Parking Inventory

for the Central Puget Sound Region

PUGET SOUND REGIONAL COUNCIL / JANUARY 2003

Abstract

REPORT:	Parking Inventory for the Central Puget Sound Region, 2002
PROJECT TITLE:	Forecasts and Databases
SUBJECT:	Spring 2002 survey of all off-street parking for the CBDs of Seattle, Bellevue, Tacoma, Everett, and Bremerton, the University District, and 3 ferry terminals: Bainbridge, Kingston and Southworth. Information collected included occupancy rates and cost to park for 0-2 hours, daily and monthly.
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Executive Summary

During the months of March through June, 2002, the Puget Sound Regional Council (PSRC) inventoried all off-street parking in the Central Business Districts (CBDs) in Seattle, Bellevue, Tacoma, Everett and Bremerton, the Seattle First Hill and lower Queen Anne areas, the University District, and some selected ferry terminals: Bainbridge, Kingston and Southworth.

This study provides an important database of parking availability, utilization, and costs to support both regional and local planning needs. The PSRC uses parking data as input to its regional travel demand forecasting models. These models provide estimates of the amount and types of travel we can expect in the years ahead, and allow policy makers to examine the impacts of alternative transportation policy decisions. Parking costs are a key factor in modeling mode choice for both work and non-work trips.

The PSRC has been conducting this survey since 1987. The CBDs of Seattle and Bellevue were first surveyed in 1987; First Hill and lower Queen Anne were first inventoried in 1989. In 1992, 1994, 1996 and 1999 the CBDs of Seattle and Bellevue, First Hill and lower Queen Anne were all surveyed. This is the first year that the CBDs of Tacoma, Everett and Bremerton, the University District and the ferry terminals have been inventoried. The parking inventory study area was expanded because of improvements to the travel demand forecasting models and the incorporation of a larger study area.

The study area for Seattle consists of 19 zones, with 13 zones in the CBD and First Hill and Queen Anne each divided into three zones. Denny Regrade, Pioneer Square, and the International District are considered part of the Seattle CBD for this study. There are seven zones in Bellevue, seven in Tacoma, eight in Everett, one in Bremerton, five in the University District and one zone in each of the ferry terminals for data collection and analysis.

The parking inventory contains information on the number of stalls, occupancy, and parking costs. The types of parking inventoried included:

- off-street parking, both public and private
- free and pay parking
- carpool and vanpool lots
- motor pool parking, both private and government
- hotels and motels
- short-term customer parking such as convenience stores and restaurants
- residential parking (in Seattle CBD only)

Findings

Availability

Table E-1 provides a summary total stalls in all the study areas in the survey. The Seattle CBD contained the highest number of available stalls with 58,538.

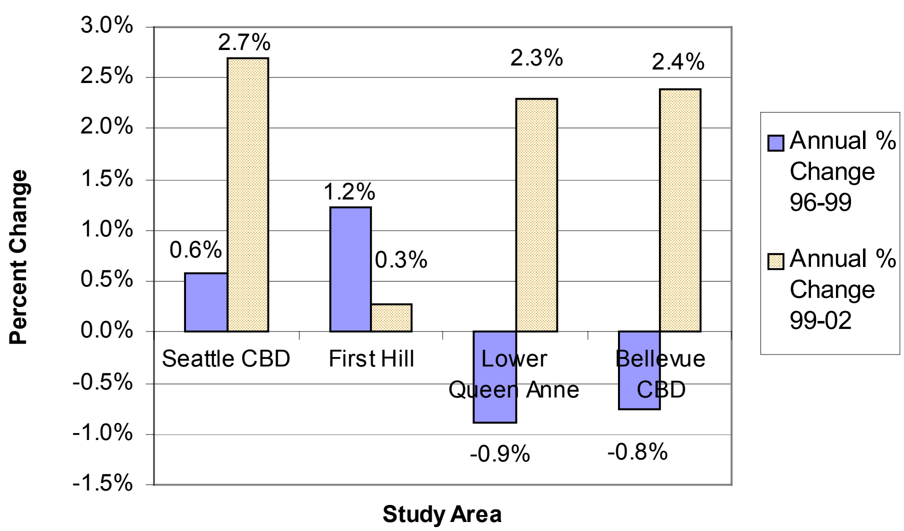
Table E-1: Summary of Total Stalls, 2002

Study Area	*Stalls 2002*
Seattle CBD	58,538
First Hill	10,800
Lower Queen Anne	17,644
Bellevue CBD	32,623
Tacoma CBD	17,993
Everett CBD	12,517
University District	5,134
Bremerton CBD	3,665
Bainbridge	1,030
Kingston	353
Southworth	330

Total stalls counted in the entire Seattle study area (includes the CBD, First Hill and lower Queen Anne), was 86,982. This was an increase of 5,723 stalls since 1999.

Those areas that have been inventoried in previous surveys (Seattle and Bellevue) all had increases in parking stalls since 1999 (Figure E-1). The Seattle CBD had the largest percent increase and the First Hill area had the smallest.

Figure E-1: Change in Parking Stalls, 1996-2002



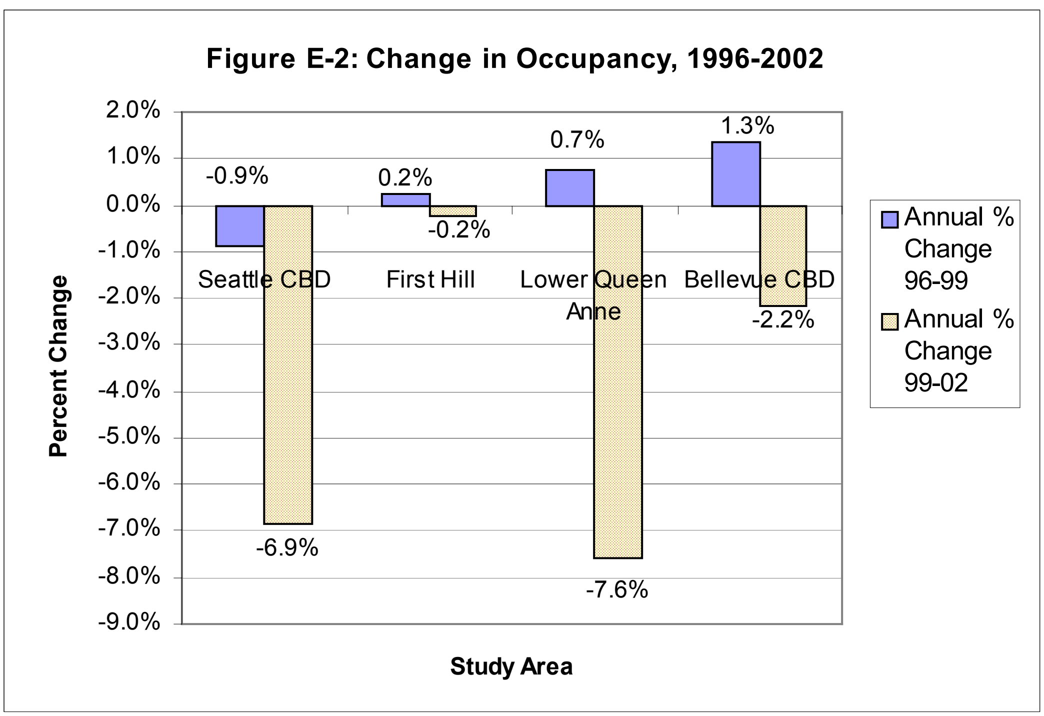
Occupancy

Table E-2 shows occupancy rates for all study areas in the survey. Bainbridge had the highest occupancy rate at 76.9%. The lots counted in this area were dedicated to ferry commuter parking. The Tacoma CBD had the lowest occupancy rate at 46.3%.

All areas that were surveyed in 1999 experienced a drop in occupancy in this current survey (Figure E-2). The Seattle CBD went from a 78.9% rate to 63.2%, First Hill from 76.7% to 76.2%, lower Queen Anne from 59.3% to 46.8 and Bellevue from 63.6% to 59.6%. The largest drop from 1999 came from the Lower Queen Anne area with a rate of 7.6%.

Table E-2: Summary of Occupancy, 2002

Study Area	*Occupancy 2002*
Seattle CBD	63.2%
First Hill	76.2%
Lower Queen Anne	46.8%
Bellevue CBD	59.6%
Tacoma CBD	46.3%
Everett CBD	52.0%
University District	63.8%
Bremerton CBD	65.1%
Bainbridge	76.9%
Kingston	46.6%
Southworth	63.9%



Cost

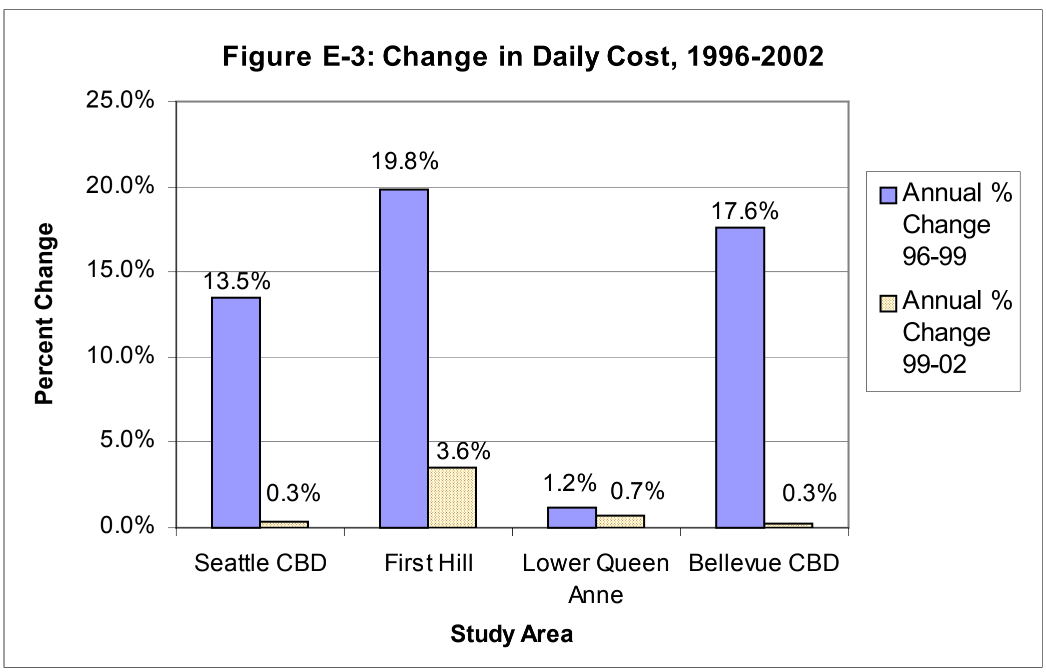
Table E-3 shows a summary of costs for all the study areas in the inventory. The Seattle CBD had the highest costs in all categories. This is representative of a large urban area with many lots dedicated to commuter parking and higher occupancy levels.

Table E-3: Summary of Costs, 2002

Study Area	*2-hour*	*Daily*	*Monthly*
Seattle CBD	$7.20	$14.52	$200.29
First Hill	$3.60	$12.37	$91.71
Lower Queen Anne	$4.51	$6.52	$106.03
Bellevue CBD	$5.01	$11.30	$138.36
Tacoma CBD	$3.92	$8.76	$88.41
Everett CBD	$2.20	$7.00	n.a.
University District	$3.35	$7.15	$74.37
Bremerton CBD	$3.56	$6.76	$89.61
Bainbridge	n.a.	$7.62	n.a.
Kingston	n.a.	n.a.	n.a.
Southworth	n.a.	n.a.	n.a.

*n.a. (not applicable); represents zones that contain less than 5 lots with parking rates.

For those areas surveyed in previous inventories, overall average costs rose in all categories (Figure E-3). The largest percent increase between 1999 and 2002 occurred in the First Hill area, at a rate of 3.6%. This area experienced an actual cost increase of $1.23.



Type

Table E-4 shows the percent of pay lots and non-pay lots in each study area. The ferry terminals showed a high percentage of pay lots dedicated to daily parking for ferry passengers. This can be somewhat misleading because the study areas were so small and the number of lots inventoried were significantly less than the other areas. The Seattle CBD had a high percentage of pay lots at 81.4%. The Everett CBD had very few, at 9.5%.

Table E-4: Summary of Type, 2002

Study Area	*Percent Pay Lots*	*Percent Non-pay Lots*
Seattle CBD	81.4%	18.6%
First Hill	74.4%	25.6%
Lower Queen Anne	36.0%	64.0%
Bellevue CBD	43.3%	56.7%
Tacoma CBD	26.2%	73.8%
Everett CBD	9.5%	90.5%
University District	48.7%	51.3%
Bremerton CBD	61.9%	38.1%
Bainbridge	87.8%	12.2%
Kingston	95.5%	4.5%
Southworth	93.3%	6.7%

Uses of Parking Data

This report is intended to support the needs of people interested in parking policies. The federal Clean Air Act and state Commute Trip Reduction Act require that local governments and large employers take a closer look at commuter travel to and from our central business districts and formulate policies to reduce the environmental impacts of commuting.

More than half of the air pollution in the central Puget Sound region comes from motor vehicles. With federal and state mandates to reduce air pollution, the region is seeking ways to discourage people from driving alone and to encourage them to use transit, carpools or some other mode of travel. One of the more effective ways to influence travel behavior is to increase the cost and/or decrease the supply of parking. The state's Commute Trip Reduction Law requires certain jurisdictions in the region to review their parking policies and, where appropriate, revise them to support commute trip reduction. For these reasons, planners and policy makers can benefit from the information provided by this survey.

I. INTRODUCTION

This is the seventh regional inventory of off-street parking in Seattle and Bellevue conducted by the Puget Sound Regional Council (PSRC). The Seattle inventory in 1987 covered only the Central Business District (CBD). Beginning in 1989, the study was expanded to include portions of both First Hill and lower Queen Anne. In 2002, seven new study areas were added including the CBDs of Tacoma, Everett and Bremerton, the University District and three ferry terminals; Bainbridge, Kingston and Southworth. Figure 1 on the following page shows the extent of the inventory area.

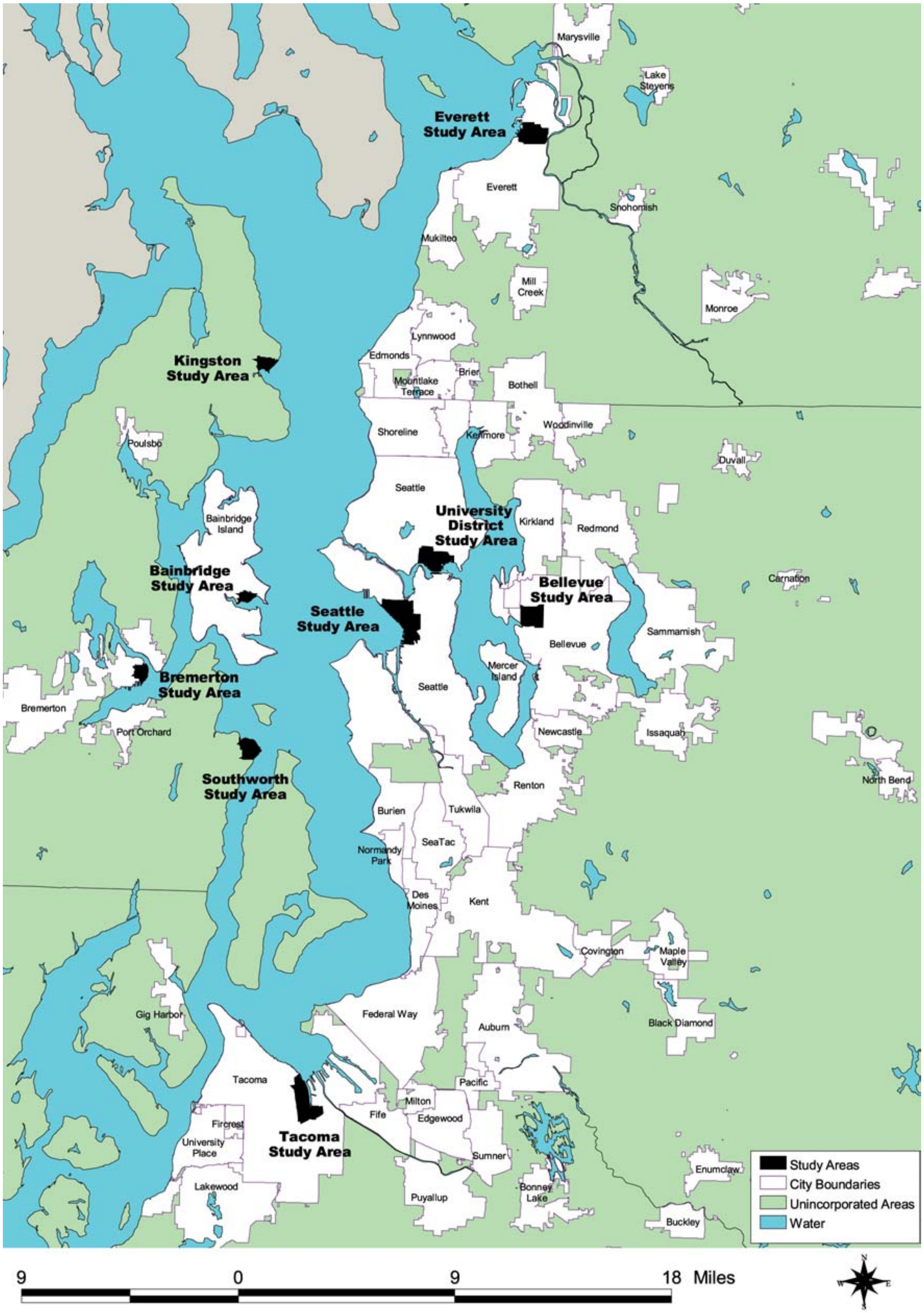
For all areas included in the survey, data were collected beginning mid March through the end of June of 2002, using temporary PSRC staff. The inventory was conducted Monday through Friday between 9:30 a.m. and 11:30 a.m., and between 1:30 p.m. and 3:30 p.m.

Data collected for each parking lot included 2000 census tract and block number, owner or tenant, address, total stalls, morning and afternoon occupancy, cost for two hours, daily and monthly parking and type of parking. Where it was not possible to physically count the spaces and cars in a particular lot, information was obtained from parking attendants, if present, or from the owner of the lot.

This report summarizes data by parking zone for all the study areas. The 2002 results are compared with results from previous inventories beginning in 1992. The new study areas, however, have no historical data for comparison. The PSRC plans to continue updating the inventory database on a two-year cycle. The data are used in the PSRC's travel forecasting models, particularly in estimating choice of travel mode.

The report is divided into nine chapters: the first chapter the introduction, the second describing the inventory in the Seattle CBD, the third in First Hill and lower Queen Anne, the fourth in the Bellevue CBD, the fifth describing the Tacoma CBD, the sixth in the Everett CBD, the seventh in the University District, the eighth in the Bremerton CBD and the final chapter describing the inventory in the three ferry terminals. Each chapter includes a description of the study area and the findings. The findings include data from the 1992, 1994, 1996 and 1999 inventories. An appendix describes the methodology in more detail.

Figure 1: Inventory Study Area



II. SEATTLE CBD

Study Area

The Seattle CBD study area is made up of 13 zones. Figure 2 on the following page shows the extent of this area. The boundary of the Seattle CBD consists of Elliot Bay to the west, Denny Way to the north, Interstate 5 to the east and Royal Brougham Way to the south. Within these zones are three subareas: Pioneer Square/International District (zones 1-3), Downtown Core (zones 4-8) and Denny Regrade (zones 9-13).

Total Stalls

In Spring of 2002, the Seattle CBD had a total of 58,538 parking stalls, an increase of 4,475 since 1999 (Table 1). This was a 2.7% annual increase in availability. Although zone 1 did not have the highest annual percent change (zone 9 with 9.6%), it had the highest increase in stalls between 1999 and 2002, with an additional 1,218 parking spaces. Zone 1 has changed considerably within the last few years, with the new Seahawks stadium and the Exhibition Center.

Table 1 shows the number of parking stalls in the Seattle CBD for the years 1996, 1999 and 2002 and the annual rate of change from 1996 to 1999, 1999 to 2002 and 1996 to 2002. Total stalls ranged from 8,675 in zone 8 to 1,658 in zone 2, a difference of 7,017 stalls. Zones 5, 6 and 12 were the only zones that showed slight decreases in total stalls.

Table 1: Seattle CBD Total Stalls & Annual Percent Change, 1996-2002

Zone	*Stalls 1996*	*Stalls 1999*	*Annual % Change 96-99*	***Stalls 2002***	***Annual % Change 99-02***	*Annual % Change 96-02*
1	3,700	3,940	2.1%	**5,158**	**9.4%**	5.7%
2	1,452	1,501	1.1%	**1,658**	**3.4%**	2.2%
3	1,663	1,651	-0.2%	**1,679**	**0.6%**	0.2%
4	7,136	7,311	0.8%	**7,347**	**0.2%**	0.5%
5	4,790	4,866	0.5%	**4,726**	**-1.0%**	-0.2%
6	1,763	1,816	1.0%	**1,698**	**-2.2%**	-0.63%
7	6,682	7,292	3.0%	**7,683**	**1.8%**	2.4%
8	6,283	7,439	5.8%	**8,675**	**5.3%**	5.5%
9	4,270	3,771	-4.1%	**4,961**	**9.6%**	2.5%
10	1,600	1,593	-0.1%	**1,735**	**2.9%**	1.4%
11	3,276	3,062	-2.2%	**3,183**	**1.3%**	-0.5%
12	4,817	4,811	0.0%	**4,794**	**-0.1%**	-0.1%
13	5,714	5,010	-4.3%	**5,241**	**1.5%**	-1.4%
Total	**53,146**	**54,063**	**0.6%**	**58,538**	**2.7%**	**1.6%**

Figure 2: Seattle CBD Study Area

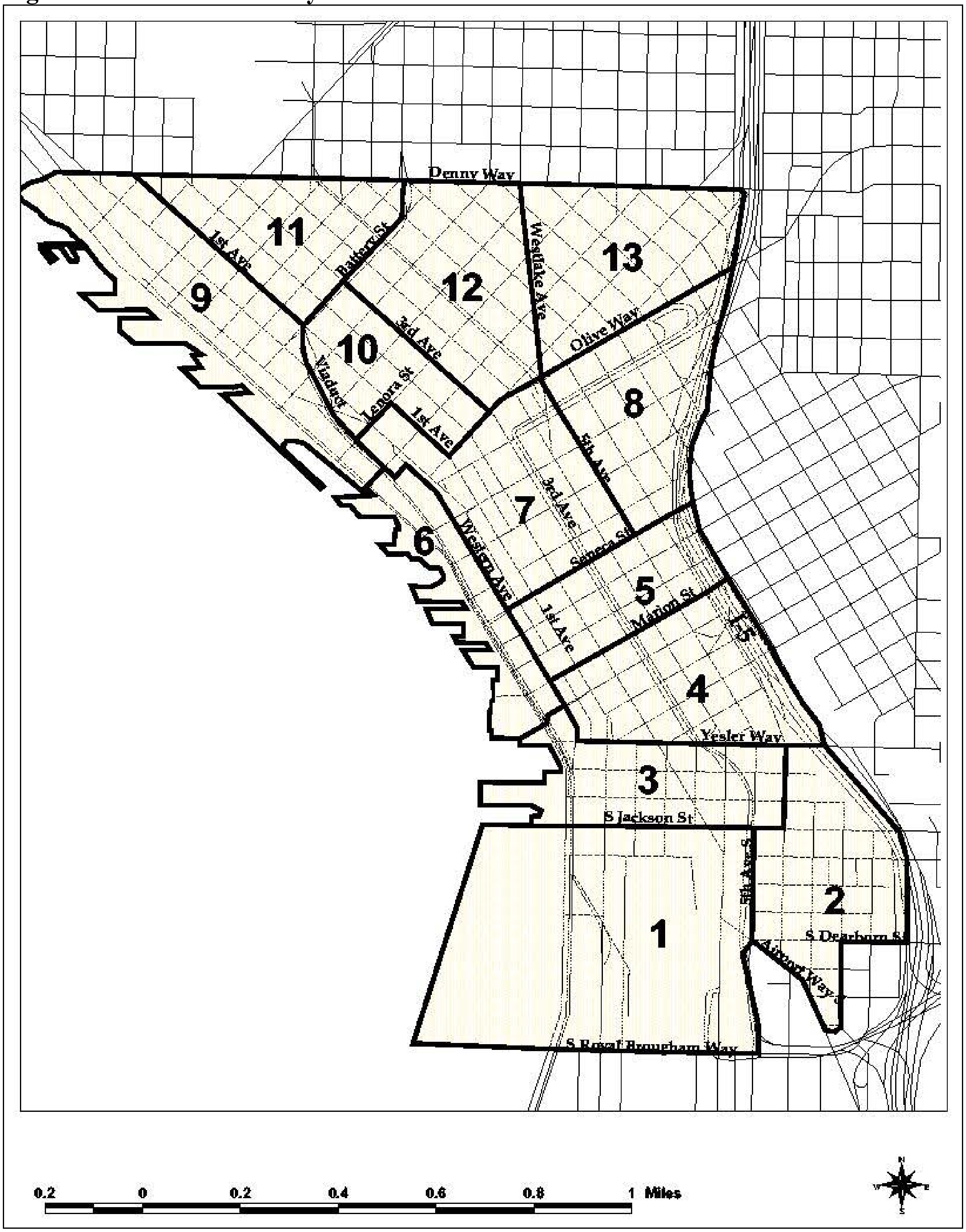


Figure 3 shows the number of stalls in each zone for the three subareas, beginning with the inventory conducted in 1992.

Figure 3: Seattle CBD Parking Stalls by Zone, 1992-2002

Occupancy

Table 2 on the following page shows the occupancy rates and annual percent change by zone for 1996, 1999 and 2002. Occupancy rates were based on average morning and afternoon counts. Lots where occupancy counts could not be taken due to inaccessibility were not included in the calculation.

Occupancy rates in the Seattle CBD decreased by 6.9% between 1999 and 2002 and 3.9% between 1996 and 2002. The largest drop in occupancy came from Zone 10, which had an annual percent decrease of 9.9%, going from an 80.6% occupancy rate in 1999 to a 59.0% rate in 2002. Referring back to Table 1, zone 10 had a 2.9% increase in parking availability, so a portion of the drop in occupancy could be explained by the additional stalls. However, all zones with the exception of zones 1 and 6 decreased in occupancy between 1999 and 2002.

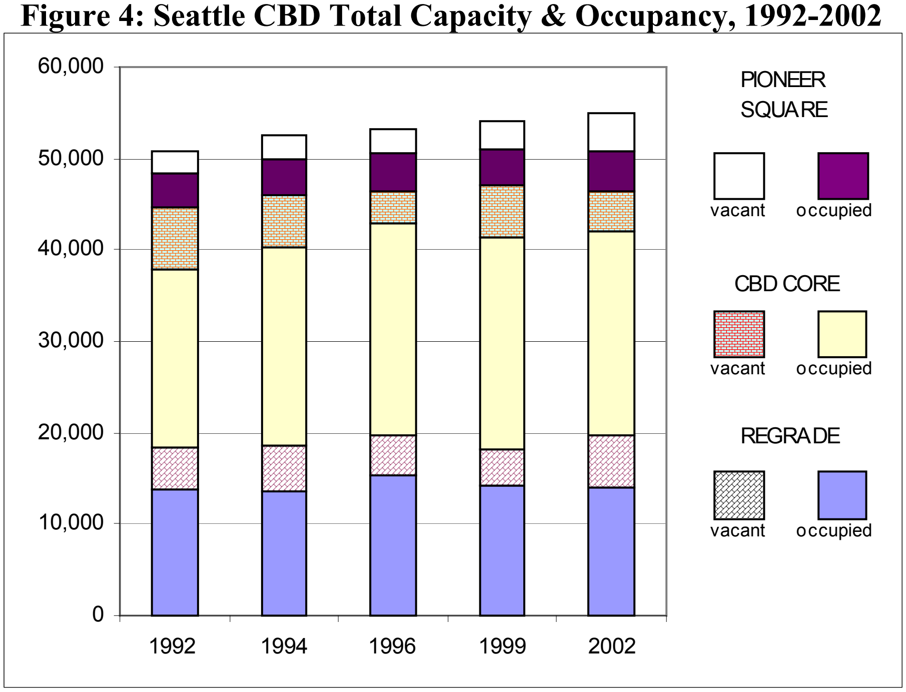
Occupancy in 2002 ranged from 46.6% in zone 1 to 79.5% in zone 3. Zone 1 contains the Seahawks stadium and exhibition center and is mainly event driven, explaining the lower occupancy rate. Zone 3 parking is used mainly by commuters.

Table 2: Seattle CBD Occupancy & Annual Percent Change, 1996-2002

Zone	*Occupancy Rate, 1996*	*Occupancy Rate, 1999*	*Annual % Change 96-99*	***Occupancy Rate, 2002***	***Annual % Change 99-02***	*Annual % Change 96-02*
1	57.6%	42.2%	-9.9%	**46.6%**	**3.3%**	-3.5%
2	62.7%	72.2%	4.8%	**67.0%**	**-2.4%**	1.1%
3	72.2%	84.7%	5.5%	**79.5%**	**-2.1%**	1.6%
4	86.6%	87.8%	0.5%	**73.2%**	**-5.9%**	-2.8%
5	85.5%	85.9%	0.2%	**74.3%**	**-4.7%**	-2.3%
6	77.2%	71.0%	-2.8%	**73.6%**	**1.2%**	-0.8%
7	88.9%	82.5%	-2.5%	**75.9%**	**-2.7%**	-2.6%
8	90.4%	74.2%	-6.4%	**61.6%**	**-6.0%**	-6.2%
9	74.2%	76.3%	0.9%	**63.5%**	**-5.9%**	-2.6%
10	67.9%	80.6%	5.9%	**59.0%**	**-9.9%**	-2.3%
11	84.4%	81.4%	-1.2%	**76.0%**	**-2.3%**	-1.7%
12	74.5%	79.3%	2.1%	**60.9%**	**-8.4%**	-3.3%
13	80.0%	85.6%	2.3%	**69.9%**	**-6.5%**	-2.2%
Total	**80.3%**	**78.2%**	**-0.9%**	**63.2%**	**-6.9%**	**-3.9%**

Figure 4 shows the change in total stalls and occupancy from 1992 to 2002 for the three subareas in the CBD.

Figure 4: Seattle CBD Total Capacity & Occupancy, 1992-2002



Parking Costs

Parking costs were recorded at three different rate levels, 2-hour (please refer to appendix for a definition of 2-hour cost), daily and monthly. The costs in this report do not reflect "early bird" special rates, employee subsidies (including free parking) or special rates (i.e. carpools). All costs shown in this report are weighted by total stalls.

Two-Hour: Table 3 shows average 2-hour costs and annual percent change for 1996, 1999 and 2002. Averages for the cost of 2 hour parking ranged from $4.70 in zone 3 to $9.52 in zone 5, a difference of $4.82. Zone 5 is located in the core downtown area, whereas zone 3 is on the outskirts. The overall average for the Seattle CBD was $7.20, an increase of $1.00 from the previous survey in 1999 at an annual rate of 5.1%. Since 1996, average cost to park in downtown has increased by $2.21 at an annual rate of 6.3%.

Zone 11 was the only zone that reported a cost decrease although it was very small ($.0.17). The largest increase in 2-hour costs came from zone 2 at 35.3%, an average cost inflation of $3.39. Zone 2 borders on zone 1 which contains the Seahawks Stadium and Exhibition Center. Costs may have gone up in response to overflow parking demands in that area.

Table 3: Seattle CBD Average 2-Hour Costs & Annual Percent Change, 1996-2002

Zone	*Cost 1996*	*Cost 1999*	*Annual % Change 96-99*	***Cost 2002***	***Annual % Change 99-02***	*Annual % Change 96-02*
1	$3.24	$4.13	8.4%	**$5.61**	**10.8%**	9.6%
2	$2.20	$2.30	1.5%	**$5.69**	**35.3%**	17.2%
3	$3.28	$4.59	11.9%	**$4.70**	**0.8%**	6.2%
4	$5.38	$6.96	9.0%	**$8.44**	**6.6%**	7.8%
5	$7.17	$8.49	5.8%	**$9.52**	**3.9%**	4.8%
6	$5.17	$5.75	3.6%	**$6.97**	**6.6%**	5.1%
7	$5.93	$6.82	4.8%	**$8.76**	**8.7%**	6.7%
8	$5.18	$6.22	6.3%	**$6.48**	**1.4%**	3.8%
9	$3.37	$5.48	17.6%	**$6.22**	**4.3%**	10.8%
10	$4.94	$5.62	4.4%	**$5.89**	**1.6%**	3.0%
11	$4.66	$5.17	3.5%	**$5.00**	**-1.1%**	1.2%
12	$4.22	$5.02	6.0%	**$6.27**	**7.7%**	6.8%
13	$3.81	$5.72	14.5%	**$6.00**	**1.6%**	7.9%
Total	**$4.99**	**$6.20**	**7.5%**	**$7.20**	**5.1%**	**6.3%**

Daily: Daily costs in the Seattle CBD have increased at an annual average rate of 0.3% since 1999 and 6.7% since 1996 (Table 4). In 2002, averages ranged from $8.91 in zone 1 to $20.75 in zone 5 amounting to an actual cost difference of $11.84. Zone 1 is subject to special events and is not as desirable an area for commuters who work in the downtown core to park because of its distance from that area. Zone 5 is located in the central core of the downtown where many of the large buildings are located, thus making it a more attractive place to park.

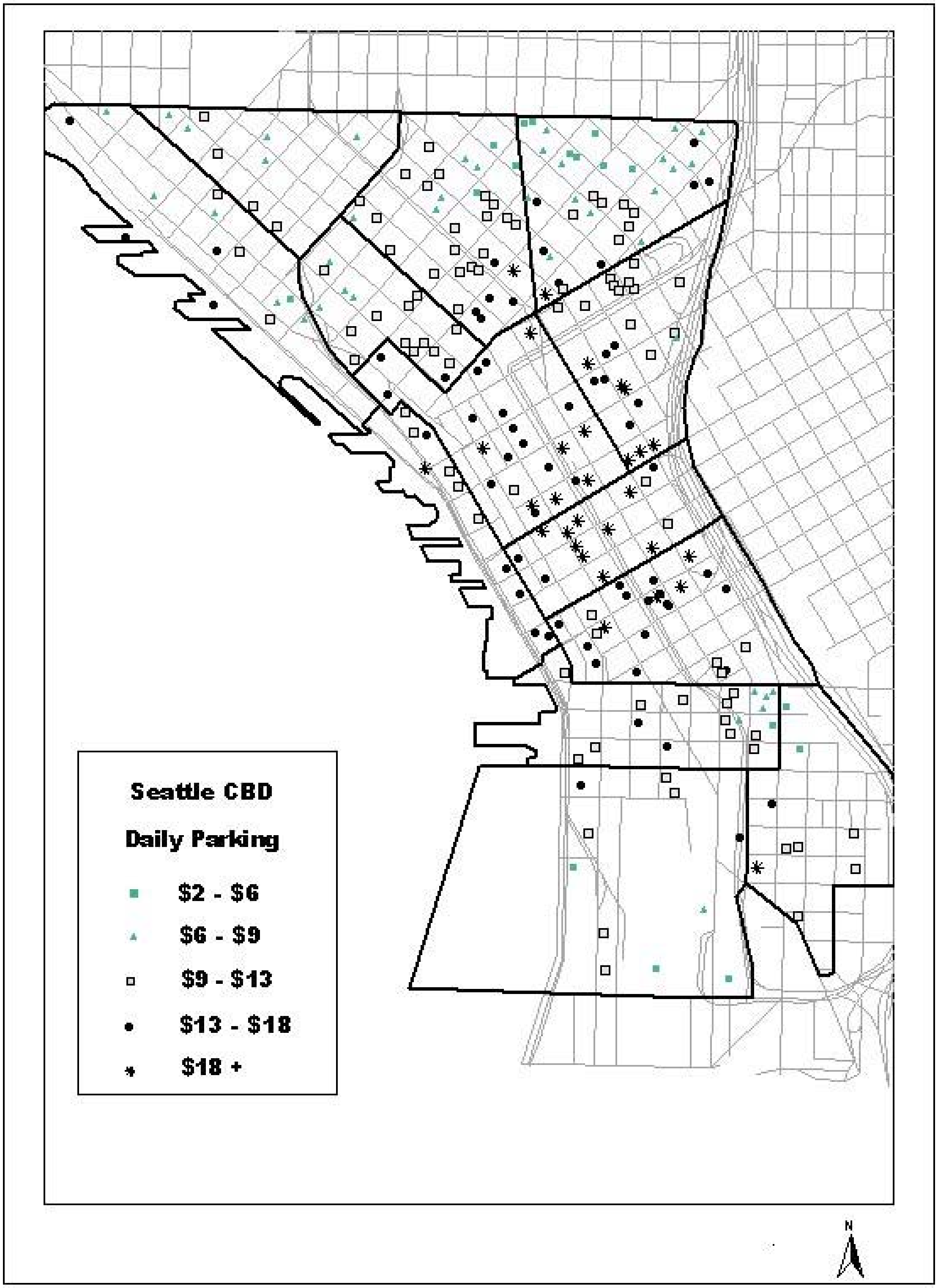
Similar to what we saw in the 2-hour cost category, zone 2 experienced the largest annual rate of change. This rate amounted to 40.1% at an average cost increase of $8.36. Zones 8, 9 and 13 all experienced decreases in parking cost, the largest decrease shown by zone 8, at an annual rate of –7.2%. Zone 8 experienced a 5.3% increase in parking stalls, which may explain the decrease in average daily cost.

Table 4: Seattle CBD Average Daily Costs & Annual Percent Change, 1996-2002

Zone	*Cost 1996*	*Cost 1999*	*Annual % Change 96-99*	***Cost 2002***	***Annual % Change 99-02***	*Annual % Change 96-02*
1	$4.54	$8.41	22.8%	**$8.91**	**2.0%**	11.9%
2	$3.43	$4.77	11.6%	**$13.13**	**40.1%**	25.1%
3	$6.36	$9.05	12.5%	**$10.60**	**5.4%**	8.9%
4	$11.31	$16.13	12.6%	**$17.53**	**2.8%**	7.6%
5	$14.05	$18.45	9.5%	**$20.75**	**4.0%**	6.7%
6	$9.36	$11.52	7.2%	**$15.12**	**9.5%**	8.3%
7	$12.38	$16.16	9.3%	**$18.18**	**4.0%**	6.6%
8	$11.89	$18.50	15.9%	**$14.79**	**-7.2%**	3.7%
9	$7.44	$12.16	17.8%	**$11.89**	**-0.7%**	8.1%
10	$8.43	$9.97	5.8%	**$10.47**	**1.6%**	3.7%
11	$8.27	$8.81	2.1%	**$9.57**	**2.8%**	2.5%
12	$8.44	$11.36	10.4%	**$12.20**	**2.4%**	6.3%
13	$6.10	$11.21	22.5%	**$10.30**	**-2.8%**	9.1%
Total	**$9.83**	**$14.39**	**13.5%**	**$14.52**	**0.3%**	**6.7%**

Ranges of average daily costs and where lots are located in 2002 are shown in Figure 5. Higher cost lots are located mainly in the central downtown portion of Seattle.

Figure 5: Seattle CBD Average Daily Parking Costs, 2002



Monthly: Table 5 shows the average monthly costs and the annual percent change from 1996, 1999 and 2002. Average monthly costs ranged from $136.44 in zone 2 to $251.57 in zone 5, a difference of $115.13. Although zone 2 reported the lowest monthly cost, it experienced the highest annual percent change at 25.2, an average cost increase of $66.89. Again, one owner seems to be responsible for the significant increase in that zone.

The overall average cost for 2002 was $200.29, an increase of $26.72 (4.9%) since 1999 and $71.15 (7.6%) since 1996. Only one zone (zone 1) reported a cost decrease, however it was very minimal at an annual percent change of –0.4.

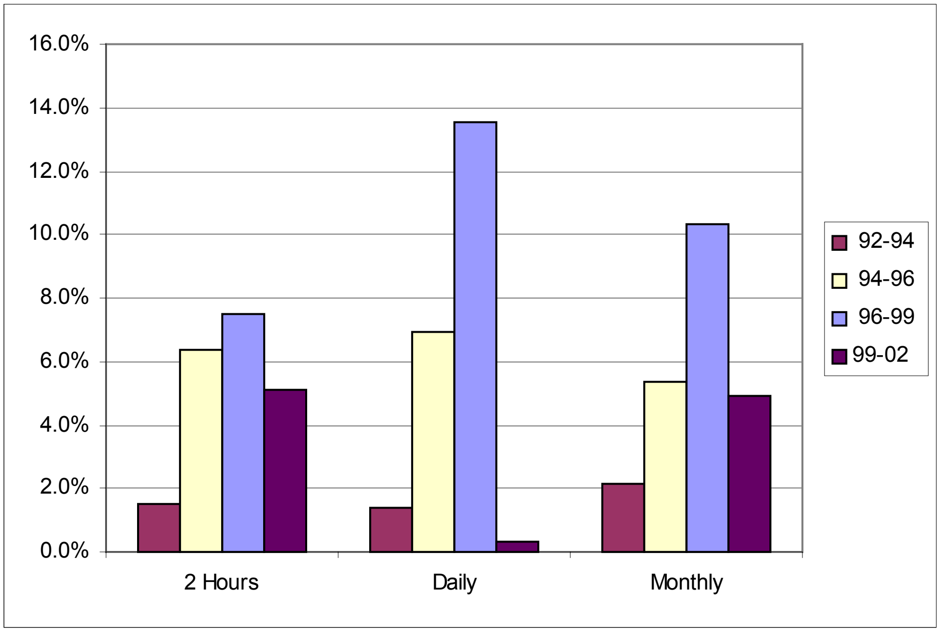
Table 5: Seattle CBD Average Monthly Costs & Annual Percent Change, 1996-2002

Zone	*Cost 1996*	*Cost 1999*	*Annual % Change 96-99*	***Cost 2002***	***Annual % Change 99-02***	*Annual % Change 96-02*
1	$65.50	$138.33	28.3%	**$136.48**	**-0.4%**	13.0%
2	$50.87	$69.55	11.0%	**$136.44**	**25.2%**	17.9%
3	$96.36	$113.34	5.6%	**$152.84**	**10.5%**	8.0%
4	$138.89	$184.51	9.9%	**$223.16**	**6.5%**	8.2%
5	$153.62	$202.12	9.6%	**$251.57**	**7.6%**	8.6%
6	$121.09	$157.16	9.1%	**$191.71**	**6.8%**	8.0%
7	$142.17	$193.41	10.8%	**$221.22**	**4.6%**	7.6%
8	$152.27	$195.43	8.7%	**$223.51**	**4.6%**	6.6%
9	$65.13	$104.07	16.9%	**$168.87**	**17.5%**	17.2%
10	$95.97	$125.51	9.4%	**$145.99**	**5.2%**	7.2%
11	$89.43	$118.39	9.8%	**n.a.**	**n.a.**	n.a.
12	$119.79	$157.47	9.5%	**$204.30**	**9.1%**	9.3%
13	$91.15	$152.84	18.8%	**$157.69**	**1.0%**	9.6%
Total	**$129.14**	**$173.57**	**10.4%**	**$200.29**	**4.9%**	**7.6%**

*n.a. (not applicable); represents zones that contain less than 5 lots with monthly rates. These lots are represented in the total, however.

Figure 6 shows the annual percent change for all cost categories (2 hour, daily and monthly) for the years 1992 to 1994, 1994 to 1996, 1996 to 1999 and 1999 to 2002. The largest percentage increases occurred between 1996 and 1999 in all cost categories.

Figure 6: Seattle CBD Annual Percent Change in Costs, 1992-2002



Parking Type

Parking type will be dealt with differently in this survey than it has in past surveys (see the methodology section of the appendix). Parking type is difficult to classify because there is often a diverse mix of types within any particular lot. For the purpose of this survey, we will only be reporting "customer", "employee" and "other" types of parking for most study areas. The Seattle CBD will include residential parking due to the abundance of apartments and condos in the downtown area.

"Customer" parking refers to those lots that are by definition short-term free parking, and where posted, usually with time limits of an hour or less. "Employee" parking is single use parking restricted to the employees of the business or organization that owns or leases the parking facility. "Other" parking includes primarily general public parking and those lots that have a mixture of types. "Residential" refers to those lots designated to apartments or condos for use by residents of those units.

Table 6 on the following page shows parking types for the Seattle CBD, total stalls by type and percent of pay and non-pay lots. The type of parking that was the most available in the Seattle CBD belonged to the "other" category, with total stalls that amounted to 48,803. Again, "other" is predominantly public pay lots, which can be seen in the high percentage of 90.6 compared to lots that have no cost at 9.4%. The percent of pay lots located in the employee category was 1.4%. Customer and residential type lots had no reported costs associated with them.

Table 6: Seattle CBD Parking Type, 2002

Zone	*Total Stalls*				*Percent Pay Lots*		*Percent Non-Pay Lots*	
	C	*E*	*R*	*O*	*E*	*O*	*E*	*O*
1	67	257	0	4,834	0.0%	95.5%	100%	4.5%
2	324	224	38	1,072	0.0%	49.5%	100%	50.5%
3	87	88	11	1,493	0.0%	91.0%	100%	9.0%
4	20	182	0	6,233	0.0%	94.2%	100%	6.1%
5	0	22	0	4,543	0.0%	96.7%	100%	3.3%
6	22	74	0	1,395	0.0%	90.0%	100%	10.0%
7	17	24	441	6,948	0.0%	86.3%	100%	13.7%
8	36	4	14	8,558	0.0%	99.6%	100%	0.4%
9	74	442	213	3,204	0.0%	95.4%	100%	4.6%
10	0	121	143	1,167	18.2%	84.1%	81.8%	15.9%
11	119	320	479	1,218	4.1%	78.3%	95.9%	21.7%
12	435	339	87	3,933	0.0%	92.6%	100%	7.4%
13	196	483	103	4,205	0.0%	71.7%	100%	28.3%
Total	**1,397**	**2,580**	**1,529**	**48,803**	**1.4%**	**90.6%**	**98.6%**	**9.4%**

*Total stalls reported in parking type may not add up to total stalls reported in Table 1 due to the inability to classify all lots.

III. First Hill and Lower Queen Anne

Study Area

Figure 7 on the following page shows the First Hill study area and the lower Queen Anne study area in reference to the Seattle CBD. Figure 8 shows the First Hill study area. First Hill is made up of 3 zones, 14, 15 and 16 and is bounded by E. Pine Street to the north, Broadway to the east, Alder Street to the south and I-5 to the west. Only that portion of First Hill that provides parking for the CBD or includes the major medical complexes is included in the study area. The major medical facilities within the First Hill study area include Swedish Hospital, Virginia Mason Hospital, Harborview Medical Center and the Fred Hutchinson Cancer Research Center. Figure 9 shows the lower Queen Anne study area. This area is made up of 3 zones, 17, 18 and 19, and extends from I-5 on the east to Elliott Bay on the west, Denny Way on the south to Roy, Valley and Mercer streets on the north. Lower Queen Anne includes the Seattle Center and Key Arena.

Total Stalls

Table 7 shows total stalls for the First Hill area and Table 8 shows total stalls for the lower Queen Anne area.

The First Hill study area had a total of 10,800 stalls in 2002. This was a 0.3% annual increase from 1999, with a difference of 626 parking stalls. Lower Queen Anne had a total of 17,644 stalls, with an annual increase of 2.3% from 1999. In the First Hill area, total stalls ranged from 2,854 in zone 16 to 3,977 in zone 15. In the lower Queen Anne area, total stalls ranged from 4,399 in zone 17 to 6,963 in zone 19. Zone 19 contains the Key Arena.

Table 7: First Hill
Total Stalls and Annual Percent Change, 1996-2002

Zone	*Stalls 1996*	*Stalls 1999*	*Annual % Change 96-99*	***Stalls 2002***	***Annual % Change 99-02***	*Annual % Change 96-02*
14	3,742	4,299	4.7%	**3,969**	**-2.6%**	1.0%
15	3,577	3,547	-0.3%	**3,977**	**3.9%**	1.8%
16	3,009	2,868	-1.6%	**2,854**	**-0.2%**	-0.9%
Total	**10,328**	**10,174**	**1.2%**	**10,800**	**0.3%**	**0.7%**

Table 8: Lower Queen Anne
Total Stalls and Annual Percent Change, 1996-2002

Zone	*Stalls 1996*	*Stalls 1999*	*Annual % Change 96-99*	***Stalls 2002***	***Annual % Change 99-02***	*Annual % Change 96-02*
17	4,289	4,108	-1.4%	**4,399**	**2.3%**	0.4%
18	5,830	5,819	-0.1%	**6,282**	**2.6%**	1.3%
19	6,810	6,555	-1.3%	**6,963**	**2.0%**	0.4%
Total	**16,929**	**16,482**	**-0.9%**	**17,644**	**2.3%**	**0.7%**

Figure 7: Seattle Study Area

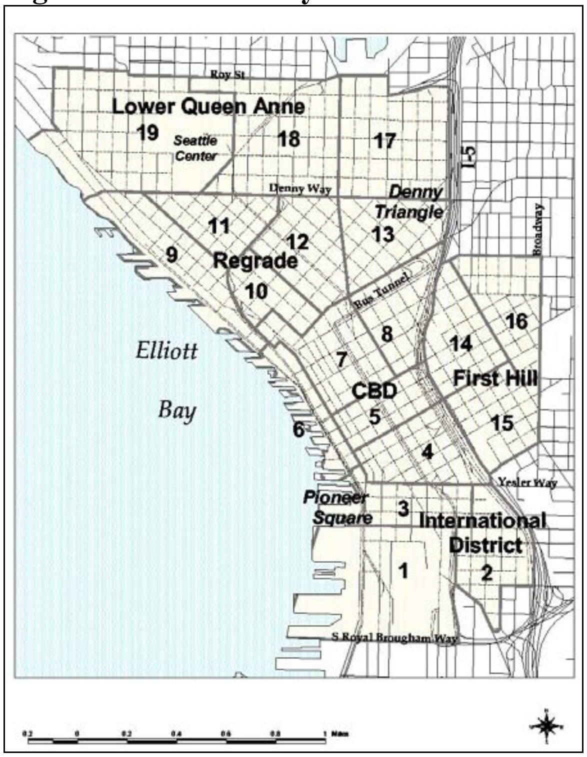


Figure 8: First Hill Study Area

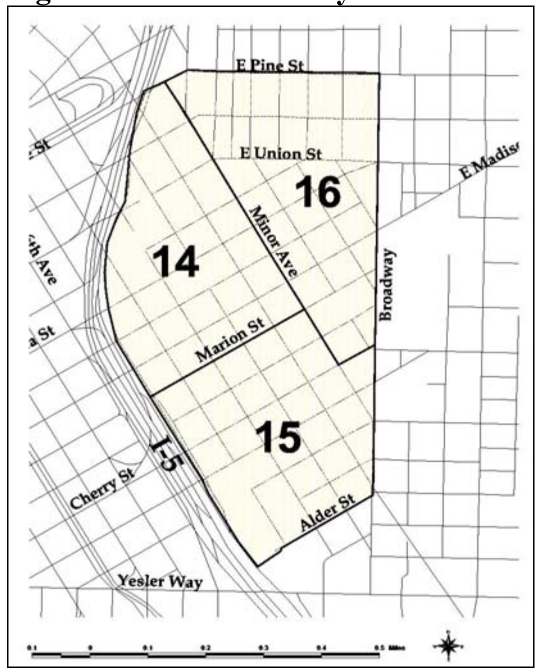
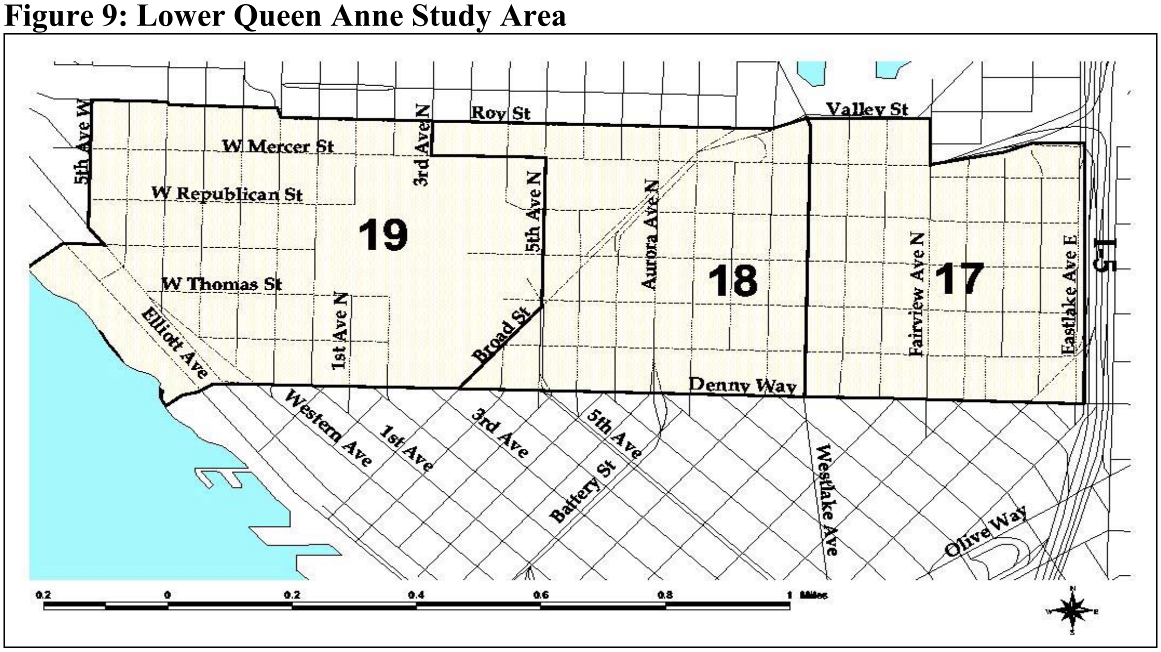


Figure 9: Lower Queen Anne Study Area



Occupancy

First Hill occupancy rates are shown in Table 9. First Hill had an annual decrease in occupancy of 0.2% between 1999 and 2002. Overall, occupancy in this area for 2002 (76.2%) was fairly consistent to what was reported in previous surveys. Previous years showed averages of 76.7% (1999) and 76.2% (1996). Table 10 shows occupancy rates for the lower Queen Anne study area. This area saw a decrease in annual occupancy between 1999 and 2002 at an annual rate of 7.6%. The lower Queen Anne area had a more dramatic loss in occupancy than the First Hill area. Lower Queen Anne has more event type facilities such as Key Arena, Memorial Stadium and the Seattle Center, which may explain the low occupancy rate.

Occupancy for the First Hill area ranged from 73.5% in zone 1 to 82.1% in zone 15. Occupancy in the lower Queen Anne area ranged from 36.1% in zone 18 to 53.7% in zone 17.

Table 9: First Hill
Occupancy Rates & Annual Percent Change, 1996-2002

Zone	*Occupancy 1996*	*Occupancy 1999*	*Annual % Change 96-99*	***Occupancy 2002***	***Annual % Change 99-02***	*Annual % Change 96-02*
14	77.0%	67.9%	-4.1%	**73.5%**	**2.7%**	-0.8%
15	76.9%	89.3%	5.1%	**82.1%**	**-2.8%**	1.1%
16	74.4%	74.4%	0.0%	**74.0%**	**-0.2%**	-0.1%
Total	**76.2%**	**76.7%**	**0.2%**	**76.2%**	**-0.2%**	**0.0%**

Table 10: Lower Queen Anne
Occupancy Rates & Annual Percent Change, 1996-2002

Zone	*Occupancy 1996*	*Occupancy 1999*	*Annual % Change 96-99*	***Occupancy 2002***	***Annual % Change 99-02***	*Annual % Change 96-02*
17	61.1%	65.3%	2.2%	**53.7%**	**-6.3%**	-2.1%
18	55.8%	48.7%	-4.4%	**36.1%**	**-9.5%**	-7.0%
19	57.8%	64.9%	3.9%	**52.5%**	**-6.8%**	-1.6%
Total	**58.0%**	**59.3%**	**0.7%**	**46.8%**	**-7.6%**	**-3.5%**

Parking Costs

Two-Hour: First Hill average 2-hour costs are shown in Table 11 on the following page. Two-hour costs in the First Hill area ranged from $2.95 in zone 16 to $4.22 in zone 14. Costs in this study area increased by 4% between 1999 and 2002, and by 6.6% since 1996. Zone 16 saw a 6.5% decrease since 1999, an average cost difference of $0.66.

Zone 14 had the largest annual percent change at a rate of 8.8%. Lower Queen Anne average 2-hour costs are shown in Table 12. Two-hour costs in the lower Queen area ranged from $2.84 in zone 17 to $5.04 in zone 18. Costs increased by 0.1% annually between 1999 and 2002.

Table 11: First Hill
Average 2-Hour Costs & Annual Percent Change, 1996-2002

Zone	*Cost 1996*	*Cost 1999*	***Annual % Change 96-99***	***Cost 2002***	***Annual % Change 99-02***	*Annual % Change 96-02*
14	$2.63	$3.28	**7.6%**	**$4.22**	**8.8%**	8.2%
15	$2.30	$2.58	**3.9%**	**$3.25**	**8.0%**	5.9%
16	$2.35	$3.61	**15.4%**	**$2.95**	**-6.5%**	3.9%
Total	**$2.46**	**$3.20**	**9.2%**	**$3.60**	**4.0%**	**6.6%**

Table 12: Lower Queen Anne
Average 2-Hour Costs & Annual Percent Change, 1996-2002

Zone	*Cost 1996*	*Cost 1999*	*Annual % Change 96-99*	***Cost 2002***	***Annual % Change 99-02***	*Annual % Change 96-02*
17	$1.93	$2.22	4.8%	**$2.84**	**8.6%**	6.6%
18	$5.56	$4.90	-4.1%	**$5.04**	**0.9%**	-1.6%
19	$3.83	$4.75	7.4%	**$5.01**	**1.8%**	4.6%
Total	**$4.46**	**$4.50**	**0.3%**	**$4.51**	**0.1%**	**0.2%**

Daily: First Hill daily costs are shown in Table 13. Daily costs increased at an annual average of 11.4% from 1996. Most of this increase occurred between 1996 and 1999 when it rose 21.9%. Daily costs for the First Hill area ranged from $11.19 in zone 15 to $13.18 in zone 14. Lower Queen Anne daily parking costs are shown in Table 14. Daily costs for this study area ranged from $5.41 in zone 17 to $8.04 in zone 19, significantly less than the daily costs reported in the First Hill area.

Table 13: First Hill
Average Daily Costs & Annual Percent Change, 1996-2002

Zone	*Cost 1996*	*Cost 1999*	*Annual % Change 96-99*	***Cost 2002***	***Annual % Change 99-02***	*Annual % Change 96-02*
14	$6.59	$11.93	21.9%	**$13.18**	**3.4%**	12.3%
15	$6.59	$10.54	16.9%	**$11.19**	**2.0%**	9.2%
16	$6.24	$10.27	18.1%	**$12.52**	**6.8%**	12.3%
Total	**$6.48**	**$11.14**	**19.8%**	**$12.37**	**3.6%**	**11.4%**

Table 14: Lower Queen Anne
Average Daily Costs & Annual Percent Change, 1996-2002

Zone	*Cost 1996*	*Cost 1999*	*Annual % Change 96-99*	***Cost 2002***	***Annual % Change 99-02***	*Annual % Change 96-02*
17	$2.58	$5.25	26.7%	**$5.41**	**1.0%**	13.1%
18	$6.35	$5.71	-3.5%	**$5.74**	**0.2%**	-1.7%
19	$6.65	$7.48	4.0%	**$8.04**	**2.4%**	3.2%
Total	**$6.16**	**$6.39**	**1.2%**	**$6.52**	**0.7%**	**1.0%**

Figure 10 and Figure 11 on the following page show daily parking costs for the First Hill and lower Queen Anne study areas. The First Hill area lots are distributed throughout the study area and have cost ranges on the mid to upper end of the scale. Many of the lower Queen Anne areas' lots are surrounding the Seattle Center and Key Arena and are in the lower cost range to park for a day.

Figure 10: First Hill
Average Daily Parking Costs, 2002

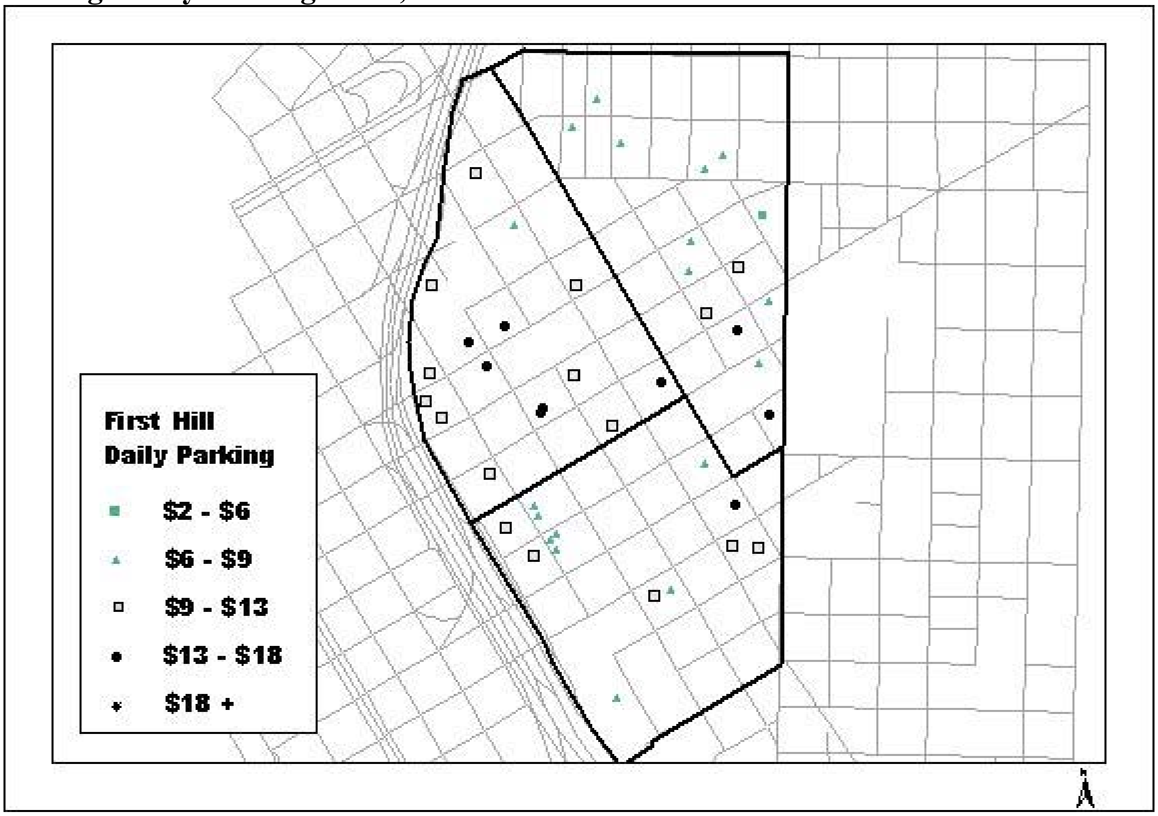
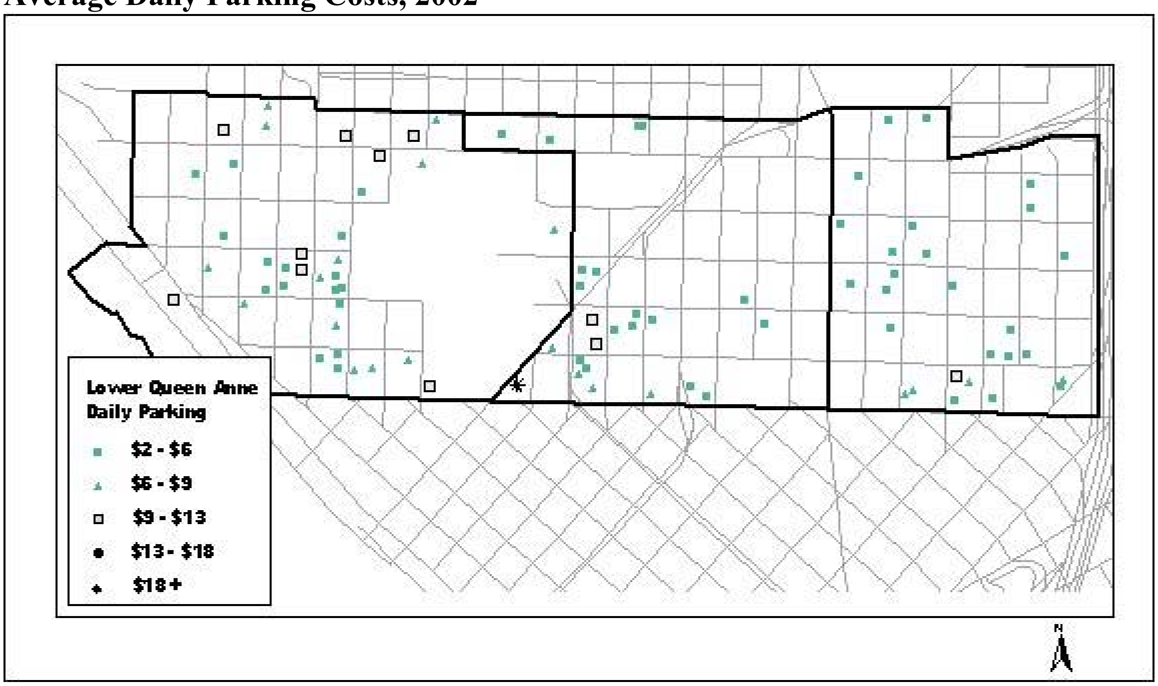


Figure 11: Lower Queen Anne
Average Daily Parking Costs, 2002



Monthly: First Hill monthly costs are shown on in Table 15. Due to the lack of monthly cost information, zone 14 was the only individual zone that could be reported. For the area as a whole, monthly costs have increased by 1.0% since 1999, and by 5.4% since 1996. Lower Queen Anne monthly costs are shown in Table 16. Due to the lack of monthly cost information, only the average total for the Queen Anne study area could be reported. Costs between 1999 and 2002 have increased by 13.9%, and have increased by 11.9% since 1996.

Table 15: First Hill
Average Monthly Costs & Annual Percent Change, 1996-2002

Zone	*Cost 1996*	*Cost 1999*	*Annual % Change 96-99*	***Cost 2002***	***Annual % Change 99-02***	*Annual % Change 96-02*
14	$75.75	$117.46	15.7%	**$110.20**	**-2.1%**	6.4%
15	$60.32	$68.33	4.2%	**n.a.**	**n.a.**	n.a.
16	$65.28	$69.55	2.1%	**n.a.**	**n.a.**	n.a.
Total	**$66.96**	**$89.08**	**10.0%**	**$91.71**	**1.0%**	**5.4%**

*n.a. (not applicable); represents zones that contain less than 5 lots with monthly rates. These lots are represented in the total, however.

Table 16: Lower Queen Anne
Average Monthly Costs & Annual Percent Change, 1996-2002

Zone	*Cost 1996*	*Cost 1999*	*Annual % Change 96-99*	***Cost 2002***	***Annual % Change 99-02***	*Annual % Change 96-02*
17	$34.64	$51.24	13.9%	**n.a.**	**n.a.**	n.a.
18	$46.35	$55.73	6.3%	**n.a.**	**n.a.**	n.a.
19	$62.82	$91.39	13.3%	**n.a.**	**n.a.**	n.a.
Total	**$54.06**	**$71.76**	**9.9%**	**$106.03**	**13.9%**	**11.9%**

*n.a. (not applicable); represents zones that contain less than 5 lots with monthly rates. These lots are represented in the total, however.

Figures 12 and 13 on the following page show annual percent change for both study areas in all cost categories from 1992-2002.

Figure 12: First Hill
Annual Percent Change in Costs, 1992-2002

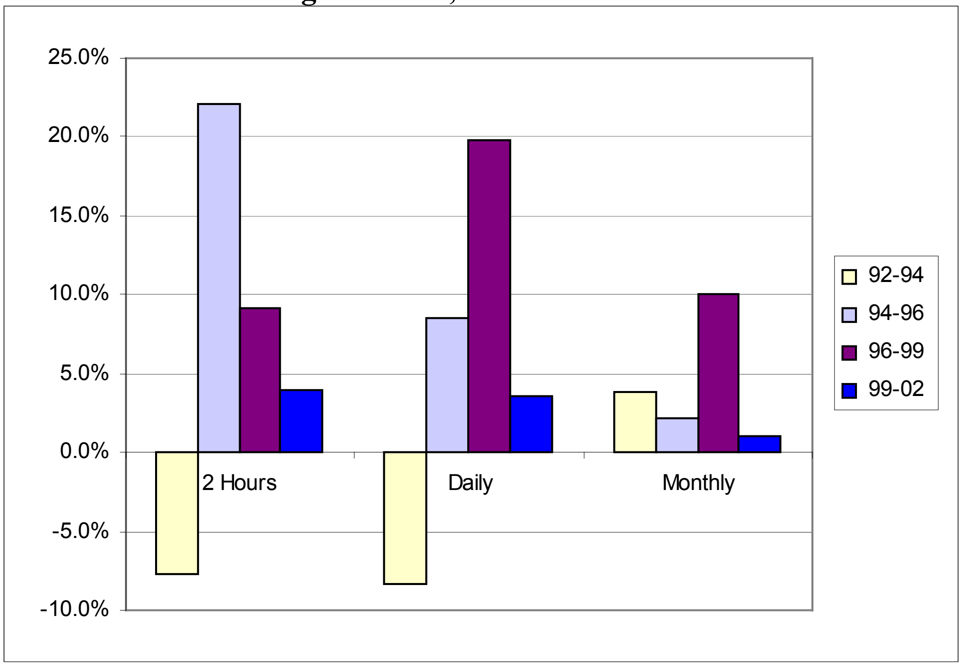
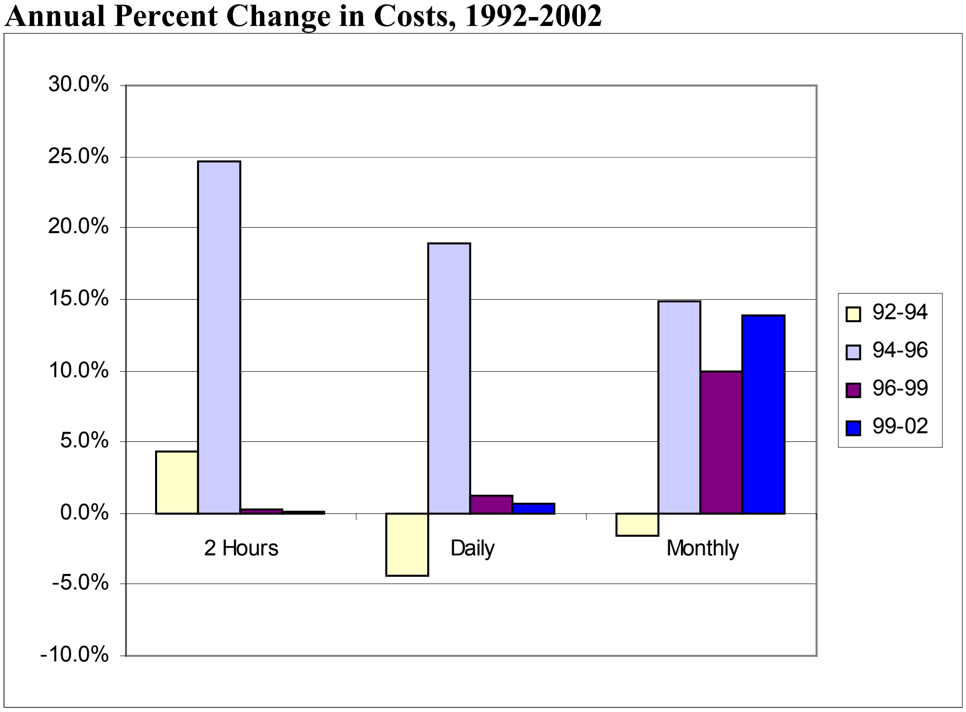


Figure 13: Lower Queen Anne
Annual Percent Change in Costs, 1992-2002



Parking Type

The parking type categories for the First Hill and lower Queen Anne area are "customer", "employee" and "other". No residential parking was included in the First Hill or Queen Anne inventories.

Table 17 shows the First Hill parking type total stalls and the percent of lots that are pay and non-pay. Both customer and employee categories had no reported costs associated with them. The "other" category contained the greatest number of stalls with 9,043 and the highest proportion of pay lots at 88.5%. Table 18 shows parking type for the lower Queen Anne area. This study area also had the greatest number of stalls in the "other" category at 11,607.

Combining all lot types together shows that in the First Hill area, the percentage of pay lots (74.4%) is triple the percentage of non-pay lots (25.6%). In the lower Queen Anne area however, this trend is reversed with non-pay lots (64.0%) accounting for a higher percentage of the total than pay lots (36.0%). The lower Queen Anne area contained a greater number of customer parking, which by definition has no costs associated with it.

Table 17: First Hill Parking Type, 2002

Parking Type	Total Stalls	Percent Pay Lots	Percent Non-Pay Lots
Customer	480	0.0%	100.0%
Employee	1,225	0.0%	100.0%
Other	9,043	88.5%	11.5%
Total	**10,748**	**74.4%**	**25.6%**

*Total stalls reported in parking type may not add up to total stalls reported in Table 7 due to the inability to classify all lots.

Table 18: Lower Queen Anne Parking Type, 2002

Parking Type	Total Stalls	Percent Pay Lots	Percent Non-Pay Lots
Customer	1,706	0.0%	100.0%
Employee	4,310	0.2%	99.8%
Other	11,607	54.6%	45.4%
Total	**17,623**	**36.0%**	**64.0%**

*Total stalls reported in parking type may not add up to total stalls reported in Table 8 due to the inability to classify all lots.

IV. BELLEVUE CBD

Study Area

The Bellevue CBD study area is made up of seven zones. Figure 14 on the following page shows the extent of this area. The boundary of the Bellevue CBD consists of 100th Ave NE to the west, NE 12th to the north, 116th Ave NE to the east and Main Street to the south. The survey included all businesses on the south side of Main Street that have access to that street and are an integral part of the downtown district.

Total Stalls

Table 19 shows total stalls and the annual change between surveys beginning in 1996. The Bellevue CBD had a total of 32,623 stalls in 2002. This is an annual increase of 2.4% (2,236 stalls) from the survey conducted in 1999 and an annual increase of 0.8% (1,530 stalls) from 1996. Total stalls in the seven Bellevue zones ranged from 487 in zone 6 to 14,503 in zone 3. Zone 3 contains a couple of large garages including the Bellevue Square parking facility. Zone 7 had the largest increase in parking stalls of 9.8% (826 stalls) between 1999 and 2002. Zone 7 contains Overlake Hospital and Bellevue City hall. Construction at the hospital during the 1999 survey reduced the total available parking in zone 7 for that year, so the rate of change may be artificially high. However, stalls in that zone have increased since 1996 with the addition of a large parking garage.

Table 19: Bellevue CBD Total Stalls & Annual Percent Change, 1996-2002

Zone	*Stalls 1996*	*Stalls 1999*	*Annual % Change 96-99*	***Stalls 2002***	***Annual % Change 99-02***	*Annual % Change 96-02*
1	3,999	3,998	0.0%	**4,076**	**0.6%**	0.3%
2	2,607	2,291	-4.2%	**2,378**	**1.3%**	-1.5%
3	12,558	12,985	1.1%	**14,503**	**3.8%**	2.4%
4	7,627	7,371	-1.1%	**7,089**	**-1.3%**	-1.2%
5	872	740	-5.3%	**718**	**-1.0%**	-3.2%
6	426	456	2.3%	**487**	**2.2%**	2.3%
7	3,004	2,546	-5.4%	**3,372**	**9.8%**	1.9%
Total	**31,093**	**30,387**	**-0.8%**	**32,623**	**2.4%**	**0.8%**

Figure 14: Bellevue CBD Study Area

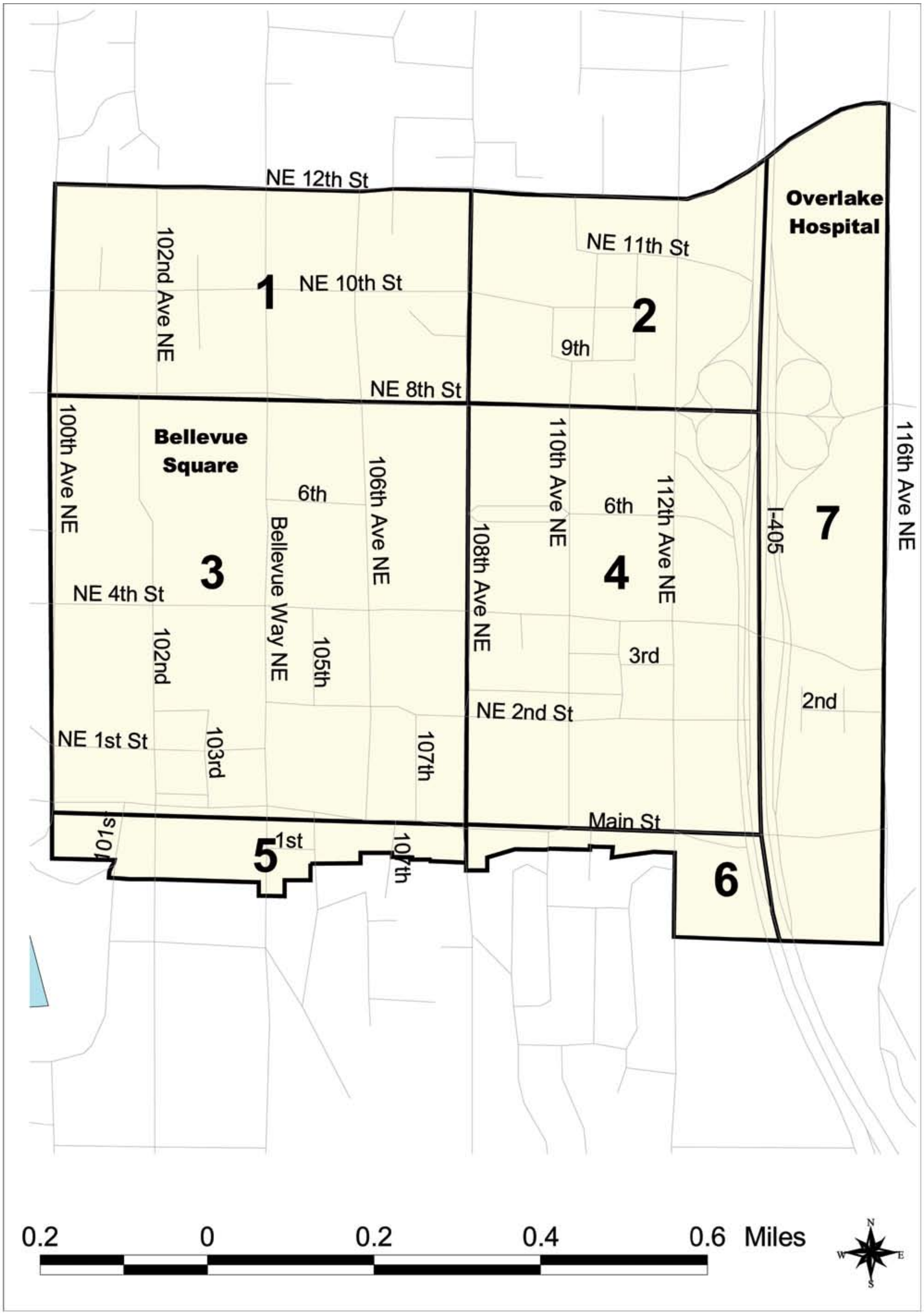
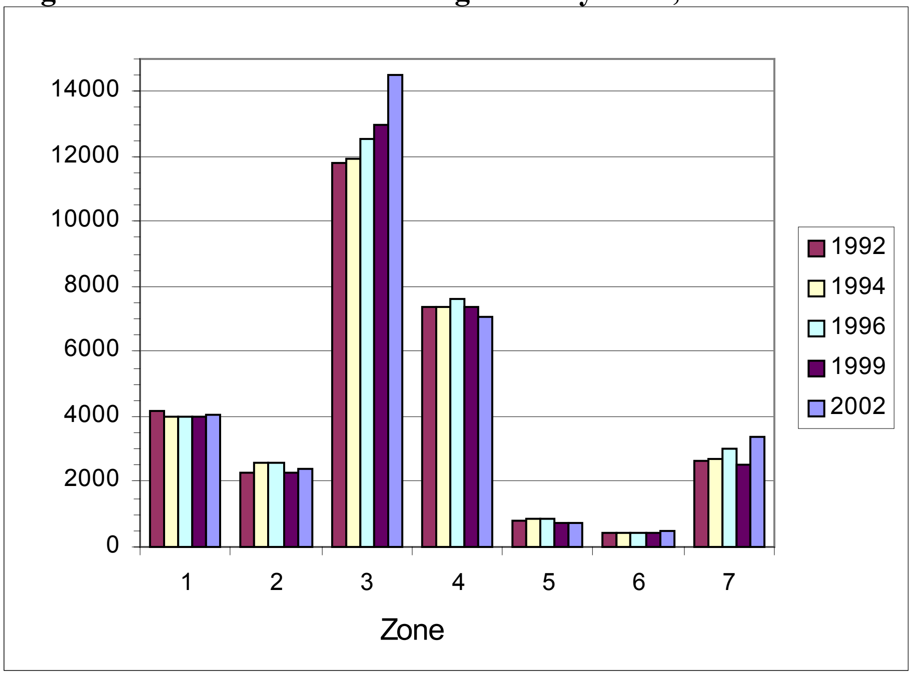


Figure 15 shows parking availability by zone from 1992 to 2002. From the chart you can see that zone 3 has been increasing steadily since 1992 and rose quite significantly in 2002.

Figure 15: Bellevue CBD Parking Stalls by Zone, 1992-2002



Occupancy

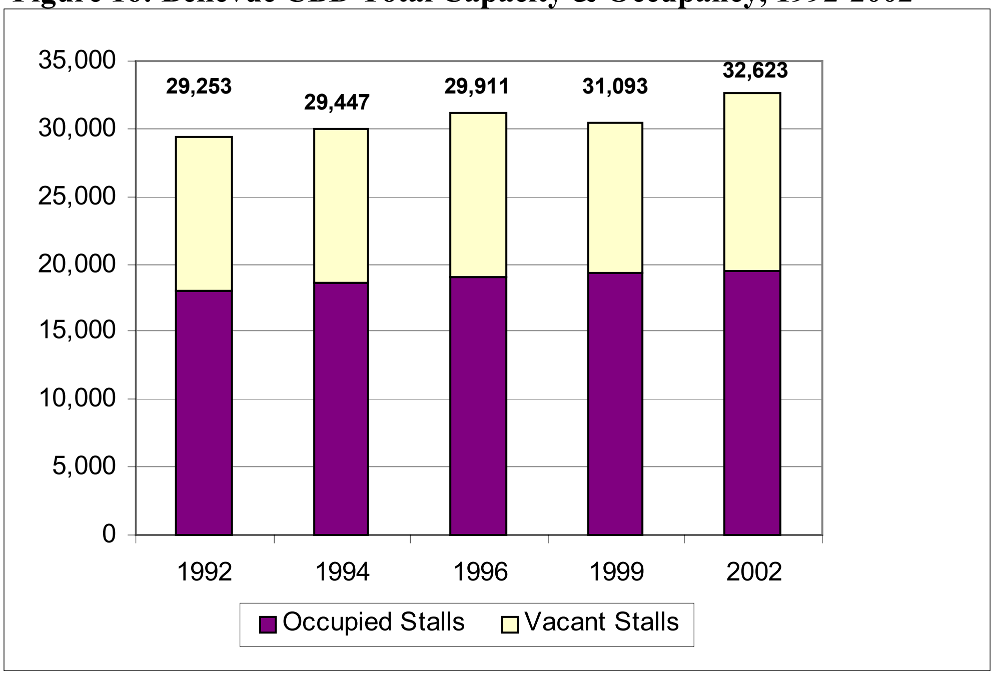
Table 20 on the following page shows the occupancy rates and annual percent change between 1996 and 2002 for the Bellevue CBD. Since 1999, the percent change of occupancy for all zones has decreased 2.2 annually. Occupancy rates ranged from 70.5% in zone 3 to 40.2% in zone 6. Zone 6 has had a loss of 11.6% since 1999. The largest decrease occurred in zone 2, with a rate of change of 14.4%. The only zone in the Bellevue study area that saw an increase in occupancy was zone 3, with a rate of 7.7%. Zone 3 contains Bellevue Square.

Figure 16 on the following page shows the change in total stalls and occupancy from 1992 to 2002 for the Bellevue CBD.

Table 20: Bellevue CBD Occupancy Rates & Annual Percent Change, 1996-2002

Zone	Occupancy 1996	Occupancy 1999	Annual % Change 96-99	**Occupancy 2002**	**Annual % Change 99-02**	Annual % Change 96-02
1	66.7%	63.5%	-1.6%	**48.1%**	**-8.9%**	-5.3%
2	67.9%	76.9%	4.2%	**48.2%**	**-14.4%**	-5.6%
3	56.6%	56.5%	-0.1%	**70.5%**	**7.7%**	3.7%
4	63.2%	73.9%	5.4%	**49.3%**	**-12.6%**	-4.0%
5	48.1%	46.5%	-1.1%	**40.4%**	**-4.6%**	-2.9%
6	54.5%	58.3%	2.3%	**40.2%**	**-11.6%**	-4.9%
7	66.1%	64.6%	-0.8%	**62.9%**	**-0.9%**	-0.8%
Total	**61.1%**	**63.6%**	**1.3%**	**59.6%**	**-2.2%**	**-0.4%**

Figure 16: Bellevue CBD Total Capacity & Occupancy, 1992-2002



Parking Costs

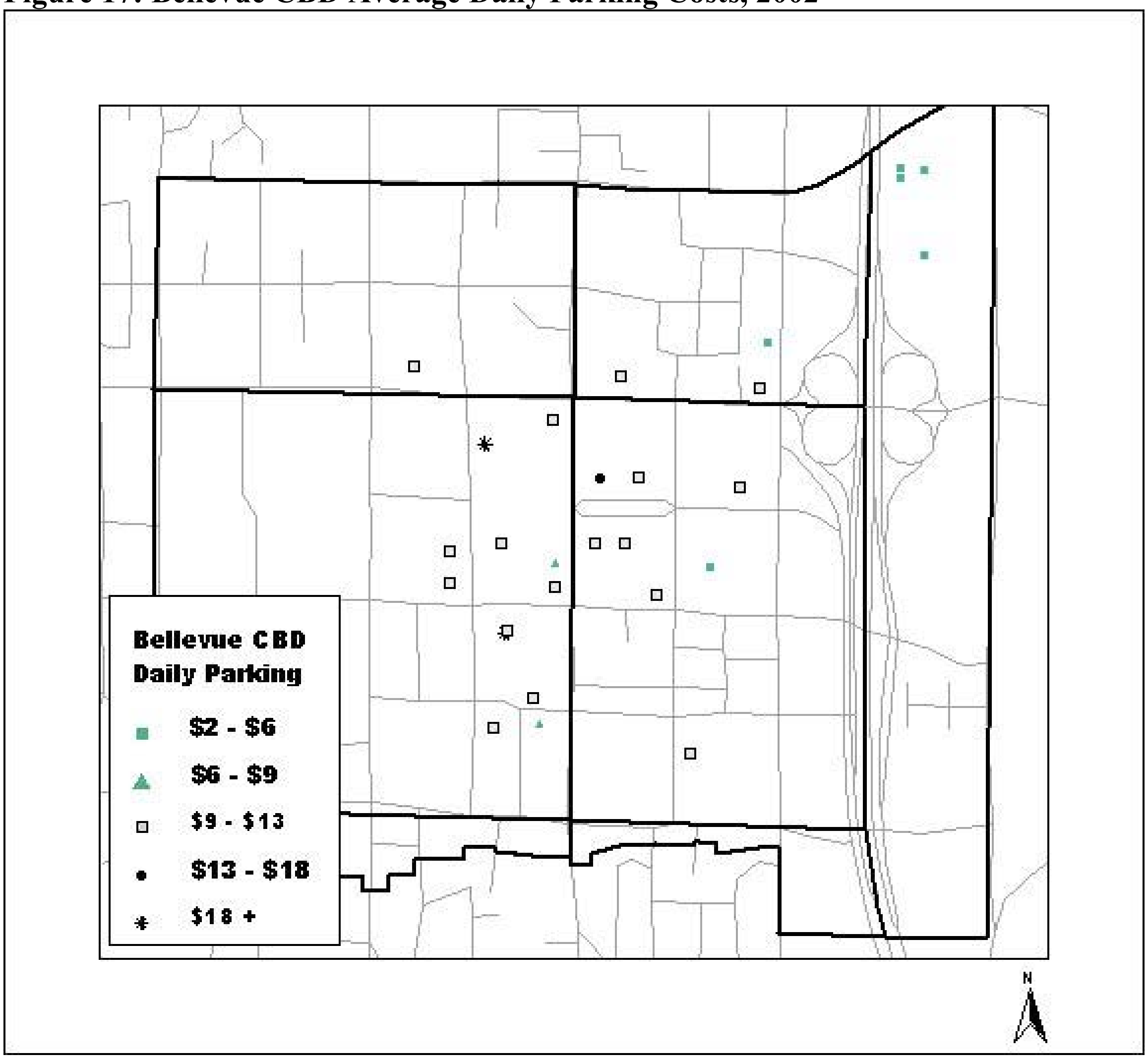
Average parking costs in the Bellevue CBD are shown in Table 25. Because each Bellevue zone had only a small number of pay lots, comparisons at the zone level is not meaningful. For this study area, average costs are compared at the CBD level. Between 1999 and 2002, the average annual change for 2 hour rates was an increase of 9.8%, a difference of $1.23. Daily parking cost had the smallest annual increase at 0.3%. All parking cost levels in the Bellevue CBD have increased since 1999.

Table 21: Bellevue CBD Average 2-hour, Daily and Monthly Costs & Annual Percent Change, 1996-2002

Zone	*Cost 1996*	*Cost 1999*	*Annual % Change 96-99*	***Cost 2002***	***Annual % Change 99-02***	*Annual % Change 96-02*
0-2 Hours	$2.46	$3.78	15.4%	**$5.01**	**9.8%**	12.6%
Daily	$6.90	$11.21	17.6%	**$11.30**	**0.3%**	8.6%
Monthly	$74.78	$105.51	12.2%	**$138.36**	**9.5%**	10.8%

Figure 17 shows the average daily parking costs for the Bellevue CBD. Most pay lots are within a block on either side of 108th Ave where many of the office towers are located.

Figure 17: Bellevue CBD Average Daily Parking Costs, 2002



Parking Type

Table 22 shows the type of parking, total stalls and the percent of lots that are pay and those that have no cost for the Bellevue CBD. Similar to what was evident in Seattle, the "other" category had the highest percent of pay lots, in Bellevue this amounted to 67.3% out of a total of 20,383 stalls.

Those lots categorized as employee parking had no posted costs associated with them and those classified as customer had only a small percentage of pay lots (3.5%). Included in the "other" category are employee and customer mixed lots, which bring down the percentage of pay lots in this category significantly.

Table 22: Bellevue CBD Parking Type, 2002

Parking Type	*Total Stalls*	*Percent Pay Lots*	*Percent Non Pay Lots*
Customer	11,287	3.5%	96.5%
Employee	953	0.0%	100.0%
Other	20,383	67.3%	32.7%
Total	**32,623**	**43.3%**	**56.7%**

V. TACOMA CBD

Study Area

The Tacoma CBD study area is made up of seven zones. Figure 18 on the following page shows the extent of this area. The study area is bounded by Division to the north, Thea Foss Waterway, Puyallup Avenue and J Street to the east, Interstate 5 to the south and S Yakima Avenue and S G Street to the west. The Tacoma CBD contains some major facilities including the University of Washington Tacoma campus (zone 4), Bates Technical College (zone 2), the Tacoma Dome (zone 7) and the Rhodes Center (zone 3), which houses the State Court of Appeals, the Department of Labor and Industries, the Washington State Employees Credit Union and a large conference center.

The boundaries of the Tacoma CBD study area were created with help from the City of Tacoma. The purpose of collaboration was to align the area with the parking study that was conducted by the Tacoma Economic Development Department. The City of Tacoma conducted their parking survey in late summer of 1999. Due to differences in methodology, the PSRC is not comparing the current survey to data collected by the City of Tacoma.

Total Stalls

In Tacoma, a total of 17,993 parking stalls were counted. Because this is the first year that we conducted an inventory for this area, there are no historical figures for comparison. Table 23 shows the total stalls per zone that were counted for the Tacoma CBD study area.

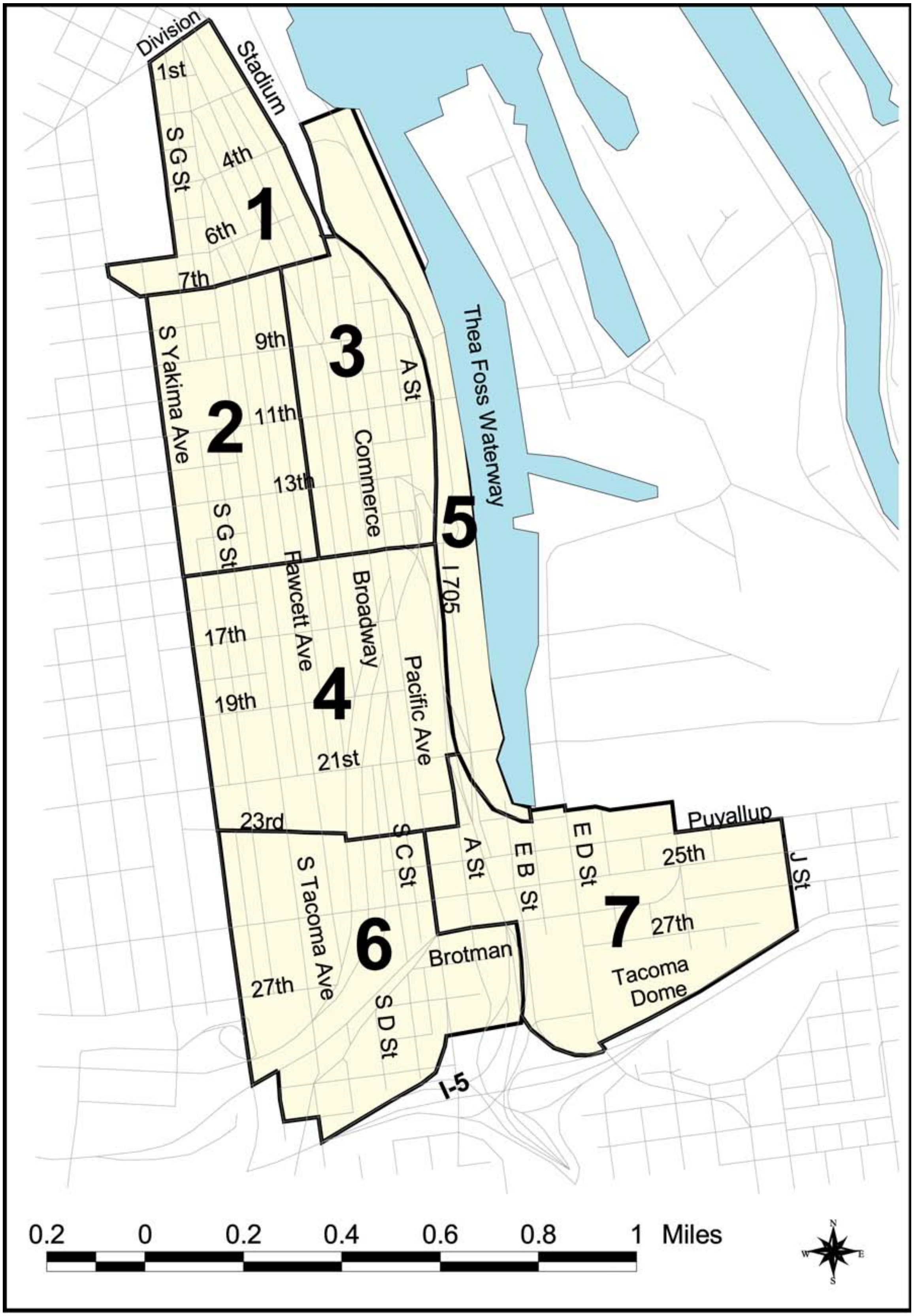
Table 23: Tacoma CBD Total Stalls

Zone	*Stalls 2002*
1	1,454
2	3,742
3	3,865
4	1,963
5	574
6	1,021
7	5,374
Total	**17,993**

Zone 7 had the highest amount of parking stalls at 5,374. Total parking stalls in the Tacoma CBD ranged from 574 in zone 5 to 5,374 in zone 7, a range of 4,800. The Tacoma Dome is located in zone 7 and has several large lots surrounding the stadium. Zone 7 also contains Tacoma Dome Transit Center and the Amtrak Terminal. Total stalls in these garages amounted to more than 2,000 spaces.

A current project that will change the parking situation in Tacoma is the construction of the Tacoma Convention and Trade Center. This project, located at the corner of Commerce and S 15th streets, will add approximately 650 additional stalls and is projected to be complete in 2004.

Figure 18: Tacoma CBD Study Area



Occupancy

Occupancy rates for the Tacoma CBD are shown in Table 24. The Tacoma CBD occupancy rates range from 27.9% in zone 7 to 63.5% in zone 3. Zone 3 contains several medium sized garages and is the core downtown area. This zone also contains the Tacoma Dome lots, which were counted on a non-event day. This facility most likely only reaches full capacity when there is a scheduled event.

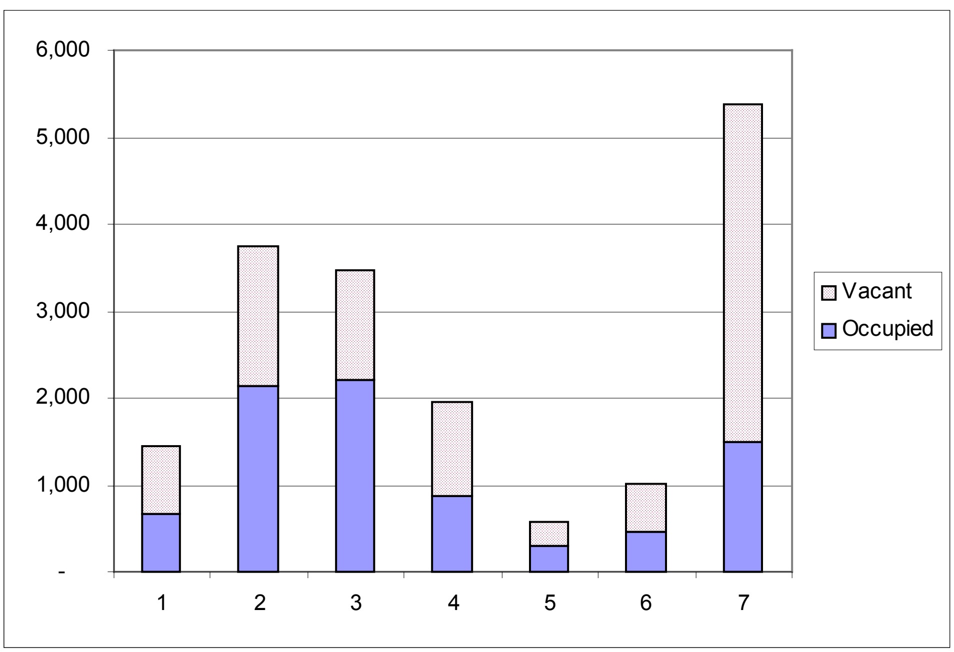
The overall average occupancy for the Tacoma CBD was 46.3%. This is lower than what was observed in the Seattle CBD (63.2%) and in the Bellevue CBD (59.6%). Removing Zone 7 from the calculation would increase the overall average occupancy to 54.3%.

Table 24: Tacoma CBD Occupancy, 2002

Zone	*Occupancy 2002*
1	46.6%
2	56.9%
3	63.5%
4	44.2%
5	53.7%
6	44.4%
7	27.9%
Total	**46.3%**

Figure 19 shows the total stalls and occupancy for the Tacoma CBD.

Figure 19: Tacoma CBD Total Capacity & Occupancy, 2002



Parking Costs

Two-hour, daily and monthly average costs by zone for the Tacoma CBD are shown in Table 25.

Two-hour: Parking rates in zones 5, 6 and 7 are unavailable because of the small number of pay lots in those areas.

Costs range from $1.00 in zone 1 to $5.18 in zone 3, the downtown core. Zone 1 is more on the outskirts of the main downtown area, which may explain the lower costs. Zones 2 and 4 are both closer to Zone 3.

Tacoma's 2 hour parking costs ($3.92) are on average $3.28 less than the Seattle CBD and $1.09 less than Bellevue CBD costs.

Table 25: Tacoma CBD Average 2-Hour, Daily & Monthly Costs, 2002

Zone	*2-hour*	*Daily*	*Monthly*
1	$1.00	$3.30	n.a.
2	$2.08	$4.85	$60.08
3	$5.18	$11.52	$106.46
4	$2.44	$6.65	n.a.
5	n.a.	n.a.	n.a.
6	n.a.	n.a.	n.a.
7	n.a.	n.a.	n.a.
Total	**$3.92**	**$8.76**	**$88.41**

*n.a. (not applicable); represents zones that contain less than 5 lots with parking rates. These lots are represented in the total, however.

Daily: Costs range from $3.30 in zone 1 to $11.52 in zone 3. This trend was evident in the 2-hour cost category as well, with zone 3 having the highest cost for parking.

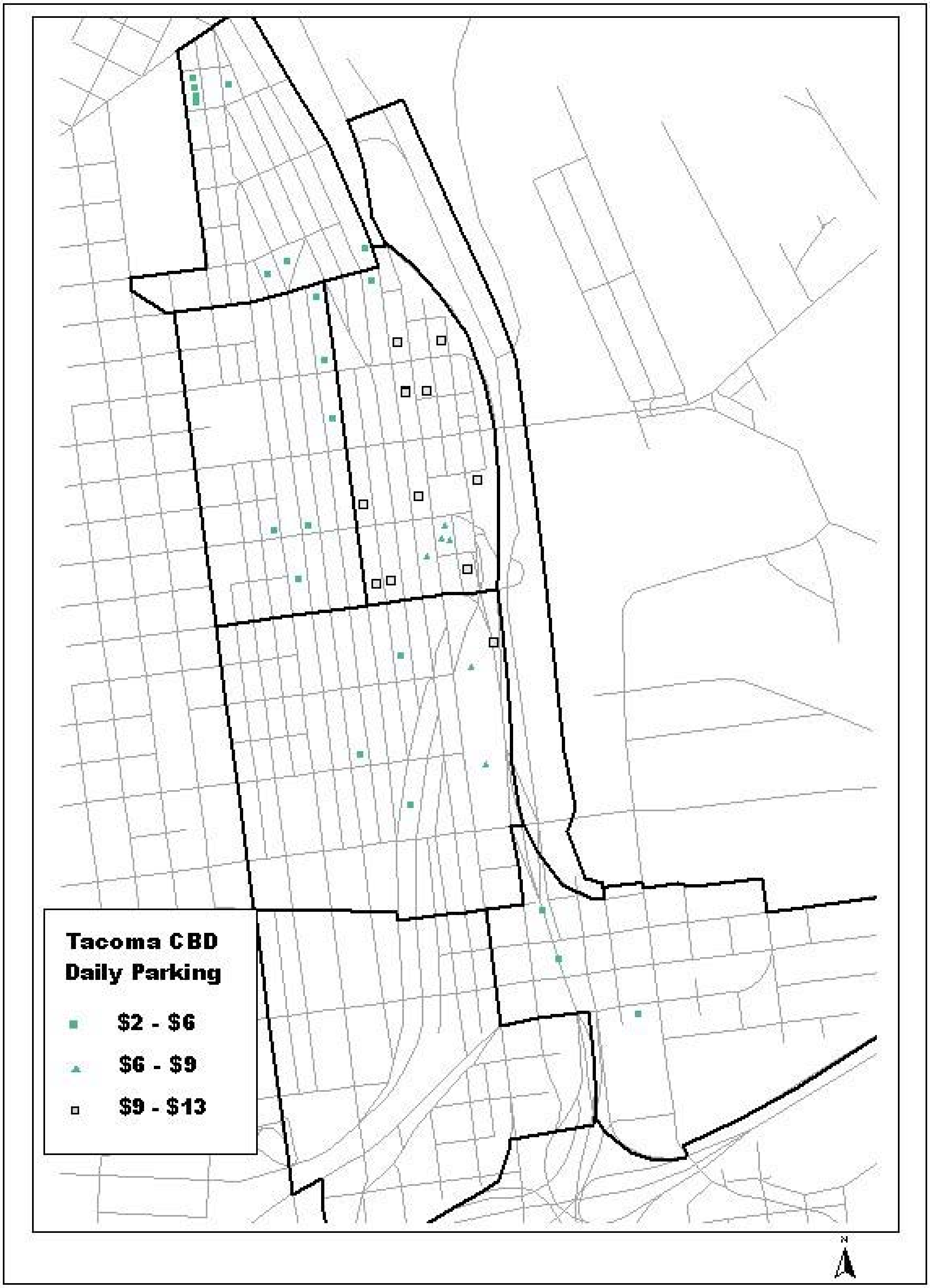
The average weighted daily cost for Tacoma amounted to a total of $8.76. Comparing this cost to Seattle and Bellevue CBD's, Tacoma is $5.76 less than Seattle and $2.54 less than Bellevue.

Figure 20 shows the distribution of daily costs within the Tacoma CBD study area. Most of the higher priced pay lots are located in zone 3.

Monthly: Monthly costs in the Tacoma CBD averaged $88.41. This study area's average monthly cost is $111.88 less than the Seattle CBD and $49.95 less than the Bellevue CBD.

Rates were not available in zones 1, 4, 5, 6 and 7 due to lack of pay lots in those areas.

Figure 20: Tacoma CBD Average Daily Parking Costs, 2002



Parking Type

The majority of lots in the Tacoma CBD were classified as "other" and contained a higher percentage of non-pay lots than pay lots (Table 26). In Seattle, we have typically seen the reverse trend with the "other" category having a higher percentage of pay lots. The other category contains lots that have mixed types. In the case of Tacoma, there was predominance of customer and employee mixed lots that had no known cost associated with them, bringing down the percentage of pay lots in this category.

Table 26: Tacoma CBD Parking Type, 2002

Parking Type	Total Stalls	Percent Pay Lots	Percent Non Pay Lots
Customer	413	0.0%	100.0%
Employee	1,423	0.0%	100.0%
Other	16,157	29.1%	70.9%
Total	**17,993**	**26.2%**	**73.8%**

Total percentage of pay lots in the Tacoma area amounted to 26.2% out of a total of 17,993 stalls. Percentage of non-pay lots was almost 74%.

VI. Everett CBD

Study Area

The Everett CBD study area is shown in Figure 21. Everett consists of eight zones. The Everett CBD is bounded by 24th and 25th streets and Everett Avenue to the north, I-5 to the east, Marine View Drive, Gedney and Bond Street to the west and 34th and 33rd streets to the south. Major facilities located in the study area include Providence General Medical Center-Colby Campus (zone 5), Snohomish County Courthouse (zone 4) and the Civic Auditorium (zone 1).

The Everett study area was determined with help from the City of Everett. This area follows mostly along designated urban center boundaries, except for the addition of zone 8 to the east.

Figure 21: Everett CBD Study Area

Total Stalls

Table 27: Everett CBD Total Stalls, 2002

Zone	*Stalls 2002*
1	1,157
2	858
3	2,272
4	2,320
5	1,335
6	1,006
7	1,142
8	2,427
Total	**12,517**

Within the Everett CBD, a total of 12,517 parking stalls were counted (Table 27). Total stalls ranged from 858 in zone 2 to 2,427 in zone 8. Zone 8 contains several large lots including Group Health Cooperative, the Howard Johnson Plaza Hotel and Lowes Hardware.

The Everett parking situation has been changing considerably within the last few years with the addition of the Everett Station transit center (zone 7) and a demolition of a parking garage (approximately 600 stalls) by Snohomish County for their Campus Redevelopment Initiative(zone 4). A new underground six-story garage will be constructed, adding 1,200 stalls.

The area surrounding the Everett Station has gone through the most extreme changes. This transit center supports Sound Transit, Everett Transit, Amtrak and Community Transit and contains around 300 parking spaces. Current construction on this project will add around 400 stalls. However, because we have no historical data for Everett, we cannot measure the full effect of these changes.

Occupancy

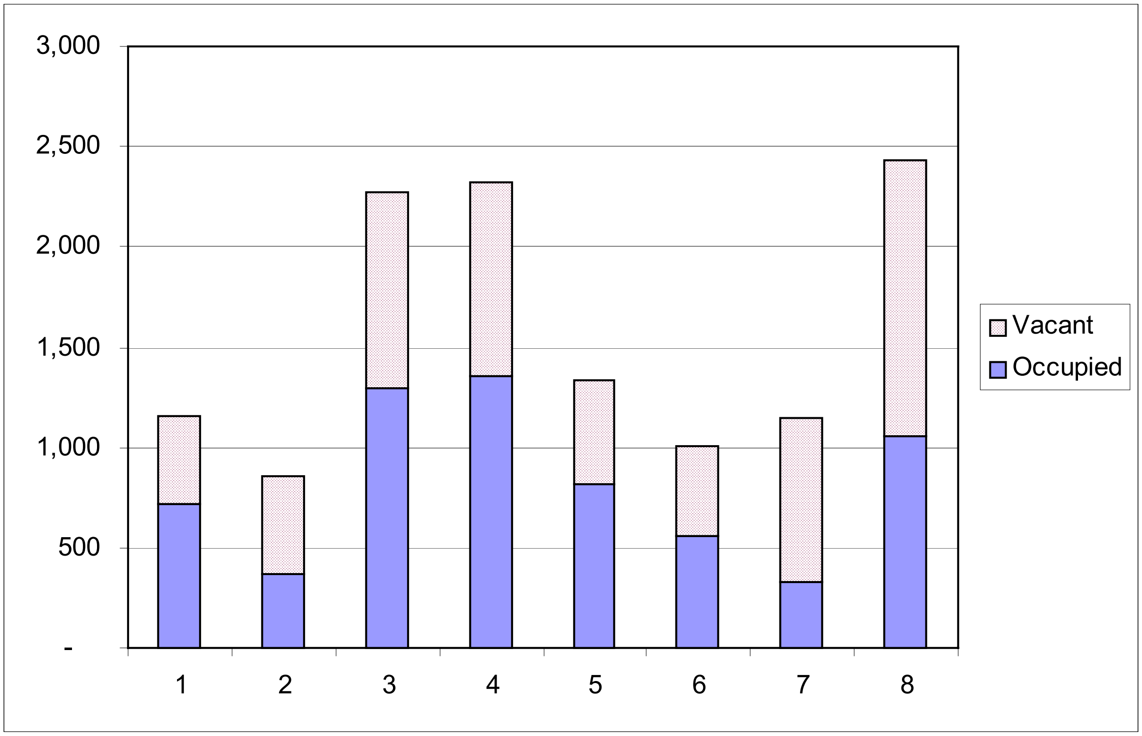
Average occupancy in the Everett CBD was 52.0% (Table 28). Occupancy rates ranged from 29.1% in zone 7 to 62.1% in zone 1. Zone 1 contains mainly customer and employee type lots. Zone 7 contains the Everett Station, which at the time of the survey was not being fully utilized. Removing this outlier would increase the overall average occupancy in the Everett area to 54.3%.

Figure 22 shows the total stalls and occupancy for the Everett CBD.

Table 28: Everett CBD Occupancy, 2002

Zone	Occupancy 2002
1	62.1%
2	42.9%
3	57.2%
4	58.6%
5	61.1%
6	55.1%
7	29.1%
8	43.7%
Total	**52.0%**

Figure 22: Everett CBD Total Capacity & Occupancy, 2002



Parking Costs

Parking costs in the Everett area are listed in Table 29. Costs are reported as totals for the entire Everett CBD and not by zones due to the lack of pay lots in the area. The collection of monthly rates in the Everett area was not sufficient to determine an average.

Table 29: Everett CBD Average 2-hour, Daily & Monthly Costs, 2002

Type	*Cost 2002*
0-2 Hours	$2.20
Daily	$7.00
Monthly	n.a.

Average two-hour cost for parking amounted to $2.20 and daily cost to $7.00. Not including the ferry terminals, Everett had the lowest costs of all the study areas in this survey.

In comparison to the CBDs in Seattle, Bellevue and Tacoma, the Everett CBD two-hour costs were $5.00 less than Seattle, $2.81 less than Bellevue and $1.72 less than Tacoma. Daily costs were $2.97 less than Seattle, $4.30 less than Bellevue and $1.76 less than Tacoma.

Parking Type

Parking in the Everett CBD study area contained mainly non-pay stalls at 90.5% (Table 30). Similar to what was reported in the Tacoma CBD, Everett has a higher percentage of non-pay lots than pay lots in the "other" category. Again, this is due to the predominance of customer and employee mixed lots that typically have no cost reported.

Table 30: Everett CBD Parking Type, 2002

Parking Type	Total Stalls	Percent Pay Lots	Percent Non Pay Lots
Customer	1,752	0.0%	100.0%
Employee	2,423	1.9%	98.1%
Other	8,342	13.7%	86.3%
Total	**12,517**	**9.5%**	**90.5%**

For comparison 81.4% of the parking in downtown Seattle and 43.3% of the parking in downtown Bellevue was pay parking.

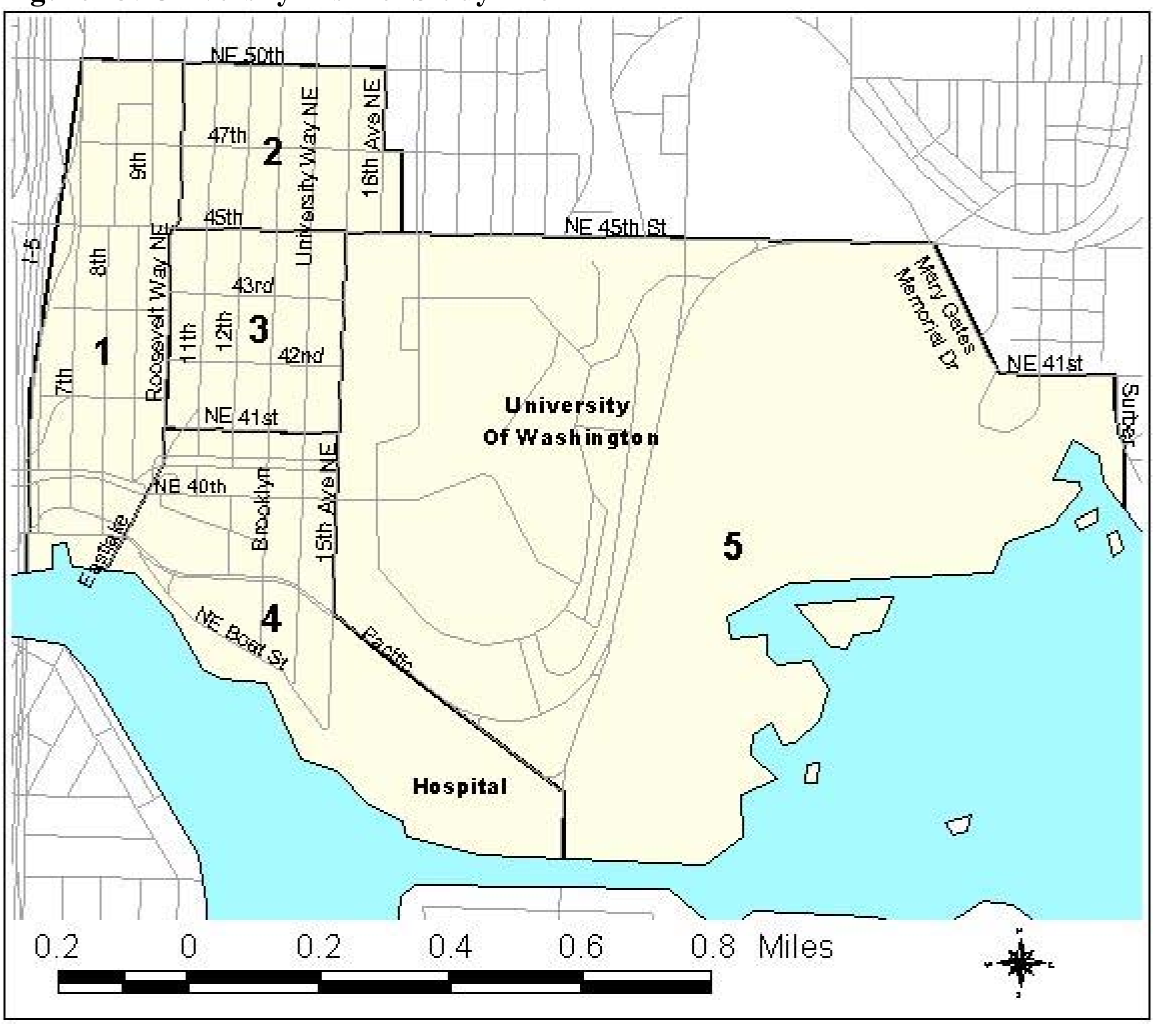
VII. University District

Study Area

The University District study area is shown in Figure 23. The University District is made up of 5 zones. The study area is bounded by 50th and 45th streets to the north, I-5 to the west, Mary Gates Memorial Drive and NE Surber Drive to the east and Pacific and NE Boat Street to the south.

Zone 5 contains the University of Washington. For the purpose of this survey, the University of Washington will be reported separately from information gathered by the PSRC. The University of Washington provided all of its own parking information.

Figure 23: University District Study Area



Total Stalls

Table 31 shows that the total number of stalls counted in the University District amounted to 5,134. Zone 4 had the fewest number of stalls with 265 and Zone 2 had the most with 1,909. Zone 4 contained many of the permit only lots owned by the University of Washington, which were not included in the count.

Parking stalls reported by the University of Washington (zone 4 and zone 5) amounted to a total of 11,642. Zone 4 contained 2,650 stalls and zone 5 contained 8,992 stalls.

Table 31: University District Total Stalls, 2002

Zone	*Stalls 2002*
1	1,462
2	1,909
3	1,498
4	265
Total	**5,134**

Occupancy

Table 32: University District Occupancy, 2002

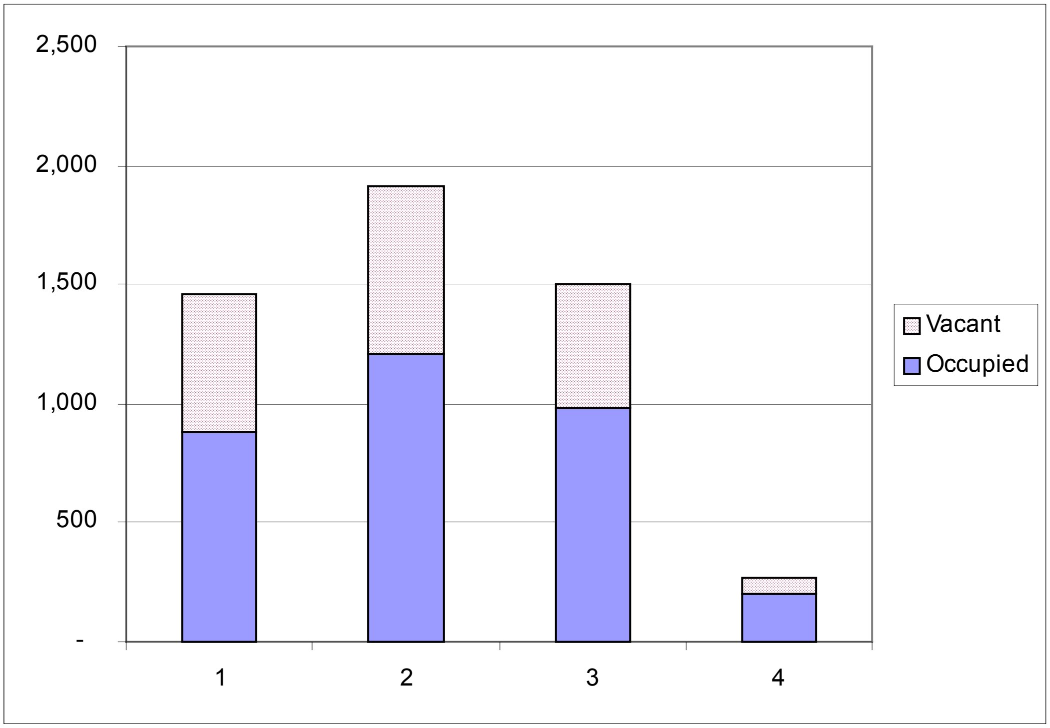
Zone	*Occupancy 2002*
1	**60.1%**
2	**63.4%**
3	**65.6%**
4	**77.4%**
Total	**63.8%**

Table 32 shows occupancy by zone for the University District. Overall occupancy in this area was 63.8%. Occupancy rates ranged from 77.4% in zone 4 to 60.1% in zone 1. Zone 4 is in close to the University of Washington and contained a high number of student dedicated parking as opposed to the other zones that contained customer dedicated parking. Parking counts were conducted when classes were in session.

We do not have available occupancy counts for the University of Washington.

Figure 24 shows total stalls and occupancy for zones 1-4 in the University District.

Figure 24: University District Total Capacity & Occupancy by zone, 2002



Parking Costs

Table 33: University District Parking Cost, 2002

Type	*Cost 2002*
0-2 Hours	$3.35
Daily	$7.15
Monthly	$74.37

Parking costs for the University District are shown in Table 33. Because of the minimal amount of pay lots, costs are reported at the study area level. Two-hour costs for the University District averaged $3.35, daily costs averaged $7.15 and monthly costs averaged $74.37.

Compared to the Seattle study area (Seattle CBD, First Hill and lower Queen Anne), the University District daily costs are $7.37 less than the Seattle CBD, $5.22 less than First Hill and $0.63 more than lower Queen Anne.

The University District 2-hour costs were more in the range of the First Hill and lower Queen Anne areas with a $0.25 difference between First Hill and a $1.16 difference from Queen Anne.

The costs to park at the University of Washington are shown in Table 34. The cost to park for two hours at the university is $0.65 more than in the surrounding University District area. However, daily and monthly costs to park on campus are lower.

Table 34: University of Washington Parking Cost, 2002

Type	*Cost 2002*
0-2 Hours	$4.00
Daily	$6.00
Monthly	$59.22

Parking Type

Table 35 shows parking type for the University District. The predominant parking type in the University District was "other", with 4,360 stalls. The "other" category contained a higher percentage of pay lots (54.0%) than non-pay lots (46.0%). Overall however, the University District study area contained a majority of non-pay lots at 51.3%. Neither customer nor employee parking contained pay lots.

Table 35: University District Parking Type, 2002

Parking Type	Total Stalls	Percent Pay Lots	Percent Non Pay Lots
Customer	79	0.0%	100.0%
Employee	425	0.0%	100.0%
Other	4,630	54.0%	46.0%
Total	**5,134**	**48.7%**	**51.3%**

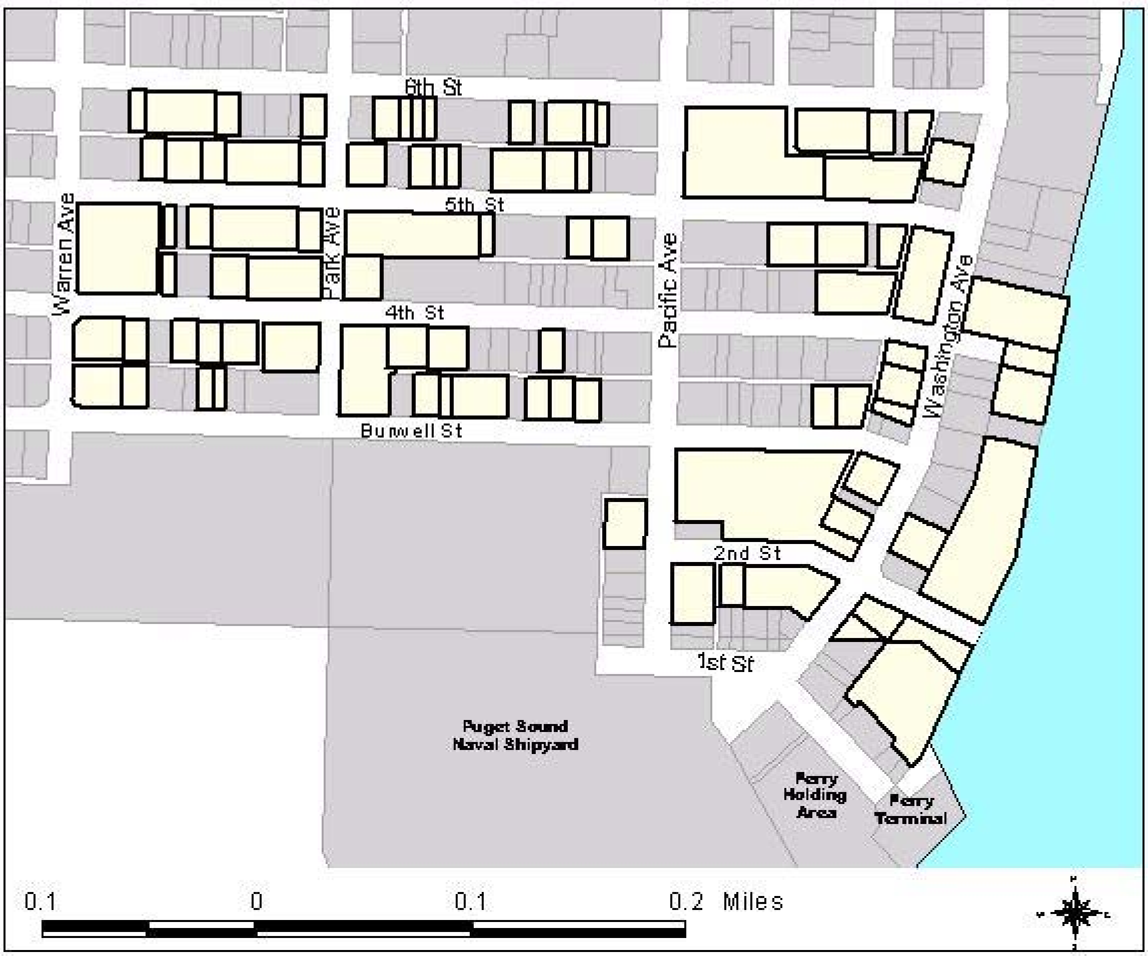
Parking type information was not provided by the University of Washington.

VIII. Bremerton CBD

Study Area

The Bremerton CBD study area is shown in Figure 25. The area is bounded by 6th Street to the north, Warren Avenue to the west, Burwell and 1st Street to the south and the ferry terminal to the east. This area has a wider extent than the other ferry terminals. Bremerton was expanded from the initial area located directly around the ferry terminal to capture the downtown parking as well; however it does not include the Puget Sound Naval Shipyard. The light colored areas on the map represent parcels that contain parking lots.

Figure 25: Bremerton CBD Study Area



Total Stalls

Three thousand six hundred and sixty five parking stalls in 89 lots were counted in the Bremerton study area. The largest lot had a total of 612 spaces, the smallest, 2. The largest capacity lot is located close to the Bremerton ferry dock.

Occupancy

The overall occupancy rate in the Bremerton area was 65.1%. Rates ranged from 100% (very small lots) to being completely empty.

Parking Costs

Table 36: Bremerton CBD Average 2-hour, Daily & Monthly Costs, 2002

Type	*Cost 2002*
0-2 Hours	$3.56
Daily	$6.76
Monthly	$89.61

Parking costs in the Bremerton CBD are reported as totals in Table 36. The average Bremerton 2-hour cost rate was $3.56. Costs charged by lots ranged from $1.00 to $5.00. Daily rates ranged from $3.50 to $10.00 and monthly rates ranged from $50.00 to $101.00. Overall, daily rates averaged $6.67 and monthly averaged $89.61.

Parking Type

Parking types in the Bremerton area consisted of “customer”, “employee” and “other”. Table 37 shows these types and the percentage of pay and non-pay lots within them.

Table 37: Bremerton CBD Parking Type, 2002

Parking Type	Total Stalls	Percent Pay Lots	Percent Non Pay Lots
Customer	64	0.0%	100.0%
Employee	93	0.0%	100.0%
Other	3,508	64.6%	35.4%
Total	**3,665**	**61.9%**	**38.1%**

The predominant type of parking was “other” with a total of 3,508 stalls, 95.7% of the total available parking.

IX. Ferry Terminals

Figure 26 on the following page provides a regional view of the locations of the ferry terminals.

A. Bainbridge

Study Area

The Bainbridge study area is shown in Figure 27. The study area is bounded by the ferry terminal to the southeast and Winslow Way E to the north, with one lot just to the north of this road. Because of the small nature of the ferry terminal area, zones were not assigned. The light colored areas on the map represent parcels that contain parking lots.

Figure 27: Bainbridge Study Area

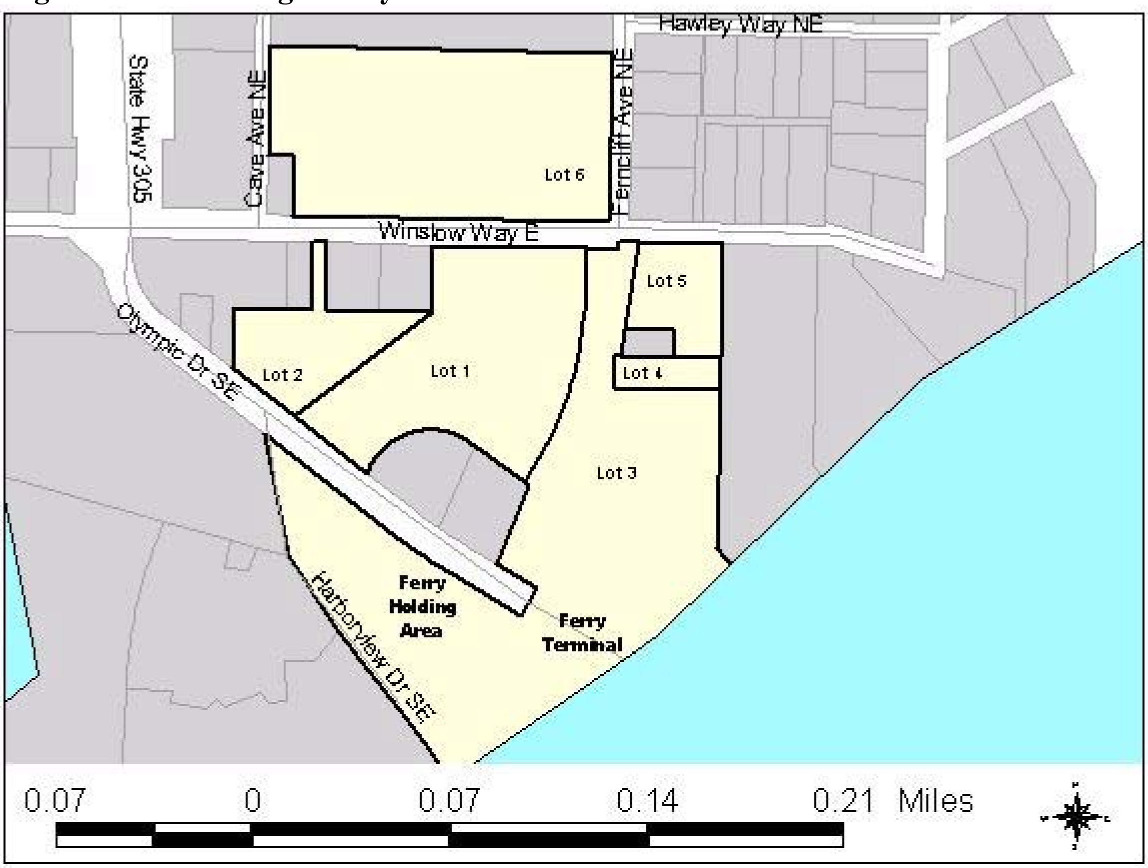
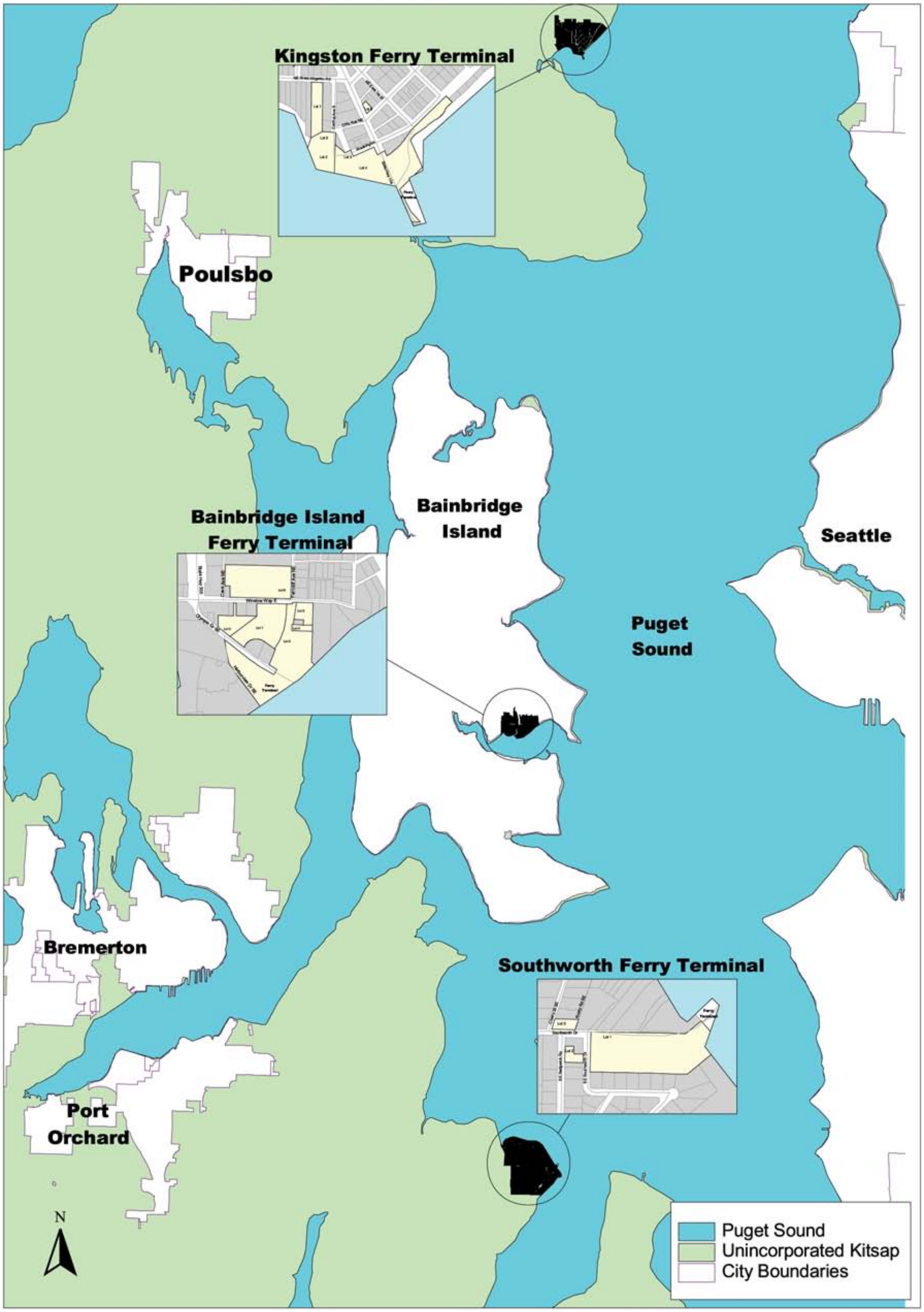


Figure 26: Ferry Terminal Study Area



Total Stalls

Six lots were catalogued in the Bainbridge study area. The amount of parking in these lots totaled 1,030 parking stalls. The largest lot contained a total of 466 stalls and the smallest had a total of 44.

Occupancy

The occupancy rate for the 6 lots in the Bainbridge area was 76.9%. Rates for the individual lots ranged from 87.5% to 59.5%. Those lots closest to the ferry terminal tended to have the higher occupancy rates.

Parking Costs

Daily parking costs were the only cost average that could be calculated in the Bainbridge study area because it was the only cost category where we had collected rates from at least 5 lots. In the 2 other cost categories, hourly and monthly, there was not enough cost information to do a meaningful calculation. Daily cost in the Bainbridge ferry terminal area averaged $7.62.

Parking Type

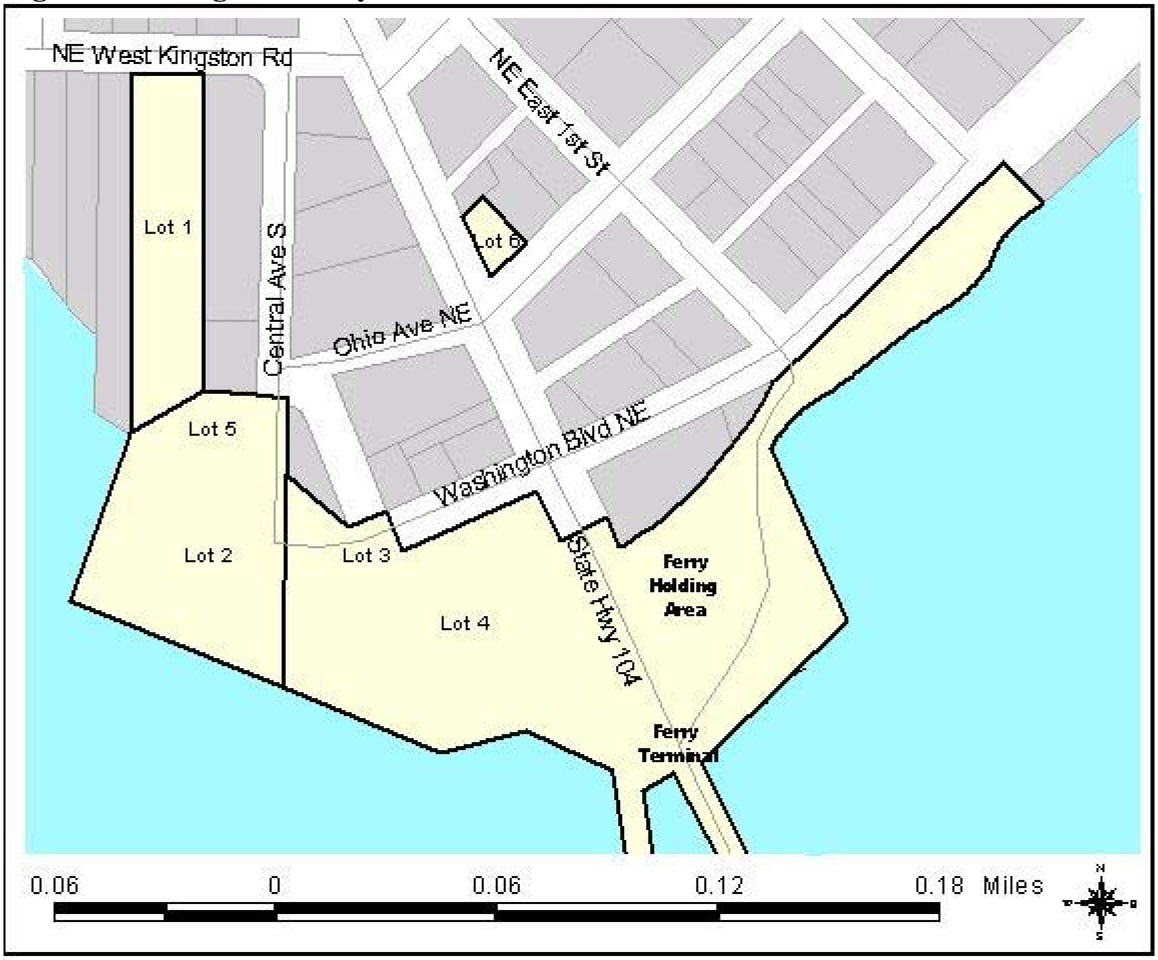
Parking type in the Bainbridge study area consisted of "other". The percentage of pay lots in this category was 87.8 with a total of 904 stalls and the percentage of non-pay lots was 12.2 with a total of 126 stalls.

B. Kingston

Study Area

The Kingston Study Area is shown in Figure 28 on the following page. The boundaries of this area are the ferry terminal to the south and West Kingston Road to the north. The light colored areas on the map represent parcels that contain parking lots.

Figure 28: Kingston Study Area



Total Stalls

A total of 6 lots in the Kingston area were counted and the number of parking stalls was 353. The largest lot contained a total of 102 parking stalls and the smallest contained 16.

Occupancy

Occupancy in the Kingston area was 46.6%. Occupancy rates in individual lots ranged from 9.4% to 67.8%.

Parking Costs

There are no parking costs for this study area due to an insufficient number of pay lots. Calculations are only conducted when there are 5 or more lots with cost information.

Parking Type

Parking type in Kingston consisted of "employee" and "other". The "other" category was the predominant type with a total of 337 stalls, 95.5% of the stalls counted. The "employee" category had 16 stalls.

C. Southworth

Study Area

The Southworth study area is shown in Figure 29 on the following page. The area is bounded by the ferry terminal to the east and Cherry Street and Sedgwick Road to the west. The light colored areas on the map represent parcels that contain parking lots.

Total Stalls

Total stalls in the Southworth area amounted to 330. This area only contained 3 lots and is the smallest of all the ferry terminals.

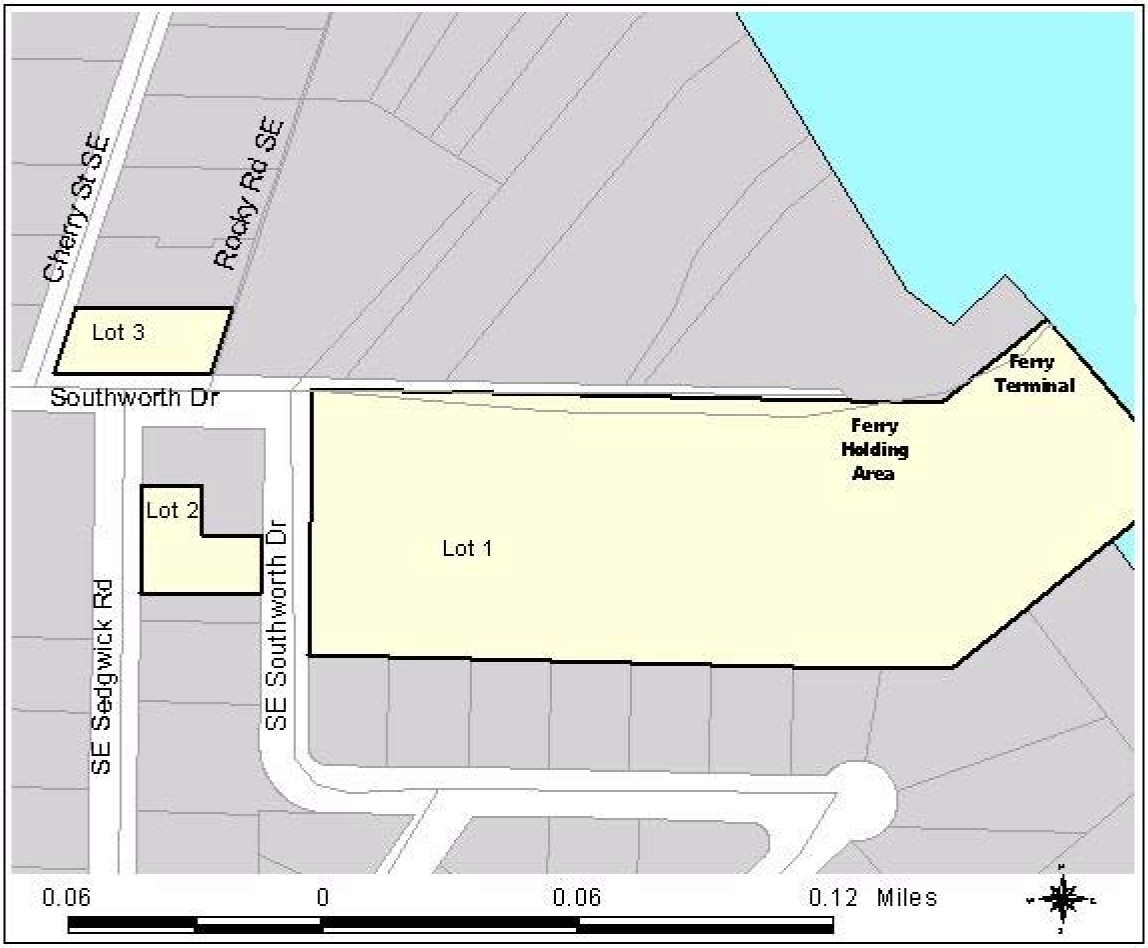
Occupancy

Occupancy in the Southworth study area was 63.9%. Rates ranged from 59.1% to 64.3%. The lot closest to the ferry terminal had the highest occupancy rate.

Parking Costs

There are no parking costs for this study area due to an insufficient number of pay lots. Calculations are only conducted when there are 5 or more lots with cost information.

Figure 29: Southworth Study Area



Parking Type

Parking type in Southworth consisted of “employee” and “other”. The “other” category was the predominant type with a total of 308 stalls, 93.3% of the stalls counted. The “employee” category had 22 stalls.

Appendix

Scope of Study

Data for the study was collected beginning in mid March 2002 through June 2002. Traditionally, travel and transportation data related to commuting behavior are collected in the spring or fall, when travel patterns are more stable. The 5 earlier surveys were conducted in April and May and a comparable period was desired. Length of data collection had to be extended due to the addition of new study areas.

The types of parking inventoried included:

- off-street parking, both public and private
- free and pay parking
- carpool and vanpool lots
- motor pool parking, both private and government
- hotels and motels
- short-term customer parking such as convenience stores and restaurants
- residential parking in the Seattle CBD

Types of parking excluded from the study were:

- on-street parking
- new and used auto and truck sales lots
- parking occupied by police, fire, and emergency vehicles
- car rental lots
- Metro bus and van storage lots
- parking associated with auto and truck repair shops
- residential parking in all study areas except for the Seattle CBD

Data Collection

Study areas were split into zones to make the data collection areas smaller and easier to track. The Seattle CBD contained 13 zones (1-13), First Hill 3 zones (14-16), lower Queen Anne 3 zones (17-19), the Bellevue CBD 7 zones (1-7), the Tacoma CBD 7 zones (1-7), the Everett CBD 8 zones (1-8), the Bremerton CBD 1 zone, the University District 5 zones (1-5) and the ferry terminals all had 1 zone each. In previous surveys, Bellevue zones were recorded as 52, 53, 62, 63, 70, 71 and 80. This year the zones have been converted to 1 through 7 where 1=52, 2=53, 3=62, 4=63, 5=70, 6=71 and 7=80.

The data collection team surveyed the Seattle zones on foot. The Bellevue and Tacoma zones were surveyed primarily by vehicle. Everett, the University District and the Ferry Terminals were all primarily surveyed on foot. Surveys were conducted Monday through Friday between the hours of 9:30 a.m. and 11:30 am, and 1:30 p.m. and 3:30 p.m. Each lot was surveyed during one morning and one afternoon period, on the same day, when possible. Each parking lot was coded to a 2000 census tract and block number in which it was located. The information collected included the lot address, owner/tenant, total number of stalls, morning and afternoon occupancy, type of parking, cost, and comments. We attempted to inventory Safeco Field, the Seahawks Stadium the Exhibition Center, the Seattle Center, the Washington State Convention and Trade Center and the Tacoma Dome during an "average weekday", when no special events were taking place.

Occupancy

Two occupancy counts were taken at each lot, one in the morning and one in the afternoon. The morning count took place between 9:00 and 11:30 am; the afternoon count could take place between 1:00 and 3:30 pm. These times were chosen because they are the times when parking utilization is most stable during a weekday. By 9 am, the morning commuter rush hour has essentially ended and shoppers have begun to arrive. After 3:30 pm, commuters begin to leave downtown. No counts were taken during the lunch hour because of high turnover at that time.

The occupancy rate is the average of the morning and afternoon counts, divided by the total number of stalls. The more counts for each lot, the more accurate the occupancy measures. A single count for each lot could introduce bias because of a difference in parking activity between the morning and afternoon. The PSRC determined that making two counts, during different parts of the day, was a reasonable compromise between accuracy and cost. These figures should be evaluated with this limitation in mind.

Parking Costs

Three cost figures were sought at each lot: the two-hour cost, the daily cost, and the monthly cost. The PSRC collected costs for only the normal workweek: Monday through Friday, 9:00 a.m. to 5:00 p.m.

Two-hour rates were used as a way to standardize short-term parking rates. These can vary greatly, with a minimum time ranging from 1/2 hour to an hour and a half. Parking lots will also charge for additional time past the minimum at increments of 1/2 hour and 1 hour. Where there was no posted 2-hour rate, the data collectors computed a 2-hour equivalent based on the minimum time plus incremental times that add up to two hours.

If the minimum time was greater than two hours, then only a daily rate was recorded, using either the posted daily rate, if any, or an equivalent daily rate based on increments of the minimum rate that add up to six hours.

Many lots in outlying areas had only monthly rates, which were not posted, and a follow-up phone call was required. When more than one monthly rate was available, either an average rate, weighted by number of stalls, was recorded, or the most predominant rate was used. Alternative rates were recorded as comments.

Special discounted rates were not included in any of the studies. These include employer subsidies, group discounts, special coupons, and "early bird" rates. Special rates for carpools and vanpools were not used unless the lots were used exclusively by either carpools or vanpools.

For the Bellevue CBD, monthly rates for many of the large parking garages were obtained from the monthly Downtown Bellevue Parking Survey conducted by TransManage. Because of the large size of the Bellevue Square parking facility, the PSRC relied on statistics concerning capacity and usage that are maintained by Bellevue Square Management. In addition, parking garages for use by the major hospitals was obtained through hospital management.

Parking Cost averages for the study areas were computed for only those lots with some known cost, whether hourly, daily, or monthly. Costs were weighted by the number of stalls in a pay lot. In lots with mixed hourly, daily, and monthly leasing, separate. weighting of costs was usually not possible. For lots with only monthly parking rates, no daily or 2-hourly cost was computed. All parking costs are reported in current dollars and have not been adjusted for inflation.

Parking Type

The 2002 study differentiated between four types of parking in the Seattle CBD:

- residential parking
- free short-term customer parking, such as convenience stores and restaurants
- employee parking
- other parking, primarily public pay lots and those lots with mixed types

For analysis, parking was categorized as customer (C), employee (E), residential (R), and other (O), the latter including public pay, employee and customer mixed lots, and tenant (non-residential) parking.

In the First Hill and lower Queen Anne areas, all residential parking, both free and pay, was excluded from the study. In these areas, four types of parking were differentiated:

- free short-term customer parking
- employee parking
- other parking, primarily public pay lots and those lots with mixed types

As with the CBD, pay and other parking were combined for analysis.

Where monthly employee or tenant parking rates could be obtained, those were included in the analysis of pay parking. Otherwise, no separate analysis was done on parking specifically designated as "employee", either because it was not always possible to determine the exclusive purpose of a parking facility or because a facility may combine employee and other types of parking with no physical differentiation.

In the Bellevue CBD, Tacoma CBD, Everett CBD, Bremerton CBD, University District and ferry terminals parking was recorded as any of four types:

- free short-term customer parking
- reserved or exclusively employee or tenant parking
- other parking, primarily public pay lots and those lots with mixed types

"Free" parking was determined on the basis of cost to the user. The exception was free employee parking subsidized by an employer. In this case, an attempt was made to find out the price paid by the employer to the parking facility owner. Free parking included parking facilities that were clearly free-of-charge, as well as parking stalls included with the price of a condominium (zones 1-13 only), parking included at no extra cost with an apartment rental (zones 1-13 only), and parking included in a commercial lease and offered at no cost to employees or customers.

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