



Appendix B
Traffic Impact Study

**TRAFFIC IMPACT STUDY
PASADENA CONFERENCE CENTER
EXPANSION PROJECT
CITY OF PASADENA, CALIFORNIA
June 17, 2004**

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June 17, 2004
1-023231-1



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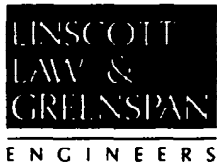


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TRAFFIC IMPACT STUDY
PASADENA CONFERENCE CENTER EXPANSION PROJECT
CITY OF PASADENA, CALIFORNIA

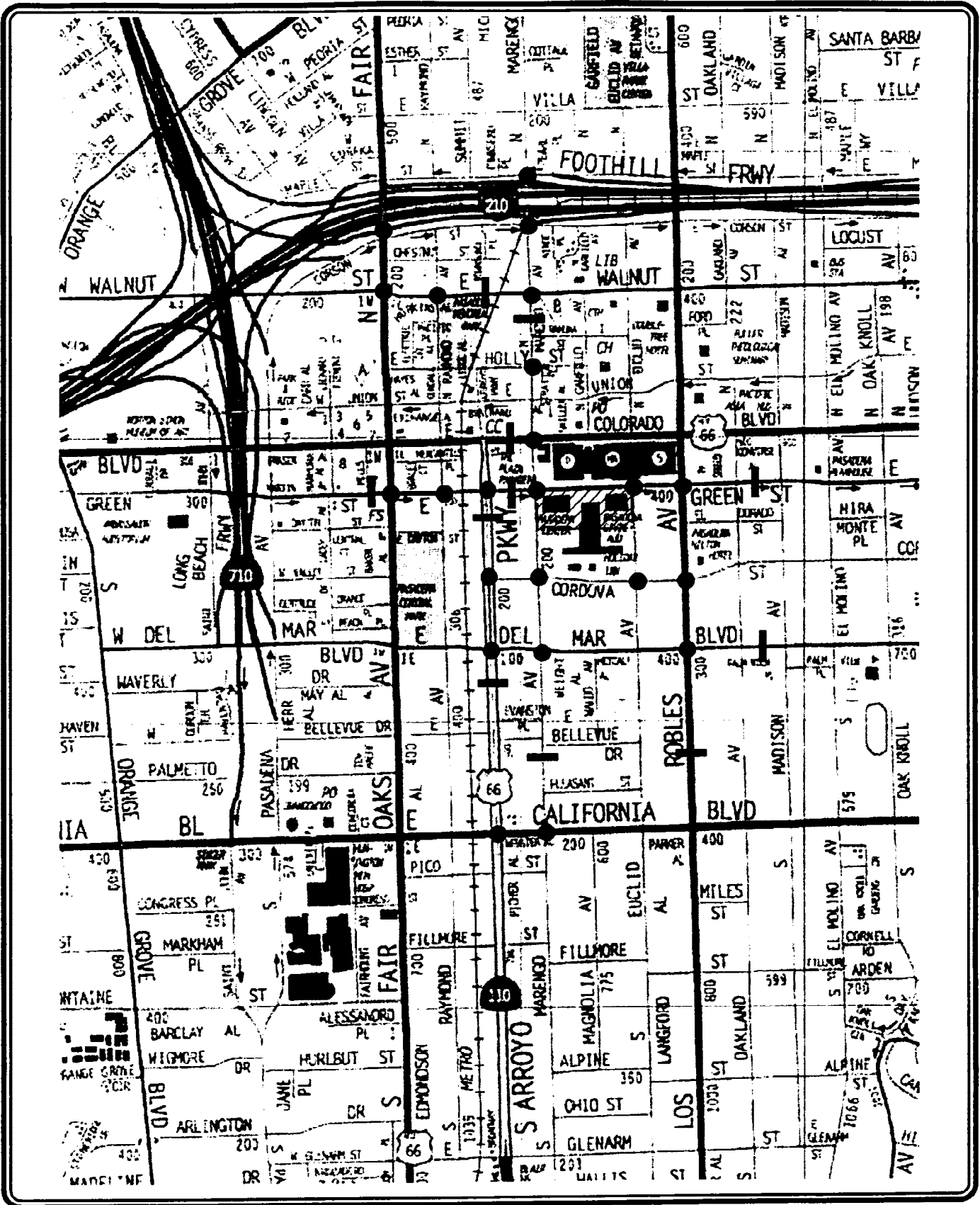
INTRODUCTION

This traffic analysis has been conducted to identify and evaluate the potential traffic impacts of the proposed Pasadena Conference Center Expansion project. The proposed project is located in the Civic Center area of the City of Pasadena, California. The project site is located on the northern half of the block bounded by Green Street to the north, Cordova Street to the south, Euclid Avenue to the east and Marengo Avenue to the west. The existing Sheraton Hotel is not a part of the expansion project. The existing ice skating rink is currently planned to be relocated to another location within the City and the space will be converted as part of the project. The Pasadena Conference Center project site location and general vicinity are shown in Figure 1.

The traffic analysis follows City of Pasadena traffic study guidelines and is consistent with traffic impact assessment guidelines set forth in the *2002 Congestion Management Program for Los Angeles County*. This traffic analysis evaluates potential project-related impacts at 23 key intersections in the vicinity of the project site. The study intersections were determined by the City of Pasadena's Department of Transportation staff. The Intersection Capacity Utilization method was used to determine Volume-to-Capacity ratios and corresponding Levels of Service at the study intersections. Eleven street segments in the project vicinity were also evaluated for potential project-related impacts based on criteria set forth in the City's traffic study guidelines. In addition, a review was conducted of Los Angeles County Metropolitan Transportation Authority intersection and freeway monitoring locations to determine if a Congestion Management Program transportation impact assessment analysis is required for the proposed project.

This study (i) presents existing traffic volumes, (ii) forecasts future traffic volumes with the related projects, (iii) forecasts future traffic volumes with the proposed project, and (iv) determines project-related impacts.

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- MAP SOURCE: THOMAS BROS. GUIDE
- STUDY INTERSECTION
- STREET SEGMENT



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FIGURE 1 VICINITY MAP

PASADENA CONFERENCE CENTER EXPANSION PROJECT

PROJECT DESCRIPTION

The proposed Pasadena Conference Center Expansion project is located in the Civic Center area of the City of Pasadena, California. The project site is located on the northern half of the block bounded by Green Street to the north, Cordova Street to the south, Euclid Avenue to the east and Marengo Avenue to the west. The existing Sheraton Hotel is not a part of the project.

Description of Project Components

The Pasadena Conference Center Expansion is a renovation and expansion of the facilities located adjacent to the historic Pasadena Civic Auditorium. The Project is being undertaken by the Pasadena Center Operating Company (PCOC). The Project includes the following components:

- Civic Auditorium - No changes are planned to the existing Civic Auditorium structure/building, other than the restoration of the existing steps to the auditorium which front Green Street. This modification would return the design of this area to its original 1932 layout and would provide enhanced access to this portion of the project site.
- Exhibition Hall - The existing Exhibit Hall would be completely demolished and removed from the Project site to accommodate a new 201,320 square-foot Exhibition Hall and Ballroom building. This new Exhibition Hall and Ballroom building includes the following components:
 - Two new exhibit halls (a 29,400 square-foot Exhibit Hall A and a 29,400 square-foot Exhibit Hall B) totaling 58,800 square feet and designed in such a way that they may be combined to serve as a single hall;
 - A new 25,600 square-foot ballroom located on the north side of Exhibit Hall A, which can be used as a single ballroom, subdivided into multiple spaces of varying sizes, or on occasion be combined with the exhibit halls to serve as additional exhibition space;

- New lobby and pre-function area totaling 26,370 square feet, which would front a portion of Marengo Avenue, Green Street and the Ludwigshafen Plaza;
 - 9,850 square feet of back-of-house (BOH) space serving the exhibition halls and ballroom at plaza level; and
 - A 55,800 square-foot loading dock area, a 10,000 square-foot kitchen, and 14,900 square feet of storage area are planned to be located beneath the exhibition halls at parking Level B.
- Conference Center - The existing Conference Center building would remain on-site. The Conference Center entrance will be relocated to be more prominently located on the northwest corner of the existing building off of the Civic Auditorium Forecourt and opposite the entrance to the new Exhibition Hall and Ballroom building. In addition, the existing kitchen facility will be renovated and converted into a pantry and storage area.
 - Parking Structure and Administrative Offices - A new parking structure would be constructed to the south of the existing Conference Center and a 70-foot wide landscaped pedestrian plaza between the two buildings (with access from Euclid Street) will be maintained. The parking structure is planned to include two levels of below grade and three levels of above grade parking. Approximately 10,000 square feet of administrative office space is planned to be located along the west face of the structure and adjacent to the Mishima Plaza terminating in a lobby at the northwest corner of the structure. The administrative office space will serve both the parking structure and PCOC administrative offices.

- Conversion of the Ice-Skating Rink - The project includes the conversion of the approximately 21,000 square-foot existing ice skating rink to ballroom space. The space was previously used as a ballroom/dance hall. The conversion would not result in any exterior modifications to the structure. Rather, the conversion would alter the interior of the building and reinstate the previous use of the structure. Entry into the converted ballroom space would remain from the west elevation through a centrally located arched opening. Based on discussions with PCOC staff, the converted ballroom space will be used to better serve future events held at the Conference Center. It is envisioned that events and activities that utilize this converted ballroom area will be appropriately scheduled and coordinated so as to preclude concurrent separate sold out events at the Conference Center, Civic Auditorium, Exhibit Halls and Ballroom building.
- Plazas- The proposed buildings would replace some of the existing open plaza areas. The space between the Civic Auditorium and the proposed buildings would be redesigned as a new Ludwishafen Plaza and a new Mishima Plaza. Along with the Civic Auditorium Forecourt, these plazas would form a comprehensive system of integrated public plazas that would extend from Green Street to the Sheraton Hotel along both sides of the Civic Auditorium. A portion of these plazas would also serve as a dedicated fire lane to provide emergency access to all of the buildings on-site.

Access to the on-site below grade parking structure will continue to be provided primarily via the existing driveways on Marengo Avenue and Euclid Avenue south of the existing Sheraton Pasadena Hotel. An additional parking structure entry/exit is planned at the existing driveway associated with the existing Euclid Avenue loading area. The main loading activities for the Project will be provided via the loading docks accessed via Marengo Avenue. A review has been undertaken of the planned expansion to the loading dock area and is summarized in the Loading/Unloading Operations Review Section of this report.

The proposed project is expected to be constructed and occupied by the Spring of 2007. The site plan for the proposed Pasadena Conference Center Expansion project is illustrated in [Figure 2](#).

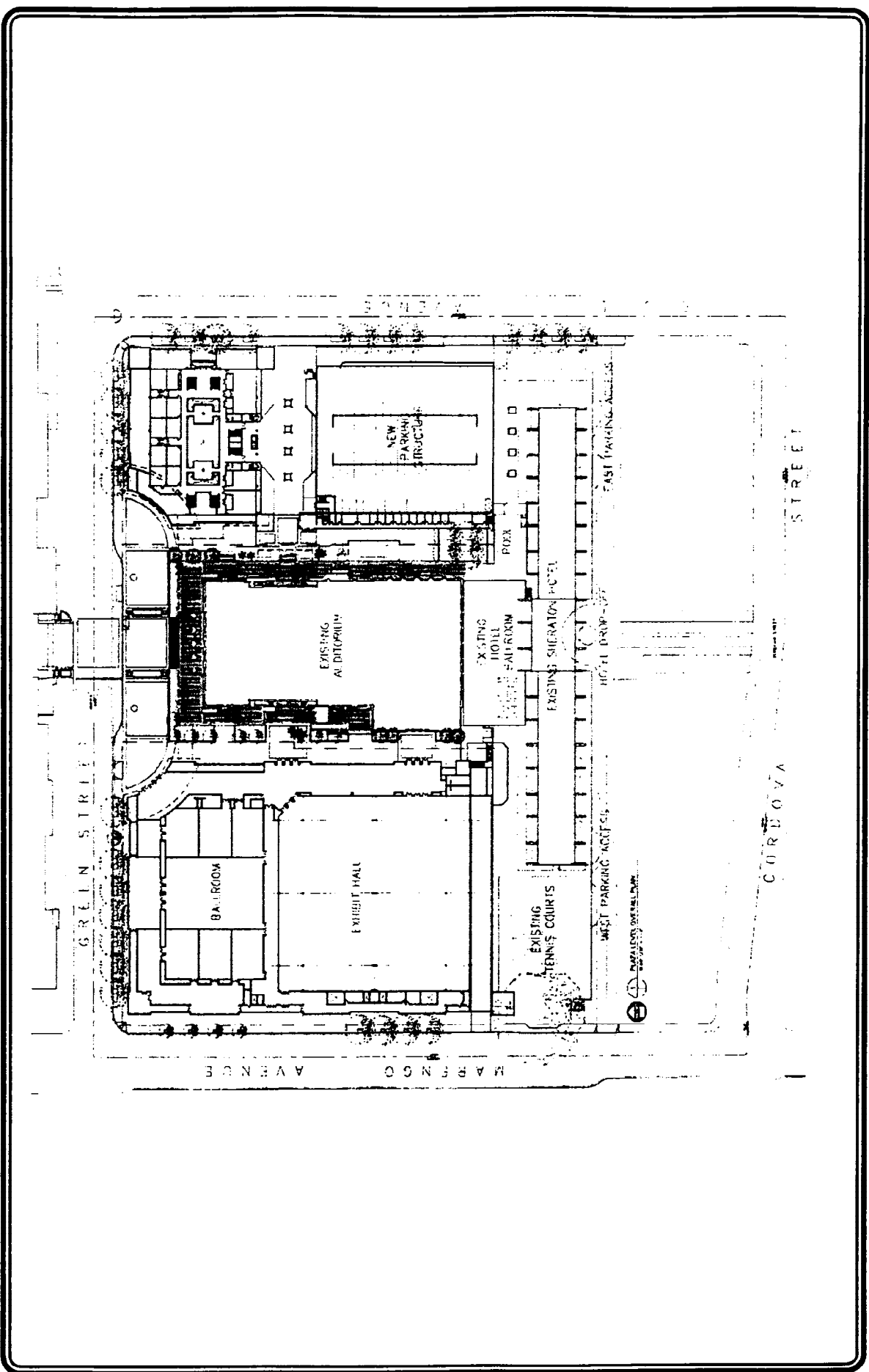


FIGURE 2 SITE PLAN

SOURCE: ZIMMER GUNSUL FRANSCA PARTNERSHIP



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PASADENA CONFERENCE CENTER EXPANSION PROJECT

Current Event Descriptions and Review of Attendance Figures

The PCOC has provided descriptions of the events currently accommodated by the Conference Center, as well as events that are planned to be accommodated with the proposed project. It should be noted that the proposed project consists of a reconfiguration of space to better accommodate events by providing amenities (i.e., standard technology, food service, etc.) that allow PCOC to attract higher profile clients in addition to many existing clients. In addition, one of the objectives of the Project is to increase the number of events that are booked on an annual basis. The size and type of events held at the new Conference Center will be the same as what is currently accommodated at the site, therefore, attendance levels for events are not anticipated to increase in the future with the proposed project. The following summary includes a description of the various events, a corresponding summary of expected attendance, as well as information pertaining to average vehicle ridership based on historic records provided by the PCOC and validated by LLG, Engineers through actual surveys.

Association Events and Conventions

Association events, including Conventions, are comprised of attendees that travel to the community and spend multiple days to attend meetings or events at the Pasadena Conference Center and typically attract attendees from outside the Pasadena area. Regional, state, national and international groups for professional, religious, educational or other purposes are currently accommodated at the Pasadena Conference Center. These events will typically range in size, from the use of several small meeting rooms to the use of the entire facility including the Civic Auditorium. These events will typically have meetings/events throughout the day during regular business hours and may have occasional evening functions.

A regional association event typically has the highest parking demand when compared with other association events and conventions, with approximately thirty percent (30%) of the estimated total vehicles parked on-site and the remaining vehicles parked at the local hotels. For state, national and international association events, most of the attendees fly to the Los Angeles/Pasadena area and shuttle or drive a rental car to the local hotels. Based on observations of similar events, the attendees of the state, national and international association events typically leave their rental cars at the hotel parking areas and walk to the Conference Center. Other attractions are nearby such as Paseo

Colorado, Old Pasadena, the Pasadena Playhouse and the South Lake Avenue Shopping District. Convention events range in size anywhere from 100 to 2,000 attendees, with an average daily attendance of approximately 750 attendees. Based on the trends observed by PCOC staff, an average vehicle ridership of 2.0 persons per vehicle can be used for planning purposes.

Trade Events

Trade events are similar to association events in terms of attendance (i.e., an average daily attendance of 750 attendees). Regional trade shows generate a higher parking demand when attendees drive in for one day of the trade show, and do not utilize other parking (i.e., parking at an adjacent hotel). For a regional trade show event, approximately fifty percent (50%) of the total vehicles generated will be parked on-site. State, national and international trade events have similar schedules.

Local Events

Local events include Banquets, Center Corporate events, Bureau Corporate events, Consumer events, Civic Auditorium events as well as other events. Local events attract patronage from the local area. Many of the local events are one-day events, and in the case of the larger consumer shows (which are scheduled for multiple days) patrons typically only attend one day. The local events range in size, from the use of a single small meeting room to the use of the entire facility. Attendance at local events range from 100 to 5,000 attendees (over multiple days) with an average daily attendance of approximately 850 attendees. In the case of other events and the Center Corporate events, events will typically be held during the regular business hours with the occasional evening functions. Banquet events will be split with about one-third (1/3) of the events involving luncheon functions and two-thirds (2/3) of the events involving dinner functions. Consumer events are typically open for eight to ten hour periods each day on weekends with occasional weekday events. Civic Auditorium events are primarily on weekends in the evening with occasional weekday events. Based on the trends observed by PCOC staff, an average vehicle ridership range of 2.5 to 4.0 persons per vehicle can be used for planning purposes.

Future Event Descriptions and Review of Event Attendance Figures

PCOC staff has provided a summary of the feasibility and market study associated with the expanded Pasadena Conference Center Project. This summary presents an overview of the anticipated levels of event activity by event type. Since the future schedules would be based on actual bookings, detailed event schedules are not yet available. Therefore, general descriptions are provided in the preceding section for the various events and are quite similar to those currently occurring at the Project site. It is important to note that while the size and nature of events may be different with the proposed Project, the peak events would not change in terms of anticipated attendance levels.

PROJECT PARKING

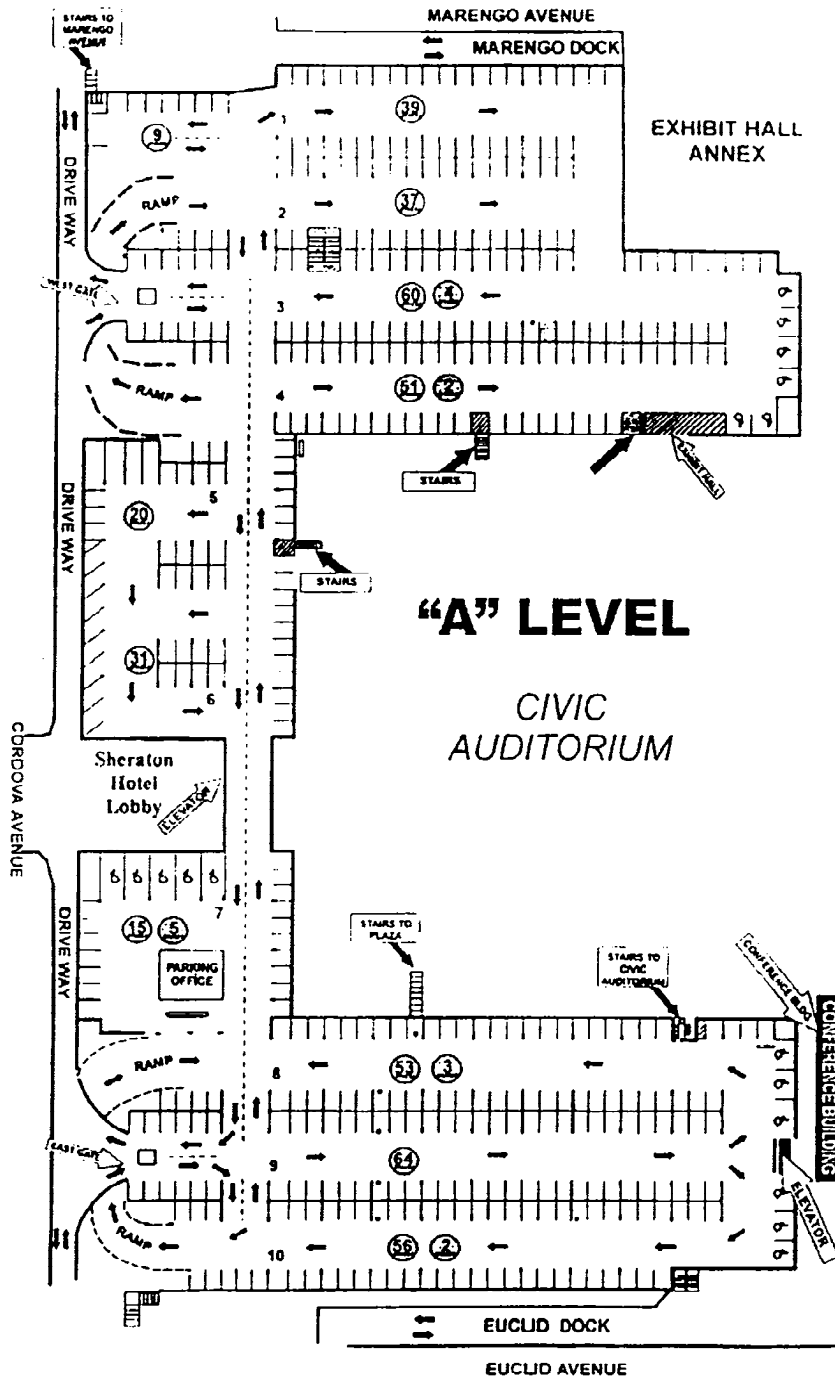
A parking assessment associated with the Pasadena Conference Center Expansion Project has been prepared to summarize a comparison of the existing parking supply and demand as well as a comparison of the planned parking supply to the forecast demand for the peak Conference Center events.

Existing Parking Supply

Parking is currently provided on-site via two levels of subterranean parking, as well as off-site in adjacent parking structures. Some on-street parking is also provided adjacent to the Pasadena Conference Center. The following summarizes the existing parking supply in the immediate vicinity of the Pasadena Conference Center.

On-Site Parking Supply

The Project site currently provides two levels of subterranean parking for use for employees of the Pasadena Conference Center, ice skating rink and the Sheraton Hotel. Parking is also provided for hotel patrons as well as patrons of various events held at the hotel and conference center. Access to the subterranean parking is primarily provided via a driveway on Marengo Avenue and a driveway on Euclid Avenue. A total of 823 parking spaces is currently provided in subterranean parking levels A and B. The general layout of the two on-site subterranean parking levels is illustrated in Figures 2A and 2B.



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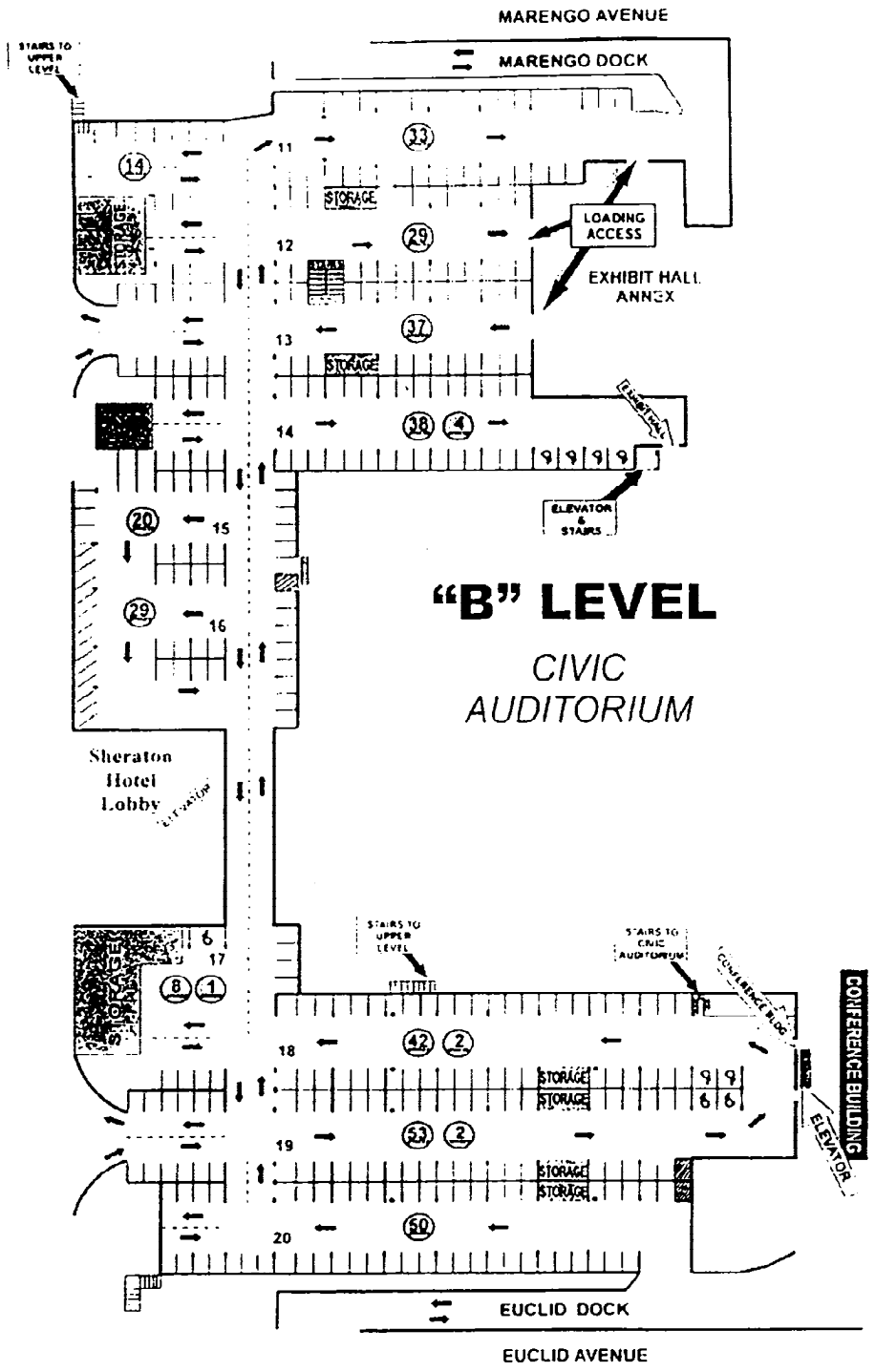


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SOURCE: PASADENA CONFERENCE CENTER

**FIGURE 2A
EXISTING PARKING LEVEL A PLAN**

PASADENA CONFERENCE CENTER EXPANSION PROJECT



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SOURCE: PASADENA CONFERENCE CENTER

**FIGURE 2B
EXISTING PARKING LEVEL B PLAN**

PASADENA CONFERENCE CENTER EXPANSION PROJECT

Off-Site Parking Supply

Since the Pasadena Conference Center is located centrally within the Central Business District of the Civic Center area of downtown Pasadena, several other parking structures are located in the immediate project vicinity. A total of 350 parking spaces are provided in the Wescom parking structure (located along the west side of Marengo Avenue), 515 parking spaces are provided in the Los Robles parking structure (located along the east side of Euclid Avenue), 520 parking spaces are provided in the Ameron parking structure (located along the south side of Cordova Street, between Euclid and Los Robles Avenues) and 715 parking spaces are provided in the Marengo Avenue parking structure. Additional parking is also provided at the recently renovated Paseo Colorado mixed-use development project.

Parking is also provided along some of the streets in the immediate vicinity of the project site. One-hour metered parking is provided along the east side of Euclid Avenue between 9:00 AM and 6:00 PM, two-hour parking is provided along portions of both sides of Cordova Street between 9:00 AM and 6:00 PM and parking limited to 15 minutes is provided along the west side of Marengo Avenue. No Parking Any Time signs are posted along the project frontage on Marengo and Euclid Avenues and Green Street. In addition, ten metered parking spaces are provided along the north side of Green Street directly in front of the Gelson's Supermarket. A total of 60 on-street parking spaces are provided in the immediate project vicinity.

Existing Parking Demand for a Sold-Out Civic Auditorium Event

In order to verify the existing parking utilization associated with a sold-out theater event at the Civic Auditorium, parking accumulation surveys were conducted both on-site and on the streets immediately surrounding the Civic Center. Pedestrian counts were conducted at crossings leading from the Euclid Street parking structure and the Paseo Colorado site. In addition, driveway traffic counts were also conducted for the peak evening arrival and departure periods at the Marengo Avenue and Euclid Street Conference Center driveways. The event surveyed was the Friday, September 13, 2002, Beauty and the Beast performance, which commenced at 8:00 PM.

Based on visual observations conducted prior to the performance, it was apparent that event patrons were arriving far in advance of the scheduled performance due to the close proximity of Paseo Colorado (e.g., families having dinner prior to the performance at the adjacent restaurants). Taxis, limousines, and busses were also observed to drop-off event patrons along the drop-off area provided along the south side of Green Street (i.e., in front of the main entrance to the Civic Center Auditorium).

The on-site and adjacent on-street parking accumulation between the hours of 6:00 PM (count conducted at 6:30 PM) and 11:00 PM (count conducted at 11:30 PM) is summarized in Table 1. Detailed parking records were also obtained from PCOC staff, including other event parking totals and hotel patron vehicles. The data was found to be consistent with the parking demand and average vehicle occupancy estimates previously provided by PCOC staff. The average vehicle occupancy was determined to be approximately 3.0 persons per vehicle for the Beauty and the Beast event.

It can be concluded that while the adjacent on-street parking was nearly fully utilized (average of 96.7 percent occupancy at 8:00 PM), the conference center parking structure was approximately 80 percent full (with Level A approximately 88.6 percent occupied and Level B approximately 67.4 percent occupied at 9:00 PM). A total of 652 vehicles were parked on-site and based on a review of the pedestrian counts, it can be concluded that approximately 272 vehicles were parked in the adjacent parking structures (approximately 70 in the Los Robles parking structure, and another 200 in a combination of the Westcom, Marengo Avenue, and Paseo Colorado parking structures).

**Table 1
EXISTING PARKING ACCUMULATION SURVEY [1]
SURVEY DATE: FRIDAY, SEPTEMBER 13, 2002
Pasadena Conference Center Expansion Project**

18-Sep-2003

PARKING LOCATION	[2] NO. OF SPACES	TIME OF SURVEY									
		6:30 PM		8:00 PM		9:00 PM		10:00 PM		11:30 PM	
		OCCUPIED	PERCENT	OCCUPIED	PERCENT	OCCUPIED	PERCENT	OCCUPIED	PERCENT	OCCUPIED	PERCENT
On-Site											
"A" Level in Parking Structure	458	249	54.4%	400	87.3%	406	88.6%	411	89.7%	132	28.8%
"B" Level in Parking Structure	365	112	30.7%	152	41.6%	246	67.4%	240	65.8%	22	6.0%
Subtotal On-Site	823	361	43.9%	552	67.1%	652	79.2%	651	79.1%	154	18.7%
West side of Marengo Avenue between Green Street and Cordova Avenue	12	12	100.0%	12	100.0%	10	83.3%	9	75.0%	6	50.0%
North side of Cordova Avenue between Marengo Avenue and Euclid Avenue	6	1	16.7%	6	100.0%	5	83.3%	6	100.0%	3	50.0%
South side of Cordova Avenue between Marengo Avenue and Euclid Avenue	14	14	100.0%	14	100.0%	12	85.7%	14	100.0%	10	71.4%
North side of Green Street between Marengo Avenue and Euclid Avenue	10	10	100.0%	8	80.0%	10	100.0%	9	90.0%	4	40.0%
East side of Euclid Avenue between Green Street and Cordova Avenue	12	12	100.0%	12	100.0%	12	100.0%	12	100.0%	5	41.7%
West side of Euclid Avenue between Green Street and Cordova Avenue	6	6	100.0%	6	100.0%	6	100.0%	6	100.0%	3	50.0%
Subtotal On-Street	60	55	91.7%	56	96.7%	55	91.7%	56	93.3%	31	51.7%

- [1] The on-street parking accumulation surveys were conducted by LLG Engineers
 [2] For those parking locations where on-street pavement markings for spaces are not provided, an estimate was made for the potential number of spaces based on the total linear feet of parking provided, and an average parking space length of 22 feet.

Future Parking Supply

The planned areas of parking supply are similar to the areas provided in the existing conditions. A summary is provided in the following paragraphs.

On-Site Parking Supply

The project site will provide parking in the two levels of subterranean parking, as well as in the proposed above grade parking structure. Parking at the site is provided for use for employees of the Pasadena Conference Center and the Sheraton Hotel. Parking is also provided for hotel patrons as well as patrons of various events held at the hotel and conference center. Access to the parking structure will continue to be primarily provided via a driveway on Marengo Avenue and a driveway on Euclid Avenue, south of the existing Sheraton Pasadena Hotel. A total of 972 parking spaces will be provided in the reconfigured parking structure.

Off-Site Parking Supply

The future off-site parking supply is similar to the existing off-site parking supply as described and summarized in the Existing Parking Supply Section of this report.

Future Parking Demand for PCOC Events

The future peak parking demand for the Pasadena Conference Center Project will be quite similar to and consistent with the existing parking demand and is dependent on the type of event scheduled. As stated previously, a feasibility and market analysis has been completed as part of the Project. Since the future schedule of events has not been developed (i.e., it will be based on actual bookings), the following parking needs are based upon industry trends, the experience of the current operator, as well as the PCOC attendance projections.

Many types of events held at the Pasadena Conference Center typically do not overlap in terms of peak arrival and departure traffic volumes or parking demand. For example, a large convention could be scheduled for the conference building, which concludes at 5:00 PM on the same day that a Civic Auditorium event is scheduled to commence at 8:00 PM. In this case, both events could be accommodated on-site. The PCOC has indicated that most of the large events will utilize most, if not all of the facility, and thus, would preclude other large events. The following parking demand analysis, however, describes the typical parking demand based on event type and the assumption that

some overlap of events will occur. This analysis is provided to identify the anticipated worst-case parking needs for the Project.

Association Events and Conventions

As summarized in the Project Description Section of this report, conventions include professional, religious, and educational associations as well as regional, state, national and international groups, and range from 100 to 2,000 attendees (with an average attendance of 750 persons). Based on industry experience and the experience of current parking operators, a regional association event typically has the highest parking demand when compared with other association events and conventions, whereby approximately 30 percent of the attendees are anticipated to park on-site. In order to conservatively estimate the worst case parking demand for this type of event, the following has been assumed; 1) a maximum attendance of 2,000 persons, 2) an average vehicle ridership of two persons per vehicle, and 3) 30 percent (30%) of the attendees will park their vehicles on-site. Therefore, a peak parking demand of approximately 300 vehicles could be anticipated for a regional association event (i.e., 2,000 attendees x 0.30 = 600 attendees/2.0 persons per vehicle = 300 vehicles).

Trade Events

A peak parking demand of approximately 500 vehicles could be anticipated with maximum attendance at a regional trade show event. The regional trade show peak parking demand was based on; 1) an average attendance of 750 persons, 2) 50% of the attendees will park on-site, and 3) an average vehicle ridership of two persons per vehicle. Therefore, a peak parking demand of approximately 190 vehicles could be expected.

Local Events

As summarized in the Project Description Section of this report, local events include Center Corporate events, Banquets, and Consumer Shows and range from 100 to 5,000 attendees (with an average daily attendance of 850 persons). A peak parking demand of approximately 833 vehicles could be anticipated with a local Consumer Show event (assuming that a peak attendance of 5,000 attendees would be evenly distributed over a two day period and that the average vehicle occupancy is three persons per vehicle).

Based on industry experience, the experience of current parking operators, as well as data collected as part of the traffic analysis, the greatest parking demand is associated with a sold-out event at the Civic Auditorium. In order to conservatively estimate the worst case parking demand for this type of event, a maximum event attendance of 2,500 persons and an average vehicle ridership of three persons per vehicle (based on the existing parking validation work effort) has been assumed. This also results in a peak parking demand of 833 vehicles.

It is important to note that the anticipated maximum parking demand for local events is likely to decrease in the future as the Pasadena Gold Line is now in operation. Patrons are able to access the site via the Del Mar Boulevard station which is within 1/4 mile of the project site. PCOC staff has indicated that a joint marketing effort with event organizers will be underway so as to publicize the availability of the recently completed Gold Line to access the project site.

Future Parking Demand and Supply

The maximum parking demand for the Pasadena Conference Center has been conservatively determined based on the assumption that some overlap of event types will occur. Current experience shows that a high level of event overlaps do not occur, and that attendees to a local Consumer Show do not leave the site concurrently. Understanding that the Sheraton Hotel, located immediately south of the Project site, also generates a demand for parking within the Conference Center, a code requirement of approximately 437 spaces has been assumed to account for full occupancy of the hotel rooms and meeting space (i.e., all 317 rooms are occupied and all 12,000 square feet of meeting space is occupied). While it is widely recognized that the parking demand associated with hotels peak late in the evenings, it has been assumed that 50 percent of code required parking would overlap with the peak parking associated with a large Consumer Show and 100 percent of the hotel parking demand would overlap with a Civic Auditorium event.

During the late afternoon/early evening time period (i.e., 5:00 - 7:00 PM), a peak parking demand of approximately 1,052 vehicles could be conservatively anticipated with the Project, based on the assumption that both a local Consumer Show and a Civic Auditorium event are scheduled and that an overlap occurs between departures of the local Consumer Show attendees (50 percent) and arrivals of Civic Auditorium event patrons (50 percent). This is a very conservative estimate in that local Consumer Show attendees vary in their arrival and departure times and it is highly unlikely that half of the event patrons on a single day would leave the Project site within the same hour. As illustrated in Table 2, the peak parking demand was determined based on 417 local Consumer Show vehicles, 417 Civic Auditorium vehicles, and 218 Sheraton Hotel vehicles.

During the late evening time period (i.e., 9:00 - 10:00 PM), a peak parking demand of approximately 1,270 vehicles could be conservatively anticipated with the Project, based on the assumption of a sold-out Civic Auditorium event and full occupancy of the Sheraton Hotel. It is also important to note that this late evening peak parking demand is projected to only occur during the time of the Civic Auditorium performance and is not projected to occur past 11:00 PM. The peak was determined based on 833 Civic Auditorium vehicles and 437 Sheraton Hotel vehicles. The projected parking demand by time of day is presented in Table 2.

A total of 972 parking spaces is planned to be provided in the reconfigured parking structure of the Pasadena Conference Center site. Therefore, the conservative peak parking demand for the Pasadena Conference Center Site expected to occur between 5:00 and 6:00 PM and results in a shortfall of 80 parking spaces. A shortfall of 298 spaces is expected to occur between 9:00 and 10:00 PM. Thus, 298 spaces are needed to satisfy the conservative projection of peak parking demand for the Pasadena Conference Center Site. Copies of the relevant parking agreements between the PCOC and the parking operators are provided in Appendix A.