

6.2 PARKING SUPPLY

6.2.1 INTRODUCTION

The Parking Supply section describes the Proposed Project's potential impacts on existing parking in the vicinity of the Sacramento Zoo. Existing parking deficiencies and parking impacts associated with the Proposed Project were identified along with possible mitigation measures. This section is organized in three parts: introduction, setting (which describes the existing parking situation), and the impact analysis, which includes standards of significance used in the evaluation, the specific impacts of the project, and the proposed improvement or mitigation measures.

6.2.2 SETTING

STUDY AREA PARKING FACILITIES

Field surveys were conducted to ascertain the quantity of parking spaces potentially available to Zoo patrons. The study concentrated on areas within easy walking distance, and especially those identified in earlier studies as being used by Zoo patrons¹. On-street parking along 18th and 19th Streets and in the residential areas south of the park is not routinely used by visitors to the Zoo because of the long walking distance (especially problematic for children). Therefore, it was not included in the survey. However, it is recognized that other users of Land Park routinely park in the adjacent neighborhoods. A total of 1,066 spaces were found, distributed in the facilities shown in **Figure 6.2-1** and described below:

15th Avenue Parking Lot – The parking lot directly east of Fairytale Town has approximately 217 parking spaces. This includes 6 spaces marked for handicapped parking.

17th Avenue Parking Lot – The parking lot adjacent to the golf course clubhouse has approximately 184 parking spaces. This includes 6 handicap parking spaces, three 30-minute spaces, and 3 spaces reserved for employees of the golf course.

On-Street Parking on 15th Avenue – 15th Avenue in front of Fairytale Town has approximately 87 diagonal parking spaces. An additional 91 parallel parking spaces are available between Fairytale Town and 18th Street. However, due to inadequate marking distinguishing the diagonal parking area from the parallel parking area, illegal diagonal parking often takes place on the eastern portion of 15th Avenue.

¹ See *Sacramento Zoo Master Plan Findings of Fact and Statement of Overriding Considerations, 1988*, and *William Land Park Study, RJM Design Group et al, 1998*. The survey of Zoo patrons described later in this reports confirms that the areas surveyed are, in fact, the primary parking areas used by Zoo patrons.

Insert Figure 6.2-1

On-Street Parking on 16th Avenue - 16th Avenue inside William Land Park has approximately 170 parallel parking spaces.

On-Street Parking on 13th Street - 13th Street inside William Land Park has approximately 85 parallel parking spaces.

On-Street Parking North of Zoo - The service roads northwest of the Zoo, and along the small connecting street immediately north of the Zoo, have approximately 130 parallel parking spaces.

On-Street Parking on Land Park Drive - Approximately 53 parallel parking spaces are available along portions of Land Park Drive.

On-Street Parking on Sutterville Road - Approximately 49 parallel parking spaces are available along Sutterville Road at the edge of William Land Park.

INTERNAL CIRCULATION

Traffic circulation in William Land Park is exceptionally poor, although the park has a fine internal road system (**Figure 6.2-2**). The park had a cruising problem a decade ago, which the City solved by blocking roads used by cruisers, thereby hampering circulation for all users. The cruising problem also caused the City to ban on-street parking on some Park roads on Sunday, which was the main cruising day. Unfortunately, this solution eliminated parking spaces needed to serve the heaviest demand from legitimate park users.

About a year after the roads were closed, the Department of Parks and Recreation instituted the Park Safety Patrol with police-like cars and uniforms. The cruising problem is now reduced to insignificance. Patrol officers believe that the problem is unlikely to re-emerge if the road closures are removed².

The most disruptive closure is where 15th Avenue meets 18th Street. This closure exacerbates traffic problems by forcing vehicles from the 15th Avenue parking lot and on-street parking to exit through the crowds of pedestrians between the Zoo entrance and Fairy Tale Town. The closure is not indicated with a “Not a Through Street” sign, and sight of the closure is blocked by bushes and parked cars lining a curve in 15th Avenue. Occasional users, which include the majority of Zoo patrons, are not aware of the closure until they are actually upon it.

Circulation within existing parking lots is also less than ideal. In the 15th Avenue Parking lot every

² Source: Discussions with the Park Safety Patrol Coordinator

Figure 2

lane is one-way in the same direction. Consequently, a driver who cannot find a space in the lane that he is in, but does spot a space in the next lane, must exit the lot and drive around the block. He must then re-enter the lot to access the space. This reportedly causes frequent disputes when someone drops-off a passenger to “reserve” a space.

ZOO PARKING DEMAND SURVEY

Information on the characteristics of Zoo parking demand was obtained through an interview survey of Zoo patrons conducted on Saturday April 6, 2002. This day was selected because, according to the Zoo’s attendance records, the first Sunday in April is typically one of the top fifteen days of the year for Zoo attendance. An annotated version of the survey form is included in **Appendix D**.

SAMPLING RATE

The Zoo’s records for attendance on April 6, 2002 are shown in the first three rows of **Table 6.2-1**. The definition of “adult”, based on ticket sales policy, is anyone over 12 years of age. Zoo members do not buy tickets and so the Zoo does not have disaggregate adult and children attendance records for members. The figures shown in **Table 6.2-1** for “members” are based on the assumption that the percentage of adults and children is the same for members as for non-members attendees.

TABLE 6.2-1
CALCULATION OF SAMPLING RATE

	Adults	Children	Total
Paid Attendees	1,533	1,035	2,568
Members	414	280	694
Total Attendance	1,947	1,315	3,262
Surveyed	559	475	1,034
Sampling Rate	28.7%	36.1%	31.7%

SOURCE: Fehr & Peers, 2002.

Only adults were asked to complete the survey; however, they filled in forms listing the number of accompanying adults and children. Of the 3,262 total attendance, 1,034 persons were included in the survey as can be seen in **Table 6.2-1**. The survey achieved an overall sampling rate of over thirty percent, which is considered a high sampling rate.

MODE SPLIT

To determine mode split, interviewees were asked, “How did you come from your home to Land Park today?” The responses are described in **Table 6.2-2**.

TABLE 6.2-2
MODE SPLIT

	Adults	Children	Total	Percent
Car	550	460	1,010	97.7%
RT Bus	5	12	17	1.6%
Private Bus	4	3	7	0.7%
Bike	0	0	0	0.0%
Walk	0	0	0	0.0%
Total			1,034	100.0%

SOURCE: Fehr & Peers, 2002.

The results show that the Zoo is entirely dependent on road transportation, and that almost all Zoo patrons arrive by car.

VEHICLE OCCUPANCY

The survey found average occupancy of 1.8 adults and 1.5 children (3.3 persons total) per car³.

PARKING LOCATION

The survey found that the most common parking location for Zoo patrons was the 15th Avenue parking lot near Fairytale Town (**Table 6.2-3**). This may be due in part to the fact the survey indicated that about a third of Zoo patrons also visited Fairytale Town the same day that they visited the Zoo.

TABLE 6.2-3
ZOO PATRON PARKING LOCATION

Parking Location	Number of Cars	Percentage of Zoo Parkers
15 th Avenue Parking Lot	120	46.7%
On-Street Inside Park	53	20.6%
On-Street Outside Park	45	17.5%
17 th Avenue parking Lot	30	11.7%
Elsewhere	9	3.5%
Total Cars in Sample	257	100.0%

NOTE: The figures in this table do not include bus riders or people who indicated that they came by car, but did not answer the parking location questions.

SOURCE: Fehr & Peers, 2002.

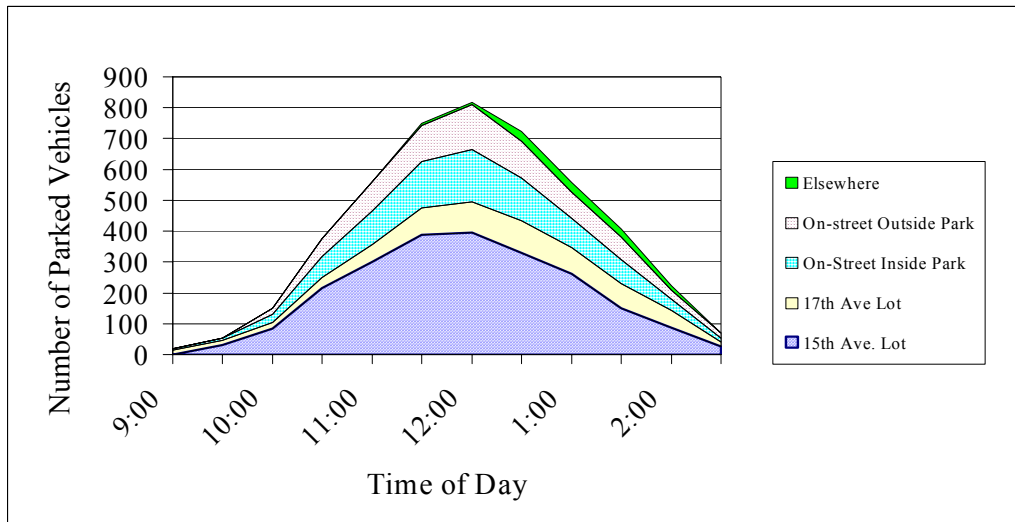
³ This figure was calculated from the survey responses remaining after removal of bus users and forms that were not completely filled out. There were 257 cars in the usable sample, containing 463 adults and 386 children.

Table 6.2-3 also shows that 17.5% of Zoo patrons use on-street parking outside of William Land Park, mainly along Sutterville Road.

PARKING DURATION AND TIME PROFILE

Respondents reported an average parking duration of 113 minutes. Each respondent's duration was cross-tabulated with their arrival time to produce the time profile shown in **Figure 6.2-3**.

FIGURE 6.2-3
TIME PROFILE BY PARKING AREA



NOTE: This figure is based on upon the responses of those patrons surveyed, and has been factored up to estimate the parking demand of the total attendance on April 6, 2002.
SOURCE: Fehr & Peers, 2002.

Figure 6.2-3 shows that parking usage by Zoo patrons is heavily peaked at noon. It also gives some idea of the relative attractiveness of the different parking spots. In the unconstrained conditions of early morning, Zoo patrons use the 15th Avenue and 17th Avenue parking lots. As the lots fill, some patrons divert to on-street parking inside the park, and then to on-street parking outside the park. Patrons do not park “elsewhere” until the parking areas inside William Land Park are full.

The other important aspect of **Figure 6.2-3** is the effect of turnover. Zoo patrons parked approximately 987 cars on the day of the survey, but because of turnover, the maximum number of spaces used was only 818. This ratio will be used later in determining the effect of future increases in Zoo patronage.

DUAL PATRONAGE

The survey found that 43.4% of Zoo patrons also visit or use some other Land Park facility when they visit the Zoo. **Table 6.2-4** summarizes the responses.

TABLE 6.2-4
DUAL PATRONAGE

Type of Patron	Percentage of Zoo Patrons
Zoo Only	56.6%
Zoo and Fairytale Town	32.3%
Zoo and Funderland	14.8%
Zoo and Picnic Areas	10.7%
Zoo and Sports Fields	2.0%
Zoo and Golf Course	0.8%
Zoo and Other	1.6%

NOTE: Figures do not add up to one hundred percent because some patrons used more than one facility besides the Zoo.

SOURCE: Fehr & Peers, 2002.

SUPPRESSED DEMAND

Interviewees were asked, “If it was easier to find a parking place, would you visit the Zoo more often?” Over three-quarters (76.6%) of the interviewees answered “yes”. Additionally, anecdotal evidence suggests that an unknown number of potential Zoo patrons do not go at all because of parking problems encountered on a previous visit or because they have heard stories that parking is difficult. The probability of suppressed demand can be viewed several ways:

- It implies that lack of parking, rather than lack of some other type of facility, may be the controlling factor in Zoo attendance. Patrons appear to be making less use of the Zoo than they would wish to.
- Small to moderate amounts of additional parking may not result in any diminution of the perceived parking problem (i.e. parking will not become easier to find) because the new spaces would likely be filled from the existing pool of suppressed demand. In other words, there is a group of people already waiting to use any additional parking that becomes available. Parking availability will not visibly improve until the suppressed demand has been satisfied, which would require substantial amounts of new parking.

EXISTING CONDITIONS

Field surveys and interviews with a variety of people associated with institutions in and around William Land Park helped to identify key issues associated with the existing parking conditions.

PARKING FOR SACRAMENTO CITY COLLEGE

On-street parking on the eastern side of William Land Park is heavily used by Sacramento City College (SCC) students. SCC runs a full course load on weekends and evenings, so this demand occurs every day except major holidays. This typically consumes 500-1000 parking spaces within William Land Park at any given time during daylight hours. The main effect of SCC parkers on the Zoo and other Land Park institutions is that they displace other users.

SCC's administration views parking as one of their biggest constraints to operations. The Cal State system measures college absorption capacity in terms of capacity/load ratio. SCC's cap/load ratio is over 1.0 for lectures (they could handle more students) but under 0.5 for parking (they have less than half of the accepted standard). The heavy course schedules in the evenings and weekends are partly due to students attempting to avoid parking difficulties during the week.

SCC had 1,540 on-campus parking places five years ago. Since then it has added 520 spaces by purchasing a cold storage lot and paving it for parking.

Given the shortage of on-campus parking, one might imagine that every available on-campus space would be in constant use. Field observation of on-campus parking facilities during a normal school day found hundreds of vacant spaces. Conversations with SCC students and administration indicate that this is because the college charges \$1 per day (or \$20 per semester) for on-campus parking⁴.

In addition to vacant spaces in existing lots, SCC has 350 new unused spaces in two parking lots south of Sutterville Road. The City will not allow use of these lots until a pedestrian signal is installed between the lots and the campus, possibly in 2004 or 2005, depending on budget.

Because it is the largest generator of parking demand in the area, SCC student parking exerts a powerful but indirect influence on the Zoo. By filling the spaces on the Park's eastern side, student parkers force picnickers and sports-related parkers to park further west, where they displace potential Zoo patrons.

⁴ SCC's administration reported that their parking lots are usually full for the first weeks of each term. Spaces later become available as new students discover the free parking in William Land Park.

PARKING MARKINGS

There are many places within the Park where road and curb markings are either faded, confusing, or non-existent. A few examples are:

- 15th Avenue in front of Fairytale Town has angled parking on both sides of the street. The lines delineating the parking spaces appear to have been changed several times and then not re-painted for years, leaving a confusing collection of faded stripes. Moreover, the road has a sharp turn which leaves limited sight distance for motorists backing out of the angled parking places.
- 15th Avenue is striped for angled parking only for the section west of the amphitheater. Nevertheless, cars are parked at angles all along the section near the rock garden. This is illegal, but the striping is so faded that it is very difficult to discern where the legal angled parking ends.
- Americans with Disabilities Act (ADA) ramps at crosswalks are not painted red, so people park across them. Many of the handicap logos and fire lane markings have faded to the point where they are no longer legally enforceable.
- The 17th Ave parking lot was recently re-striped by the Golf Course as part of their agreement with the City. The new striping is too narrow and too steeply angled to be used easily. Longer vehicles extend into the lane even when the front wheels are against the curb.

The survey team observed many illegally parked cars. In many cases the drivers were probably not aware that they had parked illegally. There were also cars parked too close to corners, in fire zones, and in front of fire hydrants. It is not clear how many of the latter cases were due to inadequate marking and how many to the overall scarcity of parking places. This type of illegal parking could lengthen emergency response times.

PARKING AVAILABILITY SURVEY

On Saturday April 6, 2002, the same day that the Zoo Patrons' Survey was conducted, a survey was made of the number of parking spaces in use during the middle of the day, when demand is highest.

Table 6.2-5 below summarizes the results of this survey:

TABLE 6.2-5
PARKING SPACE UTILIZATION

Parking Area	Total Spaces	In Use at 1:00 PM	In Use at 2:00 PM	In Use at 3:00 PM
15th Street Lot	217	217	203	167
17th Street Lot	184	172	182	160
On-Street Inside Park	616	579	616	551
Sutterville Road	49	18	31	49
Total	1,066	986	1,032	927
Percent Occupied		92%	97%	87%

SOURCE: Fehr & Peers, 2002.

Comparing **Table 6.2-5** to **Figure 6.2-3**, it appears that at 1:00 PM approximately 61% of the parking near the Zoo is Zoo-related (though some of this is dual patrons). At the peak time of parking usage (2:00 PM) however, only about 24% of the parking demand is Zoo-related. This is because Zoo parking demand peaks several hours earlier than the demand from other facilities.

ON-SITE PARKING

The Zoo currently has 20 on-site parking spaces. Employment at the Zoo fluctuates seasonally, however, 52 Zoo staff and 30 food/beverage/gift shop staff are employed at the Zoo, for a total of 82 employees. Therefore, it is assumed that up to 82 employees use on-street parking. However, the actual number of employees using on-street parking on any given day, is expected to be less than 82 employees due to the fact that not all employees are scheduled to work on every day of the seven day work week.

PARKING FINDINGS IN THE 1988 EIR

The 1988 *Sacramento Zoo Master Plan Findings of Fact and Statement of Overriding Considerations* included four specific mitigation measures for circulation and parking. These measures, and the actions taken on them, are described below:

SECTION C. TRAFFIC AND CIRCULATION

1. *“Provide a left-turn lane on Sutterville Road entering Land Park Drive. This project will be submitted and prioritized as part of the normal Street Division CIP budget process”.*

This measure has been implemented.

2. *“To encourage use of public transit, all individuals utilizing public transit for transport to*

the Zoo or Fairytale Town will be eligible for a twenty percent discounted admission to both facilities. Proof of ridership via a bus ticket or transfer for that date, or a monthly bus pass, will be required for each discount obtained”.

This measure was implemented by the Zoo’s gate staff but failed to accomplish its desired goal. The main reason is that the Sacramento Regional Transit District (RT) does not normally issue proof of ridership and so the Zoo has nothing to check. Moreover, Zoo patrons tend to be occasional users who are unaware that the discount exists until after they arrive.

SECTION D. PARKING

1. *“Phase 1: Immediately proceed to secure an agreement to utilize the approximately 115 parking spaces located at the state office building on Sutterville Road on weekends and holidays”.*

The Zoo attempted to implement this measure. However, the site changed ownership and formal agreement was never realized. The site does appear to attract some Park overflow parking on an informal basis.

2. *“Phase 2: If necessary, secure an agreement with Sacramento City College for parking from which a shuttle system to the Zoo will be tested. The test will be for a nine-month period, will be limited to weekends and holidays, and will involve discounted admissions to the Zoo and Fairytale Town as an incentive to the users”.*

Although SCC’s pricing policies makes their parking lots under-utilized and therefore theoretically available for Zoo patrons, it would be more logical, as well as safer, for students to park on the campus side of the street while Park users park on the west side of Freeport Boulevard.

For these reasons, as well as other issues related to division of costs and liability, The Land Park Working Group formally decided not to further pursue this option⁵.

As discussed in **Section 3.2.2**, it should be noted that these mitigation measures were based on an analysis of impacts that would occur with projected visitation estimates that were significantly higher than those actually experienced over the past 13 years.

⁵ Meeting of the Land Park Working Group, February 21, 2001. The Land Park Working Group is composed of the Zoo, the City, and the Land Park Association.

CUMULATIVE GROWTH IN NON-ZOO PARKING DEMAND

Other activity centers in and around William Land Park were contacted to ascertain the extent to which their parking demand is likely to grow in the future. The responses were:

- Current enrollment at Sacramento City College (SCC) is 22,000. SCC's administration bases its future enrollment projects on SACOG population estimates, broken down by the catchment area for each college in the system. Based on this, SCC enrollment is likely to grow by 9,000 (41%) over the next 15 years.
- A light rail transit (LRT) station will open near Sacramento City College in 2005. RT expects the station to serve 1,000 passengers per day in 2005, and 1,500 passengers per day in 2015. SCC expects 9,000 new students by 2015, compared to RT's target passenger level of 1,500, which means that SCC will have 7,500 – 8,000 additional students seeking parking places despite the new LRT station.
- The Land Park golf course has been growing in popularity in recent years due to the improved condition of the course. They expect an eight percent increase in use this year, to 65,000 rounds of golf per year. They said that they are not at capacity in terms of play, and could probably handle 70,000 rounds per year. However, parking is a major problem for the course. The administration also stated that they are the only city course without its own parking lot. They particularly have problems with soccer-related parkers on Saturday mornings taking up spaces and deterring golfers. They would like to have spaces reserved for golfers.
- Attendance at Fairytale Town increased nine percent last year, and is expected to increase another seven percent over the next three years. Their heavy-demand period corresponds with that of the Zoo; namely, Saturdays and Sundays during warm weather. The administration cited parking as the limiting factor in attendance.
- The Recreation and Parks Department does not have records of reservations of picnic areas and sports fields for earlier years. However, they believe that reservations for park facilities are increasing for William Land Park, as is generally the case for all City parks.
- Field observation indicates that a high percentage of weekend parking demand is sports-related. The period just prior to the scheduled start of soccer games, when players for the next game arrive before the players from the previous game have departed, appear to generate the "peak of the peak" demand.

Table 6.2-6 gives an indication of what the total parking demand for Land Park facilities in 2010 would be if the plans of all of the relevant institutions are summed together, not counting any change in Zoo attendance:

To summarize, the demand for all of the Land Park facilities has been growing and is expected to continue to grow. Meanwhile, no major additions to parking capacity are foreseen at this time. The existing insufficiency of parking, which currently occurs during heavy demand periods, can be expected to intensify and spread over more hours per day and more days each year.

The forecast shown in **Table 6.2-6** does not include existing suppressed demand and it assumes that most of the growth in demand from SCC and the sports fields will go to some other parking area besides those listed in **Section 6.2.2** of this report. Nevertheless, the forecast is useful in showing that the cumulative demand will be far in excess of the existing parking capacity (1066 spaces), so that no reserve capacity will be available to accommodate demand from the Proposed Project.

TABLE 6.2-6
PARKING DEMAND FOR WILLIAM LAND PARK FACILITIES

Institution	Existing*	2010	Basis for Estimate
Zoo	625	625	Held constant
Sports Fields	116	138	Based on SACOG population projections
Fairytale Town	100	120	Based on 7% growth every 3 years
SCC	75	91	Based on 41% more students by 2015
Golf Course	75	81	Based on a ceiling of 70,000 rounds/year
Funderland	50	60	Based on SACOG population projections
Picnics, Other	25	30	Based on SACOG population projections
Total	1,066	1,145	

NOTE: *The existing demand is based on observation made of the mid-day operations of the various institutions, with some adjustment for dual users.

SOURCE: Fehr & Peers, 2002.

6.2.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The City significance criterion for parking is:

“A significant impact to parking would occur if the anticipated parking demand of the Project exceeds the available or planned parking supply”.

This criterion does not specify a time period, and so an impact is considered significant if the anticipated parking demand exceeds the available supply of parking spaces at any time.

IMPACT CLASSIFICATION

This analysis classifies impacts in the following manner:

- No Impact;
- Less Than Significant (mitigation unnecessary);
- Significant Avoidable (impact can be mitigated to less-than-significant levels); and
- Significant Unavoidable (impact cannot be mitigated to less-than-significant levels).

Impacts are considered avoidable if and when a feasible mitigation measure will reduce the “with project” demand to less than the available supply or increase the available supply until it is equal to or greater than the “with project” demand. For example, if a project created a parking demand for three spaces beyond those currently available, then mitigation measures would be required to produce the equivalent of three new parking spaces.

ANALYSIS METHODOLOGY

Project-related parking demand will only create a significant impact if it cannot be accommodated by vacancies in the existing parking facilities. Consequently, it is crucial to determine whether the demand generated by the Proposed Project will occur during off-season⁶, when vacant parking spaces are available, or during heavy-demand periods, when parking demand already exceeds the available supply. **Table 6.2-7** summarizes Zoo attendance levels for 2001.

TABLE 6.2-7
DAILY ZOO ATTENDANCE LEVELS, 2001

Number of Visitors	Approximate Number of Visitors' Cars*	Number of Days per Year
Zoo Closed	0	3
Less than 1,000 visitors	1 - 300	167
1,000 - 1,499 visitors	300 - 450	63
1,500 - 1,999 visitors	450 - 600	41
2,000 - 2,499 visitors	600 - 750	48
2,500 - 2,999 visitors	750 - 900	27
3,000 - 3,499 visitors	900 - 1,050	13
3,500 - 3,999 visitors	1,050 - 1,200	2
4,000 - 4,499 visitors	1,200 - 1,350	0
More than 4,500 visitors	1,500	1
Average for Days When Zoo is Open	385 Cars	

NOTE: * Based on the vehicle occupancy found in the survey.

SOURCE: Fehr & Peers, 2002.

⁶ The “high season” for William Land Park occurs from June to September. Other months are the “off-season”.

Table 6.2-7 indicates that the Zoo generates less than 400 cars in parking demand on a average day. There are forty-three days each year, however, when the Zoo generates more than 750 cars/day in parking demand. Eight of these days occurred during the off-season for the Park as a whole⁷, leaving approximately 35 days when the Zoo and other facilities within William Land Park have simultaneous peaks in parking demand.

FORECASTS

The parking demand for the Proposed Project was based on the following assumptions:

Medical/Service Complex - Because it is designed for internal operational use rather than to enhance the visitors' experience, this facility will not attract new visitors to the Zoo. It was further assumed that there will be no more than two members added to the Zoo's current staff as a result of this project component. The parking demand generated by this component is two spaces.

Kampala Center - There are three types of improvements proposed for the Kampala Center. The first would be to kitchen improvements with no affect on parking.

The second would be to enclose and provide heating and air conditioning to an existing 120-seat patio area. This is in accordance with the Zoo's over-arching strategy of making the Zoo more desirable in the off-season. The Zoo believes that enclosing this area will enable them to hold approximately 20 additional off-season functions each year, with a maximum attendance of 120 persons per function. This will generate 36 cars, assuming that the vehicle occupancy remains unchanged at 3.3 persons/car. In addition, the improved conditions may influence some existing patrons to spend more time in the Kampala Center than they do at present. However, this effect is likely to be small. Additionally, the enclosure is expected to have little effect during the high season.

The third type of proposed improvement to the Kampala Center would extend the Center by providing a wooden deck over the lake. The deck would seat up to 240 persons, and be shaded but not climate-controlled. This could potentially create additional demand in both the high and off-season. For analytical purposes, it was assumed that deck area would be used on 10 high-season days and 10 off-season days each year, and will generate 73 cars, assuming that the vehicle occupancy remains unchanged at 3.3 persons/car

North Lawn - The proposed multi-use pavilion is intended to replace, rather than supplement, the Zoo's current facility, which is a tent. This tent is the same size as the proposed wooden structure

⁷ The survey of Zoo patrons that was reported in earlier was done on April 6th, when Zoo attendance totaled 3,262. This is an example of a peak day for the Zoo occurring during the off-peak season for Land Park as a whole.

and will be erected in the same place. The proposed wooden structure will provide better protection from the rain and sun than is afforded by the tent now in use. The Zoo believes the Project may enable them to book ten additional functions per year, with a maximum seated attendance of 350 persons per function. However, because the current facility is already used on all high-season days, the additional ten functions will necessarily take place during off-season times. This will generate 106 cars, assuming that the vehicle occupancy remains unchanged at 3.3 persons/car.

Sensory Zoo - The later phases of the Concept/Vision Plan involve a shift in theme to a “sensory zoo”. The Zoo believes this could result in an increase in patronage from 496,466 in 2000 to 650,000 in 2010, a total increase of 153,534 patrons/year. The Zoo’s strategy will be to gear its marketing towards increasing off-season attendance.

In order to estimate the number of parking spaces needed to accommodate the expected increase in attendance, it is first necessary to know the incremental patronage will be distributed among the days of the year. The current distribution is as shown in **Table 6.2-8** (see also **Table 6.2-7**).

**TABLE 6.2-8: 2001
DISTRIBUTION OF ZOO PATRONAGE**

Period	Number of Patrons	Number of Patrons	Number of Days
Off-Season	363,543	73%	319
High Season	132,923	27%	43
Total Annual	496,466	100%	362 ⁸

SOURCE: Fehr & Peers, 2002.

This analysis assumes the Zoo’s marketing efforts would be partly successful, and as a result the percentage of the new patrons visiting during the high season will be half as much as for existing patrons (13% rather than 27%). Assuming that the incremental patronage will be spread evenly among the days of each period, and that the vehicle occupancy and turnover rate remain unchanged, then the total number of parking spaces required for the additional patrons will be as shown in **Table 6.2-9**.

It is anticipated that approximately three additional staff will be needed to handle the increased patronage, and so three additional parking spaces will be required beyond those shown in **Table 6.2-9**.

⁸ Excludes days when the Zoo is closed.

TABLE 6.2-9
CALCULATION OF ADDITIONAL SPACES NEEDED FOR SENSORY ZOO PATRONS

Period	Number of Patrons	Percent of Patrons	Percent of Days	Patrons Per Day	Cars Per Day	Spaces Needed
Off-Season	133,575	87%	319	419	127	105
High Season	19,959	13%	43	464	141	116
Total Annual	153,534	100%	362			

SOURCE: Fehr & Peers, 2002.

Administration Building - The later phases of the Concept/Vision Plan also include an administration building to replace the trailers currently in use. The Zoo expects that one additional staff member may be added when the new building is complete. This will increase the demand for parking by one space.

Parking Structure - The Concept/Vision Plan also includes four at-grade staff parking places, six garages for larger Zoo vehicles, and fifty-two below-ground staff parking spaces, for a total of sixty-two new parking places. However, twenty existing staff parking places will be removed to make room for the structure. The parking structure would thus reduce parking demand by forty-two spaces.

The parking demand generated by the various project components can be summarized as shown in **Table 6.2-10**. At the bottom of the table is an estimate of the maximum net demand for parking spaces for Phase I and for the entire Proposed Project. This assumes the worst case which in the high season will be the ten days when a function is occurring on the Kampala Center deck, and during the off-season if there are simultaneous functions at the Kampala Center enclosure, the Kampala Center deck, and the North Lawn. These extremes are expected to occur not more than ten times per year.

The maximum net demand totals at the bottom of **Table 6.2-10** show that the Proposed Project will generate a higher demand in the off-season than in the high season, in accordance with the Zoo's strategy to promote off-season patronage. From the standpoint of parking, the off-season demand is not as critical as the high season demand, because the off-season demand can be accommodated in whole or in part by existing facilities. It is the high season demand, which cannot be accommodated by existing facilities, that determines the maximum parking impact.

TABLE 6.2-10
ESTIMATED PARKING DEMAND BY PROJECT COMPONENT

Component	Spaces Needed	Period
Medical/Service Complex	2	Daily
Kampala Center Enclosure		
Off-Season	35	20 times per year
Kampala Center Deck		
High-Season	71	10 times per year
Off-Season	71	10 times per year
North Lawn		
Off-Season	104	10 times per year
Sensory Zoo		
High Season	119	Daily
Off-Season	108	Daily
Administrative Building		
High Season	1	Daily
Off-Season	1	Daily
Parking Structure	-42	Daily
Maximum Net Demand Phase 1		
High Season		
Medical/Service Center	2	Daily
Kampala Center Deck	<u>71</u>	10 times per year
Total	73	10 times per year
Off-Season		
Medical/Service Center	2	Daily
Kampala Center Enclosure	35	20 times per year
Kampala Center Deck	71	10 times per year
North Lawn	<u>104</u>	10 times per year
Total	212	10 times per year
Maximum Net Demand Buildout		
High Season		
Medical/Service Center	2	Daily
Kampala Center Deck	71	10 times per year
Sensory Zoo	119	Daily
Administration Building	1	Daily
Parking Structure	<u>- 42</u>	Daily
Total	151	
Off-Season		
Medical/Service Center	2	Daily
Kampala Center Enclosure	35	20 times per year
Kampala Center Deck	71	10 times per year
North Lawn	104	10 times per year
Sensory Zoo	108	Daily
Administration Building	1	Daily
Parking Structure	<u>-42</u>	Daily
Total	279	

SOURCE: Fehr & Peers, 2002.

MASTER PLAN IMPACTS AND MITIGATION MEASURES

Master Plan Impact 6.2-1 Parking Impacts

PP Implementation of the overall master plan would result in the development of all of the “sensory zoo” thematic improvements, the administration building and parking structure, as well as the Phase I components described above.

Based on the data provided in **Table 6.2-11**, and the observation that there is no unutilized parking capacity that could serve the demand generated by the Proposed Project, the full buildout of the Concept/Vision Plan would have a **significant impact** in that it would generate a demand for 151 parking places that cannot be accommodated by existing facilities during high season days.

The parking demand generated by the Proposed Project and the two alternatives are compared in **Table 6.2-11**.

TABLE 6.2-11
ESTIMATED MAXIMUM PARKING DEMAND FOR PROJECT ALTERNATIVES

Alternative	Vehicles	Period
Phase 1 (only)		
Proposed Project PP		
High Season	73	10 times per year
Off-Season	212	10 times per year
Alternative AA	0	
Alternative AB	2	Daily
Master Plan (incl. Phase 1 & later Phases)		
Proposed Project PP		
High Season	151	10 times per year
Off-Season	279	10 times per year
Alternative AA	1	Daily
Alternative AB	3	Daily

SOURCE: Fehr & Peers, 2002.

AA Under the No Project Alternative, a 5,300 square foot health care facility would be built in response to American Zoo and Aquarium Association accreditation requirements. This facility would be considerably smaller than the Medical/Service complex component of the Proposed Project. Based on this, the analysis assumed that only a single new staff member would be added, rather than the two staff members assumed for the Proposed Project. Because one additional parking space can be accommodated on-site, this is considered to be a **less-than-significant impact**.

AB Under the Reduced Intensity Alternative, the Medical/Service component and the administration building of the Proposed Project would be built. Additionally, this

alternative includes replacing or renovating dilapidated exhibits and holding areas. The improvements to the Kampala Center, the pavilion on the North Lawn, the parking structure, and the thematic enhancements (sensory zoo) would not be undertaken.

Based on the data provided in **Table 6.2-11**, and the significance criteria presented earlier, the Reduced Intensity Alternative would have a **significant impact** in that it would generate a demand for three staff parking places that cannot be accommodated by existing facilities during high season days.

Master Plan Mitigation 6.2-1 Parking Impacts

The following mitigation is recommended to reduce the significance of the impacts of the Proposed Project and the Reduced Intensity Alternative. The existing parking deficiencies in William Land Park offer many opportunities for improvements. The choice of measures should be made in conjunction with the City and Sacramento City College, based on cost and practicality. The distribution of costs should be proportionate to the benefit received by the different groups, with the Zoo contributing its fair share.

A minimum of 151 parking spaces would be needed to mitigate the impact of the Proposed Project.

A minimum of 3 parking spaces would be needed to mitigate the impact of the Reduced Intensity Alternative.

The range of possible measures includes:

- a. Eliminate the current ban on weekend parking within Land Park. This would make 100-200 additional spaces available to Zoo patrons, depending on where the ban was lifted.
- b. Remove the blockage at the eastern end of 15th Avenue. This would add approximately 50 spaces to the parking areas available to Zoo patrons. Removing the blockage would work best in combination with measure a, h, and/or i, because most Zoo patrons begin their search for a parking place on 15th Avenue, and are unlikely to make use of parking areas on the eastern side of the Park unless these sites are directly accessible from 15th Avenue.
- c. In conjunction with measure a., make 15th Avenue one-way eastbound, with angled parking on both sides. Approximately 40 parallel spaces could be replaced by 80 angled spaces, for a net gain of 40 parking spaces. This would also improve safety by directing exiting traffic away from the concentration of pedestrians on Land Park Drive.
- d. Re-stripe the 15th Avenue parking lot so that the northernmost and possibly the 3rd, aisles are westbound. Improved circulation would add approximately five percent (the equivalent of 11 parking spaces) to the capacity of this lot.
- e. Re-stripe the 17th Avenue parking lot. Alternatively, reserve all of the spaces on

one side of each aisle for compact cars only. By improving circulation, these measures would add approximately five percent (9 parking spaces) to the capacity of this lot. This would also reduce the number of parking accidents.

- f. Construct a speed hump on 15th Avenue approaching the curve around Fairytale Town. This would slow cars enough so that they can respond to vehicles pulling out from parking slots. This would add the equivalent of 1-2 parking spaces by allowing vehicles to leave faster thus freeing up spaces for new arrivals. However, the principal reason for doing this would be to improve safety for drivers and pedestrians alike.
- g. Many curbs need red or blue paint to enable the police to enforce fire and ADA codes. The main reason for doing this would be to allow a quicker response time in the event of an emergency. It may also allow drivers to make better use of legal on-street parking by removing the existing ambiguities regarding which spaces are legal and which are not.

These potential mitigation measures are summarized in **Table 6.2-12**.

TABLE 6.2-12
SUMMARY OF POTENTIAL MITIGATION MEASURES

Measure	Action By	Approximate Number of Spaces Created
a. Lift ban on weekend on-street parking	City	100-200 (depends on area)
b. Remove blockage of 15 th Ave.	City	50
c. Make 15 th Ave. 1-way, add angled spaces	City	40
d. Stripe 15 th Ave. lot	City	11
e. Re-stripe 17 th Ave. lot	City	9
f. Speed hump on 15 th Ave.	City	1-2
g. Re-paint curb restrictions	City	Unknown

SOURCE: Fehr & Peers, 2002.

In addition, there are two other measures which would significantly ease the parking space shortage in William Land Park. However, they are considered less feasible than the measures listed in **Table 6.2-12** because they require the cooperation of SCC:

- h. Encourage Sacramento City College to eliminate the charge for on-campus parking. By shifting approximately 200-400 SCC-related cars out of the Park, this would make 100-200 additional spaces available to Zoo patrons⁹.
- i. Install a pedestrian signal to allow use of SCC's new parking lots. By shifting approximately 350 SCC-related cars out of the Park, this would make approximately 175 additional spaces available to Zoo patrons.

⁹ There would not be a 1-to-1 relationship between spaces freed up and spaces available to Zoo patrons because of the indirect relationship between SCC parking on the eastern side of the Park and Zoo visitors on the western side of the Park.

Many of these actions could be taken at relatively low cost and without paving over any existing green space. However, it is not possible for the Zoo to take unilateral action on any of these items¹⁰. Moreover, the mitigation measures identified above would benefit other groups besides the Zoo.

Significance after Mitigation

While mitigation measures have been identified that can reduce the significance of the impact, the Zoo lacks the ability to implement the measures by itself, and it is uncertain whether these measures can be carried out solely on behalf of the Zoo. Therefore, the impact is considered **significant and unavoidable**.

PHASE I IMPACTS AND MITIGATION MEASURES

Phase I Impact 6.2-2 Parking Impacts

PP Implementation of the Proposed Project would consist of the medical/service complex, the improvement and extension of the Kampala Center, and the North Lawn pavilion, as described above.

Anecdotal evidence from a variety of observers indicates that the parking demand already exceeds the available supply of spaces on typical summer weekend days. This is supported by the survey data presented in **Table 6.2-5**, which shows that parking capacity is almost entirely utilized even during off-season periods.

Based on the data provided in **Table 6.2-11**, and the significance criteria presented earlier in this report, the Proposed Project would have a **significant impact** in that it would generate a demand for 73 parking places that cannot be accommodated by existing facilities during high season days.

AA Under Phase 1 of the No Project Alternative, no projects will be built. No new parking demand or supply will be generated by this alternative. This is considered to be a **less-than-significant impact**.

AB Under the Reduced Intensity Alternative, the Medical/Service complex component of the Proposed Project will be built, and that two additional staff members will be hired. The improvements to the Kampala Center and the pavilion on the North Lawn would not be undertaken.

Based on the data provided in **Table 6.2-11**, and the significance criteria presented earlier, the Reduced Intensity Alternative would have a **significant impact** in that it would generate a demand for two staff parking places that cannot be accommodated by existing facilities during high season days.

¹⁰ Moreover, the dual patronage issue shown in Table 6.2-4 makes attribution of parking demand between the Zoo and other facilities problematic, even when individual Zoo patrons can be identified.

Phase I Mitigation 6.2-2 Parking Impacts

The measures listed under **Master Plan Mitigation 6.2-1** are recommended to reduce the significance of the Phase I impacts of the Proposed Project and the Reduced Intensity Alternative. The choice of measures should be made in conjunction with the City and Sacramento City College, based on cost and practicality. The distribution of costs should be proportionate to the benefit received by the different groups, with the Zoo contributing its fair share.

A minimum of 73 parking spaces would be needed to mitigate the impact of the Proposed Project.

A minimum of 2 parking spaces would be needed to mitigate the impact of the Reduced Intensity Alternative.

Significance after Mitigation

While mitigation measures have been identified that can reduce the significance of the impact, the Zoo lacks the ability to implement the measures by itself, and it is uncertain whether these measures can be carried out solely on behalf of the Zoo. Therefore, the impact is considered **significant and unavoidable**.