. Individuals who purchased their tickets on-line received a link to the electronic version of the guide. The information was also available on-line at the University's U-PASS web site (www.washington.edu/upass).

**Data Collection**

**Survey Process**
On October 5th, the UW Transportation Office conducted a survey of football game attendees as they passed through the gates at Husky Stadium. Thirteen teams of two surveyors were distributed to the seven stadium gates proportionally to the number of ticket-takers stationed at each gate. The teams attempted to survey every 45th patron who entered the gate in an effort to attempt 1,500 random surveys and complete 1,050 surveys. The survey form is displayed in Figure 5.

The survey began with the question: “Did you drive or ride in a car driven to the game today?”
If the answer was yes, the respondent was asked to reveal the number of people in the auto. The respondent was also prompted to point to a color-coded map and indicate where the vehicle was parked.

If the answer was no, the respondent was asked to reveal the mode he or she used to travel to the game.

<table>
<thead>
<tr>
<th>REFUSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Drive / ride to the game today?</td>
</tr>
<tr>
<td>YES</td>
</tr>
<tr>
<td>Or mode:</td>
</tr>
<tr>
<td>BIKE</td>
</tr>
<tr>
<td>BOAT</td>
</tr>
<tr>
<td>2. # of people in the car?</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>3. Parking Area:</td>
</tr>
<tr>
<td>A (on campus, yellow)</td>
</tr>
<tr>
<td>B (retail area, red outline)</td>
</tr>
<tr>
<td>C (neighborhood, inside purple outline)</td>
</tr>
<tr>
<td>D (out of survey area, outside purple outline)</td>
</tr>
<tr>
<td>E (patron doesn’t know)</td>
</tr>
</tbody>
</table>

Figure 5. Survey Form

Data Collection Issues

1,035 surveys were attempted, much less than the goal of 1,500. Actual game attendance may have been less than reported attendance, contributing to the failure to reach the goal of 1,500 attempted surveys. However, the response rate was much higher than expected (83.5%). Only 171 fans refused the survey. Three surveys were not usable, leaving 861 usable responses, less than the goal of 1,050.

With a total population of 71,337 fans (reported paid attendance), the results are within a confidence interval of +/- 3.3% at 95% confidence.

The population was defined as game attendees who pass through the gates, and the sample was taken from only this population. This population did not include game workers who did not pass through the gates, although these workers account for a significant number of trips to the game.

Like most surveys, this survey was subject to a non-response error as a result of people who refused to take the survey. The numbers of survey refusals by gate are listed in Table 3.
Table 3. Survey Refusals by Gate

<table>
<thead>
<tr>
<th>Gate</th>
<th>Attempted Surveys</th>
<th>% of Attempted Surveys</th>
<th>Refusals</th>
<th>Refusal rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>231</td>
<td>22.3%</td>
<td>52</td>
<td>22.6%</td>
</tr>
<tr>
<td>NE</td>
<td>29</td>
<td>2.8%</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>NW</td>
<td>178</td>
<td>17.2%</td>
<td>18</td>
<td>10.1%</td>
</tr>
<tr>
<td>S</td>
<td>74</td>
<td>7.2%</td>
<td>3</td>
<td>4.1%</td>
</tr>
<tr>
<td>SE</td>
<td>37</td>
<td>3.6%</td>
<td>1</td>
<td>2.7%</td>
</tr>
<tr>
<td>SW</td>
<td>247</td>
<td>23.9%</td>
<td>70</td>
<td>28.3%</td>
</tr>
<tr>
<td>W</td>
<td>239</td>
<td>23.1%</td>
<td>27</td>
<td>11.3%</td>
</tr>
<tr>
<td>Total</td>
<td>1035</td>
<td>171</td>
<td>16.5%</td>
<td></td>
</tr>
</tbody>
</table>

Although the overall refusal rate was quite low, the refusal rate was noticeably higher at the N and SW gates. These two gates were assumed to be heavily used by auto users because they were the most convenient gates serving the large parking lots E1 and E11. As a result of the high refusal rates at these gates, the survey may have undersampled auto users. Therefore, the results may have underestimated the number of people who arrived by auto and overestimated the number of people who arrived by other modes.

**Results**

Surveyors were instructed to ask the following questions, in this order:

- **Q1** Did you drive or ride in a car driven to the game today?
  - If respondent answered ‘yes’ to Q1:
    - **Q1-a** How many passengers, including you, came to the game in that vehicle?
    - **Q1-b** Please point to your approximate parking location on this map.
  - If respondent answered ‘no’ to Q1:
    - **Q2** By which transportation mode did you come to the game today?

**Travel Mode Choice**

Nearly half of all attendees traveled to the game by auto, including 46.2% in a carpool and 3.6% in a single-occupant vehicle (SOV). Buses and walking were the next most popular travel modes. Mode choices are listed in Table 4.
Table 4. Travel Mode Choice

<table>
<thead>
<tr>
<th>Mode</th>
<th>Responses</th>
<th>Percentage of Responses</th>
<th>Share of Attendance *</th>
<th>(rounded to nearest hundred)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpool</td>
<td>398</td>
<td>46.2%</td>
<td>33,000</td>
<td></td>
</tr>
<tr>
<td>Bus</td>
<td>278</td>
<td>32.3%</td>
<td>23,000</td>
<td></td>
</tr>
<tr>
<td>Walk</td>
<td>112</td>
<td>13.0%</td>
<td>9,300</td>
<td></td>
</tr>
<tr>
<td>SOV</td>
<td>31</td>
<td>3.6%</td>
<td>2,600</td>
<td></td>
</tr>
<tr>
<td>Boat</td>
<td>28</td>
<td>3.3%</td>
<td>2,300</td>
<td></td>
</tr>
<tr>
<td>Bike</td>
<td>8</td>
<td>0.9%</td>
<td>700</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>0.7%</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>861</strong></td>
<td><strong>100%</strong></td>
<td>**71,300 **</td>
<td></td>
</tr>
</tbody>
</table>

* estimates based on paid attendance reported by ICA, not actual attendance
** column does not total 71,300 due to rounding errors

Like previous years, game attendance is based on reported paid attendance, not actual attendance. To the extent that paid attendance exceeds actual attendance, the estimated number of people traveling by each mode is overestimated.

**Auto Occupancy and Parking**

Most people (92.8%) who traveled to the game by auto came in a carpool. Only 7.2% arrived in a SOV. Auto occupancy is summarized in Table 5.

Table 5. Auto Occupancy

<table>
<thead>
<tr>
<th>Auto Occupancy</th>
<th>Percent of Attendees Who Arrived in Autos</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7.2%</td>
</tr>
<tr>
<td>2</td>
<td>47.1%</td>
</tr>
<tr>
<td>3</td>
<td>9.6%</td>
</tr>
<tr>
<td>4</td>
<td>24.2%</td>
</tr>
<tr>
<td>5+</td>
<td>11.9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

The average auto occupancy was 3.0 people. While it is estimated that 35,544 people arrived at the October 5th game by auto, the total number of autos driven to the game was estimated at 11,848. These autos were parked in one of four areas:

- campus parking lots
- retail areas (University Way area and University Village)
- neighborhoods within the TMP parking impact area
- neighborhoods outside the TMP parking impact area

TMP parking impact areas are illustrated in Figure 8. Based on average occupancies by parking area, the numbers of autos parked in each area were estimated and listed in Table 6.
Table 6. Average Occupancy of Parked Autos

<table>
<thead>
<tr>
<th>Parking Area</th>
<th>Total Occupancy</th>
<th>Average Occupancy</th>
<th>Autos</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - campus</td>
<td>25,381</td>
<td>3.2</td>
<td>7,982</td>
</tr>
<tr>
<td>B - retail</td>
<td>1,049</td>
<td>2.4</td>
<td>442</td>
</tr>
<tr>
<td>C - neighborhood</td>
<td>5,275</td>
<td>2.6</td>
<td>2,071</td>
</tr>
<tr>
<td>D - out of area</td>
<td>1,519</td>
<td>2.3</td>
<td>663</td>
</tr>
<tr>
<td>E - didn't know</td>
<td>2,320</td>
<td>3.4</td>
<td>690</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>35,544</strong></td>
<td><strong>3.0</strong></td>
<td><strong>11,848</strong></td>
</tr>
</tbody>
</table>

*estimates based on paid attendance reported by ICA, not actual attendance

Over 70% of attendees who arrived in autos parked on campus, and more than two-thirds of autos were parked on campus. Autos parked on campus had a higher average occupancy than those parked in other areas, reflecting the campus parking price incentive for 3+ carpools. Compared to 2001, there were over 200 additional 3+ carpools per game in 2002 according to Parking Services sales reports.

The 3+ carpool pricing incentive on campus influenced attendees who arrived in autos with one or two people to seek parking off campus. Autos in surrounding parking impact areas had lower occupancy than autos on campus. Also, autos in retail areas and outside the parking impact areas had the lowest average occupancy.

Game day parking location choices are illustrated in Figure 6.

![Figure 6. Parking Area Choice for Game Attendees Arriving by Auto](image)

Surrounding areas were also impacted by parking. Almost one-third of autos were parked off campus or in unidentified areas. Over 2,000 autos were parked within the neighborhoods identified as parking impact areas, and 663 autos were parked in neighborhoods outside the impact areas. 442 autos were parked in retail areas.
Prior to 2002, autos parked on campus were estimated when Parking Services counted vacant parking spaces on game days. The number of passengers was estimated using the annual game day Average Vehicle Occupancy (AVO) survey. All vehicles parking on campus lots on game day were counted, even if the occupants were not attending the game. 11,223 autos were estimated carrying 28,788 people in 2001, giving an average occupancy rate of 2.57 people. Fans who arrived in autos parked off campus were not counted but instead were included in the Other Modes category.

On October 5th 2002 the Parking Services count yielded 11,009 autos, which included autos carrying people not attending the football game. The AVO survey was not conducted and the number of passengers was not estimated. In comparison, the survey results reported here estimated 7,982 autos carrying game attendees.

**Buses**

Nearly one-third of respondents (32.3%) arrived by transit and charter buses. This represents about 23,033 people who arrived by bus on a typical game day.

However, bus ridership may vary for “Band Day”, when marching bands from area high schools perform during one game each season. The bands travel to the stadium on charter buses. Band Day was held on September 21st during the Wyoming game, and approximately 3,000 participants arrived in 69 buses.

Prior to 2002, bus riders were reported using counting methods:

- Parking lot attendants counted charter bus passengers.
- Metro transit workers counted Park & Ride bus passengers as they boarded the buses.
- Metro counted regular transit and Husky Special riders when they alighted buses at the stadium. However, it is recognized that a significant number of passengers may have alighted the buses before they reached the stadium, and then walked several blocks to the stadium. These passengers were not counted.

In 2001, an average 15,279 passengers per game were counted on charter and transit buses. On October 5th 2002, these same counting methods yielded 1,191 people on charter buses and 14,842 people on transit buses, for a total of 16,033 people who arrived at the game by bus.

**Walking**

It was estimated that 9,280 people (13.0%) walked to the stadium.

Prior to 2002, people who walked to the stadium were not counted or estimated. They were included in the Other Modes category.
**Boats**

It was estimated that 2,320 people (3.3%) arrived by boat.

Prior to 2002, people who arrived by boat were reported using an estimation by the ICA. For boats moored to the University’s docks, the ICA counted the number of boats and estimated the number of passengers based on boat size. Charter boat companies provided the ICA with actual passenger counts from the charter boats. The ICA used boat shuttle ticket sales to count the number of passenger in boats anchored off shore. Using these counting and estimation methods in 2001, an average 3,541 passengers per game were estimated to have arrived by boat.

On October 5th 2002, this same estimation method yielded 2,853 people on 242 boats.

**Bicycles**

It was estimated that 663 people (0.9%) arrived by bicycle.

Prior to 2002, people who arrived by bicycle were not reported. They were included in the Other Modes category. However, the Transportation Office also conducted a count of bicycles parked at the stadium. In 2001, counts were conducted on two game days, yielding an average 272 bicycles.

These counts were not conducted in 2002.

**Other**

497 people (0.7%) arrived by other travel modes. These other modes could include motorcycle, taxi and limousine.
**Pre-Expansion Comparison**

Figure 7 illustrates and compares travel mode choices for the 2002 and 1986 (pre-stadium expansion) seasons.

![2002 Travel Mode Choice](image)

![1986 Travel Mode Choice](image)

**Figure 7. Travel Mode Choice for 2002 and 1986**

Historical comparisons are difficult because mode choice categories have changed. Also, estimation methods have changed. However, one dramatic shift is evident - many more attendees arrived by bus in 2002 than in 1986 (32.3% versus 14.7%).

Note that in 1986, 34.4% of attendees arrived by ‘other modes’ that were not counted or estimated, including autos parked off campus.
Neighborhood Parking

Impact Areas
Figure 8 shows the neighborhood parking impact areas that are defined in City Council Resolution 27435. Some of these neighborhoods have Special Event RPZs for football game days. On the survey date, an estimated 5,275 people parked in these areas in 2,071 autos.

Montlake RPZ Violations
Seattle Department of Transportation (SDOT) provides information regarding RPZ violations in the Montlake neighborhood. SDOT staff conducts a survey each year of illegally parked vehicles in the RPZ. This year it occurred during the afternoon of November 9, 2002 (Oregon State game). A total of 133 violations were counted during the
game, down considerably from 220 recorded in 2001. Note that violations and citations are not the same. Violations are counted when vehicles are parked in the RPZ without proper permits. The violations count does not indicate the number of citations issued for these violations. A historical violations count is presented in Figure 9.

![Montlake Restricted Parking Zone Violations](image)

* Count not conducted in 1993

**Figure 9. Number of Restricted Parking Zone Violations for One Game, by Year**

### Conclusions

The TMP successfully encouraged fans to travel to the game by alternative modes. Almost one-third of all game attendees arrived at the stadium in transit and charter buses. Another 13% walked to the stadium. Also, carpool parking price incentives were successful, resulting in higher average auto occupancy on campus parking lots.

It was estimated that more than 2,000 autos were parked in residential neighborhoods identified as parking impact areas. Average auto occupancy was lower in these areas. However, the number of violations counted in the Montlake Restricted Parking Zone was significantly less in 2002 than in 2001.
Recommendations

The survey response rate was quite high – 83.2% of all surveys resulted in a usable response. However, the Transportation Office can increase the reliability in the survey results by ensuring the survey sample is representative of the game population. Recommendations for future intercept surveys are listed below:

- Improve estimation of game day attendance
- Ensure the number of survey teams stationed at each stadium gate is proportional to the number of fans passing through each gate. A count or estimation should be conducted at a game prior to the survey to establish the proportions.
- Alternatively, survey teams could be assigned to every ticket collector and conduct the surveys until the stadium is substantially full. This would ensure that no gates are oversampled or undersampled.

Refusal rates can be minimized by offering each respondent a small token gift, like a Husky button or a concession gift certificate.

Measurement error can be minimized by improving the survey design:

- For those who arrive by auto, include a parking choice for *dropped off – did not park.*
- Clarify if RV / motor home should be included as an auto or as another mode choice.
- Make it clear that the survey is seeking information about the travel mode when traveling *to the stadium.* This will eliminate confusion for people who ride ferries (boats) to get to Seattle but not to the stadium.
- Simplify and enlarge the parking area map using bold color blocks and labels rather than outlines. Highlight the stadium, campus and other landmarks on the map for quick orientation.

Consider counting the number of autos parked on campus during a non-game day Saturday during the fall quarter. This count could be used to estimate the number of non-game day vehicles that are included in the Parking Services campus parking lot count on game day. Then, the Transportation Office sample estimation of campus parking can be more easily compared against the Parking Services count.

Also, consider how to include game workers in the sample population. These workers may not pass through the stadium gates, but they do generate a significant number of trips to the stadium.