

SAN FRANCISCO PLANNING DEPARTMENT

Better Neighborhoods 2002

Civic Center Parking Analysis

Recommendations

San Francisco Planning Department

BETTER NEIGHBORHOODS

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EXECUTIVE SUMMARY

This report details a recommended parking strategy for the Civic Center area. The aim is to identify how removal of parking in the former Central Freeway right-of-way will affect Civic Center, and to develop policy recommendations for parking in the Civic Center and Market/Octavia areas following the removal of this parking.

The calculations detailed in this report suggest that current parking demand can be accommodated within the existing supply, following closure of all surface lots in the former Central Freeway right-of-way. At the daytime 10 AM peak, demand would exactly match supply. On a “worst-case scenario” performance evening, with performances at the Opera House and Herbst Theatre, and a sold-out Symphony Hall concert, there would be in excess of 150 available spaces in the lots in the study area.

If all surface lots in the study area were to close – including those that do not lie on the former Central Freeway right-of-way – the following options are recommended to increase availability:

- Abolish discounted parking for students and government departments.
- Bring prices at the Civic Center and Performing Arts garages into line with City-owned garages at comparable locations in San Francisco.
- Establish a common vehicle fleet for City departments.
- Implement the bicycle and transit infrastructure improvements being planned through the Better Neighborhoods 2002 process, such as the Van Ness busway.
- Abolish discounted early-bird rates at the Performing Arts Garage.
- Consider valet parking at the Performing Arts Garage, if demand warrants.
- Abolish parking subsidies for opera, ballet, symphony and International School staff.
- Consolidate reserved on-street parking outside City Hall.
- Improve transit information to performing arts patrons.
- Investigate package transit-performance tickets.
- Use valet parking for performing artists and other institution staff.
- Increase use of garages and surface lots just outside the study area. This includes lots that are not open to the public, but that might lease evening parking to the performing arts institutions.

In addition, the following additional recommendations, although not in themselves improving availability, would help to match demand to supply, and improve the efficiency with which the parking stock can be utilized:

- Introduce a parking guidance system for motorists.
- Improve perceived security at Civic Center Plaza Garage.
- Expand the guaranteed parking space program for performing arts patrons.
- Introduce a parking alert system, warning patrons of evenings when parking is likely to be scarce, and encouraging them to use other modes or pre-book a parking space.

These recommendations would be likely to have the following impact:

- The daytime peak shortfall would be eliminated, even if all the surface lots in the study area were to close. There would be a surplus of about 26 spaces.
- The performance evening peak shortfall would also be eliminated. There would be a surplus of more than 50 spaces. In addition, patrons would be prioritized for the available capacity in study area garages, through the opportunity to pre-book a guaranteed parking space.

These figures are based on conservative assumptions regarding parking demand elasticities and the potential for modal shift.

Since parking demand will vary from one day to another, depending on factors such as special events, weather, seasonal effects and so on, the calculations are not intended to be an exact measure of parking availability. As the closure of surface lots – particularly those that do not lie on the former Central Freeway right-of-way – will be a gradual process, the opportunity exists to refine these estimates and recommendations in the light of actual impacts.

CHAPTER 1. INTRODUCTION

This report details a recommended parking strategy for the Civic Center area. It is based on a parking inventory, survey of surface lot users and stakeholder interviews documented in a companion Existing Conditions report.

The aim is to identify how removal of parking in the former Central Freeway right-of-way will affect Civic Center, and to develop policy recommendations for parking in the Civic Center and Market/Octavia areas following the removal of this parking.

The study area is bounded by Golden Gate Avenue to the north, Van Ness Avenue to the east, Market Street to the south and Laguna Street to the west. Also included is the one-block area south of Market Street between 12th Street and Gough Street, and Civic Center Plaza Garage on McAllister Street, adjacent to City Hall.

Chapter 2 presents the results of a review of parking price elasticities, to help predict the impact of adjusting parking fees on travel behavior.

Chapter 3 details calculations on parking availability in the study area, following the removal of (a) parking in the former Central Freeway right-of-way, and (b) all surface lots in the study area.

Chapter 4 outlines recommendations for increasing parking availability following the removal of this parking, together with an indication of their impact.

Chapter 5 summarizes the key findings and conclusions.

CHAPTER 2. PARKING PRICE ELASTICITIES

This chapter presents the results of a brief review of parking pricing elasticities. These will help to predict the impact of adjusting parking fees on travel behavior.

Firstly, parking prices at other San Francisco garages with comparable density and accessibility to Civic Center are presented, in order to assess the relative cost of parking in the study area. Secondly, the data on the impacts of recent rate changes at these garages are discussed. Thirdly, existing studies on the effect of parking price changes and parking elasticities are briefly reviewed.

PARKING PRICES AT OTHER SAN FRANCISCO GARAGES

Current travel and parking patterns in the Civic Center area depend to a significant extent on the relative cost of parking vis a vis other locations. The table below presents the rates charged at several garages in San Francisco locations with comparable density and accessibility – in other words, those on the fringes of the downtown core.

FIGURE 2-1 PARKING PRICES AT OTHER GARAGES

Garage	1 Hour	4 Hour	All Day	Early Bird	Monthly
Publicly Operated					
5 th and Mission	\$2.00	\$7.00	\$18.00	-	\$200.00
Moscone Center (3 rd /Howard)	\$2.00	\$7.00	\$18.00	-	\$200.00
Portsmouth Square (Kearny/Clay)	\$2.00	\$8.00	\$24.00	-	\$300.00
Polk and Bush	\$1.00	\$5.00	\$11.00	-	\$125.00
Civic Center	\$1.50	\$6.00	\$18.00	-	\$156.25
Performing Arts	\$1.50	\$6.00	\$15.00	\$7.00	\$140.00
Privately Operated					
Opera Plaza (Van Ness/Golden Gate)	\$6.00	\$14.00	\$14.00		\$190.00
Fox Plaza (Polk/Hayes)	\$5.25	\$12.00	\$12.00	\$8.00	\$155-165 Standard \$255-275 Reserved
Central Freeway Surface Lots (Mean)	\$5.83	\$5.83	\$5.83	\$5.83	\$115.00
Other Study Area surface lots (mean)	\$7.13	\$7.13	\$7.13	\$7.13	\$141.00

Data on occupancy is available for the Fifth and Mission and Moscone Center garages. At Fifth and Mission, occupancy for each day peaks at a monthly average of 66-78%. Valet parking is only necessary in conjunction with major events such as the San Francisco Gift Fair in February 2001.

At Moscone Center, occupancy for each days peaks at a monthly average of around 60%.

The following conclusions can be drawn from the data in Figure 2-1:

- Short-term transient parking in the Performing Arts and Civic Center garages generally costs less than at other comparable locations in the City. The standard rate at City-owned garages on the fringes of downtown is \$2.00 for one hour, and \$7.00-8.00 for four hours, compared to \$1.50 and \$6.00 at the Civic Center and Performing Arts garages.
- While the Polk and Bush garage charges less, there are no major trip generators in the immediate vicinity.
- Short-term transient rates are much higher at the privately owned Fox Plaza and Opera Plaza garages, just outside the study area. By City policy, publicly controlled lots subsidize short-term parking at the expense of long-term parking in order to promote turnover (particularly for shopping trips) and reduce peak-period commute trips.
- All-day parking rates at the Civic Center and Performing Arts garages are similar to other garages in comparable locations, and are slightly above those at Fox Plaza and Opera Plaza. However, the 'early bird' rate at the Performing Arts Garage offers parking at less than half of the standard charge.
- All-day parking rates at the surface lots in the study area, particularly those on the former Central Freeway right-of-way, are significantly lower than any of the garages.
- Monthly rates at both the garages and surface lots in the study area are around one-third lower than those at other garages in comparable locations.

EFFECT OF RATE CHANGES AT CITY-OWNED GARAGES

Rates at most City-owned garages increased in December 1999. Figure 2-2 below shows the rate changes at the Civic Center and Performing Arts garages.

While data are available on usage before and after the rate changes, it is difficult to draw conclusions regarding parking elasticities from them. This is due to the following factors:

- To take account of seasonal variations, the before/after comparison needs to be for the same months in the preceding year. However, during this time, other factors will affect utilization of the garages. For example, at the Fifth and Mission garage, the comparison time period encompasses the opening of the Sony Metreon across the street.
- Rate increases were not uniform for all time periods. Indeed, the stated aim of the revised rates was to reduce traffic, promote short-term transient parking, discourage low-occupancy commuter parking, and increase revenues. This means that increased rates may have increased utilization while simultaneously increasing availability, due to increased turnover. These effects are difficult to discern from the aggregated data.
- Parkers may have used a different garage following the rate changes, due to increased availability rather than the rate changes *per se*. For example, increased availability at Civic Center Plaza Garage may have abstracted patrons from the Performing Arts Garage, as discussed below.

FIGURE 2-2 DECEMBER 1999 RATE CHANGES

	Civic Center			Performing Arts		
	Before	After	% Change	Before	After	% Change
0-1 Hrs	\$1.00	\$1.50	50%	\$1.00	\$1.50	50%
1-2 Hrs	\$2.00	\$3.00	50%	\$2.00	\$3.00	50%
2-3 Hrs	\$3.25	\$4.50	38%	\$3.50	\$4.50	29%
3-4 Hrs	\$4.50	\$6.00	33%	\$5.00	\$6.00	20%
4-5 Hrs	\$6.00	\$8.00	33%	\$6.50	\$8.00	23%
5-6 Hrs	\$7.50	\$10.00	33%	\$8.00	\$10.00	25%
6-7 Hrs	\$9.00	\$12.00	33%	\$8.00	\$12.00	50%
7+ Hrs	\$13.50	\$18.00	33%	\$11.00	\$15.00	36%
Early Bird	-	-	-	\$5.00	\$7.00	40%
Student	\$4.50	\$5.00	11%	-	-	-
Monthly (Standard)	\$125.00	\$156.25	25%	\$115.00	\$140.00	22%
Monthly (Government)	\$125.00	\$125.00	0%	-	-	-
Monthly (City Depts.)	-	\$75.00	-	\$60.00	\$75.00	25%

As Figure 2-2 shows, the increases ranged from 50% for short-term transient parking, to 33-36% for all-day parking and 22-25% for monthly parking.

According to the Department of Parking and Traffic, the effect of these rate increases at Civic Center, together with the valet parking operation introduced at the same time, was to increase short-term transient use, and decrease long-term transient use and monthly parking.

They also had the impact of encouraging short-term transient patrons to use Civic Center rather than the Performing Arts Garage. For most parkers, according to DPT, Civic Center is the preferred garage (with the exception of symphony, ballet and opera patrons). Since the rate changes Civic Center has been accommodating those parkers who would in the past have parked at the Performing Arts Garage out of necessity.

PARKING PRICE ELASTICITY STUDIES

No comprehensive data exists on the impact of parking fees on vehicle trips and travel behavior more generally. This is partly due to the extremely location-specific nature of these responses. In particular, elasticities will depend on:

- quality and quantity of transit service, and other alternatives
- availability of other parking locations
- trip purpose
- income
- whether any parking fees are levied at present

This brief review of parking price elasticity studies does not therefore seek to provide a precise figure that will be transferable to the Civic Center area. Instead, the aim is to indicate an approximate range of values where the true figure might be expected to lie.

Transit service to and from Civic Center is far more frequent and convenient than that in most other locations where elasticities have been estimated, including other parts of the Bay Area. This suggests that the data presented here will be conservative estimates of the potential of increased parking charges to reduce vehicle trips.

California Examples of Parking Pricing Impacts

Figure 2-3 below shows the results from various Bay Area programs where parking charges have been introduced.

These Bay Area examples show a wide range of trip reduction impacts, from 8% to 21% (or a 23% difference in drive alone rate). The range is not surprising given the large number of factors that control transportation choices.

FIGURE 2-3 BAY AREA EXAMPLES OF PARKING PRICING IMPACTS

Location and Date	How Measured	Comments	Site-Level Employee Vehicle Trip Reduction
Kaiser Permanente – downtown Oakland Divisional Offices	Measured before/after implementing parking fees of \$65/month	~ 125 of employees at this location had free parking before the policy change. In addition to fees, a \$20/mo transit subsidy was implemented.	8%
Downtown Berkeley, 1993	Comparison between the City of Berkeley's downtown offices and Berkeley School District downtown headquarters	~ 80% of City employees paid for parking while school district employees received free parking. The 2 sites are within 2 - 4 blocks of each other.	21%
Stanford University – Employees, 1990	Comparison b/w 1990 employee drive alone data and 1990 Santa Clara County census data	This is the one example where this is NOT a reduction in vehicle trips (due to limited data).	Drive Alone Rates: Stanford employees: 55% Santa Clara County: 78%
San Jose State University, 2000 ¹	Comparison b/w SJSU mode split ² and Santa Clara County baseline ³ mode split	Mode split data provided for a sample (n = 1,497) of commuter students, staff & faculty	8%

Source: Nelson\Nygaard Consulting (2001), Controlled Access Parking in Redwood Shores.

As Figure 2-4 below shows, the reductions in vehicle trips achieved through introducing parking pricing in other suburban California locations are comparable with these Bay Area figures. The reduction in vehicle trips ranges from 8% to 28%.

As all these figures relate to suburban locations with fewer transit options, the potential for change in mode split in Civic Center will be significantly higher. Against that, most of the examples above involve charging for parking that had previously been free. This is likely to have a greater impact on travel behavior than increasing a charge that already exists. Nevertheless, the figures are useful in indicating a broad range for potential vehicle trip reductions.

¹ San Jose State University, 2000 Parking Survey.

² Mode split converted to cars/100 employees using a carpool occupancy rate of 2.23 people. (SJSU rate = 79 cars/100)

³ Baseline Santa Clara County mode split taken from RIDES for Bay Area Commuters Commute Profile 2000. Mode split of employees who work at sites that do not promote trip reduction. Mode split converted to cars/100 employees using the Bay Area carpool occupancy average of 2.23 people. (Baseline = 86 cars/100)

FIGURE 2-4 SUBURBAN CALIFORNIA EXAMPLES OF PARKING PRICING IMPACTS

Location	How Measured	Comments	Site-Level Employee Vehicle Trip Reduction
UC Davis – Employee Data	1997 Employee/Staff peak period mode split compared to City of Davis 1990 Journey to Work mode split data	Mode splits converted using an assumption of 2.23 people per carpool. UC Davis rate = 52.6 cars/100 employees versus City of Davis JTW rate of 62 cars/100 employees	15%
UC Santa Cruz – Employee Data	2000 Employee/Staff trip generation rate (provided by UCSC) compared to City mode split data ⁴ .	UCSC rate = 62 cars/100 employees versus City rate of 67.2 cars/100.	8%
Warner Center, Woodland Hills, 1989 ⁵	Measured before/after implementing parking charges	Established parking fees where parking had previously been free.	28%
Nestle, Inc. Glendale, 1993-1995 ⁶	Measured before/after implementing parking charges	Established parking fees of \$40 to \$50 where parking had previously been free. Carpools could park for free and transit/vanpool riders received subsidies.	27% (85cars/100 versus 62cars/100)
Commonwealth Land Title, Glendale, 1993-1995 ⁷	Measured before/after implementing parking charges	Established parking fees of \$40 to \$50 where parking had previously been free. Carpools could park for free and transit/vanpool riders received subsidies.	25% (87cars/100 versus 65cars/100)

Source: Nelson\Nygaard Consulting (2001), Controlled Access Parking in Redwood Shores.

⁴ City mode split data came from a telephone survey conducted of 400 adult residents of the City of Santa Cruz in 2000. This mode split indicates the travel mode people said they usually use to get to work or school. Mode split converted to cars/100 employees using a carpool occupancy average of 2.23 people. (Santa Cruz baseline = 67.2 cars/100)

⁵ Shoup, Donald C. (1995), "An opportunity to reduce minimum parking requirements," *Journal of the American Planning Association*, Vol. 61, No. 1, Winter 1995. APA, Chicago, IL.

⁶ Comsis Corporation (1996), MTA TDM Third-Party Evaluation Final Report.

⁷ Ibid.

Parking Price Elasticity Data

Since parking was previously free in most of these examples above, parking price elasticities cannot be calculated, as the increase in price is infinite.

More general studies of parking price elasticities have yielded the following results. Again, the wide variation in elasticities is almost certainly due to the range of factors involved. Figures from one location will not be readily transferable to another.

- Shoup, et. al. estimates elasticities at -0.05 to -0.2 ⁸
- Bay Area studies have calculated elasticities in the range -0.1 to 0.2 ⁹
- The Victoria Transport Policy Institute cites various studies showing elasticities in the range -0.1 to -0.3 . The variation depends on demographic, geographic, travel choice and trip characteristics. A portion of the reduced parking demand may consist of shifts to other parking locations, but if combined with good travel choices, it can indicate significant reductions in vehicle trips, particularly for commuting.¹⁰

⁸ Cited in Deakin, Elizabeth and Harvey, Greig (1996), Transportation Strategies for California: An assessment of congestion, emissions, energy and equity impacts. California Environmental Protection Agency, Air Resources Board, Research Division. Unfortunately, no more details are given regarding the methodology.

⁹ Ibid. Again, no more details are given of how these figures are arrived at.

¹⁰ Victoria Transport Policy Institute, 2001. This paper summarizes a range of studies which provide detailed reviews of parking price elasticities.

CHAPTER 3. PARKING AVAILABILITY

This chapter presents the results of calculations regarding parking availability in the Civic Center area, assuming that the surface lots in the study area are removed. The calculations are based on two alternative scenarios:

- a) A 'worst case scenario' in terms of parking supply – namely, that all the surface lots in the study are developed, and that no off-street parking is provided as part of any new development. In practice, this is unlikely to happen for many years, if at all. While the lots on the former Central Freeway right-of-way may be developed relatively quickly as part of Central Freeway parcel dispensations, the process on the other lots in the study area (which account for 44% of the spaces in the surface lots) is likely to be more gradual.
- b) The closure of the surface lots in the Central Freeway right-of-way only.

The figures for daytime and evening parking supply are calculated separately. Daytime parking availability is highly dependent on commuter use, while opera, symphony and ballet performances are the major factor determining evening availability.

The core assumption is made that parking locations in the study area are interchangeable. In other words, parkers may be directed to any study area lot where spaces are available. Given the size of the study area, this is a reasonable expectation.

According to the windshield survey of surface lot users, documented in the Existing Conditions report for this study, 74% of respondents park within two blocks of their destination, and 88% within three blocks. Since most of the permanent parking facilities in the study area are within 1-4 blocks of all major destinations, we would expect these patterns to continue, with some people walking an extra block or two.

Since parking demand will vary from one day to another, depending on factors such as special events, weather, seasonal effects and so on, the calculations are not intended to be an exact measure of parking availability. As the closure of surface lots will be a gradual process, the opportunity exists to refine these estimates and recommendations in the light of actual impacts.

There are three major elements to the calculations:

- The number of parkers who would use alternative modes, as calculated from the windshield survey of surface lot users
- The number of spaces available in the City-owned Performing Arts and Civic Center garages, where current surface lot users could park instead
- The likely reduction in demand from the increased prices that these users would face, given the significantly higher all-day and monthly rates in the City-owned garages compared to the surface lots

DAYTIME PARKING

According to both lot operators and the parking occupancy data collected as part of this study¹, parking demand in the Civic Center area peaks at around 10 AM. At this time, surface lot occupancy is around 80% for the Central Freeway parcels, and 95% for the other surface lots in the study area. Civic Center Plaza Garage has generally switched to valet parking by this time, and the Performing Arts Garage is around 60% full.

Assuming all of the Central Freeway lots are redeveloped, 537 cars will be displaced, according to the occupancy surveys. In the rest of the study area, there are an additional 503 vehicles parked in privately owned surface lots. If all surface parking in the study area were removed, a total of 1040 cars would be displaced.

The figures used are for the “non-performance” day survey, rather than the “performance” day. As the “performance” day counts were conducted on a Friday, these are generally slightly lower than the “non-performance” day counts, which were conducted on a Tuesday.

Some Parkers Would Use Other Travel Options

According to the windshield survey, a significant proportion of people parking in the surface lots would use alternative travel options if their lot were to close. Among commuters, who account for the vast majority of parkers at 10 AM, 84% said they would use another lot in the vicinity. The remaining 16% said they would use transit, use a lot in another part of the city, avoid trips to the area, or some other unspecified option.

This 84% figure suggests that 874 of the 1040 parkers displaced from the surface lots would continue to seek parking in the Civic Center area, and 166 would use alternative options. For the Central Freeway parcels only, 451 of the 537 parkers displaced would continue to seek parking in the Civic Center area, and 86 would use alternative options.

Spaces are Available in the City-owned Garages

According to the occupancy data provided by the garage operators, 335 spaces are available at 10 AM in the Performing Arts and Civic Center garages.

- 104 valet parking spaces in Civic Center Plaza Garage
- 231 self-park spaces in the Performing Arts Garage

Parkers Would Face Increased Charges

Parking charges in the City-owned garages in the study area are significantly higher than those levied at present in the surface lots. This means that those who currently use the surface lots and switched to the Civic Center or Performing Arts garages would face

¹ These are documented in the Existing Conditions report for this study.

a substantial increase in charges. In turn, this would reduce demand for parking, depending on the elasticity of demand.

For the calculations assuming closure of the Central Freeway lots only, parkers are assumed to prefer to move to other surface lots in the study area. Once these other surface lots are filled, they move to the Civic Center or Performing Arts garages. Parkers moving to these other surface lots would face lesser price increases.

Due to the differences in prices, monthly and daily parking demand need to be calculated separately. According to the windshield survey, 50% of commuters pay on a monthly basis, and 50% on a daily basis.

Monthly Parkers

According to the windshield survey, the mean charge actually paid by monthly parkers is \$119.00. This is in line with the posted \$115.00 mean monthly rate on the Central Freeway parcels, and \$141.00 at the other surface lots in the study area, particularly when it is considered that many of the private lots (such as those for the opera and symphony) charge rates significantly below this.

The regular monthly rate is \$156.25 at Civic Center Garage, and \$140.00 at the Performing Arts Garage. Assuming parkers were to be redistributed equally to these garages, the mean monthly cost would rise from \$119.00 to \$148.00 – an increase of \$29.00 (24%).

Transient Parkers

The mean cost for commuters paying the daily rate at the surface lots is \$6.79, according to the windshield survey. Again, this is similar to the posted rates, which average \$5.83 on the Central Freeway parcels, and \$7.13 on the other surface lots in the study area.

The regular daily rate is \$18.00 at the Civic Center Garage, and \$15.00 at the Performing Arts Garage.² Assuming parkers were to be redistributed equally to these garages, the mean daily cost would rise from \$6.79 to \$16.50 – an increase of \$9.71 or 143%.

The increase in charges is far more for those paying the daily rate than those paying the monthly rate, largely because rates at City-owned garages are set to discourage long-stay parking. This suggests that many parkers who currently pay the daily rate are likely to purchase a monthly pass for the Civic Center or Performing Arts garages instead. According to the windshield survey, 87% of commuters use the lots three or more times per week, and can thus be assumed to purchase a monthly pass for a City-owned garage. Assuming 20 uses per month, the costs for this group of commuters would rise from \$136.00 to \$148.00, an increase of \$12.00 or 9%.

² The Performing Arts Garage currently offers an 'early bird' rate of \$7. However, one of the recommendations set out in the following chapter is for this to be abolished.

The effect of these price increases on parking demand depends on the figure for price elasticity that is used. As discussed in the previous chapter, there is considerable uncertainty regarding these elasticities. However, most studies appear to give a relatively consistent range of -0.05 to -0.3 , with a range of -0.1 to -0.2 for Bay Area studies (see Chapter 2). These are likely to be conservative estimates, given the abundance of transit options in Civic Center compared to the suburban locations where they were derived. The calculations below therefore use an estimate towards the higher end of the range, at -0.175 .

These calculations, shown in Figures 3-1 and 3-2, suggest that the increased parking charges faced by commuters who previously parked in the surface lots would reduce demand by about 50 spaces. The largest proportion is accounted for by people who do not park often enough to purchase a monthly permit, and would thus face the highest increase through continuing to pay on a daily basis.

If the Central Freeway lots only were to close, the reduction in demand would be 34 spaces.

FIGURE 3-1 REDUCTIONS IN PARKING DEMAND THROUGH PRICE INCREASES (ALL SURFACE LOTS CLOSE)

	% of Commuters	Price Increase	Price Elasticity	Reduction in Demand (%)	Reduction in demand (No. of Parkers) ³
Continue to purchase monthly pass	50%	24%	-0.175	4.2%	18
Previously paid daily rate but would purchase monthly pass for garage ⁴	37%	9%	-0.175	1.6%	5
Continue to pay daily rate	13%	143%	-0.175	25.0%	28
TOTAL					51

³ Based on the figure of 874 parkers who would be likely to continue to park in the area.

⁴ Assuming 20 uses per month.

FIGURE 3-2 REDUCTIONS IN PARKING DEMAND THROUGH PRICE INCREASES (CENTRAL FREEWAY LOTS ONLY CLOSE)

	% of commuters	Price Increase	Price Elasticity	Reduction in Demand (%)	Reduction in demand (No. of Parkers) ⁵
Move to other surface lots in the study area ⁶	18%	22% ⁷	-0.175	3.9%	3
Continue to purchase monthly pass	41%	29%	-0.175	5.1%	9
Previously paid daily rate but would purchase monthly pass for garage ⁸	30%	27%	-0.175	4.7%	6
Continue to pay daily rate	11%	183%	-0.175	32.0%	16
TOTAL					34

Non-Quantifiable Impacts

Parking demand would be likely to fall further if current surface lot users were forced to find an alternative parking location, due to various non-quantifiable impacts. The estimates of reduced demand presented here therefore err on the conservative side. In particular:

- Current surface lot locations are extremely convenient to users. According to the windshield survey, 86% of commuters park within three blocks of their destination. Alternative parking locations may be more slightly more distant, increasing the attractiveness of alternatives such as transit.
- Decisions on travel behavior are generally subject to considerable inertia. Closure of a commuter's regular parking lot would require the driver to rethink his or her journey to work, and transit, carpooling or other modes are thus more likely to be considered.
- 28% of respondents to the windshield survey considered that it would be "very easy" or "somewhat easy" to use transit or carpool, instead of driving alone. This is equivalent to 291 of the 1040 vehicles currently parked in the surface lots, and suggests that there is a significant potential for mode shift.

⁵ Based on the figure of 451 parkers who would be likely to continue to park in the area.

⁶ According to the occupancy surveys, there are 82 spaces available in the other surface lots at 10 AM, excluding valet parking.

⁷ The price difference between the Central Freeway parcels and other surface lots is virtually the same for daily parkers (22.3%) and monthly parkers (22.6%).

⁸ Assuming 20 uses per month.

Combined Impact

Figure 3-3 below sets out the combined impact of the effects discussed above. The figures refer only to the effect of closing all surface lots, and no account is taken of other potential changes such as pricing structures at City-run garages.

The calculations suggest that 488 vehicles will remain to be accommodated in the morning peak if all surface lots are closed. This is equivalent to around one-third of the combined capacity of the Performing Arts and Civic Center garages.

If only the Central Freeway lots were to close, the current parking supply would exactly match the existing demand.

FIGURE 3-3 IMPACT OF CLOSING SURFACE LOTS (10 AM)

	All Surface Lots Closed		Central Freeway Lots Closed	
	Effect	Remaining Demand	Effect	Remaining Demand
Number of parkers displaced	1040	1040	537	537
Number who say they would use alternative modes/travel options	166	874	86	451
Likely number using alternative modes due to price increases	51	823	34	417
Spaces currently available in other surface lots	NA	823	82	335
Spaces currently available in Civic Center and Performing Arts garages	335	488	335	0

EVENING PARKING

Symphony, ballet and opera performances tend to begin at around 8 PM. On performance evenings, this will therefore be the time of peak demand. At this time on a 'worst case scenario' evening with ballet, symphony and Herbst Theatre performances taking place simultaneously, surface lot occupancy reaches around 89% (Central Freeway parcels) and 37% (other surface lots), according to occupancy surveys.⁹ The Performing Arts Garage is full, but Civic Center Plaza Garage is less than 40% full.¹⁰

Assuming every surface lot is redeveloped, 798 cars will be displaced, according to the occupancy surveys.

- 601 in the Central Freeway parcels
- 197 in the other surface lots

Not all of these parkers are ballet, symphony or theatre patrons. Judging by the difference in occupancy on "performance" and "non-performance" evenings, and the occupancy of the lots leased by the ballet, symphony and opera (which are used by staff and performing artists), the following estimates can be made of occupancy, as set out in Figure 3-4 below.

Symphony attendance on the night of the "performance evening" occupancy surveys was lower than average. If a capacity audience had been present, demand in the study area lots would be likely to have increased by 161 vehicles. This figure is based on the ratio of patrons to patron vehicles parked in the study area lots, and thus takes account of those using other modes, those parking outside the study area, those parking on-street, and car pooling. Due to the uncertainties involved, this estimate is not included in the calculations below. However, the implications are considered in the recommendations and conclusions in Chapters 4 and 5.

FIGURE 3-4 ESTIMATES OF OCCUPANCY COMPOSITION, PERFORMANCE EVENINGS

	Patrons	Performing Arts Staff/ Artists	Other Users (Local Residents, Restaurant-goers, etc.)
Central Freeway parcels	223	231	147
Other surface lots	55	43	99
Performing Arts Garage	504	-	77
Civic Center Garage	203	-	122
Total	985	274	445

⁹ The occupancy surveys are documented in the Existing Conditions report for this study.

¹⁰ Evening capacity figures for Civic Center Plaza Garage do not include valet parking, due to its likely impracticability when large numbers of people are leaving performances simultaneously.

The occupancy estimate for patrons of 985 is significantly less than the total number of 4,880 attending the symphony and ballet that evening. Assuming a vehicle occupancy rate of 2.0, this suggests that more than half of patrons are using transit or other modes such as taxi to attend the performances, or are parking in alternative locations – perhaps on-street, or in non study-area garages such as Opera Plaza.

Some Parkers Would Use Other Travel Options

According to the windshield survey, 75% of symphony, opera and ballet patrons said they would use another lot in the vicinity, if the surface lot were to close. This figure rises to 88% if those who said they would avoid trips to the area are included, as these patrons may have given this answer on the assumption that they would not be able to find alternative parking. In any case, even if they did avoid trips to the area, they would likely to be replaced by other patrons in the case of sell-out concerts.

This suggests that 245 of the 278 patrons who currently park in the surface lots would continue to seek parking in the Civic Center area, and 33 would use alternative options or avoid trips to the area.

For opera, symphony and ballet staff and artists, alternative modes are likely to be a less realistic option, and most are contractually entitled to free parking. No change in travel behavior is thus assumed among this group, despite the fact that taxis and transit are an option for many of them. (In addition, these institutions appear to be in violation of state law which requires employers who subsidize leased parking for their employees to offer the same cash value to those who do not drive.)

For other users, whose trip purpose is unknown, the aggregate percentage (81%) for those who would continue to seek parking in the Civic Center area is used. This suggests that 199 of the 246 people in this group who currently park in the surface lots would seek an alternative parking location nearby, and 47 would use alternative options or avoid trips to the area.

Spaces are Available in Civic Center Plaza Garage

While the Performing Arts Garage tends to fill to capacity on performance evenings, 518 self-park spaces are available in Civic Center Plaza Garage, according to occupancy data provided by the operator. Due to the large numbers of patrons leaving simultaneously after performances, it is assumed that valet parking cannot be employed.

The spaces available in Civic Center Plaza Garage need not be occupied by those displaced from the surface lots. For example, space for performing artists might be leased in Opera Plaza garage. Those who currently park in Opera Plaza might then shift to Civic Center. In other words, these calculations refer only to the total parking supply in the Civic Center area, and say nothing about the distribution of parkers within that.

Most Parkers Would Not Face Increased Charges

According to the windshield survey, virtually all performing arts patrons pay for parking on a daily basis. The mean charge paid by patrons is \$7.84. The evening rate at the Performing Arts and Civic Center garage is \$1.50 per hour, rising to \$2 after four hours. The five-hour rate, allowing for time for dinner before, would thus be \$8. Assuming no change in these rates, there would be very little reduction in demand due to increased charges.

Monthly parkers would face an increase in charges of 24%, as discussed above. However, it is difficult to estimate the numbers of monthly parkers who remain in the lots at 8 PM. Virtually all performing arts patrons pay the daily rate, according to the windshield survey.

Non-Quantifiable Impacts

As in the daytime, evening parking demand would be likely to fall further if current surface lot users were forced to find an alternative parking location, due to various non-quantifiable impacts. These include the reduced convenience of alternative locations, and the inertia of decisions regarding travel behavior. In other words, the estimates of reduced demand presented here are conservative. This is particularly true for those parkers who are not attending or working at the opera, ballet or symphony, as their travel behavior is likely to be more amenable to change.

Combined Impact

Figures 3-5 and 3-6 below set out the combined impact of the effects discussed above. Figure 3-5 shows the impact of closing all surface lots, and 3-6 that of closing the Central Freeway lots only. The calculations refer only to the effect of closing the surface lots, and no account is taken of other potential changes such as pricing structures at City-run garages.

The calculations suggest that 200 vehicles will remain to be accommodated if all surface lots are closed. This is equivalent to 14% of the combined capacity of the Performing Arts and Civic Center garages, excluding valet parking.

If only the Central Freeway lots were to close, there would be a significant excess capacity of more than 300 spaces in the study area. This margin comfortably exceeds any additional demand that might occur when symphony performances are sold out, compared to the relatively low attendance on the evening of the surveys. As discussed above, this extra demand in the study area is likely to amount to 161 vehicles.

FIGURE 3-5 IMPACT OF CLOSING ALL SURFACE LOTS (8 PM)

	Patrons		Performing Arts Staff/Artists		Other Users		Total	
	Effect	Remaining Demand	Effect	Remaining Demand	Effect	Remaining Demand	Effect	Remaining Demand
Number of parkers displaced from surface lots	278	278	274	274	246	246	798	798
Number who say they would use alternative modes/travel options	33	245	0	274	47	199	80	718
Spaces currently available in Civic Center Plaza Garage							518	200

FIGURE 3-6 IMPACT OF CLOSING CENTRAL FREEWAY LOTS (8 PM)

	Patrons		Performing Arts Staff/Artists		Other Users		Total	
	Effect	Remaining Demand	Effect	Remaining Demand	Effect	Remaining Demand	Effect	Remaining Demand
Number of parkers displaced from Central Freeway lots	223	223	231	231	147	147	601	601
Number who say they would use alternative modes/travel options	27	196	0	231	28	119	55	546
Spaces currently available in other surface lots							342	204
Spaces currently available in Civic Center Plaza Garage							518	(314)

CONCLUSIONS

These calculations suggest that overall parking supply in the Civic Center area is primarily a constraint during the daytime peak at around 10 AM. Assuming no other policy changes, about 488 vehicles are likely to remain to be accommodated if all the surface lots were to close.

On a “worst-case scenario” performance evening, about 200 vehicles remain to be accommodated.

If only the lots on the Central Freeway parcels were to close, existing demand could be accommodated within the existing parking supply, both in the daytime peak and on a “worst-case scenario” performance evening. On a performance evening, there would still be 314 spaces available in the study area, even after closure of all the Central Freeway lots.

These estimates are likely to err on the conservative side, due to the following factors:

- The exclusion of non-quantifiable factors such as the reduced convenience of alternative parking locations, and the need to make alternative travel decisions increasing the likelihood that non-single occupancy vehicle modes will be considered.
- The use of parking demand elasticity figures derived from suburban Bay Area locations with fewer travel choices.
- The exclusion of the effect of rate increases for monthly parkers on evening occupancy.

CHAPTER 4. POLICY RECOMMENDATIONS

This chapter sets out recommendations to increase parking availability in the Civic Center area. It focuses on management tools to take better advantage of the existing supply and to bring the area into compliance with current city policies on parking and transportation. It seeks to meet the parking and access needs of the performing arts institutions, Hayes Valley merchants and other businesses in ways that make the most cost effective use of public land and funding.

Utilization of the best transportation demand management tools is especially critical in the Market/Octavia area for four key reasons:

- The Better Neighborhoods 2002 planning process has found that local residents and merchants strongly desire to reduce the negative impacts caused by automobiles in their neighborhood. Since increased parking will by necessity bring in more cars, the plan will seek to minimize the number of spaces needed.
- San Francisco has long recognized that control of commuter parking supply is its most important tool in managing congestion on city streets; the success of the Downtown Plan was largely dependent on the construction of the Market Street subway plus stringent limitations on parking provision within the Financial District.
- The street network throughout the study area is already at capacity over extended peak periods. If more cars are added to the local system, they will be displaced elsewhere in the grid, adding to congestion in adjacent neighborhoods.
- The regional roadway network is also at capacity over extended peak periods. If regional traffic is added to the study area, it will be at the expense of regional traffic heading elsewhere in San Francisco or neighboring communities.

The following key principles underlie the recommendations in this chapter:

- In accordance with clear City policies, the aim should not be to cater for the entire demand for long-stay parking during the day. Instead, the parking stock should be managed to ensure the availability of short-term parking for visitors to the area.
- The potential for mode shift among opera, symphony and ballet patrons and artists are limited, due to the reduced frequency of transit late at night, unreliability of taxi services, and personal security fears. The parking stock in the evening should be managed to prioritize these users.
- Any recommendations need to improve the efficiency of parking garages in the Civic Center area. At present, Civic Center Plaza Garage is underutilized during the evening, while the Performing Arts Garage is underutilized during the day.
- All recommendations need to include real-time information to motorists about the availability of parking in all study area locations.

Based on the calculations in the previous chapter, the demand from parkers displaced from the surface lots that cannot be accommodated in the Performing Arts and Civic Center garages amounts to:

- 488 vehicles at the daytime peak (10 AM)
- 200 vehicles on a performance evening (8 PM)

If only the Central Freeway surface lots were to close, current demand could be met even without the implementation of any of these recommendations.

Few of the recommendations here have an impact that can be easily quantified. However, development of many of the lots – particularly those that do not lie on the former Central Freeway right-of-way – is likely to be a gradual process. This means that these recommendations can be refined as development proceeds. In particular, a gradual closure will allow the structure of parking charges at the City-owned garages to be refined in line with changing demand.

Options to Improve Daytime and Evening Supply

Abolish Discounted Parking

At present, students and City and government departments receive discounted parking in Civic Center Plaza Garage. City departments and attorneys also receive a discounted monthly rate in the Performing Arts Garage.

At Civic Center, students pay a flat rate of \$5.00 for all-day parking, compared to the regular rate of \$18.00. Students comprise 20% of all transient (non-monthly) parkers at this garage. Government bodies receive an advertised monthly rate of \$125.00, compared to the regular rate of \$156.25, and in practice pay an average of \$68.24. They account for 254 of the 395 monthly parkers. Apart from ten carpool spaces, no City departments currently take advantage of the discounted monthly rate.

Local residents also receive a discounted monthly parking rate of \$90 at Civic Center. Seventeen parkers currently take advantage of this.

At the Performing Arts Garage, five City attorneys currently pay the discounted monthly rate of \$112.00.

Although the precise impacts of abolishing these discounts is difficult to predict, the following estimates can be made:

- For students, the effect of withdrawing the flat \$5.00 rate will depend on how long they park for. For students who park for 3-4 hours, for example, the increase would be only \$1.00. For all-day parkers, the increase would be \$13.00. Students are likely to be more sensitive to price signals than other parkers, due to their generally lower incomes.

- Assuming a price elasticity of -0.175 , an average parking duration of 4-5 hours, and that only 50% of student parkers are present at 10 AM¹, the reduction in daytime peak parking numbers would be 14.
- For City and government departments, the effect of withdrawing the discounts will depend on internal budgetary decisions, whether the cost is borne by the employee or the organization, and whether the vehicles are primarily used for commuting or operational purposes.
- Assuming a lower price elasticity of -0.1 to reflect this, and that 75% of monthly permit holders are using the garage at 10 AM, the reduction in parking numbers at the 10 AM peak would be 25. At 8 PM, the reduction in parking numbers would be eight, assuming that 25% of monthly permit holders are using the garage at this time.²

The subsidizing of student parking in particular is inequitable and difficult to justify. There is no reason why one section of the community should be singled out to benefit from lower rates.

Adjust Prices at Civic Center and Performing Arts Garages

Currently, prices at the Civic Center and Performing Arts garages are lower than those charged at many other garages in San Francisco locations with comparable density and accessibility. As discussed in Chapter 2, the monthly rates are around one-third lower than these other garages, and short-term transient rates around 25% lower.

This suggests that there is considerable scope to reduce demand by adjusting prices at the Civic Center and Performing Arts garages, while still keeping them within the general range for other parking facilities in comparable locations. As noted above, due to the considerable number of spaces available at present in the Civic Center area, this need not be done immediately. The exact pricing structure can be refined in the light of changing conditions as the surface lots close.

Assuming a price elasticity of -0.175 , a 25% increase in prices would be likely to cut demand by 70 vehicles at the 10 AM peak, if both garages were at maximum occupancy. In the evening peak, when valet parking is not employed, the figure would be 63 vehicles.

Abolish Parking Subsidies for Performing Arts and International School Staff

Administrative staff employed by the opera, ballet and symphony, and staff at the International School, currently receive parking in the surface lots at below-market rates of \$60.00–\$85.00 per month. In the case of the opera, this benefit extends to subsidizing parking in Fox Plaza garage for staff who are unable to secure a space in the surface

¹ According to the garage manager, most students attend a half-day of classes only. This estimate suggests that 134 students parkers are present at 10 AM, assuming that the total numbers are evenly split between weekday mornings and weekday afternoons.

² Informal surveys suggested that a large number of government vehicles are stored overnight in the garage.

lots. Compared to the average \$141 monthly rate for the easterly surface lots, this represents a subsidy of \$56-\$81 per month. Compared to the \$155 rate for a reserved space in Fox Plaza, this subsidy for opera staff amounts to \$95 per month.

Staff who do not use a parking space do not receive comparable benefits. While the opera, ballet and symphony offer commuter checks for transit users, the benefit of these is that they are tax-free, rather than subsidized by the institution.

If parking were to be charged for at market rate, staff would be treated equitably regardless of how they chose to commute to work. This would encourage people to use alternative travel options, and reduce parking demand in the study area.

If the institutions resolved that they wished to continue offering this benefit, an alternative is to introduce a parking “cash-out” program. This option is in fact required under California law for employers who lease parking and provide it at less than cost to their employees. Under a cash-out program, the employer would offer its employees a choice between (a) subsidized parking; (b) a tax-free transit/vanpool subsidy equal to the value of the parking subsidy; or (c) a taxable carpool/walk/bike subsidy equal to the value of the parking subsidy. Parking cash-out programs in the Bay Area offering benefits of up to \$40 per month have achieved site-level employee vehicle trip reductions of 5.1-6.5%³. These figures are for suburban locations where fewer transportation choices are available.

This recommendation applies to the administrative staff in the institutions and also to the performing artists, despite the fact that in most cases they are contractually entitled to free parking in the immediate vicinity. Performing artists with large instruments generally leave their equipment at the venue. Although many have to leave late at night, this recommendation does not mean that they would be prevented from driving and parking in the area. Instead, it means that those artists who choose not to use a parking space would receive comparable benefits to those who do.

A 6% vehicle trip reduction would translate into a reduction of 10 staff vehicles parked during the day⁴. In the evening, assuming a lower vehicle trip reduction figure of 4% to reflect poorer transportation choices at this time, 11 fewer vehicles would be parked⁵.

Eliminate City Department Vehicles

Replacing individual City department vehicles with a common City fleet or City Car Share would increase the efficiency of the fleet. Fewer vehicles would be needed to cater for the same demand, freeing up parking spaces – including on-street spaces – around City Hall.

³ Calculated by Nelson\Nygaard based on data presented in Walukas, Beth (2001), “Financial Incentive Programs in Alameda County, California,” Alameda Congestion Management Agency, paper presented at Transportation Research Board conference in Washington, DC. See Nelson\Nygaard (2001), Controlled Access Parking in Redwood Shores.

⁴ Based on figures from the institutions regarding the number of staff leasing parking.

⁵ Based on the figure of 274 staff and performing artists parking in the area, calculated in Chapter 3.

At Fox Plaza garage, for example, a survey showed that 37 City-owned vehicles were parked at 7:30 PM.

Introduce a Parking Guidance System

Variable message signs on Van Ness, Franklin and Gough should provide motorists with real-time information on spaces available at all parking facilities in the Civic Center area. This would enable the optimum use of existing parking facilities. It would also reduce congestion, as motorists would not need to 'cruise' in search of a parking space.

Improve Transit and Bicycle Infrastructure on Van Ness, Market Street and Haight Corridors

Improvements such as a Van Ness busway, Haight transit corridor improvements, a Page Street Bike Boulevard and Market Street bicycle lanes are being developed, primarily through the Better Neighborhoods 2002 process. These will contribute significantly to the quality and capacity of the transit infrastructure and bicycle and pedestrian environment in the Civic Center area.

While the precise modal shift that will result is difficult to estimate, 10% is a conservative daytime estimate based on case studies in Boulder (CO), Davis, Stanford, and elsewhere in the Bay Area. A lower estimate of 5% is used for evening demand, due to poorer transportation choices. Applied to the Civic Center and Performing Arts garages at full capacity, this is equivalent to 159 spaces (day) and 79 spaces (evening).

Options to Increase Daytime Availability

Abolish the 'Early Bird' Discounted Rate at the Performing Arts Garage

At present, the Performing Arts Garage offers an 'early bird' rate of \$7 for parkers who arrive before 9:30 AM and depart by 6 PM. This compares to the regular all-day rate of \$15. Abolition of the early bird rate would more than double parking charges for these users.

At present, there may be a justification for such an early bird rate from a garage management and revenue maximization point of view, as the Performing Arts Garage rarely fills up during the day. However, if many former surface lot users are redirected to this garage, daytime occupancy is likely to increase significantly. There would then be far less justification for the discounted rate.

According to garage data, 'early bird' parkers account for 16% of transient parkers at the Performing Arts Garage. This is equivalent to 1,868 per month, or 85 per weekday (July 2000 – May 2001 average).

Assuming that the average price would increase to \$14.25⁶, and an elasticity of demand of -0.175, there would be a reduction of 15 vehicles parked at the 10 AM peak.

⁶ Assumptions: 75% of 'early bird' users park all day, and the average parking duration for the remainder is 5-6 hours.

Consider Valet Parking at the Performing Arts Garage

If the Performing Arts Garage began to regularly reach capacity during the daytime, valet parking could be considered, as at Civic Center Plaza Garage. As a rule of thumb, valet parking increases capacity by 25%. This would make 147 additional spaces available.

This option is unlikely to be feasible during evening performances, due to the large numbers of people seeking to leave at the same time.

Remove Reserved on-Street Parking at City Hall

At present, 96 of the 383 on-street spaces within one block of City Hall are reserved for City vehicles until 7 PM. Most of these are numbered spaces, reserved for specific individuals, and are not well utilized. In addition, many City vehicles park (free) at parking meters in the Civic Center area.

These reserved spaces could be consolidated based on peak occupancy. This would mean permit holders would no longer be entitled to individually numbered spaces, but would still in effect be guaranteed a parking space adjacent to City Hall. For special events at City Hall, when all or most permit holders would likely to be present, spaces could be temporarily reserved if desired through 'bagging' parking meters.

Assuming peak occupancy of 75%, 24 additional daytime spaces would be created.

Evening Parking**Improve Perceived Security at Civic Center Plaza Garage**

Currently, there is an imbalance in demand between the Civic Center and Performing Arts garages. A large number of spaces are available in the Performing Arts Garage during the day, and in Civic Center Plaza Garage in the evening.

According to key stakeholders, a primary reason for the low utilization of Civic Center Plaza Garage in the evening is personal security. Despite the presence of some security guards employed by the symphony and War Memorial and Performing Arts Center, many patrons are uneasy walking to this garage, even though it is only one block further than the Performing Arts Garage.

The City and the performing arts institutions should be encouraged to expand this security presence, and make guards more visible to patrons. In addition, this problem could be partly addressed by the designation of Civic Center Plaza Garage as a key parking facility for performances, together with the Performing Arts Garage. At present, the information given to patrons lists various parking locations, including surface lots, in no particular order of priority. If Civic Center were designated in this information as a key parking location, a 'critical mass' of patrons walking to the garage after performances would substantially alleviate any personal security fears.

To achieve the same end, Civic Center Plaza Garage should also be included in a 'guaranteed space' program, as administered at present by the symphony in the Performing Arts Garage. This concept is discussed in more detail below.

Expand the Guaranteed Parking Space Program

At present, the symphony offers its patrons a guaranteed parking space in the Performing Arts Garage, on payment of the \$8.00 fee together with a \$1.00 handling charge. The cap of 300 spaces has not been reached in practice so far.

If the ballet and opera feel that perceived lack of parking is dissuading patrons from attending, they should consider adopting this initiative. As well as the Performing Arts Garage, spaces in Civic Center or Opera Plaza garages might be included. Similarly, if the symphony were to reach its 300-space limit, it might expand the program to other garages. Elderly patrons might be given priority for the spaces in the Performing Arts Garage.

This option would help to address perceptions that parking is scarce in the Civic Center area at performance times. Currently, there is a large amount of parking available in Civic Center Plaza Garage and the surface lots, but according to the institutions, patrons perceive that there is a shortage.

This option would also help to reduce congestion, as patrons would not have to drive around in search of a parking space.

Improve Transit Information

At present, transit information provided by the opera, ballet and symphony to their patrons is extremely limited. It consists only of telephone numbers for transit operators and agencies. This limited information has a number of consequences:

- Patrons are not made aware of transit options that may be available to them. Few are likely to make the effort to telephone for information, unless they have already made the decision to take transit.
- Even patrons who use transit for other purposes, such as the commute to work, may be unaware that services run late at night. This is particularly the case for opera patrons; the last BART train is held in the case of late-running performances, but patrons are not made aware of this unless they ask.
- Patrons are given the impression that few other patrons are likely to be taking transit. This is likely to increase their reluctance to consider it as an option, due to personal security fears.

At a minimum, transit information in brochures and mailed with tickets should be broken down by region, giving major destinations served, hours of operation, and the telephone number for further information. For Marin County, the information should note that Golden Gate Transit services stop outside the Opera House and Symphony Hall. For BART, it should point out that the last train will not depart until after the performance.

Typical vehicle trip reduction figures for information-only transportation demand management programs range from 1-3%⁷. Most of these programs involve commute trips, however. To reflect this, a figure of 1% from the lower end of the range is used. This would translate into a reduction of 10 vehicles, from the 985 patron vehicles currently using the garages and surface lots in the study area.

Investigate Package Transit-Performance Tickets

According to a survey of opera patrons, 8% of respondents expressed interest in a combined transit-opera ticket. While this proportion is relatively low, it still accounts for 278 people out of a capacity audience. If a similar proportion of symphony patrons were interested, the total of interested patrons in both venues would reach 500.

Even if only a small proportion of this number remained seriously interested in the package, the option would still appear to be worth pursuing. The availability of the package would also help foster the impression that transit is a viable option for patrons, encouraging them to take transit even if they did not purchase the package. As discussed above, the impression that few other patrons take transit is likely to fuel personal security fears, particularly late at night.

Introduce a 'Parking Alert' System

The symphony currently issues mailings to its patrons in conjunction with special events such as the Cinco de Mayo street festivities, warning of delays in getting to the concert and finding parking.

The mailing could be extended to opera and ballet patrons. More importantly, it might be expanded to "worst case" situations where parking might be expected to be difficult to find – for example, when sell-out opera/ballet and symphony performances coincide. The mailing, perhaps in the form of a postcard, could then suggest one of three options:

- book a guaranteed parking space
- use alternative modes
- arrive early

Use Valet Parking for Performing Artists

Valet parking is currently used in the surface lots leased by the performing arts institutions, primarily to accommodate artists during evening performances. Most artists are contractually entitled to free parking in the immediate vicinity.

If the surface lots were to close, and the institutions were to lease space in an alternative lot or garage, there is no reason why valet parking should not continue to be employed. While it is not likely to be a feasible option for patrons, due to the large numbers leaving simultaneously, artist departures will be fewer in number and more spread out.

⁷ Nelson\Nygaard Consulting (2001), Vehicle trip reduction resulting from TDM programs. This paper considers the impacts of 19 TDM programs and studies.

According to the occupancy surveys, 274 vehicles belonging to artists and other staff use the surface lots that are leased by the institutions on a “performance” evening. Assuming that valet parking can increase supply by 25%, these vehicles could be accommodated in 219 marked spaces. This effectively increases supply by 55 spaces.

Increase Use of Other Garages and Surface Lots in the Neighborhood

A number of other public garages and surface lots in the neighborhood lie just outside the study area. These include:

- Fox Plaza
- Opera Plaza
- Market and 9th
- two surface lots at Polk and Hayes
- surface lot at Polk and Fell
- surface lot at Oak and Van Ness (public parking nights and weekends)
- Wells Fargo surface lot at Grove and Larkin (public parking nights and weekends)
- surface lot at Golden Gate and Larkin

While no formal occupancy surveys of these lots were conducted, an informal count of at Fox Plaza garage revealed that 175 spaces are available at 7:30 PM. The garage currently closes at 8 PM, except for residents and other monthly parkers. Opening this garage for evening use by transient parkers would significantly add to the parking supply in the Civic Center area.

The performing arts institutions should also investigate the possibility of leasing private parking for evening use only, for performing artists and other staff. Parking lots are attached to a number of businesses in the Civic Center area, such as the office building at 100 Van Ness, for employee use. These are unlikely to be used to a great extent in the evening.

SUMMARY OF RECOMMENDATIONS

The likely impact of the recommendations detailed above on parking availability in the Civic Center area is set out in Figure 4-1 below. Details of the assumptions used are provided in the text under each recommendation above.

As discussed in Chapter 3, a sold-out symphony performance might lead to an additional 161 vehicles parking in the study area. Due to the uncertainties involved in this figure, this additional demand is not included in the table below. However, these vehicles could comfortably be accommodated within the excess capacity of 226 spaces (all surface lots close) or 738 spaces (Central Freeway lots close), following implementation of these recommendations.

FIGURE 0-1 IMPACT OF RECOMMENDATIONS

	All Surface Lots Removed		Central Freeway Lots Removed	
	Daytime Peak	Performance Evening Peak	Daytime Peak	Performance Evening Peak
Recommendations to Improve Daytime and Evening Availability				
Remaining parking demand under current conditions ⁸	488	200	0	(312)
Abolish discounted parking	449	192	(39)	(320)
Adjust prices at Civic Center and Performing Arts garages	379	129	(109)	(383)
Abolish parking subsidies for performing arts and International School staff	369	118	(119)	(394)
Eliminate City department vehicles ⁹	319	68	(169)	(444)
Improve transit and bicycle infrastructure	160	(11)	(328)	(523)
Recommendations to Improve Daytime Availability				
Abolish early-bird rate	145	(11)	(343)	(523)
Valet parking at Performing Arts Garage	(2)	(11)	(490)	(523)
Remove reserved on-street parking at City Hall	(26)	(11)	(514)	(523)
Recommendations to Improve Evening Availability				
Improve transit information	(26)	(21)	(514)	(533)
Investigate package transit-performance tickets	Not Quantified			
Valet parking for performing artists	(26)	(76)	(514)	(588)
Increase use of other garages and surface lots in the neighborhood ¹⁰	(26)	(226)	(514)	(738)

⁸ See Chapter 3 for details of these calculations.

⁹ An arbitrary reduction potential of 50 is assumed.

¹⁰ Assuming 150 evening spaces are available in Fox Plaza. No consideration is given to spare capacity in other lots.

CHAPTER 5. CONCLUSIONS

The analysis in the preceding chapters demonstrates the feasibility of building no additional parking in the Civic Center area, even using conservative estimates of potential reductions.

- If only the Central Freeway lots were to be removed, existing demand could be catered for within existing supply, even without implementing the recommendations in Chapter 4.
- If the Central Freeway lots were to be removed, and the recommendations in Chapter 4 implemented, there would be a surplus of 514 spaces (daytime peak) and 738 spaces (performance evening peak).
- If all the surface lots in the study area were to be removed, and the recommendations in Chapter 4 implemented, there would be a surplus of 26 spaces (daytime peak) and 226 spaces (performance evening peak).

The recommendations maximize the efficiency of the existing parking supply in the study area in three key ways:

- A parking guidance system, employing variable message signs, would direct motorists to available parking. This would ensure all facilities, both public and private, could be used to their full capacity. It would address the current problems of underutilization of the Performing Arts Garage during the day and Civic Center Plaza Garage during the evening.
- Pricing signals would bring parking rates in the City-owned garages in the study area into line with those in comparable locations elsewhere in the City, and reduce inequitably subsidies to groups such as students and government departments.
- Performing arts patrons would be prioritized over other evening users, through the expansion of pre-booked parking spaces. More than one-quarter of evening use in the study area lots is not related to the performing arts institution (staff or patrons).

DAYTIME PARKING

The calculations in Chapters 3 and 4 yield the following results:

- If no additional action were taken, closure of the Central Freeway lots would result in demand exactly matching supply at the 10 AM peak. Closure of all surface lots in the study area would result in a shortfall of 488 spaces.
- Implementation of the recommendations in Chapter 4 would increase availability at 10 AM by about 514 spaces. This would eliminate the shortfall regardless of how many surface lots closed. It would create significant surplus capacity of more than 500 spaces if only the Central Freeway lots were to close.
- These estimates are conservative, due to the use of low figures for elasticity of demand and mode shift.

The surplus of 26 spaces remaining if all surface lots were to close is likely to lie within the margin of error of the calculations here. However, in any case City policy dictates that parking supply should not be set to match commute trip demand. Pricing structures at the City-owned garages could be adjusted so that any shortfall was at the expense of commuter parking, rather than short-stay parking. Another option is to limit the numbers of monthly permits issued.

EVENING PARKING

The calculations in Chapters 3 and 4 yield the following results:

- Even if all the Central Freeway lots were to close, the current parking supply is adequate to cater for the current performance evening demand, without additional action. More than 300 spaces would still be available in the remaining surface lots and City-owned garages, plus those spaces in facilities outside the study area such as Opera Plaza. If the recommendations in Chapter 4 were to be implemented, there would be more than 700 spaces available.
- Symphony attendance on the night of the “performance evening” occupancy surveys was lower than average. If a capacity audience had been present, demand in the study area lots would be likely to have increased by about 161 vehicles¹. Even this additional number of vehicles could be comfortably accommodated within existing provision.
- If all surface lots in the study area were to close – which is unlikely to happen in the immediate future – there would still be a surplus of more than 200 spaces, following implementation of the recommendations in Chapter 4. Even assuming the increased symphony attendance, there would still be a surplus of more than 50 spaces. In any case, patrons would have “first refusal” on the available parking, under an expanded guaranteed parking space program.
- These estimates are conservative, due to the use of low figures for elasticity of demand and mode shift. The estimates do not include capacity at other lots in the neighborhood, with the exception of Fox Plaza. In addition, as availability decreased, commercial lots would be likely to raise their rates, thus improving availability.
- This “worst-case scenario” assumes that opera/ballet, symphony and Herbst Theatre performances take place simultaneously, with the symphony performance sold out and average opera/ballet attendance. Performances in all three venues co-incided on 42 days in the year from July 2000; the number of days when attendance is this high will be commensurately less.

¹ Assuming the ratio of attendance to study area parking calculated in Chapter 3.